Systems	7127
Calc. Sub-Type	-
Priority Code	3
Quality Class	S

NUCLEAR GENERATION GROUP

ANALYSIS / CALCULATION

S10-0049

(Calculation #)

Auxiliary Building Overhead Crane (FHCR-5) Supporting Steel Structure – ANSYS Model

(Title including structures, systems, components)

☐ BNP UNIT _____

☒ CR3 ☐ HNP ☐ RNP ☐ NES ☐ ALL

APPROVAL ☒ Electronically Approved

Rev	Prepared By	Reviewed By	Supervisor
1	Signature: John F. Staples Name: John F. Staples (Enercon) Date: 01/11/2011	Signature: Matt Keeney Name: Matt Keeney (Enercon) Date: 1/11/2011	Signature: Kyong S. Pak Name: Kyong S. Pak (Enercon) Date: 1/11/2011

(For Vendor Calculations)

Vendor Enercon Services Vendor Document No. N/A

Owner's Review By Ranganath, Casaba 2011.01.11 16:15:33 -05'00' Date _____

List Of Effective Pages

Page	Rev	Page	Rev	Page	Rev	Page	Rev
i	1	ii	1	iii	1	iv	1
v	0	vi	0	vii	0	viii	0
ix	0	x	1	xi	1	xii	0
1	1	2	1	3	1	4	1
5	0	6	0	7	1	8	1
9	0	10	1	11	0	12	0
13	0	14	0	15	0	16	0
17	0	18	0	19	1	20	1
21	1	22	1	23	1	24	1
25	1	26	1	27	1	28	1
29	1	30	1	31	1	32	1

Attachments

Attach. Number	Rev	Number of Pages	Attach. Number	Rev	Number of Pages	Attach. Number	Rev	Number of Pages
1	1	16	2	0	2	3	1	16
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7	1	86	8	1	86	9	1	86
10	1	92	11	1	92	12	1	92
13	0	60	14	0	60	15	0	60
16	1	5	17	1	8	18	1	5
19	1	8	20	0	10	21	0	10
22	1	9	23	1	9	24	1	9
25	1	30	26	1	30	27	1	30
28	0	17	29	0	18	30	0	18
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Amendments

Rev & Letter	No of Pages	Rev & Letter	No of Pages	Rev & Letter	No of Pages	Rev & Letter	No of Pages

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ATTACHMENTS TOTAL PAGES

Revision Summary

Revision #	Revision Summary (Include brief description of revision and a list of EC's and other modifications incorporated into revision)
0	Original issue per EC 70139
1	Trolley-to-bridge connections in all ANSYS models are updated to reflect revised crane-vendor input (Ref. 3.7). All ANSYS results and comparisons with GT STRUDL predictions are updated.

Document Indexing Tables

Document Management System Data (For update of PassPort Controlled Document information — Document Service is to delete roll over data only if shown for DELETE in the following tables)

Notes - General

Doc Services Action (Enter ADD, DELETE, or —)	**Text of General Notes**
ADD	This calculation is issued to support the ISFSI project (EC 70139)

Reference Numbers – Reference Systems

Doc Services Action (Enter ADD, DELETE, or —)	**System** (Two letter code for systems affected by results)
ADD	7127

Reference Numbers – Other References (references to PassPort products)

Doc Services Action (Enter ADD, DELETE, or —)	**Type** (e.g. AR, EC, WO, etc)	**Reference** (e.g. AR No, EC No, WO No, etc)	**Sub** (AR Assign No, WO Task No, etc.)	**Title**
ADD	EC	70139		ISFSI Auxiliary Building Crane Upgrades (FHCR-5)
ADD	AR	429218		Calc. S10-0049 requires validation with Calc. S09-0036, EC 70139, and DCD
ADD	AR	441330		Verify crane vendor qualification calculation has justification for using ANSYS Beam188 vs Beam44.

Legend: ADD = New data record to be added to PassPort; REV = Change revision level of a referenced Controlled Document, DELETE = Existing data record to be deleted; — = Existing PassPort data that is to be retained; Bold Faced column heading = PassPort data label

Input Document References – Controlled Documents with Cross References

Doc Services Action (Enter ADD, REV, DELETE, or —)	**Doc. Type** (e.g. CALC, DWG, NPAS, POM, etc)	Document **Sub-Type**	**Document** ID (e.g., Calc No., Dwg. No., Procedure No)	**Sheet** (Dwg. sheet number if Applicable)	Doc **Rev**	**Minor Rev** (for Calc Amendments)	**Ref Type** (for NPAS Docs)
ADD	CALC		S09-0036		0		

Description Codes (Key Words)

Doc Services Action (Enter ADD, DELETE, or —)	**Code** (Codes for Key Words) (To be recorded as document description codes in PassPort)
ADD	ISFSI
ADD	AUXILIARY BUILDING
ADD	FHCR-5
ADD	OVERHEAD CRANE

Output **Document References** (Doc Service is to open listed documents and add or delete this Calc as a reference)

Doc Services Action (Enter ADD, DELETE, or —)	**Document Type** (e.g. CALC, DWG, TAG, PROCEDURE, SOFTWARE)	Document **Sub-Type**	**Document** ID (e.g., Calc No., Dwg. No., Procedure No., Software name and version)	**Revision**	Action Tracking (AR number or EC number that will track revision of affected document for the results of this calculation)

Equipment Database Data (For update of PassPort Equipment Database information)

Equipment Document References

Config Mgt Action (Enter ADD, DELETE, or —)	**Equipment Tag**	**Equipment Type** (includes SFTAPL for analysis software)	Relationship to Calc. (e.g. equipment operation affected by results, equipment design affected by results, analysis software)

Legend: ADD = New data record to be added to PassPort; REV = Change revision level of a referenced Controlled Document,
DELETE = Existing data record to be deleted; — = Existing PassPort data that is to be retained;
Bold Faced column heading = PassPort data label

Record of Lead Review

Document S10-0049 **Revision** A

The signature below of the Lead Reviewer records that:
- the review indicated below has been performed by the Lead Reviewer;
- appropriate reviews were performed and errors/deficiencies (for all reviews performed) have been resolved and these records are included in the design package;
- the review was performed in accordance with EGR-NGGC-0003.

☒ **Design Verification Review** ☐ **Engineering Review** ☐ **Owner's Review**
- ☒ Design Review
- ☐ Alternate Calculation
- ☐ Qualification Testing

☐ **Special Engineering Review**_____

☐ YES ☐ N/A **Other Records are attached.**

John Staples	John F. Staples	**Civil/Structural**	**9/30/2010**
Lead Reviewer	**(print/sign)**	**Discipline**	**Date**

Item No.	Deficiency	Resolution
1)	In all ANSYS models, change the CE's which define the relative movement between the trolley and the bridge to match those supplied by the crane-vendor.	The comments have been incorporated.
2)	Make editorial changes as shown on hard copy review document.	The comments have been incorporated.
3)		
4)		
5)		
6)		
7)		
8)		

FORM EGR-NGGC-0003-2-10
This form is a QA Record when completed and included with a completed design package. Owner's Reviews may be processed as stand alone QA records when Owner's Review is completed.

Document S10-0049 **Revision** A

The signature below of the Lead Reviewer records that:
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- appropriate reviews were performed and errors/deficiencies (for all reviews performed) have been resolved and these records are included in the design package;
- the review was performed in accordance with EGR-NGGC-0003.

☐ **Design Verification Review** ☐ **Engineering Review** ☒ **Owner's Review**
- ☐ Design Review
- ☐ Alternate Calculation
- ☐ Qualification Testing

☐ **Special Engineering Review**_____

☐ YES ☐ N/A **Other Records are attached.**

Ranganath, Casaba
Owner's Review - Lead
2010.10.26 06:50:13 -04'00'

Casaba Ranganath **Lead Reviewer (print/sign)**	**Civil/Structural** **Discipline**	**Date**

Item No.	Deficiency	Resolution
1)	Section 2.2: It is stated in the second paragraph that the solution settings for the mode and mode shape extractions should be maintained. Even if the extraction solution settings are different should not the results for both ANSYS and STRUDL model be compatible. Clarify	The solution settings should not substantially alter the results. However, changes in the solution settings may cause some results to not be calculated and these results would then be omitted in subsequent analyses. Thus, solution settings that capture the complete dynamic behavior of the structure slightly beyond the 0-33 Hz frequency range of interest (Ref 3.5) are provided in the attachments. Nevertheless, the statement is possibly misleading and was removed.
2)	Section 4.4.1.4: Editorial: Under Notes 1 delete "during" in the first line.	This comment has been incorporated.
3)	Section 4.4.1.5: Is the 1 g load applied in each direction includes the self weight of the structure and the crane load.	Yes, the 1g load includes the building selfweight, crane loads and 10% floor live load.

4)	Section 4.5.1: Why the comparison for the coupled building\crane model performed for "hook up" configuration only. Why the comparison not done in the "hook down" position.	A single hook position was used for expediency in the building/crane coupled analyses; the "hook up" configuration was not preferentially chosen over the "hook down" configuration. Agreement between the GT STRUDL and ANSYS stand-alone crane models is established in both "hook up" and "hook down" configurations (Section 4.5.2). It is concluded that the ANSYS and GT STRUDL building/crane coupled models in the crane "hook down" configuration will likewise perform similarly.
5)	Table 3: Note 1 is not very clear, for example at Node 8157 the GT STRUDL force is 0 and in ANSYS it is -39, which is a significant difference. Needs more clarification on this statement.	Note 1 has been expanded to better explain the rationale in ignoring specific comparisons between ANSYS and GT STRUDL results. Note 1 now reads: *The discrepancy between the ANSYS and GT STRUDL predictions at this location are attributed to computational inaccuracies associated with the small magnitudes of these reactions compared to the 65,000+ lb maximum predicted reaction. Since these reactions are less than 1% of the maximum predicted reaction, the discrepancy between the ANSYS and GT STRUDL results are considered unimportant and are neglected when calculating the Max. Absolute % Difference.* Similar changes were made to Note 1 in Tables 4, 5, 9, 11 and 13.
6)	Table 11: Same comment as Item 5. In case of Node 101 there is a significant difference in the GT STRUDL force and ANSYS force (23.5%). Why is this considered not significant. Need clarification about the statement in Note 1.	The requested clarification has been made in a manner similar to that shown in response to comment 5.
7)	Table 23: The displacements for stand alone model is very high and the frequency in Table 24 is also very high compared to the coupled model, which has low displacement (Table 13) and lower frequency (Table 15). Higher displacements should have lower frequency, clarify.	Certainly, a stiff system will have higher frequencies and, under equivalent loads, lower displacements relative to a softer system. However, it is difficult to show this by comparing results from Tables 23 and 24 (numbered Tables 24 and 25 in this revision) which reflect results for the stand-alone crane model to results from Tables 13 and 15 which are for the coupled bldg/crane model. These structures are very different in mass and stiffness distribution and although the hook and cable portion of the stand-alone crane model can be seen to act as a single DOF system, there is no readily-identifiable corresponding mode in the building/crane coupled model.

8)	Provide a table of comparison between STRUDL and ANSYS with regard to mass participation factor for the first 40 modes.	The requested mass participations are provided in Table 16 for the coupled building/crane structure and in Tables 26 and 28,respectively, for the stand-alone crane in the “hook up” and “hook down” configurations.

FORM EGR-NGGC-0003-2-10
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Document S10-0049 **Revision** B

The signature below of the Lead Reviewer records that:
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☐ **Design Verification Review** ☐ **Engineering Review** ☒ **Owner's Review**
- ☐ Design Review
- ☐ Alternate Calculation
- ☐ Qualification Testing

☐ **Special Engineering Review**_____

☐ YES ☐ N/A **Other Records are attached.**

Ranganath, Casaba
Owner's Review - Lead
2010.10.26 06:57:29 -04'00'

Casaba Ranganath **Civil/Structural**
Lead Reviewer (print/sign) **Discipline** **Date**

Item No.	Deficiency	Resolution
1	Need to set up AR for tracking completion of S09-0036 Calculation, Design Criteria Document FPC118-PR-001, and EC 70139, which are referenced in this calculation. All other comment resolutions are acceptable.	Comment incorporated, created AR to track reference documents.

FORM EGR-NGGC-0003-2-10
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Document S10-0049 **Revision** 1

The signature below of the Lead Reviewer records that:
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- appropriate reviews were performed and errors/deficiencies (for all reviews performed) have been resolved and these records are included in the design package;
- the review was performed in accordance with EGR-NGGC-0003.

☒ **Design Verification Review** ☐ **Engineering Review** ☐ **Owner's Review**
- ☒ Design Review
- ☐ Alternate Calculation
- ☐ Qualification Testing

☐ **Special Engineering Review** _____

☐ YES ☐ N/A **Other Records are attached.**

Matt Keeney Matt Keeney	**Civil/Structural**	1/11/2011
Lead Reviewer (print/sign)	**Discipline**	**Date**

Item No.	Deficiency	Resolution
1)	Applicable comments are marked in red on separate hardcopy printout of this document. See attached.	All comments have been incorporated.
2)		
3)		
4)		
5)		
6)		
7)		
8)		

FORM EGR-NGGC-0003-2-10
This form is a QA Record when completed and included with a completed design package. Owner's Reviews may be processed as stand alone QA records when Owner's Review is completed.

Document S10-0049 **Revision** 1

The signature below of the Lead Reviewer records that:
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- appropriate reviews were performed and errors/deficiencies (for all reviews performed) have been resolved and these records are included in the design package;
- the review was performed in accordance with EGR-NGGC-0003.

☐ **Design Verification Review** ☐ **Engineering Review** ☒ **Owner's Review**
- ☐ Design Review
- ☐ Alternate Calculation
- ☐ Qualification Testing

☐ **Special Engineering Review** _____

☐ YES ☐ N/A **Other Records are attached.**

Ranganath, Casaba
2011.01.11 14:43:34 -05'00'

Casaba Ranganath		**Civil/Structural**	
Lead Reviewer	**(print/sign)**	**Discipline**	**Date**

Item No.	Deficiency	Resolution
1)	Page 1, 2nd Paragraph: Change "will" to "is".	Comments incorporated.
2)	Page iii: Show revision bars for Attachments 7 to 11, 16 to 19, 22 to 24, and 26 and 27. No other comments; Please issue signed copy of Revision 1 with the above changes.	Revision bars are not required for these attachments on page iii, since no changes were made to the title or total page number from Rev. 0 of this calculation.
3)		
4)		
5)		
6)		
7)		
8)		

FORM EGR-NGGC-0003-2-10
This form is a QA Record when completed and included with a completed design package. Owner's Reviews may be processed as stand alone QA records when Owner's Review is completed.

Record of Interdisciplinary Reviews

PART I — DESIGN ASSUMPTION / INPUT REVIEW: APPLICABLE ☐ Yes ☒ No

The following organizations have reviewed and concur with the design assumptions and inputs used in this calculation:

Systems Engineering

Name	Signature	Date

Operations

Name	Signature	Date

Other

Name	Signature	Date

PART II — RESULTS REVIEW:

The following organizations are aware of the impact of the results of this calculation (on designs, programs and procedures):

Systems Engineering
☐ Yes ☒ NO

Name	Signature	Date

Comments:

Operations
☐ Yes ☒ NO

Name	Signature	Date

Comments:

Other

Name	Signature	Date

Comments:

Other

Name	Signature	Date

Comments:

Other

Name	Signature	Date

Comments:

1.0 PURPOSE AND SCOPE

The Progress Energy Crystal River Unit 3 (CR3) Auxiliary Building crane supporting steel structure is being evaluated for overhead FHCR-5 crane replacement (EC 70139, Ref. 3.8). Per ASME NOG-1 (Ref. 3.4), a coupled building/crane analysis is required. The coupled building/crane analysis for qualification of the building structure is being conducted in a separate effort (Ref. 3.6) and utilizes the GT STRUDL (Ref. 3.2) finite element analysis computer program. The purpose of this calculation is to develop an ANSYS (Ref. 3.3) computer model that replicates the results of the GT STRUDL model used in qualification of the Auxiliary Building steel structure. This ANSYS model will be used by the crane vendor in a coupled crane/building analysis for qualification of the crane structure.

Modeling of the connections between the crane trolley and bridge in the ANSYS models is changed in Revision 1. This change insures restraints on the nodes at the trolley-bridge connections, per Ref 3.4, involve only translations and no rotations. Details are provided in Section 4.4. Consequently, all ANSYS models are revised/re-run and comparison tables between the revised ANSYS and (unchanged) GT STRUDL results are updated.

2.0 CONCLUSIONS

An ANSYS computer model of the CR3 Auxiliary Building steel structure is developed that replicates the results of the GT STRUDL coupled building/crane model used in qualification of the Auxiliary Building steel structure. Structural equivalency of the two models is demonstrated: equivalent stiffnesses are shown by comparisons of predicted deflections and reactions under identical force loadings; equivalent mass properties are shown by comparisons of these variables to unit accelerations; and, equivalent dynamic response is demonstrated by comparisons of predicted modes and mode shapes. These results are shown in Section 4.5.1. The equivalent structural response of the crane portion of the GT STRUDL and ANSYS models is similarly demonstrated as an important intermediate result (Section 4.5.2).

During this effort, it was determined that the GT STRUDL member formulations are more compatible with ANSYS BEAM44 elements than with ANSYS BEAM188 elements as specified in the vendor-supplied crane models. Thus, the ANSYS models developed in this calculation utilize BEAM44 elements using ANSYS version 11.0 (Ref. 3.3). More details are provided in Section 4.4.1.3. This subject matter will be addressed in the crane vendor's crane qualification calculation and tracked by NTM Type AR 00441330.

3.0 REFERENCES

3.1 AISC 6th Edition, Specification for Structural Steel Buildings, Allowable Stress Design, 1963

3.2 GT STRUDL Computer User Manual, Georgia Institute of Technology, Version 30 (see note below)

3.3 ANSYS Version 11.0 (see note below)

3.4 ASME NOG-1, Rules for Construction of Overhead and Gantry Cranes (Top Running Bridge, Multiple Girder), 2004

3.5 FPC118-PR-001, Design Criteria Document for Crystal River Unit 3 Auxiliary Building Evaluation for Crane Upgrades, Revision 1 (Attachment Z23 of Ref. 3.8) (see Section 4.1)

3.6 S09-0036, Auxiliary Building Overhead Crane (FHCR-5) Supporting Steel Structure - Analysis, Revision 0 (see Section 4.1)

3.7 PN036539 Transmittal 04-4: Morris Material Handling Calculation 36539-29, Rev. 1, Crane Stick Model, Dec. 9, 2010. (Attachment 31)

3.8 EC 70139, ISFSI Auxiliary Building Crane Upgrades (FHCR-5), Rev. 0 (see Section 4.1)

Note: GT STRUDL and ANSYS are commercially available computer software programs that are procured and maintained under the Enercon Services QA program.

4.0 BODY OF CALCULATION

4.1 ASSUMPTIONS

Design Criteria Document FPC118-PR-001 (Ref. 3.5), Auxiliary Building Overhead Crane (FHCR-5) Supporting Steel Structure - Analysis S09-0036 (Ref.3.6), and Engineering Change (EC) 70139 (Ref. 3.8) are not official design inputs. This assumption is unverified and will require verification once all listed documents are issued. Assumption is tracked by NTM Type AR 00429218.

4.2 DESIGN INPUTS

4.2.1 CRANE DETAILS

The configuration of the crane, e.g. geometry, mass distribution, etc., is based on information provided by the crane vendor (Ref. 3.7). The crane vendor provided two versions of an ANSYS crane model. One model (named “HookUp12092010.cdb”) has the crane hook in the up position and the other one (named “HookDown12092010.cdb”) has the hook in the down position.

4.2.2 BUILDING DETAILS

All building details, including geometry, material and section properties, and loadings to simulate the weight of unmodeled portions of the building, are extracted from Ref. 3.6. Additionally, all modeling techniques and simplifications employed in the Ref. 3.6 GT STRUDL model were incorporated into the ANSYS models developed in this calculation.

4.3 ACCEPTANCE CRITERIA

Per Ref. 3.5, the GT STRUDL and ANSYS models must demonstrate a reasonable level of similarity in order to ensure compatibility between the building qualification and the crane design.

For both the crane and the building/crane models, the following checks will be performed:

- Identical concentrated static loads will be applied at various points in each of the principal directions of the GT STRUDL and ANSYS structural models. Displacements and reactions due to the concentrated loads will be compared to ensure the two models have equivalent stiffness properties.
- To compare the mass properties of the models, unit accelerations will be applied in each of the principal directions. The displacements and reactions due to these accelerations will be compared to ensure equivalent mass distribution in the two models.
- Modal frequencies and mode shapes for those frequencies that show significant excitation of the crane structure and/or building structural components in the proximity of the crane will be compared to ensure the GT STRUDL and ANSYS models have equivalent vibrational characteristics.

4.4 METHODOLOGY

A coupled building/crane model is developed using ANSYS. The crane portion of this model is based on a stand-alone ANSYS crane model supplied by the crane vendor (Ref. 3.7) and the Auxiliary Building steel structure portion is obtained from the GT STRUDL building qualification model (Ref. 3.6).

Structural equivalency of the two models is evaluated in three steps. First, predicted displacements and reactions under identical force loadings are compared. Agreement will insure equivalent stiffness

properties for the two models. Next, predicted displacements and reactions under identical accelerations are compared. Agreement will insure equivalent mass properties for the two models. Finally, modes and mode shapes in the range expected to be of seismic importance (Ref. 3.5) will be extracted and compared for both models. Agreement will insure the two models have equivalent vibrational characteristics. As an important intermediate result, the equivalent structural response of the crane portions of the two models is similarly demonstrated.

4.4.1 ANSYS COUPLED BUILDING/CRANE MODEL

Three different ANSYS coupled building/crane models, depicting the crane in three different locations relative to the building, are developed. This is accomplished by independently coding, in ANSYS syntax, the details shown in the GT STRUDL models (Ref. 3.6). The three crane locations are shown in Figure 1. These locations are considered broadly representative of the crane service locales.

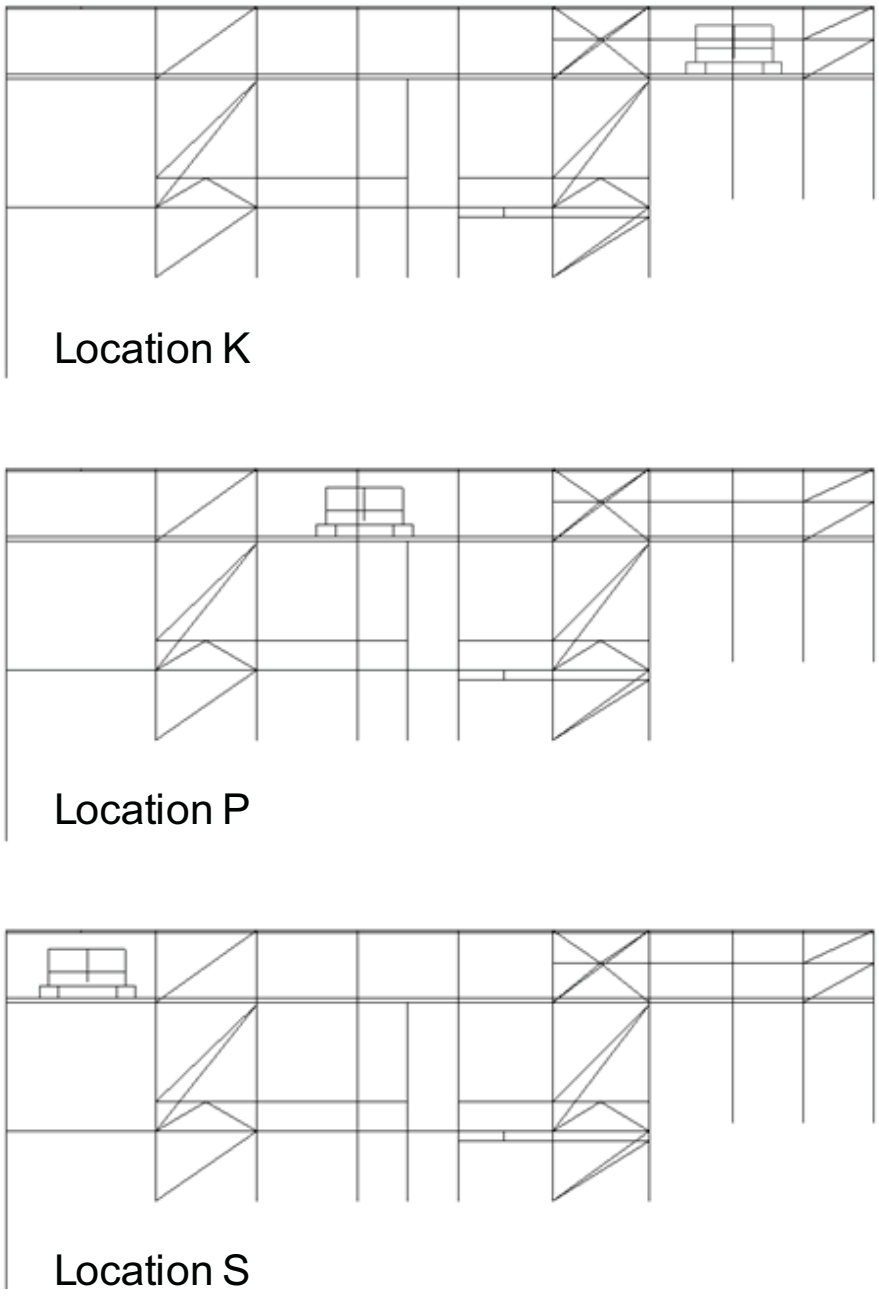


Figure 1. Positions of the Crane Relative to the Building

Connection requirements for coupling the crane trolley to the rail and the crane bridge to the runway rails, as specified in Ref. 3.4 and 3.5, are shown in Table 1 and Figure 2. These requirements are met in both the GT STRUDL and ANSYS models. However, different modeling techniques are utilized in the two softwares as detailed in the subsequent two subsections.

Table 1. Restraint Conditions at the Crane Nodes.

Node (See Figure 2)	Translation			Rotation		
	X	Y	Z	θ_x	θ_y	θ_z
A	Fixed	Fixed	Fixed	All Free		
B	Fixed	Free	Fixed			
C	Free	Fixed	Fixed			
D	Free	Free	Fixed			
E	Fixed	Fixed	Fixed			
F	Fixed	Fixed	Fixed			
G	Free	Fixed	Fixed			
H	Free	Fixed	Fixed			

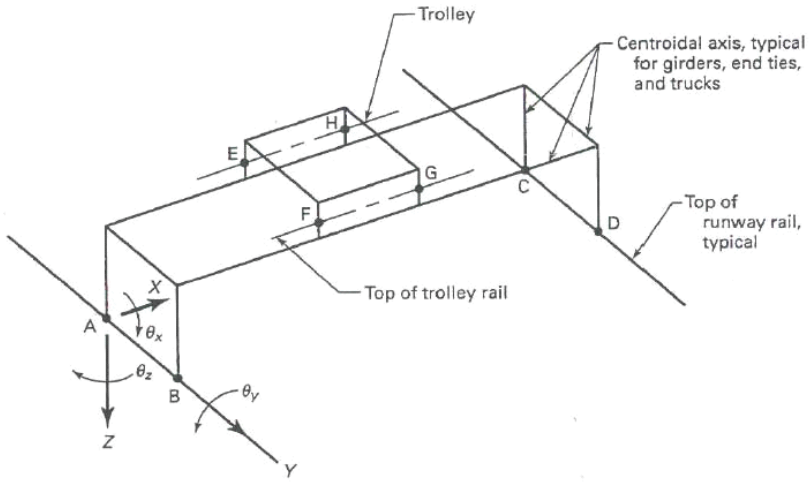


Figure 2. Crane Boundary Conditions in Accordance with ASME NOG-1 (Ref. 3.4)

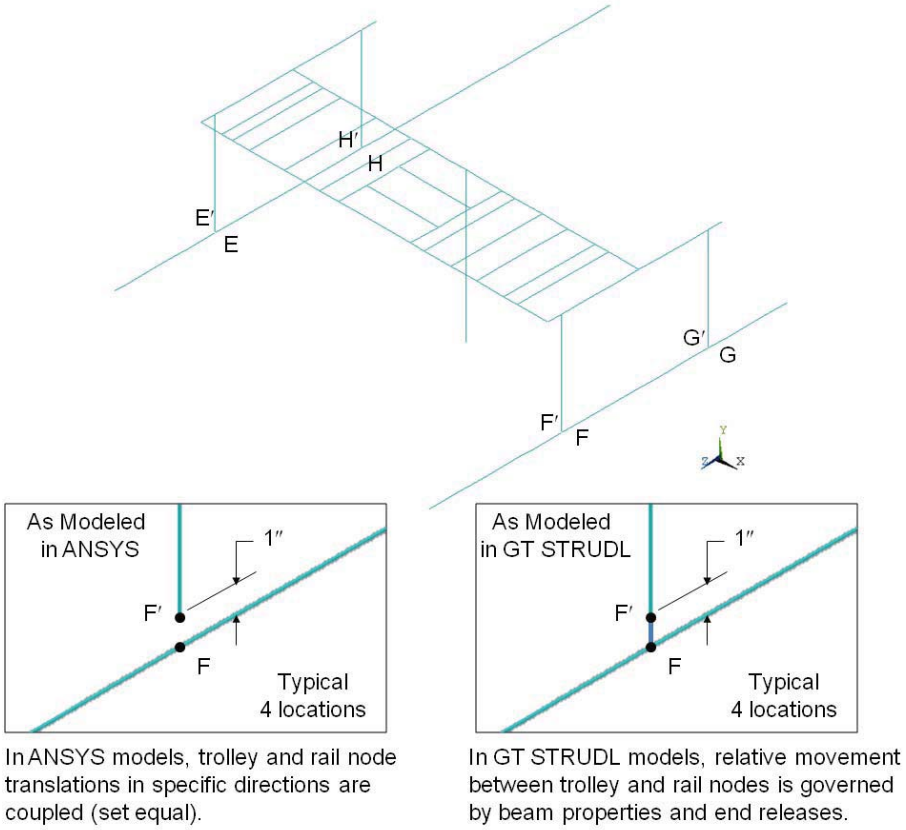
4.4.1.1 BRIDGE-TO-RAIL CONNECTION

The bridge-to-rail connections, in compliance with Ref. 3.4, are established as follows. In the ANSYS models, constraint equations are used to restrict the relative motion between two coincident nodes at each of the four locations identified as A, B, C, and D in Figure 2. One of these nodes is assigned to the bridge and the other is assigned to the bridge rail. In the GT STRUDL models, the same restrictions are enforced by beam end force and moment releases.

4.4.1.2 TROLLEY-TO-RAIL CONNECTION

Trolley-to-rail connections are defined in compliance with Ref. 3.4 and are based on the methodology embedded in the vendor-supplied ANSYS crane model (Ref. 3.7). For modeling purposes, the bottom-most point of each trolley wheel is understood to contact the rail. These points correspond to nodes E, F, G, and H of Figures 2 and 3. In the Ref 3.7 ANSYS model, a second set of nodes is defined at a 1 inch vertical distance directly above these nodes. The nodes at the higher elevation are connected to the trolley structure and the nodes at the lower elevation are connected to the trolley rail. This is illustrated in Figure 3 where nodes at the higher elevation are denoted by E′, F′, G′ and H′ and may be considered the bottom-most points on the trolley wheels. In the ANSYS models (both vendor-supplied and those developed herein), the four connections between the trolley and trolley rails are defined by coupling translations in specific directions as shown in Table 1. In the GT STRUDL model (Ref. 3.6), the restrictions shown in Table 1 are enforced by beam end force and moment releases at locations E

and F and, at locations G and H, by introducing two 1 inch long vertical beam elements to connect the trolley rail nodes to the trolley (wheel) nodes and releasing the appropriate forces and moments.



In ANSYS models, trolley and rail node translations in specific directions are coupled (set equal).

In GT STRUDL models, relative movement between trolley and rail nodes is governed by beam properties and end releases.

Figure 3. TROLLEY-RAIL CONNECTION

4.4.1.3 CRANE DETAILS

Details of the crane portion of the ANSYS coupled building/crane model are derived from the vendor-supplied stand-alone crane model (Ref. 3.7). The node coordinates are altered to coincide with the crane location and orientation in the GT STRUDL coupled building/crane model.

As previously stated, a major objective is that the ANSYS and GT STRUDL coupled building/crane models have equivalent structural response. However, no GT STRUDL beam element exactly corresponds to the ANSYS BEAM188 element used in the crane vendor-supplied ANSYS models (Ref. 3.7). Thus, the crane portion of the ANSYS coupled building/crane models included in this calculation employ ANSYS BEAM44 element. The ANSYS BEAM44 element used in this calculation is compatible with the GT STRUDL space frame beam element.

4.4.1.4 MATERIAL PROPERTIES

As described in Ref. 3.6, only the steel portions of the building and crane are explicitly modeled. Values for steel properties used herein were extracted from the GT STRUDL model (Ref. 3.6) and from the vendor-supplied crane model (Ref. 3.7) and are shown in Table 2.

Table 2. Material Properties

Young's Modulus, E [ksi]	Shear Modulus, G [ksi]	Poisson's Ratio, v	Density, ρ [lb/ft^3]
29,000 Building Steel (Ref. 3.1, 3.5, 3.6) 30,000 Crane (Ref. 3.7)	11,000 GT STRUDL (Ref. 3.2) 11,150 ANSYS (see Note 1)	0.30 (see Note 1)	490 (Ref. 3.5) (see Note 2)

Notes:
1. The value of G specified in the ANSYS input files (Ref. 3.7) is overridden by the value $G=E/(2(1+v))$.
2. Some portions of the vendor-supplied crane have other values for density. These vendor-supplied densities were maintained in all models.

4.4.1.5 LOADS

As stated in Ref. 3.5, concentrated forces and unit accelerations are to be applied to determine whether the stiffness and mass properties, respectively, are equivalent. Details of the force loading are shown in Figure 4. The acceleration loading is accomplished by separately applying a 1g load in each direction. This 1g load includes the building selfweight, crane loads and 10% floor live load.

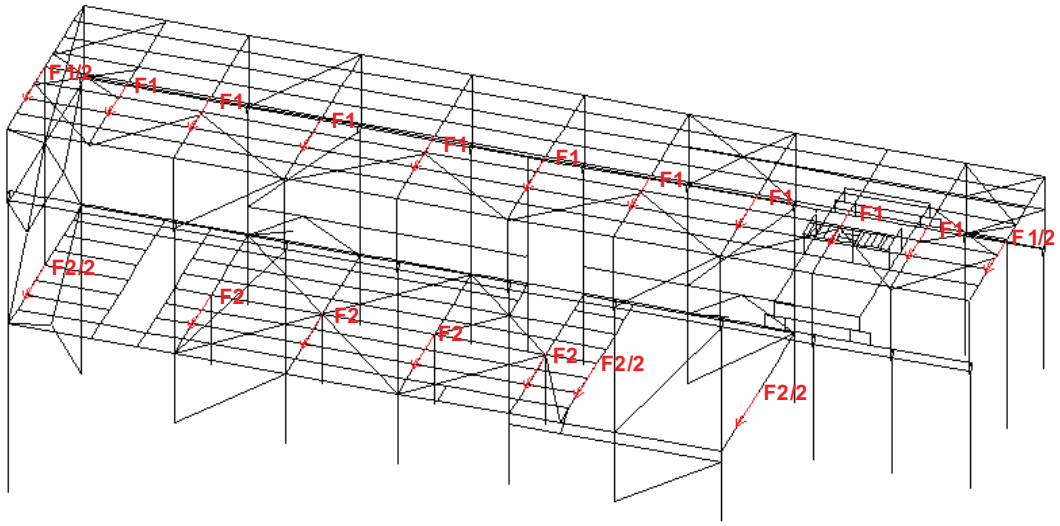


Figure 4. Static Force Loading on Coupled Building/Crane Models.

4.4.1.6 COMPUTER FILES

The ANSYS coupled building/crane models, at crane locations K, P and S, for static load analyses are included as Attachments 7 through 9, respectively. The corresponding ANSYS models for modal

analyses are included as Attachments 10 through 12. The GT STRUDL coupled building/crane models, at crane locations K, P and S, for all analyses are included as Attachments 13 through 15, respectively.

As subsequently discussed in Section 4.5.2, stand-alone crane models were developed from the ANSYS and GT STRUDL coupled building/crane models. The ANSYS stand-alone crane models are included as Attachments 1 and 2 in the "hook up" configuration for static loadings and modal analysis, respectively. The corresponding models in the "hook down" configuration are included as Attachments 3 and 4. The GT STRUDL stand-alone crane model in the "hook up" configuration for all analyses is included as Attachment 5. The corresponding GT STRUDL model in the "hook down" configuration is included as Attachment 6. Additionally, the vendor-supplied ANSYS stand-alone crane models (Ref. 3.7), in both "hook up" and "hook down" configurations are included as Attachment 31.

4.4.2 ANALYSIS TECHNIQUES

4.4.2.1 STATIC ANALYSES

Static analyses are performed using both GT STRUDL and ANSYS to compare displacements and reactions under concentrated loads and unit accelerations. By default, both programs utilize the direct elimination (Gaussian) method for solving static problems and no special settings are required.

4.4.2.2 MODAL ANALYSES

Using both the GT STRUDL and ANSYS programs, modal analyses are performed to compare the predicted frequencies and mode shapes for the coupled building/crane models involving significant excitation of the crane and/or building in the proximity of the crane are extracted. For the coupled building/crane models, the Block Lanczos solution method is employed to extract up to 300 modes in the 0.0 to 34.0 Hz range. This range encompasses the 0.0 to 33.0 Hz range of interest defined in Ref. 3.5. (As subsequently shown, fewer modes were actually found using either ANSYS or GT STRUDL.) For the stand-alone crane models, the Block Lanczos method was used to extract the first 40 modes and mode shapes.

4.5 CALCULATIONS

4.5.1 COUPLED BUILDING/CRANE COMPARISONS

Static forces are applied to the coupled building/crane model in both the GT STRUDL and ANSYS coupled building/crane models as depicted in Figure 4. The crane is positioned in one of three locations, "K", "P" or "S" as shown in Figure 1. In all comparisons, the crane is in the "hook up" configuration. Predicted reactions with the crane in the "K" location for X, Y and Z direction loadings are compared in Tables 3 through 5, respectively. The resulting predicted displacements are compared in Tables 6 through 8. It is evident from Tables 3 through 8 that there is essentially no difference in the stiffness characteristics of the two coupled building/crane models. Predicted reactions under 1g accelerations in each principal direction are compared in Tables 9 through 11. The resulting predicted displacements are compared in Tables 12 through 14. It is evident from Tables 9 through 14 that there is essentially no difference in the mass properties of the two coupled building/crane models. Although not tabulated, results for force and acceleration loadings are similar for the crane in the "P" and "S" locations. This can be seen from the results in Attachments 23, 24, 29 and 30.

The GT STRUDL analysis identified 257 modes and the ANSYS analyses identified 259 modes in the frequency range of interest (0.0 to 33.0 Hz per Ref. 3.5) for the coupled building/crane structure with the crane in location "K" (Figure 1). The first forty of these predicted resonant frequencies are

compared in Table 15. Note that some modes are identified in the GT STRUDL analysis but not in the ANSYS analysis, and vice versa. In all such cases, these modes have very low mass participation (less than 1% in any of the three directions) and are thus considered inconsequential. This is evident in Table 16 which shows mass participation on a percentage basis for all modes. Good agreement is demonstrated in all other modes, with modal frequencies differing by just 0.11 Hz or less. Similar results were obtained with the crane in locations “P” and “S” (Figure 1). This can be seen from the results in Attachments 26, 27, 29 and 30.

4.5.2 STAND-ALONE CRANE COMPARISONS

Structural behavior of the crane portion of the GT STRUDL building/crane model is compared to that of the vendor-supplied stand-alone ANSYS crane model (Ref. 3.7). This is accomplished by extracting the crane portions from the GT STRUDL and ANSYS coupled building/crane models and storing them as stand-alone crane models.

A force is applied to the node representing the crane hook in both the GT STRUDL and ANSYS stand-alone crane models. Predicted reactions of the stand-alone crane models in the “hook up” configuration for X, Y and Z loading directions are compared in Tables 17 through 19, respectively. The resulting predicted maximum displacements are compared in Table 20. It is evident from Tables 17 through 20 that there is essentially no difference in the stiffness characteristics of the two stand-alone crane models. Predicted reactions under 1g accelerations in each principal direction are compared in Tables 21 through 23. The resulting predicted maximum displacements are compared in Table 24. It is evident from Tables 21 through 24 that there is essentially no difference in the mass properties of the two stand-alone crane models.

Both the GT STRUDL and ANSYS analyses determined the first 40 modes to be below 24 Hz for the stand-alone crane in either configuration. These predicted resonant frequencies are compared in Tables 25 and 27 for the “hook up” and “hook down” configurations, respectively. Good agreement is demonstrated since modal frequencies differ by 0.5 Hz or less for all modes. Corresponding mass participations are shown on a percentage basis in Tables 26 and 28.

Table 3. Predicted Reactions of Coupled Building/Crane Models – "K" Crane Position, FX Loading

GT STRUDL		ANSYS		%DIFF	
NODE	FORCE [LBS]	NODE	FORCE [LBS]		
1	131	1	131	0.00	
12	112	12	111	0.89	
101	-24632	101	-24629	0.01	
111	148	111	147	0.68	
112	-23427	30112	-23399	0.12	
123	0	123	0	-	
1101	-466	1101	-467	-0.21	
1111	209	1111	207	0.96	
1112	-17037	31112	-17012	0.15	
1123	0	1123	0	-	
2101	150	2101	152	-1.33	SEE NOTE 1
2111	10	2111	8	20.00	SEE NOTE 1
2112	-65093	32112	-65170	-0.12	
2122	1	2122	7	-600.00	SEE NOTE 1
2123	0	2123	0	-	
3101	392	3101	394	-0.51	
3111	-177	3111	-175	1.13	
3112	0	33112	0	-	
3123	0	3123	0	-	
4101	-24434	4101	-24432	0.01	
4111	-10653	4111	-10600	0.50	
5101	542	5101	544	-0.37	
5111	-215	5111	-214	0.47	
6101	-219	6101	-220	-0.46	
7101	-186	7101	-187	-0.54	
7111	-284	7111	-283	0.35	
8100	0	8100	0	-	
8101	-218	8101	-219	-0.36	
8111	-154	8111	-154	0.41	
8156	0	8156	-3	-	SEE NOTE 1
8157	0	8157	-39	-	SEE NOTE 1
			MAX ABSOLUTE DIFF [%]:	**1.13**	

Note 1: The discrepancy between the ANSYS and GT STRUDL predictions at this location are attributed to computational inaccuracies associated with the small magnitudes of these reactions compared to the 65,000+ lb maximum predicted reaction. Since these reactions are less than 1% of the maximum predicted reaction, the discrepancy between the ANSYS and GT STRUDL results are considered unimportant and are neglected when calculating the Max. Absolute % Difference.

Table 4. Predicted Reactions of Coupled Building/Crane Models – "K" Crane Position, FY Loading

GT STRUDL		ANSYS		%DIFF	
NODE	FORCE [LBS]	NODE	FORCE [LBS]		
1	76600	1	76604	-0.01	
12	76877	12	76872	0.01	
101	32960	101	32949	0.03	
111	37879	111	37849	0.08	
112	0	30112	0	-	
123	214462	123	214510	-0.02	
1101	32445	1101	32406	0.12	
1111	27699	1111	27677	0.08	
1112	0	31112	0	-	
1123	213659	1123	213710	-0.02	
2101	27565	2101	27539	0.10	
2111	27338	2111	27314	0.09	
2112	0	32112	0	-	
2122	276	2122	276	-0.07	
2123	213959	2123	214010	-0.02	
3101	58049	3101	58026	0.04	
3111	56063	3111	56038	0.04	
3112	0	33112	0	-	
3123	215111	3123	215160	-0.02	
4101	43814	4101	43825	-0.02	
4111	39957	4111	39954	0.01	
5101	81160	5101	81156	0.00	
5111	84500	5111	84500	0.00	
5112	0	5112	0	-	
6101	19098	6101	19085	0.07	
7101	19669	7101	19676	-0.04	
7111	30283	7111	30283	0.00	
8100	19193	8100	19193	0.00	
8101	213	8101	213	-0.05	
8111	75	8111	76	-1.02	SEE NOTE 1
8156	-1081	8156	-1077	0.41	
8157	7176	8157	7180	-0.06	
			MAX ABSOLUTE DIFF [%]:	**0.41**	

Note 1: The discrepancy between the ANSYS and GT STRUDL predictions at this location are attributed to computational inaccuracies associated with the small magnitudes of these reactions compared to the 215,000+ lb maximum predicted reaction. Since these reactions are less than 1% of the maximum predicted reaction, the discrepancy between the ANSYS and GT STRUDL results are considered unimportant and are neglected when calculating the Max. Absolute % Difference.

Table 5. Predicted Reactions of Coupled Building/Crane Models – "K" Crane Position, FZ Loading

GT STRUDL		ANSYS		%DIFF	
NODE	FORCE [LBS]	NODE	FORCE [LBS]		
1	-1325	1	-1326	-0.08	
12	-16709	12	-16728	-0.11	
101	-2482	101	-2481	0.04	
111	-1277	111	-1278	-0.08	
112	0	30112	0	-	
123	0	123	0	-	
1101	-3976	1101	-3979	-0.08	
1111	-3988	1111	-3990	-0.05	
1112	0	31112	0	-	
1123	0	1123	0	-	
2101	629	2101	628	0.16	
2111	3914	2111	3910	0.10	
2112	-69654	32112	-69644	0.01	
2122	86	2122	86	0.00	
2123	0	2123	0	-	
3101	-7616	3101	-7615	0.01	
3111	-6820	3111	-6820	0.00	
3112	0	33112	0	-	
3123	0	3123	0	-	
4101	-4147	4101	-4145	0.05	
4111	5719	4111	5719	0.00	
5101	6480	5101	6475	0.08	
5111	8051	5111	8043	0.10	
5112	-31425	5112	-31407		
6101	0.95	6101	0.97	-2.11	SEE NOTE 1
7101	-2157	7101	-2157	0.00	
7111	-2534	7111	-2535	-0.04	
8100	0	8100	0	-	
8101	-2044	8101	-2046	-0.10	
8111	-1908	8111	-1910	-0.10	
8156	-24149	8156	-24129	0.08	
8157	-8171	8157	-8171	0.00	
		MAX ABSOLUTE DIFF [%]:		**0.16**	

Note 1: The discrepancy between the ANSYS and GT STRUDL predictions at this location are attributed to computational inaccuracies associated with the small magnitudes of these reactions compared to the 69,600+ lb maximum predicted reaction. Since these reactions are less than 0.1% of the maximum predicted reaction, the discrepancy between the ANSYS and GT STRUDL results are considered unimportant and are neglected when calculating the Max. Absolute % Difference.

Table 6. Predicted Displacements of Coupled Building/Crane Models – "K" Crane Position, FX Loading

GT STRUDL		ANSYS		%DIFF
NODE	DISPLACEMENT [IN.]	NODE	DISPLACEMENT [IN.]	
2	1.03432E-01	2	1.03450E-01	-0.02
19	1.65548E-01	19	1.65080E-01	0.28
27	2.71823E-01	27	2.71980E-01	-0.06
38	8.84610E-01	38	8.72250E-01	1.40
102	1.03991E-01	102	1.04010E-01	-0.02
118	1.64405E-01	118	1.63910E-01	0.30
128	2.68868E-01	128	2.69020E-01	-0.06
146	1.15686E-01	146	1.15710E-01	-0.02
152	8.87012E-01	152	8.74720E-01	1.39
1102	9.76713E-02	1102	9.76780E-02	-0.01
1118	1.61399E-01	1118	1.60830E-01	0.35
1146	1.13652E-01	1146	1.13670E-01	-0.02
1153	8.05010E-01	1153	7.93640E-01	1.41
2102	1.06853E-01	2102	1.06850E-01	0.00
2118	1.60660E-01	2118	1.60030E-01	0.39
2146	1.13621E-01	2146	1.13640E-01	-0.02
2152	8.88069E-01	2152	8.75960E-01	1.36
3102	1.05977E-01	3102	1.05990E-01	-0.01
3118	1.59351E-01	3118	1.58670E-01	0.43
3153	8.06763E-01	3153	7.95700E-01	1.37
4102	1.06813E-01	4102	1.06830E-01	-0.02
4118	1.57733E-01	4118	1.57000E-01	0.46
4152	8.87789E-01	4152	8.75900E-01	1.34
5102	1.03490E-01	5102	1.03500E-01	-0.01
5118	1.58447E-01	5118	1.57670E-01	0.49
5153	8.07712E-01	5153	7.96960E-01	1.33
6118	1.59696E-01	6118	1.58890E-01	0.50
6152	8.86431E-01	6152	8.74710E-01	1.32
7118	1.60716E-01	7118	1.59890E-01	0.51
7152	8.84215E-01	7152	8.72540E-01	1.32
8118	1.58664E-01	8118	1.57860E-01	0.51
8152	8.82277E-01	8152	8.70630E-01	1.32
		MAX ABSOLUTE DIFF [%]:		**1.41**

Table 7. Predicted Displacements of Coupled Building/Crane Models – "K" Crane Position, FY Loading

GT STRUDL		ANSYS		%DIFF
NODE	DISPLACEMENT [IN.]	NODE	DISPLACEMENT [IN.]	
2	-1.46565E-02	2	-1.46570E-02	0.00
19	-2.66126E-02	19	-2.66380E-02	-0.10
27	-1.52070E-01	27	-1.52090E-01	-0.01
38	-1.14721E-01	38	-1.14740E-01	-0.02
102	-2.91590E-03	102	-2.91440E-03	0.05
118	-1.87235E-02	118	-1.87430E-02	-0.10
128	-8.78990E-03	128	-8.78900E-03	0.01
146	-2.99359E-02	146	-2.99230E-02	0.04
152	-8.23794E-01	152	-8.23870E-01	-0.01
1102	-2.55890E-03	1102	-2.55580E-03	0.12
1118	-1.49665E-02	1118	-1.49790E-02	-0.08
1146	-2.96031E-02	1146	-2.95890E-02	0.05
1153	-7.47240E-01	1153	-7.47310E-01	-0.01
2102	-2.17410E-03	2102	-2.17200E-03	0.10
2118	-1.45879E-02	2118	-1.46030E-02	-0.10
2146	-3.01456E-02	2146	-3.01320E-02	0.05
2152	-8.24926E-01	2152	-8.25000E-01	-0.01
3102	-4.48590E-03	3102	-4.48410E-03	0.04
3118	-1.64879E-02	3118	-1.64950E-02	-0.04
3153	-7.42980E-01	3153	-7.43040E-01	-0.01
4102	-3.69930E-03	4102	-3.69950E-03	-0.01
4118	-1.49662E-02	4118	-1.49780E-02	-0.08
4152	-8.77236E-01	4152	-8.77310E-01	-0.01
5102	-6.35520E-03	5102	-6.35500E-03	0.00
5118	-2.08294E-02	5118	-2.08500E-02	-0.10
5153	-7.61410E-01	5153	-7.61460E-01	-0.01
6118	-4.02597E-01	6118	-4.02620E-01	-0.01
6152	-3.10720E+00	6152	-3.10720E+00	0.00
7118	-1.52721E-02	7118	-1.52960E-02	-0.16
7152	-8.02751E-01	7152	-8.02780E-01	0.00
8118	-6.41100E-04	8118	-6.40830E-04	0.04
8152	-1.23383E-02	8152	-1.23380E-02	0.00
			MAX ABSOLUTE DIFF [%]:	**0.16**

Table 8. Predicted Displacements of Coupled Building/Crane Models – "K" Crane Position, FZ Loading

GT STRUDL		ANSYS		%DIFF
NODE	DISPLACEMENT [IN.]	NODE	DISPLACEMENT [IN.]	
2	4.9031E-02	2	4.9090E-02	-0.12
19	7.8626E-02	19	7.8762E-02	-0.17
27	5.1833E-02	27	5.1895E-02	-0.12
38	7.9530E-02	38	7.9669E-02	-0.18
102	1.6583E-02	102	1.6569E-02	0.09
118	1.8852E-01	118	1.8824E-01	0.15
128	3.2974E-02	128	3.2998E-02	-0.07
146	1.6634E-02	146	1.6621E-02	0.08
152	1.8891E-01	152	1.8863E-01	0.15
1102	2.3937E-02	1102	2.3909E-02	0.12
1118	2.5896E-01	1118	2.5827E-01	0.27
1146	2.4171E-02	1146	2.4144E-02	0.11
1153	2.5939E-01	1153	2.5869E-01	0.27
2102	1.2280E-02	2102	1.2279E-02	0.01
2118	2.6193E-01	2118	2.6183E-01	0.04
2146	1.0392E-02	2146	1.0390E-02	0.02
2152	2.6269E-01	2152	2.6258E-01	0.04
3102	3.2733E-02	3102	3.2755E-02	-0.07
3118	2.7693E-01	3118	2.7724E-01	-0.11
3153	2.7732E-01	3153	2.7762E-01	-0.11
4102	3.7851E-02	4102	3.7853E-02	-0.01
4118	2.8735E-01	4118	2.8748E-01	-0.04
4152	2.8806E-01	4152	2.8818E-01	-0.04
5102	6.3522E-03	5102	6.3492E-03	0.05
5118	2.9827E-01	5118	2.9820E-01	0.02
5153	2.9912E-01	5153	2.9904E-01	0.03
6118	2.3741E-01	6118	2.3747E-01	-0.02
6152	2.3743E-01	6152	2.3748E-01	-0.02
7118	1.6086E-01	7118	1.6102E-01	-0.10
7152	1.6160E-01	7152	1.6176E-01	-0.10
8118	1.5302E-01	8118	1.5327E-01	-0.16
8152	1.5361E-01	8152	1.5386E-01	-0.16
		MAX ABSOLUTE DIFF [%]:		**0.27**

Table 9. Predicted Reactions of Coupled Building/Crane Models – "K" Crane Position, AX= 1g

GT STRUDL		ANSYS		%DIFF	
NODE	FORCE [LBS]	NODE	FORCE [LBS]		
1	-2127	1	-2106	0.99	
12	-4284	12	-4262	0.51	
101	-173820	101	-174620	-0.46	
111	2957	111	2975	-0.61	
112	-243527	30112	-244160	-0.26	
123	-1144	123	-1144	0.00	
1101	-3423	1101	-3432	-0.26	
1111	3725	1111	3740	-0.40	
1112	-212346	31112	-213240	-0.42	
1123	-1144	1123	-1144	0.00	
2101	7163	2101	7230	-0.94	
2111	2352	2111	2335	0.72	
2112	-227202	32112	-228180	-0.43	
2122	-139	2122	-77	44.60	SEE NOTE 1
2123	-1144	2123	-1144	0.00	
3101	6106	3101	6159	-0.87	
3111	-3329	3111	-3296	0.99	
3112	0	33112	0	-	
3123	-1144	3123	-1144	0.00	
4101	-160325	4101	-161050	-0.45	
4111	-197877	4111	-198030	-0.08	
5101	5497	5101	5542	-0.82	
5111	-3905	5111	-3893	0.31	
5112	0	5112	0	-	
6101	-7528	6101	-7559	-0.41	
7101	-7441	7101	-7474	-0.44	
7111	-11831	7111	-11879	-0.41	
8100	-2298	8100	-2298	0.00	
8101	-7498	8101	-7528	-0.40	
8111	-9677	8111	-9713	-0.37	
8156	-2029	8156	-2568	-26.56	SEE NOTE 1
8157	-1147	8157	-2176	-89.71	SEE NOTE 1
			MAX ABSOLUTE DIFF [%]:	**0.99**	

Note 1: The discrepancy between the ANSYS and GT STRUDL predictions at this location are attributed to computational inaccuracies associated with the small magnitudes of these reactions compared to the 243,000+ lb maximum predicted reaction. Since these reactions are less than 1.5% of the maximum predicted reaction, the discrepancy between the ANSYS and GT STRUDL results are considered unimportant and are neglected when calculating the Max. Absolute % Difference.

Table 10. Predicted Reactions of Coupled Building/Crane Models –"K" Crane Position, AY= 1g

GT STRUDL		ANSYS		%DIFF
NODE	FORCE [LBS]	NODE	FORCE [LBS]	
1	64190	1	64427	-0.37
12	66010	12	66254	-0.37
101	60456	101	60702	-0.41
111	62251	111	62492	-0.39
112	0	30112	0	-
123	11088	123	11091	-0.03
1101	39285	1101	39526	-0.61
1111	38676	1111	38916	-0.62
1112	0	31112	0	-
1123	14839	1123	14844	-0.03
2101	40398	2101	40638	-0.59
2111	39881	2111	40118	-0.59
2112	0	32112	0	-
2122	3352	2122	3354	-0.06
2123	13103	2123	13112	-0.07
3101	43504	3101	43887	-0.88
3111	39089	3111	39337	-0.63
3112	0	33112	0	-
3123	12859	3123	12866	-0.05
4101	43195	4101	43570	-0.87
4111	42049	4111	42304	-0.61
5101	84398	5101	84748	-0.41
5111	115871	5111	116290	-0.36
5112	0	5112	0	-
6101	127451	6101	127870	-0.33
7101	85096	7101	85412	-0.37
7111	193615	7111	194000	-0.20
8100	9607	8100	9608	-0.01
8101	16097	8101	16339	-1.50
8111	-13341	8111	-13076	1.99
8156	2722	8156	2722	0.00
8157	2790	8157	2793	-0.11
		MAX ABSOLUTE DIFF [%]:		**1.99**

Table 11. Predicted Reactions of Coupled Building/Crane Models – "K" Crane Position, AZ= 1g

GT STRUDL		ANSYS		%DIFF	
NODE	FORCE [LBS]	NODE	FORCE [LBS]		
1	-15266	1	-15301	-0.23	
12	-131496	12	-132180	-0.52	
101	-391	101	-299	23.53	SEE NOTE 1
111	7033	111	7152	-1.69	
112	0	30112	0	-	
123	-1144	123	-1144	0.00	
1101	-3628	1101	-3555	2.01	SEE NOTE 1
1111	-4415	1111	-4343	1.63	
1112	0	31112	0	-	
1123	-1144	1123	-1144	0.00	
2101	21119	2101	21402	-1.34	
2111	36477	2111	36872	-1.08	
2112	-324881	32112	-327450	-0.79	
2122	924	2122	932	-0.87	
2123	-1144	2123	-1144	0.00	
3101	-13417	3101	-13428	-0.08	
3111	-11926	3111	-11913	0.11	
3112	0	33112	0	-	
3123	-1144	3123	-1144	0.00	
4101	1612	4101	1476	8.44	SEE NOTE 1
4111	78160	4111	78667	-0.65	
5101	140724	5101	141320	-0.42	
5111	285163	5111	286060	-0.31	
5112	-654880	5112	-657090	-0.34	
6101	-9863	6101	-10007	-1.46	
7101	-59826	7101	-60193	-0.61	
7111	-223483	7111	-223970	-0.22	
8100	-2298	8100	-2298	0.00	
8101	-54652	8101	-54976	-0.59	
8111	-42390	8111	-42756	-0.86	
8156	-141490	8156	-142040	-0.39	
8157	-130862	8157	-131650	-0.60	
		MAX ABSOLUTE DIFF [%]:		**1.69**	

Note 1: The discrepancy between the ANSYS and GT STRUDL predictions at this location are attributed to computational inaccuracies associated with the small magnitudes of these reactions compared to the 654,000+ lb maximum predicted reaction. Since these reactions are less than 1.0% of the maximum predicted reaction, the discrepancy between the ANSYS and GT STRUDL results are considered unimportant and are neglected when calculating the Max. Absolute % Difference.

Table 12. Predicted Displacements of Coupled Building/Crane Models – "K" Crane Position, AX= 1g

GT STRUDL		ANSYS		%DIFF
NODE	DISPLACEMENT [IN.]	NODE	DISPLACEMENT [IN.]	
2	0.8307	2	0.8348	-0.50
19	4.0818	19	4.1028	-0.51
27	0.7793	27	0.7805	-0.15
38	5.5773	38	5.5808	-0.06
102	0.8267	102	0.8308	-0.50
118	4.0726	118	4.0935	-0.51
128	0.7783	128	0.7794	-0.15
146	0.5101	146	0.5124	-0.44
152	5.5730	152	5.5766	-0.06
1102	0.7177	1102	0.7212	-0.49
1118	4.0532	1118	4.0739	-0.51
1146	0.5084	1146	0.5107	-0.45
1153	5.5336	1153	5.5397	-0.11
2102	0.7152	2102	0.7187	-0.48
2118	4.0432	2118	4.0638	-0.51
2146	0.5085	2146	0.5108	-0.45
2152	5.5693	2152	5.5732	-0.07
3102	0.7663	3102	0.7701	-0.50
3118	4.0218	3118	4.0422	-0.51
3153	5.5347	3153	5.5413	-0.12
4102	0.7954	4102	0.7994	-0.50
4118	3.9930	4118	4.0132	-0.50
4152	5.5655	4152	5.5698	-0.08
5102	0.7394	5102	0.7430	-0.49
5118	3.9865	5118	4.0065	-0.50
5153	5.5349	5153	5.5421	-0.13
6118	3.9895	6118	4.0095	-0.50
6152	5.5614	6152	5.5660	-0.08
7118	3.9913	7118	4.0113	-0.50
7152	5.5599	7152	5.5645	-0.08
8118	3.9847	8118	4.0047	-0.50
8152	5.5598	8152	5.5645	-0.08
		MAX ABSOLUTE DIFF [%]:		**0.51**

Table 13. Predicted Displacements of Coupled Building/Crane Models – "K" Crane Position AY= 1g

GT STRUDL		ANSYS		%DIFF	
NODE	DISPLACEMENT [IN.]	NODE	DISPLACEMENT [IN.]		
2	-1.1109E-02	2	-1.1155E-02	-0.41	
19	-1.6442E-02	19	-1.6530E-02	-0.54	
27	-3.1987E-02	27	-3.2050E-02	-0.20	
38	-3.0100E-02	38	-3.0165E-02	-0.22	
102	-4.5656E-03	102	-4.5851E-03	-0.43	
118	-1.2007E-02	118	-1.2072E-02	-0.54	
128	-1.4478E-01	128	-1.4480E-01	-0.01	
146	-3.1107E-03	146	-3.1325E-03	-0.70	
152	-1.4350E-01	152	-1.4355E-01	-0.04	
1102	-2.8991E-03	1102	-2.9181E-03	-0.66	
1118	-8.4739E-03	1118	-8.5323E-03	-0.69	
1146	-4.1319E-03	1146	-4.1582E-03	-0.64	
1153	-1.3488E-01	1153	-1.3492E-01	-0.03	
2102	-2.9869E-03	2102	-3.0059E-03	-0.64	
2118	-8.6106E-03	2118	-8.6696E-03	-0.69	
2146	-3.8781E-03	2146	-3.9053E-03	-0.70	
2152	-1.5072E-01	2152	-1.5073E-01	-0.01	
3102	-3.2082E-03	3102	-3.2380E-03	-0.93	
3118	-8.3574E-03	3118	-8.4163E-03	-0.70	
3153	-1.3153E-01	3153	-1.3158E-01	-0.04	
4102	-3.1208E-03	4102	-3.1501E-03	-0.94	
4118	-9.3705E-03	4118	-9.4359E-03	-0.70	
4152	-1.5405E-01	4152	-1.5411E-01	-0.04	
5102	-6.4255E-03	5102	-6.4531E-03	-0.43	
5118	-2.4249E-02	5118	-2.4366E-02	-0.48	
5153	-1.1993E-01	5153	-1.2000E-01	-0.06	
6118	-1.4164E-01	6118	-1.4175E-01	-0.08	
6152	-4.6108E-01	6152	-4.6118E-01	-0.02	
7118	-2.3663E-02	7118	-2.3757E-02	-0.40	
7152	-1.0121E-01	7152	-1.0122E-01	-0.01	
8118	7.0290E-04	8118	6.7000E-04	4.68	SEE NOTE 1
8152	-4.6987E-03	8152	-4.6992E-03	-0.01	
			MAX ABSOLUTE DIFF [%]:	**0.94**	

Note 1: The discrepancy between the ANSYS and GT STRUDL predictions at this location are attributed to computational inaccuracies associated with the small magnitudes of these displacements compared to the 0.46+ maximum predicted displacement. Since these displacements are less than 0.5% of the maximum predicted displacement, the discrepancy between the ANSYS and GT STRUDL results are considered unimportant and are neglected when calculating the Max. Absolute % Difference.

Table 14. Predicted Displacements of Coupled Building/Crane Models – "K" Crane Position AZ= 1g

GT STRUDL		ANSYS		%DIFF
NODE	DISPLACEMENT [IN.]	NODE	DISPLACEMENT [IN.]	
2	0.366	2	0.368	-0.57
19	0.611	19	0.615	-0.70
27	0.381	27	0.383	-0.57
38	0.615	38	0.619	-0.70
102	0.097	102	0.097	-0.39
118	1.410	118	1.415	-0.30
128	1.067	128	1.068	-0.12
146	0.091	146	0.091	-0.38
152	1.409	152	1.413	-0.30
1102	0.126	1102	0.127	-0.53
1118	1.937	1118	1.947	-0.51
1146	0.123	1146	0.123	-0.53
1153	1.939	1153	1.949	-0.51
2102	0.057	2102	0.057	-0.80
2118	1.822	2118	1.838	-0.88
2146	0.043	2146	0.044	-0.78
2152	1.823	2152	1.839	-0.87
3102	0.138	3102	0.140	-1.09
3118	1.737	3118	1.759	-1.26
3153	1.738	3153	1.760	-1.26
4102	0.391	4102	0.394	-0.75
4118	3.800	4118	3.822	-0.57
4152	3.805	4152	3.827	-0.57
5102	0.097	5102	0.097	-0.42
5118	6.194	5118	6.216	-0.35
5153	6.177	5153	6.199	-0.35
6118	5.135	6118	5.155	-0.39
6152	5.133	6152	5.153	-0.39
7118	4.227	7118	4.244	-0.40
7152	4.204	7152	4.221	-0.40
8118	3.381	8118	3.398	-0.49
8152	3.393	8152	3.410	-0.49
		MAX ABSOLUTE DIFF [%]:		**1.26**

Table 15. Predicted Modal Frequencies of Coupled Building/Crane Models – "K" Crane Position
(First 40 frequencies listed, remainder available in Attachments 25 and 28)

MODE	FREQUENCY [Hz]		DIFF	
	GT STRUDL	ANSYS	[Hz]	
1	0.25	0.25	0.00	
2	0.31	0.31	0.00	
3	1.20	1.18	-0.02	
4	1.27	1.22	-0.05	
5	1.31	1.31	0.00	
6	1.72	1.71	-0.01	
7	1.74	1.76	0.02	
8	1.79	1.78	-0.01	
9	1.87	1.86	-0.01	
10	1.96	1.95	-0.01	
11		2.08		See Note 1
12	2.18			See Note 1
13	2.21	2.21	0.00	
14		2.38		See Note 1
15	2.46	2.46	0.00	
16	2.47	2.55	0.08	
17	2.54	2.55	0.01	
18		2.57		See Note 1
19	2.63	2.65	0.02	
20	2.68	2.69	0.01	
21	2.91	2.80	-0.11	
22	2.98	2.98	0.00	
23	3.15			See Note 1
24	3.16	3.17	0.01	
25	3.21	3.22	0.01	
26	3.29	3.37	0.08	
27		3.37		See Note 1
28	3.44	3.44	0.00	
29	3.74	3.77	0.03	
30	3.81	3.81	0.00	
31	4.11	4.10	-0.01	
32	4.30	4.31	0.01	
33	4.39	4.38	-0.01	
34	4.56	4.53	-0.03	
35	4.58	4.54	-0.04	
36	4.69	4.70	0.01	
37	4.75	4.74	-0.01	
38	4.78	4.78	0.00	
39	4.81	4.80	-0.01	
40	4.87	4.86	-0.01	
MAX ABSOLUTE DIFF [Hz]:			**0.11**	

Note 1: Indicated modes have less than 1% mass participation in any direction.

Table 16. Predicted Mass Participation of Coupled Building/Crane Models – "K" Crane Position
(First 40 frequencies listed, remainder available in Attachments 25 and 28)

Mode	GT STRUDL				ANSYS				
	freq	% in X dir.	% in Y dir.	% in Z dir.	freq	% in X dir.	% in Y dir.	% in Z dir.	
1	0.25	0.00	0.00	12.95	0.25	0.00	0.00	13.04	
2	0.31	12.35	0.00	0.00	0.31	12.71	0.00	0.00	
3	1.20	1.81	0.00	9.62	1.18	18.37	0.00	5.24	
4	1.27	38.69	0.00	0.55	1.22	22.49	0.00	5.17	
5	1.31	0.77	0.00	0.03	1.31	0.16	0.00	0.01	
6	1.72	0.06	0.00	17.68	1.71	0.10	0.00	17.22	
7	1.74	0.04	0.00	10.64	1.76	0.59	0.00	12.61	
8	1.79	0.98	0.00	1.10	1.78	1.60	0.00	0.08	
9	1.87	0.31	0.00	1.29	1.86	0.38	0.00	1.12	
10	1.96	0.00	0.00	1.70	1.95	0.02	0.00	1.79	
11					2.08	0.04	0.00	0.29	See Note 1
12	2.18	0.00	0.00	0.50					See Note 1
13	2.21	0.00	0.00	0.16	2.21	0.00	0.01	0.09	
14					2.38	0.01	0.00	0.41	See Note 1
15	2.46	3.61	0.00	0.56	2.46	4.67	0.00	0.25	
16	2.47	0.84	0.00	0.19	2.55	0.24	0.00	0.00	
17	2.54	0.01	0.01	0.42	2.55	0.00	0.00	0.01	
18					2.57	0.03	0.01	0.90	See Note 1
19	2.63	3.14	0.00	3.66	2.65	7.08	0.00	0.10	
20	2.68	8.14	0.00	0.19	2.69	0.25	0.00	4.04	
21	2.91	2.91	0.00	0.01	2.80	6.74	0.00	0.08	
22	2.98	0.00	1.13	0.00	2.98	0.00	1.35	0.00	
23	3.15	0.15	0.00	0.00					See Note 1
24	3.16	0.00	1.14	0.00	3.17	0.00	1.34	0.00	
25	3.21	0.00	15.01	0.00	3.22	0.00	18.10	0.00	
26	3.29	0.02	0.00	0.03	3.37	0.07	0.00	0.03	
27					3.37	0.13	0.00	0.00	See Note 1
28	3.44	0.02	0.04	0.02	3.44	0.02	0.05	0.02	
29	3.74	0.00	0.01	2.88	3.77	0.06	0.01	2.26	
30	3.81	1.59	0.00	0.00	3.82	1.27	0.00	0.27	
31	4.11	3.03	0.09	0.00	4.10	3.66	0.10	0.01	
32	4.30	0.00	5.96	0.00	4.31	0.00	7.08	0.00	
33	4.39	0.15	0.13	0.40	4.38	0.00	0.20	0.36	
34	4.56	2.61	0.39	0.02	4.53	3.06	0.02	0.01	
35	4.58	0.50	1.68	0.02	4.54	0.04	1.92	0.01	
36	4.69	0.01	0.68	0.03	4.70	0.00	1.28	0.03	
37	4.75	0.00	2.29	0.00	4.74	0.00	2.83	0.00	
38	4.78	0.01	0.56	0.01	4.78	0.01	0.74	0.01	
39	4.81	0.00	0.13	0.02	4.80	0.00	0.04	0.02	
40	4.87	0.00	0.29	0.00	4.86	0.00	0.29	0.00	

Note 1: Indicated modes have less than 1% mass participation in any direction.

Table 17. Predicted Reactions of Stand-Alone Crane Models – "Hook Up" Configuration, FX= 10 KIPS

GT STRUDL		ANSYS		%DIFF
NODE	FORCE [LBS]	NODE	FORCE [LBS]	
CN269	0	10101	0	-
CN271	0	10102	0	-
CN273	2790	10103	2784	0.20
CN275	2807	10104	2806	0.04
CN277	0	10113	0	-
CN279	0	10114	0	-
CN281	2142	10115	2142	0.00
CN283	2261	10116	2268	-0.30
			MAX ABSOLUTE DIFF [%]:	**0.30**

Table 18. Predicted Reactions of Stand-Alone Crane Models – "Hook Up" Configuration, FY= 100 KIPS

GT STRUDL		ANSYS		%DIFF
NODE	FORCE [LBS]	NODE	FORCE [LBS]	
CN269	12854	10101	12848	0.05
CN271	12386	10102	12393	-0.05
CN273	12368	10103	12374	-0.04
CN275	12865	10104	12860	0.04
CN277	12484	10113	12478	0.05
CN279	12282	10114	12288	-0.05
CN281	12264	10115	12270	-0.05
CN283	12495	10116	12489	0.05
			MAX ABSOLUTE DIFF [%]:	**0.05**

Table 19. Predicted Reactions of Stand-Alone Crane Models – "Hook Up" Configuration, FZ= 10 KIPS

GT STRUDL		ANSYS		%DIFF
NODE	FORCE [LBS]	NODE	FORCE [LBS]	
CN269	2607	10101	2606	0.06
CN271	2416	10102	2418	-0.07
CN273	2400	10103	2401	-0.07
CN275	2577	10104	2576	0.06
CN277	0	10113	0	-
CN279	0	10114	0	-
CN281	0	10115	0	-
CN283	0	10116	0	-
			MAX ABSOLUTE DIFF [%]:	**0.07**

Table 20. Predicted Maximum Displacements of Stand-Alone Crane Models – "Hook Up" Configuration

DIRECTION	FORCE [KIP]	DISPLACEMENT [IN.]		%DIFF
		GT STRUDL	ANSYS	
X	10	-3.706	-3.709	-0.08
Y	100	-0.288	-0.290	-0.69
Z	10	-5.424	-5.425	-0.02
			MAX ABSOLUTE DIFF [%]:	**0.69**

Table 21. Predicted Reactions of Stand-Alone Crane Models – "Hook Up" Configuration, AX= 1g

GT STRUDL		ANSYS		%DIFF
NODE	FORCE [LBS]	NODE	FORCE [LBS]	
CN269	0	10101	0	-
CN271	0	10102	0	-
CN273	115185	10103	114980	0.18
CN275	113866	10104	113760	0.09
CN277	0	10113	0	-
CN279	0	10114	0	-
CN281	94354	10115	94357	0.00
CN283	96599	10116	96778	-0.19
			MAX ABSOLUTE DIFF [%]:	**0.19**

Table 22. Predicted Reactions of Stand-Alone Crane Models – "Hook Up" Configuration, AY= 1g

GT STRUDL		ANSYS		%DIFF
NODE	FORCE [LBS]	NODE	FORCE [LBS]	
CN269	53549	10101	53489	0.11
CN271	52236	10102	52238	0.00
CN273	51771	10103	51770	0.00
CN275	51197	10104	51141	0.11
CN277	53515	10113	53454	0.11
CN279	53496	10114	53495	0.00
CN281	52810	10115	52805	0.01
CN283	51541	10116	51484	0.11
			MAX ABSOLUTE DIFF [%]:	**0.11**

Table 23. Predicted Reactions of Stand-Alone Crane Models – "Hook Up" Configuration, AZ= 1g

GT STRUDL		ANSYS		%DIFF
NODE	FORCE [LBS]	NODE	FORCE [LBS]	
CN269	109232	10101	109140	0.08
CN271	104123	10102	104150	-0.03
CN273	101829	10103	101860	-0.03
CN275	104818	10104	104730	0.08
CN277	0	10113	0	-
CN279	0	10114	0	-
CN281	0	10115	0	-
CN283	0	10116	0	-
			MAX ABSOLUTE DIFF [%]:	**0.08**

Table 24. Predicted Maximum Displacements of Stand-Alone Crane Models – "Hook Up" Configuration, Constant Acceleration

DIRECTION	ACCELERATION [g]	DISPLACEMENT [IN.]		%DIFF
		GT STRUDL	ANSYS	
X	-1	-99.399	-99.455	-0.06
Y	1	-0.919	-0.923	-0.44
Z	1	149.643	149.660	-0.01
			MAX ABSOLUTE DIFF [%]:	**0.44**

Table 25. Predicted Modal Frequencies of Stand-Alone Crane Models – "Hook Up" Configuration

MODE	FREQUENCY [Hz]		DIFF
	GT STRUDL	ANSYS	[Hz]
1	0.26	0.26	0.00
2	0.31	0.31	0.00
3	1.86	1.86	0.00
4	3.38	3.38	0.00
5	3.71	3.71	0.00
6	4.08	4.08	0.00
7	8.07	7.96	-0.11
8	8.82	8.83	0.01
9	9.74	9.72	-0.02
10	10.19	10.22	0.03
11	10.21	10.24	0.03
12	10.24	10.26	0.02
13	10.26	10.26	0.00
14	10.26	10.27	0.01
15	10.27	10.27	0.00
16	10.27	10.28	0.01
17	10.27	10.28	0.01
18	10.28	10.28	0.00
19	10.28	10.30	0.02
20	10.62	10.59	-0.03
21	11.96	11.49	-0.47
22	12.17	11.99	-0.18
23	12.98	13.17	0.19
24	14.32	14.47	0.15
25	14.46	14.88	0.42
26	15.73	15.67	-0.06
27	15.89	15.73	-0.16
28	18.10	17.97	-0.13
29	19.88	19.78	-0.10
30	20.18	20.20	0.02
31	22.29	22.27	-0.02
32	22.52	22.73	0.21
33	23.50	23.51	0.01
34	23.80	23.82	0.02
35	23.81	23.82	0.01
36	23.84	23.86	0.02
37	23.85	23.86	0.01
38	23.86	23.87	0.01
39	23.88	23.91	0.03
40	23.92	23.93	0.01
		MAX ABSOLUTE DIFF [Hz]:	**0.47**

Table 26. Predicted Mass Participation of Stand-Alone Crane Models – "Hook Up" Configuration

Mode	ANSYS				GT STRUDL			
	freq	% in X dir.	% in Y dir.	% in Z dir.	freq	% in X dir.	% in Y dir.	% in Z dir.
1	0.26	0.00	0.00	69.50	0.26	0.00	0.00	67.83
2	0.31	70.00	0.00	0.00	0.31	64.61	0.00	0.00
3	1.86	0.00	0.00	5.95	1.86	0.00	0.06	5.79
4	3.38	0.00	92.00	0.09	3.38	0.00	82.96	0.17
5	3.71	27.50	0.00	0.00	3.71	25.20	0.00	0.00
6	4.08	0.17	0.00	0.00	4.08	0.26	0.00	0.00
7	7.96	0.00	0.03	6.80	8.07	0.00	0.19	5.71
8	8.83	0.07	0.00	0.00	8.82	0.07	0.00	0.00
9	9.72	0.05	0.00	0.00	9.74	0.25	0.00	0.00
10	10.22	0.00	0.00	0.00	10.19	0.11	0.00	0.01
11	10.24	0.00	0.00	0.00	10.21	0.02	0.00	0.00
12	10.26	0.00	0.00	0.00	10.24	0.02	0.00	0.00
13	10.26	0.00	0.00	0.00	10.26	0.00	0.00	0.00
14	10.27	0.01	0.00	0.00	10.26	0.00	0.00	0.00
15	10.27	0.00	0.00	0.00	10.27	0.00	0.00	0.00
16	10.28	0.00	0.00	0.00	10.27	0.00	0.00	0.00
17	10.28	0.00	0.00	0.00	10.27	0.00	0.00	0.00
18	10.28	0.00	0.00	0.00	10.28	0.00	0.00	0.00
19	10.30	0.39	0.00	0.02	10.28	0.00	0.00	0.00
20	10.59	0.43	0.00	0.00	10.62	0.36	0.00	0.00
21	11.49	0.00	2.48	6.07	11.96	0.01	2.29	6.04
22	11.99	0.09	0.03	0.04	12.17	0.13	0.22	0.37
23	13.17	0.00	0.00	1.22	12.98	0.00	0.25	2.00
24	14.47	0.00	0.01	0.00	14.32	0.00	3.91	3.18
25	14.88	0.00	4.67	3.58	14.46	0.00	0.06	0.06
26	15.67	0.12	0.01	0.02	15.73	0.00	0.00	0.00
27	15.73	0.00	0.00	0.00	15.89	0.21	0.00	0.02
28	17.97	1.14	0.00	0.01	18.10	0.96	0.00	0.00
29	19.78	0.01	0.70	6.12	19.88	0.00	0.67	5.47
30	20.20	0.00	0.00	0.00	20.18	0.00	0.00	0.00
31	22.27	0.00	0.00	0.27	22.29	0.01	0.01	0.03
32	22.73	0.01	0.01	0.01	22.52	0.00	0.01	0.43
33	23.51	0.00	0.01	0.08	23.50	0.00	0.01	0.07
34	23.82	0.00	0.00	0.00	23.80	0.00	0.01	0.03
35	23.82	0.00	0.00	0.01	23.81	0.00	0.01	0.04
36	23.86	0.00	0.00	0.00	23.84	0.00	0.00	0.01
37	23.86	0.00	0.00	0.00	23.85	0.00	0.05	0.25
38	23.87	0.00	0.00	0.02	23.86	0.00	0.00	0.00
39	23.91	0.00	0.02	0.07	23.88	0.00	0.02	0.10
40	23.93	0.00	0.01	0.09	23.92	0.00	0.00	0.02

Table 27. Predicted Modal Frequencies of Stand-Alone Crane Models – "Hook Down" Configuration

MODE	FREQUENCY [Hz]		DIFF
	GT STRUDL	ANSYS	[Hz]
1	0.09	0.09	0.00
2	0.10	0.10	0.00
3	1.57	1.57	0.00
4	2.23	2.22	-0.01
5	3.67	3.67	0.00
6	4.08	4.07	-0.01
7	7.89	7.87	-0.02
8	8.82	8.83	0.01
9	9.58	9.57	-0.01
10	9.74	9.72	-0.02
11	10.18	10.22	0.04
12	10.21	10.24	0.03
13	10.24	10.26	0.02
14	10.26	10.26	0.00
15	10.26	10.27	0.01
16	10.27	10.27	0.00
17	10.27	10.28	0.01
18	10.27	10.28	0.01
19	10.28	10.28	0.00
20	10.28	10.30	0.02
21	10.62	10.59	-0.03
22	12.15	11.98	-0.17
23	12.92	13.02	0.10
24	14.12	13.74	-0.38
25	14.46	14.47	0.01
26	15.72	15.67	-0.05
27	15.89	15.73	-0.16
28	18.10	17.97	-0.13
29	19.71	19.76	0.05
30	20.18	20.20	0.02
31	22.23	21.86	-0.37
32	22.44	22.73	0.29
33	23.37	23.51	0.14
34	23.59	23.81	0.22
35	23.80	23.82	0.02
36	23.81	23.85	0.04
37	23.84	23.86	0.02
38	23.85	23.87	0.02
39	23.87	23.91	0.04
40	23.91	23.93	0.02
MAX ABSOLUTE DIFF [Hz]:			**0.38**

Table 28. Predicted Mass Participation of Stand-Alone Crane Models – "Hook Down" Configuration

Mode	ANSYS				GT STRUDL			
	freq	% in X dir.	% in Y dir.	% in Z dir.	freq	% in X dir.	% in Y dir.	% in Z dir.
1	0.09	0.00	0.00	65.77	0.09	0.00	0.00	64.18
2	0.10	68.98	0.00	0.00	0.10	63.67	0.00	0.00
3	1.57	0.00	0.00	9.66	1.57	0.00	0.08	9.40
4	2.22	0.00	80.61	0.01	2.23	0.00	73.09	0.01
5	3.67	28.57	0.00	0.00	3.67	26.19	0.00	0.00
6	4.07	0.13	0.00	0.00	4.08	0.21	0.00	0.00
7	7.87	0.00	1.09	7.38	7.89	0.00	0.74	6.91
8	8.83	0.07	0.00	0.00	8.82	0.07	0.00	0.00
9	9.57	0.00	14.39	1.03	9.58	0.00	12.91	1.01
10	9.72	0.04	0.01	0.00	9.74	0.24	0.07	0.01
11	10.22	0.00	0.00	0.00	10.18	0.13	0.01	0.00
12	10.24	0.00	0.00	0.00	10.21	0.01	0.00	0.00
13	10.26	0.00	0.00	0.00	10.24	0.02	0.00	0.00
14	10.26	0.00	0.00	0.00	10.26	0.00	0.00	0.00
15	10.27	0.01	0.00	0.00	10.26	0.00	0.00	0.00
16	10.27	0.00	0.00	0.00	10.27	0.00	0.00	0.00
17	10.28	0.00	0.00	0.00	10.27	0.00	0.00	0.00
18	10.28	0.00	0.00	0.00	10.27	0.00	0.00	0.00
19	10.28	0.01	0.00	0.00	10.28	0.00	0.00	0.00
20	10.30	0.39	0.02	0.00	10.28	0.00	0.00	0.00
21	10.59	0.43	0.00	0.00	10.62	0.36	0.00	0.00
22	11.98	0.09	0.01	0.02	12.15	0.13	0.01	0.03
23	13.02	0.00	0.20	5.33	12.92	0.00	0.15	4.23
24	13.74	0.00	2.81	3.97	14.12	0.00	3.11	4.86
25	14.47	0.00	0.00	0.00	14.46	0.00	0.01	0.01
26	15.67	0.12	0.00	0.02	15.72	0.00	0.00	0.00
27	15.73	0.00	0.00	0.00	15.89	0.22	0.00	0.02
28	17.97	1.14	0.00	0.01	18.10	0.96	0.00	0.00
29	19.76	0.01	0.77	6.25	19.71	0.01	0.61	6.30
30	20.20	0.00	0.00	0.00	20.18	0.00	0.00	0.00
31	21.86	0.00	0.01	0.25	22.23	0.01	0.01	0.18
32	22.73	0.01	0.01	0.02	22.44	0.00	0.01	0.46
33	23.51	0.00	0.01	0.08	23.37	0.01	0.10	0.50
34	23.81	0.00	0.00	0.00	23.59	0.00	0.04	0.22
35	23.82	0.00	0.00	0.01	23.80	0.00	0.00	0.00
36	23.85	0.00	0.00	0.00	23.81	0.00	0.00	0.00
37	23.86	0.00	0.00	0.00	23.84	0.00	0.00	0.00
38	23.87	0.00	0.00	0.03	23.85	0.00	0.00	0.00
39	23.91	0.00	0.01	0.06	23.87	0.00	0.00	0.00
40	23.93	0.00	0.02	0.11	23.91	0.00	0.00	0.00

Attachment 1

ANSYS Stand-Alone Crane Model, “Hook Up”, Static Loads

```
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/FILENAME, PGCR045
!/CWD,'C:\Documents and Settings\mkeeney\Desktop\MCK_ANSYS\Ansys\output'
/TITLE,Auxzilary Building Modifications
/PREP7

! The units for this model are INCHES POUNDS SECONDS.
! The nodal coordinates are a direct copy of the GT STRDL model.
! The node numbers match the original model were possible.

!
!   Added runway girder nodes
!   Replace "CNR" with on node numbers starting at 10000.
N,10101,2241,870.6,-564
N,10102,2187,870.6,-564
N,10103,2019,870.6,-564
N,10104,1965,870.6,-564
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N,10114,2187,870.6,-12
N,10115,2019,870.6,-12
N,10116,1965,870.6,-12
!
!  Added crane nodes
!  Replace "CN" with on nodes numbers starting at 11000
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N,11313,2058.5294118,880.6,-564
N,11314,2048.6470588,880.6,-564
N,11315,2038.7647059,880.6,-564
N,11316,2028.8823529,880.6,-564
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N,11329,2147.4705882,880.6,-12
N,11330,2157.3529412,880.6,-12
N,11331,2167.2352941,880.6,-12
N,11332,2177.1176471,880.6,-12
N,11333,1992,987.9,-290.625
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N,11359,2045.25,987.9,-232.25
N,11360,2034.035,987.9,-232.25
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N,11363,2194.5,987.9,-290.625
N,11365,2185.81,987.9,-290.625
N,11366,2168.31,987.9,-290.625
N,11367,2152,987.9,-290.625
N,11368,2126,987.9,-290.625
N,11369,2080,987.9,-290.625
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N,11373,2005.19,987.9,-290.625
N,11374,2011.82,987.9,-290.625
N,11375,2022.82,987.9,-290.625
N,11376,2045.25,987.9,-290.625
N,11377,2034.035,987.9,-290.625
N,11378,2067.75,987.9,-290.625
N,11379,2056.5,987.9,-290.625
N,11392,2134.5,987.9,-251.708333
N,11393,2134.5,987.9,-271.166667
N,11395,2067.75,987.9,-251.708333
N,11396,2067.75,987.9,-271.166667
N,11397,2126,987.9,-271
N,11399,2126,987.9,-250
N,11400,2080,987.9,-250
N,11401,2126,987.9,-260.5
N,11402,2080,987.9,-271
N,11403,2080,987.9,-260.5
N,11405,2110.66666667,987.9,-271
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N,11420,2005.19,987.9,-251.708333
N,11421,2005.19,987.9,-271.166667
N,11423,2022.82,987.9,-251.708333
N,11424,2022.82,987.9,-271.166667
N,11426,2045.25,987.9,-251.708333
N,11427,2045.25,987.9,-271.166667
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N,11434,2103,987.9,-290.625
N,11435,2114.5,987.9,-290.625
N,11436,2091.5,987.9,-290.625
N,11437,2214,987.9,-335
N,11438,2214,987.9,-305.416667
N,11439,2214,987.9,-320.208333
N,11440,1992,987.9,-335
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N,11446,1992,987.9,-241
N,11447,1992,987.9,-257.541667
N,11448,1992,987.9,-274.083333
N,11450,2103,891.74,-290.625

! SPRING NODES

! DEFINE REAL CONSTANT

```
R,1

R,2

R,6

R,7

R,10

R,11

R,1001,2766.222961730,,,   ! HOOK X SPRING

R,1002,2766.222961730,,,   ! HOOK Z SPRING

R,1003,2266759.624568,,,   ! HOOK Y SPRING

R,1004,688.9610669,688.9610669,688.9610669  !688.9610669,688.9610669,688.9610669, ! HOOK MASS change because of change in
gravity 688.4057971014

R,52,1.15,1.15,1.15
R,53,2.27743,2.27743,2.27743
R,54,3.662,3.662,3.662
R,55,0.64699,0.64699,0.64699
R,100,51.7598344,219.979296,51.7598344

! DEFINE MATERIAL TYPES

! THE FOLLOWING MATERIAL TYPES ARE FOR THE CRANE

MAT,2     !  HOOKUP MAT 2
MP,EX,2,3E+07
MP,NUXY,2,0.3
MP,DENS,2,0.745E-03


MAT,3     !  HOOKUP MAT 3
MP,EX,3,3E+07
MP,NUXY,3,0.3
MP,DENS,3,0.11660E-02


MAT,4     !  HOOKUP MAT 4
MP,EX,4,3E+07
MP,NUXY,4,0.3
MP,DENS,4,0.96E-03


MAT,5     !  HOOKUP MAT 5
MP,EX,5,3E+07
MP,NUXY,5,0.8E-03
MP,DENS,5,0.123E-02


MAT,6     !  HOOKUP MAT 6
MP,EX,6,3E+07
MP,NUXY,6,0.3
MP,DENS,6,0


MAT,7     !  HOOKUP MAT 7
MP,EX,7,3E+07
MP,NUXY,7,0.3
MP,DENS,7,0.121E-02


MAT,8     !  HOOKUP MAT 8
MP,EX,8,3E+07
MP,NUXY,8,0.3
MP,DENS,8,0.6241E-02



! CREATE DIFFERENT ELEMENT TYPES IN ORDER TO CONTROL THE END RELEASES USING "KEYOPT"
```

```
ET,1,BEAM188

ET,2,BEAM44
!KEYOPT,2,7,11

ET,6,BEAM44
!KEYOPT,6,7,1011

ET,10,BEAM44
!KEYOPT,10,7,11011

ET,11,BEAM44
!KEYOPT,11,7,10011

ET,   100, 21

ET,   1001, 14
KEYOP,   1001, 2,      1

ET,   1002, 14
KEYOP,   1002, 2,      3

ET,   1003, 14
KEYOP,   1003, 2,      2

ET,   1004, 21

ET,21,BEAM44

! DEFINE BEAM SECTION TYPES THAT WILL BE USED IN THE MODEL


! THE FOLLOWING SECTIONS ARE FOR THE CRANE MODEL AS PROVIDED
! BY THE CRANE VENDOR

SECTYPE,44,BEAM,HREC,       !1  MAIN BRIDGE GIRDER
SECDATA,61.000,17.125,1.0000,1.0000,0.62500, 0.62500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,45,BEAM,CSOL,       !2  WHEELS
SECDATA,4.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000


SECTYPE,47,BEAM,HREC,endtie  !4  CONNECT BRIDGE GIRDERS - TOP
SECDATA,10.000,8.0000,1.0000,1.0000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,48,BEAM,HREC,asagitie   !6 CONNECT BRIDGE GIRDERS - BOTTOM
SECDATA,8.0000,8.0000,0.75000,0.75000,0.75000,0.75000,
SECOFFSET,CENT
SECCONTROL,0.0000,0.0000,0.0000,0.0000

SECTYPE,49,BEAM,HREC,endtruck   !7  MAIN TRUCKS
SECDATA,22.000,16.600,1.5000,1.5000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,50,BEAM,RECT,       !8  VERTICAL POSTS
SECDATA,14.000,14.000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,51,BEAM,HREC,Ttrucks   !10  TROLLEY TRUCK
SECDATA,22.250,9.0000,0.75000,0.75000,0.50000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,52,BEAM,RECT,girt1   !11  OUTSIDE TROLLEY GIRDER
SECDATA,33.000,1.2500,
SECOFFSET,CENT
```

```
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,53,BEAM,RECT,girt2   !12  INSIDE TROLLEY GIRDER (CABLE ATTACHED)
SECDATA,42.625,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,55,BEAM,RECT,        !14  TROLLEY 20" STIFFENER
SECDATA,20.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,56,BEAM,RECT,stiff2    !15  TROLLEY 6" STIFFENER
SECDATA,6.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,57,BEAM,RECT,          !16  TROLLEY 15" STIFFENER
SECDATA,15.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,58,BEAM,RECT,9luk    !17  TROLLEY 9" STIFFENER
SECDATA,9.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SAVE

! SELECT NODES IN ORDER TO DEFINE A RIGID REGION USING "CERIG"


NSEL,ALL,,,,,


! EBLOCK DEFINES ELEMENTS, HEADING ARE PROVIDED TO HELP DURING CHECKING
!    MAT    TYPE    REAL    SECT                        # NODES         ELM #     I      J      K
EBLOCK,19,SOLID,
(19i8)
      7      21      1      44      0      0      0      0      2      0  12001  11001  11003      0
      7      21      1      44      0      0      0      0      2      0  12002  11003  11004      0
      7      21      1      44      0      0      0      0      2      0  12003  11004  11005      0
      7      21      1      44      0      0      0      0      2      0  12004  11005  11006      0
      7      21      1      44      0      0      0      0      2      0  12005  11006  11007      0
      7      21      1      44      0      0      0      0      2      0  12006  11007  11008      0
      7      21      1      44      0      0      0      0      2      0  12007  11008  11009      0
      7      21      1      44      0      0      0      0      2      0  12008  11009  11010      0
      7      21      1      44      0      0      0      0      2      0  12009  11010  11011      0
      7      21      1      44      0      0      0      0      2      0  12010  11011  11012      0
      7      21      1      44      0      0      0      0      2      0  12011  11012  11013      0
      7      21      1      44      0      0      0      0      2      0  12012  11013  11014      0
      7      21      1      44      0      0      0      0      2      0  12013  11014  11015      0
      7      21      1      44      0      0      0      0      2      0  12014  11015  11016      0
      7      21      1      44      0      0      0      0      2      0  12015  11016  11017      0
      7      21      1      44      0      0      0      0      2      0  12016  11017  11018      0
      7      21      1      44      0      0      0      0      2      0  12017  11018  11019      0
      7      21      1      44      0      0      0      0      2      0  12018  11019  11020      0
      7      21      1      44      0      0      0      0      2      0  12019  11020  11021      0
      7      21      1      44      0      0      0      0      2      0  12020  11021  11022      0
      7      21      1      44      0      0      0      0      2      0  12021  11022  11023      0
      7      21      1      44      0      0      0      0      2      0  12022  11023  11024      0
      7      21      1      44      0      0      0      0      2      0  12023  11024  11002      0
      7      21      1      44      0      0      0      0      2      0  12024  11025  11027      0
      7      21      1      44      0      0      0      0      2      0  12025  11027  11028      0
      7      21      1      44      0      0      0      0      2      0  12026  11028  11029      0
      7      21      1      44      0      0      0      0      2      0  12027  11029  11030      0
      7      21      1      44      0      0      0      0      2      0  12028  11030  11031      0
      7      21      1      44      0      0      0      0      2      0  12029  11031  11032      0
      7      21      1      44      0      0      0      0      2      0  12030  11032  11033      0
      7      21      1      44      0      0      0      0      2      0  12031  11033  11034      0
      7      21      1      44      0      0      0      0      2      0  12032  11034  11035      0
      7      21      1      44      0      0      0      0      2      0  12033  11035  11036      0
      7      21      1      44      0      0      0      0      2      0  12034  11036  11037      0
      7      21      1      44      0      0      0      0      2      0  12035  11037  11038      0
      7      21      1      44      0      0      0      0      2      0  12036  11038  11039      0
```

7	21	1	44	0	0	0	0	2	0	12037	11039	11040	0
7	21	1	44	0	0	0	0	2	0	12038	11040	11041	0
7	21	1	44	0	0	0	0	2	0	12039	11041	11042	0
7	21	1	44	0	0	0	0	2	0	12040	11042	11043	0
7	21	1	44	0	0	0	0	2	0	12041	11043	11044	0
7	21	1	44	0	0	0	0	2	0	12042	11044	11045	0
7	21	1	44	0	0	0	0	2	0	12043	11045	11046	0
7	21	1	44	0	0	0	0	2	0	12044	11046	11047	0
7	21	1	44	0	0	0	0	2	0	12045	11047	11048	0
7	21	1	44	0	0	0	0	2	0	12046	11048	11026	0
3	21	1	44	0	0	0	0	2	0	12047	11049	11051	0
3	21	1	44	0	0	0	0	2	0	12048	11051	11052	0
3	21	1	44	0	0	0	0	2	0	12049	11052	11053	0
3	21	1	44	0	0	0	0	2	0	12050	11053	11054	0
3	21	1	44	0	0	0	0	2	0	12051	11054	11055	0
3	21	1	44	0	0	0	0	2	0	12052	11055	11056	0
3	21	1	44	0	0	0	0	2	0	12053	11056	11057	0
3	21	1	44	0	0	0	0	2	0	12054	11057	11058	0
3	21	1	44	0	0	0	0	2	0	12055	11058	11059	0
3	21	1	44	0	0	0	0	2	0	12056	11059	11060	0
3	21	1	44	0	0	0	0	2	0	12057	11060	11061	0
3	21	1	44	0	0	0	0	2	0	12058	11061	11062	0
3	21	1	44	0	0	0	0	2	0	12059	11062	11063	0
3	21	1	44	0	0	0	0	2	0	12060	11063	11064	0
3	21	1	44	0	0	0	0	2	0	12061	11064	11065	0
3	21	1	44	0	0	0	0	2	0	12062	11065	11066	0
3	21	1	44	0	0	0	0	2	0	12063	11066	11067	0
3	21	1	44	0	0	0	0	2	0	12064	11067	11068	0
3	21	1	44	0	0	0	0	2	0	12065	11068	11069	0
3	21	1	44	0	0	0	0	2	0	12066	11069	11070	0
3	21	1	44	0	0	0	0	2	0	12067	11070	11071	0
3	21	1	44	0	0	0	0	2	0	12068	11071	11072	0
3	21	1	44	0	0	0	0	2	0	12069	11072	11050	0
7	21	1	44	0	0	0	0	2	0	12070	11026	11073	0
7	21	1	44	0	0	0	0	2	0	12071	11073	11074	0
7	21	1	44	0	0	0	0	2	0	12072	11074	11075	0
7	21	1	44	0	0	0	0	2	0	12073	11075	11076	0
7	21	1	44	0	0	0	0	2	0	12074	11076	11077	0
7	21	1	44	0	0	0	0	2	0	12075	11077	11078	0
7	21	1	44	0	0	0	0	2	0	12076	11078	11079	0
7	21	1	44	0	0	0	0	2	0	12077	11079	11080	0
7	21	1	44	0	0	0	0	2	0	12078	11080	11081	0
7	21	1	44	0	0	0	0	2	0	12079	11081	11002	0
3	21	1	44	0	0	0	0	2	0	12080	11082	11084	0
3	21	1	44	0	0	0	0	2	0	12081	11084	11085	0
3	21	1	44	0	0	0	0	2	0	12082	11085	11086	0
3	21	1	44	0	0	0	0	2	0	12083	11086	11087	0
3	21	1	44	0	0	0	0	2	0	12084	11087	11088	0
3	21	1	44	0	0	0	0	2	0	12085	11088	11089	0
3	21	1	44	0	0	0	0	2	0	12086	11089	11090	0
3	21	1	44	0	0	0	0	2	0	12087	11090	11091	0
3	21	1	44	0	0	0	0	2	0	12088	11091	11092	0
3	21	1	44	0	0	0	0	2	0	12089	11092	11093	0
3	21	1	44	0	0	0	0	2	0	12090	11093	11094	0
3	21	1	44	0	0	0	0	2	0	12091	11094	11095	0
3	21	1	44	0	0	0	0	2	0	12092	11095	11096	0
3	21	1	44	0	0	0	0	2	0	12093	11096	11097	0
3	21	1	44	0	0	0	0	2	0	12094	11097	11098	0
3	21	1	44	0	0	0	0	2	0	12095	11098	11099	0
3	21	1	44	0	0	0	0	2	0	12096	11099	11100	0
3	21	1	44	0	0	0	0	2	0	12097	11100	11101	0
3	21	1	44	0	0	0	0	2	0	12098	11101	11102	0
3	21	1	44	0	0	0	0	2	0	12099	11102	11103	0
3	21	1	44	0	0	0	0	2	0	12100	11103	11104	0
3	21	1	44	0	0	0	0	2	0	12101	11104	11105	0
3	21	1	44	0	0	0	0	2	0	12102	11105	11083	0
3	21	1	44	0	0	0	0	2	0	12103	11083	11106	0
3	21	1	44	0	0	0	0	2	0	12104	11106	11107	0
3	21	1	44	0	0	0	0	2	0	12105	11107	11108	0
3	21	1	44	0	0	0	0	2	0	12106	11108	11109	0
3	21	1	44	0	0	0	0	2	0	12107	11109	11110	0
3	21	1	44	0	0	0	0	2	0	12108	11110	11111	0
3	21	1	44	0	0	0	0	2	0	12109	11111	11112	0
3	21	1	44	0	0	0	0	2	0	12110	11112	11113	0
3	21	1	44	0	0	0	0	2	0	12111	11113	11114	0

3	21	1	44	0	0	0	0	2	0	12112	11114	11050	0
6	21	1	45	0	0	0	0	2	0	12113	11115	11117	0
6	21	1	50	0	0	0	0	2	0	12114	11117	11118	0
6	21	1	50	0	0	0	0	2	0	12115	11118	11119	0
6	21	1	50	0	0	0	0	2	0	12116	11119	11120	0
6	21	1	50	0	0	0	0	2	0	12117	11120	11121	0
6	21	1	50	0	0	0	0	2	0	12118	11121	11116	0
6	21	1	45	0	0	0	0	2	0	12119	11122	11124	0
6	21	1	50	0	0	0	0	2	0	12120	11124	11125	0
6	21	1	50	0	0	0	0	2	0	12121	11125	11126	0
6	21	1	50	0	0	0	0	2	0	12122	11126	11127	0
6	21	1	50	0	0	0	0	2	0	12123	11127	11128	0
6	21	1	50	0	0	0	0	2	0	12124	11128	11123	0
6	21	1	45	0	0	0	0	2	0	12125	11129	11131	0
6	21	1	50	0	0	0	0	2	0	12126	11131	11132	0
6	21	1	50	0	0	0	0	2	0	12127	11132	11133	0
6	21	1	50	0	0	0	0	2	0	12128	11133	11134	0
6	21	1	50	0	0	0	0	2	0	12129	11134	11135	0
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      6  1004  1004    50     0     0     0     0     1     0 12481 11450     0     0
-1

! These constraint equiations attach the trolly to the crane bridge
!!!! Dec 20, 2010, J.Staples
!!!! See Rev 1 of Calc S10-0049.
!!!! CE equations are replaced by CP commands. The CP commands include no Rotation restriction and connections now follow NOG-1 2004
!!!! This is associated with Fig. 4154.3-1 and Table 4154.3-1
!!!! Specifically, Nodes E, F, G and H of the Figure 4154.3

!CE,1,0,11002,UZ,1,11129,UZ,-1,11129,ROTX,-1,

!CE,2,0,11002,UY,1,11129,UY,-1

!CE,3,0,11002,UX,1,11129,UX,-1,11129,ROTZ,1,

!CE,4,0,11050,UZ,1,11136,UZ,-1,11136,ROTX,-1,

!CE,5,0,11050,UY,1,11136,UY,-1

!CE,6,0,11050,UX,1,11136,UX,-1,11136,ROTZ,1,

!CE,7,0,11122,UY,1,11026,UY,-1

!CE,8,0,11122,UX,1,11026,UX,-1,11026,ROTZ,-1,

!CE,9,0,11115,UY,1,11083,UY,-1

!CE,10,0,11115,UX,1,11083,UX,-1,11083,ROTZ,-1,


CP,1,UX,     11002,     11129,
```

```
CP,2,UY,      11002,     11129,
CP,3,UZ,      11002,     11129,
CP,4,UX,      11050,     11136,
CP,5,UY,      11050,     11136,
CP,6,UZ,      11050,     11136,
CP,7,UY,      11026,     11122,
CP,8,UX,      11026,     11122,
CP,9,UY,      11083,     11115,
CP,10,UX,     11083,     11115,


!!!!
!!!! End of Dec 20 2010 changes.


ESEL,ALL
NSEL,ALL


! DEFINE SUPPORTS BASED ON NODES

D,10101,UY,0
D,10101,UZ,0

D,10102,UY,0
D,10102,UZ,0

D,10103,UX,0
D,10103,UY,0
D,10103,UZ,0

D,10104,UX,0
D,10104,UY,0
D,10104,UZ,0

D,10113,UY,0

D,10114,UY,0

D,10115,UX,0
D,10115,UY,0

D,10116,UX,0
D,10116,UY,0

/SOLU
ANTYPE,0

ACEL,0,386.08858,0                                                                    !386.08858
THIS COMMAND ESTABLISHES THE DIRECTION AND FORCE FOR GRAVITY, 386.4


lswrite,1

ACEL,386.08858,0,0

lswrite,2

ACEL,0,0,-386.08858

lswrite,3

ACEL,0,0,0

F,11450,FX,-10000
lswrite,4
FDELE,ALL,ALL,ALL      ! CLEAR ALL NODES LOADS


F,11450,FY,-100000
lswrite,5
FDELE,ALL,ALL,ALL      ! CLEAR ALL NODES LOADS


F,11450,FZ,-10000
```

```
lswrite,6
FDELE,ALL,ALL,ALL      ! CLEAR ALL NODES LOADS


LSSOLVE,1,6,1
/OUTPUT, TERM

FINISH
```

Attachment 2

ANSYS Stand-Alone Crane Model, “Hook Up”, Modal Analysis

```
/BATCH
! CALCULATE THE MODAL SOLUTIONS TO FIND MODE SHAPES
ALLSEL,ALL

/SOLU
!*
ANTYPE,2
!*
!*
MODOPT,LANB,40
EQSLV,SPAR
MXPAND,40, , ,0
LUMPM,1
PSTRES,0
!*
MODOPT,LANB,40,0,24, ,OFF

/STATUS,SOLU

SOLVE
FINISH
```

Attachment 3

ANSYS Stand-Alone Crane Model, “Hook Down”, Static Loads

```
/BATCH
/FILENAME, PGCR045
!/CWD,'C:\Documents and Settings\mkeeney\Desktop\MCK_ANSYS\Ansys\output'
/TITLE,Auxzilary Building Modifications
/PREP7

! The units for this model are INCHES POUNDS SECONDS.
! The nodal coordinates are a direct copy of the GT STRDL model.
! The node numbers match the original model were possible.

!
!   Added runway girder nodes
!   Replace "CNR" with on node numbers starting at 10000.
N,10101,2241,870.6,-564
N,10102,2187,870.6,-564
N,10103,2019,870.6,-564
N,10104,1965,870.6,-564
N,10113,2241,870.6,-12
N,10114,2187,870.6,-12
N,10115,2019,870.6,-12
N,10116,1965,870.6,-12
!
!  Added crane nodes
!  Replace "CN" with on nodes numbers starting at 11000
N,11001,2214,922.1,-12
N,11002,2214,922.1,-241
N,11003,2214,922.1,-21.95652174
N,11004,2214,922.1,-31.9130435
N,11005,2214,922.1,-41.8695652
N,11006,2214,922.1,-51.826087
N,11007,2214,922.1,-61.7826087
N,11008,2214,922.1,-71.7391304
N,11009,2214,922.1,-81.6956522
N,11010,2214,922.1,-91.6521739
N,11011,2214,922.1,-101.6086957
N,11012,2214,922.1,-111.5652174
N,11013,2214,922.1,-121.521739
N,11014,2214,922.1,-131.478261
N,11015,2214,922.1,-141.434783
N,11016,2214,922.1,-151.391304
N,11017,2214,922.1,-161.347826
N,11018,2214,922.1,-171.304348
N,11019,2214,922.1,-181.26087
N,11020,2214,922.1,-191.217391
N,11021,2214,922.1,-201.173913
N,11022,2214,922.1,-211.130435
N,11023,2214,922.1,-221.086957
N,11024,2214,922.1,-231.043478
N,11025,2214,922.1,-564
N,11026,2214,922.1,-335
N,11027,2214,922.1,-554.043478
N,11028,2214,922.1,-544.086957
N,11029,2214,922.1,-534.130435
N,11030,2214,922.1,-524.173913
N,11031,2214,922.1,-514.217391
N,11032,2214,922.1,-504.26087
N,11033,2214,922.1,-494.304348
N,11034,2214,922.1,-484.347826
N,11035,2214,922.1,-474.391304
N,11036,2214,922.1,-464.434783
N,11037,2214,922.1,-454.478261
N,11038,2214,922.1,-444.521739
N,11039,2214,922.1,-434.565217
N,11040,2214,922.1,-424.608696
N,11041,2214,922.1,-414.652174
N,11042,2214,922.1,-404.695652
N,11043,2214,922.1,-394.73913
N,11044,2214,922.1,-384.782609
N,11045,2214,922.1,-374.826087
N,11046,2214,922.1,-364.869565
N,11047,2214,922.1,-354.913043
N,11048,2214,922.1,-344.956522
```

N,11049,1992,922.1,-12
N,11050,1992,922.1,-241
N,11051,1992,922.1,-21.95652174
N,11052,1992,922.1,-31.9130435
N,11053,1992,922.1,-41.8695652
N,11054,1992,922.1,-51.826087
N,11055,1992,922.1,-61.7826087
N,11056,1992,922.1,-71.7391304
N,11057,1992,922.1,-81.6956522
N,11058,1992,922.1,-91.6521739
N,11059,1992,922.1,-101.6086957
N,11060,1992,922.1,-111.5652174
N,11061,1992,922.1,-121.521739
N,11062,1992,922.1,-131.478261
N,11063,1992,922.1,-141.434783
N,11064,1992,922.1,-151.391304
N,11065,1992,922.1,-161.347826
N,11066,1992,922.1,-171.304348
N,11067,1992,922.1,-181.26087
N,11068,1992,922.1,-191.217391
N,11069,1992,922.1,-201.173913
N,11070,1992,922.1,-211.130435
N,11071,1992,922.1,-221.086957
N,11072,1992,922.1,-231.043478
N,11073,2214,922.1,-325.6
N,11074,2214,922.1,-316.2
N,11075,2214,922.1,-306.8
N,11076,2214,922.1,-297.4
N,11077,2214,922.1,-288
N,11078,2214,922.1,-278.6
N,11079,2214,922.1,-269.2
N,11080,2214,922.1,-259.8
N,11081,2214,922.1,-250.4
N,11082,1992,922.1,-564
N,11083,1992,922.1,-335
N,11084,1992,922.1,-554.043478
N,11085,1992,922.1,-544.086957
N,11086,1992,922.1,-534.130435
N,11087,1992,922.1,-524.173913
N,11088,1992,922.1,-514.217391
N,11089,1992,922.1,-504.26087
N,11090,1992,922.1,-494.304348
N,11091,1992,922.1,-484.347826
N,11092,1992,922.1,-474.391304
N,11093,1992,922.1,-464.434783
N,11094,1992,922.1,-454.478261
N,11095,1992,922.1,-444.521739
N,11096,1992,922.1,-434.565217
N,11097,1992,922.1,-424.608696
N,11098,1992,922.1,-414.652174
N,11099,1992,922.1,-404.695652
N,11100,1992,922.1,-394.73913
N,11101,1992,922.1,-384.782609
N,11102,1992,922.1,-374.826087
N,11103,1992,922.1,-364.869565
N,11104,1992,922.1,-354.913043
N,11105,1992,922.1,-344.956522
N,11106,1992,922.1,-325.6
N,11107,1992,922.1,-316.2
N,11108,1992,922.1,-306.8
N,11109,1992,922.1,-297.4
N,11110,1992,922.1,-288
N,11111,1992,922.1,-278.6
N,11112,1992,922.1,-269.2
N,11113,1992,922.1,-259.8
N,11114,1992,922.1,-250.4
N,11115,1992,923.1,-335
N,11116,1992,974.9,-335
N,11117,1992,931.73333333,-335
N,11118,1992,940.3666667,-335
N,11119,1992,949,-335
N,11120,1992,957.6333333,-335
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N,11122,2214,923.1,-335
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N,11124,2214,931.73333333,-335
N,11125,2214,940.3666667,-335
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N,11127,2214,957.6333333,-335
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N,11209,2165.7391304,922.1,-564
N,11210,2156.0869565,922.1,-564
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N,11213,2127.1304348,922.1,-564
N,11214,2117.4782609,922.1,-564
N,11215,2107.82608696,922.1,-564
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N,11219,2069.2173913,922.1,-564
N,11220,2059.5652174,922.1,-564
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N,11228,2011.3043478,922.1,-12
N,11229,2020.9565217,922.1,-12
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N,11235,2078.8695652,922.1,-12
N,11236,2088.5217391,922.1,-12
N,11237,2098.17391304,922.1,-12
N,11238,2107.82608696,922.1,-12
N,11239,2117.4782609,922.1,-12
N,11240,2127.1304348,922.1,-12
N,11241,2136.7826087,922.1,-12
N,11242,2146.4347826,922.1,-12
N,11243,2156.0869565,922.1,-12
N,11244,2165.7391304,922.1,-12
N,11245,2175.3913043,922.1,-12
N,11246,2185.0434783,922.1,-12
N,11247,2194.6956522,922.1,-12
N,11248,2204.347826,922.1,-12
N,11249,2214,880.6,-564
N,11250,2214,888.9,-564
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N,11252,2214,905.5,-564
N,11253,2214,913.8,-564
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N,11255,1992,888.9,-564
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N,11257,1992,905.5,-564
N,11258,1992,913.8,-564
N,11259,2214,880.6,-12
N,11260,2214,888.9,-12

N,11261,2214,897.2,-12
N,11262,2214,905.5,-12
N,11263,2214,913.8,-12
N,11264,1992,880.6,-12
N,11265,1992,888.9,-12
N,11266,1992,897.2,-12
N,11267,1992,905.5,-12
N,11268,1992,913.8,-12
N,11270,2241,880.6,-564
N,11272,2187,880.6,-564
N,11274,2019,880.6,-564
N,11276,1965,880.6,-564
N,11278,2241,880.6,-12
N,11280,2187,880.6,-12
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N,11286,2223,880.6,-564
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N,11288,2001,880.6,-564
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N,11292,1983,880.6,-564
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N,11298,2205,880.6,-12
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N,11300,1983,880.6,-12
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N,11302,2167.2352941,880.6,-564
N,11303,2157.3529412,880.6,-564
N,11304,2147.4705882,880.6,-564
N,11305,2137.5882353,880.6,-564
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N,11309,2098.05882353,880.6,-564
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N,11329,2147.4705882,880.6,-12
N,11330,2157.3529412,880.6,-12
N,11331,2167.2352941,880.6,-12
N,11332,2177.1176471,880.6,-12
N,11333,1992,987.9,-290.625
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N,11337,2214,987.9,-232.25
N,11338,2214,987.9,-290.625
N,11341,2214,987.9,-344.25
N,11344,1992,987.9,-344.25
N,11347,2194.5,987.9,-232.25
N,11348,2185.81,987.9,-232.25
N,11349,2168.31,987.9,-232.25
N,11350,2152,987.9,-232.25
N,11351,2134.5,987.9,-232.25

N,11352,2126,987.9,-232.25
N,11353,2005.19,987.9,-232.25
N,11354,2011.82,987.9,-232.25
N,11355,2022.82,987.9,-232.25
N,11356,2080,987.9,-232.25
N,11357,2110.66666667,987.9,-232.25
N,11358,2095.33333333,987.9,-232.25
N,11359,2045.25,987.9,-232.25
N,11360,2034.035,987.9,-232.25
N,11361,2067.75,987.9,-232.25
N,11362,2056.5,987.9,-232.25
N,11363,2194.5,987.9,-290.625
N,11365,2185.81,987.9,-290.625
N,11366,2168.31,987.9,-290.625
N,11367,2152,987.9,-290.625
N,11368,2126,987.9,-290.625
N,11369,2080,987.9,-290.625
N,11372,2134.5,987.9,-290.625
N,11373,2005.19,987.9,-290.625
N,11374,2011.82,987.9,-290.625
N,11375,2022.82,987.9,-290.625
N,11376,2045.25,987.9,-290.625
N,11377,2034.035,987.9,-290.625
N,11378,2067.75,987.9,-290.625
N,11379,2056.5,987.9,-290.625
N,11392,2134.5,987.9,-251.708333
N,11393,2134.5,987.9,-271.166667
N,11395,2067.75,987.9,-251.708333
N,11396,2067.75,987.9,-271.166667
N,11397,2126,987.9,-271
N,11399,2126,987.9,-250
N,11400,2080,987.9,-250
N,11401,2126,987.9,-260.5
N,11402,2080,987.9,-271
N,11403,2080,987.9,-260.5
N,11405,2110.66666667,987.9,-271
N,11406,2095.33333333,987.9,-271
N,11408,2110.66666667,987.9,-250
N,11409,2095.33333333,987.9,-250
N,11411,2185.81,987.9,-251.708333
N,11412,2185.81,987.9,-271.166667
N,11414,2168.31,987.9,-251.708333
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N,11420,2005.19,987.9,-251.708333
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N,11423,2022.82,987.9,-251.708333
N,11424,2022.82,987.9,-271.166667
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N,11430,2194.5,987.9,-271.166667
N,11432,2011.82,987.9,-251.708333
N,11433,2011.82,987.9,-271.166667
N,11434,2103,987.9,-290.625
N,11435,2114.5,987.9,-290.625
N,11436,2091.5,987.9,-290.625
N,11437,2214,987.9,-335
N,11438,2214,987.9,-305.416667
N,11439,2214,987.9,-320.208333
N,11440,1992,987.9,-335
N,11441,1992,987.9,-305.416667
N,11442,1992,987.9,-320.208333
N,11443,2214,987.9,-241
N,11444,2214,987.9,-257.541667
N,11445,2214,987.9,-274.083333
N,11446,1992,987.9,-241
N,11447,1992,987.9,-257.541667
N,11448,1992,987.9,-274.083333
N,11450,2103,891.74,-290.625

! SPRING NODES

```
! DEFINE REAL CONSTANT

R,1

R,2

R,6

R,7

R,10

R,11

R,1001,2766.222961730,,,   ! HOOK X SPRING

R,1002,2766.222961730,,,   ! HOOK Z SPRING

R,1003,2266759.624568,,,   ! HOOK Y SPRING

R,1004,688.9610669,688.9610669,688.9610669  !688.9610669,688.9610669,688.9610669, ! HOOK MASS change because of change in gravity 688.4057971014

R,52,1.15,1.15,1.15
R,53,2.27743,2.27743,2.27743
R,54,3.662,3.662,3.662
R,55,0.64699,0.64699,0.64699
R,100,51.7598344,219.979296,51.7598344

! DEFINE MATERIAL TYPES

! THE FOLLOWING MATERIAL TYPES ARE FOR THE CRANE

MAT,2     !  HOOKUP MAT 2
MP,EX,2,3E+07
MP,NUXY,2,0.3
MP,DENS,2,0.745E-03


MAT,3     !  HOOKUP MAT 3
MP,EX,3,3E+07
MP,NUXY,3,0.3
MP,DENS,3,0.11660E-02


MAT,4     !  HOOKUP MAT 4
MP,EX,4,3E+07
MP,NUXY,4,0.3
MP,DENS,4,0.96E-03


MAT,5     !  HOOKUP MAT 5
MP,EX,5,3E+07
MP,NUXY,5,0.8E-03
MP,DENS,5,0.123E-02


MAT,6     !  HOOKUP MAT 6
MP,EX,6,3E+07
MP,NUXY,6,0.3
MP,DENS,6,0


MAT,7     !  HOOKUP MAT 7
MP,EX,7,3E+07
MP,NUXY,7,0.3
MP,DENS,7,0.121E-02


MAT,8     !  HOOKUP MAT 8
MP,EX,8,3E+07
MP,NUXY,8,0.3
MP,DENS,8,0.6241E-02
```

```
! CREATE DIFFERENT ELEMENT TYPES IN ORDER TO CONTROL THE END RELEASES USING "KEYOPT"

ET,1,BEAM188

ET,2,BEAM44
!KEYOPT,2,7,11

ET,6,BEAM44
!KEYOPT,6,7,1011

ET,10,BEAM44
!KEYOPT,10,7,11011

ET,11,BEAM44
!KEYOPT,11,7,10011

ET,   100, 21

ET,   1001, 14
KEYOP,   1001, 2,      1

ET,   1002, 14
KEYOP,   1002, 2,      3

ET,   1003, 14
KEYOP,   1003, 2,      2

ET,   1004, 21

ET,21,BEAM44

! DEFINE BEAM SECTION TYPES THAT WILL BE USED IN THE MODEL


! THE FOLLOWING SECTIONS ARE FOR THE CRANE MODEL AS PROVIDED
! BY THE CRANE VENDOR

SECTYPE,44,BEAM,HREC,       !1  MAIN BRIDGE GIRDER
SECDATA,61.000,17.125,1.0000,1.0000,0.62500, 0.62500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,45,BEAM,CSOL,       !2  WHEELS
SECDATA,4.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000


SECTYPE,47,BEAM,HREC,endtie  !4  CONNECT BRIDGE GIRDERS - TOP
SECDATA,10.000,8.0000,1.0000,1.0000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,48,BEAM,HREC,asagitie   !6 CONNECT BRIDGE GIRDERS - BOTTOM
SECDATA,8.0000,8.0000,0.75000,0.75000,0.75000,0.75000,
SECOFFSET,CENT
SECCONTROL,0.0000,0.0000,0.0000,0.0000

SECTYPE,49,BEAM,HREC,endtruck   !7  MAIN TRUCKS
SECDATA,22.000,16.600,1.5000,1.5000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,50,BEAM,RECT,       !8  VERTICAL POSTS
SECDATA,14.000,14.000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,51,BEAM,HREC,Ttrucks   !10  TROLLEY TRUCK
SECDATA,22.250,9.0000,0.75000,0.75000,0.50000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,52,BEAM,RECT,girt1   !11  OUTSIDE TROLLEY GIRDER
```

```
SECDATA,33.000,1.2500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,53,BEAM,RECT,girt2   !12  INSIDE TROLLEY GIRDER (CABLE ATTACHED)
SECDATA,42.625,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,55,BEAM,RECT,        !14  TROLLEY 20" STIFFENER
SECDATA,20.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,56,BEAM,RECT,stiff2   !15  TROLLEY 6" STIFFENER
SECDATA,6.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,57,BEAM,RECT,         !16  TROLLEY 15" STIFFENER
SECDATA,15.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,58,BEAM,RECT,9luk    !17  TROLLEY 9" STIFFENER
SECDATA,9.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SAVE

! SELECT NODES IN ORDER TO DEFINE A RIGID REGION USING "CERIG"


NSEL,ALL,,,,,


! EBLOCK DEFINES ELEMENTS, HEADING ARE PROVIDED TO HELP DURING CHECKING
!    MAT   TYPE    REAL   SECT                        # NODES        ELM #    I     J     K
EBLOCK,19,SOLID,
(19i8)
     7     21     1     44     0     0     0     0     2     0  12001  11001  11003     0
     7     21     1     44     0     0     0     0     2     0  12002  11003  11004     0
     7     21     1     44     0     0     0     0     2     0  12003  11004  11005     0
     7     21     1     44     0     0     0     0     2     0  12004  11005  11006     0
     7     21     1     44     0     0     0     0     2     0  12005  11006  11007     0
     7     21     1     44     0     0     0     0     2     0  12006  11007  11008     0
     7     21     1     44     0     0     0     0     2     0  12007  11008  11009     0
     7     21     1     44     0     0     0     0     2     0  12008  11009  11010     0
     7     21     1     44     0     0     0     0     2     0  12009  11010  11011     0
     7     21     1     44     0     0     0     0     2     0  12010  11011  11012     0
     7     21     1     44     0     0     0     0     2     0  12011  11012  11013     0
     7     21     1     44     0     0     0     0     2     0  12012  11013  11014     0
     7     21     1     44     0     0     0     0     2     0  12013  11014  11015     0
     7     21     1     44     0     0     0     0     2     0  12014  11015  11016     0
     7     21     1     44     0     0     0     0     2     0  12015  11016  11017     0
     7     21     1     44     0     0     0     0     2     0  12016  11017  11018     0
     7     21     1     44     0     0     0     0     2     0  12017  11018  11019     0
     7     21     1     44     0     0     0     0     2     0  12018  11019  11020     0
     7     21     1     44     0     0     0     0     2     0  12019  11020  11021     0
     7     21     1     44     0     0     0     0     2     0  12020  11021  11022     0
     7     21     1     44     0     0     0     0     2     0  12021  11022  11023     0
     7     21     1     44     0     0     0     0     2     0  12022  11023  11024     0
     7     21     1     44     0     0     0     0     2     0  12023  11024  11002     0
     7     21     1     44     0     0     0     0     2     0  12024  11025  11027     0
     7     21     1     44     0     0     0     0     2     0  12025  11027  11028     0
     7     21     1     44     0     0     0     0     2     0  12026  11028  11029     0
     7     21     1     44     0     0     0     0     2     0  12027  11029  11030     0
     7     21     1     44     0     0     0     0     2     0  12028  11030  11031     0
     7     21     1     44     0     0     0     0     2     0  12029  11031  11032     0
     7     21     1     44     0     0     0     0     2     0  12030  11032  11033     0
     7     21     1     44     0     0     0     0     2     0  12031  11033  11034     0
     7     21     1     44     0     0     0     0     2     0  12032  11034  11035     0
     7     21     1     44     0     0     0     0     2     0  12033  11035  11036     0
     7     21     1     44     0     0     0     0     2     0  12034  11036  11037     0
```

7	21	1	44	0	0	0	0	2	0	12035	11037	11038	0
7	21	1	44	0	0	0	0	2	0	12036	11038	11039	0
7	21	1	44	0	0	0	0	2	0	12037	11039	11040	0
7	21	1	44	0	0	0	0	2	0	12038	11040	11041	0
7	21	1	44	0	0	0	0	2	0	12039	11041	11042	0
7	21	1	44	0	0	0	0	2	0	12040	11042	11043	0
7	21	1	44	0	0	0	0	2	0	12041	11043	11044	0
7	21	1	44	0	0	0	0	2	0	12042	11044	11045	0
7	21	1	44	0	0	0	0	2	0	12043	11045	11046	0
7	21	1	44	0	0	0	0	2	0	12044	11046	11047	0
7	21	1	44	0	0	0	0	2	0	12045	11047	11048	0
7	21	1	44	0	0	0	0	2	0	12046	11048	11026	0
3	21	1	44	0	0	0	0	2	0	12047	11049	11051	0
3	21	1	44	0	0	0	0	2	0	12048	11051	11052	0
3	21	1	44	0	0	0	0	2	0	12049	11052	11053	0
3	21	1	44	0	0	0	0	2	0	12050	11053	11054	0
3	21	1	44	0	0	0	0	2	0	12051	11054	11055	0
3	21	1	44	0	0	0	0	2	0	12052	11055	11056	0
3	21	1	44	0	0	0	0	2	0	12053	11056	11057	0
3	21	1	44	0	0	0	0	2	0	12054	11057	11058	0
3	21	1	44	0	0	0	0	2	0	12055	11058	11059	0
3	21	1	44	0	0	0	0	2	0	12056	11059	11060	0
3	21	1	44	0	0	0	0	2	0	12057	11060	11061	0
3	21	1	44	0	0	0	0	2	0	12058	11061	11062	0
3	21	1	44	0	0	0	0	2	0	12059	11062	11063	0
3	21	1	44	0	0	0	0	2	0	12060	11063	11064	0
3	21	1	44	0	0	0	0	2	0	12061	11064	11065	0
3	21	1	44	0	0	0	0	2	0	12062	11065	11066	0
3	21	1	44	0	0	0	0	2	0	12063	11066	11067	0
3	21	1	44	0	0	0	0	2	0	12064	11067	11068	0
3	21	1	44	0	0	0	0	2	0	12065	11068	11069	0
3	21	1	44	0	0	0	0	2	0	12066	11069	11070	0
3	21	1	44	0	0	0	0	2	0	12067	11070	11071	0
3	21	1	44	0	0	0	0	2	0	12068	11071	11072	0
3	21	1	44	0	0	0	0	2	0	12069	11072	11050	0
7	21	1	44	0	0	0	0	2	0	12070	11026	11073	0
7	21	1	44	0	0	0	0	2	0	12071	11073	11074	0
7	21	1	44	0	0	0	0	2	0	12072	11074	11075	0
7	21	1	44	0	0	0	0	2	0	12073	11075	11076	0
7	21	1	44	0	0	0	0	2	0	12074	11076	11077	0
7	21	1	44	0	0	0	0	2	0	12075	11077	11078	0
7	21	1	44	0	0	0	0	2	0	12076	11078	11079	0
7	21	1	44	0	0	0	0	2	0	12077	11079	11080	0
7	21	1	44	0	0	0	0	2	0	12078	11080	11081	0
7	21	1	44	0	0	0	0	2	0	12079	11081	11002	0
3	21	1	44	0	0	0	0	2	0	12080	11082	11084	0
3	21	1	44	0	0	0	0	2	0	12081	11084	11085	0
3	21	1	44	0	0	0	0	2	0	12082	11085	11086	0
3	21	1	44	0	0	0	0	2	0	12083	11086	11087	0
3	21	1	44	0	0	0	0	2	0	12084	11087	11088	0
3	21	1	44	0	0	0	0	2	0	12085	11088	11089	0
3	21	1	44	0	0	0	0	2	0	12086	11089	11090	0
3	21	1	44	0	0	0	0	2	0	12087	11090	11091	0
3	21	1	44	0	0	0	0	2	0	12088	11091	11092	0
3	21	1	44	0	0	0	0	2	0	12089	11092	11093	0
3	21	1	44	0	0	0	0	2	0	12090	11093	11094	0
3	21	1	44	0	0	0	0	2	0	12091	11094	11095	0
3	21	1	44	0	0	0	0	2	0	12092	11095	11096	0
3	21	1	44	0	0	0	0	2	0	12093	11096	11097	0
3	21	1	44	0	0	0	0	2	0	12094	11097	11098	0
3	21	1	44	0	0	0	0	2	0	12095	11098	11099	0
3	21	1	44	0	0	0	0	2	0	12096	11099	11100	0
3	21	1	44	0	0	0	0	2	0	12097	11100	11101	0
3	21	1	44	0	0	0	0	2	0	12098	11101	11102	0
3	21	1	44	0	0	0	0	2	0	12099	11102	11103	0
3	21	1	44	0	0	0	0	2	0	12100	11103	11104	0
3	21	1	44	0	0	0	0	2	0	12101	11104	11105	0
3	21	1	44	0	0	0	0	2	0	12102	11105	11083	0
3	21	1	44	0	0	0	0	2	0	12103	11083	11106	0
3	21	1	44	0	0	0	0	2	0	12104	11106	11107	0
3	21	1	44	0	0	0	0	2	0	12105	11107	11108	0
3	21	1	44	0	0	0	0	2	0	12106	11108	11109	0
3	21	1	44	0	0	0	0	2	0	12107	11109	11110	0
3	21	1	44	0	0	0	0	2	0	12108	11110	11111	0
3	21	1	44	0	0	0	0	2	0	12109	11111	11112	0

3	21	1	44	0	0	0	0	2	0	12110	11112	11113	0
3	21	1	44	0	0	0	0	2	0	12111	11113	11114	0
3	21	1	44	0	0	0	0	2	0	12112	11114	11050	0
6	21	1	45	0	0	0	0	2	0	12113	11115	11117	0
6	21	1	50	0	0	0	0	2	0	12114	11117	11118	0
6	21	1	50	0	0	0	0	2	0	12115	11118	11119	0
6	21	1	50	0	0	0	0	2	0	12116	11119	11120	0
6	21	1	50	0	0	0	0	2	0	12117	11120	11121	0
6	21	1	50	0	0	0	0	2	0	12118	11121	11116	0
6	21	1	45	0	0	0	0	2	0	12119	11122	11124	0
6	21	1	50	0	0	0	0	2	0	12120	11124	11125	0
6	21	1	50	0	0	0	0	2	0	12121	11125	11126	0
6	21	1	50	0	0	0	0	2	0	12122	11126	11127	0
6	21	1	50	0	0	0	0	2	0	12123	11127	11128	0
6	21	1	50	0	0	0	0	2	0	12124	11128	11123	0
6	21	1	45	0	0	0	0	2	0	12125	11129	11131	0
6	21	1	50	0	0	0	0	2	0	12126	11131	11132	0
6	21	1	50	0	0	0	0	2	0	12127	11132	11133	0
6	21	1	50	0	0	0	0	2	0	12128	11133	11134	0
6	21	1	50	0	0	0	0	2	0	12129	11134	11135	0
6	21	1	50	0	0	0	0	2	0	12130	11135	11130	0
6	21	1	45	0	0	0	0	2	0	12131	11136	11138	0
6	21	1	50	0	0	0	0	2	0	12132	11138	11139	0
6	21	1	50	0	0	0	0	2	0	12133	11139	11140	0
6	21	1	50	0	0	0	0	2	0	12134	11140	11141	0
6	21	1	50	0	0	0	0	2	0	12135	11141	11142	0
6	21	1	50	0	0	0	0	2	0	12136	11142	11137	0
4	21	1	47	0	0	0	0	2	0	12207	11025	11205	0
4	21	1	47	0	0	0	0	2	0	12208	11205	11206	0
4	21	1	47	0	0	0	0	2	0	12209	11206	11207	0
4	21	1	47	0	0	0	0	2	0	12210	11207	11208	0
4	21	1	47	0	0	0	0	2	0	12211	11208	11209	0
4	21	1	47	0	0	0	0	2	0	12212	11209	11210	0
4	21	1	47	0	0	0	0	2	0	12213	11210	11211	0
4	21	1	47	0	0	0	0	2	0	12214	11211	11212	0
4	21	1	47	0	0	0	0	2	0	12215	11212	11213	0
4	21	1	47	0	0	0	0	2	0	12216	11213	11214	0
4	21	1	47	0	0	0	0	2	0	12217	11214	11215	0
4	21	1	47	0	0	0	0	2	0	12218	11215	11216	0
4	21	1	47	0	0	0	0	2	0	12219	11216	11217	0
4	21	1	47	0	0	0	0	2	0	12220	11217	11218	0
4	21	1	47	0	0	0	0	2	0	12221	11218	11219	0
4	21	1	47	0	0	0	0	2	0	12222	11219	11220	0
4	21	1	47	0	0	0	0	2	0	12223	11220	11221	0
4	21	1	47	0	0	0	0	2	0	12224	11221	11222	0
4	21	1	47	0	0	0	0	2	0	12225	11222	11223	0
4	21	1	47	0	0	0	0	2	0	12226	11223	11224	0
4	21	1	47	0	0	0	0	2	0	12227	11224	11225	0
4	21	1	47	0	0	0	0	2	0	12228	11225	11226	0
4	21	1	47	0	0	0	0	2	0	12229	11226	11082	0
4	21	1	47	0	0	0	0	2	0	12230	11049	11227	0
4	21	1	47	0	0	0	0	2	0	12231	11227	11228	0
4	21	1	47	0	0	0	0	2	0	12232	11228	11229	0
4	21	1	47	0	0	0	0	2	0	12233	11229	11230	0
4	21	1	47	0	0	0	0	2	0	12234	11230	11231	0
4	21	1	47	0	0	0	0	2	0	12235	11231	11232	0
4	21	1	47	0	0	0	0	2	0	12236	11232	11233	0
4	21	1	47	0	0	0	0	2	0	12237	11233	11234	0
4	21	1	47	0	0	0	0	2	0	12238	11234	11235	0
4	21	1	47	0	0	0	0	2	0	12239	11235	11236	0
4	21	1	47	0	0	0	0	2	0	12240	11236	11237	0
4	21	1	47	0	0	0	0	2	0	12241	11237	11238	0
4	21	1	47	0	0	0	0	2	0	12242	11238	11239	0
4	21	1	47	0	0	0	0	2	0	12243	11239	11240	0
4	21	1	47	0	0	0	0	2	0	12244	11240	11241	0
4	21	1	47	0	0	0	0	2	0	12245	11241	11242	0
4	21	1	47	0	0	0	0	2	0	12246	11242	11243	0
4	21	1	47	0	0	0	0	2	0	12247	11243	11244	0
4	21	1	47	0	0	0	0	2	0	12248	11244	11245	0
4	21	1	47	0	0	0	0	2	0	12249	11245	11246	0
4	21	1	47	0	0	0	0	2	0	12250	11246	11247	0
4	21	1	47	0	0	0	0	2	0	12251	11247	11248	0
4	21	1	47	0	0	0	0	2	0	12252	11248	11001	0
6	21	1	50	0	0	0	0	2	0	12253	11249	11250	0
6	21	1	50	0	0	0	0	2	0	12254	11250	11251	0

6	21	1	50	0	0	0	0	2	0	12255	11251	11252	0
6	21	1	50	0	0	0	0	2	0	12256	11252	11253	0
6	21	1	50	0	0	0	0	2	0	12257	11253	11025	0
6	21	1	50	0	0	0	0	2	0	12258	11254	11255	0
6	21	1	50	0	0	0	0	2	0	12259	11255	11256	0
6	21	1	50	0	0	0	0	2	0	12260	11256	11257	0
6	21	1	50	0	0	0	0	2	0	12261	11257	11258	0
6	21	1	50	0	0	0	0	2	0	12262	11258	11082	0
6	21	1	50	0	0	0	0	2	0	12263	11259	11260	0
6	21	1	50	0	0	0	0	2	0	12264	11260	11261	0
6	21	1	50	0	0	0	0	2	0	12265	11261	11262	0
6	21	1	50	0	0	0	0	2	0	12266	11262	11263	0
6	21	1	50	0	0	0	0	2	0	12267	11263	11001	0
6	21	1	50	0	0	0	0	2	0	12268	11264	11265	0
6	21	1	50	0	0	0	0	2	0	12269	11265	11266	0
6	21	1	50	0	0	0	0	2	0	12270	11266	11267	0
6	21	1	50	0	0	0	0	2	0	12271	11267	11268	0
6	21	1	50	0	0	0	0	2	0	12272	11268	11049	0
5	21	1	45	0	0	0	0	2	0	12273	10101	11270	0
5	21	1	45	0	0	0	0	2	0	12274	10102	11272	0
5	21	1	45	0	0	0	0	2	0	12275	10103	11274	0
5	21	1	45	0	0	0	0	2	0	12276	10104	11276	0
5	21	1	45	0	0	0	0	2	0	12277	10113	11278	0
5	21	1	45	0	0	0	0	2	0	12278	10114	11280	0
5	21	1	45	0	0	0	0	2	0	12279	10115	11282	0
5	21	1	45	0	0	0	0	2	0	12280	10116	11284	0
5	21	1	49	0	0	0	0	2	0	12281	11270	11285	0
5	21	1	49	0	0	0	0	2	0	12282	11285	11286	0
5	21	1	49	0	0	0	0	2	0	12283	11286	11249	0
5	21	1	49	0	0	0	0	2	0	12284	11274	11287	0
5	21	1	49	0	0	0	0	2	0	12285	11287	11288	0
5	21	1	49	0	0	0	0	2	0	12286	11288	11254	0
5	21	1	49	0	0	0	0	2	0	12287	11272	11289	0
5	21	1	49	0	0	0	0	2	0	12288	11289	11290	0
5	21	1	49	0	0	0	0	2	0	12289	11290	11249	0
5	21	1	49	0	0	0	0	2	0	12290	11276	11291	0
5	21	1	49	0	0	0	0	2	0	12291	11291	11292	0
5	21	1	49	0	0	0	0	2	0	12292	11292	11254	0
5	21	1	49	0	0	0	0	2	0	12293	11278	11293	0
5	21	1	49	0	0	0	0	2	0	12294	11293	11294	0
5	21	1	49	0	0	0	0	2	0	12295	11294	11259	0
5	21	1	49	0	0	0	0	2	0	12296	11282	11295	0
5	21	1	49	0	0	0	0	2	0	12297	11295	11296	0
5	21	1	49	0	0	0	0	2	0	12298	11296	11264	0
5	21	1	49	0	0	0	0	2	0	12299	11280	11297	0
5	21	1	49	0	0	0	0	2	0	12300	11297	11298	0
5	21	1	49	0	0	0	0	2	0	12301	11298	11259	0
5	21	1	49	0	0	0	0	2	0	12302	11284	11299	0
5	21	1	49	0	0	0	0	2	0	12303	11299	11300	0
5	21	1	49	0	0	0	0	2	0	12304	11300	11264	0
5	21	1	48	0	0	0	0	2	0	12305	11272	11301	0
5	21	1	48	0	0	0	0	2	0	12306	11301	11302	0
5	21	1	48	0	0	0	0	2	0	12307	11302	11303	0
5	21	1	48	0	0	0	0	2	0	12308	11303	11304	0
5	21	1	48	0	0	0	0	2	0	12309	11304	11305	0
5	21	1	48	0	0	0	0	2	0	12310	11305	11306	0
5	21	1	48	0	0	0	0	2	0	12311	11306	11307	0
5	21	1	48	0	0	0	0	2	0	12312	11307	11308	0
5	21	1	48	0	0	0	0	2	0	12313	11308	11309	0
5	21	1	48	0	0	0	0	2	0	12314	11309	11310	0
5	21	1	48	0	0	0	0	2	0	12315	11310	11311	0
5	21	1	48	0	0	0	0	2	0	12316	11311	11312	0
5	21	1	48	0	0	0	0	2	0	12317	11312	11313	0
5	21	1	48	0	0	0	0	2	0	12318	11313	11314	0
5	21	1	48	0	0	0	0	2	0	12319	11314	11315	0
5	21	1	48	0	0	0	0	2	0	12320	11315	11316	0
5	21	1	48	0	0	0	0	2	0	12321	11316	11274	0
5	21	1	48	0	0	0	0	2	0	12322	11282	11317	0
5	21	1	48	0	0	0	0	2	0	12323	11317	11318	0
5	21	1	48	0	0	0	0	2	0	12324	11318	11319	0
5	21	1	48	0	0	0	0	2	0	12325	11319	11320	0
5	21	1	48	0	0	0	0	2	0	12326	11320	11321	0
5	21	1	48	0	0	0	0	2	0	12327	11321	11322	0
5	21	1	48	0	0	0	0	2	0	12328	11322	11323	0
5	21	1	48	0	0	0	0	2	0	12329	11323	11324	0

5	21	1	48	0	0	0	0	2	0	12330	11324	11325	0
5	21	1	48	0	0	0	0	2	0	12331	11325	11326	0
5	21	1	48	0	0	0	0	2	0	12332	11326	11327	0
5	21	1	48	0	0	0	0	2	0	12333	11327	11328	0
5	21	1	48	0	0	0	0	2	0	12334	11328	11329	0
5	21	1	48	0	0	0	0	2	0	12335	11329	11330	0
5	21	1	48	0	0	0	0	2	0	12336	11330	11331	0
5	21	1	48	0	0	0	0	2	0	12337	11331	11332	0
5	21	1	48	0	0	0	0	2	0	12338	11332	11280	0
2	100	52	45	0	0	0	0	2	0	12339	11006		
2	100	52	45	0	0	0	0	2	0	12340	11007		
2	100	53	45	0	0	0	0	2	0	12341	11285		
2	100	54	45	0	0	0	0	2	0	12342	11270		
2	100	54	45	0	0	0	0	2	0	12343	11278		
2	100	55	45	0	0	0	0	2	0	12344	11003		
2	100	55	45	0	0	0	0	2	0	12345	11027		
2	100	55	45	0	0	0	0	2	0	12346	11051		
2	100	55	45	0	0	0	0	2	0	12347	11084		
8	21	1	52	0	0	0	0	2	0	12360	11347	11337	0
8	21	1	52	0	0	0	0	2	0	12361	11347	11348	0
8	21	1	52	0	0	0	0	2	0	12362	11348	11349	0
8	21	1	52	0	0	0	0	2	0	12363	11349	11350	0
8	21	1	52	0	0	0	0	2	0	12364	11350	11351	0
8	21	1	52	0	0	0	0	2	0	12365	11351	11352	0
8	21	1	52	0	0	0	0	2	0	12366	11334	11353	0
8	21	1	52	0	0	0	0	2	0	12367	11353	11354	0
8	21	1	52	0	0	0	0	2	0	12368	11354	11355	0
8	21	1	52	0	0	0	0	2	0	12369	11352	11357	0
8	21	1	52	0	0	0	0	2	0	12370	11357	11358	0
8	21	1	52	0	0	0	0	2	0	12371	11358	11356	0
8	21	1	52	0	0	0	0	2	0	12372	11355	11360	0
8	21	1	52	0	0	0	0	2	0	12373	11360	11359	0
8	21	1	52	0	0	0	0	2	0	12374	11359	11362	0
8	21	1	52	0	0	0	0	2	0	12375	11362	11361	0
8	21	1	52	0	0	0	0	2	0	12376	11361	11356	0
8	21	1	53	0	0	0	0	2	0	12377	11363	11338	0
8	21	1	53	0	0	0	0	2	0	12378	11363	11365	0
8	21	1	53	0	0	0	0	2	0	12379	11365	11366	0
8	21	1	53	0	0	0	0	2	0	12380	11366	11367	0
8	21	1	53	0	0	0	0	2	0	12384	11367	11372	0
8	21	1	53	0	0	0	0	2	0	12385	11372	11368	0
8	21	1	53	0	0	0	0	2	0	12386	11333	11373	0
8	21	1	53	0	0	0	0	2	0	12387	11373	11374	0
8	21	1	53	0	0	0	0	2	0	12388	11374	11375	0
8	21	1	53	0	0	0	0	2	0	12389	11375	11377	0
8	21	1	53	0	0	0	0	2	0	12390	11377	11376	0
8	21	1	53	0	0	0	0	2	0	12391	11376	11379	0
8	21	1	53	0	0	0	0	2	0	12392	11379	11378	0
8	21	1	53	0	0	0	0	2	0	12393	11369	11378	0
8	21	1	55	0	0	0	0	2	0	12406	11351	11392	0
8	21	1	55	0	0	0	0	2	0	12407	11392	11393	0
8	21	1	55	0	0	0	0	2	0	12408	11393	11372	0
8	21	1	55	0	0	0	0	2	0	12409	11361	11395	0
8	21	1	55	0	0	0	0	2	0	12410	11395	11396	0
8	21	1	55	0	0	0	0	2	0	12411	11396	11378	0
8	21	1	55	0	0	0	0	2	0	12412	11368	11397	0
8	21	1	55	0	0	0	0	2	0	12413	11352	11399	0
8	21	1	55	0	0	0	0	2	0	12414	11356	11400	0
8	21	1	55	0	0	0	0	2	0	12415	11399	11401	0
8	21	1	55	0	0	0	0	2	0	12416	11401	11397	0
8	21	1	55	0	0	0	0	2	0	12417	11369	11402	0
8	21	1	55	0	0	0	0	2	0	12418	11400	11403	0
8	21	1	55	0	0	0	0	2	0	12419	11403	11402	0
8	21	1	56	0	0	0	0	2	0	12420	11397	11405	0
8	21	1	56	0	0	0	0	2	0	12421	11405	11406	0
8	21	1	56	0	0	0	0	2	0	12422	11406	11402	0
8	21	1	57	0	0	0	0	2	0	12423	11399	11408	0
8	21	1	57	0	0	0	0	2	0	12424	11408	11409	0
8	21	1	57	0	0	0	0	2	0	12425	11409	11400	0
8	21	1	56	0	0	0	0	2	0	12426	11348	11411	0
8	21	1	56	0	0	0	0	2	0	12427	11411	11412	0
8	21	1	56	0	0	0	0	2	0	12428	11412	11365	0
8	21	1	56	0	0	0	0	2	0	12429	11349	11414	0
8	21	1	56	0	0	0	0	2	0	12430	11414	11415	0
8	21	1	56	0	0	0	0	2	0	12431	11415	11366	0

```
     8    21     1    56     0     0     0     0     2     0 12432 11350 11417     0
     8    21     1    56     0     0     0     0     2     0 12433 11417 11418     0
     8    21     1    56     0     0     0     0     2     0 12434 11418 11367     0
     8    21     1    56     0     0     0     0     2     0 12435 11353 11420     0
     8    21     1    56     0     0     0     0     2     0 12436 11420 11421     0
     8    21     1    56     0     0     0     0     2     0 12437 11421 11373     0
     8    21     1    56     0     0     0     0     2     0 12438 11355 11423     0
     8    21     1    56     0     0     0     0     2     0 12439 11423 11424     0
     8    21     1    56     0     0     0     0     2     0 12440 11424 11375     0
     8    21     1    56     0     0     0     0     2     0 12441 11359 11426     0
     8    21     1    56     0     0     0     0     2     0 12442 11426 11427     0
     8    21     1    56     0     0     0     0     2     0 12443 11427 11376     0
     8    21     1    58     0     0     0     0     2     0 12444 11347 11429     0
     8    21     1    58     0     0     0     0     2     0 12445 11429 11430     0
     8    21     1    58     0     0     0     0     2     0 12446 11430 11363     0
     8    21     1    58     0     0     0     0     2     0 12447 11354 11432     0
     8    21     1    58     0     0     0     0     2     0 12448 11432 11433     0
     8    21     1    58     0     0     0     0     2     0 12449 11433 11374     0
     8    21     1    53     0     0     0     0     2     0 12450 11368 11435     0
     8    21     1    53     0     0     0     0     2     0 12451 11435 11434     0
     8    21     1    53     0     0     0     0     2     0 12452 11369 11436     0
     8    21     1    53     0     0     0     0     2     0 12453 11436 11434     0
     8    21     1    51     0     0     0     0     2     0 12454 11338 11438     0
     8    21     1    51     0     0     0     0     2     0 12455 11438 11439     0
     8    21     1    51     0     0     0     0     2     0 12456 11439 11437     0
     8    21     1    51     0     0     0     0     2     0 12457 11333 11441     0
     8    21     1    51     0     0     0     0     2     0 12458 11441 11442     0
     8    21     1    51     0     0     0     0     2     0 12459 11442 11440     0
     8    21     1    51     0     0     0     0     2     0 12460 11443 11444     0
     8    21     1    51     0     0     0     0     2     0 12461 11444 11445     0
     8    21     1    51     0     0     0     0     2     0 12462 11445 11338     0
     8    21     1    51     0     0     0     0     2     0 12463 11446 11447     0
     8    21     1    51     0     0     0     0     2     0 12464 11447 11448     0
     8    21     1    51     0     0     0     0     2     0 12465 11448 11333     0
     8    21     1    51     0     0     0     0     2     0 12466 11443 11337     0
     8    21     1    51     0     0     0     0     2     0 12467 11446 11334     0
     8    21     1    51     0     0     0     0     2     0 12468 11437 11341     0
     8    21     1    51     0     0     0     0     2     0 12469 11344 11440     0
     6    21     1    50     0     0     0     0     2     0 12470 11130 11443     0
     6    21     1    50     0     0     0     0     2     0 12471 11123 11437     0
     6    21     1    50     0     0     0     0     2     0 12472 11116 11440     0
     6    21     1    50     0     0     0     0     2     0 12473 11137 11446     0
     6  1001  1001    50     0     0     0     0     2     0 12478 11434 11450     0
     6  1002  1002    50     0     0     0     0     2     0 12479 11434 11450     0
     6  1003  1003    50     0     0     0     0     2     0 12480 11434 11450     0
     6  1004  1004    50     0     0     0     0     1     0 12481 11450     0     0
-1

! These constraint equiations attach the trolly to the crane bridge
!!!! Dec 20, 2010, J.Staples
!!!! See Rev 1 of Calc S10-0049.
!!!! CE equations are replaced by CP commands. The CP commands include no Rotation restriction and connections now follow NOG-1 2004
!!!! This is associated with Fig. 4154.3-1 and Table 4154.3-1
!!!! Specifically, Nodes E, F, G and H of the Figure 4154.3

!CE,1,0,11002,UZ,1,11129,UZ,-1,11129,ROTX,-1,

!CE,2,0,11002,UY,1,11129,UY,-1

!CE,3,0,11002,UX,1,11129,UX,-1,11129,ROTZ,1,

!CE,4,0,11050,UZ,1,11136,UZ,-1,11136,ROTX,-1,

!CE,5,0,11050,UY,1,11136,UY,-1

!CE,6,0,11050,UX,1,11136,UX,-1,11136,ROTZ,1,

!CE,7,0,11122,UY,1,11026,UY,-1

!CE,8,0,11122,UX,1,11026,UX,-1,11026,ROTZ,-1,

!CE,9,0,11115,UY,1,11083,UY,-1

!CE,10,0,11115,UX,1,11083,UX,-1,11083,ROTZ,-1,
```

```
CP,1,UX,      11002,     11129,
CP,2,UY,      11002,     11129,
CP,3,UZ,      11002,     11129,
CP,4,UX,      11050,     11136,
CP,5,UY,      11050,     11136,
CP,6,UZ,      11050,     11136,
CP,7,UY,      11026,     11122,
CP,8,UX,      11026,     11122,
CP,9,UY,      11083,     11115,
CP,10,UX,     11083,     11115,


!!!!
!!!! End of Dec 20 2010 changes.


ESEL,ALL
NSEL,ALL


! DEFINE SUPPORTS BASED ON NODES

D,10101,UY,0
D,10101,UZ,0

D,10102,UY,0
D,10102,UZ,0

D,10103,UX,0
D,10103,UY,0
D,10103,UZ,0

D,10104,UX,0
D,10104,UY,0
D,10104,UZ,0

D,10113,UY,0

D,10114,UY,0

D,10115,UX,0
D,10115,UY,0

D,10116,UX,0
D,10116,UY,0

/SOLU
ANTYPE,0

ACEL,0,386.08858,0                                                                    !386.08858
THIS COMMAND ESTABLISHES THE DIRECTION AND FORCE FOR GRAVITY, 386.4


lswrite,1

ACEL,386.08858,0,0

lswrite,2

ACEL,0,0,-386.08858

lswrite,3

ACEL,0,0,0

F,11450,FX,-10000
lswrite,4
FDELE,ALL,ALL,ALL      ! CLEAR ALL NODES LOADS


F,11450,FY,-100000
lswrite,5
FDELE,ALL,ALL,ALL      ! CLEAR ALL NODES LOADS
```

```
F,11450,FZ,-10000
lswrite,6
FDELE,ALL,ALL,ALL       ! CLEAR ALL NODES LOADS


LSSOLVE,1,6,1
/OUTPUT, TERM

FINISH

!/SOLU

!ANTYPE,2
!MODOPT,LANB,40
!EQSLV,SPAR
!MXPAND,40, , ,0
!LUMPM,1
!PSTRES,0
!*
!MODOPT,LANB,40,0,0, ,OFF
!/OUTPUT,'PH_OUT','TXT'    !,'J:\MATTWO~1\TESTRU~1\CRANEA~1\',
!STATUS,SOLU
!SOLVE
!/OUTPUT, TERM
FINISH
```

Attachment 4

ANSYS Stand-Alone Crane Model, “Hook Down”, Modal Analysis

```
/BATCH
! CALCULATE THE MODAL SOLUTIONS TO FIND MODE SHAPES
ALLSEL,ALL

/SOLU
!*
ANTYPE,2
!*
!*
MODOPT,LANB,40
EQSLV,SPAR
MXPAND,40, , ,0
LUMPM,1
PSTRES,0
!*
MODOPT,LANB,40,0,24, ,OFF

/STATUS,SOLU

SOLVE
FINISH
```

Attachment 5

GT STRUDL Stand-Alone Crane Model, “Hook Up”, All Analyses

```
$ PGENCR045 - Aux Building Crane Upgrade_FHCR5
$ Ansys Crane Stick Model provided by vendor is converted into GTSTRUDL model.
$
TYPE SPACE FRAME
UNITS INCH LBS

JOINT COORDINATES GLOBAL

$ ADDED CRANE JOINTS

'CN1'   111.000   0.000    0.000
'CN2'   111.000   0.000 -229.000
'CN3'   111.000   0.000   -9.957
'CN4'   111.000   0.000  -19.913
'CN5'   111.000   0.000  -29.870
'CN6'   111.000   0.000  -39.826
'CN7'   111.000   0.000  -49.783
'CN8'   111.000   0.000  -59.739
'CN9'   111.000   0.000  -69.696
'CN10'  111.000   0.000  -79.652
'CN11'  111.000   0.000  -89.609
'CN12'  111.000   0.000  -99.565
'CN13'  111.000   0.000 -109.520
'CN14'  111.000   0.000 -119.480
'CN15'  111.000   0.000 -129.430
'CN16'  111.000   0.000 -139.390
'CN17'  111.000   0.000 -149.350
'CN18'  111.000   0.000 -159.300
'CN19'  111.000   0.000 -169.260
'CN20'  111.000   0.000 -179.220
'CN21'  111.000   0.000 -189.170
'CN22'  111.000   0.000 -199.130
'CN23'  111.000   0.000 -209.090
'CN24'  111.000   0.000 -219.040
'CN25'  111.000   0.000 -552.000
'CN26'  111.000   0.000 -323.000
'CN27'  111.000   0.000 -542.040
'CN28'  111.000   0.000 -532.090
'CN29'  111.000   0.000 -522.130
'CN30'  111.000   0.000 -512.170
'CN31'  111.000   0.000 -502.220
'CN32'  111.000   0.000 -492.260
'CN33'  111.000   0.000 -482.300
'CN34'  111.000   0.000 -472.350
'CN35'  111.000   0.000 -462.390
'CN36'  111.000   0.000 -452.430
'CN37'  111.000   0.000 -442.480
'CN38'  111.000   0.000 -432.520
'CN39'  111.000   0.000 -422.570
'CN40'  111.000   0.000 -412.610
'CN41'  111.000   0.000 -402.650
'CN42'  111.000   0.000 -392.700
'CN43'  111.000   0.000 -382.740
'CN44'  111.000   0.000 -372.780
'CN45'  111.000   0.000 -362.830
'CN46'  111.000   0.000 -352.870
'CN47'  111.000   0.000 -342.910
'CN48'  111.000   0.000 -332.960
'CN49'  -111.000  0.000    0.000
'CN50'  -111.000  0.000 -229.000
'CN51'  -111.000  0.000   -9.957
'CN52'  -111.000  0.000  -19.913
'CN53'  -111.000  0.000  -29.870
'CN54'  -111.000  0.000  -39.826
'CN55'  -111.000  0.000  -49.783
'CN56'  -111.000  0.000  -59.739
'CN57'  -111.000  0.000  -69.696
'CN58'  -111.000  0.000  -79.652
'CN59'  -111.000  0.000  -89.609
'CN60'  -111.000  0.000  -99.565
'CN61'  -111.000  0.000 -109.520
'CN62'  -111.000  0.000 -119.480
'CN63'  -111.000  0.000 -129.430
```

'CN64' -111.000 0.000 -139.390
'CN65' -111.000 0.000 -149.350
'CN66' -111.000 0.000 -159.300
'CN67' -111.000 0.000 -169.260
'CN68' -111.000 0.000 -179.220
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$ ADDED NODES FOR MOMENT AT BASE OF TROLLEY, MCK 9/3/2010
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'CM315' 'CN310' 'CN311'
'CM316' 'CN311' 'CN312'
'CM317' 'CN312' 'CN313'
'CM318' 'CN313' 'CN314'
'CM319' 'CN314' 'CN315'
'CM320' 'CN315' 'CN316'
'CM321' 'CN316' 'CN274'
'CM322' 'CN282' 'CN317'
'CM323' 'CN317' 'CN318'
'CM324' 'CN318' 'CN319'
'CM325' 'CN319' 'CN320'
'CM326' 'CN320' 'CN321'
'CM327' 'CN321' 'CN322'
'CM328' 'CN322' 'CN323'
'CM329' 'CN323' 'CN324'
'CM330' 'CN324' 'CN325'
'CM331' 'CN325' 'CN326'
'CM332' 'CN326' 'CN327'
'CM333' 'CN327' 'CN328'
'CM334' 'CN328' 'CN329'
'CM335' 'CN329' 'CN330'
'CM336' 'CN330' 'CN331'
'CM337' 'CN331' 'CN332'
'CM338' 'CN332' 'CN280'
'CM360' 'CN347' 'CN337'
'CM361' 'CN347' 'CN348'
'CM362' 'CN348' 'CN349'
'CM363' 'CN349' 'CN350'
'CM364' 'CN350' 'CN351'
'CM365' 'CN351' 'CN352'
'CM366' 'CN334' 'CN353'
'CM367' 'CN353' 'CN354'
'CM368' 'CN354' 'CN355'
'CM369' 'CN352' 'CN357'
'CM370' 'CN357' 'CN358'
'CM371' 'CN358' 'CN356'
'CM372' 'CN355' 'CN360'
'CM373' 'CN360' 'CN359'
'CM374' 'CN359' 'CN362'
'CM375' 'CN362' 'CN361'
'CM376' 'CN361' 'CN356'
'CM377' 'CN363' 'CN338'
'CM378' 'CN363' 'CN365'
'CM379' 'CN365' 'CN366'
'CM380' 'CN366' 'CN367'
'CM384' 'CN367' 'CN372'
'CM385' 'CN372' 'CN368'
'CM386' 'CN333' 'CN373'
'CM387' 'CN373' 'CN374'
'CM388' 'CN374' 'CN375'
'CM389' 'CN375' 'CN377'
'CM390' 'CN377' 'CN376'
'CM391' 'CN376' 'CN379'

'CM392' 'CN379' 'CN378'
'CM393' 'CN369' 'CN378'
'CM406' 'CN351' 'CN392'
'CM407' 'CN392' 'CN393'
'CM408' 'CN393' 'CN372'
'CM409' 'CN361' 'CN395'
'CM410' 'CN395' 'CN396'
'CM411' 'CN396' 'CN378'
'CM412' 'CN368' 'CN397'
'CM413' 'CN352' 'CN399'
'CM414' 'CN356' 'CN400'
'CM415' 'CN399' 'CN401'
'CM416' 'CN401' 'CN397'
'CM417' 'CN369' 'CN402'
'CM418' 'CN400' 'CN403'
'CM419' 'CN403' 'CN402'
'CM420' 'CN397' 'CN405'
'CM421' 'CN405' 'CN406'
'CM422' 'CN406' 'CN402'
'CM423' 'CN399' 'CN408'
'CM424' 'CN408' 'CN409'
'CM425' 'CN409' 'CN400'
'CM426' 'CN348' 'CN411'
'CM427' 'CN411' 'CN412'
'CM428' 'CN412' 'CN365'
'CM429' 'CN349' 'CN414'
'CM430' 'CN414' 'CN415'
'CM431' 'CN415' 'CN366'
'CM432' 'CN350' 'CN417'
'CM433' 'CN417' 'CN418'
'CM434' 'CN418' 'CN367'
'CM435' 'CN353' 'CN420'
'CM436' 'CN420' 'CN421'
'CM437' 'CN421' 'CN373'
'CM438' 'CN355' 'CN423'
'CM439' 'CN423' 'CN424'
'CM440' 'CN424' 'CN375'
'CM441' 'CN359' 'CN426'
'CM442' 'CN426' 'CN427'
'CM443' 'CN427' 'CN376'
'CM444' 'CN347' 'CN429'
'CM445' 'CN429' 'CN430'
'CM446' 'CN430' 'CN363'
'CM447' 'CN354' 'CN432'
'CM448' 'CN432' 'CN433'
'CM449' 'CN433' 'CN374'
'CM450' 'CN368' 'CN435'
'CM451' 'CN435' 'CN434'
'CM452' 'CN369' 'CN436'
'CM453' 'CN436' 'CN434'
'CM454' 'CN338' 'CN438'
'CM455' 'CN438' 'CN439'
'CM456' 'CN439' 'CN437'
'CM457' 'CN333' 'CN441'
'CM458' 'CN441' 'CN442'
'CM459' 'CN442' 'CN440'
'CM460' 'CN443' 'CN444'
'CM461' 'CN444' 'CN445'
'CM462' 'CN445' 'CN338'
'CM463' 'CN446' 'CN447'
'CM464' 'CN447' 'CN448'
'CM465' 'CN448' 'CN333'
'CM466' 'CN443' 'CN337'
'CM467' 'CN446' 'CN334'
'CM468' 'CN437' 'CN341'
'CM469' 'CN344' 'CN440'
'CM470' 'CN130' 'CN443'
'CM471' 'CN123' 'CN437'
'CM472' 'CN116' 'CN440'
'CM473' 'CN137' 'CN446'

$ ADDED MEMEBERS AT BASE OF TROLLEY FOR MOMENT, MCK 9/3/2010
'CM479' 'CN26' 'CN451'
'CM480' 'CN83' 'CN452'

```
'CM483' 'CN434' 'CN450'


ELEMENT INC

'CM478' 'CN434' 'CN450'
'CM481' 'CN434' 'CN450'
'CM482' 'CN434' 'CN450'
$'CM484' 'CN434' 'CN450'

NONLINEAR SPRING PROPERTIES
CURVE 'FY' FORCE SYMMETRY
0.0 0.0  2266759.624568 1.0
$PRINT ALL
$END

$NONLINEAR SPRING PROPERTIES
CURVE 'FX' FORCE SYMMETRY
0.0 0.0 2766222.961730 1000.0
$PRINT ALL
$END


$NONLINEAR SPRING PROPERTIES
CURVE 'FZ' FORCE SYMMETRY
0.0 0.0 2766222.961730 1000.0
$PRINT ALL
$END

$NONLINEAR SPRING PROPERTIES
$CURVE 'MZ' MOMENT SYMMETRY
$0.0 0.0 2766222.961730 0.0
PRINT ALL
END



ELEMENT PROPS
'CM478' TYPE 'NLS'
'CM481' TYPE 'NLS'
'CM482' TYPE 'NLS'
$'CM484' TYPE 'NLS'

NONLINEAR SPRING ELEMENT DATA
STIFFNESS
'CM478' Y CURVE 'FY'
'CM481' X CURVE 'FX'
'CM482' Z CURVE 'FZ'
$'CM484' MZ CURVE 'MZ'
END

$-----------------------------------------------------------------

UNITS INCH LBS
$ ADDED CRANE MEMBER DENSITIES

$ not needed per

CONSTANT

E 0.3E8 MEMBER ALL
$ E 13137518 MEM 'CM478'
 POI 0.3 MEMBER ALL

$
$ Added crane member material property 2
$
DENSITY 0.4505424 MEMBER                                -
'CM47'  'CM48'  'CM49'  'CM50'  'CM51'  'CM52'  'CM53'  'CM54'  -
'CM55'  'CM56'  'CM57'  'CM58'  'CM59'  'CM60'  'CM61'  'CM62'  -
'CM63'  'CM64'  'CM65'  'CM66'  'CM67'  'CM68'  'CM69'  'CM80'  -
'CM81'  'CM82'  'CM83'  'CM84'  'CM85'  'CM86'  'CM87'  'CM88'  -
'CM89'  'CM90'  'CM91'  'CM92'  'CM93'  'CM94'  'CM95'  'CM96'  -
'CM97'  'CM98'  'CM99'  'CM100' 'CM101' 'CM102' 'CM103' 'CM104' -
```

```
'CM105' 'CM106' 'CM107' 'CM108' 'CM109' 'CM110' 'CM111' 'CM112'

$
$ Added crane member material property 3 $ 0.371
$
DENSITY 0.370944 MEMBER                                    -
'CM207' 'CM208' 'CM209' 'CM210' 'CM211' 'CM212' 'CM213' 'CM214' -
'CM215' 'CM216' 'CM217' 'CM218' 'CM219' 'CM220' 'CM221' 'CM222' -
'CM223' 'CM224' 'CM225' 'CM226' 'CM227' 'CM228' 'CM229' 'CM230' -
'CM231' 'CM232' 'CM233' 'CM234' 'CM235' 'CM236' 'CM237' 'CM238' -
'CM239' 'CM240' 'CM241' 'CM242' 'CM243' 'CM244' 'CM245' 'CM246' -
'CM247' 'CM248' 'CM249' 'CM250' 'CM251' 'CM252'

$
$ Added crane member material property 4
$
DENSITY 0.475272 MEMBER                                    -
'CM273' 'CM274' 'CM275' 'CM276' 'CM277' 'CM278' 'CM279' 'CM280' -
'CM305' 'CM306' 'CM307' 'CM308' 'CM309' 'CM310' 'CM311' 'CM312' -
'CM313' 'CM314' 'CM315' 'CM316' 'CM317' 'CM318' 'CM319' 'CM320' -
'CM321' 'CM322' 'CM323' 'CM324' 'CM325' 'CM326' 'CM327' 'CM328' -
'CM329' 'CM330' 'CM331' 'CM332' 'CM333' 'CM334' 'CM335' 'CM336' -
'CM337' 'CM338' 'CM281' 'CM282' 'CM283' 'CM284' 'CM285' 'CM286' -
'CM287' 'CM288' 'CM289' 'CM290' 'CM291' 'CM292' 'CM293' 'CM294' -
'CM295' 'CM296' 'CM297' 'CM298' 'CM299' 'CM300' 'CM301' 'CM302' -
'CM303' 'CM304'

$
$ Added crane member material property 5   $ zero works
$
DENSITY 0.000 MEMBER                                       -
'CM113' 'CM119' 'CM125' 'CM114' 'CM115' 'CM116' 'CM117' 'CM118' -
'CM120' 'CM121' 'CM122' 'CM123' 'CM124' 'CM126' 'CM127' 'CM128' -
'CM129' 'CM130' 'CM131' 'CM132' 'CM133' 'CM134' 'CM135' 'CM136' -
'CM253' 'CM254' 'CM255' 'CM256' 'CM257' 'CM258' 'CM259' 'CM260' -
'CM261' 'CM262' 'CM263' 'CM264' 'CM265' 'CM266' 'CM267' 'CM268' -
'CM269' 'CM270' 'CM271' 'CM272' 'CM470' 'CM471' 'CM472' 'CM473' -
'CM479' 'CM480' 'CM483'                                $ ADDED 'CM479' 'CM480'

$
$ Added crane member material property 6
$
DENSITY 0.467544 MEMBER                                    -
'CM1'   'CM2'   'CM3'   'CM4'   'CM5'   'CM6'   'CM7'   'CM8'   -
'CM9'   'CM10'  'CM11'  'CM12'  'CM13'  'CM14'  'CM15'  'CM16'  -
'CM17'  'CM18'  'CM19'  'CM20'  'CM21'  'CM22'  'CM23'  'CM24'  -
'CM25'  'CM26'  'CM27'  'CM28'  'CM29'  'CM30'  'CM31'  'CM32'  -
'CM33'  'CM34'  'CM35'  'CM36'  'CM37'  'CM38'  'CM39'  'CM40'  -
'CM41'  'CM42'  'CM43'  'CM44'  'CM45'  'CM46'  'CM70'  'CM71'  -
'CM72'  'CM73'  'CM74'  'CM75'  'CM76'  'CM77'  'CM78'  'CM79'

$
$ Added crane member material property 7
$
DENSITY 2.4117156 MEMBER                                   -
'CM454' 'CM455' 'CM456' 'CM457' 'CM458' 'CM459' 'CM460' 'CM461' -
'CM462' 'CM463' 'CM464' 'CM465' 'CM466' 'CM467' 'CM468' 'CM469' -
'CM360' 'CM361' 'CM362' 'CM363' 'CM364' 'CM365' 'CM366' 'CM367' -
'CM368' 'CM369' 'CM370' 'CM371' 'CM372' 'CM373' 'CM374' 'CM375' -
'CM376' 'CM377' 'CM378' 'CM379' 'CM380' 'CM384' 'CM385' 'CM386' -
'CM387' 'CM388' 'CM389' 'CM390' 'CM391' 'CM392' 'CM393' 'CM450' -
'CM451' 'CM452' 'CM453' 'CM406' 'CM407' 'CM408' 'CM409' 'CM410' -
'CM411' 'CM412' 'CM413' 'CM414' 'CM415' 'CM416' 'CM417' 'CM418' -
'CM419' 'CM420' 'CM421' 'CM422' 'CM426' 'CM427' 'CM428' 'CM429' -
'CM430' 'CM431' 'CM432' 'CM433' 'CM434' 'CM435' 'CM436' 'CM437' -
'CM438' 'CM439' 'CM440' 'CM441' 'CM442' 'CM443' 'CM423' 'CM424' -
'CM425' 'CM444' 'CM445' 'CM446' 'CM447' 'CM448' 'CM449'


$-------------------------------------------------------------

UNITS INCH LBS

$
$ Added crane section property 1
```

```
$
MEMBER PROPERTIES PRISMATIC                              -
AX 108.0   AY 71.65   AZ 13.80                          -
IX 17697   IY 5859.0  IZ 52222.0    -
YD 61.00   ZD 17.125  YC 30.5   ZC 8.5625
'CM1'   'CM2'   'CM3'   'CM4'   'CM5'   'CM6'   'CM7'   'CM8'   -
'CM9'   'CM10'  'CM11'  'CM12'  'CM13'  'CM14'  'CM15'  'CM16'  -
'CM17'  'CM18'  'CM19'  'CM20'  'CM21'  'CM22'  'CM23'  'CM24'  -
'CM25'  'CM26'  'CM27'  'CM28'  'CM29'  'CM30'  'CM31'  'CM32'  -
'CM33'  'CM34'  'CM35'  'CM36'  'CM37'  'CM38'  'CM39'  'CM40'  -
'CM41'  'CM42'  'CM43'  'CM44'  'CM45'  'CM46'  'CM47'  'CM48'  -
'CM49'  'CM50'  'CM51'  'CM52'  'CM53'  'CM54'  'CM55'  'CM56'  -
'CM57'  'CM58'  'CM59'  'CM60'  'CM61'  'CM62'  'CM63'  'CM64'  -
'CM65'  'CM66'  'CM67'  'CM68'  'CM69'  'CM70'  'CM71'  'CM72'  -
'CM73'  'CM74'  'CM75'  'CM76'  'CM77'  'CM78'  'CM79'  'CM80'  -
'CM81'  'CM82'  'CM83'  'CM84'  'CM85'  'CM86'  'CM87'  'CM88'  -
'CM89'  'CM90'  'CM91'  'CM92'  'CM93'  'CM94'  'CM95'  'CM96'  -
'CM97'  'CM98'  'CM99'  'CM100' 'CM101' 'CM102' 'CM103' 'CM104' -
'CM105' 'CM106' 'CM107' 'CM108' 'CM109' 'CM110' 'CM111' 'CM112'

$
$ Added crane section property 2
$
MEMBER PROPERTIES PRISMATIC                              -
AX 50.226  AY 43.039  AZ 43.039                          -
IX 401.29  IY 200.65  IZ 200.65  -
YD 4.0   ZD 4.0  YC 2.0   ZC 2.0
 'CM273' 'CM274' 'CM275' 'CM276' 'CM277' 'CM278' 'CM279' -
'CM280' 'CM131' 'CM113' 'CM119' 'CM125' 'CM479' 'CM480'                    $ ADDED 'CM479' 'CM480'

$
$ Added crane section property 3 (not used in P&H ANSYS model)
$

$
$ Added crane section property 4
$
MEMBER PROPERTIES PRISMATIC                              -
AX 32.0    AY 16.95   AZ 12.248                         -
IX 534.79  IY 282.67  IZ 410.67   -
YD 10.00   ZD 8.00  YC 5.0   ZC 4.0
'CM207' 'CM208' 'CM209' 'CM210' 'CM211' 'CM212' 'CM213' 'CM214' -
'CM215' 'CM216' 'CM217' 'CM218' 'CM219' 'CM220' 'CM221' 'CM222' -
'CM223' 'CM224' 'CM225' 'CM226' 'CM227' 'CM228' 'CM229' 'CM230' -
'CM231' 'CM232' 'CM233' 'CM234' 'CM235' 'CM236' 'CM237' 'CM238' -
'CM239' 'CM240' 'CM241' 'CM242' 'CM243' 'CM244' 'CM245' 'CM246' -
'CM247' 'CM248' 'CM249' 'CM250' 'CM251' 'CM252'

$
$ Added crane section property 5 (not used in P&H ANSYS model)
$

$
$ Added crane section property 6
$
MEMBER PROPERTIES PRISMATIC                              -
AX 21.75   AY 9.7879   AZ 9.7879                         -
IX 304.54  IY 192.58  IZ 192.58  -
YD 8.00   ZD 8.00  YC 4.0   ZC 4.0
'CM305' 'CM306' 'CM307' 'CM308' 'CM309' 'CM310' 'CM311' 'CM312' -
'CM313' 'CM314' 'CM315' 'CM316' 'CM317' 'CM318' 'CM319' 'CM320' -
'CM321' 'CM322' 'CM323' 'CM324' 'CM325' 'CM326' 'CM327' 'CM328' -
'CM329' 'CM330' 'CM331' 'CM332' 'CM333' 'CM334' 'CM335' 'CM336' -
'CM337' 'CM338'

$
$ Added crane section property 7
$
MEMBER PROPERTIES PRISMATIC                              -
AX 87.8    AY 38.73    AZ 36.679                         -
IX 6940.5  IY 3458.7  IZ 6384.6  -
YD 22.00   ZD 16.6  YC 11.0   ZC 8.3
'CM281' 'CM282' 'CM283' 'CM284' 'CM285' 'CM286' 'CM287' 'CM288' -
'CM289' 'CM290' 'CM291' 'CM292' 'CM293' 'CM294' 'CM295' 'CM296' -
'CM297' 'CM298' 'CM299' 'CM300' 'CM301' 'CM302' 'CM303' 'CM304'
```

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$
$ Added crane section property 8
$
MEMBER PROPERTIES PRISMATIC                              -
AX 196.0   AY 165.053   AZ 165.053                        -
IX 5479.2  IY 3201.3  IZ 3201.3  -
YD 14.00   ZD 14.00  YC 7.0   ZC 7.0
'CM114' 'CM115' 'CM116' 'CM117' 'CM118' 'CM120' 'CM121' 'CM122' -
'CM123' 'CM124' 'CM126' 'CM127' 'CM128' 'CM129' 'CM130'  -
'CM132' 'CM133' 'CM134' 'CM135' 'CM136' 'CM253' 'CM254' 'CM255' -
'CM256' 'CM257' 'CM258' 'CM259' 'CM260' 'CM261' 'CM262' 'CM263' -
'CM264' 'CM265' 'CM266' 'CM267' 'CM268' 'CM269' 'CM270' 'CM271' -
'CM272' 'CM470' 'CM471' 'CM472' 'CM473'

$
$ Added crane section property 9 (not used in P&H ANSYS model)
$

$
$ Added crane section property 10  $ 2305.2
$
MEMBER PROPERTIES PRISMATIC                              -
AX 34.25   AY 20.6188   AZ 7.162                         -
IX 1264.9  IY 466.354 IZ 2305.2  -
YD 22.25   ZD 9.0  YC 11.125   ZC 4.5
'CM454' 'CM455' 'CM456' 'CM457' 'CM458' 'CM459' 'CM460' 'CM461' -
'CM462' 'CM463' 'CM464' 'CM465' 'CM466' 'CM467' 'CM468' 'CM469'

$
$ Added crane section property 11 $ 5.3711   3743.4
$
MEMBER PROPERTIES PRISMATIC                              -
AX 41.25   AY 34.737   AZ 34.737                         -
IX 21.388  IY 5.3711   IZ 3743.4  -
YD 33.00   ZD 1.25  YC 16.5   ZC 0.625
'CM360' 'CM361' 'CM362' 'CM363' 'CM364' 'CM365' 'CM366' 'CM367' -
'CM368' 'CM369' 'CM370' 'CM371' 'CM372' 'CM373' 'CM374' 'CM375' -
'CM376'

$
$ Added crane section property 12 $ iz 6453.7
$
MEMBER PROPERTIES PRISMATIC                              -
AX 42.625  AY 35.8949  AZ 35.8949                        -
 IX 14.184  IY 3.552   IZ 6453.7  -
$ IX 14.184  IY 3.552   IZ 6453.7  -
YD 42.00   ZD 1.00  YC 21.0   ZC 0.5
'CM377' 'CM378' 'CM379' 'CM380' 'CM384' 'CM385' 'CM386' 'CM387' -
'CM388' 'CM389' 'CM390' 'CM391' 'CM392' 'CM393' 'CM450' 'CM452' -
'CM451'  'CM453'




$
$ Added crane section property 13 (not used in P&H ANSYS model)
$

$
$ Added crane section property 14
$
MEMBER PROPERTIES PRISMATIC                              -
AX 10.0    AY 8.4211    AZ 8.4211                        -
IX 0.83169 IY 0.208   IZ 333.333  -
YD 20.00   ZD 0.5  YC 10.0   ZC 0.25
'CM406' 'CM407' 'CM408' 'CM409' 'CM410' 'CM411' 'CM412' 'CM413' -
'CM414' 'CM415' 'CM416' 'CM417' 'CM418' 'CM419'

$
$ Added crane section property 15
$
MEMBER PROPERTIES PRISMATIC                              -
AX 3.0     AY 2.526     AZ 2.526                         -
```

```
IX 0.24485 IY 0.0625  IZ 9.0       -
YD 6.00   ZD 0.5  YC 3.0   ZC 0.25
'CM420' 'CM421' 'CM422' 'CM426' 'CM427' 'CM428' 'CM429' 'CM430' -
'CM431' 'CM432' 'CM433' 'CM434' 'CM435' 'CM436' 'CM437' 'CM438' -
'CM439' 'CM440' 'CM441' 'CM442' 'CM443'

$
$ Added crane section property 16
$
MEMBER PROPERTIES PRISMATIC                              -
AX 7.5     AY 6.3158     AZ 6.3158                       -
IX 0.62282 IY 0.15625 IZ 140.625  -
YD 15.00   ZD 0.5  YC 7.5   ZC 0.25
'CM423' 'CM424' 'CM425'

$
$ Added crane section property 17 $ 0.37144
$
MEMBER PROPERTIES PRISMATIC                              -
AX 4.5     AY 3.789     AZ 3.789                        -
IX 0.37144  IY 0.09375 IZ 30.375    -
YD 9.00   ZD 0.5  YC 4.5   ZC 0.25
'CM444' 'CM445' 'CM446' 'CM447' 'CM448' 'CM449'


BYPASS
$
$ Added crane section property 18
$

MEMBER PROPERTIES STIFFNESS
'CM478' MATRIX COLUMN 1 2 3 4 5 6
ROW 1  2266759.624568  0.0       0.0       0.0   0.0   0.0
ROW 2  0.0      2766.222961730  0.0       0.0   0.0   0.0
ROW 3  0.0      0.0       2766.222961730  0.0   0.0   0.0
ROW 4  0.0      0.0       0.0       0.1   0.0   0.0
ROW 5  0.0      0.0       0.0       0.0   0.1   0.0
ROW 6  0.0      0.0       0.0       0.0   0.0   0.1

BYPASS

$$ HOOK MEMBER
MEMBER PROPERTIES PRISMATIC  -
AX 0.1      -
IX 0.01  IY 0.01  IZ 0.01
$ IX 1.0  IY 15.602  IZ 15.602
$ IX 1.0  IY 25.885  IZ 15.602
'CM483'
$-----------------------------------------------------------------

STATUS SUPPORT -
'CN269' 'CN271' 'CN273' 'CN275' 'CN277' 'CN279' 'CN281' 'CN283'

UNITS INCH LBS


$--------------------------------

MEMBER RELEASES
$
$ The wheels are restrained at the west runway girder since it has
$ longer span and will impact the runway girder more.
$ Note P&H's ANSYS model restrains at the east side.
$

'CM113'    STA    MOM X Y Z
'CM119'    STA    MOM X Y Z
'CM131'    STA    MOM X Y Z    FOR Z
'CM125'    STA    MOM X Y Z    FOR Z

'CM277'    STA    MOM X Y Z    FOR Y Z
'CM278'    STA    MOM X Y Z    FOR Y Z
'CM279'    STA    MOM X Y Z    FOR Z
'CM280'    STA    MOM X Y Z    FOR Z
'CM273'    STA    MOM X Y Z    FOR Y
```

```
'CM274'    STA    MOM X Y Z    FOR Y
'CM275'    STA    MOM X Y Z
'CM276'    STA    MOM X Y Z


$ 'CM478'    STA MOM Y Z
$-------------------------------------------------------------------

UNITS INCH KIP

DEAD LOAD  1 'Structural Steel and Crane Member Dead Load'      -
DIRECTION -Y FACTOR 1.0

LOADING  2 'CRANE COMPONENT DEAD LOAD'

JOINT LOADS

'CN6'       FORCE Y      -0.44436
'CN7'       FORCE Y      -0.44436
'CN285'      FORCE Y       -0.880
'CN270'      FORCE Y       -1.415
'CN278'      FORCE Y       -1.415
'CN3'       FORCE Y      -0.250
'CN27'       FORCE Y      -0.250
'CN51'       FORCE Y      -0.250
'CN84'       FORCE Y      -0.250
'CN450'      FORCE Y       -1.13

LOADING  16 'CASK WEIGH FOR PENDULUM EFFECT'

JOINT LOADS

'CN450'        FORCE Y      -266

UNITS POUNDS

DEAD LOAD  38 'ACCELERATION Y' DIRECTION -Y FACTOR 1.0

$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'      FORCE Y      -266000
'CN6'       FORCE Y      -444
'CN7'       FORCE Y      -444
'CN285'      FORCE Y       -880
'CN270'      FORCE Y       -1415
'CN278'      FORCE Y       -1415
'CN3'       FORCE Y      -250
'CN27'       FORCE Y      -250
'CN51'       FORCE Y      -250
'CN84'       FORCE Y      -250
'CN450'      FORCE Y       -113

DEAD LOAD  39 'ACCELERATION X' DIRECTION X FACTOR -1.0

$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'      FORCE X      -266000
'CN6'       FORCE X      -444
'CN7'       FORCE X      -444
'CN285'      FORCE X       -880
'CN270'      FORCE X       -1415
'CN278'      FORCE X       -1415
'CN3'       FORCE X      -250
'CN27'       FORCE X      -250
'CN51'       FORCE X      -250
'CN84'       FORCE X      -250
'CN450'      FORCE Y       -113

DEAD LOAD  40 'ACCELERATION Z' DIRECTION Z FACTOR -1.0

$
```

```
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'     FORCE Z     -266000
'CN6'       FORCE Z     -444
'CN7'       FORCE Z     -444
'CN285'     FORCE Z     -880
'CN270'     FORCE Z     -1415
'CN278'     FORCE Z     -1415
'CN3'       FORCE Z     -250
'CN27'      FORCE Z     -250
'CN51'      FORCE Z     -250
'CN84'      FORCE Z     -250
'CN450'     FORCE Y     -113

LOADING  41 'HOOK FORCE X'
JOINT LOADS
 'CN450'     FORCE X     -10000


LOADING  42 'HOOK FORCE Y'
JOINT LOADS
 'CN450'     FORCE Y     -100000


LOADING  43 'HOOK FORCE Z'
JOINT LOADS
 'CN450'     FORCE Z     -10000


MAXIMUM NUMBER OF CYCLES 40
CONVERGENCE TOL 0.001
NONLINEAR ANALYSIS
$ STIFFNESS ANALYSIS

$-----------------------------------------------------------------
 $ bypass

UNIT KIP SECOND INCH

INERTIA OF JOINTS FROM LOAD 1 2 16 ALL DOF

PRINT DYNAMIC JOINT INERTIA

EIGEN PARAMETERS
  NUMBER OF MODES 40
  SOLVE USING GTLANCZOS
  PRINT MAX
END

$ Eigen solution

DYNAMIC ANALYSIS EIGENSOLUTION

LIST DYNAMIC PARTICIPATION FACTORS

LIST DYNAMIC EIGENVALUES

LIST DYNAMIC MASS SUMMARY

$ SAVE 'HOOK_UP'

$ bypass
```

Attachment 6

GT STRUDL Stand-Alone Crane Model, “Hook Down”, All Analyses

```
$ PGENCR045 - Aux Building Crane Upgrade_FHCR5
$ Ansys Crane Stick Model provided by vendor is converted into GTSTRUDL model.
$
TYPE SPACE FRAME
UNITS INCH LBS

JOINT COORDINATES GLOBAL

$ ADDED CRANE JOINTS

'CN1'   111.000   0.000    0.000
'CN2'   111.000   0.000 -229.000
'CN3'   111.000   0.000   -9.957
'CN4'   111.000   0.000  -19.913
'CN5'   111.000   0.000  -29.870
'CN6'   111.000   0.000  -39.826
'CN7'   111.000   0.000  -49.783
'CN8'   111.000   0.000  -59.739
'CN9'   111.000   0.000  -69.696
'CN10'  111.000   0.000  -79.652
'CN11'  111.000   0.000  -89.609
'CN12'  111.000   0.000  -99.565
'CN13'  111.000   0.000 -109.520
'CN14'  111.000   0.000 -119.480
'CN15'  111.000   0.000 -129.430
'CN16'  111.000   0.000 -139.390
'CN17'  111.000   0.000 -149.350
'CN18'  111.000   0.000 -159.300
'CN19'  111.000   0.000 -169.260
'CN20'  111.000   0.000 -179.220
'CN21'  111.000   0.000 -189.170
'CN22'  111.000   0.000 -199.130
'CN23'  111.000   0.000 -209.090
'CN24'  111.000   0.000 -219.040
'CN25'  111.000   0.000 -552.000
'CN26'  111.000   0.000 -323.000
'CN27'  111.000   0.000 -542.040
'CN28'  111.000   0.000 -532.090
'CN29'  111.000   0.000 -522.130
'CN30'  111.000   0.000 -512.170
'CN31'  111.000   0.000 -502.220
'CN32'  111.000   0.000 -492.260
'CN33'  111.000   0.000 -482.300
'CN34'  111.000   0.000 -472.350
'CN35'  111.000   0.000 -462.390
'CN36'  111.000   0.000 -452.430
'CN37'  111.000   0.000 -442.480
'CN38'  111.000   0.000 -432.520
'CN39'  111.000   0.000 -422.570
'CN40'  111.000   0.000 -412.610
'CN41'  111.000   0.000 -402.650
'CN42'  111.000   0.000 -392.700
'CN43'  111.000   0.000 -382.740
'CN44'  111.000   0.000 -372.780
'CN45'  111.000   0.000 -362.830
'CN46'  111.000   0.000 -352.870
'CN47'  111.000   0.000 -342.910
'CN48'  111.000   0.000 -332.960
'CN49'  -111.000  0.000    0.000
'CN50'  -111.000  0.000 -229.000
'CN51'  -111.000  0.000   -9.957
'CN52'  -111.000  0.000  -19.913
'CN53'  -111.000  0.000  -29.870
'CN54'  -111.000  0.000  -39.826
'CN55'  -111.000  0.000  -49.783
'CN56'  -111.000  0.000  -59.739
'CN57'  -111.000  0.000  -69.696
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'CN62'  -111.000  0.000 -119.480
'CN63'  -111.000  0.000 -129.430
```

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$ ADDED NODES FOR MOMENT AT BASE OF TROLLEY, MCK 9/3/2010
'CN451' 111 1 -323.000
'CN452' -111 1 -323.000

$----------

MEMBER INCIDENCES

$ ADDED CRANE MEMBRS

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'CM467' 'CN446' 'CN334'
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'CM469' 'CN344' 'CN440'
'CM470' 'CN130' 'CN443'
'CM471' 'CN123' 'CN437'
'CM472' 'CN116' 'CN440'
'CM473' 'CN137' 'CN446'

$ ADDED MEMEBERS AT BASE OF TROLLEY FOR MOMENT, MCK 9/3/2010
'CM479' 'CN26' 'CN451'
'CM480' 'CN83' 'CN452'

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'CM483' 'CN434' 'CN450'


ELEMENT INC

'CM478' 'CN434' 'CN450'
'CM481' 'CN434' 'CN450'
'CM482' 'CN434' 'CN450'
$'CM484' 'CN434' 'CN450'

NONLINEAR SPRING PROPERTIES
CURVE 'FY' FORCE SYMMETRY
0.0 0.0  206381235.3227 1000.0
$PRINT ALL
$END

NONLINEAR SPRING PROPERTIES
CURVE 'FX' FORCE SYMMETRY
0.0 0.0 25185577.94274 100000.0
$PRINT ALL
$END


$NONLINEAR SPRING PROPERTIES
CURVE 'FZ' FORCE SYMMETRY
0.0 0.0 25185577.94274 100000.0
$PRINT ALL
$END

$NONLINEAR SPRING PROPERTIES
$CURVE 'MZ' MOMENT SYMMETRY
$0.0 0.0 2766222.961730 0.0
PRINT ALL
END



ELEMENT PROPS
'CM478' TYPE 'NLS'
'CM481' TYPE 'NLS'
'CM482' TYPE 'NLS'
$'CM484' TYPE 'NLS'

NONLINEAR SPRING ELEMENT DATA
STIFFNESS
'CM478' Y CURVE 'FY'
'CM481' X CURVE 'FX'
'CM482' Z CURVE 'FZ'
$'CM484' MZ CURVE 'MZ'
END

$-----------------------------------------------------------------

UNITS INCH LBS
$ ADDED CRANE MEMBER DENSITIES

$ not needed per

CONSTANT

E 0.3E8 MEMBER ALL
$ E 13137518 MEM 'CM478'
 POI 0.3 MEMBER ALL

$
$ Added crane member material property 2
$
DENSITY 0.4505424 MEMBER                                -
'CM47'  'CM48'  'CM49'  'CM50'  'CM51'  'CM52'  'CM53'  'CM54'  -
'CM55'  'CM56'  'CM57'  'CM58'  'CM59'  'CM60'  'CM61'  'CM62'  -
'CM63'  'CM64'  'CM65'  'CM66'  'CM67'  'CM68'  'CM69'  'CM80'  -
'CM81'  'CM82'  'CM83'  'CM84'  'CM85'  'CM86'  'CM87'  'CM88'  -
'CM89'  'CM90'  'CM91'  'CM92'  'CM93'  'CM94'  'CM95'  'CM96'  -
'CM97'  'CM98'  'CM99'  'CM100' 'CM101' 'CM102' 'CM103' 'CM104' -
```

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'CM105' 'CM106' 'CM107' 'CM108' 'CM109' 'CM110' 'CM111' 'CM112'

$
$ Added crane member material property 3 $ 0.371
$
DENSITY 0.370944 MEMBER                                    -
'CM207' 'CM208' 'CM209' 'CM210' 'CM211' 'CM212' 'CM213' 'CM214' -
'CM215' 'CM216' 'CM217' 'CM218' 'CM219' 'CM220' 'CM221' 'CM222' -
'CM223' 'CM224' 'CM225' 'CM226' 'CM227' 'CM228' 'CM229' 'CM230' -
'CM231' 'CM232' 'CM233' 'CM234' 'CM235' 'CM236' 'CM237' 'CM238' -
'CM239' 'CM240' 'CM241' 'CM242' 'CM243' 'CM244' 'CM245' 'CM246' -
'CM247' 'CM248' 'CM249' 'CM250' 'CM251' 'CM252'

$
$ Added crane member material property 4
$
DENSITY 0.475272 MEMBER                                    -
'CM273' 'CM274' 'CM275' 'CM276' 'CM277' 'CM278' 'CM279' 'CM280' -
'CM305' 'CM306' 'CM307' 'CM308' 'CM309' 'CM310' 'CM311' 'CM312' -
'CM313' 'CM314' 'CM315' 'CM316' 'CM317' 'CM318' 'CM319' 'CM320' -
'CM321' 'CM322' 'CM323' 'CM324' 'CM325' 'CM326' 'CM327' 'CM328' -
'CM329' 'CM330' 'CM331' 'CM332' 'CM333' 'CM334' 'CM335' 'CM336' -
'CM337' 'CM338' 'CM281' 'CM282' 'CM283' 'CM284' 'CM285' 'CM286' -
'CM287' 'CM288' 'CM289' 'CM290' 'CM291' 'CM292' 'CM293' 'CM294' -
'CM295' 'CM296' 'CM297' 'CM298' 'CM299' 'CM300' 'CM301' 'CM302' -
'CM303' 'CM304'

$
$ Added crane member material property 5   $ zero works
$
DENSITY 0.000 MEMBER                                       -
'CM113' 'CM119' 'CM125' 'CM114' 'CM115' 'CM116' 'CM117' 'CM118' -
'CM120' 'CM121' 'CM122' 'CM123' 'CM124' 'CM126' 'CM127' 'CM128' -
'CM129' 'CM130' 'CM131' 'CM132' 'CM133' 'CM134' 'CM135' 'CM136' -
'CM253' 'CM254' 'CM255' 'CM256' 'CM257' 'CM258' 'CM259' 'CM260' -
'CM261' 'CM262' 'CM263' 'CM264' 'CM265' 'CM266' 'CM267' 'CM268' -
'CM269' 'CM270' 'CM271' 'CM272' 'CM470' 'CM471' 'CM472' 'CM473' -
'CM479' 'CM480' 'CM483'                                $ ADDED 'CM479' 'CM480'

$
$ Added crane member material property 6
$
DENSITY 0.467544 MEMBER                                    -
'CM1'   'CM2'   'CM3'   'CM4'   'CM5'   'CM6'   'CM7'   'CM8'   -
'CM9'   'CM10'  'CM11'  'CM12'  'CM13'  'CM14'  'CM15'  'CM16'  -
'CM17'  'CM18'  'CM19'  'CM20'  'CM21'  'CM22'  'CM23'  'CM24'  -
'CM25'  'CM26'  'CM27'  'CM28'  'CM29'  'CM30'  'CM31'  'CM32'  -
'CM33'  'CM34'  'CM35'  'CM36'  'CM37'  'CM38'  'CM39'  'CM40'  -
'CM41'  'CM42'  'CM43'  'CM44'  'CM45'  'CM46'  'CM70'  'CM71'  -
'CM72'  'CM73'  'CM74'  'CM75'  'CM76'  'CM77'  'CM78'  'CM79'

$
$ Added crane member material property 7
$
DENSITY 2.4117156 MEMBER                                   -
'CM454' 'CM455' 'CM456' 'CM457' 'CM458' 'CM459' 'CM460' 'CM461' -
'CM462' 'CM463' 'CM464' 'CM465' 'CM466' 'CM467' 'CM468' 'CM469' -
'CM360' 'CM361' 'CM362' 'CM363' 'CM364' 'CM365' 'CM366' 'CM367' -
'CM368' 'CM369' 'CM370' 'CM371' 'CM372' 'CM373' 'CM374' 'CM375' -
'CM376' 'CM377' 'CM378' 'CM379' 'CM380' 'CM384' 'CM385' 'CM386' -
'CM387' 'CM388' 'CM389' 'CM390' 'CM391' 'CM392' 'CM393' 'CM450' -
'CM451' 'CM452' 'CM453' 'CM406' 'CM407' 'CM408' 'CM409' 'CM410' -
'CM411' 'CM412' 'CM413' 'CM414' 'CM415' 'CM416' 'CM417' 'CM418' -
'CM419' 'CM420' 'CM421' 'CM422' 'CM426' 'CM427' 'CM428' 'CM429' -
'CM430' 'CM431' 'CM432' 'CM433' 'CM434' 'CM435' 'CM436' 'CM437' -
'CM438' 'CM439' 'CM440' 'CM441' 'CM442' 'CM443' 'CM423' 'CM424' -
'CM425' 'CM444' 'CM445' 'CM446' 'CM447' 'CM448' 'CM449'


$-------------------------------------------------------------

UNITS INCH LBS

$
$ Added crane section property 1
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$
MEMBER PROPERTIES PRISMATIC                              -
AX 108.0   AY 71.65   AZ 13.80                           -
IX 17697   IY 5859.0  IZ 52222.0    -
YD 61.00   ZD 17.125  YC 30.5   ZC 8.5625
'CM1'   'CM2'   'CM3'   'CM4'   'CM5'   'CM6'   'CM7'   'CM8'   -
'CM9'   'CM10'  'CM11'  'CM12'  'CM13'  'CM14'  'CM15'  'CM16'  -
'CM17'  'CM18'  'CM19'  'CM20'  'CM21'  'CM22'  'CM23'  'CM24'  -
'CM25'  'CM26'  'CM27'  'CM28'  'CM29'  'CM30'  'CM31'  'CM32'  -
'CM33'  'CM34'  'CM35'  'CM36'  'CM37'  'CM38'  'CM39'  'CM40'  -
'CM41'  'CM42'  'CM43'  'CM44'  'CM45'  'CM46'  'CM47'  'CM48'  -
'CM49'  'CM50'  'CM51'  'CM52'  'CM53'  'CM54'  'CM55'  'CM56'  -
'CM57'  'CM58'  'CM59'  'CM60'  'CM61'  'CM62'  'CM63'  'CM64'  -
'CM65'  'CM66'  'CM67'  'CM68'  'CM69'  'CM70'  'CM71'  'CM72'  -
'CM73'  'CM74'  'CM75'  'CM76'  'CM77'  'CM78'  'CM79'  'CM80'  -
'CM81'  'CM82'  'CM83'  'CM84'  'CM85'  'CM86'  'CM87'  'CM88'  -
'CM89'  'CM90'  'CM91'  'CM92'  'CM93'  'CM94'  'CM95'  'CM96'  -
'CM97'  'CM98'  'CM99'  'CM100' 'CM101' 'CM102' 'CM103' 'CM104' -
'CM105' 'CM106' 'CM107' 'CM108' 'CM109' 'CM110' 'CM111' 'CM112'

$
$ Added crane section property 2
$
MEMBER PROPERTIES PRISMATIC                              -
AX 50.226  AY 43.039  AZ 43.039                          -
IX 401.29  IY 200.65  IZ 200.65  -
YD 4.0   ZD 4.0  YC 2.0   ZC 2.0
 'CM273' 'CM274' 'CM275' 'CM276' 'CM277' 'CM278' 'CM279' -
'CM280' 'CM131' 'CM113' 'CM119' 'CM125' 'CM479' 'CM480'                    $ ADDED 'CM479' 'CM480'

$
$ Added crane section property 3 (not used in P&H ANSYS model)
$

$
$ Added crane section property 4
$
MEMBER PROPERTIES PRISMATIC                              -
AX 32.0    AY 16.95   AZ 12.248                          -
IX 534.79  IY 282.67  IZ 410.67   -
YD 10.00   ZD 8.00  YC 5.0   ZC 4.0
'CM207' 'CM208' 'CM209' 'CM210' 'CM211' 'CM212' 'CM213' 'CM214' -
'CM215' 'CM216' 'CM217' 'CM218' 'CM219' 'CM220' 'CM221' 'CM222' -
'CM223' 'CM224' 'CM225' 'CM226' 'CM227' 'CM228' 'CM229' 'CM230' -
'CM231' 'CM232' 'CM233' 'CM234' 'CM235' 'CM236' 'CM237' 'CM238' -
'CM239' 'CM240' 'CM241' 'CM242' 'CM243' 'CM244' 'CM245' 'CM246' -
'CM247' 'CM248' 'CM249' 'CM250' 'CM251' 'CM252'

$
$ Added crane section property 5 (not used in P&H ANSYS model)
$

$
$ Added crane section property 6
$
MEMBER PROPERTIES PRISMATIC                              -
AX 21.75   AY 9.7879   AZ 9.7879                         -
IX 304.54  IY 192.58  IZ 192.58  -
YD 8.00   ZD 8.00  YC 4.0   ZC 4.0
'CM305' 'CM306' 'CM307' 'CM308' 'CM309' 'CM310' 'CM311' 'CM312' -
'CM313' 'CM314' 'CM315' 'CM316' 'CM317' 'CM318' 'CM319' 'CM320' -
'CM321' 'CM322' 'CM323' 'CM324' 'CM325' 'CM326' 'CM327' 'CM328' -
'CM329' 'CM330' 'CM331' 'CM332' 'CM333' 'CM334' 'CM335' 'CM336' -
'CM337' 'CM338'

$
$ Added crane section property 7
$
MEMBER PROPERTIES PRISMATIC                              -
AX 87.8    AY 38.73    AZ 36.679                         -
IX 6940.5  IY 3458.7  IZ 6384.6  -
YD 22.00   ZD 16.6  YC 11.0   ZC 8.3
'CM281' 'CM282' 'CM283' 'CM284' 'CM285' 'CM286' 'CM287' 'CM288' -
'CM289' 'CM290' 'CM291' 'CM292' 'CM293' 'CM294' 'CM295' 'CM296' -
'CM297' 'CM298' 'CM299' 'CM300' 'CM301' 'CM302' 'CM303' 'CM304'
```

```
$
$ Added crane section property 8
$
MEMBER PROPERTIES PRISMATIC                              -
AX 196.0   AY 165.053   AZ 165.053                        -
IX 5479.2  IY 3201.3  IZ 3201.3  -
YD 14.00   ZD 14.00  YC 7.0   ZC 7.0
'CM114' 'CM115' 'CM116' 'CM117' 'CM118' 'CM120' 'CM121' 'CM122' -
'CM123' 'CM124' 'CM126' 'CM127' 'CM128' 'CM129' 'CM130'  -
'CM132' 'CM133' 'CM134' 'CM135' 'CM136' 'CM253' 'CM254' 'CM255' -
'CM256' 'CM257' 'CM258' 'CM259' 'CM260' 'CM261' 'CM262' 'CM263' -
'CM264' 'CM265' 'CM266' 'CM267' 'CM268' 'CM269' 'CM270' 'CM271' -
'CM272' 'CM470' 'CM471' 'CM472' 'CM473'

$
$ Added crane section property 9 (not used in P&H ANSYS model)
$

$
$ Added crane section property 10  $ 2305.2
$
MEMBER PROPERTIES PRISMATIC                              -
AX 34.25   AY 20.6188   AZ 7.162                         -
IX 1264.9  IY 466.354 IZ 2305.2  -
YD 22.25   ZD 9.0  YC 11.125   ZC 4.5
'CM454' 'CM455' 'CM456' 'CM457' 'CM458' 'CM459' 'CM460' 'CM461' -
'CM462' 'CM463' 'CM464' 'CM465' 'CM466' 'CM467' 'CM468' 'CM469'

$
$ Added crane section property 11 $ 5.3711   3743.4
$
MEMBER PROPERTIES PRISMATIC                              -
AX 41.25   AY 34.737   AZ 34.737                         -
IX 21.388  IY 5.3711   IZ 3743.4  -
YD 33.00   ZD 1.25  YC 16.5   ZC 0.625
'CM360' 'CM361' 'CM362' 'CM363' 'CM364' 'CM365' 'CM366' 'CM367' -
'CM368' 'CM369' 'CM370' 'CM371' 'CM372' 'CM373' 'CM374' 'CM375' -
'CM376'

$
$ Added crane section property 12 $ iz 6453.7
$
MEMBER PROPERTIES PRISMATIC                              -
AX 42.625  AY 35.8949  AZ 35.8949                        -
 IX 14.184  IY 3.552   IZ 6453.7  -
$ IX 14.184  IY 3.552   IZ 6453.7  -
YD 42.00   ZD 1.00  YC 21.0   ZC 0.5
'CM377' 'CM378' 'CM379' 'CM380' 'CM384' 'CM385' 'CM386' 'CM387' -
'CM388' 'CM389' 'CM390' 'CM391' 'CM392' 'CM393' 'CM450' 'CM452' -
'CM451'  'CM453'




$
$ Added crane section property 13 (not used in P&H ANSYS model)
$

$
$ Added crane section property 14
$
MEMBER PROPERTIES PRISMATIC                              -
AX 10.0    AY 8.4211    AZ 8.4211                        -
IX 0.83169 IY 0.208   IZ 333.333  -
YD 20.00   ZD 0.5  YC 10.0   ZC 0.25
'CM406' 'CM407' 'CM408' 'CM409' 'CM410' 'CM411' 'CM412' 'CM413' -
'CM414' 'CM415' 'CM416' 'CM417' 'CM418' 'CM419'

$
$ Added crane section property 15
$
MEMBER PROPERTIES PRISMATIC                              -
AX 3.0     AY 2.526     AZ 2.526                         -
```

```
IX 0.24485 IY 0.0625  IZ 9.0       -
YD 6.00   ZD 0.5  YC 3.0   ZC 0.25
'CM420' 'CM421' 'CM422' 'CM426' 'CM427' 'CM428' 'CM429' 'CM430' -
'CM431' 'CM432' 'CM433' 'CM434' 'CM435' 'CM436' 'CM437' 'CM438' -
'CM439' 'CM440' 'CM441' 'CM442' 'CM443'

$
$ Added crane section property 16
$
MEMBER PROPERTIES PRISMATIC                              -
AX 7.5     AY 6.3158     AZ 6.3158                       -
IX 0.62282 IY 0.15625 IZ 140.625  -
YD 15.00   ZD 0.5  YC 7.5   ZC 0.25
'CM423' 'CM424' 'CM425'

$
$ Added crane section property 17 $ 0.37144
$
MEMBER PROPERTIES PRISMATIC                              -
AX 4.5     AY 3.789     AZ 3.789                        -
IX 0.37144  IY 0.09375 IZ 30.375    -
YD 9.00   ZD 0.5  YC 4.5   ZC 0.25
'CM444' 'CM445' 'CM446' 'CM447' 'CM448' 'CM449'


BYPASS
$
$ Added crane section property 18
$

MEMBER PROPERTIES STIFFNESS
'CM478' MATRIX COLUMN 1 2 3 4 5 6
ROW 1  206381.2353227  0.0       0.0       0.0   0.0   0.0
ROW 2  0.0      251.8557794274  0.0       0.0   0.0   0.0
ROW 3  0.0      0.0       251.8557794274  0.0   0.0   0.0
ROW 4  0.0      0.0       0.0       0.1   0.0   0.0
ROW 5  0.0      0.0       0.0       0.0   0.1   0.0
ROW 6  0.0      0.0       0.0       0.0   0.0   0.1

BYPASS

$$ HOOK MEMBER
MEMBER PROPERTIES PRISMATIC  -
AX 0.1      -
IX 0.01  IY 0.01  IZ 0.01
$ IX 1.0  IY 15.602  IZ 15.602
$ IX 1.0  IY 25.885  IZ 15.602
'CM483'
$-----------------------------------------------------------------

STATUS SUPPORT -
'CN269' 'CN271' 'CN273' 'CN275' 'CN277' 'CN279' 'CN281' 'CN283'

UNITS INCH LBS


$--------------------------------

MEMBER RELEASES
$
$ The wheels are restrained at the west runway girder since it has
$ longer span and will impact the runway girder more.
$ Note P&H's ANSYS model restrains at the east side.
$

'CM113'    STA    MOM X Y Z
'CM119'    STA    MOM X Y Z
'CM131'    STA    MOM X Y Z    FOR Z
'CM125'    STA    MOM X Y Z    FOR Z

'CM277'    STA    MOM X Y Z    FOR Y Z
'CM278'    STA    MOM X Y Z    FOR Y Z
'CM279'    STA    MOM X Y Z    FOR Z
'CM280'    STA    MOM X Y Z    FOR Z
'CM273'    STA    MOM X Y Z    FOR Y
```

```
'CM274'    STA    MOM X Y Z    FOR Y
'CM275'    STA    MOM X Y Z
'CM276'    STA    MOM X Y Z


$ 'CM478'    STA MOM Y Z
$-------------------------------------------------------------------

UNITS INCH KIP

DEAD LOAD  1 'Structural Steel and Crane Member Dead Load'      -
DIRECTION -Y FACTOR 1.0

LOADING  2 'CRANE COMPONENT DEAD LOAD'

JOINT LOADS

'CN6'       FORCE Y      -0.44436
'CN7'       FORCE Y      -0.44436
'CN285'      FORCE Y       -0.880
'CN270'      FORCE Y       -1.415
'CN278'      FORCE Y       -1.415
'CN3'       FORCE Y      -0.250
'CN27'       FORCE Y      -0.250
'CN51'       FORCE Y      -0.250
'CN84'       FORCE Y      -0.250
'CN450'      FORCE Y       -1.13

LOADING  16 'CASK WEIGH FOR PENDULUM EFFECT'

JOINT LOADS

'CN450'        FORCE Y      -266

UNITS POUNDS

DEAD LOAD  38 'ACCELERATION Y' DIRECTION -Y FACTOR 1.0

$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'      FORCE Y      -266000
'CN6'       FORCE Y      -444
'CN7'       FORCE Y      -444
'CN285'      FORCE Y       -880
'CN270'      FORCE Y       -1415
'CN278'      FORCE Y       -1415
'CN3'       FORCE Y      -250
'CN27'       FORCE Y      -250
'CN51'       FORCE Y      -250
'CN84'       FORCE Y      -250
'CN450'      FORCE Y       -113

DEAD LOAD  39 'ACCELERATION X' DIRECTION X FACTOR -1.0

$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'      FORCE X      -266000
'CN6'       FORCE X      -444
'CN7'       FORCE X      -444
'CN285'      FORCE X       -880
'CN270'      FORCE X       -1415
'CN278'      FORCE X       -1415
'CN3'       FORCE X      -250
'CN27'       FORCE X      -250
'CN51'       FORCE X      -250
'CN84'       FORCE X      -250
'CN450'      FORCE Y       -113

DEAD LOAD  40 'ACCELERATION Z' DIRECTION Z FACTOR -1.0
```

```
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'     FORCE Z     -266000
'CN6'       FORCE Z     -444
'CN7'       FORCE Z     -444
'CN285'     FORCE Z     -880
'CN270'     FORCE Z     -1415
'CN278'     FORCE Z     -1415
'CN3'       FORCE Z     -250
'CN27'      FORCE Z     -250
'CN51'      FORCE Z     -250
'CN84'      FORCE Z     -250
'CN450'     FORCE Y     -113

LOADING  41 'HOOK FORCE X'
JOINT LOADS
 'CN450'     FORCE X     -10000


LOADING  42 'HOOK FORCE Y'
JOINT LOADS
 'CN450'     FORCE Y     -100000


LOADING  43 'HOOK FORCE Z'
JOINT LOADS
 'CN450'     FORCE Z     -10000


MAXIMUM NUMBER OF CYCLES 40
CONVERGENCE TOL 0.001
NONLINEAR ANALYSIS
$ STIFFNESS ANALYSIS

$-----------------------------------------------------------------
 $ bypass

UNIT KIP SECOND INCH

INERTIA OF JOINTS FROM LOAD 1 2 16 ALL DOF

PRINT DYNAMIC JOINT INERTIA

EIGEN PARAMETERS
  NUMBER OF MODES 40
  SOLVE USING GTLANCZOS
  PRINT MAX
END

$ Eigen solution

DYNAMIC ANALYSIS EIGENSOLUTION

LIST DYNAMIC PARTICIPATION FACTORS

LIST DYNAMIC EIGENVALUES

LIST DYNAMIC MASS SUMMARY

$ SAVE 'HOOK_UP'

$ bypass
```

Attachment 7

ANSYS Coupled Building/Crane Model, Crane at K, Static Loads

```
 /BATCH
/FILENAME, PGCR045
!/CWD,'C:\Documents and Settings\mkeeney\Desktop\MCK_ANSYS\Ansys\output'
/TITLE,Auxzilary Building Modifications
/PREP7

! The units for this model are INCHES POUNDS SECONDS.
! The nodal coordinates are a direct copy of the GT STRDL model.
! The node numbers match the original model were possible.

! DEFINE NODE LOCATIONS

N,1,0,0,0
N,2,0,489.96,0
N,3,0,844.08,0
N,4,0,852,0
N,5,0,852,11
N,6,0,860.04,11
N,7,0,870.6,11
N,8,0,1065.96,11
N,9,0,852,-12
N,10,0,870.6,-12
N,12,0,0,-576
N,13,0,489.96,-576
N,14,0,844.08,-576
N,15,0,852,-576
N,16,0,852,-587
N,17,0,860.04,-587
N,18,0,870.6,-587
N,19,0,1065.96,-587
N,20,0,852,-564
N,21,0,870.6,-564
N,23,0,288,-336
N,24,0,489.96,-504
N,25,0,489.96,-432
N,26,0,489.96,-360
N,27,0,489.96,-288
N,28,0,489.96,-216
N,29,0,489.96,-144
N,30,0,489.96,-72
N,31,0,672,-432
N,32,0,672,-288
N,33,0,672,-144
N,34,0,844.08,-288
N,35,0,1065.96,-512
N,36,0,1065.96,-437
N,37,0,1065.96,-362
N,38,0,1065.96,-288
N,39,0,1065.96,-214
N,40,0,1065.96,-139
N,41,0,1065.96,-64
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N,103,432,852,0
N,104,432,852,11
N,105,432,860.04,11
N,106,432,870.6,11
N,107,432,1065.96,11
N,108,432,852,-12
N,109,432,870.6,-12
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N,112,432,489.96,-576
N,113,432,573,-576
N,114,432,852,-576
N,115,432,852,-587
N,116,432,860.04,-587
N,117,432,870.6,-587
N,118,432,1065.96,-587
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N,120,432,870.6,-564
N,123,432,288,-288
N,124,216,489.96,-576
N,125,216,489.96,-504
N,126,216,489.96,-432
N,127,216,489.96,-360
```

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N,130,216,489.96,-144
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N,134,336,489.96,-504
N,135,336,489.96,-432
N,136,336,489.96,-360
N,137,336,489.96,-288
N,138,336,489.96,-216
N,139,336,489.96,-144
N,140,336,489.96,-72
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N,144,432,489.96,-360
N,145,432,489.96,-288
N,146,432,489.96,-216
N,147,432,489.96,-144
N,148,432,489.96,-72
N,149,432,1065.96,-512
N,150,432,1065.96,-437
N,151,432,1065.96,-362
N,152,432,1065.96,-288
N,153,432,1065.96,-214
N,154,432,1065.96,-139
N,155,432,1065.96,-64
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N,175,216,1065.96,-512
N,176,216,1065.96,-437
N,177,216,1065.96,-362
N,178,216,1065.96,-288
N,179,216,1065.96,-214
N,180,216,1065.96,-139
N,181,216,1065.96,-64
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N,183,577.5,573,-576
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N,1106,723,870.6,11
N,1107,723,1065.96,11
N,1108,723,852,-12
N,1109,723,870.6,-12
N,1111,723,288,-576
N,1112,723,489.96,-576
N,1113,723,573,-576
N,1114,723,852,-576
N,1115,723,852,-587
N,1116,723,860.04,-587
N,1117,723,870.6,-587
N,1118,723,1065.96,-587
N,1119,723,852,-564
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N,1123,723,288,-288
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N,1143,723,489.96,-432
N,1144,723,489.96,-360
N,1145,723,489.96,-288
N,1146,723,489.96,-216
N,1147,723,489.96,-144
N,1148,723,489.96,-72
N,1149,723,1065.96,-512
N,1150,723,1065.96,-437
N,1151,723,1065.96,-362
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N,7152,2301,1065.96,-288
N,7153,2301,1065.96,-214
N,7154,2301,1065.96,-139
N,7155,2301,1065.96,-64
N,8100,2505,516,-288
N,8101,2505,516,0
N,8103,2505,852,0
N,8104,2505,852,11
N,8105,2505,860.04,11
N,8106,2505,870.6,11
N,8107,2505,1065.96,11
N,8108,2505,852,-12
N,8109,2505,870.6,-12
N,8111,2505,516,-576

N,8112,2505,849.98,-288      ! NEW NODE FOR MODAL ANALISYS MCK 9/22/10

N,8114,2505,852,-576
N,8115,2505,852,-587
N,8116,2505,860.04,-587
N,8117,2505,870.6,-587
N,8118,2505,1065.96,-587
N,8119,2505,852,-564
N,8120,2505,870.6,-564
N,8149,2505,1065.96,-512
N,8150,2505,1065.96,-437
N,8151,2505,1065.96,-362
N,8152,2505,1065.96,-288
N,8153,2505,1065.96,-214
N,8154,2505,1065.96,-139
N,8155,2505,1065.96,-64
N,8156,432,288,-932
N,8157,1578,288,-900
N,21740,1159.5,573,-587
N,81660,2505,971.04,-587

!
!   Added runway girder nodes
!   Replace "CNR" with on node numbers starting at 10000.
```

```
N,10101,2241,870.6,-564
N,10102,2187,870.6,-564
N,10103,2019,870.6,-564
N,10104,1965,870.6,-564
N,10113,2241,870.6,-12
N,10114,2187,870.6,-12
N,10115,2019,870.6,-12
N,10116,1965,870.6,-12
N,10201,2139,870.6,-564
N,10202,2085,870.6,-564
N,10203,1917,870.6,-564
N,10204,1863,870.6,-564
N,10213,2139,870.6,-12
N,10214,2085,870.6,-12
N,10215,1917,870.6,-12
N,10216,1863,870.6,-12
N,10301,2106,870.6,-564
N,10302,2052,870.6,-564
N,10303,1884,870.6,-564
N,10304,1830,870.6,-564
N,10313,2106,870.6,-12
N,10314,2052,870.6,-12
N,10315,1884,870.6,-12
N,10316,1830,870.6,-12
N,10401,1296,870.6,-564
N,10402,1242,870.6,-564
N,10403,1074,870.6,-564
N,10404,1020,870.6,-564
N,10413,1296,870.6,-12
N,10414,1242,870.6,-12
N,10415,1074,870.6,-12
N,10416,1020,870.6,-12
N,10501,1263,870.6,-564
N,10502,1209,870.6,-564
N,10503,1041,870.6,-564
N,10504,987,870.6,-564
N,10513,1263,870.6,-12
N,10514,1209,870.6,-12
N,10515,1041,870.6,-12
N,10516,987,870.6,-12
N,10601,1173,870.6,-564
N,10602,1119,870.6,-564
N,10603,951,870.6,-564
N,10604,897,870.6,-564
N,10613,1173,870.6,-12
N,10614,1119,870.6,-12
N,10615,951,870.6,-12
N,10616,897,870.6,-12
N,10701,459,870.6,-564
N,10702,405,870.6,-564
N,10703,237,870.6,-564
N,10704,183,870.6,-564
N,10713,459,870.6,-12
N,10714,405,870.6,-12
N,10715,237,870.6,-12
N,10716,183,870.6,-12
N,10801,372,870.6,-564
N,10802,318,870.6,-564
N,10803,150,870.6,-564
N,10804,96,870.6,-564
N,10813,372,870.6,-12
N,10814,318,870.6,-12
N,10815,150,870.6,-12
N,10816,96,870.6,-12
N,10901,303,870.6,-564
N,10902,249,870.6,-564
N,10903,81,870.6,-564
N,10904,27,870.6,-564
N,10913,303,870.6,-12
N,10914,249,870.6,-12
N,10915,81,870.6,-12
N,10916,27,870.6,-12
!
!  Added crane nodes
!  Replace "CN" with on nodes numbers starting at 11000
```

N,11001,2214,946.1,-12
N,11002,2214,946.1,-238.38
N,11003,2214,946.1,-21.96
N,11004,2214,946.1,-31.91
N,11005,2214,946.1,-41.87
N,11006,2214,946.1,-51.83
N,11007,2214,946.1,-61.78
N,11008,2214,946.1,-71.74
N,11009,2214,946.1,-81.7
N,11010,2214,946.1,-91.65
N,11011,2214,946.1,-101.61
N,11012,2214,946.1,-111.57
N,11013,2214,946.1,-121.52
N,11014,2214,946.1,-131.48
N,11015,2214,946.1,-141.43
N,11016,2214,946.1,-151.39
N,11017,2214,946.1,-161.35
N,11018,2214,946.1,-171.3
N,11019,2214,946.1,-181.26
N,11020,2214,946.1,-191.22
N,11021,2214,946.1,-201.17
N,11022,2214,946.1,-211.13
N,11023,2214,946.1,-221.09
N,11024,2214,946.1,-231.04
N,11025,2214,946.1,-564
N,11026,2214,946.1,-332.38
N,11027,2214,946.1,-554.04
N,11028,2214,946.1,-544.09
N,11029,2214,946.1,-534.13
N,11030,2214,946.1,-524.17
N,11031,2214,946.1,-514.22
N,11032,2214,946.1,-504.26
N,11033,2214,946.1,-494.3
N,11034,2214,946.1,-484.35
N,11035,2214,946.1,-474.39
N,11036,2214,946.1,-464.43
N,11037,2214,946.1,-454.48
N,11038,2214,946.1,-444.52
N,11039,2214,946.1,-434.57
N,11040,2214,946.1,-424.61
N,11041,2214,946.1,-414.65
N,11042,2214,946.1,-404.7
N,11043,2214,946.1,-394.73913
N,11044,2214,946.1,-384.78
N,11045,2214,946.1,-374.83
N,11046,2214,946.1,-364.87
N,11047,2214,946.1,-354.91
N,11048,2214,946.1,-344.96
N,11049,1992,946.1,-12
N,11050,1992,946.1,-238.38
N,11051,1992,946.1,-21.96
N,11052,1992,946.1,-31.91
N,11053,1992,946.1,-41.87
N,11054,1992,946.1,-51.83
N,11055,1992,946.1,-61.78
N,11056,1992,946.1,-71.74
N,11057,1992,946.1,-81.7
N,11058,1992,946.1,-91.65
N,11059,1992,946.1,-101.61
N,11060,1992,946.1,-111.57
N,11061,1992,946.1,-121.52
N,11062,1992,946.1,-131.48
N,11063,1992,946.1,-141.43
N,11064,1992,946.1,-151.39
N,11065,1992,946.1,-161.35
N,11066,1992,946.1,-171.3
N,11067,1992,946.1,-181.26
N,11068,1992,946.1,-191.22
N,11069,1992,946.1,-201.17
N,11070,1992,946.1,-211.13
N,11071,1992,946.1,-221.09
N,11072,1992,946.1,-231.04
N,11073,2214,946.1,-325.6
N,11074,2214,946.1,-316.2
N,11075,2214,946.1,-306.8

N,11076,2214,946.1,-297.4
N,11077,2214,946.1,-288
N,11078,2214,946.1,-278.6
N,11079,2214,946.1,-269.2
N,11080,2214,946.1,-259.8
N,11081,2214,946.1,-250.4
N,11082,1992,946.1,-564
N,11083,1992,946.1,-332.38
N,11084,1992,946.1,-554.04
N,11085,1992,946.1,-544.09
N,11086,1992,946.1,-534.13
N,11087,1992,946.1,-524.17
N,11088,1992,946.1,-514.22
N,11089,1992,946.1,-504.26
N,11090,1992,946.1,-494.3
N,11091,1992,946.1,-484.35
N,11092,1992,946.1,-474.39
N,11093,1992,946.1,-464.43
N,11094,1992,946.1,-454.48
N,11095,1992,946.1,-444.52
N,11096,1992,946.1,-434.57
N,11097,1992,946.1,-424.61
N,11098,1992,946.1,-414.65
N,11099,1992,946.1,-404.7
N,11100,1992,946.1,-394.73913
N,11101,1992,946.1,-384.78
N,11102,1992,946.1,-374.83
N,11103,1992,946.1,-364.87
N,11104,1992,946.1,-354.91
N,11105,1992,946.1,-344.96
N,11106,1992,946.1,-325.6
N,11107,1992,946.1,-316.2
N,11108,1992,946.1,-306.8
N,11109,1992,946.1,-297.4
N,11110,1992,946.1,-288
N,11111,1992,946.1,-278.6
N,11112,1992,946.1,-269.2
N,11113,1992,946.1,-259.8
N,11114,1992,946.1,-250.4
N,11115,1992,947.1,-332.38
N,11116,1992,998.9,-332.38
N,11117,1992,955.73333333,-332.38
N,11118,1992,964.3666667,-332.38
N,11119,1992,973,-332.38
N,11120,1992,981.6333333,-332.38
N,11121,1992,990.2666667,-332.38
N,11122,2214,947.1,-332.38
N,11123,2214,998.9,-332.38
N,11124,2214,955.73333333,-332.38
N,11125,2214,964.3666667,-332.38
N,11126,2214,973,-332.38
N,11127,2214,981.6333333,-332.38
N,11128,2214,990.2666667,-332.38
N,11129,2214,947.1,-238.38
N,11130,2214,998.9,-238.38
N,11131,2214,955.73333333,-238.38
N,11132,2214,964.3666667,-238.38
N,11133,2214,973,-238.38
N,11134,2214,981.6333333,-238.38
N,11135,2214,990.2666667,-238.38
N,11136,1992,947.1,-238.38
N,11137,1992,998.9,-238.38
N,11138,1992,955.73333333,-238.38
N,11139,1992,964.3666667,-238.38
N,11140,1992,973,-238.38
N,11141,1992,981.6333333,-238.38
N,11142,1992,990.2666667,-238.38
N,11205,2204.347826,946.1,-564
N,11206,2194.6956522,946.1,-564
N,11207,2185.0434783,946.1,-564
N,11208,2175.3913043,946.1,-564
N,11209,2165.7391304,946.1,-564
N,11210,2156.0869565,946.1,-564
N,11211,2146.4347826,946.1,-564
N,11212,2136.7826087,946.1,-564

N,11213,2127.1304348,946.1,-564
N,11214,2117.4782609,946.1,-564
N,11215,2107.82608696,946.1,-564
N,11216,2098.17391304,946.1,-564
N,11217,2088.5217391,946.1,-564
N,11218,2078.8695652,946.1,-564
N,11219,2069.2173913,946.1,-564
N,11220,2059.5652174,946.1,-564
N,11221,2049.9130435,946.1,-564
N,11222,2040.2608696,946.1,-564
N,11223,2030.6086957,946.1,-564
N,11224,2020.9565217,946.1,-564
N,11225,2011.3043478,946.1,-564
N,11226,2001.652174,946.1,-564
N,11227,2001.652174,946.1,-12
N,11228,2011.3043478,946.1,-12
N,11229,2020.9565217,946.1,-12
N,11230,2030.6086957,946.1,-12
N,11231,2040.2608696,946.1,-12
N,11232,2049.9130435,946.1,-12
N,11233,2059.5652174,946.1,-12
N,11234,2069.2173913,946.1,-12
N,11235,2078.8695652,946.1,-12
N,11236,2088.5217391,946.1,-12
N,11237,2098.17391304,946.1,-12
N,11238,2107.82608696,946.1,-12
N,11239,2117.4782609,946.1,-12
N,11240,2127.1304348,946.1,-12
N,11241,2136.7826087,946.1,-12
N,11242,2146.4347826,946.1,-12
N,11243,2156.0869565,946.1,-12
N,11244,2165.7391304,946.1,-12
N,11245,2175.3913043,946.1,-12
N,11246,2185.0434783,946.1,-12
N,11247,2194.6956522,946.1,-12
N,11248,2204.347826,946.1,-12
N,11249,2214,904.6,-564
N,11250,2214,912.9,-564
N,11251,2214,921.2,-564
N,11252,2214,929.5,-564
N,11253,2214,937.8,-564
N,11254,1992,904.6,-564
N,11255,1992,912.9,-564
N,11256,1992,921.2,-564
N,11257,1992,929.5,-564
N,11258,1992,937.8,-564
N,11259,2214,904.6,-12
N,11260,2214,912.9,-12
N,11261,2214,921.2,-12
N,11262,2214,929.5,-12
N,11263,2214,937.8,-12
N,11264,1992,904.6,-12
N,11265,1992,912.9,-12
N,11266,1992,921.2,-12
N,11267,1992,929.5,-12
N,11268,1992,937.8,-12
N,11270,2241,904.6,-564
N,11272,2187,904.6,-564
N,11274,2019,904.6,-564
N,11276,1965,904.6,-564
N,11278,2241,904.6,-12
N,11280,2187,904.6,-12
N,11282,2019,904.6,-12
N,11284,1965,904.6,-12
N,11285,2232,904.6,-564
N,11286,2223,904.6,-564
N,11287,2010,904.6,-564
N,11288,2001,904.6,-564
N,11289,2196,904.6,-564
N,11290,2205,904.6,-564
N,11291,1974,904.6,-564
N,11292,1983,904.6,-564
N,11293,2232,904.6,-12
N,11294,2223,904.6,-12
N,11295,2010,904.6,-12

N,11296,2001,904.6,-12
N,11297,2196,904.6,-12
N,11298,2205,904.6,-12
N,11299,1974,904.6,-12
N,11300,1983,904.6,-12
N,11301,2177.1176471,904.6,-564
N,11302,2167.2352941,904.6,-564
N,11303,2157.3529412,904.6,-564
N,11304,2147.4705882,904.6,-564
N,11305,2137.5882353,904.6,-564
N,11306,2127.7058824,904.6,-564
N,11307,2117.8235294,904.6,-564
N,11308,2107.94117647,904.6,-564
N,11309,2098.05882353,904.6,-564
N,11310,2088.1764706,904.6,-564
N,11311,2078.2941176,904.6,-564
N,11312,2068.4117647,904.6,-564
N,11313,2058.5294118,904.6,-564
N,11314,2048.6470588,904.6,-564
N,11315,2038.7647059,904.6,-564
N,11316,2028.8823529,904.6,-564
N,11317,2028.8823529,904.6,-12
N,11318,2038.7647059,904.6,-12
N,11319,2048.6470588,904.6,-12
N,11320,2058.5294118,904.6,-12
N,11321,2068.4117647,904.6,-12
N,11322,2078.2941176,904.6,-12
N,11323,2088.1764706,904.6,-12
N,11324,2098.05882353,904.6,-12
N,11325,2107.94117647,904.6,-12
N,11326,2117.8235294,904.6,-12
N,11327,2127.7058824,904.6,-12
N,11328,2137.5882353,904.6,-12
N,11329,2147.4705882,904.6,-12
N,11330,2157.3529412,904.6,-12
N,11331,2167.2352941,904.6,-12
N,11332,2177.1176471,904.6,-12
N,11333,1992,1011.9,-288
N,11334,1992,1011.9,-229.63
N,11337,2214,1011.9,-229.63
N,11338,2214,1011.9,-288
N,11341,2214,1011.9,-341.63
N,11344,1992,1011.9,-341.63
N,11347,2194.5,1011.9,-229.63
N,11348,2185.81,1011.9,-229.63
N,11349,2168.31,1011.9,-229.63
N,11350,2152,1011.9,-229.63
N,11351,2134.5,1011.9,-229.63
N,11352,2126,1011.9,-229.63
N,11353,2005.19,1011.9,-229.63
N,11354,2011.82,1011.9,-229.63
N,11355,2022.82,1011.9,-229.63
N,11356,2080,1011.9,-229.63
N,11357,2110.66666667,1011.9,-229.63
N,11358,2095.33333333,1011.9,-229.63
N,11359,2045.25,1011.9,-229.63
N,11360,2034.035,1011.9,-229.63
N,11361,2067.75,1011.9,-229.63
N,11362,2056.5,1011.9,-229.63
N,11363,2194.5,1011.9,-288
N,11365,2185.81,1011.9,-288
N,11366,2168.31,1011.9,-288
N,11367,2152,1011.9,-288
N,11368,2126,1011.9,-288
N,11369,2080,1011.9,-288
N,11372,2134.5,1011.9,-288
N,11373,2005.19,1011.9,-288
N,11374,2011.82,1011.9,-288
N,11375,2022.82,1011.9,-288
N,11376,2045.25,1011.9,-288
N,11377,2034.035,1011.9,-288
N,11378,2067.75,1011.9,-288
N,11379,2056.5,1011.9,-288
N,11392,2134.5,1011.9,-249.09
N,11393,2134.5,1011.9,-268.55

```
N,11395,2067.75,1011.9,-249.09
N,11396,2067.75,1011.9,-268.55
N,11397,2126,1011.9,-268.38
N,11399,2126,1011.9,-247.38
N,11400,2080,1011.9,-247.38
N,11401,2126,1011.9,-257.88
N,11402,2080,1011.9,-268.38
N,11403,2080,1011.9,-257.88
N,11405,2110.66666667,1011.9,-268.38
N,11406,2095.33333333,1011.9,-268.38
N,11408,2110.66666667,1011.9,-247.38
N,11409,2095.33333333,1011.9,-247.38
N,11411,2185.81,1011.9,-249.09
N,11412,2185.81,1011.9,-268.55
N,11414,2168.31,1011.9,-249.09
N,11415,2168.31,1011.9,-268.55
N,11417,2152,1011.9,-249.09
N,11418,2152,1011.9,-268.55
N,11420,2005.19,1011.9,-249.09
N,11421,2005.19,1011.9,-268.55
N,11423,2022.82,1011.9,-249.09
N,11424,2022.82,1011.9,-268.55
N,11426,2045.25,1011.9,-249.09
N,11427,2045.25,1011.9,-268.55
N,11429,2194.5,1011.9,-249.09
N,11430,2194.5,1011.9,-268.55
N,11432,2011.82,1011.9,-249.09
N,11433,2011.82,1011.9,-268.55
N,11434,2103,1011.9,-288
N,11435,2114.5,1011.9,-288
N,11436,2091.5,1011.9,-288
N,11437,2214,1011.9,-332.38
N,11438,2214,1011.9,-302.8
N,11439,2214,1011.9,-317.59
N,11440,1992,1011.9,-332.38
N,11441,1992,1011.9,-302.8
N,11442,1992,1011.9,-317.59
N,11443,2214,1011.9,-238.38
N,11444,2214,1011.9,-254.92
N,11445,2214,1011.9,-271.46
N,11446,1992,1011.9,-238.38
N,11447,1992,1011.9,-254.92
N,11448,1992,1011.9,-271.46
N,11450,2103,915.74,-288

! The following nodes are for column and beam orentation.

N,20001,100,800,-587
N,20002,100,800,-576
N,20003,100,800,-564
N,20004,100,800,-512
N,20005,100,800,-504
N,20006,100,800,-439.97
N,20007,100,800,-437
N,20008,100,800,-420.35
N,20009,100,800,-399.35
N,20010,100,800,-381.6
N,20011,100,800,-362
N,20012,100,800,-360
N,20013,100,800,-288
N,20014,100,800,-216
N,20015,100,800,-214
N,20016,100,800,-144
N,20017,100,800,-139
N,20018,100,800,-72
N,20019,100,800,-64
N,20020,100,800,-12
N,20021,100,800,0
N,20022,100,800,11
N,20030,100,800,-586
N,20035,100,800,-12
N,20036,100,800,-401.06
N,20049,100,800,-12
N,20052,10000,800,-288
N,20054,10000,800,-586
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N,20057,216,800,-586
N,20058,432,800,-586
N,20059,1014,800,-586
N,20060,1305,800,-586
N,20061,1578,800,-586
N,20062,1857,800,-586
N,20063,2097,800,-586
N,20064,2301,800,-586
N,20065,2505,800,-586
N,20066,1159.5,800,-586
N,20067,1437,800,-586
N,20068,1118.52,800,-586
N,20069,100,489.95,-576
N,20070,100,288,-336
N,20071,0,-100,-362
N,20072,0,-100,-214
N,20073,216,-100,11
N,20074,723,-100,11
N,20075,1305,-100,11
N,20076,1857,-100,11
N,20077,2301,-100,11
N,20078,2301,-100,-362
N,20079,2505,-100,-362
N,20080,1014,800,-576
N,20081,336,800,100
N,20082,100,800,-432
N,20083,-100,672,-432       !31
N,20084,-100,672,-144       !33
N,20085,-100,844.08,-288    !34
N,20086,723,-100,-288       !1145
N,20087,1014,-100,-288      !2145
N,20088,1305,-100,-288      !3145

! SPRING NODES

N,30112,432,489.96,-576
N,31112,723,489.96,-576
N,32112,1014,489.96,-576
N,33112,1305,489.96,-576
!N,35112,1857,489.96,-576

!CONSTRAINT NODES

N,40101,2241,894.6,-564
N,40102,2187,894.6,-564
N,40103,2019,894.6,-564
N,40104,1965,894.6,-564
N,40113,2241,894.6,-12
N,40114,2187,894.6,-12
N,40115,2019,894.6,-12
N,40116,1965,894.6,-12

! NODES FOR BEAM EXCENTRICITY

N,50037,0,1059.4725,-362
N,50039,0,1059.4725,-214
N,50153,432,1059.4725,-214
N,50174,216,1059.4725,-587
N,50177,216,1059.4725,-362
N,50179,216,1059.4725,-214
N,50182,216,1059.4725,11
N,51107,723,1059.4725,11
N,52153,1014,1059.4725,-214

N,52156,1159.5,489.96,-576
N,52174,1159.5,573,-576

N,53107,1305,1059.285,11
N,54153,1578,1059.285,-214
N,55107,1857,1059.285,11
N,56153,2097,1059.285,-214
N,57107,2301,1059.285,11
N,57118,2301,1059.285,-587
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N,57153,2301,1059.285,-214
N,58151,2505,1059.285,-362
N,58153,2505,1059.285,-214

! ELEMENT TYPE 2 NODES

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N,80002,0,489.96,0
N,60008,0,1065.96,11
N,60012,0,0,-576
N,60013,0,489.96,-576
N,70013,0,489.96,-576
N,80013,0,489.96,-576
N,90013,0,489.96,-576
N,60019,0,1065.96,-587
N,70019,0,1065.96,-587
N,60031,0,672,-432
N,60034,0,844.08,-288
N,70034,0,844.08,-288
N,60113,432,573,-576
N,60124,216,489.96,-576
N,60133,336,489.96,-576
N,60174,216,1065.96,-587
N,61109,723,870.6,-12
N,61120,723,870.6,-564
N,72102,1014,489.96,0
N,62109,1014,870.6,-12
N,62116,1014,860.04,-587
N,62120,1014,870.6,-564
N,62143,1014,489.96,-432
N,62148,1014,489.96,-72
N,62156,1159.5,489.96,-587
N,63100,1305,459.96,0
N,73112,1305,489.96,-576
N,63120,1305,870.6,-564
N,63156,1437,489.96,-576
N,64113,1578,573,-576
N,64122,1578,971.04,-587
N,65112,1857,489.96,-576
N,75118,1857,1065.96,-587
N,66118,2097,1065.96,-587
N,73102,1305,489.96,0
N,63109,1305,870.6,-12
N,65109,1857,870.6,-12
N,65120,1857,870.6,-564
N,66109,2097,870.6,-12
N,67109,2301,870.6,-12
N,68120,2505,870.6,-564


! ELEMENT TYPE 3 NODES

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N,61118,723,1065.96,-587
N,62112,1014,489.96,-576
N,62118,1014,1065.96,-587
N,63112,1305,489.96,-576
N,63118,1305,1065.96,-587
N,64118,1578,1065.96,-587
N,65118,1857,1065.96,-587
N,67118,2301,1065.96,-587
N,68118,2505,1065.96,-587

! ELEMENT TYPE 7 NODES

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N,70033,0,672,-144
N,70008,0,1065.96,11
N,70031,0,672,-432
N,60145,432,489.96,-288
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N,60132,216,489.96,0
N,60141,336,489.96,0
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N,62145,1014,489.96,-288
N,63121,1159.5,860.04,-587
N,63145,1305,489.96,-288
N,63164,1437,489.96,0
N,65102,1857,489.96,0
N,66107,2097,1065.96,11
N,70102,432,489.96,0
N,70112,432,489.96,-576
N,63143,1305,489.96,-432
N,64102,1578,489.96,0
N,64112,1578,489.96,-576
N,65122,1857,971.04,-587
N,65113,1857,573,-576
N,83102,1305,489.96,0
N,63148,1305,489.96,-72
N,68152,2505,1065.96,-288
N,63116,1305,860.04,-587
N,77118,2301,1065.96,-587
N,70107,432,1065.96,11
N,70118,432,1065.96,-587
N,60182,216,1065.96,11
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N,75109,1857,870.6,-12
N,64109,1578,870.6,-12
N,72109,1014,870.6,-12
N,71109,723,870.6,-12
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N,75120,1857,870.6,-564
N,64120,1578,870.6,-564
N,72120,1014,870.6,-564
N,71120,723,870.6,-564
N,60021,0,870.6,-564

! ELEMENT TYPE 8 NODES

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N,61107,723,1065.96,11
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N,62107,1014,1065.96,11
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N,63107,1305,1065.96,11
N,64100,1578,459.96,0
N,64107,1578,1065.96,11
N,65107,1857,1065.96,11
N,67107,2301,1065.96,11
N,68107,2505,1065.96,11

! ELEMENT TYPE 9 NODES

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N,80008,0,1065.96,11
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N,60017,0,860.04,-587
N,80019,0,1065.96,-587
N,60024,0,489.96,-504
N,60025,0,489.96,-432
N,60026,0,489.96,-360
N,60027,0,489.96,-288
N,60028,0,489.96,-216
N,60029,0,489.96,-144
N,60030,0,489.96,-72
N,80034,0,844.08,-288
N,90034,0,844.08,-288
N,100034,0,844.08,-288
N,110034,0,844.08,-288
N,60035,0,1065.96,-512
N,60036,0,1065.96,-437
N,60037,0,1065.96,-362

N,60038,0,1065.96,-288
N,60039,0,1065.96,-214
N,60040,0,1065.96,-139
N,60041,0,1065.96,-64
N,60101,432,288,0
N,80102,432,489.96,0
N,90102,432,489.96,0
N,100102,432,489.96,0
N,60105,432,860.04,11
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N,80105,432,860.04,11
N,80107,432,1065.96,11
N,80112,432,489.96,-576
N,90112,432,489.96,-576
N,100112,432,489.96,-576
N,110112,432,489.96,-576
N,70113,432,573,-576
N,60116,432,860.04,-587
N,70116,432,860.04,-587
N,80116,432,860.04,-587
N,60118,432,1065.96,-587
N,80118,432,1065.96,-587
N,60125,216,489.96,-504
N,70125,216,489.96,-504
N,60126,216,489.96,-432
N,60127,216,489.96,-360
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N,77152,2301,1065.96,-288
N,67153,2301,1065.96,-214
N,77153,2301,1065.96,-214
N,67154,2301,1065.96,-139
N,77154,2301,1065.96,-139
N,67155,2301,1065.96,-64
N,77155,2301,1065.96,-64
N,68105,2505,860.04,11
N,78107,2505,1065.96,11
N,68109,2505,870.6,-12
N,68116,2505,860.04,-587
N,78118,2505,1065.96,-587
N,88118,2505,1065.96,-587
N,68149,2505,1065.96,-512
N,68150,2505,1065.96,-437
N,68151,2505,1065.96,-362
N,78152,2505,1065.96,-288
N,68153,2505,1065.96,-214
N,68154,2505,1065.96,-139
N,68155,2505,1065.96,-64
N,150037,0,1059.4725,-362
N,250037,0,1059.4725,-362
N,150039,0,1059.4725,-214
N,250039,0,1059.4725,-214
N,150153,432,1059.4725,-214
N,250153,432,1059.4725,-214
N,150174,216,1059.4725,-587
N,150177,216,1059.4725,-362
N,150179,216,1059.4725,-214
N,150182,216,1059.4725,11
N,250182,216,1059.4725,11
N,151107,723,1059.4725,11
N,251107,723,1059.4725,11
N,152153,1014,1059.4725,-214
N,252153,1014,1059.4725,-214
N,152156,1159.5,489.96,-576
N,152174,1159.5,573,-576
N,153107,1305,1059.285,11

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N,253107,1305,1059.285,11
N,154153,1578,1059.285,-214
N,254153,1578,1059.285,-214
N,155107,1857,1059.285,11
N,255107,1857,1059.285,11
N,156153,2097,1059.285,-214
N,256153,2097,1059.285,-214
N,157107,2301,1059.285,11
N,257107,2301,1059.285,11
N,157118,2301,1059.285,-587
N,157151,2301,1059.285,-362
N,157153,2301,1059.285,-214
N,158151,2505,1059.285,-362
N,258151,2505,1059.285,-362
N,158153,2505,1059.285,-214
N,258153,2505,1059.285,-214
N,181660,2505,971.04,-587
N,281660,2505,971.04,-587

! ELEMENT TYPE 16 NODES

N,74100,1578,459.96,0
N,75100,1857,459.96,0

!RAIL GIRDER                MCK 9/10/2010

N,60009,0,852,-12
N,60020,0,852,-564
N,60108,432,852,-12
N,60119,432,852,-564
N,61108,723,852,-12
N,61119,723,852,-564
N,62108,1014,852,-12
N,62119,1014,852,-564
N,63108,1305,852,-12
N,63119,1305,852,-564
N,64108,1578,852,-12
N,64119,1578,852,-564
N,65108,1857,852,-12
N,65119,1857,852,-564
N,66108,2097,852,-12
N,67108,2301,852,-12
N,67119,2301,852,-564
N,68108,2505,852,-12
N,68119,2505,852,-564

!  ADDED RUNWAY GIRDER NODES

N,301011,2241,894.6,-564
N,301021,2187,894.6,-564
N,301031,2019,894.6,-564
N,301041,1965,894.6,-564

N,301131,2241,894.6,-12
N,301141,2187,894.6,-12
N,301151,2019,894.6,-12
N,301161,1965,894.6,-12

! DEFINE REAL CONSTANT

R,1

R,9

R,12,0.001, , ,       ! SPRING CONSTANT

R,13,18105000, , ,    ! SPRING CONSTANT

R,14,11978000, , ,    ! SPRING CONSTANT

R,15,23956000, , ,    ! SPRING CONSTANT

R,1001,2766.222961730,,,   ! HOOK X SPRING

R,1002,2766.222961730,,,   ! HOOK Z SPRING
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R,1003,2266759.624568,,,   ! HOOK Y SPRING

hookmass=688.9610669  ! hookmass = 0 for loadcase 6 and 7 all others is should be 688.9610669

R,1004,hookmass,hookmass,hookmass, ! HOOK MASS change because of change in gravity 688.4057971014

R,52,1.15,1.15,1.15
R,53,2.27743,2.27743,2.27743
R,54,3.662,3.662,3.662
R,55,0.64699,0.64699,0.64699
R,100,51.7598344,219.979296,51.7598344

R,401,14619.6 ! TORSIONAL SPRING FOR DIAGONAL WT4X12
R,402,10406.7 ! TORSIONAL SPRING FOR DIAGONAL WT4X12
R,403,56560 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X1/2_3/8
R,404,13334 ! TORSIONAL SPRING FOR DIAGONAL LL4X3X5/16_3/8
R,405,75068 ! TORSIONAL SPRING FOR DIAGONAL LL6X4X1/2_3/8
R,406,61618 ! TORSIONAL SPRING FOR DIAGONAL W14X43
R,407,215956 ! TORSIONAL SPRING FOR DIAGONAL W14X87
R,408,206514 ! TORSIONAL SPRING FOR DIAGONAL W14X87
R,409,31583 ! TORSIONAL SPRING FOR DIAGONAL LL3.5X3.5X3/8_3/8
R,410,21617 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,411,7180 ! TORSIONAL SPRING FOR DIAGONAL L4X4X5/16_3/8
R,412,25326 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,413,37519 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,414,5720 ! TORSIONAL SPRING FOR DIAGONAL LL3X3X3/8_3/8
R,415,18756 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,416,14402 ! TORSIONAL SPRING FOR DIAGONAL LL4X4X3/8_3/8
R,417,51480 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X1/2_3/8
R,418,55000 ! TORSIONAL SPRING FOR DIAGONAL LL5X5X1/2
R,419,2687 ! TORSIONAL SPRING FOR DIAGONAL LL3X3X3/16_3/8
R,420,170024 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X3/4_3/8
R,421,496078 ! TORSIONAL SPRING FOR DIAGONAL W14X119
R,422,169412 ! TORSIONAL SPRING FOR DIAGONAL W12X72

GRAV=386.08858                                                                    ! in/sec^2

! DEFINE MATERIAL TYPES

Mat,1   ! BUILDING STEEL
MP,EX,1,2.90E+07
!MP,Nuxy,1,3.00E-01
MP,DENS,1,0.73377E-03
MP,GXY,1,11000000

Mat,13   ! BUILDING STEEL
MP,EX,13,2.90E+07
!MP,Nuxy,13,3.00E-01
MP,DENS,13,0.00001
MP,GXY,13,11000000

! THE FOLLOWING MATERIAL TYPES ARE FOR THE CRANE

MAT,2     !  HOOKUP MAT 1
MP,EX,2,3E+07
MP,NUXY,2,0.3
MP,DENS,2,0.745E-03

MAT,3     !  HOOKUP MAT 2
MP,EX,3,3E+07
MP,NUXY,3,0.3
MP,DENS,3,0.11660E-02

MAT,4     !  HOOKUP MAT 3
MP,EX,4,3E+07
MP,NUXY,4,0.3
MP,DENS,4,0.96E-03

MAT,5     !  HOOKUP MAT 4
MP,EX,5,3E+07
MP,NUXY,5,0.8E-03
MP,DENS,5,0.123E-02

MAT,6     !  HOOKUP MAT 5
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MP,EX,6,3E+07
MP,NUXY,6,0.3
MP,DENS,6,0

MAT,7     ! HOOKUP MAT 6
MP,EX,7,3E+07
MP,NUXY,7,0.3
MP,DENS,7,0.121E-02

MAT,8     ! HOOKUP MAT 7
MP,EX,8,3E+07
MP,NUXY,8,0.3
MP,DENS,8,0.6241E-02



! CREATE DIFFERENT ELEMENT TYPES IN ORDER TO CONTROL THE END RELEASES USING "KEYOPT"

ET,1,BEAM44

ET,2,BEAM44
!KEYOPT,2,7,11

ET,3,BEAM44
!KEYOPT,3,7,1

ET,7,BEAM44
!KEYOPT,7,8,11

ET,8,BEAM44
!KEYOPT,8,8,1

ET,9,BEAM44
!KEYOPT,9,7,11
!KEYOPT,9,8,11

ET,12,COMBIN14
KEYOPT,12,1,0
KEYOPT,12,2,3
KEYOPT,12,3,0

ET,13,COMBIN14
KEYOPT,13,1,0
KEYOPT,13,2,3
KEYOPT,13,3,0

ET,14,COMBIN14
KEYOPT,14,1,0
KEYOPT,14,2,1
KEYOPT,14,3,0

ET,15,COMBIN14
KEYOPT,15,1,0
KEYOPT,15,2,1
KEYOPT,15,3,0

ET,16,BEAM44
!KEYOPT,16,7,1
!KEYOPT,16,8,11

ET,21,BEAM44

ET,100,MASS21

ET,   1001, 14
KEYOP,   1001, 2,      1

ET,   1002, 14
KEYOP,   1002, 2,      3

ET,   1003, 14
KEYOP,   1003, 2,      2

ET,   1004, 21
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ET,300,COMBIN14  ! TORSIONAL SPRING FOR DIAGONAL BRACING
KEYOPT,300,1,0
KEYOPT,300,2,0
KEYOPT,300,3,1

! DEFINE BEAM SECTION TYPES THAT WILL BE USED IN THE MODEL

!W33X141
!SECTYPE,2,BEAM,I,W33X141
!SECDATA,11.535,11.535,33.31,0.96,0.96,0.605
R,202,41.6,246,7460,16.655,5.77,9.7
RMORE,41.6,246,7460,16.655,5.77,9.7
RMORE,,,,,,,
RMORE,2.8175,2.0642

!W12X72
!SECTYPE,3,BEAM,I,W12X72
!SECDATA,12.04,12.04,12.25,0.671,0.671,0.43
R,203,21.2,195,597,6.125,6.02,2.94
RMORE,21.2,195,597,6.125,6.02,2.94
RMORE,,,,,,,
RMORE,1.9681,4.0251

!W14X119
!SECTYPE,4,BEAM,I,W14X119
!SECDATA,14.65,14.65,14.5,0.938,0.938,0.57
R,204,35,492,1370,7.25,7.325,9.2
RMORE,35,492,1370,7.25,7.325,9.2
RMORE,,,,,,,
RMORE,1.9103,4.2347

!W36X300
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,205,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W36X300 W/ L6X8
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,244,111.3,4560.861,24519.303,15.254,14.25,70.062
RMORE,111.3,4560.861,24519.303,15.254,14.25,70.062
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W36X300 W/ L4X6
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,245,105.18,3565.207,23828.308,15.844,14.25,67.364
RMORE,105.18,3565.207,23828.308,15.844,14.25,67.364
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W14X136
!SECTYPE,6,BEAM,I,W14X136
!SECDATA,14.74,14.74,14.75,1.063,1.063,0.66
R,206,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,,
RMORE,1.9147,4.1089

!W36X230
!SECTYPE,7,BEAM,I,W36X230
!SECDATA,16.475,16.475,35.88,1.26,1.26,0.761
R,207,67.7,940,15000,17.94,8.238,28.6
RMORE,67.7,940,15000,17.94,8.238,28.6
RMORE,,,,,,,
RMORE,2.4466,2.5447

!2L3X3X5/16_3/8                                                    SEC 8
R,30,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,,,,,,,
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RMORE,2.844,2.844

R,40,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,,,,,,,
RMORE,2.844,2.844

!W10X33
!SECTYPE,9,BEAM,I,W10X33
!SECDATA,7.964,7.964,9.75,0.433,0.433,0.292
R,209,9.71,36.5,171,4.875,3.982,0.58
RMORE,9.71,36.5,171,4.875,3.982,0.58
RMORE,,,,,,,
RMORE,2.1118,3.4106

!W30X116
!SECTYPE,10,BEAM,I,W30X116
!SECDATA,10.5,10.5,30,0.85,0.85,0.564
R,210,34.2,164,4930,15,5.25,6.43
RMORE,34.2,164,4930,15,5.25,6.43
RMORE,,,,,,,
RMORE,2.8739,2.0213

!W14X87
!SECTYPE,11,BEAM,I,W14X87
!SECDATA,14.5,14.5,14,0.688,0.688,0.42
R,211,25.6,350,967,7,7.25,3.68
RMORE,25.6,350,967,7,7.25,3.68
RMORE,,,,,,,
RMORE,1.9205,4.3537

!W14X43
!SECTYPE,12,BEAM,I,W14X43
!SECDATA,8,8,13.68,0.528,0.528,0.308
R,212,12.6,45.1,429,6.84,4,1.05
RMORE,12.6,45.1,429,6.84,4,1.05
RMORE,,,,,,,
RMORE,2.2372,2.9907

!2L6X4X1/2_3/8  SEC 13
R,31,9.5,25.641,34.79,4.188,1.737,0.792
RMORE,9.5,25.641,34.79,4.188,1.737,0.792
RMORE,,,,,,,
RMORE,3.5621,2.375
!SECTYPE,13,BEAM,ASEC,LL64X1/2
!SECDATA,9.5,25.64,,34.79,0,0.834,0,1.737,0,1.737

!2L4X3X5/16_3/8                                                    SEC 14
R,32,4.18,7.037,6.762,3.188,1.103,0.136
RMORE,4.18,7.037,6.762,3.188,1.103,0.136
RMORE,,,,,,,
RMORE,3.344,2.5075


!2L6X6X1/2_3/8                                                    SEC 15
R,33,11.5,80.128,39.816,6.188,1.435,0.958
RMORE,11.5,80.128,39.816,6.188,1.435,0.958
RMORE,,,,,,,
RMORE,2.875,2.875
!SECTYPE,15,BEAM,ASEC,LL66X1/2
!SECDATA,11.5,39.8,,80.155,0,1.002,0,1.435,0,1.435

!W24X100
!SECTYPE,16,BEAM,I,W24X100
!SECDATA,12,12,24,0.775,0.775,0.468
R,216,29.5,223,3000,12,6,4.87
RMORE,29.5,223,3000,12,6,4.87
RMORE,,,,,,,
RMORE,2.379,2.6264

!W36X280
!SECTYPE,17,BEAM,I,W36X280
!SECDATA,16.595,16.595,36.5,1.57,1.57,0.885
R,217,82.4,1200,18900,18.25,8.3,52.6
RMORE,82.4,1200,18900,18.25,8.3,52.6
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RMORE,,,,,,,
RMORE,2.372,2.5432

!W12X40
!SECTYPE,18,BEAM,I,W12X40
!SECDATA,8,8,11.94,0.516,0.516,0.294
R,218,11.8,44.1,310,5.97,4,0.956
RMORE,11.8,44.1,310,5.97,4,0.956
RMORE,,,,,,,
RMORE,2.1439,3.3618

!W14X30
!SECTYPE,19,BEAM,I,W14X30
!SECDATA,6.733,6.733,13.86,0.383,0.383,0.270
R,219,8.83,19.5,290,6.93,3.367,0.376
RMORE,8.83,19.5,290,6.93,3.367,0.376
RMORE,,,,,,,
RMORE,2.5684,2.36

!W12X27
!SECTYPE,20,BEAM,I,W12X27
!SECDATA,6.5,6.5,11.96,0.4,0.4,0.237
R,220,7.95,18.3,204,5.98,3.25,0.351
RMORE,7.95,18.3,204,5.98,3.25,0.351
RMORE,,,,,,,
RMORE,2.2944,2.8042

!W36X150
!SECTYPE,21,BEAM,I,W36X150
!SECDATA,11.972,11.972,35.84,0.94,0.94,0.625
R,221,44.2,270,9030,17.92,5.99,10.1
RMORE,44.2,270,9030,17.92,5.99,10.1
RMORE,,,,,,,
RMORE,2.9457,1.9732

!W36X160
!SECTYPE,22,BEAM,I,W36X160
!SECDATA,12,12,36,1.02,1.02,0.653
R,222,47.1,295,9760,18,6,12.4
RMORE,47.1,295,9760,18,6,12.4
RMORE,,,,,,,
RMORE,2.886,2.0036

!W24X76
!SECTYPE,23,BEAM,I,W24X76
!SECDATA,8.985,8.985,23.91,0.682,0.682,0.44
R,223,22.4,82.6,2100,11.955,4.49,2.7
RMORE,22.4,82.6,2100,11.955,4.49,2.7
RMORE,,,,,,,
RMORE,2.7417,2.1293

!W18X45
!SECTYPE,24,BEAM,I,W18X45
!SECDATA,7.477,7.477,17.86,0.499,0.499,0.335
R,224,13.2,34.8,706,8.93,3.74,0.889
RMORE,13.2,34.8,706,8.93,3.74,0.889
RMORE,,,,,,,
RMORE,2.6533,2.2063

!W10X15
!SECTYPE,25,BEAM,I,W10X15
!SECDATA,4,4,10,0.269,0.269,0.230
R,225,4.41,2.88,68.9,5,2,0.104
RMORE,4.41,2.88,68.9,5,2,0.104
RMORE,,,,,,,
RMORE,3.0732,1.9174

!W24X55
!SECTYPE,26,BEAM,I,W24X55
!SECDATA,7,7,23.55,0.503,0.503,0.396
R,226,16.2,28.9,1340,11.775,3.5,1.18
RMORE,16.2,28.9,1340,11.775,3.5,1.18
RMORE,,,,,,,
RMORE,3.4505,1.7371
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!W24X68
!SECTYPE,27,BEAM,I,W24X68
!SECDATA,8.961,8.961,23.71,0.582,0.582,0.416
R,227,20,70,1820,11.855,4.48,1.86
RMORE,20,70,1820,11.855,4.48,1.86
RMORE,,,,,,,
RMORE,2.876,2.0278

!W10X21
!SECTYPE,28,BEAM,I,W10X21
!SECDATA,5.75,5.75,9.9,0.338,0.338,0.240
R,228,6.2,10.8,107,4.95,2.875,0.21
RMORE,6.2,10.8,107,4.95,2.875,0.21
RMORE,,,,,,,
RMORE,2.3782,2.6094

!C8X11
SECTYPE,29,BEAM,CHAN,C8X11
SECDATA,2.25,2.25,8,0.39,0.39,0.220
R,229,3.38,1.32,32.6,4,1.13,1.268
RMORE,3.38,1.32,32.6,4,1.13,1.268
RMORE,,,,,,,
RMORE,2.8766,1.9205

!W30X108
!SECTYPE,30,BEAM,I,W30X108
!SECDATA,10.484,10.484,29.82,0.76,0.76,0.548
R,230,31.8,146,4470,14.91,5.24,5.02
RMORE,31.8,146,4470,14.91,5.24,5.02
RMORE,,,,,,,
RMORE,2.9932,1.946

!W14X22
!SECTYPE,31,BEAM,I,W14X22
!SECDATA,5,5,13.72,0.335,0.335,0.230
R,231,6.49,7,198,6.86,2.5,0.208
RMORE,6.49,7,198,6.86,2.5,0.208
RMORE,,,,,,,
RMORE,2.9064,2.0564

!W14X61
!SECTYPE,32,BEAM,I,W14X61
!SECDATA,10,10,13.91,0.643,0.643,0.378
R,232,17.9,107,641,6.955,5,2.19
RMORE,17.9,107,641,6.955,5,2.19
RMORE,,,,,,,
RMORE,2.088,3.4043

!W27X84
!SECTYPE,33,BEAM,I,W27X84
!SECDATA,9.963,9.963,26.69,0.636,0.636,0.463
R,233,24.8,105,2830,13.345,4.98,2.79
RMORE,24.8,105,2830,13.345,4.98,2.79
RMORE,,,,,,,
RMORE,2.9353,2.007

!W27X94
!SECTYPE,34,BEAM,I,W27X94
!SECDATA,9.99,9.99,26.91,0.745,0.745,0.49
R,234,27.7,124,3270,13.455,5,4.06
RMORE,27.7,124,3270,13.455,5,4.06
RMORE,,,,,,,
RMORE,2.7839,2.1007

!2L4X4X3/8_3/8 SEC35
R,34,5.719,18.77,8.717,4.188,0.951,0.268
RMORE,5.719,18.77,8.717,4.188,0.951,0.268
RMORE,,,,,,,
RMORE,2.8595,2.8595

!2L6X6X3/4_3/8 SEC 36
R,35,16.875,121.302,56.31,6.188,1.4,3.164
RMORE,16.875,121.302,56.31,6.188,1.4,3.164
RMORE,,,,,,,
RMORE,2.8125,2.8125
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!2L3X3X3/16_3/8 SEC 37
R,36,2.18,4.134,1.923,3.188,0.726,0.025
RMORE,2.18,4.134,1.923,3.188,0.726,0.025
RMORE,,,,,,,
RMORE,2.9067,2.9067

!2L5X5X1/2_3/8 SEC 38
R,37,9.5,47.485,22.5,5.188,1.184,0.792
RMORE,9.5,47.485,22.5,5.188,1.184,0.792
RMORE,,,,,,,
RMORE,2.8503,2.8503

!L4X4X5/16
!SECTYPE,39,BEAM,L,L44X5/16
!SECDATA,4,4,0.313,0.313
R,239,2.402,5.925,1.503,2.828,1.357,0.078
RMORE,2.402,5.925,1.503,2.828,1.357,0.078
RMORE,,,,,,,
RMORE,2.1182,2.0978,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

!L5X5X1/2
!SECTYPE,40,BEAM,L,L55X1/2
!SECDATA,5,5,0.5,0.5
R,240,4.75,17.912,4.589,3.536,1.675,0.396
RMORE,4.75,17.912,4.589,3.536,1.675,0.396
RMORE,,,,,,,
RMORE,2.1158,2.0833,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

!2L3.5X3.5X3/8_3/8 SEC 41
R,38,4.969,12.891,5.73,3.688,0.826,0.233
RMORE,4.969,12.891,5.73,3.688,0.826,0.233
RMORE,,,,,,,
RMORE,2.8394,2.8394

!2L3X3X3/8_3/8 SEC 42
R,39,4.219,8.395,3.519,3.188,0.7,0.198
RMORE,4.219,8.395,3.519,3.188,0.7,0.198
RMORE,,,,,,,
RMORE,2.7527,2.7527

!WT4X12
!SECTYPE,43,BEAM,T,WT4X12
!SECDATA,6.5,3.97,0.398,0.245
R,243,3.54,9.15,3.529,0.699,3.248,0.174
RMORE,3.54,9.15,3.529,0.699,3.248,0.174
RMORE,,,,,,,
RMORE,2.0439,5.463

!L4X4X1/2
R,241,3.75,8.828,2.295,2.828,1.320,0.312        ! NEW SECTION 9/14/2010 MCK  EL 7301,7313
RMORE,3.75,8.828,2.295,2.828,1.320,0.312
RMORE,,,,,,,
RMORE,2.1114,2.0616,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

!L6X6X3/4
R,242,8.438,44.692,11.617,4.243,1.98,1.582        ! NEW SECTION 9/14/2010 MCK  EL 7303,7315
RMORE,8.438,44.692,11.617,4.243,1.98,1.582
RMORE,,,,,,,
RMORE,2.1121,2.0616,,,,,
```

```
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

! THE FOLLOWING SECTIONS ARE FOR THE CRANE MODEL AS PROVIDED
! BY THE CRANE VENDOR

SECTYPE,44,BEAM,HREC,       !1
SECDATA,61.000,17.125,1.0000,1.0000,0.62500, 0.62500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,45,BEAM,CSOL,       !2
SECDATA,4.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,46,BEAM,RECT,trolgirt   !3
SECDATA,22.000,2.5000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,47,BEAM,HREC,endtie  !4
SECDATA,10.000,8.0000,1.0000,1.0000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,48,BEAM,HREC,asagitie   !6
SECDATA,8.0000,8.0000,0.75000,0.75000,0.75000,0.75000,
SECOFFSET,CENT
SECCONTROL,0.0000,0.0000,0.0000,0.0000

SECTYPE,49,BEAM,HREC,endtruck   !7
SECDATA,22.000,16.600,1.5000,1.5000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,50,BEAM,RECT,       !8
SECDATA,14.000,14.000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,51,BEAM,HREC,Ttrucks   !10
SECDATA,22.250,9.0000,0.75000,0.75000,0.50000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,52,BEAM,RECT,girt1   !11
SECDATA,33.000,1.2500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,53,BEAM,RECT,girt2   !12
SECDATA,42.625,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,54,BEAM,RECT,girt3   !13
SECDATA,33.000,1.2500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,55,BEAM,RECT,       !14
SECDATA,20.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,56,BEAM,RECT,stiff2    !15
SECDATA,6.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,57,BEAM,RECT,        !16
```

```
SECDATA,15.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,58,BEAM,RECT,9luk    !17
SECDATA,9.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,59,BEAM,ASEC,STIFF    !RIGID BEAM
SECDATA,1000,1000000,,1000000,,1000000   !GT STRUDL USES AN AREA OF 10
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,60,BEAM,ASEC,STIFF    !RIGID BEAM
SECDATA,1000,1000000,,1000000,,1000000   !GT STRUDL USES AN AREA OF 10
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SAVE

! SELECT NODES IN ORDER TO DEFINE A RIGID REGION USING "CERIG"


! EBLOCK DEFINES ELEMENTS, HEADING ARE PROVIDED TO HELP DURING CHECKING
!    MAT   TYPE    REAL    SECT                        # NODES        ELM #     I      J      K
EBLOCK,19,SOLID,
(19i8)
     1     1   205     0     0     0     0     0     2     0     1     1     2     0
     1     1   205     0     0     0     0     0     2     0     2     2     3     0
     1     1   205     0     0     0     0     0     2     0     3     3     4     0
    13     1     1    59     0     0     0     0     2     0     4     4     5     0
     1     1   206     0     0     0     0     0     2     0     5     5     6     0
     1     1   206     0     0     0     0     0     2     0     6     6     7     0
     1     1   206     0     0     0     0     0     2     0     7     7     8     0
    13     1     1    59     0     0     0     0     2     0     8     4     9     0
    13     1     1    59     0     0     0     0     2     0     9 60009    10     0
    13     1     1    59     0     0     0     0     2     0    11    10     7 20056
     1     1   205     0     0     0     0     0     2     0    12    12    13     0
     1     1   205     0     0     0     0     0     2     0    13    13    14     0
     1     1   205     0     0     0     0     0     2     0    14    14    15     0
    13     1     1    59     0     0     0     0     2     0    15    15    16     0
     1     1   206     0     0     0     0     0     2     0    16    16    17     0
     1     1   206     0     0     0     0     0     2     0    17    17    18     0
     1     1   206     0     0     0     0     0     2     0    18    18    19     0
    13     1     1    59     0     0     0     0     2     0    19    15    20     0
    13     1     1    59     0     0     0     0     2     0    20 60020    21     0
    13     1     1    59     0     0     0     0     2     0    22    21    18 20056
     1     2   207     0     0     0     0     0     2     0    23 60013    24 20056
     1     1   207     0     0     0     0     0     2     0    24    24    25 20056
     1     1   207     0     0     0     0     0     2     0    25    25    26 20056
     1     1   207     0     0     0     0     0     2     0    26    26    27 20056
     1     1   207     0     0     0     0     0     2     0    27    27    28 20056
     1     1   207     0     0     0     0     0     2     0    28    28    29 20056
     1     1   207     0     0     0     0     0     2     0    29    29    30 20056
     1     7   207     0     0     0     0     0     2     0    30    30 90002 20056
     1     2    30     0     0     0     0     0     2     0    31 60031    32     0
     1     7    40     0     0     0     0     0     2     0    32    32 60033     0
     1     9   209     0     0     0     0     0     2     0    33 60014 80034 20056
     1     9   209     0     0     0     0     0     2     0    34 90034 60003 20056
     1     2   210     0     0     0     0     0     2     0    35 60019    35 20056
     1     1   210     0     0     0     0     0     2     0    36    35    36 20056
     1     1   210     0     0     0     0     0     2     0    37    36    37 20056
     1     1   210     0     0     0     0     0     2     0    38    37    38 20056
     1     1   210     0     0     0     0     0     2     0    39    38    39 20056
     1     1   210     0     0     0     0     0     2     0    40    39    40 20056
     1     1   210     0     0     0     0     0     2     0    41    40    41 20056
     1     7   210     0     0     0     0     0     2     0    42    41 70008 20056
     1     2   211     0     0     0     0     0     2     0    43 60012    23 20070
     1     2   212     0     0     0     0     0     2     0    44 70013    23 20070
     1     2   211     0     0     0     0     0     2     0    45 60002    23 20070
     1     2    31     0     0     0     0     0     2     0    46 80013    31 20083
     1     7    32     0     0     0     0     0     2     0    47    14 70031 20083
     1     2    31     0     0     0     0     0     2     0    48 60034    31 20085
     1     2    31     0     0     0     0     0     2     0    49 70002    33 20084
     1     7    32     0     0     0     0     0     2     0    50     3 70033 20084
     1     2    31     0     0     0     0     0     2     0    51 70034    33 20085
```

1	9	33	0	0	0	0	0	2	0	52	80019	100034	20085
1	9	33	0	0	0	0	0	2	0	53	80008	110034	20085
1	1	216	0	0	0	0	0	2	0	54	27	32	20052
1	1	216	0	0	0	0	0	2	0	55	32	34	20052
1	1	216	0	0	0	0	0	2	0	56	34	38	20052
1	1	205	0	0	0	0	0	2	0	100	101	102	0
1	1	205	0	0	0	0	0	2	0	101	102	103	0
13	1	1	59	0	0	0	0	2	0	102	103	104	0
1	1	206	0	0	0	0	0	2	0	103	104	105	0
1	1	206	0	0	0	0	0	2	0	104	105	106	0
1	1	206	0	0	0	0	0	2	0	105	106	107	0
13	1	1	59	0	0	0	0	2	0	106	103	108	0
13	1	1	59	0	0	0	0	2	0	107	60108	109	0
13	1	1	59	0	0	0	0	2	0	109	109	106	20058
1	1	205	0	0	0	0	0	2	0	110	111	112	0
1	1	205	0	0	0	0	0	2	0	111	112	113	0
1	1	205	0	0	0	0	0	2	0	112	113	114	0
13	1	1	59	0	0	0	0	2	0	113	114	115	0
1	1	206	0	0	0	0	0	2	0	114	115	116	0
1	1	206	0	0	0	0	0	2	0	115	116	117	0
1	1	206	0	0	0	0	0	2	0	116	117	118	0
13	1	1	59	0	0	0	0	2	0	117	114	119	0
13	1	1	59	0	0	0	0	2	0	118	60119	120	0
13	1	1	59	0	0	0	0	2	0	120	120	117	20058
1	7	206	0	0	0	0	0	2	0	121	123	60145	20052
1	2	217	0	0	0	0	0	2	0	122	60124	125	20057
1	1	217	0	0	0	0	0	2	0	123	125	126	20057
1	1	217	0	0	0	0	0	2	0	124	126	127	20057
1	1	217	0	0	0	0	0	2	0	125	127	128	20057
1	1	217	0	0	0	0	0	2	0	126	128	129	20057
1	1	217	0	0	0	0	0	2	0	127	129	130	20057
1	1	217	0	0	0	0	0	2	0	128	130	131	20057
1	7	217	0	0	0	0	0	2	0	129	131	60132	20057
1	2	207	0	0	0	0	0	2	0	130	60133	134	20081
1	1	207	0	0	0	0	0	2	0	131	134	135	20081
1	1	207	0	0	0	0	0	2	0	132	135	136	20081
1	1	207	0	0	0	0	0	2	0	133	136	137	20081
1	1	207	0	0	0	0	0	2	0	134	137	138	20081
1	1	207	0	0	0	0	0	2	0	135	138	139	20081
1	1	207	0	0	0	0	0	2	0	136	139	140	20081
1	7	207	0	0	0	0	0	2	0	137	140	60141	20081
1	3	207	0	0	0	0	0	2	0	138	60112	142	20058
1	1	207	0	0	0	0	0	2	0	139	142	143	20058
1	1	207	0	0	0	0	0	2	0	140	143	144	20058
1	1	207	0	0	0	0	0	2	0	141	144	145	20058
1	1	207	0	0	0	0	0	2	0	142	145	146	20058
1	1	207	0	0	0	0	0	2	0	143	146	147	20058
1	1	207	0	0	0	0	0	2	0	144	147	148	20058
1	8	207	0	0	0	0	0	2	0	145	148	60102	20058
1	3	210	0	0	0	0	0	2	0	146	60118	149	20058
1	1	210	0	0	0	0	0	2	0	147	149	150	20058
1	1	210	0	0	0	0	0	2	0	148	150	151	20058
1	1	210	0	0	0	0	0	2	0	149	151	152	20058
1	1	210	0	0	0	0	0	2	0	150	152	153	20058
1	1	210	0	0	0	0	0	2	0	151	153	154	20058
1	1	210	0	0	0	0	0	2	0	152	154	155	20058
1	8	210	0	0	0	0	0	2	0	153	155	60107	20058
1	2	218	0	0	0	0	0	2	0	157	60113	183	20002
1	7	218	0	0	0	0	0	2	0	158	183	61113	20002
1	1	205	0	0	0	0	0	2	0	1100	1101	1102	0
1	1	205	0	0	0	0	0	2	0	1101	1102	1103	0
13	1	1	59	0	0	0	0	2	0	1102	1103	1104	0
1	1	206	0	0	0	0	0	2	0	1103	1104	1105	0
1	1	206	0	0	0	0	0	2	0	1104	1105	1106	0
1	1	206	0	0	0	0	0	2	0	1105	1106	1107	0
13	1	1	59	0	0	0	0	2	0	1106	1103	1108	0
13	1	1	59	0	0	0	0	2	0	1107	61108	1109	0
13	1	1	59	0	0	0	0	2	0	1109	1109	1106	20055
1	1	205	0	0	0	0	0	2	0	1110	1111	1112	0
1	1	205	0	0	0	0	0	2	0	1111	1112	1113	0
1	1	205	0	0	0	0	0	2	0	1112	1113	1114	0
13	1	1	59	0	0	0	0	2	0	1113	1114	1115	0
1	1	206	0	0	0	0	0	2	0	1114	1115	1116	0
1	1	206	0	0	0	0	0	2	0	1115	1116	1117	0
1	1	206	0	0	0	0	0	2	0	1116	1117	1118	0

13	1	1	59	0	0	0	0	2	0	1117	1114	1119	0
13	1	1	59	0	0	0	0	2	0	1118	61119	1120	0
13	1	1	59	0	0	0	0	2	0	1120	1120	1117	20055
1	7	206	0	0	0	0	0	2	0	1121	1123	61145	0
1	3	207	0	0	0	0	0	2	0	1138	61112	1142	20055
1	1	207	0	0	0	0	0	2	0	1139	1142	1143	20055
1	1	207	0	0	0	0	0	2	0	1140	1143	1144	20055
1	1	207	0	0	0	0	0	2	0	1141	1144	1145	20055
1	1	207	0	0	0	0	0	2	0	1142	1145	1146	20055
1	1	207	0	0	0	0	0	2	0	1143	1146	1147	20055
1	1	207	0	0	0	0	0	2	0	1144	1147	1148	20055
1	8	207	0	0	0	0	0	2	0	1145	1148	61102	20055
1	3	210	0	0	0	0	0	2	0	1146	61118	1149	20055
1	1	210	0	0	0	0	0	2	0	1147	1149	1150	20055
1	1	210	0	0	0	0	0	2	0	1148	1150	1151	20055
1	1	210	0	0	0	0	0	2	0	1149	1151	1152	20055
1	1	210	0	0	0	0	0	2	0	1150	1152	1153	20055
1	1	210	0	0	0	0	0	2	0	1151	1153	1154	20055
1	1	210	0	0	0	0	0	2	0	1152	1154	1155	20055
1	8	210	0	0	0	0	0	2	0	1153	1155	61107	20055
1	9	218	0	0	0	0	0	2	0	1157	71113	62113	20002
1	1	205	0	0	0	0	0	2	0	2100	2101	2102	0
1	1	205	0	0	0	0	0	2	0	2101	2102	2103	0
13	1	1	59	0	0	0	0	2	0	2102	2103	2104	0
1	1	206	0	0	0	0	0	2	0	2103	2104	2105	0
1	1	206	0	0	0	0	0	2	0	2104	2105	2106	0
1	1	206	0	0	0	0	0	2	0	2105	2106	2107	0
13	1	1	59	0	0	0	0	2	0	2106	2103	2108	0
13	1	1	59	0	0	0	0	2	0	2107	62108	2109	0
13	1	1	59	0	0	0	0	2	0	2109	2109	2106	20059
1	1	205	0	0	0	0	0	2	0	2110	2111	2112	0
1	1	205	0	0	0	0	0	2	0	2111	2112	2113	0
1	1	205	0	0	0	0	0	2	0	2112	2113	2114	0
13	1	1	59	0	0	0	0	2	0	2113	2114	2115	0
1	1	206	0	0	0	0	0	2	0	2114	2115	2116	0
1	1	206	0	0	0	0	0	2	0	2115	2116	2117	0
1	1	206	0	0	0	0	0	2	0	2116	2117	2118	0
13	1	1	59	0	0	0	0	2	0	2117	2114	2119	0
13	1	1	59	0	0	0	0	2	0	2118	62119	2120	0
13	1	1	59	0	0	0	0	2	0	2120	2120	2117	20059
1	7	206	0	0	0	0	0	2	0	2121	2123	62145	0
1	1	212	0	0	0	0	0	2	0	2122	2122	2156	0
1	2	219	0	0	0	0	0	2	0	2123	62156	2157	20066
1	1	219	0	0	0	0	0	2	0	2124	2157	2158	20066
1	1	212	0	0	0	0	0	2	0	2125	2156	21740	0
1	7	212	0	0	0	0	0	2	0	2126	21740	63121	0
1	3	207	0	0	0	0	0	2	0	2138	62112	2142	20059
1	1	207	0	0	0	0	0	2	0	2139	2142	2143	20059
1	1	207	0	0	0	0	0	2	0	2140	2143	2144	20059
1	1	207	0	0	0	0	0	2	0	2141	2144	2145	20059
1	1	207	0	0	0	0	0	2	0	2142	2145	2146	20059
1	1	207	0	0	0	0	0	2	0	2143	2146	2147	20059
1	1	207	0	0	0	0	0	2	0	2144	2147	2148	20059
1	8	207	0	0	0	0	0	2	0	2145	2148	62102	20059
1	3	210	0	0	0	0	0	2	0	2146	62118	2149	20059
1	1	210	0	0	0	0	0	2	0	2147	2149	2150	20059
1	1	210	0	0	0	0	0	2	0	2148	2150	2151	20059
1	1	210	0	0	0	0	0	2	0	2149	2151	2152	20059
1	1	210	0	0	0	0	0	2	0	2150	2152	2153	20059
1	1	210	0	0	0	0	0	2	0	2151	2153	2154	20059
1	1	210	0	0	0	0	0	2	0	2152	2154	2155	20059
1	8	210	0	0	0	0	0	2	0	2153	2155	62107	20059
1	9	220	0	0	0	0	0	2	0	2157	72113	152174	20080
1	1	205	0	0	0	0	0	2	0	3100	3101	3100	0
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13	1	1	59	0	0	0	0	2	0	3102	3103	3104	0
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13	1	1	59	0	0	0	0	2	0	3106	3103	3108	0
13	1	1	59	0	0	0	0	2	0	3107	63108	3109	0
13	1	1	59	0	0	0	0	2	0	3109	3109	3106	20060
1	1	205	0	0	0	0	0	2	0	3110	3111	3112	0
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1	1	205	0	0	0	0	0	2	0	3112	3113	3114	0

13	1	1	59	0	0	0	0	2	0	3113	3114	3115	0
1	1	206	0	0	0	0	0	2	0	3114	3115	3116	0
1	1	206	0	0	0	0	0	2	0	3115	3116	3117	0
1	1	206	0	0	0	0	0	2	0	3116	3117	3118	0
13	1	1	59	0	0	0	0	2	0	3117	3114	3119	0
13	1	1	59	0	0	0	0	2	0	3118	63119	3120	0
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1	7	206	0	0	0	0	0	2	0	3121	3123	63145	0
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1	3	207	0	0	0	0	0	2	0	3138	63112	3142	20060
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1	2	221	0	0	0	0	0	2	0	3154	63156	3157	20067
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1	1	221	0	0	0	0	0	2	0	3159	3161	3162	20067
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1	7	221	0	0	0	0	0	2	0	3161	3163	63164	20067
1	1	205	0	0	0	0	0	2	0	3163	3100	3102	0
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13	1	1	59	0	0	0	0	2	0	5102	5103	5104	0
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1	1	206	0	0	0	0	0	2	0	5105	5106	5107	0
13	1	1	59	0	0	0	0	2	0	5106	5103	5108	0
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1	1	205	0	0	0	0	0	2	0	5110	5111	5112	0
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13	1	1	59	0	0	0	0	2	0	5117	5114	5119	0
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1	1	222	0	0	0	0	0	2	0	5139	5187	5188	20062
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1	8	210	0	0	0	0	0	2	0	5153	5155	65107	20062
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1	9	226	0	0	0	0	0	2	0	7037	61143	72143	20082
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1	7	227	0	0	0	0	0	2	0	7049	2158	63143	20082
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1	9	231	0	0	0	0	0	2	0	7052	73148	63163	20018
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1	9	231	0	0	0	0	0	2	0	7054	63146	63161	20014
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1	9	231	0	0	0	0	0	2	0	7057	73143	63158	20082
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1	7	227	0	0	0	0	0	2	0	7360	2127	83102	20021
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1	1	205	0	0	0	0	0	2	0	8100	8101	8103	0
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5	21	1	48	0	0	0	0	2	0	12328	11322	11323	0
5	21	1	48	0	0	0	0	2	0	12329	11323	11324	0
5	21	1	48	0	0	0	0	2	0	12330	11324	11325	0
5	21	1	48	0	0	0	0	2	0	12331	11325	11326	0
5	21	1	48	0	0	0	0	2	0	12332	11326	11327	0
5	21	1	48	0	0	0	0	2	0	12333	11327	11328	0
5	21	1	48	0	0	0	0	2	0	12334	11328	11329	0
5	21	1	48	0	0	0	0	2	0	12335	11329	11330	0
5	21	1	48	0	0	0	0	2	0	12336	11330	11331	0
5	21	1	48	0	0	0	0	2	0	12337	11331	11332	0
5	21	1	48	0	0	0	0	2	0	12338	11332	11280	0
2	100	52	45	0	0	0	0	2	0	12339	11006	0	0
2	100	52	45	0	0	0	0	2	0	12340	11007	0	0
2	100	53	45	0	0	0	0	2	0	12341	11285	0	0
2	100	54	45	0	0	0	0	2	0	12342	11270	0	0

2	100	54	45	0	0	0	0	2	0	12343	11278	0	0
2	100	55	45	0	0	0	0	2	0	12344	11003	0	0
2	100	55	45	0	0	0	0	2	0	12345	11027	0	0
2	100	55	45	0	0	0	0	2	0	12346	11051	0	0
2	100	55	45	0	0	0	0	2	0	12347	11084	0	0
8	21	1	52	0	0	0	0	2	0	12360	11347	11337	0
8	21	1	52	0	0	0	0	2	0	12361	11347	11348	0
8	21	1	52	0	0	0	0	2	0	12362	11348	11349	0
8	21	1	52	0	0	0	0	2	0	12363	11349	11350	0
8	21	1	52	0	0	0	0	2	0	12364	11350	11351	0
8	21	1	52	0	0	0	0	2	0	12365	11351	11352	0
8	21	1	52	0	0	0	0	2	0	12366	11334	11353	0
8	21	1	52	0	0	0	0	2	0	12367	11353	11354	0
8	21	1	52	0	0	0	0	2	0	12368	11354	11355	0
8	21	1	52	0	0	0	0	2	0	12369	11352	11357	0
8	21	1	52	0	0	0	0	2	0	12370	11357	11358	0
8	21	1	52	0	0	0	0	2	0	12371	11358	11356	0
8	21	1	52	0	0	0	0	2	0	12372	11355	11360	0
8	21	1	52	0	0	0	0	2	0	12373	11360	11359	0
8	21	1	52	0	0	0	0	2	0	12374	11359	11362	0
8	21	1	52	0	0	0	0	2	0	12375	11362	11361	0
8	21	1	52	0	0	0	0	2	0	12376	11361	11356	0
8	21	1	53	0	0	0	0	2	0	12377	11363	11338	0
8	21	1	53	0	0	0	0	2	0	12378	11363	11365	0
8	21	1	53	0	0	0	0	2	0	12379	11365	11366	0
8	21	1	53	0	0	0	0	2	0	12380	11366	11367	0
8	21	1	53	0	0	0	0	2	0	12384	11367	11372	0
8	21	1	53	0	0	0	0	2	0	12385	11372	11368	0
8	21	1	53	0	0	0	0	2	0	12386	11333	11373	0
8	21	1	53	0	0	0	0	2	0	12387	11373	11374	0
8	21	1	53	0	0	0	0	2	0	12388	11374	11375	0
8	21	1	53	0	0	0	0	2	0	12389	11375	11377	0
8	21	1	53	0	0	0	0	2	0	12390	11377	11376	0
8	21	1	53	0	0	0	0	2	0	12391	11376	11379	0
8	21	1	53	0	0	0	0	2	0	12392	11379	11378	0
8	21	1	53	0	0	0	0	2	0	12393	11369	11378	0
8	21	1	55	0	0	0	0	2	0	12406	11351	11392	0
8	21	1	55	0	0	0	0	2	0	12407	11392	11393	0
8	21	1	55	0	0	0	0	2	0	12408	11393	11372	0
8	21	1	55	0	0	0	0	2	0	12409	11361	11395	0
8	21	1	55	0	0	0	0	2	0	12410	11395	11396	0
8	21	1	55	0	0	0	0	2	0	12411	11396	11378	0
8	21	1	55	0	0	0	0	2	0	12412	11368	11397	0
8	21	1	55	0	0	0	0	2	0	12413	11352	11399	0
8	21	1	55	0	0	0	0	2	0	12414	11356	11400	0
8	21	1	55	0	0	0	0	2	0	12415	11399	11401	0
8	21	1	55	0	0	0	0	2	0	12416	11401	11397	0
8	21	1	55	0	0	0	0	2	0	12417	11369	11402	0
8	21	1	55	0	0	0	0	2	0	12418	11400	11403	0
8	21	1	55	0	0	0	0	2	0	12419	11403	11402	0
8	21	1	56	0	0	0	0	2	0	12420	11397	11405	0
8	21	1	56	0	0	0	0	2	0	12421	11405	11406	0
8	21	1	56	0	0	0	0	2	0	12422	11406	11402	0
8	21	1	57	0	0	0	0	2	0	12423	11399	11408	0
8	21	1	57	0	0	0	0	2	0	12424	11408	11409	0
8	21	1	57	0	0	0	0	2	0	12425	11409	11400	0
8	21	1	56	0	0	0	0	2	0	12426	11348	11411	0
8	21	1	56	0	0	0	0	2	0	12427	11411	11412	0
8	21	1	56	0	0	0	0	2	0	12428	11412	11365	0
8	21	1	56	0	0	0	0	2	0	12429	11349	11414	0
8	21	1	56	0	0	0	0	2	0	12430	11414	11415	0
8	21	1	56	0	0	0	0	2	0	12431	11415	11366	0
8	21	1	56	0	0	0	0	2	0	12432	11350	11417	0
8	21	1	56	0	0	0	0	2	0	12433	11417	11418	0
8	21	1	56	0	0	0	0	2	0	12434	11418	11367	0
8	21	1	56	0	0	0	0	2	0	12435	11353	11420	0
8	21	1	56	0	0	0	0	2	0	12436	11420	11421	0
8	21	1	56	0	0	0	0	2	0	12437	11421	11373	0
8	21	1	56	0	0	0	0	2	0	12438	11355	11423	0
8	21	1	56	0	0	0	0	2	0	12439	11423	11424	0
8	21	1	56	0	0	0	0	2	0	12440	11424	11375	0
8	21	1	56	0	0	0	0	2	0	12441	11359	11426	0
8	21	1	56	0	0	0	0	2	0	12442	11426	11427	0
8	21	1	56	0	0	0	0	2	0	12443	11427	11376	0
8	21	1	58	0	0	0	0	2	0	12444	11347	11429	0

8	21	1	58	0	0	0	0	2	0	12445	11429	11430	0
8	21	1	58	0	0	0	0	2	0	12446	11430	11363	0
8	21	1	58	0	0	0	0	2	0	12447	11354	11432	0
8	21	1	58	0	0	0	0	2	0	12448	11432	11433	0
8	21	1	58	0	0	0	0	2	0	12449	11433	11374	0
8	21	1	53	0	0	0	0	2	0	12450	11368	11435	0
8	21	1	53	0	0	0	0	2	0	12451	11435	11434	0
8	21	1	53	0	0	0	0	2	0	12452	11369	11436	0
8	21	1	53	0	0	0	0	2	0	12453	11436	11434	0
8	21	1	51	0	0	0	0	2	0	12454	11338	11438	0
8	21	1	51	0	0	0	0	2	0	12455	11438	11439	0
8	21	1	51	0	0	0	0	2	0	12456	11439	11437	0
8	21	1	51	0	0	0	0	2	0	12457	11333	11441	0
8	21	1	51	0	0	0	0	2	0	12458	11441	11442	0
8	21	1	51	0	0	0	0	2	0	12459	11442	11440	0
8	21	1	51	0	0	0	0	2	0	12460	11443	11444	0
8	21	1	51	0	0	0	0	2	0	12461	11444	11445	0
8	21	1	51	0	0	0	0	2	0	12462	11445	11338	0
8	21	1	51	0	0	0	0	2	0	12463	11446	11447	0
8	21	1	51	0	0	0	0	2	0	12464	11447	11448	0
8	21	1	51	0	0	0	0	2	0	12465	11448	11333	0
8	21	1	51	0	0	0	0	2	0	12466	11443	11337	0
8	21	1	51	0	0	0	0	2	0	12467	11446	11334	0
8	21	1	51	0	0	0	0	2	0	12468	11437	11341	0
8	21	1	51	0	0	0	0	2	0	12469	11344	11440	0
6	21	1	50	0	0	0	0	2	0	12470	11130	11443	0
6	21	1	50	0	0	0	0	2	0	12471	11123	11437	0
6	21	1	50	0	0	0	0	2	0	12472	11116	11440	0
6	21	1	50	0	0	0	0	2	0	12473	11137	11446	0
6	1001	1001	50	0	0	0	0	2	0	12478	11434	11450	0
6	1002	1002	50	0	0	0	0	2	0	12479	11434	11450	0
6	1003	1003	50	0	0	0	0	2	0	12480	11434	11450	0
6	1004	1004	50	0	0	0	0	1	0	12481	11450	0	0
1	1	205	0	0	0	0	0	2	0	71000	7101	7103	0
13	1	1	59	0	0	0	0	2	0	71020	7103	7104	0
1	1	206	0	0	0	0	0	2	0	71030	7104	7105	0
1	1	206	0	0	0	0	0	2	0	71040	7105	7106	0
1	1	206	0	0	0	0	0	2	0	71050	7106	7107	0
13	1	1	59	0	0	0	0	2	0	71060	7103	7108	0
13	1	1	59	0	0	0	0	2	0	71070	67108	7109	0
13	1	1	59	0	0	0	0	2	0	71090	7109	7106	20064
1	1	205	0	0	0	0	0	2	0	71100	7111	7114	0
13	1	1	59	0	0	0	0	2	0	71130	7114	7115	0
1	1	206	0	0	0	0	0	2	0	71140	7115	7116	0
1	1	206	0	0	0	0	0	2	0	71150	7116	7117	0
1	1	206	0	0	0	0	0	2	0	71160	7117	7122	0
13	1	1	59	0	0	0	0	2	0	71170	7114	7119	0
13	1	1	59	0	0	0	0	2	0	71180	67119	7120	0
13	1	1	59	0	0	0	0	2	0	71200	7120	7117	20064
1	1	206	0	0	0	0	0	2	0	71210	7122	7118	0
1	1	206	0	0	0	0	0	2	0	81160	81660	8118	0
0	14	14	0	0	0	0	0	2	0	90001	112	30112	0
0	15	15	0	0	0	0	0	2	0	90002	1112	31112	0
0	12	12	0	0	0	0	0	2	0	90003	1112	31112	0
0	14	14	0	0	0	0	0	2	0	90004	2112	32112	0
0	13	13	0	0	0	0	0	2	0	90005	2112	32112	0
0	12	12	0	0	0	0	0	2	0	90006	3112	33112	0
6	1	1	60	0	0	0	0	2	0	90501	37	50037	0
6	1	1	60	0	0	0	0	2	0	90502	39	50039	0
6	1	1	60	0	0	0	0	2	0	90503	153	50153	0
6	1	1	60	0	0	0	0	2	0	90504	174	50174	0
6	1	1	60	0	0	0	0	2	0	90505	177	50177	0
6	1	1	60	0	0	0	0	2	0	90506	179	50179	0
6	1	1	60	0	0	0	0	2	0	90507	182	50182	0
6	1	1	60	0	0	0	0	2	0	90508	1107	51107	0
6	1	1	60	0	0	0	0	2	0	90509	2153	52153	0
6	1	1	60	0	0	0	0	2	0	90510	3107	53107	0
6	1	1	60	0	0	0	0	2	0	90511	4153	54153	0
6	1	1	60	0	0	0	0	2	0	90512	5107	55107	0
6	1	1	60	0	0	0	0	2	0	90513	6153	56153	0
6	1	1	60	0	0	0	0	2	0	90514	7107	57107	0
6	1	1	60	0	0	0	0	2	0	90515	7118	57118	0
6	1	1	60	0	0	0	0	2	0	90516	7151	57151	0
6	1	1	60	0	0	0	0	2	0	90517	7153	57153	0
6	1	1	60	0	0	0	0	2	0	90518	8151	58151	0

```
    6     1     1    60     0     0     0     0     2     0  90519   8153  58153      0
    6     1     1    60     0     0     0     0     2     0  90520  21740  52174      0
    6     1     1    60     0     0     0     0     2     0  90521   2156  52156      0
    0   300   407     0     0     0     0     0     2     0  40043     12     23      0
    0   300   406     0     0     0     0     0     2     0  40044     13     23      0
    0   300   408     0     0     0     0     0     2     0  40045      2     23      0
    0   300   405     0     0     0     0     0     2     0  40046     13     31      0
    0   300   404     0     0     0     0     0     2     0  40047     14     31      0
    0   300   405     0     0     0     0     0     2     0  40048     34     31      0
    0   300   405     0     0     0     0     0     2     0  40049      2     33      0
    0   300   404     0     0     0     0     0     2     0  40050      3     33      0
    0   300   405     0     0     0     0     0     2     0  40051     34     33      0
    0   300   403     0     0     0     0     0     2     0  40052     19     34      0
    0   300   403     0     0     0     0     0     2     0  40053      8     34      0
    0   300   411     0     0     0     0     0     2     0  47301   1107    105      0
    0   300   415     0     0     0     0     0     2     0  47303   1103    102      0
    0   300   412     0     0     0     0     0     2     0  47305   1102    101      0
    0   300   411     0     0     0     0     0     2     0  47307   1118    116      0
    0   300   410     0     0     0     0     0     2     0  47309   1114    113      0
    0   300   409     0     0     0     0     0     2     0  47310    112    183      0
    0   300   409     0     0     0     0     0     2     0  47311   1112    183      0
    0   300   411     0     0     0     0     0     2     0  47313   5107   4105      0
    0   300   415     0     0     0     0     0     2     0  47315   5103   4102      0
    0   300   412     0     0     0     0     0     2     0  47317   5100   4101      0
    0   300   414     0     0     0     0     0     2     0  47320   4118   4156      0
    0   300   414     0     0     0     0     0     2     0  47321   4156   5116      0
    0   300   414     0     0     0     0     0     2     0  47322   4116   4156      0
    0   300   414     0     0     0     0     0     2     0  47323   4156   5118      0
    0   300   410     0     0     0     0     0     2     0  47325   5114   4113      0
    0   300   409     0     0     0     0     0     2     0  47326   4112   5123      0
    0   300   409     0     0     0     0     0     2     0  47327   5123   5112      0
    0   300   412     0     0     0     0     0     2     0  47329   5112   4111      0
    0   300   413     0     0     0     0     0     2     0  47333   8118   7122      0
    0   300   413     0     0     0     0     0     2     0  47335  81660   7116      0
    0   300   402     0     0     0     0     0     2     0  47336  50037  50174      0
    0   300   401     0     0     0     0     0     2     0  47337  50037  50179      0
    0   300   401     0     0     0     0     0     2     0  47338  50039  50177      0
    0   300   402     0     0     0     0     0     2     0  47339  50039  50182      0
    0   300   402     0     0     0     0     0     2     0  47340  50182  50153      0
    0   300   402     0     0     0     0     0     2     0  47341  50153  51107      0
    0   300   402     0     0     0     0     0     2     0  47342  51107  52153      0
    0   300   402     0     0     0     0     0     2     0  47343  52153  53107      0
    0   300   402     0     0     0     0     0     2     0  47344  53107  54153      0
    0   300   402     0     0     0     0     0     2     0  47345  54153  55107      0
    0   300   402     0     0     0     0     0     2     0  47346  55107  56153      0
    0   300   402     0     0     0     0     0     2     0  47347  56153  57107      0
    0   300   402     0     0     0     0     0     2     0  47348  57107  58153      0
    0   300   401     0     0     0     0     0     2     0  47349  57151  58153      0
    0   300   401     0     0     0     0     0     2     0  47350  57153  58151      0
    0   300   402     0     0     0     0     0     2     0  47351  57118  58151      0
    0   300   421     0     0     0     0     0     2     0  47352    112   8156      0
    0   300   422     0     0     0     0     0     2     0  47353   4112   8157      0
    0   300   416     0     0     0     0     0     2     0  47435    112   1145      0
    0   300   417     0     0     0     0     0     2     0  47436   1145   2102      0
    0   300   416     0     0     0     0     0     2     0  47437    102   1145      0
    0   300   417     0     0     0     0     0     2     0  47438   1145   2112      0
    0   300   420     0     0     0     0     0     2     0  47439   2112   3145      0
    0   300   419     0     0     0     0     0     2     0  47441   2145   2158      0
    0   300   417     0     0     0     0     0     2     0  47442   2102   3145      0
    0   300   418     0     0     0     0     0     2     0  47443   3145   3164      0
   13     1     1    59     0     0     0     0     2     0  30001  10101 301011      0
   13     1     1    59     0     0     0     0     2     0  30002  10102 301021      0
   13     1     1    59     0     0     0     0     2     0  30003  10103 301031      0
   13     1     1    59     0     0     0     0     2     0  30004  10104 301041      0
   13     1     1    59     0     0     0     0     2     0  30005  10113 301131      0
   13     1     1    59     0     0     0     0     2     0  30006  10114 301141      0
   13     1     1    59     0     0     0     0     2     0  30007  10115 301151      0
   13     1     1    59     0     0     0     0     2     0  30008  10116 301161      0
-1

! These constraint equiations attach the trolly to the crane bridge
!!!! Dec 20, 2010, J.Staples
!!!! See Rev 1 of Calc S10-0049.
!!!! CE equations are replaced by CP commands. The CP commands include no Rotation restriction and connections now follow NOG-1 2004
!!!! This is associated with Fig. 4154.3-1 and Table 4154.3-1
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!!!! Specifically, Nodes E, F, G and H of the Figure 4154.3

!CE,1,0,11002,UZ,1,11129,UZ,-1,11129,ROTX,-1,

!CE,2,0,11002,UY,1,11129,UY,-1

!CE,3,0,11002,UX,1,11129,UX,-1,11129,ROTZ,1,

!CE,4,0,11050,UZ,1,11136,UZ,-1,11136,ROTX,-1,

!CE,5,0,11050,UY,1,11136,UY,-1

!CE,6,0,11050,UX,1,11136,UX,-1,11136,ROTZ,1,

!CE,7,0,11122,UY,1,11026,UY,-1

!CE,8,0,11122,UX,1,11026,UX,-1,11026,ROTZ,-1,

!CE,9,0,11115,UY,1,11083,UY,-1

!CE,10,0,11115,UX,1,11083,UX,-1,11083,ROTZ,-1,


CP,1,UX,     11002,    11129,
CP,2,UY,     11002,    11129,
CP,3,UZ,     11002,    11129,
CP,4,UX,     11050,    11136,
CP,5,UY,     11050,    11136,
CP,6,UZ,     11050,    11136,
CP,7,UY,     11026,    11122,
CP,8,UX,     11026,    11122,
CP,9,UY,     11083,    11115,
CP,10,UX,    11083,    11115,


!!!!
!!!! End of Dec 20 2010 changes.


! These constraint equiations attach the crane bridge to the crane rail

CE,11,0,40101,UY,1,301011,UY,-1
CE,12,0,40101,UZ,1,301011,UZ,-1

CE,13,0,40102,UY,1,301021,UY,-1
CE,14,0,40102,UZ,1,301021,UZ,-1

CE,15,0,40103,UX,1,301031,UX,-1
CE,16,0,40103,UY,1,301031,UY,-1
CE,17,0,40103,UZ,1,301031,UZ,-1

CE,18,0,40104,UX,1,301041,UX,-1
CE,19,0,40104,UY,1,301041,UY,-1
CE,20,0,40104,UZ,1,301041,UZ,-1

CE,21,0,40113,UY,1,301131,UY,-1

CE,22,0,40114,UY,1,301141,UY,-1

CE,23,0,40115,UX,1,301151,UX,-1
CE,24,0,40115,UY,1,301151,UY,-1

CE,25,0,40116,UX,1,301161,UX,-1
CE,26,0,40116,UY,1,301161,UY,-1


! ELEMENT TYPE 2


CE,101,0,60013,UX,1,13,UX,-1
CE,NEXT,0,60013,UY,1,13,UY,-1
CE,NEXT,0,60013,UZ,1,13,UZ,-1
CE,NEXT,0,60013,ROTZ,1,13,ROTZ,-1

CE,NEXT,0,60031,UX,1,31,UX,-1
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CE,NEXT,0,60031,UY,1,31,UY,-1
CE,NEXT,0,60031,UZ,1,31,UZ,-1
CE,NEXT,0,60031,ROTZ,1,31,ROTZ,-1

CE,NEXT,0,60019,UX,1,19,UX,-1
CE,NEXT,0,60019,UY,1,19,UY,-1
CE,NEXT,0,60019,UZ,1,19,UZ,-1
CE,NEXT,0,60019,ROTZ,1,19,ROTZ,-1

CE,NEXT,0,60012,UX,1,12,UX,-1
CE,NEXT,0,60012,UY,1,12,UY,-1
CE,NEXT,0,60012,UZ,1,12,UZ,-1

CE,NEXT,0,70013,UX,1,13,UX,-1
CE,NEXT,0,70013,UY,1,13,UY,-1
CE,NEXT,0,70013,UZ,1,13,UZ,-1

CE,NEXT,0,60002,UX,1,2,UX,-1
CE,NEXT,0,60002,UY,1,2,UY,-1
CE,NEXT,0,60002,UZ,1,2,UZ,-1

CE,NEXT,0,80013,UX,1,13,UX,-1
CE,NEXT,0,80013,UY,1,13,UY,-1
CE,NEXT,0,80013,UZ,1,13,UZ,-1

CE,NEXT,0,60034,UX,1,34,UX,-1
CE,NEXT,0,60034,UY,1,34,UY,-1
CE,NEXT,0,60034,UZ,1,34,UZ,-1

CE,NEXT,0,70002,UX,1,2,UX,-1
CE,NEXT,0,70002,UY,1,2,UY,-1
CE,NEXT,0,70002,UZ,1,2,UZ,-1

CE,NEXT,0,70034,UX,1,34,UX,-1
CE,NEXT,0,70034,UY,1,34,UY,-1
CE,NEXT,0,70034,UZ,1,34,UZ,-1

CE,NEXT,0,60124,UX,1,124,UX,-1
CE,NEXT,0,60124,UY,1,124,UY,-1
CE,NEXT,0,60124,UZ,1,124,UZ,-1
CE,NEXT,0,60124,ROTZ,1,124,ROTZ,-1

CE,NEXT,0,60133,UX,1,133,UX,-1
CE,NEXT,0,60133,UY,1,133,UY,-1
CE,NEXT,0,60133,UZ,1,133,UZ,-1
CE,NEXT,0,60133,ROTZ,1,133,ROTZ,-1

CE,NEXT,0,60113,UX,1,113,UX,-1
CE,NEXT,0,60113,UY,1,113,UY,-1
CE,NEXT,0,60113,UZ,1,113,UZ,-1
CE,NEXT,0,60113,ROTX,1,113,ROTX,-1

CE,NEXT,0,62156,UX,1,2156,UX,-1
CE,NEXT,0,62156,UY,1,2156,UY,-1
CE,NEXT,0,62156,UZ,1,2156,UZ,-1
CE,NEXT,0,62156,ROTZ,1,2156,ROTZ,-1

CE,NEXT,0,63156,UX,1,3156,UX,-1
CE,NEXT,0,63156,UY,1,3156,UY,-1
CE,NEXT,0,63156,UZ,1,3156,UZ,-1
CE,NEXT,0,63156,ROTZ,1,3156,ROTZ,-1

CE,NEXT,0,65112,UX,1,5112,UX,-1
CE,NEXT,0,65112,UY,1,5112,UY,-1
CE,NEXT,0,65112,UZ,1,5112,UZ,-1
CE,NEXT,0,65112,ROTZ,1,5112,ROTZ,-1

CE,NEXT,0,66118,UX,1,6118,UX,-1
CE,NEXT,0,66118,UY,1,6118,UY,-1
CE,NEXT,0,66118,UZ,1,6118,UZ,-1
CE,NEXT,0,66118,ROTZ,1,6118,ROTZ,-1

CE,NEXT,0,80002,UX,1,2,UX,-1
CE,NEXT,0,80002,UY,1,2,UY,-1
CE,NEXT,0,80002,UZ,1,2,UZ,-1
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CE,NEXT,0,80002,ROTX,1,2,ROTX,-1

CE,NEXT,0,90013,UX,1,13,UX,-1
CE,NEXT,0,90013,UY,1,13,UY,-1
CE,NEXT,0,90013,UZ,1,13,UZ,-1
CE,NEXT,0,90013,ROTX,1,13,ROTX,-1

CE,NEXT,0,72102,UX,1,2102,UX,-1
CE,NEXT,0,72102,UY,1,2102,UY,-1
CE,NEXT,0,72102,UZ,1,2102,UZ,-1
CE,NEXT,0,72102,ROTX,1,2102,ROTX,-1

CE,NEXT,0,62148,UX,1,2148,UX,-1
CE,NEXT,0,62148,UY,1,2148,UY,-1
CE,NEXT,0,62148,UZ,1,2148,UZ,-1
CE,NEXT,0,62148,ROTX,1,2148,ROTX,-1

CE,NEXT,0,62143,UX,1,2143,UX,-1
CE,NEXT,0,62143,UY,1,2143,UY,-1
CE,NEXT,0,62143,UZ,1,2143,UZ,-1
CE,NEXT,0,62143,ROTX,1,2143,ROTX,-1

CE,NEXT,0,63100,UX,1,3100,UX,-1
CE,NEXT,0,63100,UY,1,3100,UY,-1
CE,NEXT,0,63100,UZ,1,3100,UZ,-1
CE,NEXT,0,63100,ROTX,1,3100,ROTX,-1

CE,NEXT,0,73102,UX,1,3102,UX,-1
CE,NEXT,0,73102,UY,1,3102,UY,-1
CE,NEXT,0,73102,UZ,1,3102,UZ,-1
CE,NEXT,0,73102,ROTX,1,3102,ROTX,-1

CE,NEXT,0,73112,UX,1,3112,UX,-1
CE,NEXT,0,73112,UY,1,3112,UY,-1
CE,NEXT,0,73112,UZ,1,3112,UZ,-1
CE,NEXT,0,73112,ROTX,1,3112,ROTX,-1

CE,NEXT,0,64113,UX,1,4113,UX,-1
CE,NEXT,0,64113,UY,1,4113,UY,-1
CE,NEXT,0,64113,UZ,1,4113,UZ,-1
CE,NEXT,0,64113,ROTX,1,4113,ROTX,-1

CE,NEXT,0,64122,UX,1,4122,UX,-1
CE,NEXT,0,64122,UY,1,4122,UY,-1
CE,NEXT,0,64122,UZ,1,4122,UZ,-1
CE,NEXT,0,64122,ROTX,1,4122,ROTX,-1

CE,NEXT,0,62116,UX,1,2116,UX,-1
CE,NEXT,0,62116,UY,1,2116,UY,-1
CE,NEXT,0,62116,UZ,1,2116,UZ,-1
CE,NEXT,0,62116,ROTX,1,2116,ROTX,-1

CE,NEXT,0,60008,UX,1,8,UX,-1
CE,NEXT,0,60008,UY,1,8,UY,-1
CE,NEXT,0,60008,UZ,1,8,UZ,-1
CE,NEXT,0,60008,ROTX,1,8,ROTX,-1

CE,NEXT,0,70019,UX,1,19,UX,-1
CE,NEXT,0,70019,UY,1,19,UY,-1
CE,NEXT,0,70019,UZ,1,19,UZ,-1
CE,NEXT,0,70019,ROTX,1,19,ROTX,-1

CE,NEXT,0,75118,UX,1,5118,UX,-1
CE,NEXT,0,75118,UY,1,5118,UY,-1
CE,NEXT,0,75118,UZ,1,5118,UZ,-1
CE,NEXT,0,75118,ROTX,1,5118,ROTX,-1

CE,NEXT,0,60174,UX,1,174,UX,-1
CE,NEXT,0,60174,UY,1,174,UY,-1
CE,NEXT,0,60174,UZ,1,174,UZ,-1
CE,NEXT,0,60174,ROTZ,1,174,ROTZ,-1

CE,NEXT,0,67109,UX,1,7109,UX,-1
CE,NEXT,0,67109,UY,1,7109,UY,-1
CE,NEXT,0,67109,UZ,1,7109,UZ,-1
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CE,NEXT,0,67109,ROTX,1,7109,ROTX,-1

CE,NEXT,0,66109,UX,1,6109,UX,-1
CE,NEXT,0,66109,UY,1,6109,UY,-1
CE,NEXT,0,66109,UZ,1,6109,UZ,-1
CE,NEXT,0,66109,ROTX,1,6109,ROTX,-1

CE,NEXT,0,65109,UX,1,5109,UX,-1
CE,NEXT,0,65109,UY,1,5109,UY,-1
CE,NEXT,0,65109,UZ,1,5109,UZ,-1
CE,NEXT,0,65109,ROTX,1,5109,ROTX,-1

CE,NEXT,0,63109,UX,1,3109,UX,-1
CE,NEXT,0,63109,UY,1,3109,UY,-1
CE,NEXT,0,63109,UZ,1,3109,UZ,-1
CE,NEXT,0,63109,ROTX,1,3109,ROTX,-1

CE,NEXT,0,62109,UX,1,2109,UX,-1
CE,NEXT,0,62109,UY,1,2109,UY,-1
CE,NEXT,0,62109,UZ,1,2109,UZ,-1
CE,NEXT,0,62109,ROTX,1,2109,ROTX,-1

CE,NEXT,0,61109,UX,1,1109,UX,-1
CE,NEXT,0,61109,UY,1,1109,UY,-1
CE,NEXT,0,61109,UZ,1,1109,UZ,-1
CE,NEXT,0,61109,ROTX,1,1109,ROTX,-1

CE,NEXT,0,68120,UX,1,8120,UX,-1
CE,NEXT,0,68120,UY,1,8120,UY,-1
CE,NEXT,0,68120,UZ,1,8120,UZ,-1
CE,NEXT,0,68120,ROTX,1,8120,ROTX,-1

CE,NEXT,0,65120,UX,1,5120,UX,-1
CE,NEXT,0,65120,UY,1,5120,UY,-1
CE,NEXT,0,65120,UZ,1,5120,UZ,-1
CE,NEXT,0,65120,ROTX,1,5120,ROTX,-1

CE,NEXT,0,63120,UX,1,3120,UX,-1
CE,NEXT,0,63120,UY,1,3120,UY,-1
CE,NEXT,0,63120,UZ,1,3120,UZ,-1
CE,NEXT,0,63120,ROTX,1,3120,ROTX,-1

CE,NEXT,0,62120,UX,1,2120,UX,-1
CE,NEXT,0,62120,UY,1,2120,UY,-1
CE,NEXT,0,62120,UZ,1,2120,UZ,-1
CE,NEXT,0,62120,ROTX,1,2120,ROTX,-1

CE,NEXT,0,61120,UX,1,1120,UX,-1
CE,NEXT,0,61120,UY,1,1120,UY,-1
CE,NEXT,0,61120,UZ,1,1120,UZ,-1
CE,NEXT,0,61120,ROTX,1,1120,ROTX,-1

!,ELEMENT,TYPE,,,,3,,

CE,NEXT,0,60112,UX,1,112,UX,-1
CE,NEXT,0,60112,UY,1,112,UY,-1
CE,NEXT,0,60112,UZ,1,112,UZ,-1
CE,NEXT,0,60112,ROTX,1,112,ROTX,-1
CE,NEXT,0,60112,ROTZ,1,112,ROTZ,-1

CE,NEXT,0,60118,UX,1,118,UX,-1
CE,NEXT,0,60118,UY,1,118,UY,-1
CE,NEXT,0,60118,UZ,1,118,UZ,-1
CE,NEXT,0,60118,ROTX,1,118,ROTX,-1
CE,NEXT,0,60118,ROTZ,1,118,ROTZ,-1

CE,NEXT,0,61112,UX,1,1112,UX,-1
CE,NEXT,0,61112,UY,1,1112,UY,-1
CE,NEXT,0,61112,UZ,1,1112,UZ,-1
CE,NEXT,0,61112,ROTX,1,1112,ROTX,-1
CE,NEXT,0,61112,ROTZ,1,1112,ROTZ,-1

CE,NEXT,0,61118,UX,1,1118,UX,-1
CE,NEXT,0,61118,UY,1,1118,UY,-1
CE,NEXT,0,61118,UZ,1,1118,UZ,-1
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CE,NEXT,0,61118,ROTX,1,1118,ROTX,-1
CE,NEXT,0,61118,ROTZ,1,1118,ROTZ,-1

CE,NEXT,0,62112,UX,1,2112,UX,-1
CE,NEXT,0,62112,UY,1,2112,UY,-1
CE,NEXT,0,62112,UZ,1,2112,UZ,-1
CE,NEXT,0,62112,ROTX,1,2112,ROTX,-1
CE,NEXT,0,62112,ROTZ,1,2112,ROTZ,-1

CE,NEXT,0,62118,UX,1,2118,UX,-1
CE,NEXT,0,62118,UY,1,2118,UY,-1
CE,NEXT,0,62118,UZ,1,2118,UZ,-1
CE,NEXT,0,62118,ROTX,1,2118,ROTX,-1
CE,NEXT,0,62118,ROTZ,1,2118,ROTZ,-1

CE,NEXT,0,63112,UX,1,3112,UX,-1
CE,NEXT,0,63112,UY,1,3112,UY,-1
CE,NEXT,0,63112,UZ,1,3112,UZ,-1
CE,NEXT,0,63112,ROTX,1,3112,ROTX,-1
CE,NEXT,0,63112,ROTZ,1,3112,ROTZ,-1

CE,NEXT,0,63118,UX,1,3118,UX,-1
CE,NEXT,0,63118,UY,1,3118,UY,-1
CE,NEXT,0,63118,UZ,1,3118,UZ,-1
CE,NEXT,0,63118,ROTX,1,3118,ROTX,-1
CE,NEXT,0,63118,ROTZ,1,3118,ROTZ,-1

CE,NEXT,0,64118,UX,1,4118,UX,-1
CE,NEXT,0,64118,UY,1,4118,UY,-1
CE,NEXT,0,64118,UZ,1,4118,UZ,-1
CE,NEXT,0,64118,ROTX,1,4118,ROTX,-1
CE,NEXT,0,64118,ROTZ,1,4118,ROTZ,-1

CE,NEXT,0,65118,UX,1,5118,UX,-1
CE,NEXT,0,65118,UY,1,5118,UY,-1
CE,NEXT,0,65118,UZ,1,5118,UZ,-1
CE,NEXT,0,65118,ROTX,1,5118,ROTX,-1
CE,NEXT,0,65118,ROTZ,1,5118,ROTZ,-1

CE,NEXT,0,67118,UX,1,7118,UX,-1
CE,NEXT,0,67118,UY,1,7118,UY,-1
CE,NEXT,0,67118,UZ,1,7118,UZ,-1
CE,NEXT,0,67118,ROTX,1,7118,ROTX,-1
CE,NEXT,0,67118,ROTZ,1,7118,ROTZ,-1

CE,NEXT,0,68118,UX,1,8118,UX,-1
CE,NEXT,0,68118,UY,1,8118,UY,-1
CE,NEXT,0,68118,UZ,1,8118,UZ,-1
CE,NEXT,0,68118,ROTX,1,8118,ROTX,-1
CE,NEXT,0,68118,ROTZ,1,8118,ROTZ,-1

!,ELEMENT,TYPE,,,,7,,

CE,NEXT,0,90002,UX,1,2,UX,-1
CE,NEXT,0,90002,UY,1,2,UY,-1
CE,NEXT,0,90002,UZ,1,2,UZ,-1
CE,NEXT,0,90002,ROTZ,1,2,ROTZ,-1

CE,NEXT,0,60033,UX,1,33,UX,-1
CE,NEXT,0,60033,UY,1,33,UY,-1
CE,NEXT,0,60033,UZ,1,33,UZ,-1
CE,NEXT,0,60033,ROTZ,1,33,ROTZ,-1

CE,NEXT,0,70008,UX,1,8,UX,-1
CE,NEXT,0,70008,UY,1,8,UY,-1
CE,NEXT,0,70008,UZ,1,8,UZ,-1
CE,NEXT,0,70008,ROTZ,1,8,ROTZ,-1

CE,NEXT,0,70031,UX,1,31,UX,-1
CE,NEXT,0,70031,UY,1,31,UY,-1
CE,NEXT,0,70031,UZ,1,31,UZ,-1

CE,NEXT,0,70033,UX,1,33,UX,-1
CE,NEXT,0,70033,UY,1,33,UY,-1
CE,NEXT,0,70033,UZ,1,33,UZ,-1
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CE,NEXT,0,60145,UX,1,145,UX,-1
CE,NEXT,0,60145,UY,1,145,UY,-1
CE,NEXT,0,60145,UZ,1,145,UZ,-1
CE,NEXT,0,60145,ROTY,1,145,ROTY,-1

CE,NEXT,0,60132,UX,1,132,UX,-1
CE,NEXT,0,60132,UY,1,132,UY,-1
CE,NEXT,0,60132,UZ,1,132,UZ,-1
CE,NEXT,0,60132,ROTZ,1,132,ROTZ,-1

CE,NEXT,0,60141,UX,1,141,UX,-1
CE,NEXT,0,60141,UY,1,141,UY,-1
CE,NEXT,0,60141,UZ,1,141,UZ,-1
CE,NEXT,0,60141,ROTZ,1,141,ROTZ,-1

CE,NEXT,0,61113,UX,1,1113,UX,-1
CE,NEXT,0,61113,UY,1,1113,UY,-1
CE,NEXT,0,61113,UZ,1,1113,UZ,-1
CE,NEXT,0,61113,ROTX,1,1113,ROTX,-1

CE,NEXT,0,61145,UX,1,1145,UX,-1
CE,NEXT,0,61145,UY,1,1145,UY,-1
CE,NEXT,0,61145,UZ,1,1145,UZ,-1
CE,NEXT,0,61145,ROTY,1,1145,ROTY,-1

CE,NEXT,0,62145,UX,1,2145,UX,-1
CE,NEXT,0,62145,UY,1,2145,UY,-1
CE,NEXT,0,62145,UZ,1,2145,UZ,-1
CE,NEXT,0,62145,ROTY,1,2145,ROTY,-1

CE,NEXT,0,63121,UX,1,3121,UX,-1
CE,NEXT,0,63121,UY,1,3121,UY,-1
CE,NEXT,0,63121,UZ,1,3121,UZ,-1
CE,NEXT,0,63121,ROTY,1,3121,ROTY,-1

CE,NEXT,0,63145,UX,1,3145,UX,-1
CE,NEXT,0,63145,UY,1,3145,UY,-1
CE,NEXT,0,63145,UZ,1,3145,UZ,-1
CE,NEXT,0,63145,ROTY,1,3145,ROTY,-1

CE,NEXT,0,63164,UX,1,3164,UX,-1
CE,NEXT,0,63164,UY,1,3164,UY,-1
CE,NEXT,0,63164,UZ,1,3164,UZ,-1
CE,NEXT,0,63164,ROTZ,1,3164,ROTZ,-1

CE,NEXT,0,65102,UX,1,5102,UX,-1
CE,NEXT,0,65102,UY,1,5102,UY,-1
CE,NEXT,0,65102,UZ,1,5102,UZ,-1
CE,NEXT,0,65102,ROTZ,1,5102,ROTZ,-1

CE,NEXT,0,66107,UX,1,6107,UX,-1
CE,NEXT,0,66107,UY,1,6107,UY,-1
CE,NEXT,0,66107,UZ,1,6107,UZ,-1
CE,NEXT,0,66107,ROTZ,1,6107,ROTZ,-1

CE,NEXT,0,70102,UX,1,102,UX,-1
CE,NEXT,0,70102,UY,1,102,UY,-1
CE,NEXT,0,70102,UZ,1,102,UZ,-1
CE,NEXT,0,70102,ROTX,1,102,ROTX,-1

CE,NEXT,0,70112,UX,1,112,UX,-1
CE,NEXT,0,70112,UY,1,112,UY,-1
CE,NEXT,0,70112,UZ,1,112,UZ,-1
CE,NEXT,0,70112,ROTX,1,112,ROTX,-1

CE,NEXT,0,63143,UX,1,3143,UX,-1
CE,NEXT,0,63143,UY,1,3143,UY,-1
CE,NEXT,0,63143,UZ,1,3143,UZ,-1
CE,NEXT,0,63143,ROTX,1,3143,ROTX,-1

CE,NEXT,0,64102,UX,1,4102,UX,-1
CE,NEXT,0,64102,UY,1,4102,UY,-1
CE,NEXT,0,64102,UZ,1,4102,UZ,-1
CE,NEXT,0,64102,ROTX,1,4102,ROTX,-1
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CE,NEXT,0,64112,UX,1,4112,UX,-1
CE,NEXT,0,64112,UY,1,4112,UY,-1
CE,NEXT,0,64112,UZ,1,4112,UZ,-1
CE,NEXT,0,64112,ROTX,1,4112,ROTX,-1

CE,NEXT,0,65122,UX,1,5122,UX,-1
CE,NEXT,0,65122,UY,1,5122,UY,-1
CE,NEXT,0,65122,UZ,1,5122,UZ,-1
CE,NEXT,0,65122,ROTX,1,5122,ROTX,-1

CE,NEXT,0,65113,UX,1,5113,UX,-1
CE,NEXT,0,65113,UY,1,5113,UY,-1
CE,NEXT,0,65113,UZ,1,5113,UZ,-1
CE,NEXT,0,65113,ROTX,1,5113,ROTX,-1

CE,NEXT,0,83102,UX,1,3102,UX,-1
CE,NEXT,0,83102,UY,1,3102,UY,-1
CE,NEXT,0,83102,UZ,1,3102,UZ,-1
CE,NEXT,0,83102,ROTX,1,3102,ROTX,-1

CE,NEXT,0,63148,UX,1,3148,UX,-1
CE,NEXT,0,63148,UY,1,3148,UY,-1
CE,NEXT,0,63148,UZ,1,3148,UZ,-1
CE,NEXT,0,63148,ROTX,1,3148,ROTX,-1

CE,NEXT,0,68152,UX,1,8152,UX,-1
CE,NEXT,0,68152,UY,1,8152,UY,-1
CE,NEXT,0,68152,UZ,1,8152,UZ,-1
CE,NEXT,0,68152,ROTY,1,8152,ROTY,-1

CE,NEXT,0,63116,UX,1,3116,UX,-1
CE,NEXT,0,63116,UY,1,3116,UY,-1
CE,NEXT,0,63116,UZ,1,3116,UZ,-1
CE,NEXT,0,63116,ROTX,1,3116,ROTX,-1

CE,NEXT,0,77118,UX,1,7118,UX,-1
CE,NEXT,0,77118,UY,1,7118,UY,-1
CE,NEXT,0,77118,UZ,1,7118,UZ,-1
CE,NEXT,0,77118,ROTX,1,7118,ROTX,-1

CE,NEXT,0,70107,UX,1,107,UX,-1
CE,NEXT,0,70107,UY,1,107,UY,-1
CE,NEXT,0,70107,UZ,1,107,UZ,-1
CE,NEXT,0,70107,ROTX,1,107,ROTX,-1

CE,NEXT,0,70118,UX,1,118,UX,-1
CE,NEXT,0,70118,UY,1,118,UY,-1
CE,NEXT,0,70118,UZ,1,118,UZ,-1
CE,NEXT,0,70118,ROTX,1,118,ROTX,-1

CE,NEXT,0,60182,UX,1,182,UX,-1
CE,NEXT,0,60182,UY,1,182,UY,-1
CE,NEXT,0,60182,UZ,1,182,UZ,-1
CE,NEXT,0,60182,ROTZ,1,182,ROTZ,-1

CE,NEXT,0,76109,UX,1,6109,UX,-1
CE,NEXT,0,76109,UY,1,6109,UY,-1
CE,NEXT,0,76109,UZ,1,6109,UZ,-1
CE,NEXT,0,76109,ROTX,1,6109,ROTX,-1

CE,NEXT,0,75109,UX,1,5109,UX,-1
CE,NEXT,0,75109,UY,1,5109,UY,-1
CE,NEXT,0,75109,UZ,1,5109,UZ,-1
CE,NEXT,0,75109,ROTX,1,5109,ROTX,-1

CE,NEXT,0,64109,UX,1,4109,UX,-1
CE,NEXT,0,64109,UY,1,4109,UY,-1
CE,NEXT,0,64109,UZ,1,4109,UZ,-1
CE,NEXT,0,64109,ROTX,1,4109,ROTX,-1

CE,NEXT,0,72109,UX,1,2109,UX,-1
CE,NEXT,0,72109,UY,1,2109,UY,-1
CE,NEXT,0,72109,UZ,1,2109,UZ,-1
CE,NEXT,0,72109,ROTX,1,2109,ROTX,-1
```

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CE,NEXT,0,71109,UX,1,1109,UX,-1
CE,NEXT,0,71109,UY,1,1109,UY,-1
CE,NEXT,0,71109,UZ,1,1109,UZ,-1
CE,NEXT,0,71109,ROTX,1,1109,ROTX,-1

CE,NEXT,0,60010,UX,1,10,UX,-1
CE,NEXT,0,60010,UY,1,10,UY,-1
CE,NEXT,0,60010,UZ,1,10,UZ,-1
CE,NEXT,0,60010,ROTX,1,10,ROTX,-1

CE,NEXT,0,75120,UX,1,5120,UX,-1
CE,NEXT,0,75120,UY,1,5120,UY,-1
CE,NEXT,0,75120,UZ,1,5120,UZ,-1
CE,NEXT,0,75120,ROTX,1,5120,ROTX,-1

CE,NEXT,0,64120,UX,1,4120,UX,-1
CE,NEXT,0,64120,UY,1,4120,UY,-1
CE,NEXT,0,64120,UZ,1,4120,UZ,-1
CE,NEXT,0,64120,ROTX,1,4120,ROTX,-1

CE,NEXT,0,72120,UX,1,2120,UX,-1
CE,NEXT,0,72120,UY,1,2120,UY,-1
CE,NEXT,0,72120,UZ,1,2120,UZ,-1
CE,NEXT,0,72120,ROTX,1,2120,ROTX,-1

CE,NEXT,0,71120,UX,1,1120,UX,-1
CE,NEXT,0,71120,UY,1,1120,UY,-1
CE,NEXT,0,71120,UZ,1,1120,UZ,-1
CE,NEXT,0,71120,ROTX,1,1120,ROTX,-1

CE,NEXT,0,60021,UX,1,21,UX,-1
CE,NEXT,0,60021,UY,1,21,UY,-1
CE,NEXT,0,60021,UZ,1,21,UZ,-1
CE,NEXT,0,60021,ROTX,1,21,ROTX,-1

!,ELEMENT,TYPE,,,,8,,

CE,NEXT,0,60102,UX,1,102,UX,-1
CE,NEXT,0,60102,UY,1,102,UY,-1
CE,NEXT,0,60102,UZ,1,102,UZ,-1
CE,NEXT,0,60102,ROTX,1,102,ROTX,-1
CE,NEXT,0,60102,ROTZ,1,102,ROTZ,-1

CE,NEXT,0,60107,UX,1,107,UX,-1
CE,NEXT,0,60107,UY,1,107,UY,-1
CE,NEXT,0,60107,UZ,1,107,UZ,-1
CE,NEXT,0,60107,ROTX,1,107,ROTX,-1
CE,NEXT,0,60107,ROTZ,1,107,ROTZ,-1

CE,NEXT,0,61102,UX,1,1102,UX,-1
CE,NEXT,0,61102,UY,1,1102,UY,-1
CE,NEXT,0,61102,UZ,1,1102,UZ,-1
CE,NEXT,0,61102,ROTX,1,1102,ROTX,-1
CE,NEXT,0,61102,ROTZ,1,1102,ROTZ,-1

CE,NEXT,0,61107,UX,1,1107,UX,-1
CE,NEXT,0,61107,UY,1,1107,UY,-1
CE,NEXT,0,61107,UZ,1,1107,UZ,-1
CE,NEXT,0,61107,ROTX,1,1107,ROTX,-1
CE,NEXT,0,61107,ROTZ,1,1107,ROTZ,-1

CE,NEXT,0,62102,UX,1,2102,UX,-1
CE,NEXT,0,62102,UY,1,2102,UY,-1
CE,NEXT,0,62102,UZ,1,2102,UZ,-1
CE,NEXT,0,62102,ROTX,1,2102,ROTX,-1
CE,NEXT,0,62102,ROTZ,1,2102,ROTZ,-1

CE,NEXT,0,62107,UX,1,2107,UX,-1
CE,NEXT,0,62107,UY,1,2107,UY,-1
CE,NEXT,0,62107,UZ,1,2107,UZ,-1
CE,NEXT,0,62107,ROTX,1,2107,ROTX,-1
CE,NEXT,0,62107,ROTZ,1,2107,ROTZ,-1

CE,NEXT,0,63102,UX,1,3102,UX,-1
```

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CE,NEXT,0,63102,UY,1,3102,UY,-1
CE,NEXT,0,63102,UZ,1,3102,UZ,-1
CE,NEXT,0,63102,ROTX,1,3102,ROTX,-1
CE,NEXT,0,63102,ROTZ,1,3102,ROTZ,-1

CE,NEXT,0,63107,UX,1,3107,UX,-1
CE,NEXT,0,63107,UY,1,3107,UY,-1
CE,NEXT,0,63107,UZ,1,3107,UZ,-1
CE,NEXT,0,63107,ROTX,1,3107,ROTX,-1
CE,NEXT,0,63107,ROTZ,1,3107,ROTZ,-1

CE,NEXT,0,64107,UX,1,4107,UX,-1
CE,NEXT,0,64107,UY,1,4107,UY,-1
CE,NEXT,0,64107,UZ,1,4107,UZ,-1
CE,NEXT,0,64107,ROTX,1,4107,ROTX,-1
CE,NEXT,0,64107,ROTZ,1,4107,ROTZ,-1

CE,NEXT,0,65107,UX,1,5107,UX,-1
CE,NEXT,0,65107,UY,1,5107,UY,-1
CE,NEXT,0,65107,UZ,1,5107,UZ,-1
CE,NEXT,0,65107,ROTX,1,5107,ROTX,-1
CE,NEXT,0,65107,ROTZ,1,5107,ROTZ,-1

CE,NEXT,0,64100,UX,1,4100,UX,-1
CE,NEXT,0,64100,UY,1,4100,UY,-1
CE,NEXT,0,64100,UZ,1,4100,UZ,-1
CE,NEXT,0,64100,ROTX,1,4100,ROTX,-1
CE,NEXT,0,64100,ROTY,1,4100,ROTY,-1

CE,NEXT,0,67107,UX,1,7107,UX,-1
CE,NEXT,0,67107,UY,1,7107,UY,-1
CE,NEXT,0,67107,UZ,1,7107,UZ,-1
CE,NEXT,0,67107,ROTX,1,7107,ROTX,-1
CE,NEXT,0,67107,ROTZ,1,7107,ROTZ,-1

CE,NEXT,0,68107,UX,1,8107,UX,-1
CE,NEXT,0,68107,UY,1,8107,UY,-1
CE,NEXT,0,68107,UZ,1,8107,UZ,-1
CE,NEXT,0,68107,ROTX,1,8107,ROTX,-1
CE,NEXT,0,68107,ROTZ,1,8107,ROTZ,-1

!,ELEMENT,TYPE,,,,16,,

CE,NEXT,0,74100,UX,1,4100,UX,-1
CE,NEXT,0,74100,UY,1,4100,UY,-1
CE,NEXT,0,74100,UZ,1,4100,UZ,-1
CE,NEXT,0,74100,ROTX,1,4100,ROTX,-1
CE,NEXT,0,74100,ROTY,1,4100,ROTY,-1

CE,NEXT,0,75100,UX,1,5100,UX,-1
CE,NEXT,0,75100,UY,1,5100,UY,-1
CE,NEXT,0,75100,UZ,1,5100,UZ,-1
CE,NEXT,0,75100,ROTX,1,5100,ROTX,-1

!,ELEMENT,TYPE,,,,9,,


CE,NEXT,0,60014,UX,1,14,UX,-1
CE,NEXT,0,60014,UY,1,14,UY,-1
CE,NEXT,0,60014,UZ,1,14,UZ,-1
CE,NEXT,0,60014,ROTZ,1,14,ROTZ,-1

CE,NEXT,0,80034,UX,1,34,UX,-1
CE,NEXT,0,80034,UY,1,34,UY,-1
CE,NEXT,0,80034,UZ,1,34,UZ,-1
CE,NEXT,0,80034,ROTZ,1,34,ROTZ,-1

CE,NEXT,0,90034,UX,1,34,UX,-1
CE,NEXT,0,90034,UY,1,34,UY,-1
CE,NEXT,0,90034,UZ,1,34,UZ,-1
CE,NEXT,0,90034,ROTZ,1,34,ROTZ,-1

CE,NEXT,0,60003,UX,1,3,UX,-1
CE,NEXT,0,60003,UY,1,3,UY,-1
CE,NEXT,0,60003,UZ,1,3,UZ,-1
```

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CE,NEXT,0,60003,ROTZ,1,3,ROTZ,-1

CE,NEXT,0,80019,UX,1,19,UX,-1
CE,NEXT,0,80019,UY,1,19,UY,-1
CE,NEXT,0,80019,UZ,1,19,UZ,-1

CE,NEXT,0,100034,UX,1,34,UX,-1
CE,NEXT,0,100034,UY,1,34,UY,-1
CE,NEXT,0,100034,UZ,1,34,UZ,-1

CE,NEXT,0,80008,UX,1,8,UX,-1
CE,NEXT,0,80008,UY,1,8,UY,-1
CE,NEXT,0,80008,UZ,1,8,UZ,-1

CE,NEXT,0,110034,UX,1,34,UX,-1
CE,NEXT,0,110034,UY,1,34,UY,-1
CE,NEXT,0,110034,UZ,1,34,UZ,-1

CE,NEXT,0,91107,UX,1,1107,UX,-1
CE,NEXT,0,91107,UY,1,1107,UY,-1
CE,NEXT,0,91107,UZ,1,1107,UZ,-1

CE,NEXT,0,80105,UX,1,105,UX,-1
CE,NEXT,0,80105,UY,1,105,UY,-1
CE,NEXT,0,80105,UZ,1,105,UZ,-1

CE,NEXT,0,61103,UX,1,1103,UX,-1
CE,NEXT,0,61103,UY,1,1103,UY,-1
CE,NEXT,0,61103,UZ,1,1103,UZ,-1

CE,NEXT,0,90102,UX,1,102,UX,-1
CE,NEXT,0,90102,UY,1,102,UY,-1
CE,NEXT,0,90102,UZ,1,102,UZ,-1

CE,NEXT,0,91102,UX,1,1102,UX,-1
CE,NEXT,0,91102,UY,1,1102,UY,-1
CE,NEXT,0,91102,UZ,1,1102,UZ,-1

CE,NEXT,0,60101,UX,1,101,UX,-1
CE,NEXT,0,60101,UY,1,101,UY,-1
CE,NEXT,0,60101,UZ,1,101,UZ,-1

CE,NEXT,0,91118,UX,1,1118,UX,-1
CE,NEXT,0,91118,UY,1,1118,UY,-1
CE,NEXT,0,91118,UZ,1,1118,UZ,-1

CE,NEXT,0,80116,UX,1,116,UX,-1
CE,NEXT,0,80116,UY,1,116,UY,-1
CE,NEXT,0,80116,UZ,1,116,UZ,-1

CE,NEXT,0,61114,UX,1,1114,UX,-1
CE,NEXT,0,61114,UY,1,1114,UY,-1
CE,NEXT,0,61114,UZ,1,1114,UZ,-1

CE,NEXT,0,70113,UX,1,113,UX,-1
CE,NEXT,0,70113,UY,1,113,UY,-1
CE,NEXT,0,70113,UZ,1,113,UZ,-1

CE,NEXT,0,90112,UX,1,112,UX,-1
CE,NEXT,0,90112,UY,1,112,UY,-1
CE,NEXT,0,90112,UZ,1,112,UZ,-1

CE,NEXT,0,60183,UX,1,183,UX,-1
CE,NEXT,0,60183,UY,1,183,UY,-1
CE,NEXT,0,60183,UZ,1,183,UZ,-1

CE,NEXT,0,91112,UX,1,1112,UX,-1
CE,NEXT,0,91112,UY,1,1112,UY,-1
CE,NEXT,0,91112,UZ,1,1112,UZ,-1

CE,NEXT,0,70183,UX,1,183,UX,-1
CE,NEXT,0,70183,UY,1,183,UY,-1
CE,NEXT,0,70183,UZ,1,183,UZ,-1

CE,NEXT,0,95107,UX,1,5107,UX,-1
```

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CE,NEXT,0,95107,UY,1,5107,UY,-1
CE,NEXT,0,95107,UZ,1,5107,UZ,-1

CE,NEXT,0,84105,UX,1,4105,UX,-1
CE,NEXT,0,84105,UY,1,4105,UY,-1
CE,NEXT,0,84105,UZ,1,4105,UZ,-1

CE,NEXT,0,65103,UX,1,5103,UX,-1
CE,NEXT,0,65103,UY,1,5103,UY,-1
CE,NEXT,0,65103,UZ,1,5103,UZ,-1

CE,NEXT,0,84102,UX,1,4102,UX,-1
CE,NEXT,0,84102,UY,1,4102,UY,-1
CE,NEXT,0,84102,UZ,1,4102,UZ,-1

CE,NEXT,0,65100,UX,1,5100,UX,-1
CE,NEXT,0,65100,UY,1,5100,UY,-1
CE,NEXT,0,65100,UZ,1,5100,UZ,-1

CE,NEXT,0,64101,UX,1,4101,UX,-1
CE,NEXT,0,64101,UY,1,4101,UY,-1
CE,NEXT,0,64101,UZ,1,4101,UZ,-1

CE,NEXT,0,94118,UX,1,4118,UX,-1
CE,NEXT,0,94118,UY,1,4118,UY,-1
CE,NEXT,0,94118,UZ,1,4118,UZ,-1

CE,NEXT,0,84156,UX,1,4156,UX,-1
CE,NEXT,0,84156,UY,1,4156,UY,-1
CE,NEXT,0,84156,UZ,1,4156,UZ,-1

CE,NEXT,0,64156,UX,1,4156,UX,-1
CE,NEXT,0,64156,UY,1,4156,UY,-1
CE,NEXT,0,64156,UZ,1,4156,UZ,-1

CE,NEXT,0,75116,UX,1,5116,UX,-1
CE,NEXT,0,75116,UY,1,5116,UY,-1
CE,NEXT,0,75116,UZ,1,5116,UZ,-1

CE,NEXT,0,84116,UX,1,4116,UX,-1
CE,NEXT,0,84116,UY,1,4116,UY,-1
CE,NEXT,0,84116,UZ,1,4116,UZ,-1

CE,NEXT,0,94156,UX,1,4156,UX,-1
CE,NEXT,0,94156,UY,1,4156,UY,-1
CE,NEXT,0,94156,UZ,1,4156,UZ,-1

CE,NEXT,0,74156,UX,1,4156,UX,-1
CE,NEXT,0,74156,UY,1,4156,UY,-1
CE,NEXT,0,74156,UZ,1,4156,UZ,-1

CE,NEXT,0,95118,UX,1,5118,UX,-1
CE,NEXT,0,95118,UY,1,5118,UY,-1
CE,NEXT,0,95118,UZ,1,5118,UZ,-1

CE,NEXT,0,65114,UX,1,5114,UX,-1
CE,NEXT,0,65114,UY,1,5114,UY,-1
CE,NEXT,0,65114,UZ,1,5114,UZ,-1

CE,NEXT,0,84113,UX,1,4113,UX,-1
CE,NEXT,0,84113,UY,1,4113,UY,-1
CE,NEXT,0,84113,UZ,1,4113,UZ,-1

CE,NEXT,0,84112,UX,1,4112,UX,-1
CE,NEXT,0,84112,UY,1,4112,UY,-1
CE,NEXT,0,84112,UZ,1,4112,UZ,-1

CE,NEXT,0,65123,UX,1,5123,UX,-1
CE,NEXT,0,65123,UY,1,5123,UY,-1
CE,NEXT,0,65123,UZ,1,5123,UZ,-1

CE,NEXT,0,75123,UX,1,5123,UX,-1
CE,NEXT,0,75123,UY,1,5123,UY,-1
CE,NEXT,0,75123,UZ,1,5123,UZ,-1
```

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CE,NEXT,0,95112,UX,1,5112,UX,-1
CE,NEXT,0,95112,UY,1,5112,UY,-1
CE,NEXT,0,95112,UZ,1,5112,UZ,-1

CE,NEXT,0,85112,UX,1,5112,UX,-1
CE,NEXT,0,85112,UY,1,5112,UY,-1
CE,NEXT,0,85112,UZ,1,5112,UZ,-1

CE,NEXT,0,64111,UX,1,4111,UX,-1
CE,NEXT,0,64111,UY,1,4111,UY,-1
CE,NEXT,0,64111,UZ,1,4111,UZ,-1

CE,NEXT,0,88118,UX,1,8118,UX,-1
CE,NEXT,0,88118,UY,1,8118,UY,-1
CE,NEXT,0,88118,UZ,1,8118,UZ,-1

CE,NEXT,0,87122,UX,1,7122,UX,-1
CE,NEXT,0,87122,UY,1,7122,UY,-1
CE,NEXT,0,87122,UZ,1,7122,UZ,-1

CE,NEXT,0,281660,UX,1,81660,UX,-1
CE,NEXT,0,281660,UY,1,81660,UY,-1
CE,NEXT,0,281660,UZ,1,81660,UZ,-1

CE,NEXT,0,77116,UX,1,7116,UX,-1
CE,NEXT,0,77116,UY,1,7116,UY,-1
CE,NEXT,0,77116,UZ,1,7116,UZ,-1

CE,NEXT,0,150037,UX,1,50037,UX,-1
CE,NEXT,0,150037,UY,1,50037,UY,-1
CE,NEXT,0,150037,UZ,1,50037,UZ,-1

CE,NEXT,0,150174,UX,1,50174,UX,-1
CE,NEXT,0,150174,UY,1,50174,UY,-1
CE,NEXT,0,150174,UZ,1,50174,UZ,-1

CE,NEXT,0,250037,UX,1,50037,UX,-1
CE,NEXT,0,250037,UY,1,50037,UY,-1
CE,NEXT,0,250037,UZ,1,50037,UZ,-1

CE,NEXT,0,150179,UX,1,50179,UX,-1
CE,NEXT,0,150179,UY,1,50179,UY,-1
CE,NEXT,0,150179,UZ,1,50179,UZ,-1

CE,NEXT,0,150039,UX,1,50039,UX,-1
CE,NEXT,0,150039,UY,1,50039,UY,-1
CE,NEXT,0,150039,UZ,1,50039,UZ,-1

CE,NEXT,0,150177,UX,1,50177,UX,-1
CE,NEXT,0,150177,UY,1,50177,UY,-1
CE,NEXT,0,150177,UZ,1,50177,UZ,-1

CE,NEXT,0,250039,UX,1,50039,UX,-1
CE,NEXT,0,250039,UY,1,50039,UY,-1
CE,NEXT,0,250039,UZ,1,50039,UZ,-1

CE,NEXT,0,250182,UX,1,50182,UX,-1
CE,NEXT,0,250182,UY,1,50182,UY,-1
CE,NEXT,0,250182,UZ,1,50182,UZ,-1

CE,NEXT,0,150182,UX,1,50182,UX,-1
CE,NEXT,0,150182,UY,1,50182,UY,-1
CE,NEXT,0,150182,UZ,1,50182,UZ,-1

CE,NEXT,0,250153,UX,1,50153,UX,-1
CE,NEXT,0,250153,UY,1,50153,UY,-1
CE,NEXT,0,250153,UZ,1,50153,UZ,-1

CE,NEXT,0,150153,UX,1,50153,UX,-1
CE,NEXT,0,150153,UY,1,50153,UY,-1
CE,NEXT,0,150153,UZ,1,50153,UZ,-1

CE,NEXT,0,251107,UX,1,51107,UX,-1
CE,NEXT,0,251107,UY,1,51107,UY,-1
CE,NEXT,0,251107,UZ,1,51107,UZ,-1
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CE,NEXT,0,151107,UX,1,51107,UX,-1
CE,NEXT,0,151107,UY,1,51107,UY,-1
CE,NEXT,0,151107,UZ,1,51107,UZ,-1

CE,NEXT,0,252153,UX,1,52153,UX,-1
CE,NEXT,0,252153,UY,1,52153,UY,-1
CE,NEXT,0,252153,UZ,1,52153,UZ,-1

CE,NEXT,0,152153,UX,1,52153,UX,-1
CE,NEXT,0,152153,UY,1,52153,UY,-1
CE,NEXT,0,152153,UZ,1,52153,UZ,-1

CE,NEXT,0,253107,UX,1,53107,UX,-1
CE,NEXT,0,253107,UY,1,53107,UY,-1
CE,NEXT,0,253107,UZ,1,53107,UZ,-1

CE,NEXT,0,153107,UX,1,53107,UX,-1
CE,NEXT,0,153107,UY,1,53107,UY,-1
CE,NEXT,0,153107,UZ,1,53107,UZ,-1

CE,NEXT,0,254153,UX,1,54153,UX,-1
CE,NEXT,0,254153,UY,1,54153,UY,-1
CE,NEXT,0,254153,UZ,1,54153,UZ,-1

CE,NEXT,0,154153,UX,1,54153,UX,-1
CE,NEXT,0,154153,UY,1,54153,UY,-1
CE,NEXT,0,154153,UZ,1,54153,UZ,-1

CE,NEXT,0,255107,UX,1,55107,UX,-1
CE,NEXT,0,255107,UY,1,55107,UY,-1
CE,NEXT,0,255107,UZ,1,55107,UZ,-1

CE,NEXT,0,155107,UX,1,55107,UX,-1
CE,NEXT,0,155107,UY,1,55107,UY,-1
CE,NEXT,0,155107,UZ,1,55107,UZ,-1

CE,NEXT,0,256153,UX,1,56153,UX,-1
CE,NEXT,0,256153,UY,1,56153,UY,-1
CE,NEXT,0,256153,UZ,1,56153,UZ,-1

CE,NEXT,0,156153,UX,1,56153,UX,-1
CE,NEXT,0,156153,UY,1,56153,UY,-1
CE,NEXT,0,156153,UZ,1,56153,UZ,-1

CE,NEXT,0,257107,UX,1,57107,UX,-1
CE,NEXT,0,257107,UY,1,57107,UY,-1
CE,NEXT,0,257107,UZ,1,57107,UZ,-1

CE,NEXT,0,157107,UX,1,57107,UX,-1
CE,NEXT,0,157107,UY,1,57107,UY,-1
CE,NEXT,0,157107,UZ,1,57107,UZ,-1

CE,NEXT,0,158153,UX,1,58153,UX,-1
CE,NEXT,0,158153,UY,1,58153,UY,-1
CE,NEXT,0,158153,UZ,1,58153,UZ,-1

CE,NEXT,0,157151,UX,1,57151,UX,-1
CE,NEXT,0,157151,UY,1,57151,UY,-1
CE,NEXT,0,157151,UZ,1,57151,UZ,-1

CE,NEXT,0,258153,UX,1,58153,UX,-1
CE,NEXT,0,258153,UY,1,58153,UY,-1
CE,NEXT,0,258153,UZ,1,58153,UZ,-1

CE,NEXT,0,157153,UX,1,57153,UX,-1
CE,NEXT,0,157153,UY,1,57153,UY,-1
CE,NEXT,0,157153,UZ,1,57153,UZ,-1

CE,NEXT,0,158151,UX,1,58151,UX,-1
CE,NEXT,0,158151,UY,1,58151,UY,-1
CE,NEXT,0,158151,UZ,1,58151,UZ,-1

CE,NEXT,0,157118,UX,1,57118,UX,-1
CE,NEXT,0,157118,UY,1,57118,UY,-1
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CE,NEXT,0,157118,UZ,1,57118,UZ,-1

CE,NEXT,0,258151,UX,1,58151,UX,-1
CE,NEXT,0,258151,UY,1,58151,UY,-1
CE,NEXT,0,258151,UZ,1,58151,UZ,-1

CE,NEXT,0,100112,UX,1,112,UX,-1
CE,NEXT,0,100112,UY,1,112,UY,-1
CE,NEXT,0,100112,UZ,1,112,UZ,-1

CE,NEXT,0,94112,UX,1,4112,UX,-1
CE,NEXT,0,94112,UY,1,4112,UY,-1
CE,NEXT,0,94112,UZ,1,4112,UZ,-1

CE,NEXT,0,62124,UX,1,2124,UX,-1
CE,NEXT,0,62124,UY,1,2124,UY,-1
CE,NEXT,0,62124,UZ,1,2124,UZ,-1

CE,NEXT,0,62125,UX,1,2125,UX,-1
CE,NEXT,0,62125,UY,1,2125,UY,-1
CE,NEXT,0,62125,UZ,1,2125,UZ,-1

CE,NEXT,0,110112,UX,1,112,UX,-1
CE,NEXT,0,110112,UY,1,112,UY,-1
CE,NEXT,0,110112,UZ,1,112,UZ,-1

CE,NEXT,0,111145,UX,1,1145,UX,-1
CE,NEXT,0,111145,UY,1,1145,UY,-1
CE,NEXT,0,111145,UZ,1,1145,UZ,-1

CE,NEXT,0,91145,UX,1,1145,UX,-1
CE,NEXT,0,91145,UY,1,1145,UY,-1
CE,NEXT,0,91145,UZ,1,1145,UZ,-1

CE,NEXT,0,102102,UX,1,2102,UX,-1
CE,NEXT,0,102102,UY,1,2102,UY,-1
CE,NEXT,0,102102,UZ,1,2102,UZ,-1

CE,NEXT,0,100102,UX,1,102,UX,-1
CE,NEXT,0,100102,UY,1,102,UY,-1
CE,NEXT,0,100102,UZ,1,102,UZ,-1

CE,NEXT,0,121145,UX,1,1145,UX,-1
CE,NEXT,0,121145,UY,1,1145,UY,-1
CE,NEXT,0,121145,UZ,1,1145,UZ,-1

CE,NEXT,0,101145,UX,1,1145,UX,-1
CE,NEXT,0,101145,UY,1,1145,UY,-1
CE,NEXT,0,101145,UZ,1,1145,UZ,-1

CE,NEXT,0,102112,UX,1,2112,UX,-1
CE,NEXT,0,102112,UY,1,2112,UY,-1
CE,NEXT,0,102112,UZ,1,2112,UZ,-1

CE,NEXT,0,92112,UX,1,2112,UX,-1
CE,NEXT,0,92112,UY,1,2112,UY,-1
CE,NEXT,0,92112,UZ,1,2112,UZ,-1

CE,NEXT,0,103145,UX,1,3145,UX,-1
CE,NEXT,0,103145,UY,1,3145,UY,-1
CE,NEXT,0,103145,UZ,1,3145,UZ,-1

CE,NEXT,0,92145,UX,1,2145,UX,-1
CE,NEXT,0,92145,UY,1,2145,UY,-1
CE,NEXT,0,92145,UZ,1,2145,UZ,-1

CE,NEXT,0,62158,UX,1,2158,UX,-1
CE,NEXT,0,62158,UY,1,2158,UY,-1
CE,NEXT,0,62158,UZ,1,2158,UZ,-1

CE,NEXT,0,92102,UX,1,2102,UX,-1
CE,NEXT,0,92102,UY,1,2102,UY,-1
CE,NEXT,0,92102,UZ,1,2102,UZ,-1

CE,NEXT,0,113145,UX,1,3145,UX,-1
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CE,NEXT,0,113145,UY,1,3145,UY,-1
CE,NEXT,0,113145,UZ,1,3145,UZ,-1

CE,NEXT,0,93145,UX,1,3145,UX,-1
CE,NEXT,0,93145,UY,1,3145,UY,-1
CE,NEXT,0,93145,UZ,1,3145,UZ,-1

CE,NEXT,0,73164,UX,1,3164,UX,-1
CE,NEXT,0,73164,UY,1,3164,UY,-1
CE,NEXT,0,73164,UZ,1,3164,UZ,-1

CE,NEXT,0,71113,UX,1,1113,UX,-1
CE,NEXT,0,71113,UY,1,1113,UY,-1
CE,NEXT,0,71113,UZ,1,1113,UZ,-1
CE,NEXT,0,71113,ROTX,1,1113,ROTX,-1

CE,NEXT,0,62113,UX,1,2113,UX,-1
CE,NEXT,0,62113,UY,1,2113,UY,-1
CE,NEXT,0,62113,UZ,1,2113,UZ,-1
CE,NEXT,0,62113,ROTX,1,2113,ROTX,-1

CE,NEXT,0,72113,UX,1,2113,UX,-1
CE,NEXT,0,72113,UY,1,2113,UY,-1
CE,NEXT,0,72113,UZ,1,2113,UZ,-1
CE,NEXT,0,72113,ROTX,1,2113,ROTX,-1

CE,NEXT,0,152174,UX,1,52174,UX,-1
CE,NEXT,0,152174,UY,1,52174,UY,-1
CE,NEXT,0,152174,UZ,1,52174,UZ,-1
CE,NEXT,0,152174,ROTX,1,52174,ROTX,-1

CE,NEXT,0,63113,UX,1,3113,UX,-1
CE,NEXT,0,63113,UY,1,3113,UY,-1
CE,NEXT,0,63113,UZ,1,3113,UZ,-1
CE,NEXT,0,63113,ROTX,1,3113,ROTX,-1

CE,NEXT,0,74113,UX,1,4113,UX,-1
CE,NEXT,0,74113,UY,1,4113,UY,-1
CE,NEXT,0,74113,UZ,1,4113,UZ,-1
CE,NEXT,0,74113,ROTX,1,4113,ROTX,-1

CE,NEXT,0,60030,UX,1,30,UX,-1
CE,NEXT,0,60030,UY,1,30,UY,-1
CE,NEXT,0,60030,UZ,1,30,UZ,-1
CE,NEXT,0,60030,ROTX,1,30,ROTX,-1

CE,NEXT,0,60131,UX,1,131,UX,-1
CE,NEXT,0,60131,UY,1,131,UY,-1
CE,NEXT,0,60131,UZ,1,131,UZ,-1
CE,NEXT,0,60131,ROTX,1,131,ROTX,-1

CE,NEXT,0,60029,UX,1,29,UX,-1
CE,NEXT,0,60029,UY,1,29,UY,-1
CE,NEXT,0,60029,UZ,1,29,UZ,-1
CE,NEXT,0,60029,ROTX,1,29,ROTX,-1

CE,NEXT,0,60130,UX,1,130,UX,-1
CE,NEXT,0,60130,UY,1,130,UY,-1
CE,NEXT,0,60130,UZ,1,130,UZ,-1
CE,NEXT,0,60130,ROTX,1,130,ROTX,-1

CE,NEXT,0,60028,UX,1,28,UX,-1
CE,NEXT,0,60028,UY,1,28,UY,-1
CE,NEXT,0,60028,UZ,1,28,UZ,-1
CE,NEXT,0,60028,ROTX,1,28,ROTX,-1

CE,NEXT,0,60129,UX,1,129,UX,-1
CE,NEXT,0,60129,UY,1,129,UY,-1
CE,NEXT,0,60129,UZ,1,129,UZ,-1
CE,NEXT,0,60129,ROTX,1,129,ROTX,-1

CE,NEXT,0,60027,UX,1,27,UX,-1
CE,NEXT,0,60027,UY,1,27,UY,-1
CE,NEXT,0,60027,UZ,1,27,UZ,-1
CE,NEXT,0,60027,ROTX,1,27,ROTX,-1
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CE,NEXT,0,60128,UX,1,128,UX,-1
CE,NEXT,0,60128,UY,1,128,UY,-1
CE,NEXT,0,60128,UZ,1,128,UZ,-1
CE,NEXT,0,60128,ROTX,1,128,ROTX,-1

CE,NEXT,0,60026,UX,1,26,UX,-1
CE,NEXT,0,60026,UY,1,26,UY,-1
CE,NEXT,0,60026,UZ,1,26,UZ,-1
CE,NEXT,0,60026,ROTX,1,26,ROTX,-1

CE,NEXT,0,60127,UX,1,127,UX,-1
CE,NEXT,0,60127,UY,1,127,UY,-1
CE,NEXT,0,60127,UZ,1,127,UZ,-1
CE,NEXT,0,60127,ROTX,1,127,ROTX,-1

CE,NEXT,0,60025,UX,1,25,UX,-1
CE,NEXT,0,60025,UY,1,25,UY,-1
CE,NEXT,0,60025,UZ,1,25,UZ,-1
CE,NEXT,0,60025,ROTX,1,25,ROTX,-1

CE,NEXT,0,60126,UX,1,126,UX,-1
CE,NEXT,0,60126,UY,1,126,UY,-1
CE,NEXT,0,60126,UZ,1,126,UZ,-1
CE,NEXT,0,60126,ROTX,1,126,ROTX,-1

CE,NEXT,0,60024,UX,1,24,UX,-1
CE,NEXT,0,60024,UY,1,24,UY,-1
CE,NEXT,0,60024,UZ,1,24,UZ,-1
CE,NEXT,0,60024,ROTX,1,24,ROTX,-1

CE,NEXT,0,60125,UX,1,125,UX,-1
CE,NEXT,0,60125,UY,1,125,UY,-1
CE,NEXT,0,60125,UZ,1,125,UZ,-1
CE,NEXT,0,60125,ROTX,1,125,ROTX,-1

CE,NEXT,0,70131,UX,1,131,UX,-1
CE,NEXT,0,70131,UY,1,131,UY,-1
CE,NEXT,0,70131,UZ,1,131,UZ,-1
CE,NEXT,0,70131,ROTX,1,131,ROTX,-1

CE,NEXT,0,60140,UX,1,140,UX,-1
CE,NEXT,0,60140,UY,1,140,UY,-1
CE,NEXT,0,60140,UZ,1,140,UZ,-1
CE,NEXT,0,60140,ROTX,1,140,ROTX,-1

CE,NEXT,0,70125,UX,1,125,UX,-1
CE,NEXT,0,70125,UY,1,125,UY,-1
CE,NEXT,0,70125,UZ,1,125,UZ,-1
CE,NEXT,0,70125,ROTX,1,125,ROTX,-1

CE,NEXT,0,60134,UX,1,134,UX,-1
CE,NEXT,0,60134,UY,1,134,UY,-1
CE,NEXT,0,60134,UZ,1,134,UZ,-1
CE,NEXT,0,60134,ROTX,1,134,ROTX,-1

CE,NEXT,0,70140,UX,1,140,UX,-1
CE,NEXT,0,70140,UY,1,140,UY,-1
CE,NEXT,0,70140,UZ,1,140,UZ,-1
CE,NEXT,0,70140,ROTX,1,140,ROTX,-1

CE,NEXT,0,60148,UX,1,148,UX,-1
CE,NEXT,0,60148,UY,1,148,UY,-1
CE,NEXT,0,60148,UZ,1,148,UZ,-1
CE,NEXT,0,60148,ROTX,1,148,ROTX,-1

CE,NEXT,0,60139,UX,1,139,UX,-1
CE,NEXT,0,60139,UY,1,139,UY,-1
CE,NEXT,0,60139,UZ,1,139,UZ,-1
CE,NEXT,0,60139,ROTX,1,139,ROTX,-1

CE,NEXT,0,60147,UX,1,147,UX,-1
CE,NEXT,0,60147,UY,1,147,UY,-1
CE,NEXT,0,60147,UZ,1,147,UZ,-1
CE,NEXT,0,60147,ROTX,1,147,ROTX,-1
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CE,NEXT,0,60138,UX,1,138,UX,-1
CE,NEXT,0,60138,UY,1,138,UY,-1
CE,NEXT,0,60138,UZ,1,138,UZ,-1
CE,NEXT,0,60138,ROTX,1,138,ROTX,-1

CE,NEXT,0,60146,UX,1,146,UX,-1
CE,NEXT,0,60146,UY,1,146,UY,-1
CE,NEXT,0,60146,UZ,1,146,UZ,-1
CE,NEXT,0,60146,ROTX,1,146,ROTX,-1

CE,NEXT,0,60137,UX,1,137,UX,-1
CE,NEXT,0,60137,UY,1,137,UY,-1
CE,NEXT,0,60137,UZ,1,137,UZ,-1
CE,NEXT,0,60137,ROTX,1,137,ROTX,-1

CE,NEXT,0,70145,UX,1,145,UX,-1
CE,NEXT,0,70145,UY,1,145,UY,-1
CE,NEXT,0,70145,UZ,1,145,UZ,-1
CE,NEXT,0,70145,ROTX,1,145,ROTX,-1

CE,NEXT,0,60136,UX,1,136,UX,-1
CE,NEXT,0,60136,UY,1,136,UY,-1
CE,NEXT,0,60136,UZ,1,136,UZ,-1
CE,NEXT,0,60136,ROTX,1,136,ROTX,-1

CE,NEXT,0,70144,UX,1,144,UX,-1
CE,NEXT,0,70144,UY,1,144,UY,-1
CE,NEXT,0,70144,UZ,1,144,UZ,-1
CE,NEXT,0,70144,ROTX,1,144,ROTX,-1

CE,NEXT,0,60135,UX,1,135,UX,-1
CE,NEXT,0,60135,UY,1,135,UY,-1
CE,NEXT,0,60135,UZ,1,135,UZ,-1
CE,NEXT,0,60135,ROTX,1,135,ROTX,-1

CE,NEXT,0,70143,UX,1,143,UX,-1
CE,NEXT,0,70143,UY,1,143,UY,-1
CE,NEXT,0,70143,UZ,1,143,UZ,-1
CE,NEXT,0,70143,ROTX,1,143,ROTX,-1

CE,NEXT,0,70134,UX,1,134,UX,-1
CE,NEXT,0,70134,UY,1,134,UY,-1
CE,NEXT,0,70134,UZ,1,134,UZ,-1
CE,NEXT,0,70134,ROTX,1,134,ROTX,-1

CE,NEXT,0,70142,UX,1,142,UX,-1
CE,NEXT,0,70142,UY,1,142,UY,-1
CE,NEXT,0,70142,UZ,1,142,UZ,-1
CE,NEXT,0,70142,ROTX,1,142,ROTX,-1

CE,NEXT,0,80102,UX,1,102,UX,-1
CE,NEXT,0,80102,UY,1,102,UY,-1
CE,NEXT,0,80102,UZ,1,102,UZ,-1
CE,NEXT,0,80102,ROTX,1,102,ROTX,-1

CE,NEXT,0,81102,UX,1,1102,UX,-1
CE,NEXT,0,81102,UY,1,1102,UY,-1
CE,NEXT,0,81102,UZ,1,1102,UZ,-1
CE,NEXT,0,81102,ROTX,1,1102,ROTX,-1

CE,NEXT,0,70148,UX,1,148,UX,-1
CE,NEXT,0,70148,UY,1,148,UY,-1
CE,NEXT,0,70148,UZ,1,148,UZ,-1
CE,NEXT,0,70148,ROTX,1,148,ROTX,-1

CE,NEXT,0,71148,UX,1,1148,UX,-1
CE,NEXT,0,71148,UY,1,1148,UY,-1
CE,NEXT,0,71148,UZ,1,1148,UZ,-1
CE,NEXT,0,71148,ROTX,1,1148,ROTX,-1

CE,NEXT,0,70147,UX,1,147,UX,-1
CE,NEXT,0,70147,UY,1,147,UY,-1
CE,NEXT,0,70147,UZ,1,147,UZ,-1
CE,NEXT,0,70147,ROTX,1,147,ROTX,-1
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CE,NEXT,0,71147,UX,1,1147,UX,-1
CE,NEXT,0,71147,UY,1,1147,UY,-1
CE,NEXT,0,71147,UZ,1,1147,UZ,-1
CE,NEXT,0,71147,ROTX,1,1147,ROTX,-1

CE,NEXT,0,70146,UX,1,146,UX,-1
CE,NEXT,0,70146,UY,1,146,UY,-1
CE,NEXT,0,70146,UZ,1,146,UZ,-1
CE,NEXT,0,70146,ROTX,1,146,ROTX,-1

CE,NEXT,0,71146,UX,1,1146,UX,-1
CE,NEXT,0,71146,UY,1,1146,UY,-1
CE,NEXT,0,71146,UZ,1,1146,UZ,-1
CE,NEXT,0,71146,ROTX,1,1146,ROTX,-1

CE,NEXT,0,80145,UX,1,145,UX,-1
CE,NEXT,0,80145,UY,1,145,UY,-1
CE,NEXT,0,80145,UZ,1,145,UZ,-1
CE,NEXT,0,80145,ROTX,1,145,ROTX,-1

CE,NEXT,0,81145,UX,1,1145,UX,-1
CE,NEXT,0,81145,UY,1,1145,UY,-1
CE,NEXT,0,81145,UZ,1,1145,UZ,-1
CE,NEXT,0,81145,ROTX,1,1145,ROTX,-1

CE,NEXT,0,60144,UX,1,144,UX,-1
CE,NEXT,0,60144,UY,1,144,UY,-1
CE,NEXT,0,60144,UZ,1,144,UZ,-1
CE,NEXT,0,60144,ROTX,1,144,ROTX,-1

CE,NEXT,0,71144,UX,1,1144,UX,-1
CE,NEXT,0,71144,UY,1,1144,UY,-1
CE,NEXT,0,71144,UZ,1,1144,UZ,-1
CE,NEXT,0,71144,ROTX,1,1144,ROTX,-1

CE,NEXT,0,60143,UX,1,143,UX,-1
CE,NEXT,0,60143,UY,1,143,UY,-1
CE,NEXT,0,60143,UZ,1,143,UZ,-1
CE,NEXT,0,60143,ROTX,1,143,ROTX,-1

CE,NEXT,0,71143,UX,1,1143,UX,-1
CE,NEXT,0,71143,UY,1,1143,UY,-1
CE,NEXT,0,71143,UZ,1,1143,UZ,-1
CE,NEXT,0,71143,ROTX,1,1143,ROTX,-1

CE,NEXT,0,60142,UX,1,142,UX,-1
CE,NEXT,0,60142,UY,1,142,UY,-1
CE,NEXT,0,60142,UZ,1,142,UZ,-1
CE,NEXT,0,60142,ROTX,1,142,ROTX,-1

CE,NEXT,0,71142,UX,1,1142,UX,-1
CE,NEXT,0,71142,UY,1,1142,UY,-1
CE,NEXT,0,71142,UZ,1,1142,UZ,-1
CE,NEXT,0,71142,ROTX,1,1142,ROTX,-1

CE,NEXT,0,80112,UX,1,112,UX,-1
CE,NEXT,0,80112,UY,1,112,UY,-1
CE,NEXT,0,80112,UZ,1,112,UZ,-1
CE,NEXT,0,80112,ROTX,1,112,ROTX,-1

CE,NEXT,0,71112,UX,1,1112,UX,-1
CE,NEXT,0,71112,UY,1,1112,UY,-1
CE,NEXT,0,71112,UZ,1,1112,UZ,-1
CE,NEXT,0,71112,ROTX,1,1112,ROTX,-1

CE,NEXT,0,71102,UX,1,1102,UX,-1
CE,NEXT,0,71102,UY,1,1102,UY,-1
CE,NEXT,0,71102,UZ,1,1102,UZ,-1
CE,NEXT,0,71102,ROTX,1,1102,ROTX,-1

CE,NEXT,0,82102,UX,1,2102,UX,-1
CE,NEXT,0,82102,UY,1,2102,UY,-1
CE,NEXT,0,82102,UZ,1,2102,UZ,-1
CE,NEXT,0,82102,ROTX,1,2102,ROTX,-1
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CE,NEXT,0,61148,UX,1,1148,UX,-1
CE,NEXT,0,61148,UY,1,1148,UY,-1
CE,NEXT,0,61148,UZ,1,1148,UZ,-1
CE,NEXT,0,61148,ROTX,1,1148,ROTX,-1

CE,NEXT,0,72148,UX,1,2148,UX,-1
CE,NEXT,0,72148,UY,1,2148,UY,-1
CE,NEXT,0,72148,UZ,1,2148,UZ,-1
CE,NEXT,0,72148,ROTX,1,2148,ROTX,-1

CE,NEXT,0,61147,UX,1,1147,UX,-1
CE,NEXT,0,61147,UY,1,1147,UY,-1
CE,NEXT,0,61147,UZ,1,1147,UZ,-1
CE,NEXT,0,61147,ROTX,1,1147,ROTX,-1

CE,NEXT,0,62147,UX,1,2147,UX,-1
CE,NEXT,0,62147,UY,1,2147,UY,-1
CE,NEXT,0,62147,UZ,1,2147,UZ,-1
CE,NEXT,0,62147,ROTX,1,2147,ROTX,-1

CE,NEXT,0,61146,UX,1,1146,UX,-1
CE,NEXT,0,61146,UY,1,1146,UY,-1
CE,NEXT,0,61146,UZ,1,1146,UZ,-1
CE,NEXT,0,61146,ROTX,1,1146,ROTX,-1

CE,NEXT,0,62146,UX,1,2146,UX,-1
CE,NEXT,0,62146,UY,1,2146,UY,-1
CE,NEXT,0,62146,UZ,1,2146,UZ,-1
CE,NEXT,0,62146,ROTX,1,2146,ROTX,-1

CE,NEXT,0,71145,UX,1,1145,UX,-1
CE,NEXT,0,71145,UY,1,1145,UY,-1
CE,NEXT,0,71145,UZ,1,1145,UZ,-1
CE,NEXT,0,71145,ROTX,1,1145,ROTX,-1

CE,NEXT,0,72145,UX,1,2145,UX,-1
CE,NEXT,0,72145,UY,1,2145,UY,-1
CE,NEXT,0,72145,UZ,1,2145,UZ,-1
CE,NEXT,0,72145,ROTX,1,2145,ROTX,-1

CE,NEXT,0,61144,UX,1,1144,UX,-1
CE,NEXT,0,61144,UY,1,1144,UY,-1
CE,NEXT,0,61144,UZ,1,1144,UZ,-1
CE,NEXT,0,61144,ROTX,1,1144,ROTX,-1

CE,NEXT,0,62144,UX,1,2144,UX,-1
CE,NEXT,0,62144,UY,1,2144,UY,-1
CE,NEXT,0,62144,UZ,1,2144,UZ,-1
CE,NEXT,0,62144,ROTX,1,2144,ROTX,-1

CE,NEXT,0,61143,UX,1,1143,UX,-1
CE,NEXT,0,61143,UY,1,1143,UY,-1
CE,NEXT,0,61143,UZ,1,1143,UZ,-1
CE,NEXT,0,61143,ROTX,1,1143,ROTX,-1

CE,NEXT,0,72143,UX,1,2143,UX,-1
CE,NEXT,0,72143,UY,1,2143,UY,-1
CE,NEXT,0,72143,UZ,1,2143,UZ,-1
CE,NEXT,0,72143,ROTX,1,2143,ROTX,-1

CE,NEXT,0,61142,UX,1,1142,UX,-1
CE,NEXT,0,61142,UY,1,1142,UY,-1
CE,NEXT,0,61142,UZ,1,1142,UZ,-1
CE,NEXT,0,61142,ROTX,1,1142,ROTX,-1

CE,NEXT,0,62142,UX,1,2142,UX,-1
CE,NEXT,0,62142,UY,1,2142,UY,-1
CE,NEXT,0,62142,UZ,1,2142,UZ,-1
CE,NEXT,0,62142,ROTX,1,2142,ROTX,-1

CE,NEXT,0,81112,UX,1,1112,UX,-1
CE,NEXT,0,81112,UY,1,1112,UY,-1
CE,NEXT,0,81112,UZ,1,1112,UZ,-1
CE,NEXT,0,81112,ROTX,1,1112,ROTX,-1
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CE,NEXT,0,82112,UX,1,2112,UX,-1
CE,NEXT,0,82112,UY,1,2112,UY,-1
CE,NEXT,0,82112,UZ,1,2112,UZ,-1
CE,NEXT,0,82112,ROTX,1,2112,ROTX,-1

CE,NEXT,0,72147,UX,1,2147,UX,-1
CE,NEXT,0,72147,UY,1,2147,UY,-1
CE,NEXT,0,72147,UZ,1,2147,UZ,-1
CE,NEXT,0,72147,ROTX,1,2147,ROTX,-1

CE,NEXT,0,73147,UX,1,3147,UX,-1
CE,NEXT,0,73147,UY,1,3147,UY,-1
CE,NEXT,0,73147,UZ,1,3147,UZ,-1
CE,NEXT,0,73147,ROTX,1,3147,ROTX,-1

CE,NEXT,0,72146,UX,1,2146,UX,-1
CE,NEXT,0,72146,UY,1,2146,UY,-1
CE,NEXT,0,72146,UZ,1,2146,UZ,-1
CE,NEXT,0,72146,ROTX,1,2146,ROTX,-1

CE,NEXT,0,73146,UX,1,3146,UX,-1
CE,NEXT,0,73146,UY,1,3146,UY,-1
CE,NEXT,0,73146,UZ,1,3146,UZ,-1
CE,NEXT,0,73146,ROTX,1,3146,ROTX,-1

CE,NEXT,0,82145,UX,1,2145,UX,-1
CE,NEXT,0,82145,UY,1,2145,UY,-1
CE,NEXT,0,82145,UZ,1,2145,UZ,-1
CE,NEXT,0,82145,ROTX,1,2145,ROTX,-1

CE,NEXT,0,83145,UX,1,3145,UX,-1
CE,NEXT,0,83145,UY,1,3145,UY,-1
CE,NEXT,0,83145,UZ,1,3145,UZ,-1
CE,NEXT,0,83145,ROTX,1,3145,ROTX,-1

CE,NEXT,0,72144,UX,1,2144,UX,-1
CE,NEXT,0,72144,UY,1,2144,UY,-1
CE,NEXT,0,72144,UZ,1,2144,UZ,-1
CE,NEXT,0,72144,ROTX,1,2144,ROTX,-1

CE,NEXT,0,73144,UX,1,3144,UX,-1
CE,NEXT,0,73144,UY,1,3144,UY,-1
CE,NEXT,0,73144,UZ,1,3144,UZ,-1
CE,NEXT,0,73144,ROTX,1,3144,ROTX,-1

CE,NEXT,0,72142,UX,1,2142,UX,-1
CE,NEXT,0,72142,UY,1,2142,UY,-1
CE,NEXT,0,72142,UZ,1,2142,UZ,-1
CE,NEXT,0,72142,ROTX,1,2142,ROTX,-1

CE,NEXT,0,62157,UX,1,2157,UX,-1
CE,NEXT,0,62157,UY,1,2157,UY,-1
CE,NEXT,0,62157,UZ,1,2157,UZ,-1
CE,NEXT,0,62157,ROTX,1,2157,ROTX,-1

CE,NEXT,0,72112,UX,1,2112,UX,-1
CE,NEXT,0,72112,UY,1,2112,UY,-1
CE,NEXT,0,72112,UZ,1,2112,UZ,-1
CE,NEXT,0,72112,ROTX,1,2112,ROTX,-1

CE,NEXT,0,152156,UX,1,52156,UX,-1
CE,NEXT,0,152156,UY,1,52156,UY,-1
CE,NEXT,0,152156,UZ,1,52156,UZ,-1
CE,NEXT,0,152156,ROTX,1,52156,ROTX,-1

CE,NEXT,0,73148,UX,1,3148,UX,-1
CE,NEXT,0,73148,UY,1,3148,UY,-1
CE,NEXT,0,73148,UZ,1,3148,UZ,-1
CE,NEXT,0,73148,ROTX,1,3148,ROTX,-1

CE,NEXT,0,63163,UX,1,3163,UX,-1
CE,NEXT,0,63163,UY,1,3163,UY,-1
CE,NEXT,0,63163,UZ,1,3163,UZ,-1
CE,NEXT,0,63163,ROTX,1,3163,ROTX,-1
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CE,NEXT,0,63147,UX,1,3147,UX,-1
CE,NEXT,0,63147,UY,1,3147,UY,-1
CE,NEXT,0,63147,UZ,1,3147,UZ,-1
CE,NEXT,0,63147,ROTX,1,3147,ROTX,-1

CE,NEXT,0,63162,UX,1,3162,UX,-1
CE,NEXT,0,63162,UY,1,3162,UY,-1
CE,NEXT,0,63162,UZ,1,3162,UZ,-1
CE,NEXT,0,63162,ROTX,1,3162,ROTX,-1

CE,NEXT,0,63146,UX,1,3146,UX,-1
CE,NEXT,0,63146,UY,1,3146,UY,-1
CE,NEXT,0,63146,UZ,1,3146,UZ,-1
CE,NEXT,0,63146,ROTX,1,3146,ROTX,-1

CE,NEXT,0,63161,UX,1,3161,UX,-1
CE,NEXT,0,63161,UY,1,3161,UY,-1
CE,NEXT,0,63161,UZ,1,3161,UZ,-1
CE,NEXT,0,63161,ROTX,1,3161,ROTX,-1

CE,NEXT,0,73145,UX,1,3145,UX,-1
CE,NEXT,0,73145,UY,1,3145,UY,-1
CE,NEXT,0,73145,UZ,1,3145,UZ,-1
CE,NEXT,0,73145,ROTX,1,3145,ROTX,-1

CE,NEXT,0,63160,UX,1,3160,UX,-1
CE,NEXT,0,63160,UY,1,3160,UY,-1
CE,NEXT,0,63160,UZ,1,3160,UZ,-1
CE,NEXT,0,63160,ROTX,1,3160,ROTX,-1

CE,NEXT,0,63144,UX,1,3144,UX,-1
CE,NEXT,0,63144,UY,1,3144,UY,-1
CE,NEXT,0,63144,UZ,1,3144,UZ,-1
CE,NEXT,0,63144,ROTX,1,3144,ROTX,-1

CE,NEXT,0,63159,UX,1,3159,UX,-1
CE,NEXT,0,63159,UY,1,3159,UY,-1
CE,NEXT,0,63159,UZ,1,3159,UZ,-1
CE,NEXT,0,63159,ROTX,1,3159,ROTX,-1

CE,NEXT,0,73143,UX,1,3143,UX,-1
CE,NEXT,0,73143,UY,1,3143,UY,-1
CE,NEXT,0,73143,UZ,1,3143,UZ,-1
CE,NEXT,0,73143,ROTX,1,3143,ROTX,-1

CE,NEXT,0,63158,UX,1,3158,UX,-1
CE,NEXT,0,63158,UY,1,3158,UY,-1
CE,NEXT,0,63158,UZ,1,3158,UZ,-1
CE,NEXT,0,63158,ROTX,1,3158,ROTX,-1

CE,NEXT,0,63142,UX,1,3142,UX,-1
CE,NEXT,0,63142,UY,1,3142,UY,-1
CE,NEXT,0,63142,UZ,1,3142,UZ,-1
CE,NEXT,0,63142,ROTX,1,3142,ROTX,-1

CE,NEXT,0,63157,UX,1,3157,UX,-1
CE,NEXT,0,63157,UY,1,3157,UY,-1
CE,NEXT,0,63157,UZ,1,3157,UZ,-1
CE,NEXT,0,63157,ROTX,1,3157,ROTX,-1

CE,NEXT,0,74112,UX,1,4112,UX,-1
CE,NEXT,0,74112,UY,1,4112,UY,-1
CE,NEXT,0,74112,UZ,1,4112,UZ,-1
CE,NEXT,0,74112,ROTX,1,4112,ROTX,-1

CE,NEXT,0,75112,UX,1,5112,UX,-1
CE,NEXT,0,75112,UY,1,5112,UY,-1
CE,NEXT,0,75112,UZ,1,5112,UZ,-1
CE,NEXT,0,75112,ROTX,1,5112,ROTX,-1

CE,NEXT,0,74102,UX,1,4102,UX,-1
CE,NEXT,0,74102,UY,1,4102,UY,-1
CE,NEXT,0,74102,UZ,1,4102,UZ,-1
CE,NEXT,0,74102,ROTX,1,4102,ROTX,-1
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CE,NEXT,0,75102,UX,1,5102,UX,-1
CE,NEXT,0,75102,UY,1,5102,UY,-1
CE,NEXT,0,75102,UZ,1,5102,UZ,-1
CE,NEXT,0,75102,ROTX,1,5102,ROTX,-1

CE,NEXT,0,67122,UX,1,7122,UX,-1
CE,NEXT,0,67122,UY,1,7122,UY,-1
CE,NEXT,0,67122,UZ,1,7122,UZ,-1
CE,NEXT,0,67122,ROTX,1,7122,ROTX,-1

CE,NEXT,0,181660,UX,1,81660,UX,-1
CE,NEXT,0,181660,UY,1,81660,UY,-1
CE,NEXT,0,181660,UZ,1,81660,UZ,-1
CE,NEXT,0,181660,ROTX,1,81660,ROTX,-1

CE,NEXT,0,75122,UX,1,5122,UX,-1
CE,NEXT,0,75122,UY,1,5122,UY,-1
CE,NEXT,0,75122,UZ,1,5122,UZ,-1
CE,NEXT,0,75122,ROTX,1,5122,ROTX,-1

CE,NEXT,0,77122,UX,1,7122,UX,-1
CE,NEXT,0,77122,UY,1,7122,UY,-1
CE,NEXT,0,77122,UZ,1,7122,UZ,-1
CE,NEXT,0,77122,ROTX,1,7122,ROTX,-1

CE,NEXT,0,60006,UX,1,6,UX,-1
CE,NEXT,0,60006,UY,1,6,UY,-1
CE,NEXT,0,60006,UZ,1,6,UZ,-1
CE,NEXT,0,60006,ROTX,1,6,ROTX,-1

CE,NEXT,0,60105,UX,1,105,UX,-1
CE,NEXT,0,60105,UY,1,105,UY,-1
CE,NEXT,0,60105,UZ,1,105,UZ,-1
CE,NEXT,0,60105,ROTX,1,105,ROTX,-1

CE,NEXT,0,70105,UX,1,105,UX,-1
CE,NEXT,0,70105,UY,1,105,UY,-1
CE,NEXT,0,70105,UZ,1,105,UZ,-1
CE,NEXT,0,70105,ROTX,1,105,ROTX,-1

CE,NEXT,0,61105,UX,1,1105,UX,-1
CE,NEXT,0,61105,UY,1,1105,UY,-1
CE,NEXT,0,61105,UZ,1,1105,UZ,-1
CE,NEXT,0,61105,ROTX,1,1105,ROTX,-1

CE,NEXT,0,71105,UX,1,1105,UX,-1
CE,NEXT,0,71105,UY,1,1105,UY,-1
CE,NEXT,0,71105,UZ,1,1105,UZ,-1
CE,NEXT,0,71105,ROTX,1,1105,ROTX,-1

CE,NEXT,0,62105,UX,1,2105,UX,-1
CE,NEXT,0,62105,UY,1,2105,UY,-1
CE,NEXT,0,62105,UZ,1,2105,UZ,-1
CE,NEXT,0,62105,ROTX,1,2105,ROTX,-1

CE,NEXT,0,72105,UX,1,2105,UX,-1
CE,NEXT,0,72105,UY,1,2105,UY,-1
CE,NEXT,0,72105,UZ,1,2105,UZ,-1
CE,NEXT,0,72105,ROTX,1,2105,ROTX,-1

CE,NEXT,0,63105,UX,1,3105,UX,-1
CE,NEXT,0,63105,UY,1,3105,UY,-1
CE,NEXT,0,63105,UZ,1,3105,UZ,-1
CE,NEXT,0,63105,ROTX,1,3105,ROTX,-1

CE,NEXT,0,73105,UX,1,3105,UX,-1
CE,NEXT,0,73105,UY,1,3105,UY,-1
CE,NEXT,0,73105,UZ,1,3105,UZ,-1
CE,NEXT,0,73105,ROTX,1,3105,ROTX,-1

CE,NEXT,0,64105,UX,1,4105,UX,-1
CE,NEXT,0,64105,UY,1,4105,UY,-1
CE,NEXT,0,64105,UZ,1,4105,UZ,-1
CE,NEXT,0,64105,ROTX,1,4105,ROTX,-1
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CE,NEXT,0,74105,UX,1,4105,UX,-1
CE,NEXT,0,74105,UY,1,4105,UY,-1
CE,NEXT,0,74105,UZ,1,4105,UZ,-1
CE,NEXT,0,74105,ROTX,1,4105,ROTX,-1

CE,NEXT,0,65105,UX,1,5105,UX,-1
CE,NEXT,0,65105,UY,1,5105,UY,-1
CE,NEXT,0,65105,UZ,1,5105,UZ,-1
CE,NEXT,0,65105,ROTX,1,5105,ROTX,-1

CE,NEXT,0,75105,UX,1,5105,UX,-1
CE,NEXT,0,75105,UY,1,5105,UY,-1
CE,NEXT,0,75105,UZ,1,5105,UZ,-1
CE,NEXT,0,75105,ROTX,1,5105,ROTX,-1

CE,NEXT,0,66105,UX,1,6105,UX,-1
CE,NEXT,0,66105,UY,1,6105,UY,-1
CE,NEXT,0,66105,UZ,1,6105,UZ,-1
CE,NEXT,0,66105,ROTX,1,6105,ROTX,-1

CE,NEXT,0,76105,UX,1,6105,UX,-1
CE,NEXT,0,76105,UY,1,6105,UY,-1
CE,NEXT,0,76105,UZ,1,6105,UZ,-1
CE,NEXT,0,76105,ROTX,1,6105,ROTX,-1

CE,NEXT,0,67105,UX,1,7105,UX,-1
CE,NEXT,0,67105,UY,1,7105,UY,-1
CE,NEXT,0,67105,UZ,1,7105,UZ,-1
CE,NEXT,0,67105,ROTX,1,7105,ROTX,-1

CE,NEXT,0,77105,UX,1,7105,UX,-1
CE,NEXT,0,77105,UY,1,7105,UY,-1
CE,NEXT,0,77105,UZ,1,7105,UZ,-1
CE,NEXT,0,77105,ROTX,1,7105,ROTX,-1

CE,NEXT,0,68105,UX,1,8105,UX,-1
CE,NEXT,0,68105,UY,1,8105,UY,-1
CE,NEXT,0,68105,UZ,1,8105,UZ,-1
CE,NEXT,0,68105,ROTX,1,8105,ROTX,-1

CE,NEXT,0,60017,UX,1,17,UX,-1
CE,NEXT,0,60017,UY,1,17,UY,-1
CE,NEXT,0,60017,UZ,1,17,UZ,-1
CE,NEXT,0,60017,ROTX,1,17,ROTX,-1

CE,NEXT,0,60116,UX,1,116,UX,-1
CE,NEXT,0,60116,UY,1,116,UY,-1
CE,NEXT,0,60116,UZ,1,116,UZ,-1
CE,NEXT,0,60116,ROTX,1,116,ROTX,-1

CE,NEXT,0,70116,UX,1,116,UX,-1
CE,NEXT,0,70116,UY,1,116,UY,-1
CE,NEXT,0,70116,UZ,1,116,UZ,-1
CE,NEXT,0,70116,ROTX,1,116,ROTX,-1

CE,NEXT,0,61116,UX,1,1116,UX,-1
CE,NEXT,0,61116,UY,1,1116,UY,-1
CE,NEXT,0,61116,UZ,1,1116,UZ,-1
CE,NEXT,0,61116,ROTX,1,1116,ROTX,-1

CE,NEXT,0,71116,UX,1,1116,UX,-1
CE,NEXT,0,71116,UY,1,1116,UY,-1
CE,NEXT,0,71116,UZ,1,1116,UZ,-1
CE,NEXT,0,71116,ROTX,1,1116,ROTX,-1

CE,NEXT,0,72116,UX,1,2116,UX,-1
CE,NEXT,0,72116,UY,1,2116,UY,-1
CE,NEXT,0,72116,UZ,1,2116,UZ,-1
CE,NEXT,0,72116,ROTX,1,2116,ROTX,-1

CE,NEXT,0,73116,UX,1,3116,UX,-1
CE,NEXT,0,73116,UY,1,3116,UY,-1
CE,NEXT,0,73116,UZ,1,3116,UZ,-1
CE,NEXT,0,73116,ROTX,1,3116,ROTX,-1
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CE,NEXT,0,64116,UX,1,4116,UX,-1
CE,NEXT,0,64116,UY,1,4116,UY,-1
CE,NEXT,0,64116,UZ,1,4116,UZ,-1
CE,NEXT,0,64116,ROTX,1,4116,ROTX,-1

CE,NEXT,0,74116,UX,1,4116,UX,-1
CE,NEXT,0,74116,UY,1,4116,UY,-1
CE,NEXT,0,74116,UZ,1,4116,UZ,-1
CE,NEXT,0,74116,ROTX,1,4116,ROTX,-1

CE,NEXT,0,65116,UX,1,5116,UX,-1
CE,NEXT,0,65116,UY,1,5116,UY,-1
CE,NEXT,0,65116,UZ,1,5116,UZ,-1
CE,NEXT,0,65116,ROTX,1,5116,ROTX,-1

CE,NEXT,0,67116,UX,1,7116,UX,-1
CE,NEXT,0,67116,UY,1,7116,UY,-1
CE,NEXT,0,67116,UZ,1,7116,UZ,-1
CE,NEXT,0,67116,ROTX,1,7116,ROTX,-1

CE,NEXT,0,68116,UX,1,8116,UX,-1
CE,NEXT,0,68116,UY,1,8116,UY,-1
CE,NEXT,0,68116,UZ,1,8116,UZ,-1
CE,NEXT,0,68116,ROTX,1,8116,ROTX,-1

CE,NEXT,0,60041,UX,1,41,UX,-1
CE,NEXT,0,60041,UY,1,41,UY,-1
CE,NEXT,0,60041,UZ,1,41,UZ,-1
CE,NEXT,0,60041,ROTX,1,41,ROTX,-1

CE,NEXT,0,60181,UX,1,181,UX,-1
CE,NEXT,0,60181,UY,1,181,UY,-1
CE,NEXT,0,60181,UZ,1,181,UZ,-1
CE,NEXT,0,60181,ROTX,1,181,ROTX,-1

CE,NEXT,0,60040,UX,1,40,UX,-1
CE,NEXT,0,60040,UY,1,40,UY,-1
CE,NEXT,0,60040,UZ,1,40,UZ,-1
CE,NEXT,0,60040,ROTX,1,40,ROTX,-1

CE,NEXT,0,60180,UX,1,180,UX,-1
CE,NEXT,0,60180,UY,1,180,UY,-1
CE,NEXT,0,60180,UZ,1,180,UZ,-1
CE,NEXT,0,60180,ROTX,1,180,ROTX,-1

CE,NEXT,0,60039,UX,1,39,UX,-1
CE,NEXT,0,60039,UY,1,39,UY,-1
CE,NEXT,0,60039,UZ,1,39,UZ,-1
CE,NEXT,0,60039,ROTX,1,39,ROTX,-1

CE,NEXT,0,60179,UX,1,179,UX,-1
CE,NEXT,0,60179,UY,1,179,UY,-1
CE,NEXT,0,60179,UZ,1,179,UZ,-1
CE,NEXT,0,60179,ROTX,1,179,ROTX,-1

CE,NEXT,0,60038,UX,1,38,UX,-1
CE,NEXT,0,60038,UY,1,38,UY,-1
CE,NEXT,0,60038,UZ,1,38,UZ,-1
CE,NEXT,0,60038,ROTX,1,38,ROTX,-1

CE,NEXT,0,60178,UX,1,178,UX,-1
CE,NEXT,0,60178,UY,1,178,UY,-1
CE,NEXT,0,60178,UZ,1,178,UZ,-1
CE,NEXT,0,60178,ROTX,1,178,ROTX,-1

CE,NEXT,0,60037,UX,1,37,UX,-1
CE,NEXT,0,60037,UY,1,37,UY,-1
CE,NEXT,0,60037,UZ,1,37,UZ,-1
CE,NEXT,0,60037,ROTX,1,37,ROTX,-1

CE,NEXT,0,60177,UX,1,177,UX,-1
CE,NEXT,0,60177,UY,1,177,UY,-1
CE,NEXT,0,60177,UZ,1,177,UZ,-1
CE,NEXT,0,60177,ROTX,1,177,ROTX,-1
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CE,NEXT,0,60036,UX,1,36,UX,-1
CE,NEXT,0,60036,UY,1,36,UY,-1
CE,NEXT,0,60036,UZ,1,36,UZ,-1
CE,NEXT,0,60036,ROTX,1,36,ROTX,-1

CE,NEXT,0,60176,UX,1,176,UX,-1
CE,NEXT,0,60176,UY,1,176,UY,-1
CE,NEXT,0,60176,UZ,1,176,UZ,-1
CE,NEXT,0,60176,ROTX,1,176,ROTX,-1

CE,NEXT,0,60035,UX,1,35,UX,-1
CE,NEXT,0,60035,UY,1,35,UY,-1
CE,NEXT,0,60035,UZ,1,35,UZ,-1
CE,NEXT,0,60035,ROTX,1,35,ROTX,-1

CE,NEXT,0,60175,UX,1,175,UX,-1
CE,NEXT,0,60175,UY,1,175,UY,-1
CE,NEXT,0,60175,UZ,1,175,UZ,-1
CE,NEXT,0,60175,ROTX,1,175,ROTX,-1

CE,NEXT,0,80107,UX,1,107,UX,-1
CE,NEXT,0,80107,UY,1,107,UY,-1
CE,NEXT,0,80107,UZ,1,107,UZ,-1
CE,NEXT,0,80107,ROTX,1,107,ROTX,-1

CE,NEXT,0,71107,UX,1,1107,UX,-1
CE,NEXT,0,71107,UY,1,1107,UY,-1
CE,NEXT,0,71107,UZ,1,1107,UZ,-1
CE,NEXT,0,71107,ROTX,1,1107,ROTX,-1

CE,NEXT,0,60155,UX,1,155,UX,-1
CE,NEXT,0,60155,UY,1,155,UY,-1
CE,NEXT,0,60155,UZ,1,155,UZ,-1
CE,NEXT,0,60155,ROTX,1,155,ROTX,-1

CE,NEXT,0,71155,UX,1,1155,UX,-1
CE,NEXT,0,71155,UY,1,1155,UY,-1
CE,NEXT,0,71155,UZ,1,1155,UZ,-1
CE,NEXT,0,71155,ROTX,1,1155,ROTX,-1

CE,NEXT,0,60154,UX,1,154,UX,-1
CE,NEXT,0,60154,UY,1,154,UY,-1
CE,NEXT,0,60154,UZ,1,154,UZ,-1
CE,NEXT,0,60154,ROTX,1,154,ROTX,-1

CE,NEXT,0,71154,UX,1,1154,UX,-1
CE,NEXT,0,71154,UY,1,1154,UY,-1
CE,NEXT,0,71154,UZ,1,1154,UZ,-1
CE,NEXT,0,71154,ROTX,1,1154,ROTX,-1

CE,NEXT,0,60153,UX,1,153,UX,-1
CE,NEXT,0,60153,UY,1,153,UY,-1
CE,NEXT,0,60153,UZ,1,153,UZ,-1
CE,NEXT,0,60153,ROTX,1,153,ROTX,-1

CE,NEXT,0,71153,UX,1,1153,UX,-1
CE,NEXT,0,71153,UY,1,1153,UY,-1
CE,NEXT,0,71153,UZ,1,1153,UZ,-1
CE,NEXT,0,71153,ROTX,1,1153,ROTX,-1

CE,NEXT,0,60152,UX,1,152,UX,-1
CE,NEXT,0,60152,UY,1,152,UY,-1
CE,NEXT,0,60152,UZ,1,152,UZ,-1
CE,NEXT,0,60152,ROTX,1,152,ROTX,-1

CE,NEXT,0,71152,UX,1,1152,UX,-1
CE,NEXT,0,71152,UY,1,1152,UY,-1
CE,NEXT,0,71152,UZ,1,1152,UZ,-1
CE,NEXT,0,71152,ROTX,1,1152,ROTX,-1

CE,NEXT,0,60151,UX,1,151,UX,-1
CE,NEXT,0,60151,UY,1,151,UY,-1
CE,NEXT,0,60151,UZ,1,151,UZ,-1
CE,NEXT,0,60151,ROTX,1,151,ROTX,-1
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CE,NEXT,0,71151,UX,1,1151,UX,-1
CE,NEXT,0,71151,UY,1,1151,UY,-1
CE,NEXT,0,71151,UZ,1,1151,UZ,-1
CE,NEXT,0,71151,ROTX,1,1151,ROTX,-1

CE,NEXT,0,60150,UX,1,150,UX,-1
CE,NEXT,0,60150,UY,1,150,UY,-1
CE,NEXT,0,60150,UZ,1,150,UZ,-1
CE,NEXT,0,60150,ROTX,1,150,ROTX,-1

CE,NEXT,0,71150,UX,1,1150,UX,-1
CE,NEXT,0,71150,UY,1,1150,UY,-1
CE,NEXT,0,71150,UZ,1,1150,UZ,-1
CE,NEXT,0,71150,ROTX,1,1150,ROTX,-1

CE,NEXT,0,60149,UX,1,149,UX,-1
CE,NEXT,0,60149,UY,1,149,UY,-1
CE,NEXT,0,60149,UZ,1,149,UZ,-1
CE,NEXT,0,60149,ROTX,1,149,ROTX,-1

CE,NEXT,0,71149,UX,1,1149,UX,-1
CE,NEXT,0,71149,UY,1,1149,UY,-1
CE,NEXT,0,71149,UZ,1,1149,UZ,-1
CE,NEXT,0,71149,ROTX,1,1149,ROTX,-1

CE,NEXT,0,80118,UX,1,118,UX,-1
CE,NEXT,0,80118,UY,1,118,UY,-1
CE,NEXT,0,80118,UZ,1,118,UZ,-1
CE,NEXT,0,80118,ROTX,1,118,ROTX,-1

CE,NEXT,0,71118,UX,1,1118,UX,-1
CE,NEXT,0,71118,UY,1,1118,UY,-1
CE,NEXT,0,71118,UZ,1,1118,UZ,-1
CE,NEXT,0,71118,ROTX,1,1118,ROTX,-1

CE,NEXT,0,81107,UX,1,1107,UX,-1
CE,NEXT,0,81107,UY,1,1107,UY,-1
CE,NEXT,0,81107,UZ,1,1107,UZ,-1
CE,NEXT,0,81107,ROTX,1,1107,ROTX,-1

CE,NEXT,0,72107,UX,1,2107,UX,-1
CE,NEXT,0,72107,UY,1,2107,UY,-1
CE,NEXT,0,72107,UZ,1,2107,UZ,-1
CE,NEXT,0,72107,ROTX,1,2107,ROTX,-1

CE,NEXT,0,61155,UX,1,1155,UX,-1
CE,NEXT,0,61155,UY,1,1155,UY,-1
CE,NEXT,0,61155,UZ,1,1155,UZ,-1
CE,NEXT,0,61155,ROTX,1,1155,ROTX,-1

CE,NEXT,0,62155,UX,1,2155,UX,-1
CE,NEXT,0,62155,UY,1,2155,UY,-1
CE,NEXT,0,62155,UZ,1,2155,UZ,-1
CE,NEXT,0,62155,ROTX,1,2155,ROTX,-1

CE,NEXT,0,61154,UX,1,1154,UX,-1
CE,NEXT,0,61154,UY,1,1154,UY,-1
CE,NEXT,0,61154,UZ,1,1154,UZ,-1
CE,NEXT,0,61154,ROTX,1,1154,ROTX,-1

CE,NEXT,0,62154,UX,1,2154,UX,-1
CE,NEXT,0,62154,UY,1,2154,UY,-1
CE,NEXT,0,62154,UZ,1,2154,UZ,-1
CE,NEXT,0,62154,ROTX,1,2154,ROTX,-1

CE,NEXT,0,61153,UX,1,1153,UX,-1
CE,NEXT,0,61153,UY,1,1153,UY,-1
CE,NEXT,0,61153,UZ,1,1153,UZ,-1
CE,NEXT,0,61153,ROTX,1,1153,ROTX,-1

CE,NEXT,0,62153,UX,1,2153,UX,-1
CE,NEXT,0,62153,UY,1,2153,UY,-1
CE,NEXT,0,62153,UZ,1,2153,UZ,-1
CE,NEXT,0,62153,ROTX,1,2153,ROTX,-1
```

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CE,NEXT,0,61152,UX,1,1152,UX,-1
CE,NEXT,0,61152,UY,1,1152,UY,-1
CE,NEXT,0,61152,UZ,1,1152,UZ,-1
CE,NEXT,0,61152,ROTX,1,1152,ROTX,-1

CE,NEXT,0,72152,UX,1,2152,UX,-1
CE,NEXT,0,72152,UY,1,2152,UY,-1
CE,NEXT,0,72152,UZ,1,2152,UZ,-1
CE,NEXT,0,72152,ROTX,1,2152,ROTX,-1

CE,NEXT,0,61151,UX,1,1151,UX,-1
CE,NEXT,0,61151,UY,1,1151,UY,-1
CE,NEXT,0,61151,UZ,1,1151,UZ,-1
CE,NEXT,0,61151,ROTX,1,1151,ROTX,-1

CE,NEXT,0,72151,UX,1,2151,UX,-1
CE,NEXT,0,72151,UY,1,2151,UY,-1
CE,NEXT,0,72151,UZ,1,2151,UZ,-1
CE,NEXT,0,72151,ROTX,1,2151,ROTX,-1

CE,NEXT,0,61150,UX,1,1150,UX,-1
CE,NEXT,0,61150,UY,1,1150,UY,-1
CE,NEXT,0,61150,UZ,1,1150,UZ,-1
CE,NEXT,0,61150,ROTX,1,1150,ROTX,-1

CE,NEXT,0,72150,UX,1,2150,UX,-1
CE,NEXT,0,72150,UY,1,2150,UY,-1
CE,NEXT,0,72150,UZ,1,2150,UZ,-1
CE,NEXT,0,72150,ROTX,1,2150,ROTX,-1

CE,NEXT,0,61149,UX,1,1149,UX,-1
CE,NEXT,0,61149,UY,1,1149,UY,-1
CE,NEXT,0,61149,UZ,1,1149,UZ,-1
CE,NEXT,0,61149,ROTX,1,1149,ROTX,-1

CE,NEXT,0,72149,UX,1,2149,UX,-1
CE,NEXT,0,72149,UY,1,2149,UY,-1
CE,NEXT,0,72149,UZ,1,2149,UZ,-1
CE,NEXT,0,72149,ROTX,1,2149,ROTX,-1

CE,NEXT,0,81118,UX,1,1118,UX,-1
CE,NEXT,0,81118,UY,1,1118,UY,-1
CE,NEXT,0,81118,UZ,1,1118,UZ,-1
CE,NEXT,0,81118,ROTX,1,1118,ROTX,-1

CE,NEXT,0,82118,UX,1,2118,UX,-1
CE,NEXT,0,82118,UY,1,2118,UY,-1
CE,NEXT,0,82118,UZ,1,2118,UZ,-1
CE,NEXT,0,82118,ROTX,1,2118,ROTX,-1

CE,NEXT,0,82107,UX,1,2107,UX,-1
CE,NEXT,0,82107,UY,1,2107,UY,-1
CE,NEXT,0,82107,UZ,1,2107,UZ,-1
CE,NEXT,0,82107,ROTX,1,2107,ROTX,-1

CE,NEXT,0,83107,UX,1,3107,UX,-1
CE,NEXT,0,83107,UY,1,3107,UY,-1
CE,NEXT,0,83107,UZ,1,3107,UZ,-1
CE,NEXT,0,83107,ROTX,1,3107,ROTX,-1

CE,NEXT,0,72155,UX,1,2155,UX,-1
CE,NEXT,0,72155,UY,1,2155,UY,-1
CE,NEXT,0,72155,UZ,1,2155,UZ,-1
CE,NEXT,0,72155,ROTX,1,2155,ROTX,-1

CE,NEXT,0,73155,UX,1,3155,UX,-1
CE,NEXT,0,73155,UY,1,3155,UY,-1
CE,NEXT,0,73155,UZ,1,3155,UZ,-1
CE,NEXT,0,73155,ROTX,1,3155,ROTX,-1

CE,NEXT,0,72154,UX,1,2154,UX,-1
CE,NEXT,0,72154,UY,1,2154,UY,-1
CE,NEXT,0,72154,UZ,1,2154,UZ,-1
CE,NEXT,0,72154,ROTX,1,2154,ROTX,-1
```

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CE,NEXT,0,73154,UX,1,3154,UX,-1
CE,NEXT,0,73154,UY,1,3154,UY,-1
CE,NEXT,0,73154,UZ,1,3154,UZ,-1
CE,NEXT,0,73154,ROTX,1,3154,ROTX,-1

CE,NEXT,0,72153,UX,1,2153,UX,-1
CE,NEXT,0,72153,UY,1,2153,UY,-1
CE,NEXT,0,72153,UZ,1,2153,UZ,-1
CE,NEXT,0,72153,ROTX,1,2153,ROTX,-1

CE,NEXT,0,63153,UX,1,3153,UX,-1
CE,NEXT,0,63153,UY,1,3153,UY,-1
CE,NEXT,0,63153,UZ,1,3153,UZ,-1
CE,NEXT,0,63153,ROTX,1,3153,ROTX,-1

CE,NEXT,0,62152,UX,1,2152,UX,-1
CE,NEXT,0,62152,UY,1,2152,UY,-1
CE,NEXT,0,62152,UZ,1,2152,UZ,-1
CE,NEXT,0,62152,ROTX,1,2152,ROTX,-1

CE,NEXT,0,73152,UX,1,3152,UX,-1
CE,NEXT,0,73152,UY,1,3152,UY,-1
CE,NEXT,0,73152,UZ,1,3152,UZ,-1
CE,NEXT,0,73152,ROTX,1,3152,ROTX,-1

CE,NEXT,0,62151,UX,1,2151,UX,-1
CE,NEXT,0,62151,UY,1,2151,UY,-1
CE,NEXT,0,62151,UZ,1,2151,UZ,-1
CE,NEXT,0,62151,ROTX,1,2151,ROTX,-1

CE,NEXT,0,73151,UX,1,3151,UX,-1
CE,NEXT,0,73151,UY,1,3151,UY,-1
CE,NEXT,0,73151,UZ,1,3151,UZ,-1
CE,NEXT,0,73151,ROTX,1,3151,ROTX,-1

CE,NEXT,0,62150,UX,1,2150,UX,-1
CE,NEXT,0,62150,UY,1,2150,UY,-1
CE,NEXT,0,62150,UZ,1,2150,UZ,-1
CE,NEXT,0,62150,ROTX,1,2150,ROTX,-1

CE,NEXT,0,63150,UX,1,3150,UX,-1
CE,NEXT,0,63150,UY,1,3150,UY,-1
CE,NEXT,0,63150,UZ,1,3150,UZ,-1
CE,NEXT,0,63150,ROTX,1,3150,ROTX,-1

CE,NEXT,0,62149,UX,1,2149,UX,-1
CE,NEXT,0,62149,UY,1,2149,UY,-1
CE,NEXT,0,62149,UZ,1,2149,UZ,-1
CE,NEXT,0,62149,ROTX,1,2149,ROTX,-1

CE,NEXT,0,63149,UX,1,3149,UX,-1
CE,NEXT,0,63149,UY,1,3149,UY,-1
CE,NEXT,0,63149,UZ,1,3149,UZ,-1
CE,NEXT,0,63149,ROTX,1,3149,ROTX,-1

CE,NEXT,0,72118,UX,1,2118,UX,-1
CE,NEXT,0,72118,UY,1,2118,UY,-1
CE,NEXT,0,72118,UZ,1,2118,UZ,-1
CE,NEXT,0,72118,ROTX,1,2118,ROTX,-1

CE,NEXT,0,73118,UX,1,3118,UX,-1
CE,NEXT,0,73118,UY,1,3118,UY,-1
CE,NEXT,0,73118,UZ,1,3118,UZ,-1
CE,NEXT,0,73118,ROTX,1,3118,ROTX,-1

CE,NEXT,0,73107,UX,1,3107,UX,-1
CE,NEXT,0,73107,UY,1,3107,UY,-1
CE,NEXT,0,73107,UZ,1,3107,UZ,-1
CE,NEXT,0,73107,ROTX,1,3107,ROTX,-1

CE,NEXT,0,74107,UX,1,4107,UX,-1
CE,NEXT,0,74107,UY,1,4107,UY,-1
CE,NEXT,0,74107,UZ,1,4107,UZ,-1
CE,NEXT,0,74107,ROTX,1,4107,ROTX,-1
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CE,NEXT,0,63155,UX,1,3155,UX,-1
CE,NEXT,0,63155,UY,1,3155,UY,-1
CE,NEXT,0,63155,UZ,1,3155,UZ,-1
CE,NEXT,0,63155,ROTX,1,3155,ROTX,-1

CE,NEXT,0,64155,UX,1,4155,UX,-1
CE,NEXT,0,64155,UY,1,4155,UY,-1
CE,NEXT,0,64155,UZ,1,4155,UZ,-1
CE,NEXT,0,64155,ROTX,1,4155,ROTX,-1

CE,NEXT,0,63154,UX,1,3154,UX,-1
CE,NEXT,0,63154,UY,1,3154,UY,-1
CE,NEXT,0,63154,UZ,1,3154,UZ,-1
CE,NEXT,0,63154,ROTX,1,3154,ROTX,-1

CE,NEXT,0,64154,UX,1,4154,UX,-1
CE,NEXT,0,64154,UY,1,4154,UY,-1
CE,NEXT,0,64154,UZ,1,4154,UZ,-1
CE,NEXT,0,64154,ROTX,1,4154,ROTX,-1

CE,NEXT,0,73153,UX,1,3153,UX,-1
CE,NEXT,0,73153,UY,1,3153,UY,-1
CE,NEXT,0,73153,UZ,1,3153,UZ,-1
CE,NEXT,0,73153,ROTX,1,3153,ROTX,-1

CE,NEXT,0,64153,UX,1,4153,UX,-1
CE,NEXT,0,64153,UY,1,4153,UY,-1
CE,NEXT,0,64153,UZ,1,4153,UZ,-1
CE,NEXT,0,64153,ROTX,1,4153,ROTX,-1

CE,NEXT,0,63152,UX,1,3152,UX,-1
CE,NEXT,0,63152,UY,1,3152,UY,-1
CE,NEXT,0,63152,UZ,1,3152,UZ,-1
CE,NEXT,0,63152,ROTX,1,3152,ROTX,-1

CE,NEXT,0,64152,UX,1,4152,UX,-1
CE,NEXT,0,64152,UY,1,4152,UY,-1
CE,NEXT,0,64152,UZ,1,4152,UZ,-1
CE,NEXT,0,64152,ROTX,1,4152,ROTX,-1

CE,NEXT,0,63151,UX,1,3151,UX,-1
CE,NEXT,0,63151,UY,1,3151,UY,-1
CE,NEXT,0,63151,UZ,1,3151,UZ,-1
CE,NEXT,0,63151,ROTX,1,3151,ROTX,-1

CE,NEXT,0,64151,UX,1,4151,UX,-1
CE,NEXT,0,64151,UY,1,4151,UY,-1
CE,NEXT,0,64151,UZ,1,4151,UZ,-1
CE,NEXT,0,64151,ROTX,1,4151,ROTX,-1

CE,NEXT,0,73150,UX,1,3150,UX,-1
CE,NEXT,0,73150,UY,1,3150,UY,-1
CE,NEXT,0,73150,UZ,1,3150,UZ,-1
CE,NEXT,0,73150,ROTX,1,3150,ROTX,-1

CE,NEXT,0,64150,UX,1,4150,UX,-1
CE,NEXT,0,64150,UY,1,4150,UY,-1
CE,NEXT,0,64150,UZ,1,4150,UZ,-1
CE,NEXT,0,64150,ROTX,1,4150,ROTX,-1

CE,NEXT,0,73149,UX,1,3149,UX,-1
CE,NEXT,0,73149,UY,1,3149,UY,-1
CE,NEXT,0,73149,UZ,1,3149,UZ,-1
CE,NEXT,0,73149,ROTX,1,3149,ROTX,-1

CE,NEXT,0,64149,UX,1,4149,UX,-1
CE,NEXT,0,64149,UY,1,4149,UY,-1
CE,NEXT,0,64149,UZ,1,4149,UZ,-1
CE,NEXT,0,64149,ROTX,1,4149,ROTX,-1

CE,NEXT,0,83118,UX,1,3118,UX,-1
CE,NEXT,0,83118,UY,1,3118,UY,-1
CE,NEXT,0,83118,UZ,1,3118,UZ,-1
CE,NEXT,0,83118,ROTX,1,3118,ROTX,-1
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CE,NEXT,0,74118,UX,1,4118,UX,-1
CE,NEXT,0,74118,UY,1,4118,UY,-1
CE,NEXT,0,74118,UZ,1,4118,UZ,-1
CE,NEXT,0,74118,ROTX,1,4118,ROTX,-1

CE,NEXT,0,84107,UX,1,4107,UX,-1
CE,NEXT,0,84107,UY,1,4107,UY,-1
CE,NEXT,0,84107,UZ,1,4107,UZ,-1
CE,NEXT,0,84107,ROTX,1,4107,ROTX,-1

CE,NEXT,0,75107,UX,1,5107,UX,-1
CE,NEXT,0,75107,UY,1,5107,UY,-1
CE,NEXT,0,75107,UZ,1,5107,UZ,-1
CE,NEXT,0,75107,ROTX,1,5107,ROTX,-1

CE,NEXT,0,74155,UX,1,4155,UX,-1
CE,NEXT,0,74155,UY,1,4155,UY,-1
CE,NEXT,0,74155,UZ,1,4155,UZ,-1
CE,NEXT,0,74155,ROTX,1,4155,ROTX,-1

CE,NEXT,0,65155,UX,1,5155,UX,-1
CE,NEXT,0,65155,UY,1,5155,UY,-1
CE,NEXT,0,65155,UZ,1,5155,UZ,-1
CE,NEXT,0,65155,ROTX,1,5155,ROTX,-1

CE,NEXT,0,74154,UX,1,4154,UX,-1
CE,NEXT,0,74154,UY,1,4154,UY,-1
CE,NEXT,0,74154,UZ,1,4154,UZ,-1
CE,NEXT,0,74154,ROTX,1,4154,ROTX,-1

CE,NEXT,0,65154,UX,1,5154,UX,-1
CE,NEXT,0,65154,UY,1,5154,UY,-1
CE,NEXT,0,65154,UZ,1,5154,UZ,-1
CE,NEXT,0,65154,ROTX,1,5154,ROTX,-1

CE,NEXT,0,74153,UX,1,4153,UX,-1
CE,NEXT,0,74153,UY,1,4153,UY,-1
CE,NEXT,0,74153,UZ,1,4153,UZ,-1
CE,NEXT,0,74153,ROTX,1,4153,ROTX,-1

CE,NEXT,0,65153,UX,1,5153,UX,-1
CE,NEXT,0,65153,UY,1,5153,UY,-1
CE,NEXT,0,65153,UZ,1,5153,UZ,-1
CE,NEXT,0,65153,ROTX,1,5153,ROTX,-1

CE,NEXT,0,74152,UX,1,4152,UX,-1
CE,NEXT,0,74152,UY,1,4152,UY,-1
CE,NEXT,0,74152,UZ,1,4152,UZ,-1
CE,NEXT,0,74152,ROTX,1,4152,ROTX,-1

CE,NEXT,0,65152,UX,1,5152,UX,-1
CE,NEXT,0,65152,UY,1,5152,UY,-1
CE,NEXT,0,65152,UZ,1,5152,UZ,-1
CE,NEXT,0,65152,ROTX,1,5152,ROTX,-1

CE,NEXT,0,74151,UX,1,4151,UX,-1
CE,NEXT,0,74151,UY,1,4151,UY,-1
CE,NEXT,0,74151,UZ,1,4151,UZ,-1
CE,NEXT,0,74151,ROTX,1,4151,ROTX,-1

CE,NEXT,0,65151,UX,1,5151,UX,-1
CE,NEXT,0,65151,UY,1,5151,UY,-1
CE,NEXT,0,65151,UZ,1,5151,UZ,-1
CE,NEXT,0,65151,ROTX,1,5151,ROTX,-1

CE,NEXT,0,74150,UX,1,4150,UX,-1
CE,NEXT,0,74150,UY,1,4150,UY,-1
CE,NEXT,0,74150,UZ,1,4150,UZ,-1
CE,NEXT,0,74150,ROTX,1,4150,ROTX,-1

CE,NEXT,0,75150,UX,1,5150,UX,-1
CE,NEXT,0,75150,UY,1,5150,UY,-1
CE,NEXT,0,75150,UZ,1,5150,UZ,-1
CE,NEXT,0,75150,ROTX,1,5150,ROTX,-1
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CE,NEXT,0,74149,UX,1,4149,UX,-1
CE,NEXT,0,74149,UY,1,4149,UY,-1
CE,NEXT,0,74149,UZ,1,4149,UZ,-1
CE,NEXT,0,74149,ROTX,1,4149,ROTX,-1

CE,NEXT,0,75149,UX,1,5149,UX,-1
CE,NEXT,0,75149,UY,1,5149,UY,-1
CE,NEXT,0,75149,UZ,1,5149,UZ,-1
CE,NEXT,0,75149,ROTX,1,5149,ROTX,-1

CE,NEXT,0,84118,UX,1,4118,UX,-1
CE,NEXT,0,84118,UY,1,4118,UY,-1
CE,NEXT,0,84118,UZ,1,4118,UZ,-1
CE,NEXT,0,84118,ROTX,1,4118,ROTX,-1

CE,NEXT,0,85118,UX,1,5118,UX,-1
CE,NEXT,0,85118,UY,1,5118,UY,-1
CE,NEXT,0,85118,UZ,1,5118,UZ,-1
CE,NEXT,0,85118,ROTX,1,5118,ROTX,-1

CE,NEXT,0,85107,UX,1,5107,UX,-1
CE,NEXT,0,85107,UY,1,5107,UY,-1
CE,NEXT,0,85107,UZ,1,5107,UZ,-1
CE,NEXT,0,85107,ROTX,1,5107,ROTX,-1

CE,NEXT,0,76107,UX,1,6107,UX,-1
CE,NEXT,0,76107,UY,1,6107,UY,-1
CE,NEXT,0,76107,UZ,1,6107,UZ,-1
CE,NEXT,0,76107,ROTX,1,6107,ROTX,-1

CE,NEXT,0,75155,UX,1,5155,UX,-1
CE,NEXT,0,75155,UY,1,5155,UY,-1
CE,NEXT,0,75155,UZ,1,5155,UZ,-1
CE,NEXT,0,75155,ROTX,1,5155,ROTX,-1

CE,NEXT,0,66155,UX,1,6155,UX,-1
CE,NEXT,0,66155,UY,1,6155,UY,-1
CE,NEXT,0,66155,UZ,1,6155,UZ,-1
CE,NEXT,0,66155,ROTX,1,6155,ROTX,-1

CE,NEXT,0,75154,UX,1,5154,UX,-1
CE,NEXT,0,75154,UY,1,5154,UY,-1
CE,NEXT,0,75154,UZ,1,5154,UZ,-1
CE,NEXT,0,75154,ROTX,1,5154,ROTX,-1

CE,NEXT,0,66154,UX,1,6154,UX,-1
CE,NEXT,0,66154,UY,1,6154,UY,-1
CE,NEXT,0,66154,UZ,1,6154,UZ,-1
CE,NEXT,0,66154,ROTX,1,6154,ROTX,-1

CE,NEXT,0,75153,UX,1,5153,UX,-1
CE,NEXT,0,75153,UY,1,5153,UY,-1
CE,NEXT,0,75153,UZ,1,5153,UZ,-1
CE,NEXT,0,75153,ROTX,1,5153,ROTX,-1

CE,NEXT,0,66153,UX,1,6153,UX,-1
CE,NEXT,0,66153,UY,1,6153,UY,-1
CE,NEXT,0,66153,UZ,1,6153,UZ,-1
CE,NEXT,0,66153,ROTX,1,6153,ROTX,-1

CE,NEXT,0,75152,UX,1,5152,UX,-1
CE,NEXT,0,75152,UY,1,5152,UY,-1
CE,NEXT,0,75152,UZ,1,5152,UZ,-1
CE,NEXT,0,75152,ROTX,1,5152,ROTX,-1

CE,NEXT,0,66152,UX,1,6152,UX,-1
CE,NEXT,0,66152,UY,1,6152,UY,-1
CE,NEXT,0,66152,UZ,1,6152,UZ,-1
CE,NEXT,0,66152,ROTX,1,6152,ROTX,-1

CE,NEXT,0,75151,UX,1,5151,UX,-1
CE,NEXT,0,75151,UY,1,5151,UY,-1
CE,NEXT,0,75151,UZ,1,5151,UZ,-1
CE,NEXT,0,75151,ROTX,1,5151,ROTX,-1
```

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CE,NEXT,0,66151,UX,1,6151,UX,-1
CE,NEXT,0,66151,UY,1,6151,UY,-1
CE,NEXT,0,66151,UZ,1,6151,UZ,-1
CE,NEXT,0,66151,ROTX,1,6151,ROTX,-1

CE,NEXT,0,65150,UX,1,5150,UX,-1
CE,NEXT,0,65150,UY,1,5150,UY,-1
CE,NEXT,0,65150,UZ,1,5150,UZ,-1
CE,NEXT,0,65150,ROTX,1,5150,ROTX,-1

CE,NEXT,0,66150,UX,1,6150,UX,-1
CE,NEXT,0,66150,UY,1,6150,UY,-1
CE,NEXT,0,66150,UZ,1,6150,UZ,-1
CE,NEXT,0,66150,ROTX,1,6150,ROTX,-1

CE,NEXT,0,65149,UX,1,5149,UX,-1
CE,NEXT,0,65149,UY,1,5149,UY,-1
CE,NEXT,0,65149,UZ,1,5149,UZ,-1
CE,NEXT,0,65149,ROTX,1,5149,ROTX,-1

CE,NEXT,0,66149,UX,1,6149,UX,-1
CE,NEXT,0,66149,UY,1,6149,UY,-1
CE,NEXT,0,66149,UZ,1,6149,UZ,-1
CE,NEXT,0,66149,ROTX,1,6149,ROTX,-1

CE,NEXT,0,86107,UX,1,6107,UX,-1
CE,NEXT,0,86107,UY,1,6107,UY,-1
CE,NEXT,0,86107,UZ,1,6107,UZ,-1
CE,NEXT,0,86107,ROTX,1,6107,ROTX,-1

CE,NEXT,0,87107,UX,1,7107,UX,-1
CE,NEXT,0,87107,UY,1,7107,UY,-1
CE,NEXT,0,87107,UZ,1,7107,UZ,-1
CE,NEXT,0,87107,ROTX,1,7107,ROTX,-1

CE,NEXT,0,76155,UX,1,6155,UX,-1
CE,NEXT,0,76155,UY,1,6155,UY,-1
CE,NEXT,0,76155,UZ,1,6155,UZ,-1
CE,NEXT,0,76155,ROTX,1,6155,ROTX,-1

CE,NEXT,0,77155,UX,1,7155,UX,-1
CE,NEXT,0,77155,UY,1,7155,UY,-1
CE,NEXT,0,77155,UZ,1,7155,UZ,-1
CE,NEXT,0,77155,ROTX,1,7155,ROTX,-1

CE,NEXT,0,76154,UX,1,6154,UX,-1
CE,NEXT,0,76154,UY,1,6154,UY,-1
CE,NEXT,0,76154,UZ,1,6154,UZ,-1
CE,NEXT,0,76154,ROTX,1,6154,ROTX,-1

CE,NEXT,0,77154,UX,1,7154,UX,-1
CE,NEXT,0,77154,UY,1,7154,UY,-1
CE,NEXT,0,77154,UZ,1,7154,UZ,-1
CE,NEXT,0,77154,ROTX,1,7154,ROTX,-1

CE,NEXT,0,76153,UX,1,6153,UX,-1
CE,NEXT,0,76153,UY,1,6153,UY,-1
CE,NEXT,0,76153,UZ,1,6153,UZ,-1
CE,NEXT,0,76153,ROTX,1,6153,ROTX,-1

CE,NEXT,0,77153,UX,1,7153,UX,-1
CE,NEXT,0,77153,UY,1,7153,UY,-1
CE,NEXT,0,77153,UZ,1,7153,UZ,-1
CE,NEXT,0,77153,ROTX,1,7153,ROTX,-1

CE,NEXT,0,76152,UX,1,6152,UX,-1
CE,NEXT,0,76152,UY,1,6152,UY,-1
CE,NEXT,0,76152,UZ,1,6152,UZ,-1
CE,NEXT,0,76152,ROTX,1,6152,ROTX,-1

CE,NEXT,0,77152,UX,1,7152,UX,-1
CE,NEXT,0,77152,UY,1,7152,UY,-1
CE,NEXT,0,77152,UZ,1,7152,UZ,-1
CE,NEXT,0,77152,ROTX,1,7152,ROTX,-1
```

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CE,NEXT,0,76151,UX,1,6151,UX,-1
CE,NEXT,0,76151,UY,1,6151,UY,-1
CE,NEXT,0,76151,UZ,1,6151,UZ,-1
CE,NEXT,0,76151,ROTX,1,6151,ROTX,-1

CE,NEXT,0,77151,UX,1,7151,UX,-1
CE,NEXT,0,77151,UY,1,7151,UY,-1
CE,NEXT,0,77151,UZ,1,7151,UZ,-1
CE,NEXT,0,77151,ROTX,1,7151,ROTX,-1

CE,NEXT,0,76150,UX,1,6150,UX,-1
CE,NEXT,0,76150,UY,1,6150,UY,-1
CE,NEXT,0,76150,UZ,1,6150,UZ,-1
CE,NEXT,0,76150,ROTX,1,6150,ROTX,-1

CE,NEXT,0,77150,UX,1,7150,UX,-1
CE,NEXT,0,77150,UY,1,7150,UY,-1
CE,NEXT,0,77150,UZ,1,7150,UZ,-1
CE,NEXT,0,77150,ROTX,1,7150,ROTX,-1

CE,NEXT,0,76149,UX,1,6149,UX,-1
CE,NEXT,0,76149,UY,1,6149,UY,-1
CE,NEXT,0,76149,UZ,1,6149,UZ,-1
CE,NEXT,0,76149,ROTX,1,6149,ROTX,-1

CE,NEXT,0,77149,UX,1,7149,UX,-1
CE,NEXT,0,77149,UY,1,7149,UY,-1
CE,NEXT,0,77149,UZ,1,7149,UZ,-1
CE,NEXT,0,77149,ROTX,1,7149,ROTX,-1

CE,NEXT,0,77107,UX,1,7107,UX,-1
CE,NEXT,0,77107,UY,1,7107,UY,-1
CE,NEXT,0,77107,UZ,1,7107,UZ,-1
CE,NEXT,0,77107,ROTX,1,7107,ROTX,-1

CE,NEXT,0,78107,UX,1,8107,UX,-1
CE,NEXT,0,78107,UY,1,8107,UY,-1
CE,NEXT,0,78107,UZ,1,8107,UZ,-1
CE,NEXT,0,78107,ROTX,1,8107,ROTX,-1

CE,NEXT,0,67155,UX,1,7155,UX,-1
CE,NEXT,0,67155,UY,1,7155,UY,-1
CE,NEXT,0,67155,UZ,1,7155,UZ,-1
CE,NEXT,0,67155,ROTX,1,7155,ROTX,-1

CE,NEXT,0,68155,UX,1,8155,UX,-1
CE,NEXT,0,68155,UY,1,8155,UY,-1
CE,NEXT,0,68155,UZ,1,8155,UZ,-1
CE,NEXT,0,68155,ROTX,1,8155,ROTX,-1

CE,NEXT,0,67154,UX,1,7154,UX,-1
CE,NEXT,0,67154,UY,1,7154,UY,-1
CE,NEXT,0,67154,UZ,1,7154,UZ,-1
CE,NEXT,0,67154,ROTX,1,7154,ROTX,-1

CE,NEXT,0,68154,UX,1,8154,UX,-1
CE,NEXT,0,68154,UY,1,8154,UY,-1
CE,NEXT,0,68154,UZ,1,8154,UZ,-1
CE,NEXT,0,68154,ROTX,1,8154,ROTX,-1

CE,NEXT,0,67153,UX,1,7153,UX,-1
CE,NEXT,0,67153,UY,1,7153,UY,-1
CE,NEXT,0,67153,UZ,1,7153,UZ,-1
CE,NEXT,0,67153,ROTX,1,7153,ROTX,-1

CE,NEXT,0,68153,UX,1,8153,UX,-1
CE,NEXT,0,68153,UY,1,8153,UY,-1
CE,NEXT,0,68153,UZ,1,8153,UZ,-1
CE,NEXT,0,68153,ROTX,1,8153,ROTX,-1

CE,NEXT,0,67152,UX,1,7152,UX,-1
CE,NEXT,0,67152,UY,1,7152,UY,-1
CE,NEXT,0,67152,UZ,1,7152,UZ,-1
CE,NEXT,0,67152,ROTX,1,7152,ROTX,-1
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CE,NEXT,0,78152,UX,1,8152,UX,-1
CE,NEXT,0,78152,UY,1,8152,UY,-1
CE,NEXT,0,78152,UZ,1,8152,UZ,-1
CE,NEXT,0,78152,ROTX,1,8152,ROTX,-1

CE,NEXT,0,67151,UX,1,7151,UX,-1
CE,NEXT,0,67151,UY,1,7151,UY,-1
CE,NEXT,0,67151,UZ,1,7151,UZ,-1
CE,NEXT,0,67151,ROTX,1,7151,ROTX,-1

CE,NEXT,0,68151,UX,1,8151,UX,-1
CE,NEXT,0,68151,UY,1,8151,UY,-1
CE,NEXT,0,68151,UZ,1,8151,UZ,-1
CE,NEXT,0,68151,ROTX,1,8151,ROTX,-1

CE,NEXT,0,67150,UX,1,7150,UX,-1
CE,NEXT,0,67150,UY,1,7150,UY,-1
CE,NEXT,0,67150,UZ,1,7150,UZ,-1
CE,NEXT,0,67150,ROTX,1,7150,ROTX,-1

CE,NEXT,0,68150,UX,1,8150,UX,-1
CE,NEXT,0,68150,UY,1,8150,UY,-1
CE,NEXT,0,68150,UZ,1,8150,UZ,-1
CE,NEXT,0,68150,ROTX,1,8150,ROTX,-1

CE,NEXT,0,67149,UX,1,7149,UX,-1
CE,NEXT,0,67149,UY,1,7149,UY,-1
CE,NEXT,0,67149,UZ,1,7149,UZ,-1
CE,NEXT,0,67149,ROTX,1,7149,ROTX,-1

CE,NEXT,0,68149,UX,1,8149,UX,-1
CE,NEXT,0,68149,UY,1,8149,UY,-1
CE,NEXT,0,68149,UZ,1,8149,UZ,-1
CE,NEXT,0,68149,ROTX,1,8149,ROTX,-1

CE,NEXT,0,87118,UX,1,7118,UX,-1
CE,NEXT,0,87118,UY,1,7118,UY,-1
CE,NEXT,0,87118,UZ,1,7118,UZ,-1
CE,NEXT,0,87118,ROTX,1,7118,ROTX,-1

CE,NEXT,0,78118,UX,1,8118,UX,-1
CE,NEXT,0,78118,UY,1,8118,UY,-1
CE,NEXT,0,78118,UZ,1,8118,UZ,-1
CE,NEXT,0,78118,ROTX,1,8118,ROTX,-1

CE,NEXT,0,70181,UX,1,181,UX,-1
CE,NEXT,0,70181,UY,1,181,UY,-1
CE,NEXT,0,70181,UZ,1,181,UZ,-1
CE,NEXT,0,70181,ROTX,1,181,ROTX,-1

CE,NEXT,0,70155,UX,1,155,UX,-1
CE,NEXT,0,70155,UY,1,155,UY,-1
CE,NEXT,0,70155,UZ,1,155,UZ,-1
CE,NEXT,0,70155,ROTX,1,155,ROTX,-1

CE,NEXT,0,70180,UX,1,180,UX,-1
CE,NEXT,0,70180,UY,1,180,UY,-1
CE,NEXT,0,70180,UZ,1,180,UZ,-1
CE,NEXT,0,70180,ROTX,1,180,ROTX,-1

CE,NEXT,0,70154,UX,1,154,UX,-1
CE,NEXT,0,70154,UY,1,154,UY,-1
CE,NEXT,0,70154,UZ,1,154,UZ,-1
CE,NEXT,0,70154,ROTX,1,154,ROTX,-1

CE,NEXT,0,70179,UX,1,179,UX,-1
CE,NEXT,0,70179,UY,1,179,UY,-1
CE,NEXT,0,70179,UZ,1,179,UZ,-1
CE,NEXT,0,70179,ROTX,1,179,ROTX,-1

CE,NEXT,0,70153,UX,1,153,UX,-1
CE,NEXT,0,70153,UY,1,153,UY,-1
CE,NEXT,0,70153,UZ,1,153,UZ,-1
CE,NEXT,0,70153,ROTX,1,153,ROTX,-1
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CE,NEXT,0,70178,UX,1,178,UX,-1
CE,NEXT,0,70178,UY,1,178,UY,-1
CE,NEXT,0,70178,UZ,1,178,UZ,-1
CE,NEXT,0,70178,ROTX,1,178,ROTX,-1

CE,NEXT,0,70152,UX,1,152,UX,-1
CE,NEXT,0,70152,UY,1,152,UY,-1
CE,NEXT,0,70152,UZ,1,152,UZ,-1
CE,NEXT,0,70152,ROTX,1,152,ROTX,-1

CE,NEXT,0,70177,UX,1,177,UX,-1
CE,NEXT,0,70177,UY,1,177,UY,-1
CE,NEXT,0,70177,UZ,1,177,UZ,-1
CE,NEXT,0,70177,ROTX,1,177,ROTX,-1

CE,NEXT,0,70151,UX,1,151,UX,-1
CE,NEXT,0,70151,UY,1,151,UY,-1
CE,NEXT,0,70151,UZ,1,151,UZ,-1
CE,NEXT,0,70151,ROTX,1,151,ROTX,-1

CE,NEXT,0,70176,UX,1,176,UX,-1
CE,NEXT,0,70176,UY,1,176,UY,-1
CE,NEXT,0,70176,UZ,1,176,UZ,-1
CE,NEXT,0,70176,ROTX,1,176,ROTX,-1

CE,NEXT,0,70150,UX,1,150,UX,-1
CE,NEXT,0,70150,UY,1,150,UY,-1
CE,NEXT,0,70150,UZ,1,150,UZ,-1
CE,NEXT,0,70150,ROTX,1,150,ROTX,-1

CE,NEXT,0,70175,UX,1,175,UX,-1
CE,NEXT,0,70175,UY,1,175,UY,-1
CE,NEXT,0,70175,UZ,1,175,UZ,-1
CE,NEXT,0,70175,ROTX,1,175,ROTX,-1

CE,NEXT,0,70149,UX,1,149,UX,-1
CE,NEXT,0,70149,UY,1,149,UY,-1
CE,NEXT,0,70149,UZ,1,149,UZ,-1
CE,NEXT,0,70149,ROTX,1,149,ROTX,-1

CE,NEXT,0,68109,UX,1,8109,UX,-1
CE,NEXT,0,68109,UY,1,8109,UY,-1
CE,NEXT,0,68109,UZ,1,8109,UZ,-1
CE,NEXT,0,68109,ROTX,1,8109,ROTX,-1

CE,NEXT,0,77109,UX,1,7109,UX,-1
CE,NEXT,0,77109,UY,1,7109,UY,-1
CE,NEXT,0,77109,UZ,1,7109,UZ,-1
CE,NEXT,0,77109,ROTX,1,7109,ROTX,-1

CE,NEXT,0,74109,UX,1,4109,UX,-1
CE,NEXT,0,74109,UY,1,4109,UY,-1
CE,NEXT,0,74109,UZ,1,4109,UZ,-1
CE,NEXT,0,74109,ROTX,1,4109,ROTX,-1

CE,NEXT,0,73109,UX,1,3109,UX,-1
CE,NEXT,0,73109,UY,1,3109,UY,-1
CE,NEXT,0,73109,UZ,1,3109,UZ,-1
CE,NEXT,0,73109,ROTX,1,3109,ROTX,-1

CE,NEXT,0,74120,UX,1,4120,UX,-1
CE,NEXT,0,74120,UY,1,4120,UY,-1
CE,NEXT,0,74120,UZ,1,4120,UZ,-1
CE,NEXT,0,74120,ROTX,1,4120,ROTX,-1

CE,NEXT,0,73120,UX,1,3120,UX,-1
CE,NEXT,0,73120,UY,1,3120,UY,-1
CE,NEXT,0,73120,UZ,1,3120,UZ,-1
CE,NEXT,0,73120,ROTX,1,3120,ROTX,-1

CE,NEXT,0,9,UY,1,60009,UY,-1

CE,NEXT,0,20,UY,1,60020,UY,-1
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CE,NEXT,0,108,UY,1,60108,UY,-1

CE,NEXT,0,119,UY,1,60119,UY,-1

CE,NEXT,0,1108,UY,1,61108,UY,-1

CE,NEXT,0,1119,UY,1,61119,UY,-1

CE,NEXT,0,2108,UY,1,62108,UY,-1

CE,NEXT,0,2119,UY,1,62119,UY,-1

CE,NEXT,0,3108,UY,1,63108,UY,-1

CE,NEXT,0,3119,UY,1,63119,UY,-1

CE,NEXT,0,4108,UY,1,64108,UY,-1

CE,NEXT,0,4119,UY,1,64119,UY,-1

CE,NEXT,0,5108,UY,1,65108,UY,-1

CE,NEXT,0,5119,UY,1,65119,UY,-1

CE,NEXT,0,6108,UY,1,66108,UY,-1

CE,NEXT,0,7108,UY,1,67108,UY,-1

CE,NEXT,0,7119,UY,1,67119,UY,-1

CE,NEXT,0,8108,UY,1,68108,UY,-1

CE,NEXT,0,8119,UY,1,68119,UY,-1

! DEFINE SUPPORTS BASED ON NODES

D,1,UX,0
D,1,UY,0
D,1,UZ,0
D,1,ROTX,0
D,1,ROTY,0

D,12,UX,0
D,12,UY,0
D,12,UZ,0
D,12,ROTX,0
D,12,ROTY,0

D,101,UX,0
D,101,UY,0
D,101,UZ,0
D,101,ROTX,0
D,101,ROTY,0

D,111,UX,0
D,111,UY,0
D,111,UZ,0
D,111,ROTX,0
D,111,ROTY,0

D,30112,UX,0
D,30112,UY,0
D,30112,UZ,0
D,30112,ROTX,0
D,30112,ROTY,0
D,30112,ROTZ,0

D,123,UX,0
D,123,UY,0
D,123,UZ,0
D,123,ROTY,0

D,1101,UX,0
D,1101,UY,0
D,1101,UZ,0
```

D,1101,ROTX,0
D,1101,ROTY,0

D,1111,UX,0
D,1111,UY,0
D,1111,UZ,0
D,1111,ROTX,0
D,1111,ROTY,0

D,31112,UX,0
D,31112,UY,0
D,31112,UZ,0
D,31112,ROTX,0
D,31112,ROTY,0
D,31112,ROTZ,0

D,1123,UX,0
D,1123,UY,0
D,1123,UZ,0
D,1123,ROTY,0

D,2101,UX,0
D,2101,UY,0
D,2101,UZ,0
D,2101,ROTX,0
D,2101,ROTY,0

D,2111,UX,0
D,2111,UY,0
D,2111,UZ,0
D,2111,ROTX,0
D,2111,ROTY,0

D,2122,UX,0
D,2122,UY,0
D,2122,UZ,0
D,2122,ROTY,0

D,32112,UX,0
D,32112,UY,0
D,32112,UZ,0
D,32112,ROTX,0
D,32112,ROTY,0
D,32112,ROTZ,0

D,2123,UX,0
D,2123,UY,0
D,2123,UZ,0
D,2123,ROTY,0

D,3101,UX,0
D,3101,UY,0
D,3101,UZ,0
D,3101,ROTX,0
D,3101,ROTY,0

D,3111,UX,0
D,3111,UY,0
D,3111,UZ,0
D,3111,ROTX,0
D,3111,ROTY,0

D,33112,UX,0
D,33112,UY,0
D,33112,UZ,0
D,33112,ROTX,0
D,33112,ROTY,0
D,33112,ROTZ,0

D,3123,UX,0
D,3123,UY,0
D,3123,UZ,0
D,3123,ROTY,0

```
D,4101,UX,0
D,4101,UY,0
D,4101,UZ,0
D,4101,ROTX,0
D,4101,ROTY,0

D,4111,UX,0
D,4111,UY,0
D,4111,UZ,0
D,4111,ROTX,0
D,4111,ROTY,0

D,5101,UX,0
D,5101,UY,0
D,5101,UZ,0
D,5101,ROTX,0
D,5101,ROTY,0

D,5111,UX,0
D,5111,UY,0
D,5111,UZ,0
D,5111,ROTX,0
D,5111,ROTY,0

D,5112,UZ,0

D,6101,UX,0
D,6101,UY,0
D,6101,UZ,0
D,6101,ROTY,0

D,7101,UX,0
D,7101,UY,0
D,7101,UZ,0
D,7101,ROTX,0
D,7101,ROTY,0

D,7111,UX,0
D,7111,UY,0
D,7111,UZ,0
D,7111,ROTX,0
D,7111,ROTY,0

D,8100,UX,0
D,8100,UY,0
D,8100,UZ,0
D,8100,ROTY,0

D,8101,UX,0
D,8101,UY,0
D,8101,UZ,0
D,8101,ROTX,0
D,8101,ROTY,0

D,8111,UX,0
D,8111,UY,0
D,8111,UZ,0
D,8111,ROTX,0
D,8111,ROTY,0

D,8156,UX,0
D,8156,UY,0
D,8156,UZ,0
D,8156,ROTY,0
D,8156,ROTZ,0

D,8157,UX,0
D,8157,UY,0
D,8157,UZ,0
D,8157,ROTY,0
D,8157,ROTZ,0

/SOLU

! Dead Load
```

```
FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1   ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

F,11434,FX,30000

ACEL,0,0,0                                                                    ! THIS
COMMAND ESTABLISHES THE DIRECTION AND FORCE FOR GRAVITY,
!                   USED FOR BUILDING DEAD LOAD

lswrite,1             ! Write dead load to file
SFEDELE,ALL,ALL,ALL    ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL         ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL      ! CLEAR ALL NODES LOADS
ACEL,0,0,0             ! REMOVES BUILDING DEAD LOAD FROM FUTURE LOAD STEPS

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER

F,11434,FZ,-30000

lswrite,2             ! Write dead load to file
SFEDELE,ALL,ALL,ALL    ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL         ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL      ! CLEAR ALL NODES LOADS

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1   ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

ACEL,0,GRAV,0



lswrite,5

ACEL,-GRAV,0,0



lswrite,6
ACEL,0,0,-GRAV



lswrite,7

ACEL,0,0,0

SFEDELE,ALL,ALL,ALL    ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL         ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL      ! CLEAR ALL NODES LOADS


FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1   ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

ACEL,0,0,0


F,38,FX,1950
F,152,FX,3900
F,178,FX,3900
F,1152,FX,3900
F,2152,FX,3900
F,3152,FX,3900
F,4152,FX,3900
F,5152,FX,3900
F,6152,FX,3900
F,7152,FX,3900
F,8152,FX,1950

F,27,FX,11500
F,145,FX,23000
```

```
F,1145,FX,23000
F,2145,FX,23000
F,3145,FX,23000
F,3160,FX,11500
F,5190,FX,11500


lswrite,8            ! Write 10 KIP LOAD AT ROOF FOR BUILDING COMPARSION
SFEDELE,ALL,ALL,ALL     ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL          ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL       ! CLEAR ALL NODES LOADS

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

ACEL,0,0,0

F,38,FY,-19500
F,152,FY,-39000
F,178,FY,-39000
F,1152,FY,-39000
F,2152,FY,-39000
F,3152,FY,-39000
F,4152,FY,-39000
F,5152,FY,-39000
F,6152,FY,-39000
F,7152,FY,-39000
F,8152,FY,-19500

F,27,FY,-115000
F,145,FY,-230000
F,1145,FY,-230000
F,2145,FY,-230000
F,3145,FY,-230000
F,3160,FY,-115000
F,5190,FY,-115000

lswrite,9            ! Write 10 KIP LOAD AT ROOF FOR BUILDING COMPARSION
SFEDELE,ALL,ALL,ALL     ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL          ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL       ! CLEAR ALL NODES LOADS

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

ACEL,0,0,0

F,38,FZ,1950
F,152,FZ,3900
F,178,FZ,3900
F,1152,FZ,3900
F,2152,FZ,3900
F,3152,FZ,3900
F,4152,FZ,3900
F,5152,FZ,3900
F,6152,FZ,3900
F,7152,FZ,3900
F,8152,FZ,1950

F,27,FZ,11500
F,145,FZ,23000
F,1145,FZ,23000
F,2145,FZ,23000
F,3145,FZ,23000
F,3160,FZ,11500
F,5190,FZ,11500

lswrite,10           ! Write 10 KIP LOAD AT ROOF FOR BUILDING COMPARSION


LSSOLVE,5,10,1         ! SOLVE MODEL FOR STADIC LOADS STEEL DEAD LOAD ONLY


NSEL,S,,,2
NSEL,A,,,19
```

```
NSEL,A,,,27
NSEL,A,,,38
NSEL,A,,,102
NSEL,A,,,118
NSEL,A,,,128
NSEL,A,,,146
NSEL,A,,,152
NSEL,A,,,1102
NSEL,A,,,1118
NSEL,A,,,1146
NSEL,A,,,1153
NSEL,A,,,2102
NSEL,A,,,2118
NSEL,A,,,2146
NSEL,A,,,2152
NSEL,A,,,3102
NSEL,A,,,3118
NSEL,A,,,3153
NSEL,A,,,4102
NSEL,A,,,4118
NSEL,A,,,4152
NSEL,A,,,5102
NSEL,A,,,5118
NSEL,A,,,5153
NSEL,A,,,6118
NSEL,A,,,6152
NSEL,A,,,7118
NSEL,A,,,7152
NSEL,A,,,8118
NSEL,A,,,8152


/POST1
AVPRIN,0, ,
ETABLE,FX_I,SMISC, 1
ETABLE,FX_J,SMISC, 7
!*
AVPRIN,0, ,
ETABLE,FY_I,SMISC, 2
ETABLE,FY_J,SMISC, 8
!*
AVPRIN,0, ,
ETABLE,FZ_I,SMISC, 3
ETABLE,FZ_J,SMISC, 9
!*
AVPRIN,0, ,
ETABLE,MX_I,SMISC, 4
ETABLE,MX_J,SMISC, 10
!*
AVPRIN,0, ,
ETABLE,MY_I,SMISC, 5
ETABLE,MY_J,SMISC, 11
!*
AVPRIN,0, ,
ETABLE,MZ_I,SMISC, 6
ETABLE,MZ_J,SMISC, 12



FINISH
```

Attachment 8

ANSYS Coupled Building/Crane Model, Crane at P, Static Loads

```
/BATCH
/FILENAME, PGCR045
!/CWD,'C:\Documents and Settings\mkeeney\Desktop\MCK_ANSYS\Ansys\output'
/TITLE,Auxzilary Building Modifications
/PREP7

! The units for this model are INCHES POUNDS SECONDS.
! The nodal coordinates are a direct copy of the GT STRDL model.
! The node numbers match the original model were possible.

! DEFINE NODE LOCATIONS

N,1,0,0,0
N,2,0,489.96,0
N,3,0,844.08,0
N,4,0,852,0
N,5,0,852,11
N,6,0,860.04,11
N,7,0,870.6,11
N,8,0,1065.96,11
N,9,0,852,-12
N,10,0,870.6,-12
N,12,0,0,-576
N,13,0,489.96,-576
N,14,0,844.08,-576
N,15,0,852,-576
N,16,0,852,-587
N,17,0,860.04,-587
N,18,0,870.6,-587
N,19,0,1065.96,-587
N,20,0,852,-564
N,21,0,870.6,-564
N,23,0,288,-336
N,24,0,489.96,-504
N,25,0,489.96,-432
N,26,0,489.96,-360
N,27,0,489.96,-288
N,28,0,489.96,-216
N,29,0,489.96,-144
N,30,0,489.96,-72
N,31,0,672,-432
N,32,0,672,-288
N,33,0,672,-144
N,34,0,844.08,-288
N,35,0,1065.96,-512
N,36,0,1065.96,-437
N,37,0,1065.96,-362
N,38,0,1065.96,-288
N,39,0,1065.96,-214
N,40,0,1065.96,-139
N,41,0,1065.96,-64
N,101,432,288,0
N,102,432,489.96,0
N,103,432,852,0
N,104,432,852,11
N,105,432,860.04,11
N,106,432,870.6,11
N,107,432,1065.96,11
N,108,432,852,-12
N,109,432,870.6,-12
N,111,432,288,-576
N,112,432,489.96,-576
N,113,432,573,-576
N,114,432,852,-576
N,115,432,852,-587
N,116,432,860.04,-587
N,117,432,870.6,-587
N,118,432,1065.96,-587
N,119,432,852,-564
N,120,432,870.6,-564
N,123,432,288,-288
N,124,216,489.96,-576
N,125,216,489.96,-504
N,126,216,489.96,-432
```

N,127,216,489.96,-360
N,128,216,489.96,-288
N,129,216,489.96,-216
N,130,216,489.96,-144
N,131,216,489.96,-72
N,132,216,489.96,0
N,133,336,489.96,-576
N,134,336,489.96,-504
N,135,336,489.96,-432
N,136,336,489.96,-360
N,137,336,489.96,-288
N,138,336,489.96,-216
N,139,336,489.96,-144
N,140,336,489.96,-72
N,141,336,489.96,0
N,142,432,489.96,-504
N,143,432,489.96,-432
N,144,432,489.96,-360
N,145,432,489.96,-288
N,146,432,489.96,-216
N,147,432,489.96,-144
N,148,432,489.96,-72
N,149,432,1065.96,-512
N,150,432,1065.96,-437
N,151,432,1065.96,-362
N,152,432,1065.96,-288
N,153,432,1065.96,-214
N,154,432,1065.96,-139
N,155,432,1065.96,-64
N,174,216,1065.96,-587
N,175,216,1065.96,-512
N,176,216,1065.96,-437
N,177,216,1065.96,-362
N,178,216,1065.96,-288
N,179,216,1065.96,-214
N,180,216,1065.96,-139
N,181,216,1065.96,-64
N,182,216,1065.96,11
N,183,577.5,573,-576
N,1101,723,288,0
N,1102,723,489.96,0
N,1103,723,852,0
N,1104,723,852,11
N,1105,723,860.04,11
N,1106,723,870.6,11
N,1107,723,1065.96,11
N,1108,723,852,-12
N,1109,723,870.6,-12
N,1111,723,288,-576
N,1112,723,489.96,-576
N,1113,723,573,-576
N,1114,723,852,-576
N,1115,723,852,-587
N,1116,723,860.04,-587
N,1117,723,870.6,-587
N,1118,723,1065.96,-587
N,1119,723,852,-564
N,1120,723,870.6,-564
N,1123,723,288,-288
N,1142,723,489.96,-504
N,1143,723,489.96,-432
N,1144,723,489.96,-360
N,1145,723,489.96,-288
N,1146,723,489.96,-216
N,1147,723,489.96,-144
N,1148,723,489.96,-72
N,1149,723,1065.96,-512
N,1150,723,1065.96,-437
N,1151,723,1065.96,-362
N,1152,723,1065.96,-288
N,1153,723,1065.96,-214
N,1154,723,1065.96,-139
N,1155,723,1065.96,-64
N,2101,1014,288,0
N,2102,1014,489.96,0

N,2103,1014,852,0
N,2104,1014,852,11
N,2105,1014,860.04,11
N,2106,1014,870.6,11
N,2107,1014,1065.96,11
N,2108,1014,852,-12
N,2109,1014,870.6,-12
N,2111,1014,288,-576
N,2112,1014,489.96,-576
N,2113,1014,573,-576
N,2114,1014,852,-576
N,2115,1014,852,-587
N,2116,1014,860.04,-587
N,2117,1014,870.6,-587
N,2118,1014,1065.96,-587
N,2119,1014,852,-564
N,2120,1014,870.6,-564
N,2122,1159.5,288,-587
N,2123,1014,288,-288
N,2124,1118.52,489.96,0
N,2125,1118.52,489.96,-72
N,2126,1159.5,489.96,-72
N,2127,1159.5,489.96,0
N,2142,1014,489.96,-504
N,2143,1014,489.96,-432
N,2144,1014,489.96,-360
N,2145,1014,489.96,-288
N,2146,1014,489.96,-216
N,2147,1014,489.96,-144
N,2148,1014,489.96,-72
N,2149,1014,1065.96,-512
N,2150,1014,1065.96,-437
N,2151,1014,1065.96,-362
N,2152,1014,1065.96,-288
N,2153,1014,1065.96,-214
N,2154,1014,1065.96,-139
N,2155,1014,1065.96,-64
N,2156,1159.5,489.96,-587
N,2157,1159.5,489.96,-504
N,2158,1159.5,489.96,-432
N,3100,1305,459.96,0
N,3101,1305,288,0
N,3102,1305,489.96,0
N,3103,1305,852,0
N,3104,1305,852,11
N,3105,1305,860.04,11
N,3106,1305,870.6,11
N,3107,1305,1065.96,11
N,3108,1305,852,-12
N,3109,1305,870.6,-12
N,3111,1305,288,-576
N,3112,1305,489.96,-576
N,3113,1305,573,-576
N,3114,1305,852,-576
N,3115,1305,852,-587
N,3116,1305,860.04,-587
N,3117,1305,870.6,-587
N,3118,1305,1065.96,-587
N,3119,1305,852,-564
N,3120,1305,870.6,-564
N,3121,1159.5,860.04,-587
N,3123,1305,288,-288
N,3142,1305,489.96,-504
N,3143,1305,489.96,-432
N,3144,1305,489.96,-360
N,3145,1305,489.96,-288
N,3146,1305,489.96,-216
N,3147,1305,489.96,-144
N,3148,1305,489.96,-72
N,3149,1305,1065.96,-512
N,3150,1305,1065.96,-437
N,3151,1305,1065.96,-362
N,3152,1305,1065.96,-288
N,3153,1305,1065.96,-214
N,3154,1305,1065.96,-139

N,3155,1305,1065.96,-64
N,3156,1437,489.96,-576
N,3157,1437,489.96,-504
N,3158,1437,489.96,-432
N,3159,1437,489.96,-360
N,3160,1437,489.96,-288
N,3161,1437,489.96,-216
N,3162,1437,489.96,-144
N,3163,1437,489.96,-72
N,3164,1437,489.96,0
N,3165,1437,459.96,0
N,4100,1578,459.96,0
N,4101,1578,288,0
N,4102,1578,489.96,0
N,4103,1578,852,0
N,4104,1578,852,11
N,4105,1578,860.04,11
N,4106,1578,870.6,11
N,4107,1578,1065.96,11
N,4108,1578,852,-12
N,4109,1578,870.6,-12
N,4111,1578,288,-576
N,4112,1578,489.96,-576
N,4113,1578,573,-576
N,4114,1578,852,-576
N,4115,1578,852,-587
N,4116,1578,860.04,-587
N,4117,1578,870.6,-587
N,4118,1578,1065.96,-587
N,4119,1578,852,-564
N,4120,1578,870.6,-564
N,4122,1578,971.04,-587
N,4149,1578,1065.96,-512
N,4150,1578,1065.96,-437
N,4151,1578,1065.96,-362
N,4152,1578,1065.96,-288
N,4153,1578,1065.96,-214
N,4154,1578,1065.96,-139
N,4155,1578,1065.96,-64
N,4156,1717.5,971.04,-587
N,5100,1857,459.96,0
N,5101,1857,288,0
N,5102,1857,489.96,0
N,5103,1857,852,0
N,5104,1857,852,11
N,5105,1857,860.04,11
N,5106,1857,870.6,11
N,5107,1857,1065.96,11
N,5108,1857,852,-12
N,5109,1857,870.6,-12
N,5111,1857,288,-576
N,5112,1857,489.96,-576
N,5113,1857,573,-576
N,5114,1857,852,-576
N,5115,1857,852,-587
N,5116,1857,860.04,-587
N,5117,1857,870.6,-587
N,5118,1857,1065.96,-587
N,5119,1857,852,-564
N,5120,1857,870.6,-564
N,5122,1857,971.04,-587
N,5123,1717.5,573,-576
N,5149,1857,1065.96,-512
N,5150,1857,1065.96,-437
N,5151,1857,1065.96,-362
N,5152,1857,1065.96,-288
N,5153,1857,1065.96,-214
N,5154,1857,1065.96,-139
N,5155,1857,1065.96,-64
N,5187,1857,489.96,-504
N,5188,1857,489.96,-432
N,5189,1857,489.96,-360
N,5190,1857,489.96,-288
N,5191,1857,489.96,-216
N,5192,1857,489.96,-144

```
N,5193,1857,489.96,-72
N,6101,2097,516,0
N,6103,2097,852,0
N,6104,2097,852,11
N,6105,2097,860.04,11
N,6106,2097,870.6,11
N,6107,2097,1065.96,11
N,6108,2097,852,-12
N,6109,2097,870.6,-12
N,6118,2097,1065.96,-587
N,6149,2097,1065.96,-512
N,6150,2097,1065.96,-437
N,6151,2097,1065.96,-362
N,6152,2097,1065.96,-288
N,6153,2097,1065.96,-214
N,6154,2097,1065.96,-139
N,6155,2097,1065.96,-64
N,7101,2301,516,0
N,7103,2301,852,0
N,7104,2301,852,11
N,7105,2301,860.04,11
N,7106,2301,870.6,11
N,7107,2301,1065.96,11
N,7108,2301,852,-12
N,7109,2301,870.6,-12
N,7111,2301,516,-576
N,7114,2301,852,-576
N,7115,2301,852,-587
N,7116,2301,860.04,-587
N,7117,2301,870.6,-587
N,7118,2301,1065.96,-587
N,7119,2301,852,-564
N,7120,2301,870.6,-564
N,7122,2301,971.04,-587
N,7149,2301,1065.96,-512
N,7150,2301,1065.96,-437
N,7151,2301,1065.96,-362
N,7152,2301,1065.96,-288
N,7153,2301,1065.96,-214
N,7154,2301,1065.96,-139
N,7155,2301,1065.96,-64
N,8100,2505,516,-288
N,8101,2505,516,0
N,8103,2505,852,0
N,8104,2505,852,11
N,8105,2505,860.04,11
N,8106,2505,870.6,11
N,8107,2505,1065.96,11
N,8108,2505,852,-12
N,8109,2505,870.6,-12
N,8111,2505,516,-576

N,8112,2505,849.98,-288      ! NEW NODE FOR MODAL ANALISYS MCK 9/22/10

N,8114,2505,852,-576
N,8115,2505,852,-587
N,8116,2505,860.04,-587
N,8117,2505,870.6,-587
N,8118,2505,1065.96,-587
N,8119,2505,852,-564
N,8120,2505,870.6,-564
N,8149,2505,1065.96,-512
N,8150,2505,1065.96,-437
N,8151,2505,1065.96,-362
N,8152,2505,1065.96,-288
N,8153,2505,1065.96,-214
N,8154,2505,1065.96,-139
N,8155,2505,1065.96,-64
N,8156,432,288,-932
N,8157,1578,288,-900
N,21740,1159.5,573,-587
N,81660,2505,971.04,-587

!
!   Added runway girder nodes
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```
!    Replace "CNR" with on node numbers starting at 10000.
N,10101,2241,870.6,-564
N,10102,2187,870.6,-564
N,10103,2019,870.6,-564
N,10104,1965,870.6,-564
N,10113,2241,870.6,-12
N,10114,2187,870.6,-12
N,10115,2019,870.6,-12
N,10116,1965,870.6,-12
N,10201,2139,870.6,-564
N,10202,2085,870.6,-564
N,10203,1917,870.6,-564
N,10204,1863,870.6,-564
N,10213,2139,870.6,-12
N,10214,2085,870.6,-12
N,10215,1917,870.6,-12
N,10216,1863,870.6,-12
N,10301,2106,870.6,-564
N,10302,2052,870.6,-564
N,10303,1884,870.6,-564
N,10304,1830,870.6,-564
N,10313,2106,870.6,-12
N,10314,2052,870.6,-12
N,10315,1884,870.6,-12
N,10316,1830,870.6,-12
N,10401,1296,870.6,-564
N,10402,1242,870.6,-564
N,10403,1074,870.6,-564
N,10404,1020,870.6,-564
N,10413,1296,870.6,-12
N,10414,1242,870.6,-12
N,10415,1074,870.6,-12
N,10416,1020,870.6,-12
N,10501,1263,870.6,-564
N,10502,1209,870.6,-564
N,10503,1041,870.6,-564
N,10504,987,870.6,-564
N,10513,1263,870.6,-12
N,10514,1209,870.6,-12
N,10515,1041,870.6,-12
N,10516,987,870.6,-12
N,10601,1173,870.6,-564
N,10602,1119,870.6,-564
N,10603,951,870.6,-564
N,10604,897,870.6,-564
N,10613,1173,870.6,-12
N,10614,1119,870.6,-12
N,10615,951,870.6,-12
N,10616,897,870.6,-12
N,10701,459,870.6,-564
N,10702,405,870.6,-564
N,10703,237,870.6,-564
N,10704,183,870.6,-564
N,10713,459,870.6,-12
N,10714,405,870.6,-12
N,10715,237,870.6,-12
N,10716,183,870.6,-12
N,10801,372,870.6,-564
N,10802,318,870.6,-564
N,10803,150,870.6,-564
N,10804,96,870.6,-564
N,10813,372,870.6,-12
N,10814,318,870.6,-12
N,10815,150,870.6,-12
N,10816,96,870.6,-12
N,10901,303,870.6,-564
N,10902,249,870.6,-564
N,10903,81,870.6,-564
N,10904,27,870.6,-564
N,10913,303,870.6,-12
N,10914,249,870.6,-12
N,10915,81,870.6,-12
N,10916,27,870.6,-12
!
!    Added crane nodes
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```
!  Replace "CN" with on nodes numbers starting at 11000
N,11001,1146,946.1,-12
N,11002,1146,946.1,-238.38
N,11003,1146,946.1,-21.96
N,11004,1146,946.1,-31.91
N,11005,1146,946.1,-41.87
N,11006,1146,946.1,-51.83
N,11007,1146,946.1,-61.78
N,11008,1146,946.1,-71.74
N,11009,1146,946.1,-81.7
N,11010,1146,946.1,-91.65
N,11011,1146,946.1,-101.61
N,11012,1146,946.1,-111.57
N,11013,1146,946.1,-121.52
N,11014,1146,946.1,-131.48
N,11015,1146,946.1,-141.43
N,11016,1146,946.1,-151.39
N,11017,1146,946.1,-161.35
N,11018,1146,946.1,-171.3
N,11019,1146,946.1,-181.26
N,11020,1146,946.1,-191.22
N,11021,1146,946.1,-201.17
N,11022,1146,946.1,-211.13
N,11023,1146,946.1,-221.09
N,11024,1146,946.1,-231.04
N,11025,1146,946.1,-564
N,11026,1146,946.1,-332.38
N,11027,1146,946.1,-554.04
N,11028,1146,946.1,-544.09
N,11029,1146,946.1,-534.13
N,11030,1146,946.1,-524.17
N,11031,1146,946.1,-514.22
N,11032,1146,946.1,-504.26
N,11033,1146,946.1,-494.3
N,11034,1146,946.1,-484.35
N,11035,1146,946.1,-474.39
N,11036,1146,946.1,-464.43
N,11037,1146,946.1,-454.48
N,11038,1146,946.1,-444.52
N,11039,1146,946.1,-434.57
N,11040,1146,946.1,-424.61
N,11041,1146,946.1,-414.65
N,11042,1146,946.1,-404.7
N,11043,1146,946.1,-394.73913
N,11044,1146,946.1,-384.78
N,11045,1146,946.1,-374.83
N,11046,1146,946.1,-364.87
N,11047,1146,946.1,-354.91
N,11048,1146,946.1,-344.96
N,11049,924,946.1,-12
N,11050,924,946.1,-238.38
N,11051,924,946.1,-21.96
N,11052,924,946.1,-31.91
N,11053,924,946.1,-41.87
N,11054,924,946.1,-51.83
N,11055,924,946.1,-61.78
N,11056,924,946.1,-71.74
N,11057,924,946.1,-81.7
N,11058,924,946.1,-91.65
N,11059,924,946.1,-101.61
N,11060,924,946.1,-111.57
N,11061,924,946.1,-121.52
N,11062,924,946.1,-131.48
N,11063,924,946.1,-141.43
N,11064,924,946.1,-151.39
N,11065,924,946.1,-161.35
N,11066,924,946.1,-171.3
N,11067,924,946.1,-181.26
N,11068,924,946.1,-191.22
N,11069,924,946.1,-201.17
N,11070,924,946.1,-211.13
N,11071,924,946.1,-221.09
N,11072,924,946.1,-231.04
N,11073,1146,946.1,-325.6
N,11074,1146,946.1,-316.2
```

N,11075,1146,946.1,-306.8
N,11076,1146,946.1,-297.4
N,11077,1146,946.1,-288
N,11078,1146,946.1,-278.6
N,11079,1146,946.1,-269.2
N,11080,1146,946.1,-259.8
N,11081,1146,946.1,-250.4
N,11082,924,946.1,-564
N,11083,924,946.1,-332.38
N,11084,924,946.1,-554.04
N,11085,924,946.1,-544.09
N,11086,924,946.1,-534.13
N,11087,924,946.1,-524.17
N,11088,924,946.1,-514.22
N,11089,924,946.1,-504.26
N,11090,924,946.1,-494.3
N,11091,924,946.1,-484.35
N,11092,924,946.1,-474.39
N,11093,924,946.1,-464.43
N,11094,924,946.1,-454.48
N,11095,924,946.1,-444.52
N,11096,924,946.1,-434.57
N,11097,924,946.1,-424.61
N,11098,924,946.1,-414.65
N,11099,924,946.1,-404.7
N,11100,924,946.1,-394.73913
N,11101,924,946.1,-384.78
N,11102,924,946.1,-374.83
N,11103,924,946.1,-364.87
N,11104,924,946.1,-354.91
N,11105,924,946.1,-344.96
N,11106,924,946.1,-325.6
N,11107,924,946.1,-316.2
N,11108,924,946.1,-306.8
N,11109,924,946.1,-297.4
N,11110,924,946.1,-288
N,11111,924,946.1,-278.6
N,11112,924,946.1,-269.2
N,11113,924,946.1,-259.8
N,11114,924,946.1,-250.4
N,11115,924,947.1,-332.38
N,11116,924,998.9,-332.38
N,11117,924,955.73333333,-332.38
N,11118,924,964.3666667,-332.38
N,11119,924,973,-332.38
N,11120,924,981.6333333,-332.38
N,11121,924,990.2666667,-332.38
N,11122,1146,947.1,-332.38
N,11123,1146,998.9,-332.38
N,11124,1146,955.73333333,-332.38
N,11125,1146,964.3666667,-332.38
N,11126,1146,973,-332.38
N,11127,1146,981.6333333,-332.38
N,11128,1146,990.2666667,-332.38
N,11129,1146,947.1,-238.38
N,11130,1146,998.9,-238.38
N,11131,1146,955.73333333,-238.38
N,11132,1146,964.3666667,-238.38
N,11133,1146,973,-238.38
N,11134,1146,981.6333333,-238.38
N,11135,1146,990.2666667,-238.38
N,11136,924,947.1,-238.38
N,11137,924,998.9,-238.38
N,11138,924,955.73333333,-238.38
N,11139,924,964.3666667,-238.38
N,11140,924,973,-238.38
N,11141,924,981.6333333,-238.38
N,11142,924,990.2666667,-238.38
N,11205,1136.347826,946.1,-564
N,11206,1126.6956522,946.1,-564
N,11207,1117.0434783,946.1,-564
N,11208,1107.3913043,946.1,-564
N,11209,1097.7391304,946.1,-564
N,11210,1088.0869565,946.1,-564
N,11211,1078.4347826,946.1,-564

N,11212,1068.7826087,946.1,-564
N,11213,1059.1304348,946.1,-564
N,11214,1049.4782609,946.1,-564
N,11215,1039.82608696,946.1,-564
N,11216,1030.17391304,946.1,-564
N,11217,1020.5217391,946.1,-564
N,11218,1010.8695652,946.1,-564
N,11219,1001.2173913,946.1,-564
N,11220,991.5652174,946.1,-564
N,11221,981.9130435,946.1,-564
N,11222,972.2608696,946.1,-564
N,11223,962.6086957,946.1,-564
N,11224,952.9565217,946.1,-564
N,11225,943.3043478,946.1,-564
N,11226,933.652174,946.1,-564
N,11227,933.652174,946.1,-12
N,11228,943.3043478,946.1,-12
N,11229,952.9565217,946.1,-12
N,11230,962.6086957,946.1,-12
N,11231,972.2608696,946.1,-12
N,11232,981.9130435,946.1,-12
N,11233,991.5652174,946.1,-12
N,11234,1001.2173913,946.1,-12
N,11235,1010.8695652,946.1,-12
N,11236,1020.5217391,946.1,-12
N,11237,1030.17391304,946.1,-12
N,11238,1039.82608696,946.1,-12
N,11239,1049.4782609,946.1,-12
N,11240,1059.1304348,946.1,-12
N,11241,1068.7826087,946.1,-12
N,11242,1078.4347826,946.1,-12
N,11243,1088.0869565,946.1,-12
N,11244,1097.7391304,946.1,-12
N,11245,1107.3913043,946.1,-12
N,11246,1117.0434783,946.1,-12
N,11247,1126.6956522,946.1,-12
N,11248,1136.347826,946.1,-12
N,11249,1146,904.6,-564
N,11250,1146,912.9,-564
N,11251,1146,921.2,-564
N,11252,1146,929.5,-564
N,11253,1146,937.8,-564
N,11254,924,904.6,-564
N,11255,924,912.9,-564
N,11256,924,921.2,-564
N,11257,924,929.5,-564
N,11258,924,937.8,-564
N,11259,1146,904.6,-12
N,11260,1146,912.9,-12
N,11261,1146,921.2,-12
N,11262,1146,929.5,-12
N,11263,1146,937.8,-12
N,11264,924,904.6,-12
N,11265,924,912.9,-12
N,11266,924,921.2,-12
N,11267,924,929.5,-12
N,11268,924,937.8,-12
N,11270,1173,904.6,-564
N,11272,1119,904.6,-564
N,11274,951,904.6,-564
N,11276,897,904.6,-564
N,11278,1173,904.6,-12
N,11280,1119,904.6,-12
N,11282,951,904.6,-12
N,11284,897,904.6,-12
N,11285,1164,904.6,-564
N,11286,1155,904.6,-564
N,11287,942,904.6,-564
N,11288,933,904.6,-564
N,11289,1128,904.6,-564
N,11290,1137,904.6,-564
N,11291,906,904.6,-564
N,11292,915,904.6,-564
N,11293,1164,904.6,-12
N,11294,1155,904.6,-12

N,11295,942,904.6,-12
N,11296,933,904.6,-12
N,11297,1128,904.6,-12
N,11298,1137,904.6,-12
N,11299,906,904.6,-12
N,11300,915,904.6,-12
N,11301,1109.1176471,904.6,-564
N,11302,1099.2352941,904.6,-564
N,11303,1089.3529412,904.6,-564
N,11304,1079.4705882,904.6,-564
N,11305,1069.5882353,904.6,-564
N,11306,1059.7058824,904.6,-564
N,11307,1049.8235294,904.6,-564
N,11308,1039.94117647,904.6,-564
N,11309,1030.05882353,904.6,-564
N,11310,1020.1764706,904.6,-564
N,11311,1010.2941176,904.6,-564
N,11312,1000.4117647,904.6,-564
N,11313,990.5294118,904.6,-564
N,11314,980.6470588,904.6,-564
N,11315,970.7647059,904.6,-564
N,11316,960.8823529,904.6,-564
N,11317,960.8823529,904.6,-12
N,11318,970.7647059,904.6,-12
N,11319,980.6470588,904.6,-12
N,11320,990.5294118,904.6,-12
N,11321,1000.4117647,904.6,-12
N,11322,1010.2941176,904.6,-12
N,11323,1020.1764706,904.6,-12
N,11324,1030.05882353,904.6,-12
N,11325,1039.94117647,904.6,-12
N,11326,1049.8235294,904.6,-12
N,11327,1059.7058824,904.6,-12
N,11328,1069.5882353,904.6,-12
N,11329,1079.4705882,904.6,-12
N,11330,1089.3529412,904.6,-12
N,11331,1099.2352941,904.6,-12
N,11332,1109.1176471,904.6,-12
N,11333,924,1011.9,-288
N,11334,924,1011.9,-229.63
N,11337,1146,1011.9,-229.63
N,11338,1146,1011.9,-288
N,11341,1146,1011.9,-341.63
N,11344,924,1011.9,-341.63
N,11347,1126.5,1011.9,-229.63
N,11348,1117.81,1011.9,-229.63
N,11349,1100.31,1011.9,-229.63
N,11350,1084,1011.9,-229.63
N,11351,1066.5,1011.9,-229.63
N,11352,1058,1011.9,-229.63
N,11353,937.19,1011.9,-229.63
N,11354,943.82,1011.9,-229.63
N,11355,954.82,1011.9,-229.63
N,11356,1012,1011.9,-229.63
N,11357,1042.66666667,1011.9,-229.63
N,11358,1027.33333333,1011.9,-229.63
N,11359,977.25,1011.9,-229.63
N,11360,966.035,1011.9,-229.63
N,11361,999.75,1011.9,-229.63
N,11362,988.5,1011.9,-229.63
N,11363,1126.5,1011.9,-288
N,11365,1117.81,1011.9,-288
N,11366,1100.31,1011.9,-288
N,11367,1084,1011.9,-288
N,11368,1058,1011.9,-288
N,11369,1012,1011.9,-288
N,11372,1066.5,1011.9,-288
N,11373,937.19,1011.9,-288
N,11374,943.82,1011.9,-288
N,11375,954.82,1011.9,-288
N,11376,977.25,1011.9,-288
N,11377,966.035,1011.9,-288
N,11378,999.75,1011.9,-288
N,11379,988.5,1011.9,-288
N,11392,1066.5,1011.9,-249.09

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N,11393,1066.5,1011.9,-268.55
N,11395,999.75,1011.9,-249.09
N,11396,999.75,1011.9,-268.55
N,11397,1058,1011.9,-268.38
N,11399,1058,1011.9,-247.38
N,11400,1012,1011.9,-247.38
N,11401,1058,1011.9,-257.88
N,11402,1012,1011.9,-268.38
N,11403,1012,1011.9,-257.88
N,11405,1042.66666667,1011.9,-268.38
N,11406,1027.33333333,1011.9,-268.38
N,11408,1042.66666667,1011.9,-247.38
N,11409,1027.33333333,1011.9,-247.38
N,11411,1117.81,1011.9,-249.09
N,11412,1117.81,1011.9,-268.55
N,11414,1100.31,1011.9,-249.09
N,11415,1100.31,1011.9,-268.55
N,11417,1084,1011.9,-249.09
N,11418,1084,1011.9,-268.55
N,11420,937.19,1011.9,-249.09
N,11421,937.19,1011.9,-268.55
N,11423,954.82,1011.9,-249.09
N,11424,954.82,1011.9,-268.55
N,11426,977.25,1011.9,-249.09
N,11427,977.25,1011.9,-268.55
N,11429,1126.5,1011.9,-249.09
N,11430,1126.5,1011.9,-268.55
N,11432,943.82,1011.9,-249.09
N,11433,943.82,1011.9,-268.55
N,11434,1035,1011.9,-288
N,11435,1046.5,1011.9,-288
N,11436,1023.5,1011.9,-288
N,11437,1146,1011.9,-332.38
N,11438,1146,1011.9,-302.8
N,11439,1146,1011.9,-317.59
N,11440,924,1011.9,-332.38
N,11441,924,1011.9,-302.8
N,11442,924,1011.9,-317.59
N,11443,1146,1011.9,-238.38
N,11444,1146,1011.9,-254.92
N,11445,1146,1011.9,-271.46
N,11446,924,1011.9,-238.38
N,11447,924,1011.9,-254.92
N,11448,924,1011.9,-271.46
N,11450,1035,915.74,-288

! The following nodes are for column and beam orentation.

N,20001,100,800,-587
N,20002,100,800,-576
N,20003,100,800,-564
N,20004,100,800,-512
N,20005,100,800,-504
N,20006,100,800,-439.97
N,20007,100,800,-437
N,20008,100,800,-420.35
N,20009,100,800,-399.35
N,20010,100,800,-381.6
N,20011,100,800,-362
N,20012,100,800,-360
N,20013,100,800,-288
N,20014,100,800,-216
N,20015,100,800,-214
N,20016,100,800,-144
N,20017,100,800,-139
N,20018,100,800,-72
N,20019,100,800,-64
N,20020,100,800,-12
N,20021,100,800,0
N,20022,100,800,11
N,20030,100,800,-586
N,20035,100,800,-12
N,20036,100,800,-401.06
N,20049,100,800,-12
N,20052,10000,800,-288
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N,20054,10000,800,-586
N,20055,723,800,-586
N,20056,0,800,-586
N,20057,216,800,-586
N,20058,432,800,-586
N,20059,1014,800,-586
N,20060,1305,800,-586
N,20061,1578,800,-586
N,20062,1857,800,-586
N,20063,2097,800,-586
N,20064,2301,800,-586
N,20065,2505,800,-586
N,20066,1159.5,800,-586
N,20067,1437,800,-586
N,20068,1118.52,800,-586
N,20069,100,489.95,-576
N,20070,100,288,-336
N,20071,0,-100,-362
N,20072,0,-100,-214
N,20073,216,-100,11
N,20074,723,-100,11
N,20075,1305,-100,11
N,20076,1857,-100,11
N,20077,2301,-100,11
N,20078,2301,-100,-362
N,20079,2505,-100,-362
N,20080,1014,800,-576
N,20081,336,800,100
N,20082,100,800,-432
N,20083,-100,672,-432       !31
N,20084,-100,672,-144       !33
N,20085,-100,844.08,-288    !34
N,20086,723,-100,-288       !1145
N,20087,1014,-100,-288      !2145
N,20088,1305,-100,-288      !3145

! SPRING NODES

N,30112,432,489.96,-576
N,31112,723,489.96,-576
N,32112,1014,489.96,-576
N,33112,1305,489.96,-576
!N,35112,1857,489.96,-576

!CONSTRAINT NODES

N,40101,1173,894.6,-564
N,40102,1119,894.6,-564
N,40103,951,894.6,-564
N,40104,897,894.6,-564
N,40113,1173,894.6,-12
N,40114,1119,894.6,-12
N,40115,951,894.6,-12
N,40116,897,894.6,-12

! NODES FOR BEAM EXCENTRICITY

N,50037,0,1059.4725,-362
N,50039,0,1059.4725,-214
N,50153,432,1059.4725,-214
N,50174,216,1059.4725,-587
N,50177,216,1059.4725,-362
N,50179,216,1059.4725,-214
N,50182,216,1059.4725,11
N,51107,723,1059.4725,11
N,52153,1014,1059.4725,-214

N,52156,1159.5,489.96,-576
N,52174,1159.5,573,-576

N,53107,1305,1059.285,11
N,54153,1578,1059.285,-214
N,55107,1857,1059.285,11
N,56153,2097,1059.285,-214
N,57107,2301,1059.285,11
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N,57118,2301,1059.285,-587
N,57151,2301,1059.285,-362
N,57153,2301,1059.285,-214
N,58151,2505,1059.285,-362
N,58153,2505,1059.285,-214

! ELEMENT TYPE 2 NODES

N,60002,0,489.96,0
N,70002,0,489.96,0
N,80002,0,489.96,0
N,60008,0,1065.96,11
N,60012,0,0,-576
N,60013,0,489.96,-576
N,70013,0,489.96,-576
N,80013,0,489.96,-576
N,90013,0,489.96,-576
N,60019,0,1065.96,-587
N,70019,0,1065.96,-587
N,60031,0,672,-432
N,60034,0,844.08,-288
N,70034,0,844.08,-288
N,60113,432,573,-576
N,60124,216,489.96,-576
N,60133,336,489.96,-576
N,60174,216,1065.96,-587
N,61109,723,870.6,-12
N,61120,723,870.6,-564
N,72102,1014,489.96,0
N,62109,1014,870.6,-12
N,62116,1014,860.04,-587
N,62120,1014,870.6,-564
N,62143,1014,489.96,-432
N,62148,1014,489.96,-72
N,62156,1159.5,489.96,-587
N,63100,1305,459.96,0
N,73112,1305,489.96,-576
N,63120,1305,870.6,-564
N,63156,1437,489.96,-576
N,64113,1578,573,-576
N,64122,1578,971.04,-587
N,65112,1857,489.96,-576
N,75118,1857,1065.96,-587
N,66118,2097,1065.96,-587
N,73102,1305,489.96,0
N,63109,1305,870.6,-12
N,65109,1857,870.6,-12
N,65120,1857,870.6,-564
N,66109,2097,870.6,-12
N,67109,2301,870.6,-12
N,68120,2505,870.6,-564


! ELEMENT TYPE 3 NODES

N,60112,432,489.96,-576
N,60118,432,1065.96,-587
N,61112,723,489.96,-576
N,61118,723,1065.96,-587
N,62112,1014,489.96,-576
N,62118,1014,1065.96,-587
N,63112,1305,489.96,-576
N,63118,1305,1065.96,-587
N,64118,1578,1065.96,-587
N,65118,1857,1065.96,-587
N,67118,2301,1065.96,-587
N,68118,2505,1065.96,-587

! ELEMENT TYPE 7 NODES

N,90002,0,489.96,0
N,60033,0,672,-144
N,70033,0,672,-144
N,70008,0,1065.96,11
N,70031,0,672,-432
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N,60145,432,489.96,-288
N,60132,216,489.96,0
N,60141,336,489.96,0
N,61113,723,573,-576
N,61145,723,489.96,-288
N,62145,1014,489.96,-288
N,63121,1159.5,860.04,-587
N,63145,1305,489.96,-288
N,63164,1437,489.96,0
N,65102,1857,489.96,0
N,66107,2097,1065.96,11
N,70102,432,489.96,0
N,70112,432,489.96,-576
N,63143,1305,489.96,-432
N,64102,1578,489.96,0
N,64112,1578,489.96,-576
N,65122,1857,971.04,-587
N,65113,1857,573,-576
N,83102,1305,489.96,0
N,63148,1305,489.96,-72
N,68152,2505,1065.96,-288
N,63116,1305,860.04,-587
N,77118,2301,1065.96,-587
N,70107,432,1065.96,11
N,70118,432,1065.96,-587
N,60182,216,1065.96,11
N,76109,2097,870.6,-12
N,75109,1857,870.6,-12
N,64109,1578,870.6,-12
N,72109,1014,870.6,-12
N,71109,723,870.6,-12
N,60010,0,870.6,-12
N,75120,1857,870.6,-564
N,64120,1578,870.6,-564
N,72120,1014,870.6,-564
N,71120,723,870.6,-564
N,60021,0,870.6,-564

! ELEMENT TYPE 8 NODES

N,60102,432,489.96,0
N,60107,432,1065.96,11
N,61102,723,489.96,0
N,61107,723,1065.96,11
N,62102,1014,489.96,0
N,62107,1014,1065.96,11
N,63102,1305,489.96,0
N,63107,1305,1065.96,11
N,64100,1578,459.96,0
N,64107,1578,1065.96,11
N,65107,1857,1065.96,11
N,67107,2301,1065.96,11
N,68107,2505,1065.96,11

! ELEMENT TYPE 9 NODES

N,60003,0,844.08,0
N,60006,0,860.04,11
N,80008,0,1065.96,11
N,60014,0,844.08,-576
N,60017,0,860.04,-587
N,80019,0,1065.96,-587
N,60024,0,489.96,-504
N,60025,0,489.96,-432
N,60026,0,489.96,-360
N,60027,0,489.96,-288
N,60028,0,489.96,-216
N,60029,0,489.96,-144
N,60030,0,489.96,-72
N,80034,0,844.08,-288
N,90034,0,844.08,-288
N,100034,0,844.08,-288
N,110034,0,844.08,-288
N,60035,0,1065.96,-512
N,60036,0,1065.96,-437

N,60037,0,1065.96,-362
N,60038,0,1065.96,-288
N,60039,0,1065.96,-214
N,60040,0,1065.96,-139
N,60041,0,1065.96,-64
N,60101,432,288,0
N,80102,432,489.96,0
N,90102,432,489.96,0
N,100102,432,489.96,0
N,60105,432,860.04,11
N,70105,432,860.04,11
N,80105,432,860.04,11
N,80107,432,1065.96,11
N,80112,432,489.96,-576
N,90112,432,489.96,-576
N,100112,432,489.96,-576
N,110112,432,489.96,-576
N,70113,432,573,-576
N,60116,432,860.04,-587
N,70116,432,860.04,-587
N,80116,432,860.04,-587
N,60118,432,1065.96,-587
N,80118,432,1065.96,-587
N,60125,216,489.96,-504
N,70125,216,489.96,-504
N,60126,216,489.96,-432
N,60127,216,489.96,-360
N,60128,216,489.96,-288
N,60129,216,489.96,-216
N,60130,216,489.96,-144
N,60131,216,489.96,-72
N,70131,216,489.96,-72
N,60134,336,489.96,-504
N,70134,336,489.96,-504
N,60135,336,489.96,-432
N,60136,336,489.96,-360
N,60137,336,489.96,-288
N,60138,336,489.96,-216
N,60139,336,489.96,-144
N,60140,336,489.96,-72
N,70140,336,489.96,-72
N,60142,432,489.96,-504
N,70142,432,489.96,-504
N,60143,432,489.96,-432
N,70143,432,489.96,-432
N,60144,432,489.96,-360
N,70144,432,489.96,-360
N,70145,432,489.96,-288
N,80145,432,489.96,-288
N,60146,432,489.96,-216
N,70146,432,489.96,-216
N,60147,432,489.96,-144
N,70147,432,489.96,-144
N,60148,432,489.96,-72
N,70148,432,489.96,-72
N,60149,432,1065.96,-512
N,70149,432,1065.96,-512
N,60150,432,1065.96,-437
N,70150,432,1065.96,-437
N,60151,432,1065.96,-362
N,70151,432,1065.96,-362
N,60152,432,1065.96,-288
N,70152,432,1065.96,-288
N,60153,432,1065.96,-214
N,70153,432,1065.96,-214
N,60154,432,1065.96,-139
N,70154,432,1065.96,-139
N,60155,432,1065.96,-64
N,70155,432,1065.96,-64
N,60175,216,1065.96,-512
N,70175,216,1065.96,-512
N,60176,216,1065.96,-437
N,70176,216,1065.96,-437
N,60177,216,1065.96,-362
N,70177,216,1065.96,-362

N,60178,216,1065.96,-288
N,70178,216,1065.96,-288
N,60179,216,1065.96,-214
N,70179,216,1065.96,-214
N,60180,216,1065.96,-139
N,70180,216,1065.96,-139
N,60181,216,1065.96,-64
N,70181,216,1065.96,-64
N,60183,577.5,573,-576
N,70183,577.5,573,-576
N,71102,723,489.96,0
N,81102,723,489.96,0
N,91102,723,489.96,0
N,61103,723,852,0
N,61105,723,860.04,11
N,71105,723,860.04,11
N,71107,723,1065.96,11
N,81107,723,1065.96,11
N,91107,723,1065.96,11
N,71112,723,489.96,-576
N,81112,723,489.96,-576
N,91112,723,489.96,-576
N,71113,723,573,-576
N,61114,723,852,-576
N,61116,723,860.04,-587
N,71116,723,860.04,-587
N,71118,723,1065.96,-587
N,81118,723,1065.96,-587
N,91118,723,1065.96,-587
N,61142,723,489.96,-504
N,71142,723,489.96,-504
N,61143,723,489.96,-432
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N,61144,723,489.96,-360
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N,71145,723,489.96,-288
N,81145,723,489.96,-288
N,91145,723,489.96,-288
N,101145,723,489.96,-288
N,111145,723,489.96,-288
N,121145,723,489.96,-288
N,61146,723,489.96,-216
N,71146,723,489.96,-216
N,61147,723,489.96,-144
N,71147,723,489.96,-144
N,61148,723,489.96,-72
N,71148,723,489.96,-72
N,61149,723,1065.96,-512
N,71149,723,1065.96,-512
N,61150,723,1065.96,-437
N,71150,723,1065.96,-437
N,61151,723,1065.96,-362
N,71151,723,1065.96,-362
N,61152,723,1065.96,-288
N,71152,723,1065.96,-288
N,61153,723,1065.96,-214
N,71153,723,1065.96,-214
N,61154,723,1065.96,-139
N,71154,723,1065.96,-139
N,61155,723,1065.96,-64
N,71155,723,1065.96,-64
N,82102,1014,489.96,0
N,92102,1014,489.96,0
N,102102,1014,489.96,0
N,62105,1014,860.04,11
N,72105,1014,860.04,11
N,72107,1014,1065.96,11
N,82107,1014,1065.96,11
N,72112,1014,489.96,-576
N,82112,1014,489.96,-576
N,92112,1014,489.96,-576
N,102112,1014,489.96,-576
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N,72113,1014,573,-576
N,72116,1014,860.04,-587

N,72118,1014,1065.96,-587
N,82118,1014,1065.96,-587
N,62124,1118.52,489.96,0
N,62125,1118.52,489.96,-72
N,62142,1014,489.96,-504
N,72142,1014,489.96,-504
N,72143,1014,489.96,-432
N,62144,1014,489.96,-360
N,72144,1014,489.96,-360
N,72145,1014,489.96,-288
N,82145,1014,489.96,-288
N,92145,1014,489.96,-288
N,62146,1014,489.96,-216
N,72146,1014,489.96,-216
N,62147,1014,489.96,-144
N,72147,1014,489.96,-144
N,72148,1014,489.96,-72
N,62149,1014,1065.96,-512
N,72149,1014,1065.96,-512
N,62150,1014,1065.96,-437
N,72150,1014,1065.96,-437
N,62151,1014,1065.96,-362
N,72151,1014,1065.96,-362
N,62152,1014,1065.96,-288
N,72152,1014,1065.96,-288
N,62153,1014,1065.96,-214
N,72153,1014,1065.96,-214
N,62154,1014,1065.96,-139
N,72154,1014,1065.96,-139
N,62155,1014,1065.96,-64
N,72155,1014,1065.96,-64
N,62157,1159.5,489.96,-504
N,62158,1159.5,489.96,-432
N,63105,1305,860.04,11
N,73105,1305,860.04,11
N,73107,1305,1065.96,11
N,83107,1305,1065.96,11
N,73109,1305,870.6,-12
N,63113,1305,573,-576
N,73116,1305,860.04,-587
N,73118,1305,1065.96,-587
N,83118,1305,1065.96,-587
N,73120,1305,870.6,-564
N,63142,1305,489.96,-504
N,73143,1305,489.96,-432
N,63144,1305,489.96,-360
N,73144,1305,489.96,-360
N,73145,1305,489.96,-288
N,83145,1305,489.96,-288
N,93145,1305,489.96,-288
N,103145,1305,489.96,-288
N,113145,1305,489.96,-288
N,63146,1305,489.96,-216
N,73146,1305,489.96,-216
N,63147,1305,489.96,-144
N,73147,1305,489.96,-144
N,73148,1305,489.96,-72
N,63149,1305,1065.96,-512
N,73149,1305,1065.96,-512
N,63150,1305,1065.96,-437
N,73150,1305,1065.96,-437
N,63151,1305,1065.96,-362
N,73151,1305,1065.96,-362
N,63152,1305,1065.96,-288
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N,63153,1305,1065.96,-214
N,73153,1305,1065.96,-214
N,63154,1305,1065.96,-139
N,73154,1305,1065.96,-139
N,63155,1305,1065.96,-64
N,73155,1305,1065.96,-64
N,63157,1437,489.96,-504
N,63158,1437,489.96,-432
N,63159,1437,489.96,-360
N,63160,1437,489.96,-288

N,63161,1437,489.96,-216
N,63162,1437,489.96,-144
N,63163,1437,489.96,-72
N,73164,1437,489.96,0
N,64101,1578,288,0
N,74102,1578,489.96,0
N,84102,1578,489.96,0
N,64105,1578,860.04,11
N,74105,1578,860.04,11
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N,84107,1578,1065.96,11
N,74109,1578,870.6,-12
N,64111,1578,288,-576
N,74112,1578,489.96,-576
N,84112,1578,489.96,-576
N,94112,1578,489.96,-576
N,74113,1578,573,-576
N,84113,1578,573,-576
N,64116,1578,860.04,-587
N,74116,1578,860.04,-587
N,84116,1578,860.04,-587
N,74118,1578,1065.96,-587
N,84118,1578,1065.96,-587
N,94118,1578,1065.96,-587
N,74120,1578,870.6,-564
N,64149,1578,1065.96,-512
N,74149,1578,1065.96,-512
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N,74151,1578,1065.96,-362
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N,74152,1578,1065.96,-288
N,64153,1578,1065.96,-214
N,74153,1578,1065.96,-214
N,64154,1578,1065.96,-139
N,74154,1578,1065.96,-139
N,64155,1578,1065.96,-64
N,74155,1578,1065.96,-64
N,64156,1717.5,971.04,-587
N,74156,1717.5,971.04,-587
N,84156,1717.5,971.04,-587
N,94156,1717.5,971.04,-587
N,65100,1857,459.96,0
N,75102,1857,489.96,0
N,65103,1857,852,0
N,65105,1857,860.04,11
N,75105,1857,860.04,11
N,75107,1857,1065.96,11
N,85107,1857,1065.96,11
N,95107,1857,1065.96,11
N,75112,1857,489.96,-576
N,85112,1857,489.96,-576
N,95112,1857,489.96,-576
N,65114,1857,852,-576
N,65116,1857,860.04,-587
N,75116,1857,860.04,-587
N,85118,1857,1065.96,-587
N,95118,1857,1065.96,-587
N,75122,1857,971.04,-587
N,65123,1717.5,573,-576
N,75123,1717.5,573,-576
N,65149,1857,1065.96,-512
N,75149,1857,1065.96,-512
N,65150,1857,1065.96,-437
N,75150,1857,1065.96,-437
N,65151,1857,1065.96,-362
N,75151,1857,1065.96,-362
N,65152,1857,1065.96,-288
N,75152,1857,1065.96,-288
N,65153,1857,1065.96,-214
N,75153,1857,1065.96,-214
N,65154,1857,1065.96,-139
N,75154,1857,1065.96,-139

N,65155,1857,1065.96,-64
N,75155,1857,1065.96,-64
N,66105,2097,860.04,11
N,76105,2097,860.04,11
N,76107,2097,1065.96,11
N,86107,2097,1065.96,11
N,66149,2097,1065.96,-512
N,76149,2097,1065.96,-512
N,66150,2097,1065.96,-437
N,76150,2097,1065.96,-437
N,66151,2097,1065.96,-362
N,76151,2097,1065.96,-362
N,66152,2097,1065.96,-288
N,76152,2097,1065.96,-288
N,66153,2097,1065.96,-214
N,76153,2097,1065.96,-214
N,66154,2097,1065.96,-139
N,76154,2097,1065.96,-139
N,66155,2097,1065.96,-64
N,76155,2097,1065.96,-64
N,67105,2301,860.04,11
N,77105,2301,860.04,11
N,77107,2301,1065.96,11
N,87107,2301,1065.96,11
N,77109,2301,870.6,-12
N,67116,2301,860.04,-587
N,77116,2301,860.04,-587
N,87118,2301,1065.96,-587
N,67122,2301,971.04,-587
N,77122,2301,971.04,-587
N,87122,2301,971.04,-587
N,67149,2301,1065.96,-512
N,77149,2301,1065.96,-512
N,67150,2301,1065.96,-437
N,77150,2301,1065.96,-437
N,67151,2301,1065.96,-362
N,77151,2301,1065.96,-362
N,67152,2301,1065.96,-288
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N,67153,2301,1065.96,-214
N,77153,2301,1065.96,-214
N,67154,2301,1065.96,-139
N,77154,2301,1065.96,-139
N,67155,2301,1065.96,-64
N,77155,2301,1065.96,-64
N,68105,2505,860.04,11
N,78107,2505,1065.96,11
N,68109,2505,870.6,-12
N,68116,2505,860.04,-587
N,78118,2505,1065.96,-587
N,88118,2505,1065.96,-587
N,68149,2505,1065.96,-512
N,68150,2505,1065.96,-437
N,68151,2505,1065.96,-362
N,78152,2505,1065.96,-288
N,68153,2505,1065.96,-214
N,68154,2505,1065.96,-139
N,68155,2505,1065.96,-64
N,150037,0,1059.4725,-362
N,250037,0,1059.4725,-362
N,150039,0,1059.4725,-214
N,250039,0,1059.4725,-214
N,150153,432,1059.4725,-214
N,250153,432,1059.4725,-214
N,150174,216,1059.4725,-587
N,150177,216,1059.4725,-362
N,150179,216,1059.4725,-214
N,150182,216,1059.4725,11
N,250182,216,1059.4725,11
N,151107,723,1059.4725,11
N,251107,723,1059.4725,11
N,152153,1014,1059.4725,-214
N,252153,1014,1059.4725,-214
N,152156,1159.5,489.96,-576
N,152174,1159.5,573,-576

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N,153107,1305,1059.285,11
N,253107,1305,1059.285,11
N,154153,1578,1059.285,-214
N,254153,1578,1059.285,-214
N,155107,1857,1059.285,11
N,255107,1857,1059.285,11
N,156153,2097,1059.285,-214
N,256153,2097,1059.285,-214
N,157107,2301,1059.285,11
N,257107,2301,1059.285,11
N,157118,2301,1059.285,-587
N,157151,2301,1059.285,-362
N,157153,2301,1059.285,-214
N,158151,2505,1059.285,-362
N,258151,2505,1059.285,-362
N,158153,2505,1059.285,-214
N,258153,2505,1059.285,-214
N,181660,2505,971.04,-587
N,281660,2505,971.04,-587

! ELEMENT TYPE 16 NODES

N,74100,1578,459.96,0
N,75100,1857,459.96,0

!RAIL GIRDER                MCK 9/10/2010

N,60009,0,852,-12
N,60020,0,852,-564
N,60108,432,852,-12
N,60119,432,852,-564
N,61108,723,852,-12
N,61119,723,852,-564
N,62108,1014,852,-12
N,62119,1014,852,-564
N,63108,1305,852,-12
N,63119,1305,852,-564
N,64108,1578,852,-12
N,64119,1578,852,-564
N,65108,1857,852,-12
N,65119,1857,852,-564
N,66108,2097,852,-12
N,67108,2301,852,-12
N,67119,2301,852,-564
N,68108,2505,852,-12
N,68119,2505,852,-564

!  ADDED RUNWAY GIRDER NODES

N,301011,1173,894.6,-564
N,301021,1119,894.6,-564
N,301031,951,894.6,-564
N,301041,897,894.6,-564

N,301131,1173,894.6,-12
N,301141,1119,894.6,-12
N,301151,951,894.6,-12
N,301161,897,894.6,-12

! DEFINE REAL CONSTANT

R,1

R,9

R,12,0.001, , ,       ! SPRING CONSTANT

R,13,18105000, , ,    ! SPRING CONSTANT

R,14,11978000, , ,    ! SPRING CONSTANT

R,15,23956000, , ,    ! SPRING CONSTANT

R,1001,2766.222961730,,,   ! HOOK X SPRING
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R,1002,2766.222961730,,,   ! HOOK Z SPRING

R,1003,2266759.624568,,,   ! HOOK Y SPRING

hookmass=688.9610669  ! hookmass = 0 for loadcase 6 and 7 all others is should be 688.9610669

R,1004,hookmass,hookmass,hookmass, ! HOOK MASS change because of change in gravity 688.4057971014

R,52,1.15,1.15,1.15
R,53,2.27743,2.27743,2.27743
R,54,3.662,3.662,3.662
R,55,0.64699,0.64699,0.64699
R,100,51.7598344,219.979296,51.7598344

R,401,14619.6 ! TORSIONAL SPRING FOR DIAGONAL WT4X12
R,402,10406.7 ! TORSIONAL SPRING FOR DIAGONAL WT4X12
R,403,56560 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X1/2_3/8
R,404,13334 ! TORSIONAL SPRING FOR DIAGONAL LL4X3X5/16_3/8
R,405,75068 ! TORSIONAL SPRING FOR DIAGONAL LL6X4X1/2_3/8
R,406,61618 ! TORSIONAL SPRING FOR DIAGONAL W14X43
R,407,215956 ! TORSIONAL SPRING FOR DIAGONAL W14X87
R,408,206514 ! TORSIONAL SPRING FOR DIAGONAL W14X87
R,409,31583 ! TORSIONAL SPRING FOR DIAGONAL LL3.5X3.5X3/8_3/8
R,410,21617 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,411,7180 ! TORSIONAL SPRING FOR DIAGONAL L4X4X5/16_3/8
R,412,25326 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,413,37519 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,414,5720 ! TORSIONAL SPRING FOR DIAGONAL LL3X3X3/8_3/8
R,415,18756 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,416,14402 ! TORSIONAL SPRING FOR DIAGONAL LL4X4X3/8_3/8
R,417,51480 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X1/2_3/8
R,418,55000 ! TORSIONAL SPRING FOR DIAGONAL LL5X5X1/2
R,419,2687 ! TORSIONAL SPRING FOR DIAGONAL LL3X3X3/16_3/8
R,420,170024 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X3/4_3/8
R,421,496078 ! TORSIONAL SPRING FOR DIAGONAL W14X119
R,422,169412 ! TORSIONAL SPRING FOR DIAGONAL W12X72

GRAV=386.08858                                                    ! in/sec^2

! DEFINE MATERIAL TYPES

Mat,1   ! BUILDING STEEL
MP,EX,1,2.90E+07
!MP,Nuxy,1,3.00E-01
MP,DENS,1,0.73377E-03
MP,GXY,1,11000000

Mat,13   ! BUILDING STEEL
MP,EX,13,2.90E+07
!MP,Nuxy,13,3.00E-01
MP,DENS,13,0.00001
MP,GXY,13,11000000

! THE FOLLOWING MATERIAL TYPES ARE FOR THE CRANE

MAT,2     !  HOOKUP MAT 1
MP,EX,2,3E+07
MP,NUXY,2,0.3
MP,DENS,2,0.745E-03

MAT,3     !  HOOKUP MAT 2
MP,EX,3,3E+07
MP,NUXY,3,0.3
MP,DENS,3,0.11660E-02

MAT,4     !  HOOKUP MAT 3
MP,EX,4,3E+07
MP,NUXY,4,0.3
MP,DENS,4,0.96E-03

MAT,5     !  HOOKUP MAT 4
MP,EX,5,3E+07
MP,NUXY,5,0.8E-03
MP,DENS,5,0.123E-02
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MAT,6     !  HOOKUP MAT 5
MP,EX,6,3E+07
MP,NUXY,6,0.3
MP,DENS,6,0

MAT,7     !  HOOKUP MAT 6
MP,EX,7,3E+07
MP,NUXY,7,0.3
MP,DENS,7,0.121E-02

MAT,8     !  HOOKUP MAT 7
MP,EX,8,3E+07
MP,NUXY,8,0.3
MP,DENS,8,0.6241E-02



! CREATE DIFFERENT ELEMENT TYPES IN ORDER TO CONTROL THE END RELEASES USING "KEYOPT"

ET,1,BEAM44

ET,2,BEAM44
!KEYOPT,2,7,11

ET,3,BEAM44
!KEYOPT,3,7,1

ET,7,BEAM44
!KEYOPT,7,8,11

ET,8,BEAM44
!KEYOPT,8,8,1

ET,9,BEAM44
!KEYOPT,9,7,11
!KEYOPT,9,8,11

ET,12,COMBIN14
KEYOPT,12,1,0
KEYOPT,12,2,3
KEYOPT,12,3,0

ET,13,COMBIN14
KEYOPT,13,1,0
KEYOPT,13,2,3
KEYOPT,13,3,0

ET,14,COMBIN14
KEYOPT,14,1,0
KEYOPT,14,2,1
KEYOPT,14,3,0

ET,15,COMBIN14
KEYOPT,15,1,0
KEYOPT,15,2,1
KEYOPT,15,3,0

ET,16,BEAM44
!KEYOPT,16,7,1
!KEYOPT,16,8,11

ET,21,BEAM44

ET,100,MASS21

ET,    1001, 14
KEYOP,    1001, 2,       1

ET,    1002, 14
KEYOP,    1002, 2,       3

ET,    1003, 14
KEYOP,    1003, 2,       2

ET,    1004, 21
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ET,300,COMBIN14  ! TORSIONAL SPRING FOR DIAGONAL BRACING
KEYOPT,300,1,0
KEYOPT,300,2,0
KEYOPT,300,3,1

! DEFINE BEAM SECTION TYPES THAT WILL BE USED IN THE MODEL

!W33X141
!SECTYPE,2,BEAM,I,W33X141
!SECDATA,11.535,11.535,33.31,0.96,0.96,0.605
R,202,41.6,246,7460,16.655,5.77,9.7
RMORE,41.6,246,7460,16.655,5.77,9.7
RMORE,,,,,,,
RMORE,2.8175,2.0642

!W12X72
!SECTYPE,3,BEAM,I,W12X72
!SECDATA,12.04,12.04,12.25,0.671,0.671,0.43
R,203,21.2,195,597,6.125,6.02,2.94
RMORE,21.2,195,597,6.125,6.02,2.94
RMORE,,,,,,,
RMORE,1.9681,4.0251

!W14X119
!SECTYPE,4,BEAM,I,W14X119
!SECDATA,14.65,14.65,14.5,0.938,0.938,0.57
R,204,35,492,1370,7.25,7.325,9.2
RMORE,35,492,1370,7.25,7.325,9.2
RMORE,,,,,,,
RMORE,1.9103,4.2347

!W36X300
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,205,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W36X300 W/ L6X8
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,244,111.3,4560.861,24519.303,15.254,14.25,70.062
RMORE,111.3,4560.861,24519.303,15.254,14.25,70.062
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W36X300 W/ L4X6
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,245,105.18,3565.207,23828.308,15.844,14.25,67.364
RMORE,105.18,3565.207,23828.308,15.844,14.25,67.364
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W14X136
!SECTYPE,6,BEAM,I,W14X136
!SECDATA,14.74,14.74,14.75,1.063,1.063,0.66
R,206,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,,
RMORE,1.9147,4.1089

!W36X230
!SECTYPE,7,BEAM,I,W36X230
!SECDATA,16.475,16.475,35.88,1.26,1.26,0.761
R,207,67.7,940,15000,17.94,8.238,28.6
RMORE,67.7,940,15000,17.94,8.238,28.6
RMORE,,,,,,,
RMORE,2.4466,2.5447

!2L3X3X5/16_3/8                                                    SEC 8
R,30,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,3.555,6.96,3.02,3.188,0.709,0.125
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RMORE,,,,,,,
RMORE,2.844,2.844

R,40,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,,,,,,,
RMORE,2.844,2.844

!W10X33
!SECTYPE,9,BEAM,I,W10X33
!SECDATA,7.964,7.964,9.75,0.433,0.433,0.292
R,209,9.71,36.5,171,4.875,3.982,0.58
RMORE,9.71,36.5,171,4.875,3.982,0.58
RMORE,,,,,,,
RMORE,2.1118,3.4106

!W30X116
!SECTYPE,10,BEAM,I,W30X116
!SECDATA,10.5,10.5,30,0.85,0.85,0.564
R,210,34.2,164,4930,15,5.25,6.43
RMORE,34.2,164,4930,15,5.25,6.43
RMORE,,,,,,,
RMORE,2.8739,2.0213

!W14X87
!SECTYPE,11,BEAM,I,W14X87
!SECDATA,14.5,14.5,14,0.688,0.688,0.42
R,211,25.6,350,967,7,7.25,3.68
RMORE,25.6,350,967,7,7.25,3.68
RMORE,,,,,,,
RMORE,1.9205,4.3537

!W14X43
!SECTYPE,12,BEAM,I,W14X43
!SECDATA,8,8,13.68,0.528,0.528,0.308
R,212,12.6,45.1,429,6.84,4,1.05
RMORE,12.6,45.1,429,6.84,4,1.05
RMORE,,,,,,,
RMORE,2.2372,2.9907

!2L6X4X1/2_3/8  SEC 13
R,31,9.5,25.641,34.79,4.188,1.737,0.792
RMORE,9.5,25.641,34.79,4.188,1.737,0.792
RMORE,,,,,,,
RMORE,3.5621,2.375
!SECTYPE,13,BEAM,ASEC,LL64X1/2
!SECDATA,9.5,25.64,,34.79,0,0.834,0,1.737,0,1.737

!2L4X3X5/16_3/8                                                    SEC 14
R,32,4.18,7.037,6.762,3.188,1.103,0.136
RMORE,4.18,7.037,6.762,3.188,1.103,0.136
RMORE,,,,,,,
RMORE,3.344,2.5075


!2L6X6X1/2_3/8                                                    SEC 15
R,33,11.5,80.128,39.816,6.188,1.435,0.958
RMORE,11.5,80.128,39.816,6.188,1.435,0.958
RMORE,,,,,,,
RMORE,2.875,2.875
!SECTYPE,15,BEAM,ASEC,LL66X1/2
!SECDATA,11.5,39.8,,80.155,0,1.002,0,1.435,0,1.435

!W24X100
!SECTYPE,16,BEAM,I,W24X100
!SECDATA,12,12,24,0.775,0.775,0.468
R,216,29.5,223,3000,12,6,4.87
RMORE,29.5,223,3000,12,6,4.87
RMORE,,,,,,,
RMORE,2.379,2.6264

!W36X280
!SECTYPE,17,BEAM,I,W36X280
!SECDATA,16.595,16.595,36.5,1.57,1.57,0.885
R,217,82.4,1200,18900,18.25,8.3,52.6
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RMORE,82.4,1200,18900,18.25,8.3,52.6
RMORE,,,,,,,
RMORE,2.372,2.5432

!W12X40
!SECTYPE,18,BEAM,I,W12X40
!SECDATA,8,8,11.94,0.516,0.516,0.294
R,218,11.8,44.1,310,5.97,4,0.956
RMORE,11.8,44.1,310,5.97,4,0.956
RMORE,,,,,,,
RMORE,2.1439,3.3618

!W14X30
!SECTYPE,19,BEAM,I,W14X30
!SECDATA,6.733,6.733,13.86,0.383,0.383,0.270
R,219,8.83,19.5,290,6.93,3.367,0.376
RMORE,8.83,19.5,290,6.93,3.367,0.376
RMORE,,,,,,,
RMORE,2.5684,2.36

!W12X27
!SECTYPE,20,BEAM,I,W12X27
!SECDATA,6.5,6.5,11.96,0.4,0.4,0.237
R,220,7.95,18.3,204,5.98,3.25,0.351
RMORE,7.95,18.3,204,5.98,3.25,0.351
RMORE,,,,,,,
RMORE,2.2944,2.8042

!W36X150
!SECTYPE,21,BEAM,I,W36X150
!SECDATA,11.972,11.972,35.84,0.94,0.94,0.625
R,221,44.2,270,9030,17.92,5.99,10.1
RMORE,44.2,270,9030,17.92,5.99,10.1
RMORE,,,,,,,
RMORE,2.9457,1.9732

!W36X160
!SECTYPE,22,BEAM,I,W36X160
!SECDATA,12,12,36,1.02,1.02,0.653
R,222,47.1,295,9760,18,6,12.4
RMORE,47.1,295,9760,18,6,12.4
RMORE,,,,,,,
RMORE,2.886,2.0036

!W24X76
!SECTYPE,23,BEAM,I,W24X76
!SECDATA,8.985,8.985,23.91,0.682,0.682,0.44
R,223,22.4,82.6,2100,11.955,4.49,2.7
RMORE,22.4,82.6,2100,11.955,4.49,2.7
RMORE,,,,,,,
RMORE,2.7417,2.1293

!W18X45
!SECTYPE,24,BEAM,I,W18X45
!SECDATA,7.477,7.477,17.86,0.499,0.499,0.335
R,224,13.2,34.8,706,8.93,3.74,0.889
RMORE,13.2,34.8,706,8.93,3.74,0.889
RMORE,,,,,,,
RMORE,2.6533,2.2063

!W10X15
!SECTYPE,25,BEAM,I,W10X15
!SECDATA,4,4,10,0.269,0.269,0.230
R,225,4.41,2.88,68.9,5,2,0.104
RMORE,4.41,2.88,68.9,5,2,0.104
RMORE,,,,,,,
RMORE,3.0732,1.9174

!W24X55
!SECTYPE,26,BEAM,I,W24X55
!SECDATA,7,7,23.55,0.503,0.503,0.396
R,226,16.2,28.9,1340,11.775,3.5,1.18
RMORE,16.2,28.9,1340,11.775,3.5,1.18
RMORE,,,,,,,
RMORE,3.4505,1.7371
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!W24X68
!SECTYPE,27,BEAM,I,W24X68
!SECDATA,8.961,8.961,23.71,0.582,0.582,0.416
R,227,20,70,1820,11.855,4.48,1.86
RMORE,20,70,1820,11.855,4.48,1.86
RMORE,,,,,,,
RMORE,2.876,2.0278

!W10X21
!SECTYPE,28,BEAM,I,W10X21
!SECDATA,5.75,5.75,9.9,0.338,0.338,0.240
R,228,6.2,10.8,107,4.95,2.875,0.21
RMORE,6.2,10.8,107,4.95,2.875,0.21
RMORE,,,,,,,
RMORE,2.3782,2.6094

!C8X11
SECTYPE,29,BEAM,CHAN,C8X11
SECDATA,2.25,2.25,8,0.39,0.39,0.220
R,229,3.38,1.32,32.6,4,1.13,1.268
RMORE,3.38,1.32,32.6,4,1.13,1.268
RMORE,,,,,,,
RMORE,2.8766,1.9205

!W30X108
!SECTYPE,30,BEAM,I,W30X108
!SECDATA,10.484,10.484,29.82,0.76,0.76,0.548
R,230,31.8,146,4470,14.91,5.24,5.02
RMORE,31.8,146,4470,14.91,5.24,5.02
RMORE,,,,,,,
RMORE,2.9932,1.946

!W14X22
!SECTYPE,31,BEAM,I,W14X22
!SECDATA,5,5,13.72,0.335,0.335,0.230
R,231,6.49,7,198,6.86,2.5,0.208
RMORE,6.49,7,198,6.86,2.5,0.208
RMORE,,,,,,,
RMORE,2.9064,2.0564

!W14X61
!SECTYPE,32,BEAM,I,W14X61
!SECDATA,10,10,13.91,0.643,0.643,0.378
R,232,17.9,107,641,6.955,5,2.19
RMORE,17.9,107,641,6.955,5,2.19
RMORE,,,,,,,
RMORE,2.088,3.4043

!W27X84
!SECTYPE,33,BEAM,I,W27X84
!SECDATA,9.963,9.963,26.69,0.636,0.636,0.463
R,233,24.8,105,2830,13.345,4.98,2.79
RMORE,24.8,105,2830,13.345,4.98,2.79
RMORE,,,,,,,
RMORE,2.9353,2.007

!W27X94
!SECTYPE,34,BEAM,I,W27X94
!SECDATA,9.99,9.99,26.91,0.745,0.745,0.49
R,234,27.7,124,3270,13.455,5,4.06
RMORE,27.7,124,3270,13.455,5,4.06
RMORE,,,,,,,
RMORE,2.7839,2.1007

!2L4X4X3/8_3/8 SEC35
R,34,5.719,18.77,8.717,4.188,0.951,0.268
RMORE,5.719,18.77,8.717,4.188,0.951,0.268
RMORE,,,,,,,
RMORE,2.8595,2.8595

!2L6X6X3/4_3/8 SEC 36
R,35,16.875,121.302,56.31,6.188,1.4,3.164
RMORE,16.875,121.302,56.31,6.188,1.4,3.164
RMORE,,,,,,,
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RMORE,2.8125,2.8125

!2L3X3X3/16_3/8 SEC 37
R,36,2.18,4.134,1.923,3.188,0.726,0.025
RMORE,2.18,4.134,1.923,3.188,0.726,0.025
RMORE,,,,,,,
RMORE,2.9067,2.9067

!2L5X5X1/2_3/8 SEC 38
R,37,9.5,47.485,22.5,5.188,1.184,0.792
RMORE,9.5,47.485,22.5,5.188,1.184,0.792
RMORE,,,,,,,
RMORE,2.8503,2.8503

!L4X4X5/16
!SECTYPE,39,BEAM,L,L44X5/16
!SECDATA,4,4,0.313,0.313
R,239,2.402,5.925,1.503,2.828,1.357,0.078
RMORE,2.402,5.925,1.503,2.828,1.357,0.078
RMORE,,,,,,,
RMORE,2.1182,2.0978,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

!L5X5X1/2
!SECTYPE,40,BEAM,L,L55X1/2
!SECDATA,5,5,0.5,0.5
R,240,4.75,17.912,4.589,3.536,1.675,0.396
RMORE,4.75,17.912,4.589,3.536,1.675,0.396
RMORE,,,,,,,
RMORE,2.1158,2.0833,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

!2L3.5X3.5X3/8_3/8 SEC 41
R,38,4.969,12.891,5.73,3.688,0.826,0.233
RMORE,4.969,12.891,5.73,3.688,0.826,0.233
RMORE,,,,,,,
RMORE,2.8394,2.8394

!2L3X3X3/8_3/8 SEC 42
R,39,4.219,8.395,3.519,3.188,0.7,0.198
RMORE,4.219,8.395,3.519,3.188,0.7,0.198
RMORE,,,,,,,
RMORE,2.7527,2.7527

!WT4X12
!SECTYPE,43,BEAM,T,WT4X12
!SECDATA,6.5,3.97,0.398,0.245
R,243,3.54,9.15,3.529,0.699,3.248,0.174
RMORE,3.54,9.15,3.529,0.699,3.248,0.174
RMORE,,,,,,,
RMORE,2.0439,5.463

!L4X4X1/2
R,241,3.75,8.828,2.295,2.828,1.320,0.312        ! NEW SECTION 9/14/2010 MCK  EL 7301,7313
RMORE,3.75,8.828,2.295,2.828,1.320,0.312
RMORE,,,,,,,
RMORE,2.1114,2.0616,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

!L6X6X3/4
R,242,8.438,44.692,11.617,4.243,1.98,1.582        ! NEW SECTION 9/14/2010 MCK  EL 7303,7315
RMORE,8.438,44.692,11.617,4.243,1.98,1.582
RMORE,,,,,,,
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RMORE,2.1121,2.0616,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

! THE FOLLOWING SECTIONS ARE FOR THE CRANE MODEL AS PROVIDED
! BY THE CRANE VENDOR

SECTYPE,44,BEAM,HREC,       !1
SECDATA,61.000,17.125,1.0000,1.0000,0.62500, 0.62500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,45,BEAM,CSOL,       !2
SECDATA,4.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,46,BEAM,RECT,trolgirt   !3
SECDATA,22.000,2.5000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,47,BEAM,HREC,endtie  !4
SECDATA,10.000,8.0000,1.0000,1.0000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,48,BEAM,HREC,asagitie   !6
SECDATA,8.0000,8.0000,0.75000,0.75000,0.75000,0.75000,
SECOFFSET,CENT
SECCONTROL,0.0000,0.0000,0.0000,0.0000

SECTYPE,49,BEAM,HREC,endtruck   !7
SECDATA,22.000,16.600,1.5000,1.5000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,50,BEAM,RECT,       !8
SECDATA,14.000,14.000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,51,BEAM,HREC,Ttrucks   !10
SECDATA,22.250,9.0000,0.75000,0.75000,0.50000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,52,BEAM,RECT,girt1   !11
SECDATA,33.000,1.2500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,53,BEAM,RECT,girt2   !12
SECDATA,42.625,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,54,BEAM,RECT,girt3   !13
SECDATA,33.000,1.2500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,55,BEAM,RECT,       !14
SECDATA,20.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,56,BEAM,RECT,stiff2    !15
SECDATA,6.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000
```

```
SECTYPE,57,BEAM,RECT,         !16
SECDATA,15.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,58,BEAM,RECT,9luk    !17
SECDATA,9.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,59,BEAM,ASEC,STIFF    !RIGID BEAM
SECDATA,1000,1000000,,1000000,,1000000   !GT STRUDL USES AN AREA OF 10
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,60,BEAM,ASEC,STIFF    !RIGID BEAM
SECDATA,1000,1000000,,1000000,,1000000   !GT STRUDL USES AN AREA OF 10
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SAVE

! SELECT NODES IN ORDER TO DEFINE A RIGID REGION USING "CERIG"


! EBLOCK DEFINES ELEMENTS, HEADING ARE PROVIDED TO HELP DURING CHECKING
!    MAT    TYPE    REAL    SECT                        # NODES        ELM #    I      J      K
EBLOCK,19,SOLID,
(19i8)
     1     1   205     0     0     0     0     0     2     0     1     1     2     0
     1     1   205     0     0     0     0     0     2     0     2     2     3     0
     1     1   205     0     0     0     0     0     2     0     3     3     4     0
    13     1     1    59     0     0     0     0     2     0     4     4     5     0
     1     1   206     0     0     0     0     0     2     0     5     5     6     0
     1     1   206     0     0     0     0     0     2     0     6     6     7     0
     1     1   206     0     0     0     0     0     2     0     7     7     8     0
    13     1     1    59     0     0     0     0     2     0     8     4     9     0
    13     1     1    59     0     0     0     0     2     0     9 60009    10     0
    13     1     1    59     0     0     0     0     2     0    11    10     7 20056
     1     1   205     0     0     0     0     0     2     0    12    12    13     0
     1     1   205     0     0     0     0     0     2     0    13    13    14     0
     1     1   205     0     0     0     0     0     2     0    14    14    15     0
    13     1     1    59     0     0     0     0     2     0    15    15    16     0
     1     1   206     0     0     0     0     0     2     0    16    16    17     0
     1     1   206     0     0     0     0     0     2     0    17    17    18     0
     1     1   206     0     0     0     0     0     2     0    18    18    19     0
    13     1     1    59     0     0     0     0     2     0    19    15    20     0
    13     1     1    59     0     0     0     0     2     0    20 60020    21     0
    13     1     1    59     0     0     0     0     2     0    22    21    18 20056
     1     2   207     0     0     0     0     0     2     0    23 60013    24 20056
     1     1   207     0     0     0     0     0     2     0    24    24    25 20056
     1     1   207     0     0     0     0     0     2     0    25    25    26 20056
     1     1   207     0     0     0     0     0     2     0    26    26    27 20056
     1     1   207     0     0     0     0     0     2     0    27    27    28 20056
     1     1   207     0     0     0     0     0     2     0    28    28    29 20056
     1     1   207     0     0     0     0     0     2     0    29    29    30 20056
     1     7   207     0     0     0     0     0     2     0    30    30 90002 20056
     1     2    30     0     0     0     0     0     2     0    31 60031    32     0
     1     7    40     0     0     0     0     0     2     0    32    32 60033     0
     1     9   209     0     0     0     0     0     2     0    33 60014 80034 20056
     1     9   209     0     0     0     0     0     2     0    34 90034 60003 20056
     1     2   210     0     0     0     0     0     2     0    35 60019    35 20056
     1     1   210     0     0     0     0     0     2     0    36    35    36 20056
     1     1   210     0     0     0     0     0     2     0    37    36    37 20056
     1     1   210     0     0     0     0     0     2     0    38    37    38 20056
     1     1   210     0     0     0     0     0     2     0    39    38    39 20056
     1     1   210     0     0     0     0     0     2     0    40    39    40 20056
     1     1   210     0     0     0     0     0     2     0    41    40    41 20056
     1     7   210     0     0     0     0     0     2     0    42    41 70008 20056
     1     2   211     0     0     0     0     0     2     0    43 60012    23 20070
     1     2   212     0     0     0     0     0     2     0    44 70013    23 20070
     1     2   211     0     0     0     0     0     2     0    45 60002    23 20070
     1     2    31     0     0     0     0     0     2     0    46 80013    31 20083
     1     7    32     0     0     0     0     0     2     0    47    14 70031 20083
     1     2    31     0     0     0     0     0     2     0    48 60034    31 20085
     1     2    31     0     0     0     0     0     2     0    49 70002    33 20084
     1     7    32     0     0     0     0     0     2     0    50     3 70033 20084
```

1	2	31	0	0	0	0	0	2	0	51	70034	33	20085
1	9	33	0	0	0	0	0	2	0	52	80019	100034	20085
1	9	33	0	0	0	0	0	2	0	53	80008	110034	20085
1	1	216	0	0	0	0	0	2	0	54	27	32	20052
1	1	216	0	0	0	0	0	2	0	55	32	34	20052
1	1	216	0	0	0	0	0	2	0	56	34	38	20052
1	1	205	0	0	0	0	0	2	0	100	101	102	0
1	1	205	0	0	0	0	0	2	0	101	102	103	0
13	1	1	59	0	0	0	0	2	0	102	103	104	0
1	1	206	0	0	0	0	0	2	0	103	104	105	0
1	1	206	0	0	0	0	0	2	0	104	105	106	0
1	1	206	0	0	0	0	0	2	0	105	106	107	0
13	1	1	59	0	0	0	0	2	0	106	103	108	0
13	1	1	59	0	0	0	0	2	0	107	60108	109	0
13	1	1	59	0	0	0	0	2	0	109	109	106	20058
1	1	205	0	0	0	0	0	2	0	110	111	112	0
1	1	205	0	0	0	0	0	2	0	111	112	113	0
1	1	205	0	0	0	0	0	2	0	112	113	114	0
13	1	1	59	0	0	0	0	2	0	113	114	115	0
1	1	206	0	0	0	0	0	2	0	114	115	116	0
1	1	206	0	0	0	0	0	2	0	115	116	117	0
1	1	206	0	0	0	0	0	2	0	116	117	118	0
13	1	1	59	0	0	0	0	2	0	117	114	119	0
13	1	1	59	0	0	0	0	2	0	118	60119	120	0
13	1	1	59	0	0	0	0	2	0	120	120	117	20058
1	7	206	0	0	0	0	0	2	0	121	123	60145	20052
1	2	217	0	0	0	0	0	2	0	122	60124	125	20057
1	1	217	0	0	0	0	0	2	0	123	125	126	20057
1	1	217	0	0	0	0	0	2	0	124	126	127	20057
1	1	217	0	0	0	0	0	2	0	125	127	128	20057
1	1	217	0	0	0	0	0	2	0	126	128	129	20057
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1	1	217	0	0	0	0	0	2	0	128	130	131	20057
1	7	217	0	0	0	0	0	2	0	129	131	60132	20057
1	2	207	0	0	0	0	0	2	0	130	60133	134	20081
1	1	207	0	0	0	0	0	2	0	131	134	135	20081
1	1	207	0	0	0	0	0	2	0	132	135	136	20081
1	1	207	0	0	0	0	0	2	0	133	136	137	20081
1	1	207	0	0	0	0	0	2	0	134	137	138	20081
1	1	207	0	0	0	0	0	2	0	135	138	139	20081
1	1	207	0	0	0	0	0	2	0	136	139	140	20081
1	7	207	0	0	0	0	0	2	0	137	140	60141	20081
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1	1	207	0	0	0	0	0	2	0	142	145	146	20058
1	1	207	0	0	0	0	0	2	0	143	146	147	20058
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1	3	210	0	0	0	0	0	2	0	146	60118	149	20058
1	1	210	0	0	0	0	0	2	0	147	149	150	20058
1	1	210	0	0	0	0	0	2	0	148	150	151	20058
1	1	210	0	0	0	0	0	2	0	149	151	152	20058
1	1	210	0	0	0	0	0	2	0	150	152	153	20058
1	1	210	0	0	0	0	0	2	0	151	153	154	20058
1	1	210	0	0	0	0	0	2	0	152	154	155	20058
1	8	210	0	0	0	0	0	2	0	153	155	60107	20058
1	2	218	0	0	0	0	0	2	0	157	60113	183	20002
1	7	218	0	0	0	0	0	2	0	158	183	61113	20002
1	1	205	0	0	0	0	0	2	0	1100	1101	1102	0
1	1	205	0	0	0	0	0	2	0	1101	1102	1103	0
13	1	1	59	0	0	0	0	2	0	1102	1103	1104	0
1	1	206	0	0	0	0	0	2	0	1103	1104	1105	0
1	1	206	0	0	0	0	0	2	0	1104	1105	1106	0
1	1	206	0	0	0	0	0	2	0	1105	1106	1107	0
13	1	1	59	0	0	0	0	2	0	1106	1103	1108	0
13	1	1	59	0	0	0	0	2	0	1107	61108	1109	0
13	1	1	59	0	0	0	0	2	0	1109	1109	1106	20055
1	1	205	0	0	0	0	0	2	0	1110	1111	1112	0
1	1	205	0	0	0	0	0	2	0	1111	1112	1113	0
1	1	205	0	0	0	0	0	2	0	1112	1113	1114	0
13	1	1	59	0	0	0	0	2	0	1113	1114	1115	0
1	1	206	0	0	0	0	0	2	0	1114	1115	1116	0
1	1	206	0	0	0	0	0	2	0	1115	1116	1117	0

1	1	206	0	0	0	0	0	2	0	1116	1117	1118	0
13	1	1	59	0	0	0	0	2	0	1117	1114	1119	0
13	1	1	59	0	0	0	0	2	0	1118	61119	1120	0
13	1	1	59	0	0	0	0	2	0	1120	1120	1117	20055
1	7	206	0	0	0	0	0	2	0	1121	1123	61145	0
1	3	207	0	0	0	0	0	2	0	1138	61112	1142	20055
1	1	207	0	0	0	0	0	2	0	1139	1142	1143	20055
1	1	207	0	0	0	0	0	2	0	1140	1143	1144	20055
1	1	207	0	0	0	0	0	2	0	1141	1144	1145	20055
1	1	207	0	0	0	0	0	2	0	1142	1145	1146	20055
1	1	207	0	0	0	0	0	2	0	1143	1146	1147	20055
1	1	207	0	0	0	0	0	2	0	1144	1147	1148	20055
1	8	207	0	0	0	0	0	2	0	1145	1148	61102	20055
1	3	210	0	0	0	0	0	2	0	1146	61118	1149	20055
1	1	210	0	0	0	0	0	2	0	1147	1149	1150	20055
1	1	210	0	0	0	0	0	2	0	1148	1150	1151	20055
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1	9	218	0	0	0	0	0	2	0	1157	71113	62113	20002
1	1	205	0	0	0	0	0	2	0	2100	2101	2102	0
1	1	205	0	0	0	0	0	2	0	2101	2102	2103	0
13	1	1	59	0	0	0	0	2	0	2102	2103	2104	0
1	1	206	0	0	0	0	0	2	0	2103	2104	2105	0
1	1	206	0	0	0	0	0	2	0	2104	2105	2106	0
1	1	206	0	0	0	0	0	2	0	2105	2106	2107	0
13	1	1	59	0	0	0	0	2	0	2106	2103	2108	0
13	1	1	59	0	0	0	0	2	0	2107	62108	2109	0
13	1	1	59	0	0	0	0	2	0	2109	2109	2106	20059
1	1	205	0	0	0	0	0	2	0	2110	2111	2112	0
1	1	205	0	0	0	0	0	2	0	2111	2112	2113	0
1	1	205	0	0	0	0	0	2	0	2112	2113	2114	0
13	1	1	59	0	0	0	0	2	0	2113	2114	2115	0
1	1	206	0	0	0	0	0	2	0	2114	2115	2116	0
1	1	206	0	0	0	0	0	2	0	2115	2116	2117	0
1	1	206	0	0	0	0	0	2	0	2116	2117	2118	0
13	1	1	59	0	0	0	0	2	0	2117	2114	2119	0
13	1	1	59	0	0	0	0	2	0	2118	62119	2120	0
13	1	1	59	0	0	0	0	2	0	2120	2120	2117	20059
1	7	206	0	0	0	0	0	2	0	2121	2123	62145	0
1	1	212	0	0	0	0	0	2	0	2122	2122	2156	0
1	2	219	0	0	0	0	0	2	0	2123	62156	2157	20066
1	1	219	0	0	0	0	0	2	0	2124	2157	2158	20066
1	1	212	0	0	0	0	0	2	0	2125	2156	21740	0
1	7	212	0	0	0	0	0	2	0	2126	21740	63121	0
1	3	207	0	0	0	0	0	2	0	2138	62112	2142	20059
1	1	207	0	0	0	0	0	2	0	2139	2142	2143	20059
1	1	207	0	0	0	0	0	2	0	2140	2143	2144	20059
1	1	207	0	0	0	0	0	2	0	2141	2144	2145	20059
1	1	207	0	0	0	0	0	2	0	2142	2145	2146	20059
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1	1	207	0	0	0	0	0	2	0	2144	2147	2148	20059
1	8	207	0	0	0	0	0	2	0	2145	2148	62102	20059
1	3	210	0	0	0	0	0	2	0	2146	62118	2149	20059
1	1	210	0	0	0	0	0	2	0	2147	2149	2150	20059
1	1	210	0	0	0	0	0	2	0	2148	2150	2151	20059
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1	1	210	0	0	0	0	0	2	0	2150	2152	2153	20059
1	1	210	0	0	0	0	0	2	0	2151	2153	2154	20059
1	1	210	0	0	0	0	0	2	0	2152	2154	2155	20059
1	8	210	0	0	0	0	0	2	0	2153	2155	62107	20059
1	9	220	0	0	0	0	0	2	0	2157	72113	152174	20080
1	1	205	0	0	0	0	0	2	0	3100	3101	3100	0
1	1	205	0	0	0	0	0	2	0	3101	3102	3103	0
13	1	1	59	0	0	0	0	2	0	3102	3103	3104	0
1	1	206	0	0	0	0	0	2	0	3103	3104	3105	0
1	1	206	0	0	0	0	0	2	0	3104	3105	3106	0
1	1	206	0	0	0	0	0	2	0	3105	3106	3107	0
13	1	1	59	0	0	0	0	2	0	3106	3103	3108	0
13	1	1	59	0	0	0	0	2	0	3107	63108	3109	0
13	1	1	59	0	0	0	0	2	0	3109	3109	3106	20060
1	1	205	0	0	0	0	0	2	0	3110	3111	3112	0
1	1	205	0	0	0	0	0	2	0	3111	3112	3113	0

1	1	205	0	0	0	0	0	2	0	3112	3113	3114	0
13	1	1	59	0	0	0	0	2	0	3113	3114	3115	0
1	1	206	0	0	0	0	0	2	0	3114	3115	3116	0
1	1	206	0	0	0	0	0	2	0	3115	3116	3117	0
1	1	206	0	0	0	0	0	2	0	3116	3117	3118	0
13	1	1	59	0	0	0	0	2	0	3117	3114	3119	0
13	1	1	59	0	0	0	0	2	0	3118	63119	3120	0
13	1	1	59	0	0	0	0	2	0	3120	3120	3117	20060
1	7	206	0	0	0	0	0	2	0	3121	3123	63145	0
1	9	218	0	0	0	0	0	2	0	3122	63113	74113	20002
1	3	207	0	0	0	0	0	2	0	3138	63112	3142	20060
1	1	207	0	0	0	0	0	2	0	3139	3142	3143	20060
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1	1	207	0	0	0	0	0	2	0	3144	3147	3148	20060
1	8	207	0	0	0	0	0	2	0	3145	3148	63102	20060
1	3	210	0	0	0	0	0	2	0	3146	63118	3149	20060
1	1	210	0	0	0	0	0	2	0	3147	3149	3150	20060
1	1	210	0	0	0	0	0	2	0	3148	3150	3151	20060
1	1	210	0	0	0	0	0	2	0	3149	3151	3152	20060
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1	1	210	0	0	0	0	0	2	0	3151	3153	3154	20060
1	1	210	0	0	0	0	0	2	0	3152	3154	3155	20060
1	8	210	0	0	0	0	0	2	0	3153	3155	63107	20060
1	2	221	0	0	0	0	0	2	0	3154	63156	3157	20067
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1	1	221	0	0	0	0	0	2	0	3156	3158	3159	20067
1	1	221	0	0	0	0	0	2	0	3157	3159	3160	20067
1	1	221	0	0	0	0	0	2	0	3158	3160	3161	20067
1	1	221	0	0	0	0	0	2	0	3159	3161	3162	20067
1	1	221	0	0	0	0	0	2	0	3160	3162	3163	20067
1	7	221	0	0	0	0	0	2	0	3161	3163	63164	20067
1	1	205	0	0	0	0	0	2	0	3163	3100	3102	0
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13	1	1	59	0	0	0	0	2	0	4106	4103	4108	0
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13	1	1	59	0	0	0	0	2	0	4109	4109	4106	20061
1	1	205	0	0	0	0	0	2	0	4110	4111	4112	0
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13	1	1	59	0	0	0	0	2	0	4117	4114	4119	0
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1	1	222	0	0	0	0	0	2	0	5139	5187	5188	20062
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1	8	210	0	0	0	0	0	2	0	5153	5155	65107	20062
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1	2	205	0	0	0	0	0	2	0	7000	80002	132	20021
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1	7	227	0	0	0	0	0	2	0	7049	2158	63143	20082
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1	9	231	0	0	0	0	0	2	0	7052	73148	63163	20018
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1	9	231	0	0	0	0	0	2	0	7054	63146	63161	20014
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1	1	210	0	0	0	0	0	2	0	7247	7149	7150	20064
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1	9	212	0	0	0	0	0	2	0	8707	76105	67105	20022
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1	9	232	0	0	0	0	0	2	0	8800	60017	60116	20001
1	9	212	0	0	0	0	0	2	0	8801	70116	61116	20001
1	9	212	0	0	0	0	0	2	0	8802	71116	72116	20001
1	2	212	0	0	0	0	0	2	0	8803	62116	3121	20001
1	9	212	0	0	0	0	0	2	0	8804	73116	64116	20001
1	9	212	0	0	0	0	0	2	0	8805	74116	65116	20001
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1	9	212	0	0	0	0	0	2	0	8807	67116	68116	20001
1	2	233	0	0	0	0	0	2	0	9000	60008	182	20022
1	9	220	0	0	0	0	0	2	0	9001	60041	60181	20019
1	9	220	0	0	0	0	0	2	0	9002	60040	60180	20017
1	9	220	0	0	0	0	0	2	0	9003	60039	60179	20015
1	9	220	0	0	0	0	0	2	0	9004	60038	60178	20013
1	9	220	0	0	0	0	0	2	0	9005	60037	60177	20011
1	9	220	0	0	0	0	0	2	0	9006	60036	60176	20007
1	9	220	0	0	0	0	0	2	0	9007	60035	60175	20004

1	2	233	0	0	0	0	0	2	0	9008	70019	174	20001
1	9	218	0	0	0	0	0	2	0	9009	80107	71107	20022
1	9	220	0	0	0	0	0	2	0	9010	60155	71155	20019
1	9	220	0	0	0	0	0	2	0	9011	60154	71154	20017
1	9	220	0	0	0	0	0	2	0	9012	60153	71153	20015
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1	9	220	0	0	0	0	0	2	0	9015	60150	71150	20007
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1	9	220	0	0	0	0	0	2	0	9019	61155	62155	20019
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8	21	1	53	0	0	0	0	2	0	12389	11375	11377	0
8	21	1	53	0	0	0	0	2	0	12390	11377	11376	0
8	21	1	53	0	0	0	0	2	0	12391	11376	11379	0
8	21	1	53	0	0	0	0	2	0	12392	11379	11378	0
8	21	1	53	0	0	0	0	2	0	12393	11369	11378	0
8	21	1	55	0	0	0	0	2	0	12406	11351	11392	0
8	21	1	55	0	0	0	0	2	0	12407	11392	11393	0
8	21	1	55	0	0	0	0	2	0	12408	11393	11372	0
8	21	1	55	0	0	0	0	2	0	12409	11361	11395	0
8	21	1	55	0	0	0	0	2	0	12410	11395	11396	0
8	21	1	55	0	0	0	0	2	0	12411	11396	11378	0
8	21	1	55	0	0	0	0	2	0	12412	11368	11397	0
8	21	1	55	0	0	0	0	2	0	12413	11352	11399	0
8	21	1	55	0	0	0	0	2	0	12414	11356	11400	0
8	21	1	55	0	0	0	0	2	0	12415	11399	11401	0
8	21	1	55	0	0	0	0	2	0	12416	11401	11397	0
8	21	1	55	0	0	0	0	2	0	12417	11369	11402	0
8	21	1	55	0	0	0	0	2	0	12418	11400	11403	0
8	21	1	55	0	0	0	0	2	0	12419	11403	11402	0
8	21	1	56	0	0	0	0	2	0	12420	11397	11405	0
8	21	1	56	0	0	0	0	2	0	12421	11405	11406	0
8	21	1	56	0	0	0	0	2	0	12422	11406	11402	0
8	21	1	57	0	0	0	0	2	0	12423	11399	11408	0
8	21	1	57	0	0	0	0	2	0	12424	11408	11409	0
8	21	1	57	0	0	0	0	2	0	12425	11409	11400	0
8	21	1	56	0	0	0	0	2	0	12426	11348	11411	0
8	21	1	56	0	0	0	0	2	0	12427	11411	11412	0
8	21	1	56	0	0	0	0	2	0	12428	11412	11365	0
8	21	1	56	0	0	0	0	2	0	12429	11349	11414	0
8	21	1	56	0	0	0	0	2	0	12430	11414	11415	0
8	21	1	56	0	0	0	0	2	0	12431	11415	11366	0
8	21	1	56	0	0	0	0	2	0	12432	11350	11417	0
8	21	1	56	0	0	0	0	2	0	12433	11417	11418	0
8	21	1	56	0	0	0	0	2	0	12434	11418	11367	0
8	21	1	56	0	0	0	0	2	0	12435	11353	11420	0
8	21	1	56	0	0	0	0	2	0	12436	11420	11421	0
8	21	1	56	0	0	0	0	2	0	12437	11421	11373	0
8	21	1	56	0	0	0	0	2	0	12438	11355	11423	0
8	21	1	56	0	0	0	0	2	0	12439	11423	11424	0
8	21	1	56	0	0	0	0	2	0	12440	11424	11375	0
8	21	1	56	0	0	0	0	2	0	12441	11359	11426	0
8	21	1	56	0	0	0	0	2	0	12442	11426	11427	0
8	21	1	56	0	0	0	0	2	0	12443	11427	11376	0

8	21	1	58	0	0	0	0	2	0	12444	11347	11429	0
8	21	1	58	0	0	0	0	2	0	12445	11429	11430	0
8	21	1	58	0	0	0	0	2	0	12446	11430	11363	0
8	21	1	58	0	0	0	0	2	0	12447	11354	11432	0
8	21	1	58	0	0	0	0	2	0	12448	11432	11433	0
8	21	1	58	0	0	0	0	2	0	12449	11433	11374	0
8	21	1	53	0	0	0	0	2	0	12450	11368	11435	0
8	21	1	53	0	0	0	0	2	0	12451	11435	11434	0
8	21	1	53	0	0	0	0	2	0	12452	11369	11436	0
8	21	1	53	0	0	0	0	2	0	12453	11436	11434	0
8	21	1	51	0	0	0	0	2	0	12454	11338	11438	0
8	21	1	51	0	0	0	0	2	0	12455	11438	11439	0
8	21	1	51	0	0	0	0	2	0	12456	11439	11437	0
8	21	1	51	0	0	0	0	2	0	12457	11333	11441	0
8	21	1	51	0	0	0	0	2	0	12458	11441	11442	0
8	21	1	51	0	0	0	0	2	0	12459	11442	11440	0
8	21	1	51	0	0	0	0	2	0	12460	11443	11444	0
8	21	1	51	0	0	0	0	2	0	12461	11444	11445	0
8	21	1	51	0	0	0	0	2	0	12462	11445	11338	0
8	21	1	51	0	0	0	0	2	0	12463	11446	11447	0
8	21	1	51	0	0	0	0	2	0	12464	11447	11448	0
8	21	1	51	0	0	0	0	2	0	12465	11448	11333	0
8	21	1	51	0	0	0	0	2	0	12466	11443	11337	0
8	21	1	51	0	0	0	0	2	0	12467	11446	11334	0
8	21	1	51	0	0	0	0	2	0	12468	11437	11341	0
8	21	1	51	0	0	0	0	2	0	12469	11344	11440	0
6	21	1	50	0	0	0	0	2	0	12470	11130	11443	0
6	21	1	50	0	0	0	0	2	0	12471	11123	11437	0
6	21	1	50	0	0	0	0	2	0	12472	11116	11440	0
6	21	1	50	0	0	0	0	2	0	12473	11137	11446	0
6	1001	1001	50	0	0	0	0	2	0	12478	11434	11450	0
6	1002	1002	50	0	0	0	0	2	0	12479	11434	11450	0
6	1003	1003	50	0	0	0	0	2	0	12480	11434	11450	0
6	1004	1004	50	0	0	0	0	1	0	12481	11450	0	0
1	1	205	0	0	0	0	0	2	0	71000	7101	7103	0
13	1	1	59	0	0	0	0	2	0	71020	7103	7104	0
1	1	206	0	0	0	0	0	2	0	71030	7104	7105	0
1	1	206	0	0	0	0	0	2	0	71040	7105	7106	0
1	1	206	0	0	0	0	0	2	0	71050	7106	7107	0
13	1	1	59	0	0	0	0	2	0	71060	7103	7108	0
13	1	1	59	0	0	0	0	2	0	71070	67108	7109	0
13	1	1	59	0	0	0	0	2	0	71090	7109	7106	20064
1	1	205	0	0	0	0	0	2	0	71100	7111	7114	0
13	1	1	59	0	0	0	0	2	0	71130	7114	7115	0
1	1	206	0	0	0	0	0	2	0	71140	7115	7116	0
1	1	206	0	0	0	0	0	2	0	71150	7116	7117	0
1	1	206	0	0	0	0	0	2	0	71160	7117	7122	0
13	1	1	59	0	0	0	0	2	0	71170	7114	7119	0
13	1	1	59	0	0	0	0	2	0	71180	67119	7120	0
13	1	1	59	0	0	0	0	2	0	71200	7120	7117	20064
1	1	206	0	0	0	0	0	2	0	71210	7122	7118	0
1	1	206	0	0	0	0	0	2	0	81160	81660	8118	0
0	14	14	0	0	0	0	0	2	0	90001	112	30112	0
0	15	15	0	0	0	0	0	2	0	90002	1112	31112	0
0	12	12	0	0	0	0	0	2	0	90003	1112	31112	0
0	14	14	0	0	0	0	0	2	0	90004	2112	32112	0
0	13	13	0	0	0	0	0	2	0	90005	2112	32112	0
0	12	12	0	0	0	0	0	2	0	90006	3112	33112	0
6	1	1	60	0	0	0	0	2	0	90501	37	50037	0
6	1	1	60	0	0	0	0	2	0	90502	39	50039	0
6	1	1	60	0	0	0	0	2	0	90503	153	50153	0
6	1	1	60	0	0	0	0	2	0	90504	174	50174	0
6	1	1	60	0	0	0	0	2	0	90505	177	50177	0
6	1	1	60	0	0	0	0	2	0	90506	179	50179	0
6	1	1	60	0	0	0	0	2	0	90507	182	50182	0
6	1	1	60	0	0	0	0	2	0	90508	1107	51107	0
6	1	1	60	0	0	0	0	2	0	90509	2153	52153	0
6	1	1	60	0	0	0	0	2	0	90510	3107	53107	0
6	1	1	60	0	0	0	0	2	0	90511	4153	54153	0
6	1	1	60	0	0	0	0	2	0	90512	5107	55107	0
6	1	1	60	0	0	0	0	2	0	90513	6153	56153	0
6	1	1	60	0	0	0	0	2	0	90514	7107	57107	0
6	1	1	60	0	0	0	0	2	0	90515	7118	57118	0
6	1	1	60	0	0	0	0	2	0	90516	7151	57151	0
6	1	1	60	0	0	0	0	2	0	90517	7153	57153	0

```
    6     1     1    60     0     0     0     0     2     0  90518   8151  58151      0
    6     1     1    60     0     0     0     0     2     0  90519   8153  58153      0
    6     1     1    60     0     0     0     0     2     0  90520  21740  52174      0
    6     1     1    60     0     0     0     0     2     0  90521   2156  52156      0
    0   300   407     0     0     0     0     0     2     0  40043     12     23      0
    0   300   406     0     0     0     0     0     2     0  40044     13     23      0
    0   300   408     0     0     0     0     0     2     0  40045      2     23      0
    0   300   405     0     0     0     0     0     2     0  40046     13     31      0
    0   300   404     0     0     0     0     0     2     0  40047     14     31      0
    0   300   405     0     0     0     0     0     2     0  40048     34     31      0
    0   300   405     0     0     0     0     0     2     0  40049      2     33      0
    0   300   404     0     0     0     0     0     2     0  40050      3     33      0
    0   300   405     0     0     0     0     0     2     0  40051     34     33      0
    0   300   403     0     0     0     0     0     2     0  40052     19     34      0
    0   300   403     0     0     0     0     0     2     0  40053      8     34      0
    0   300   411     0     0     0     0     0     2     0  47301   1107    105      0
    0   300   415     0     0     0     0     0     2     0  47303   1103    102      0
    0   300   412     0     0     0     0     0     2     0  47305   1102    101      0
    0   300   411     0     0     0     0     0     2     0  47307   1118    116      0
    0   300   410     0     0     0     0     0     2     0  47309   1114    113      0
    0   300   409     0     0     0     0     0     2     0  47310    112    183      0
    0   300   409     0     0     0     0     0     2     0  47311   1112    183      0
    0   300   411     0     0     0     0     0     2     0  47313   5107   4105      0
    0   300   415     0     0     0     0     0     2     0  47315   5103   4102      0
    0   300   412     0     0     0     0     0     2     0  47317   5100   4101      0
    0   300   414     0     0     0     0     0     2     0  47320   4118   4156      0
    0   300   414     0     0     0     0     0     2     0  47321   4156   5116      0
    0   300   414     0     0     0     0     0     2     0  47322   4116   4156      0
    0   300   414     0     0     0     0     0     2     0  47323   4156   5118      0
    0   300   410     0     0     0     0     0     2     0  47325   5114   4113      0
    0   300   409     0     0     0     0     0     2     0  47326   4112   5123      0
    0   300   409     0     0     0     0     0     2     0  47327   5123   5112      0
    0   300   412     0     0     0     0     0     2     0  47329   5112   4111      0
    0   300   413     0     0     0     0     0     2     0  47333   8118   7122      0
    0   300   413     0     0     0     0     0     2     0  47335  81660   7116      0
    0   300   402     0     0     0     0     0     2     0  47336  50037  50174      0
    0   300   401     0     0     0     0     0     2     0  47337  50037  50179      0
    0   300   401     0     0     0     0     0     2     0  47338  50039  50177      0
    0   300   402     0     0     0     0     0     2     0  47339  50039  50182      0
    0   300   402     0     0     0     0     0     2     0  47340  50182  50153      0
    0   300   402     0     0     0     0     0     2     0  47341  50153  51107      0
    0   300   402     0     0     0     0     0     2     0  47342  51107  52153      0
    0   300   402     0     0     0     0     0     2     0  47343  52153  53107      0
    0   300   402     0     0     0     0     0     2     0  47344  53107  54153      0
    0   300   402     0     0     0     0     0     2     0  47345  54153  55107      0
    0   300   402     0     0     0     0     0     2     0  47346  55107  56153      0
    0   300   402     0     0     0     0     0     2     0  47347  56153  57107      0
    0   300   402     0     0     0     0     0     2     0  47348  57107  58153      0
    0   300   401     0     0     0     0     0     2     0  47349  57151  58153      0
    0   300   401     0     0     0     0     0     2     0  47350  57153  58151      0
    0   300   402     0     0     0     0     0     2     0  47351  57118  58151      0
    0   300   421     0     0     0     0     0     2     0  47352    112   8156      0
    0   300   422     0     0     0     0     0     2     0  47353   4112   8157      0
    0   300   416     0     0     0     0     0     2     0  47435    112   1145      0
    0   300   417     0     0     0     0     0     2     0  47436   1145   2102      0
    0   300   416     0     0     0     0     0     2     0  47437    102   1145      0
    0   300   417     0     0     0     0     0     2     0  47438   1145   2112      0
    0   300   420     0     0     0     0     0     2     0  47439   2112   3145      0
    0   300   419     0     0     0     0     0     2     0  47441   2145   2158      0
    0   300   417     0     0     0     0     0     2     0  47442   2102   3145      0
    0   300   418     0     0     0     0     0     2     0  47443   3145   3164      0
   13     1     1    59     0     0     0     0     2     0  30001  10601 301011      0
   13     1     1    59     0     0     0     0     2     0  30002  10602 301021      0
   13     1     1    59     0     0     0     0     2     0  30003  10603 301031      0
   13     1     1    59     0     0     0     0     2     0  30004  10604 301041      0
   13     1     1    59     0     0     0     0     2     0  30005  10613 301131      0
   13     1     1    59     0     0     0     0     2     0  30006  10614 301141      0
   13     1     1    59     0     0     0     0     2     0  30007  10615 301151      0
   13     1     1    59     0     0     0     0     2     0  30008  10616 301161      0
-1

! These constraint equiations attach the trolly to the crane bridge
!!!! Dec 20, 2010, J.Staples
!!!! See Rev 1 of Calc S10-0049.
!!!! CE equations are replaced by CP commands. The CP commands include no Rotation restriction and connections now follow NOG-1 2004
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!!!! This is associated with Fig. 4154.3-1 and Table 4154.3-1
!!!! Specifically, Nodes E, F, G and H of the Figure 4154.3

!CE,1,0,11002,UZ,1,11129,UZ,-1,11129,ROTX,-1,

!CE,2,0,11002,UY,1,11129,UY,-1

!CE,3,0,11002,UX,1,11129,UX,-1,11129,ROTZ,1,

!CE,4,0,11050,UZ,1,11136,UZ,-1,11136,ROTX,-1,

!CE,5,0,11050,UY,1,11136,UY,-1

!CE,6,0,11050,UX,1,11136,UX,-1,11136,ROTZ,1,

!CE,7,0,11122,UY,1,11026,UY,-1

!CE,8,0,11122,UX,1,11026,UX,-1,11026,ROTZ,-1,

!CE,9,0,11115,UY,1,11083,UY,-1

!CE,10,0,11115,UX,1,11083,UX,-1,11083,ROTZ,-1,


CP,1,UX,     11002,    11129,
CP,2,UY,     11002,    11129,
CP,3,UZ,     11002,    11129,
CP,4,UX,     11050,    11136,
CP,5,UY,     11050,    11136,
CP,6,UZ,     11050,    11136,
CP,7,UY,     11026,    11122,
CP,8,UX,     11026,    11122,
CP,9,UY,     11083,    11115,
CP,10,UX,    11083,    11115,


!!!!
!!!! End of Dec 20 2010 changes.


! These constraint equiations attach the crane bridge to the crane rail

CE,11,0,40101,UY,1,301011,UY,-1
CE,12,0,40101,UZ,1,301011,UZ,-1

CE,13,0,40102,UY,1,301021,UY,-1
CE,14,0,40102,UZ,1,301021,UZ,-1

CE,15,0,40103,UX,1,301031,UX,-1
CE,16,0,40103,UY,1,301031,UY,-1
CE,17,0,40103,UZ,1,301031,UZ,-1

CE,18,0,40104,UX,1,301041,UX,-1
CE,19,0,40104,UY,1,301041,UY,-1
CE,20,0,40104,UZ,1,301041,UZ,-1

CE,21,0,40113,UY,1,301131,UY,-1

CE,22,0,40114,UY,1,301141,UY,-1

CE,23,0,40115,UX,1,301151,UX,-1
CE,24,0,40115,UY,1,301151,UY,-1

CE,25,0,40116,UX,1,301161,UX,-1
CE,26,0,40116,UY,1,301161,UY,-1


! ELEMENT TYPE 2


CE,101,0,60013,UX,1,13,UX,-1
CE,NEXT,0,60013,UY,1,13,UY,-1
CE,NEXT,0,60013,UZ,1,13,UZ,-1
CE,NEXT,0,60013,ROTZ,1,13,ROTZ,-1
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CE,NEXT,0,60031,UX,1,31,UX,-1
CE,NEXT,0,60031,UY,1,31,UY,-1
CE,NEXT,0,60031,UZ,1,31,UZ,-1
CE,NEXT,0,60031,ROTZ,1,31,ROTZ,-1

CE,NEXT,0,60019,UX,1,19,UX,-1
CE,NEXT,0,60019,UY,1,19,UY,-1
CE,NEXT,0,60019,UZ,1,19,UZ,-1
CE,NEXT,0,60019,ROTZ,1,19,ROTZ,-1

CE,NEXT,0,60012,UX,1,12,UX,-1
CE,NEXT,0,60012,UY,1,12,UY,-1
CE,NEXT,0,60012,UZ,1,12,UZ,-1

CE,NEXT,0,70013,UX,1,13,UX,-1
CE,NEXT,0,70013,UY,1,13,UY,-1
CE,NEXT,0,70013,UZ,1,13,UZ,-1

CE,NEXT,0,60002,UX,1,2,UX,-1
CE,NEXT,0,60002,UY,1,2,UY,-1
CE,NEXT,0,60002,UZ,1,2,UZ,-1

CE,NEXT,0,80013,UX,1,13,UX,-1
CE,NEXT,0,80013,UY,1,13,UY,-1
CE,NEXT,0,80013,UZ,1,13,UZ,-1

CE,NEXT,0,60034,UX,1,34,UX,-1
CE,NEXT,0,60034,UY,1,34,UY,-1
CE,NEXT,0,60034,UZ,1,34,UZ,-1

CE,NEXT,0,70002,UX,1,2,UX,-1
CE,NEXT,0,70002,UY,1,2,UY,-1
CE,NEXT,0,70002,UZ,1,2,UZ,-1

CE,NEXT,0,70034,UX,1,34,UX,-1
CE,NEXT,0,70034,UY,1,34,UY,-1
CE,NEXT,0,70034,UZ,1,34,UZ,-1

CE,NEXT,0,60124,UX,1,124,UX,-1
CE,NEXT,0,60124,UY,1,124,UY,-1
CE,NEXT,0,60124,UZ,1,124,UZ,-1
CE,NEXT,0,60124,ROTZ,1,124,ROTZ,-1

CE,NEXT,0,60133,UX,1,133,UX,-1
CE,NEXT,0,60133,UY,1,133,UY,-1
CE,NEXT,0,60133,UZ,1,133,UZ,-1
CE,NEXT,0,60133,ROTZ,1,133,ROTZ,-1

CE,NEXT,0,60113,UX,1,113,UX,-1
CE,NEXT,0,60113,UY,1,113,UY,-1
CE,NEXT,0,60113,UZ,1,113,UZ,-1
CE,NEXT,0,60113,ROTX,1,113,ROTX,-1

CE,NEXT,0,62156,UX,1,2156,UX,-1
CE,NEXT,0,62156,UY,1,2156,UY,-1
CE,NEXT,0,62156,UZ,1,2156,UZ,-1
CE,NEXT,0,62156,ROTZ,1,2156,ROTZ,-1

CE,NEXT,0,63156,UX,1,3156,UX,-1
CE,NEXT,0,63156,UY,1,3156,UY,-1
CE,NEXT,0,63156,UZ,1,3156,UZ,-1
CE,NEXT,0,63156,ROTZ,1,3156,ROTZ,-1

CE,NEXT,0,65112,UX,1,5112,UX,-1
CE,NEXT,0,65112,UY,1,5112,UY,-1
CE,NEXT,0,65112,UZ,1,5112,UZ,-1
CE,NEXT,0,65112,ROTZ,1,5112,ROTZ,-1

CE,NEXT,0,66118,UX,1,6118,UX,-1
CE,NEXT,0,66118,UY,1,6118,UY,-1
CE,NEXT,0,66118,UZ,1,6118,UZ,-1
CE,NEXT,0,66118,ROTZ,1,6118,ROTZ,-1

CE,NEXT,0,80002,UX,1,2,UX,-1
CE,NEXT,0,80002,UY,1,2,UY,-1
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CE,NEXT,0,80002,UZ,1,2,UZ,-1
CE,NEXT,0,80002,ROTX,1,2,ROTX,-1

CE,NEXT,0,90013,UX,1,13,UX,-1
CE,NEXT,0,90013,UY,1,13,UY,-1
CE,NEXT,0,90013,UZ,1,13,UZ,-1
CE,NEXT,0,90013,ROTX,1,13,ROTX,-1

CE,NEXT,0,72102,UX,1,2102,UX,-1
CE,NEXT,0,72102,UY,1,2102,UY,-1
CE,NEXT,0,72102,UZ,1,2102,UZ,-1
CE,NEXT,0,72102,ROTX,1,2102,ROTX,-1

CE,NEXT,0,62148,UX,1,2148,UX,-1
CE,NEXT,0,62148,UY,1,2148,UY,-1
CE,NEXT,0,62148,UZ,1,2148,UZ,-1
CE,NEXT,0,62148,ROTX,1,2148,ROTX,-1

CE,NEXT,0,62143,UX,1,2143,UX,-1
CE,NEXT,0,62143,UY,1,2143,UY,-1
CE,NEXT,0,62143,UZ,1,2143,UZ,-1
CE,NEXT,0,62143,ROTX,1,2143,ROTX,-1

CE,NEXT,0,63100,UX,1,3100,UX,-1
CE,NEXT,0,63100,UY,1,3100,UY,-1
CE,NEXT,0,63100,UZ,1,3100,UZ,-1
CE,NEXT,0,63100,ROTX,1,3100,ROTX,-1

CE,NEXT,0,73102,UX,1,3102,UX,-1
CE,NEXT,0,73102,UY,1,3102,UY,-1
CE,NEXT,0,73102,UZ,1,3102,UZ,-1
CE,NEXT,0,73102,ROTX,1,3102,ROTX,-1

CE,NEXT,0,73112,UX,1,3112,UX,-1
CE,NEXT,0,73112,UY,1,3112,UY,-1
CE,NEXT,0,73112,UZ,1,3112,UZ,-1
CE,NEXT,0,73112,ROTX,1,3112,ROTX,-1

CE,NEXT,0,64113,UX,1,4113,UX,-1
CE,NEXT,0,64113,UY,1,4113,UY,-1
CE,NEXT,0,64113,UZ,1,4113,UZ,-1
CE,NEXT,0,64113,ROTX,1,4113,ROTX,-1

CE,NEXT,0,64122,UX,1,4122,UX,-1
CE,NEXT,0,64122,UY,1,4122,UY,-1
CE,NEXT,0,64122,UZ,1,4122,UZ,-1
CE,NEXT,0,64122,ROTX,1,4122,ROTX,-1

CE,NEXT,0,62116,UX,1,2116,UX,-1
CE,NEXT,0,62116,UY,1,2116,UY,-1
CE,NEXT,0,62116,UZ,1,2116,UZ,-1
CE,NEXT,0,62116,ROTX,1,2116,ROTX,-1

CE,NEXT,0,60008,UX,1,8,UX,-1
CE,NEXT,0,60008,UY,1,8,UY,-1
CE,NEXT,0,60008,UZ,1,8,UZ,-1
CE,NEXT,0,60008,ROTX,1,8,ROTX,-1

CE,NEXT,0,70019,UX,1,19,UX,-1
CE,NEXT,0,70019,UY,1,19,UY,-1
CE,NEXT,0,70019,UZ,1,19,UZ,-1
CE,NEXT,0,70019,ROTX,1,19,ROTX,-1

CE,NEXT,0,75118,UX,1,5118,UX,-1
CE,NEXT,0,75118,UY,1,5118,UY,-1
CE,NEXT,0,75118,UZ,1,5118,UZ,-1
CE,NEXT,0,75118,ROTX,1,5118,ROTX,-1

CE,NEXT,0,60174,UX,1,174,UX,-1
CE,NEXT,0,60174,UY,1,174,UY,-1
CE,NEXT,0,60174,UZ,1,174,UZ,-1
CE,NEXT,0,60174,ROTZ,1,174,ROTZ,-1

CE,NEXT,0,67109,UX,1,7109,UX,-1
CE,NEXT,0,67109,UY,1,7109,UY,-1
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CE,NEXT,0,67109,UZ,1,7109,UZ,-1
CE,NEXT,0,67109,ROTX,1,7109,ROTX,-1

CE,NEXT,0,66109,UX,1,6109,UX,-1
CE,NEXT,0,66109,UY,1,6109,UY,-1
CE,NEXT,0,66109,UZ,1,6109,UZ,-1
CE,NEXT,0,66109,ROTX,1,6109,ROTX,-1

CE,NEXT,0,65109,UX,1,5109,UX,-1
CE,NEXT,0,65109,UY,1,5109,UY,-1
CE,NEXT,0,65109,UZ,1,5109,UZ,-1
CE,NEXT,0,65109,ROTX,1,5109,ROTX,-1

CE,NEXT,0,63109,UX,1,3109,UX,-1
CE,NEXT,0,63109,UY,1,3109,UY,-1
CE,NEXT,0,63109,UZ,1,3109,UZ,-1
CE,NEXT,0,63109,ROTX,1,3109,ROTX,-1

CE,NEXT,0,62109,UX,1,2109,UX,-1
CE,NEXT,0,62109,UY,1,2109,UY,-1
CE,NEXT,0,62109,UZ,1,2109,UZ,-1
CE,NEXT,0,62109,ROTX,1,2109,ROTX,-1

CE,NEXT,0,61109,UX,1,1109,UX,-1
CE,NEXT,0,61109,UY,1,1109,UY,-1
CE,NEXT,0,61109,UZ,1,1109,UZ,-1
CE,NEXT,0,61109,ROTX,1,1109,ROTX,-1

CE,NEXT,0,68120,UX,1,8120,UX,-1
CE,NEXT,0,68120,UY,1,8120,UY,-1
CE,NEXT,0,68120,UZ,1,8120,UZ,-1
CE,NEXT,0,68120,ROTX,1,8120,ROTX,-1

CE,NEXT,0,65120,UX,1,5120,UX,-1
CE,NEXT,0,65120,UY,1,5120,UY,-1
CE,NEXT,0,65120,UZ,1,5120,UZ,-1
CE,NEXT,0,65120,ROTX,1,5120,ROTX,-1

CE,NEXT,0,63120,UX,1,3120,UX,-1
CE,NEXT,0,63120,UY,1,3120,UY,-1
CE,NEXT,0,63120,UZ,1,3120,UZ,-1
CE,NEXT,0,63120,ROTX,1,3120,ROTX,-1

CE,NEXT,0,62120,UX,1,2120,UX,-1
CE,NEXT,0,62120,UY,1,2120,UY,-1
CE,NEXT,0,62120,UZ,1,2120,UZ,-1
CE,NEXT,0,62120,ROTX,1,2120,ROTX,-1

CE,NEXT,0,61120,UX,1,1120,UX,-1
CE,NEXT,0,61120,UY,1,1120,UY,-1
CE,NEXT,0,61120,UZ,1,1120,UZ,-1
CE,NEXT,0,61120,ROTX,1,1120,ROTX,-1

!,ELEMENT,TYPE,,,,3,,

CE,NEXT,0,60112,UX,1,112,UX,-1
CE,NEXT,0,60112,UY,1,112,UY,-1
CE,NEXT,0,60112,UZ,1,112,UZ,-1
CE,NEXT,0,60112,ROTX,1,112,ROTX,-1
CE,NEXT,0,60112,ROTZ,1,112,ROTZ,-1

CE,NEXT,0,60118,UX,1,118,UX,-1
CE,NEXT,0,60118,UY,1,118,UY,-1
CE,NEXT,0,60118,UZ,1,118,UZ,-1
CE,NEXT,0,60118,ROTX,1,118,ROTX,-1
CE,NEXT,0,60118,ROTZ,1,118,ROTZ,-1

CE,NEXT,0,61112,UX,1,1112,UX,-1
CE,NEXT,0,61112,UY,1,1112,UY,-1
CE,NEXT,0,61112,UZ,1,1112,UZ,-1
CE,NEXT,0,61112,ROTX,1,1112,ROTX,-1
CE,NEXT,0,61112,ROTZ,1,1112,ROTZ,-1

CE,NEXT,0,61118,UX,1,1118,UX,-1
CE,NEXT,0,61118,UY,1,1118,UY,-1
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CE,NEXT,0,61118,UZ,1,1118,UZ,-1
CE,NEXT,0,61118,ROTX,1,1118,ROTX,-1
CE,NEXT,0,61118,ROTZ,1,1118,ROTZ,-1

CE,NEXT,0,62112,UX,1,2112,UX,-1
CE,NEXT,0,62112,UY,1,2112,UY,-1
CE,NEXT,0,62112,UZ,1,2112,UZ,-1
CE,NEXT,0,62112,ROTX,1,2112,ROTX,-1
CE,NEXT,0,62112,ROTZ,1,2112,ROTZ,-1

CE,NEXT,0,62118,UX,1,2118,UX,-1
CE,NEXT,0,62118,UY,1,2118,UY,-1
CE,NEXT,0,62118,UZ,1,2118,UZ,-1
CE,NEXT,0,62118,ROTX,1,2118,ROTX,-1
CE,NEXT,0,62118,ROTZ,1,2118,ROTZ,-1

CE,NEXT,0,63112,UX,1,3112,UX,-1
CE,NEXT,0,63112,UY,1,3112,UY,-1
CE,NEXT,0,63112,UZ,1,3112,UZ,-1
CE,NEXT,0,63112,ROTX,1,3112,ROTX,-1
CE,NEXT,0,63112,ROTZ,1,3112,ROTZ,-1

CE,NEXT,0,63118,UX,1,3118,UX,-1
CE,NEXT,0,63118,UY,1,3118,UY,-1
CE,NEXT,0,63118,UZ,1,3118,UZ,-1
CE,NEXT,0,63118,ROTX,1,3118,ROTX,-1
CE,NEXT,0,63118,ROTZ,1,3118,ROTZ,-1

CE,NEXT,0,64118,UX,1,4118,UX,-1
CE,NEXT,0,64118,UY,1,4118,UY,-1
CE,NEXT,0,64118,UZ,1,4118,UZ,-1
CE,NEXT,0,64118,ROTX,1,4118,ROTX,-1
CE,NEXT,0,64118,ROTZ,1,4118,ROTZ,-1

CE,NEXT,0,65118,UX,1,5118,UX,-1
CE,NEXT,0,65118,UY,1,5118,UY,-1
CE,NEXT,0,65118,UZ,1,5118,UZ,-1
CE,NEXT,0,65118,ROTX,1,5118,ROTX,-1
CE,NEXT,0,65118,ROTZ,1,5118,ROTZ,-1

CE,NEXT,0,67118,UX,1,7118,UX,-1
CE,NEXT,0,67118,UY,1,7118,UY,-1
CE,NEXT,0,67118,UZ,1,7118,UZ,-1
CE,NEXT,0,67118,ROTX,1,7118,ROTX,-1
CE,NEXT,0,67118,ROTZ,1,7118,ROTZ,-1

CE,NEXT,0,68118,UX,1,8118,UX,-1
CE,NEXT,0,68118,UY,1,8118,UY,-1
CE,NEXT,0,68118,UZ,1,8118,UZ,-1
CE,NEXT,0,68118,ROTX,1,8118,ROTX,-1
CE,NEXT,0,68118,ROTZ,1,8118,ROTZ,-1

!,ELEMENT,TYPE,,,,7,,

CE,NEXT,0,90002,UX,1,2,UX,-1
CE,NEXT,0,90002,UY,1,2,UY,-1
CE,NEXT,0,90002,UZ,1,2,UZ,-1
CE,NEXT,0,90002,ROTZ,1,2,ROTZ,-1

CE,NEXT,0,60033,UX,1,33,UX,-1
CE,NEXT,0,60033,UY,1,33,UY,-1
CE,NEXT,0,60033,UZ,1,33,UZ,-1
CE,NEXT,0,60033,ROTZ,1,33,ROTZ,-1

CE,NEXT,0,70008,UX,1,8,UX,-1
CE,NEXT,0,70008,UY,1,8,UY,-1
CE,NEXT,0,70008,UZ,1,8,UZ,-1
CE,NEXT,0,70008,ROTZ,1,8,ROTZ,-1

CE,NEXT,0,70031,UX,1,31,UX,-1
CE,NEXT,0,70031,UY,1,31,UY,-1
CE,NEXT,0,70031,UZ,1,31,UZ,-1

CE,NEXT,0,70033,UX,1,33,UX,-1
CE,NEXT,0,70033,UY,1,33,UY,-1
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CE,NEXT,0,70033,UZ,1,33,UZ,-1

CE,NEXT,0,60145,UX,1,145,UX,-1
CE,NEXT,0,60145,UY,1,145,UY,-1
CE,NEXT,0,60145,UZ,1,145,UZ,-1
CE,NEXT,0,60145,ROTY,1,145,ROTY,-1

CE,NEXT,0,60132,UX,1,132,UX,-1
CE,NEXT,0,60132,UY,1,132,UY,-1
CE,NEXT,0,60132,UZ,1,132,UZ,-1
CE,NEXT,0,60132,ROTZ,1,132,ROTZ,-1

CE,NEXT,0,60141,UX,1,141,UX,-1
CE,NEXT,0,60141,UY,1,141,UY,-1
CE,NEXT,0,60141,UZ,1,141,UZ,-1
CE,NEXT,0,60141,ROTZ,1,141,ROTZ,-1

CE,NEXT,0,61113,UX,1,1113,UX,-1
CE,NEXT,0,61113,UY,1,1113,UY,-1
CE,NEXT,0,61113,UZ,1,1113,UZ,-1
CE,NEXT,0,61113,ROTX,1,1113,ROTX,-1

CE,NEXT,0,61145,UX,1,1145,UX,-1
CE,NEXT,0,61145,UY,1,1145,UY,-1
CE,NEXT,0,61145,UZ,1,1145,UZ,-1
CE,NEXT,0,61145,ROTY,1,1145,ROTY,-1

CE,NEXT,0,62145,UX,1,2145,UX,-1
CE,NEXT,0,62145,UY,1,2145,UY,-1
CE,NEXT,0,62145,UZ,1,2145,UZ,-1
CE,NEXT,0,62145,ROTY,1,2145,ROTY,-1

CE,NEXT,0,63121,UX,1,3121,UX,-1
CE,NEXT,0,63121,UY,1,3121,UY,-1
CE,NEXT,0,63121,UZ,1,3121,UZ,-1
CE,NEXT,0,63121,ROTY,1,3121,ROTY,-1

CE,NEXT,0,63145,UX,1,3145,UX,-1
CE,NEXT,0,63145,UY,1,3145,UY,-1
CE,NEXT,0,63145,UZ,1,3145,UZ,-1
CE,NEXT,0,63145,ROTY,1,3145,ROTY,-1

CE,NEXT,0,63164,UX,1,3164,UX,-1
CE,NEXT,0,63164,UY,1,3164,UY,-1
CE,NEXT,0,63164,UZ,1,3164,UZ,-1
CE,NEXT,0,63164,ROTZ,1,3164,ROTZ,-1

CE,NEXT,0,65102,UX,1,5102,UX,-1
CE,NEXT,0,65102,UY,1,5102,UY,-1
CE,NEXT,0,65102,UZ,1,5102,UZ,-1
CE,NEXT,0,65102,ROTZ,1,5102,ROTZ,-1

CE,NEXT,0,66107,UX,1,6107,UX,-1
CE,NEXT,0,66107,UY,1,6107,UY,-1
CE,NEXT,0,66107,UZ,1,6107,UZ,-1
CE,NEXT,0,66107,ROTZ,1,6107,ROTZ,-1

CE,NEXT,0,70102,UX,1,102,UX,-1
CE,NEXT,0,70102,UY,1,102,UY,-1
CE,NEXT,0,70102,UZ,1,102,UZ,-1
CE,NEXT,0,70102,ROTX,1,102,ROTX,-1

CE,NEXT,0,70112,UX,1,112,UX,-1
CE,NEXT,0,70112,UY,1,112,UY,-1
CE,NEXT,0,70112,UZ,1,112,UZ,-1
CE,NEXT,0,70112,ROTX,1,112,ROTX,-1

CE,NEXT,0,63143,UX,1,3143,UX,-1
CE,NEXT,0,63143,UY,1,3143,UY,-1
CE,NEXT,0,63143,UZ,1,3143,UZ,-1
CE,NEXT,0,63143,ROTX,1,3143,ROTX,-1

CE,NEXT,0,64102,UX,1,4102,UX,-1
CE,NEXT,0,64102,UY,1,4102,UY,-1
CE,NEXT,0,64102,UZ,1,4102,UZ,-1
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CE,NEXT,0,64102,ROTX,1,4102,ROTX,-1

CE,NEXT,0,64112,UX,1,4112,UX,-1
CE,NEXT,0,64112,UY,1,4112,UY,-1
CE,NEXT,0,64112,UZ,1,4112,UZ,-1
CE,NEXT,0,64112,ROTX,1,4112,ROTX,-1

CE,NEXT,0,65122,UX,1,5122,UX,-1
CE,NEXT,0,65122,UY,1,5122,UY,-1
CE,NEXT,0,65122,UZ,1,5122,UZ,-1
CE,NEXT,0,65122,ROTX,1,5122,ROTX,-1

CE,NEXT,0,65113,UX,1,5113,UX,-1
CE,NEXT,0,65113,UY,1,5113,UY,-1
CE,NEXT,0,65113,UZ,1,5113,UZ,-1
CE,NEXT,0,65113,ROTX,1,5113,ROTX,-1

CE,NEXT,0,83102,UX,1,3102,UX,-1
CE,NEXT,0,83102,UY,1,3102,UY,-1
CE,NEXT,0,83102,UZ,1,3102,UZ,-1
CE,NEXT,0,83102,ROTX,1,3102,ROTX,-1

CE,NEXT,0,63148,UX,1,3148,UX,-1
CE,NEXT,0,63148,UY,1,3148,UY,-1
CE,NEXT,0,63148,UZ,1,3148,UZ,-1
CE,NEXT,0,63148,ROTX,1,3148,ROTX,-1

CE,NEXT,0,68152,UX,1,8152,UX,-1
CE,NEXT,0,68152,UY,1,8152,UY,-1
CE,NEXT,0,68152,UZ,1,8152,UZ,-1
CE,NEXT,0,68152,ROTY,1,8152,ROTY,-1

CE,NEXT,0,63116,UX,1,3116,UX,-1
CE,NEXT,0,63116,UY,1,3116,UY,-1
CE,NEXT,0,63116,UZ,1,3116,UZ,-1
CE,NEXT,0,63116,ROTX,1,3116,ROTX,-1

CE,NEXT,0,77118,UX,1,7118,UX,-1
CE,NEXT,0,77118,UY,1,7118,UY,-1
CE,NEXT,0,77118,UZ,1,7118,UZ,-1
CE,NEXT,0,77118,ROTX,1,7118,ROTX,-1

CE,NEXT,0,70107,UX,1,107,UX,-1
CE,NEXT,0,70107,UY,1,107,UY,-1
CE,NEXT,0,70107,UZ,1,107,UZ,-1
CE,NEXT,0,70107,ROTX,1,107,ROTX,-1

CE,NEXT,0,70118,UX,1,118,UX,-1
CE,NEXT,0,70118,UY,1,118,UY,-1
CE,NEXT,0,70118,UZ,1,118,UZ,-1
CE,NEXT,0,70118,ROTX,1,118,ROTX,-1

CE,NEXT,0,60182,UX,1,182,UX,-1
CE,NEXT,0,60182,UY,1,182,UY,-1
CE,NEXT,0,60182,UZ,1,182,UZ,-1
CE,NEXT,0,60182,ROTZ,1,182,ROTZ,-1

CE,NEXT,0,76109,UX,1,6109,UX,-1
CE,NEXT,0,76109,UY,1,6109,UY,-1
CE,NEXT,0,76109,UZ,1,6109,UZ,-1
CE,NEXT,0,76109,ROTX,1,6109,ROTX,-1

CE,NEXT,0,75109,UX,1,5109,UX,-1
CE,NEXT,0,75109,UY,1,5109,UY,-1
CE,NEXT,0,75109,UZ,1,5109,UZ,-1
CE,NEXT,0,75109,ROTX,1,5109,ROTX,-1

CE,NEXT,0,64109,UX,1,4109,UX,-1
CE,NEXT,0,64109,UY,1,4109,UY,-1
CE,NEXT,0,64109,UZ,1,4109,UZ,-1
CE,NEXT,0,64109,ROTX,1,4109,ROTX,-1

CE,NEXT,0,72109,UX,1,2109,UX,-1
CE,NEXT,0,72109,UY,1,2109,UY,-1
CE,NEXT,0,72109,UZ,1,2109,UZ,-1
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CE,NEXT,0,72109,ROTX,1,2109,ROTX,-1

CE,NEXT,0,71109,UX,1,1109,UX,-1
CE,NEXT,0,71109,UY,1,1109,UY,-1
CE,NEXT,0,71109,UZ,1,1109,UZ,-1
CE,NEXT,0,71109,ROTX,1,1109,ROTX,-1

CE,NEXT,0,60010,UX,1,10,UX,-1
CE,NEXT,0,60010,UY,1,10,UY,-1
CE,NEXT,0,60010,UZ,1,10,UZ,-1
CE,NEXT,0,60010,ROTX,1,10,ROTX,-1

CE,NEXT,0,75120,UX,1,5120,UX,-1
CE,NEXT,0,75120,UY,1,5120,UY,-1
CE,NEXT,0,75120,UZ,1,5120,UZ,-1
CE,NEXT,0,75120,ROTX,1,5120,ROTX,-1

CE,NEXT,0,64120,UX,1,4120,UX,-1
CE,NEXT,0,64120,UY,1,4120,UY,-1
CE,NEXT,0,64120,UZ,1,4120,UZ,-1
CE,NEXT,0,64120,ROTX,1,4120,ROTX,-1

CE,NEXT,0,72120,UX,1,2120,UX,-1
CE,NEXT,0,72120,UY,1,2120,UY,-1
CE,NEXT,0,72120,UZ,1,2120,UZ,-1
CE,NEXT,0,72120,ROTX,1,2120,ROTX,-1

CE,NEXT,0,71120,UX,1,1120,UX,-1
CE,NEXT,0,71120,UY,1,1120,UY,-1
CE,NEXT,0,71120,UZ,1,1120,UZ,-1
CE,NEXT,0,71120,ROTX,1,1120,ROTX,-1

CE,NEXT,0,60021,UX,1,21,UX,-1
CE,NEXT,0,60021,UY,1,21,UY,-1
CE,NEXT,0,60021,UZ,1,21,UZ,-1
CE,NEXT,0,60021,ROTX,1,21,ROTX,-1

!,ELEMENT,TYPE,,,,8,,

CE,NEXT,0,60102,UX,1,102,UX,-1
CE,NEXT,0,60102,UY,1,102,UY,-1
CE,NEXT,0,60102,UZ,1,102,UZ,-1
CE,NEXT,0,60102,ROTX,1,102,ROTX,-1
CE,NEXT,0,60102,ROTZ,1,102,ROTZ,-1

CE,NEXT,0,60107,UX,1,107,UX,-1
CE,NEXT,0,60107,UY,1,107,UY,-1
CE,NEXT,0,60107,UZ,1,107,UZ,-1
CE,NEXT,0,60107,ROTX,1,107,ROTX,-1
CE,NEXT,0,60107,ROTZ,1,107,ROTZ,-1

CE,NEXT,0,61102,UX,1,1102,UX,-1
CE,NEXT,0,61102,UY,1,1102,UY,-1
CE,NEXT,0,61102,UZ,1,1102,UZ,-1
CE,NEXT,0,61102,ROTX,1,1102,ROTX,-1
CE,NEXT,0,61102,ROTZ,1,1102,ROTZ,-1

CE,NEXT,0,61107,UX,1,1107,UX,-1
CE,NEXT,0,61107,UY,1,1107,UY,-1
CE,NEXT,0,61107,UZ,1,1107,UZ,-1
CE,NEXT,0,61107,ROTX,1,1107,ROTX,-1
CE,NEXT,0,61107,ROTZ,1,1107,ROTZ,-1

CE,NEXT,0,62102,UX,1,2102,UX,-1
CE,NEXT,0,62102,UY,1,2102,UY,-1
CE,NEXT,0,62102,UZ,1,2102,UZ,-1
CE,NEXT,0,62102,ROTX,1,2102,ROTX,-1
CE,NEXT,0,62102,ROTZ,1,2102,ROTZ,-1

CE,NEXT,0,62107,UX,1,2107,UX,-1
CE,NEXT,0,62107,UY,1,2107,UY,-1
CE,NEXT,0,62107,UZ,1,2107,UZ,-1
CE,NEXT,0,62107,ROTX,1,2107,ROTX,-1
CE,NEXT,0,62107,ROTZ,1,2107,ROTZ,-1
```

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CE,NEXT,0,63102,UX,1,3102,UX,-1
CE,NEXT,0,63102,UY,1,3102,UY,-1
CE,NEXT,0,63102,UZ,1,3102,UZ,-1
CE,NEXT,0,63102,ROTX,1,3102,ROTX,-1
CE,NEXT,0,63102,ROTZ,1,3102,ROTZ,-1

CE,NEXT,0,63107,UX,1,3107,UX,-1
CE,NEXT,0,63107,UY,1,3107,UY,-1
CE,NEXT,0,63107,UZ,1,3107,UZ,-1
CE,NEXT,0,63107,ROTX,1,3107,ROTX,-1
CE,NEXT,0,63107,ROTZ,1,3107,ROTZ,-1

CE,NEXT,0,64107,UX,1,4107,UX,-1
CE,NEXT,0,64107,UY,1,4107,UY,-1
CE,NEXT,0,64107,UZ,1,4107,UZ,-1
CE,NEXT,0,64107,ROTX,1,4107,ROTX,-1
CE,NEXT,0,64107,ROTZ,1,4107,ROTZ,-1

CE,NEXT,0,65107,UX,1,5107,UX,-1
CE,NEXT,0,65107,UY,1,5107,UY,-1
CE,NEXT,0,65107,UZ,1,5107,UZ,-1
CE,NEXT,0,65107,ROTX,1,5107,ROTX,-1
CE,NEXT,0,65107,ROTZ,1,5107,ROTZ,-1

CE,NEXT,0,64100,UX,1,4100,UX,-1
CE,NEXT,0,64100,UY,1,4100,UY,-1
CE,NEXT,0,64100,UZ,1,4100,UZ,-1
CE,NEXT,0,64100,ROTX,1,4100,ROTX,-1
CE,NEXT,0,64100,ROTY,1,4100,ROTY,-1

CE,NEXT,0,67107,UX,1,7107,UX,-1
CE,NEXT,0,67107,UY,1,7107,UY,-1
CE,NEXT,0,67107,UZ,1,7107,UZ,-1
CE,NEXT,0,67107,ROTX,1,7107,ROTX,-1
CE,NEXT,0,67107,ROTZ,1,7107,ROTZ,-1

CE,NEXT,0,68107,UX,1,8107,UX,-1
CE,NEXT,0,68107,UY,1,8107,UY,-1
CE,NEXT,0,68107,UZ,1,8107,UZ,-1
CE,NEXT,0,68107,ROTX,1,8107,ROTX,-1
CE,NEXT,0,68107,ROTZ,1,8107,ROTZ,-1

!,ELEMENT,TYPE,,,,16,,

CE,NEXT,0,74100,UX,1,4100,UX,-1
CE,NEXT,0,74100,UY,1,4100,UY,-1
CE,NEXT,0,74100,UZ,1,4100,UZ,-1
CE,NEXT,0,74100,ROTX,1,4100,ROTX,-1
CE,NEXT,0,74100,ROTY,1,4100,ROTY,-1

CE,NEXT,0,75100,UX,1,5100,UX,-1
CE,NEXT,0,75100,UY,1,5100,UY,-1
CE,NEXT,0,75100,UZ,1,5100,UZ,-1
CE,NEXT,0,75100,ROTX,1,5100,ROTX,-1

!,ELEMENT,TYPE,,,,9,,


CE,NEXT,0,60014,UX,1,14,UX,-1
CE,NEXT,0,60014,UY,1,14,UY,-1
CE,NEXT,0,60014,UZ,1,14,UZ,-1
CE,NEXT,0,60014,ROTZ,1,14,ROTZ,-1

CE,NEXT,0,80034,UX,1,34,UX,-1
CE,NEXT,0,80034,UY,1,34,UY,-1
CE,NEXT,0,80034,UZ,1,34,UZ,-1
CE,NEXT,0,80034,ROTZ,1,34,ROTZ,-1

CE,NEXT,0,90034,UX,1,34,UX,-1
CE,NEXT,0,90034,UY,1,34,UY,-1
CE,NEXT,0,90034,UZ,1,34,UZ,-1
CE,NEXT,0,90034,ROTZ,1,34,ROTZ,-1

CE,NEXT,0,60003,UX,1,3,UX,-1
CE,NEXT,0,60003,UY,1,3,UY,-1
```

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CE,NEXT,0,60003,UZ,1,3,UZ,-1
CE,NEXT,0,60003,ROTZ,1,3,ROTZ,-1

CE,NEXT,0,80019,UX,1,19,UX,-1
CE,NEXT,0,80019,UY,1,19,UY,-1
CE,NEXT,0,80019,UZ,1,19,UZ,-1

CE,NEXT,0,100034,UX,1,34,UX,-1
CE,NEXT,0,100034,UY,1,34,UY,-1
CE,NEXT,0,100034,UZ,1,34,UZ,-1

CE,NEXT,0,80008,UX,1,8,UX,-1
CE,NEXT,0,80008,UY,1,8,UY,-1
CE,NEXT,0,80008,UZ,1,8,UZ,-1

CE,NEXT,0,110034,UX,1,34,UX,-1
CE,NEXT,0,110034,UY,1,34,UY,-1
CE,NEXT,0,110034,UZ,1,34,UZ,-1

CE,NEXT,0,91107,UX,1,1107,UX,-1
CE,NEXT,0,91107,UY,1,1107,UY,-1
CE,NEXT,0,91107,UZ,1,1107,UZ,-1

CE,NEXT,0,80105,UX,1,105,UX,-1
CE,NEXT,0,80105,UY,1,105,UY,-1
CE,NEXT,0,80105,UZ,1,105,UZ,-1

CE,NEXT,0,61103,UX,1,1103,UX,-1
CE,NEXT,0,61103,UY,1,1103,UY,-1
CE,NEXT,0,61103,UZ,1,1103,UZ,-1

CE,NEXT,0,90102,UX,1,102,UX,-1
CE,NEXT,0,90102,UY,1,102,UY,-1
CE,NEXT,0,90102,UZ,1,102,UZ,-1

CE,NEXT,0,91102,UX,1,1102,UX,-1
CE,NEXT,0,91102,UY,1,1102,UY,-1
CE,NEXT,0,91102,UZ,1,1102,UZ,-1

CE,NEXT,0,60101,UX,1,101,UX,-1
CE,NEXT,0,60101,UY,1,101,UY,-1
CE,NEXT,0,60101,UZ,1,101,UZ,-1

CE,NEXT,0,91118,UX,1,1118,UX,-1
CE,NEXT,0,91118,UY,1,1118,UY,-1
CE,NEXT,0,91118,UZ,1,1118,UZ,-1

CE,NEXT,0,80116,UX,1,116,UX,-1
CE,NEXT,0,80116,UY,1,116,UY,-1
CE,NEXT,0,80116,UZ,1,116,UZ,-1

CE,NEXT,0,61114,UX,1,1114,UX,-1
CE,NEXT,0,61114,UY,1,1114,UY,-1
CE,NEXT,0,61114,UZ,1,1114,UZ,-1

CE,NEXT,0,70113,UX,1,113,UX,-1
CE,NEXT,0,70113,UY,1,113,UY,-1
CE,NEXT,0,70113,UZ,1,113,UZ,-1

CE,NEXT,0,90112,UX,1,112,UX,-1
CE,NEXT,0,90112,UY,1,112,UY,-1
CE,NEXT,0,90112,UZ,1,112,UZ,-1

CE,NEXT,0,60183,UX,1,183,UX,-1
CE,NEXT,0,60183,UY,1,183,UY,-1
CE,NEXT,0,60183,UZ,1,183,UZ,-1

CE,NEXT,0,91112,UX,1,1112,UX,-1
CE,NEXT,0,91112,UY,1,1112,UY,-1
CE,NEXT,0,91112,UZ,1,1112,UZ,-1

CE,NEXT,0,70183,UX,1,183,UX,-1
CE,NEXT,0,70183,UY,1,183,UY,-1
CE,NEXT,0,70183,UZ,1,183,UZ,-1
```

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CE,NEXT,0,95107,UX,1,5107,UX,-1
CE,NEXT,0,95107,UY,1,5107,UY,-1
CE,NEXT,0,95107,UZ,1,5107,UZ,-1

CE,NEXT,0,84105,UX,1,4105,UX,-1
CE,NEXT,0,84105,UY,1,4105,UY,-1
CE,NEXT,0,84105,UZ,1,4105,UZ,-1

CE,NEXT,0,65103,UX,1,5103,UX,-1
CE,NEXT,0,65103,UY,1,5103,UY,-1
CE,NEXT,0,65103,UZ,1,5103,UZ,-1

CE,NEXT,0,84102,UX,1,4102,UX,-1
CE,NEXT,0,84102,UY,1,4102,UY,-1
CE,NEXT,0,84102,UZ,1,4102,UZ,-1

CE,NEXT,0,65100,UX,1,5100,UX,-1
CE,NEXT,0,65100,UY,1,5100,UY,-1
CE,NEXT,0,65100,UZ,1,5100,UZ,-1

CE,NEXT,0,64101,UX,1,4101,UX,-1
CE,NEXT,0,64101,UY,1,4101,UY,-1
CE,NEXT,0,64101,UZ,1,4101,UZ,-1

CE,NEXT,0,94118,UX,1,4118,UX,-1
CE,NEXT,0,94118,UY,1,4118,UY,-1
CE,NEXT,0,94118,UZ,1,4118,UZ,-1

CE,NEXT,0,84156,UX,1,4156,UX,-1
CE,NEXT,0,84156,UY,1,4156,UY,-1
CE,NEXT,0,84156,UZ,1,4156,UZ,-1

CE,NEXT,0,64156,UX,1,4156,UX,-1
CE,NEXT,0,64156,UY,1,4156,UY,-1
CE,NEXT,0,64156,UZ,1,4156,UZ,-1

CE,NEXT,0,75116,UX,1,5116,UX,-1
CE,NEXT,0,75116,UY,1,5116,UY,-1
CE,NEXT,0,75116,UZ,1,5116,UZ,-1

CE,NEXT,0,84116,UX,1,4116,UX,-1
CE,NEXT,0,84116,UY,1,4116,UY,-1
CE,NEXT,0,84116,UZ,1,4116,UZ,-1

CE,NEXT,0,94156,UX,1,4156,UX,-1
CE,NEXT,0,94156,UY,1,4156,UY,-1
CE,NEXT,0,94156,UZ,1,4156,UZ,-1

CE,NEXT,0,74156,UX,1,4156,UX,-1
CE,NEXT,0,74156,UY,1,4156,UY,-1
CE,NEXT,0,74156,UZ,1,4156,UZ,-1

CE,NEXT,0,95118,UX,1,5118,UX,-1
CE,NEXT,0,95118,UY,1,5118,UY,-1
CE,NEXT,0,95118,UZ,1,5118,UZ,-1

CE,NEXT,0,65114,UX,1,5114,UX,-1
CE,NEXT,0,65114,UY,1,5114,UY,-1
CE,NEXT,0,65114,UZ,1,5114,UZ,-1

CE,NEXT,0,84113,UX,1,4113,UX,-1
CE,NEXT,0,84113,UY,1,4113,UY,-1
CE,NEXT,0,84113,UZ,1,4113,UZ,-1

CE,NEXT,0,84112,UX,1,4112,UX,-1
CE,NEXT,0,84112,UY,1,4112,UY,-1
CE,NEXT,0,84112,UZ,1,4112,UZ,-1

CE,NEXT,0,65123,UX,1,5123,UX,-1
CE,NEXT,0,65123,UY,1,5123,UY,-1
CE,NEXT,0,65123,UZ,1,5123,UZ,-1

CE,NEXT,0,75123,UX,1,5123,UX,-1
CE,NEXT,0,75123,UY,1,5123,UY,-1
CE,NEXT,0,75123,UZ,1,5123,UZ,-1
```

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CE,NEXT,0,95112,UX,1,5112,UX,-1
CE,NEXT,0,95112,UY,1,5112,UY,-1
CE,NEXT,0,95112,UZ,1,5112,UZ,-1

CE,NEXT,0,85112,UX,1,5112,UX,-1
CE,NEXT,0,85112,UY,1,5112,UY,-1
CE,NEXT,0,85112,UZ,1,5112,UZ,-1

CE,NEXT,0,64111,UX,1,4111,UX,-1
CE,NEXT,0,64111,UY,1,4111,UY,-1
CE,NEXT,0,64111,UZ,1,4111,UZ,-1

CE,NEXT,0,88118,UX,1,8118,UX,-1
CE,NEXT,0,88118,UY,1,8118,UY,-1
CE,NEXT,0,88118,UZ,1,8118,UZ,-1

CE,NEXT,0,87122,UX,1,7122,UX,-1
CE,NEXT,0,87122,UY,1,7122,UY,-1
CE,NEXT,0,87122,UZ,1,7122,UZ,-1

CE,NEXT,0,281660,UX,1,81660,UX,-1
CE,NEXT,0,281660,UY,1,81660,UY,-1
CE,NEXT,0,281660,UZ,1,81660,UZ,-1

CE,NEXT,0,77116,UX,1,7116,UX,-1
CE,NEXT,0,77116,UY,1,7116,UY,-1
CE,NEXT,0,77116,UZ,1,7116,UZ,-1

CE,NEXT,0,150037,UX,1,50037,UX,-1
CE,NEXT,0,150037,UY,1,50037,UY,-1
CE,NEXT,0,150037,UZ,1,50037,UZ,-1

CE,NEXT,0,150174,UX,1,50174,UX,-1
CE,NEXT,0,150174,UY,1,50174,UY,-1
CE,NEXT,0,150174,UZ,1,50174,UZ,-1

CE,NEXT,0,250037,UX,1,50037,UX,-1
CE,NEXT,0,250037,UY,1,50037,UY,-1
CE,NEXT,0,250037,UZ,1,50037,UZ,-1

CE,NEXT,0,150179,UX,1,50179,UX,-1
CE,NEXT,0,150179,UY,1,50179,UY,-1
CE,NEXT,0,150179,UZ,1,50179,UZ,-1

CE,NEXT,0,150039,UX,1,50039,UX,-1
CE,NEXT,0,150039,UY,1,50039,UY,-1
CE,NEXT,0,150039,UZ,1,50039,UZ,-1

CE,NEXT,0,150177,UX,1,50177,UX,-1
CE,NEXT,0,150177,UY,1,50177,UY,-1
CE,NEXT,0,150177,UZ,1,50177,UZ,-1

CE,NEXT,0,250039,UX,1,50039,UX,-1
CE,NEXT,0,250039,UY,1,50039,UY,-1
CE,NEXT,0,250039,UZ,1,50039,UZ,-1

CE,NEXT,0,250182,UX,1,50182,UX,-1
CE,NEXT,0,250182,UY,1,50182,UY,-1
CE,NEXT,0,250182,UZ,1,50182,UZ,-1

CE,NEXT,0,150182,UX,1,50182,UX,-1
CE,NEXT,0,150182,UY,1,50182,UY,-1
CE,NEXT,0,150182,UZ,1,50182,UZ,-1

CE,NEXT,0,250153,UX,1,50153,UX,-1
CE,NEXT,0,250153,UY,1,50153,UY,-1
CE,NEXT,0,250153,UZ,1,50153,UZ,-1

CE,NEXT,0,150153,UX,1,50153,UX,-1
CE,NEXT,0,150153,UY,1,50153,UY,-1
CE,NEXT,0,150153,UZ,1,50153,UZ,-1

CE,NEXT,0,251107,UX,1,51107,UX,-1
CE,NEXT,0,251107,UY,1,51107,UY,-1
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CE,NEXT,0,251107,UZ,1,51107,UZ,-1

CE,NEXT,0,151107,UX,1,51107,UX,-1
CE,NEXT,0,151107,UY,1,51107,UY,-1
CE,NEXT,0,151107,UZ,1,51107,UZ,-1

CE,NEXT,0,252153,UX,1,52153,UX,-1
CE,NEXT,0,252153,UY,1,52153,UY,-1
CE,NEXT,0,252153,UZ,1,52153,UZ,-1

CE,NEXT,0,152153,UX,1,52153,UX,-1
CE,NEXT,0,152153,UY,1,52153,UY,-1
CE,NEXT,0,152153,UZ,1,52153,UZ,-1

CE,NEXT,0,253107,UX,1,53107,UX,-1
CE,NEXT,0,253107,UY,1,53107,UY,-1
CE,NEXT,0,253107,UZ,1,53107,UZ,-1

CE,NEXT,0,153107,UX,1,53107,UX,-1
CE,NEXT,0,153107,UY,1,53107,UY,-1
CE,NEXT,0,153107,UZ,1,53107,UZ,-1

CE,NEXT,0,254153,UX,1,54153,UX,-1
CE,NEXT,0,254153,UY,1,54153,UY,-1
CE,NEXT,0,254153,UZ,1,54153,UZ,-1

CE,NEXT,0,154153,UX,1,54153,UX,-1
CE,NEXT,0,154153,UY,1,54153,UY,-1
CE,NEXT,0,154153,UZ,1,54153,UZ,-1

CE,NEXT,0,255107,UX,1,55107,UX,-1
CE,NEXT,0,255107,UY,1,55107,UY,-1
CE,NEXT,0,255107,UZ,1,55107,UZ,-1

CE,NEXT,0,155107,UX,1,55107,UX,-1
CE,NEXT,0,155107,UY,1,55107,UY,-1
CE,NEXT,0,155107,UZ,1,55107,UZ,-1

CE,NEXT,0,256153,UX,1,56153,UX,-1
CE,NEXT,0,256153,UY,1,56153,UY,-1
CE,NEXT,0,256153,UZ,1,56153,UZ,-1

CE,NEXT,0,156153,UX,1,56153,UX,-1
CE,NEXT,0,156153,UY,1,56153,UY,-1
CE,NEXT,0,156153,UZ,1,56153,UZ,-1

CE,NEXT,0,257107,UX,1,57107,UX,-1
CE,NEXT,0,257107,UY,1,57107,UY,-1
CE,NEXT,0,257107,UZ,1,57107,UZ,-1

CE,NEXT,0,157107,UX,1,57107,UX,-1
CE,NEXT,0,157107,UY,1,57107,UY,-1
CE,NEXT,0,157107,UZ,1,57107,UZ,-1

CE,NEXT,0,158153,UX,1,58153,UX,-1
CE,NEXT,0,158153,UY,1,58153,UY,-1
CE,NEXT,0,158153,UZ,1,58153,UZ,-1

CE,NEXT,0,157151,UX,1,57151,UX,-1
CE,NEXT,0,157151,UY,1,57151,UY,-1
CE,NEXT,0,157151,UZ,1,57151,UZ,-1

CE,NEXT,0,258153,UX,1,58153,UX,-1
CE,NEXT,0,258153,UY,1,58153,UY,-1
CE,NEXT,0,258153,UZ,1,58153,UZ,-1

CE,NEXT,0,157153,UX,1,57153,UX,-1
CE,NEXT,0,157153,UY,1,57153,UY,-1
CE,NEXT,0,157153,UZ,1,57153,UZ,-1

CE,NEXT,0,158151,UX,1,58151,UX,-1
CE,NEXT,0,158151,UY,1,58151,UY,-1
CE,NEXT,0,158151,UZ,1,58151,UZ,-1

CE,NEXT,0,157118,UX,1,57118,UX,-1
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CE,NEXT,0,157118,UY,1,57118,UY,-1
CE,NEXT,0,157118,UZ,1,57118,UZ,-1

CE,NEXT,0,258151,UX,1,58151,UX,-1
CE,NEXT,0,258151,UY,1,58151,UY,-1
CE,NEXT,0,258151,UZ,1,58151,UZ,-1

CE,NEXT,0,100112,UX,1,112,UX,-1
CE,NEXT,0,100112,UY,1,112,UY,-1
CE,NEXT,0,100112,UZ,1,112,UZ,-1

CE,NEXT,0,94112,UX,1,4112,UX,-1
CE,NEXT,0,94112,UY,1,4112,UY,-1
CE,NEXT,0,94112,UZ,1,4112,UZ,-1

CE,NEXT,0,62124,UX,1,2124,UX,-1
CE,NEXT,0,62124,UY,1,2124,UY,-1
CE,NEXT,0,62124,UZ,1,2124,UZ,-1

CE,NEXT,0,62125,UX,1,2125,UX,-1
CE,NEXT,0,62125,UY,1,2125,UY,-1
CE,NEXT,0,62125,UZ,1,2125,UZ,-1

CE,NEXT,0,110112,UX,1,112,UX,-1
CE,NEXT,0,110112,UY,1,112,UY,-1
CE,NEXT,0,110112,UZ,1,112,UZ,-1

CE,NEXT,0,111145,UX,1,1145,UX,-1
CE,NEXT,0,111145,UY,1,1145,UY,-1
CE,NEXT,0,111145,UZ,1,1145,UZ,-1

CE,NEXT,0,91145,UX,1,1145,UX,-1
CE,NEXT,0,91145,UY,1,1145,UY,-1
CE,NEXT,0,91145,UZ,1,1145,UZ,-1

CE,NEXT,0,102102,UX,1,2102,UX,-1
CE,NEXT,0,102102,UY,1,2102,UY,-1
CE,NEXT,0,102102,UZ,1,2102,UZ,-1

CE,NEXT,0,100102,UX,1,102,UX,-1
CE,NEXT,0,100102,UY,1,102,UY,-1
CE,NEXT,0,100102,UZ,1,102,UZ,-1

CE,NEXT,0,121145,UX,1,1145,UX,-1
CE,NEXT,0,121145,UY,1,1145,UY,-1
CE,NEXT,0,121145,UZ,1,1145,UZ,-1

CE,NEXT,0,101145,UX,1,1145,UX,-1
CE,NEXT,0,101145,UY,1,1145,UY,-1
CE,NEXT,0,101145,UZ,1,1145,UZ,-1

CE,NEXT,0,102112,UX,1,2112,UX,-1
CE,NEXT,0,102112,UY,1,2112,UY,-1
CE,NEXT,0,102112,UZ,1,2112,UZ,-1

CE,NEXT,0,92112,UX,1,2112,UX,-1
CE,NEXT,0,92112,UY,1,2112,UY,-1
CE,NEXT,0,92112,UZ,1,2112,UZ,-1

CE,NEXT,0,103145,UX,1,3145,UX,-1
CE,NEXT,0,103145,UY,1,3145,UY,-1
CE,NEXT,0,103145,UZ,1,3145,UZ,-1

CE,NEXT,0,92145,UX,1,2145,UX,-1
CE,NEXT,0,92145,UY,1,2145,UY,-1
CE,NEXT,0,92145,UZ,1,2145,UZ,-1

CE,NEXT,0,62158,UX,1,2158,UX,-1
CE,NEXT,0,62158,UY,1,2158,UY,-1
CE,NEXT,0,62158,UZ,1,2158,UZ,-1

CE,NEXT,0,92102,UX,1,2102,UX,-1
CE,NEXT,0,92102,UY,1,2102,UY,-1
CE,NEXT,0,92102,UZ,1,2102,UZ,-1
```

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CE,NEXT,0,113145,UX,1,3145,UX,-1
CE,NEXT,0,113145,UY,1,3145,UY,-1
CE,NEXT,0,113145,UZ,1,3145,UZ,-1

CE,NEXT,0,93145,UX,1,3145,UX,-1
CE,NEXT,0,93145,UY,1,3145,UY,-1
CE,NEXT,0,93145,UZ,1,3145,UZ,-1

CE,NEXT,0,73164,UX,1,3164,UX,-1
CE,NEXT,0,73164,UY,1,3164,UY,-1
CE,NEXT,0,73164,UZ,1,3164,UZ,-1

CE,NEXT,0,71113,UX,1,1113,UX,-1
CE,NEXT,0,71113,UY,1,1113,UY,-1
CE,NEXT,0,71113,UZ,1,1113,UZ,-1
CE,NEXT,0,71113,ROTX,1,1113,ROTX,-1

CE,NEXT,0,62113,UX,1,2113,UX,-1
CE,NEXT,0,62113,UY,1,2113,UY,-1
CE,NEXT,0,62113,UZ,1,2113,UZ,-1
CE,NEXT,0,62113,ROTX,1,2113,ROTX,-1

CE,NEXT,0,72113,UX,1,2113,UX,-1
CE,NEXT,0,72113,UY,1,2113,UY,-1
CE,NEXT,0,72113,UZ,1,2113,UZ,-1
CE,NEXT,0,72113,ROTX,1,2113,ROTX,-1

CE,NEXT,0,152174,UX,1,52174,UX,-1
CE,NEXT,0,152174,UY,1,52174,UY,-1
CE,NEXT,0,152174,UZ,1,52174,UZ,-1
CE,NEXT,0,152174,ROTX,1,52174,ROTX,-1

CE,NEXT,0,63113,UX,1,3113,UX,-1
CE,NEXT,0,63113,UY,1,3113,UY,-1
CE,NEXT,0,63113,UZ,1,3113,UZ,-1
CE,NEXT,0,63113,ROTX,1,3113,ROTX,-1

CE,NEXT,0,74113,UX,1,4113,UX,-1
CE,NEXT,0,74113,UY,1,4113,UY,-1
CE,NEXT,0,74113,UZ,1,4113,UZ,-1
CE,NEXT,0,74113,ROTX,1,4113,ROTX,-1

CE,NEXT,0,60030,UX,1,30,UX,-1
CE,NEXT,0,60030,UY,1,30,UY,-1
CE,NEXT,0,60030,UZ,1,30,UZ,-1
CE,NEXT,0,60030,ROTX,1,30,ROTX,-1

CE,NEXT,0,60131,UX,1,131,UX,-1
CE,NEXT,0,60131,UY,1,131,UY,-1
CE,NEXT,0,60131,UZ,1,131,UZ,-1
CE,NEXT,0,60131,ROTX,1,131,ROTX,-1

CE,NEXT,0,60029,UX,1,29,UX,-1
CE,NEXT,0,60029,UY,1,29,UY,-1
CE,NEXT,0,60029,UZ,1,29,UZ,-1
CE,NEXT,0,60029,ROTX,1,29,ROTX,-1

CE,NEXT,0,60130,UX,1,130,UX,-1
CE,NEXT,0,60130,UY,1,130,UY,-1
CE,NEXT,0,60130,UZ,1,130,UZ,-1
CE,NEXT,0,60130,ROTX,1,130,ROTX,-1

CE,NEXT,0,60028,UX,1,28,UX,-1
CE,NEXT,0,60028,UY,1,28,UY,-1
CE,NEXT,0,60028,UZ,1,28,UZ,-1
CE,NEXT,0,60028,ROTX,1,28,ROTX,-1

CE,NEXT,0,60129,UX,1,129,UX,-1
CE,NEXT,0,60129,UY,1,129,UY,-1
CE,NEXT,0,60129,UZ,1,129,UZ,-1
CE,NEXT,0,60129,ROTX,1,129,ROTX,-1

CE,NEXT,0,60027,UX,1,27,UX,-1
CE,NEXT,0,60027,UY,1,27,UY,-1
CE,NEXT,0,60027,UZ,1,27,UZ,-1
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CE,NEXT,0,60027,ROTX,1,27,ROTX,-1

CE,NEXT,0,60128,UX,1,128,UX,-1
CE,NEXT,0,60128,UY,1,128,UY,-1
CE,NEXT,0,60128,UZ,1,128,UZ,-1
CE,NEXT,0,60128,ROTX,1,128,ROTX,-1

CE,NEXT,0,60026,UX,1,26,UX,-1
CE,NEXT,0,60026,UY,1,26,UY,-1
CE,NEXT,0,60026,UZ,1,26,UZ,-1
CE,NEXT,0,60026,ROTX,1,26,ROTX,-1

CE,NEXT,0,60127,UX,1,127,UX,-1
CE,NEXT,0,60127,UY,1,127,UY,-1
CE,NEXT,0,60127,UZ,1,127,UZ,-1
CE,NEXT,0,60127,ROTX,1,127,ROTX,-1

CE,NEXT,0,60025,UX,1,25,UX,-1
CE,NEXT,0,60025,UY,1,25,UY,-1
CE,NEXT,0,60025,UZ,1,25,UZ,-1
CE,NEXT,0,60025,ROTX,1,25,ROTX,-1

CE,NEXT,0,60126,UX,1,126,UX,-1
CE,NEXT,0,60126,UY,1,126,UY,-1
CE,NEXT,0,60126,UZ,1,126,UZ,-1
CE,NEXT,0,60126,ROTX,1,126,ROTX,-1

CE,NEXT,0,60024,UX,1,24,UX,-1
CE,NEXT,0,60024,UY,1,24,UY,-1
CE,NEXT,0,60024,UZ,1,24,UZ,-1
CE,NEXT,0,60024,ROTX,1,24,ROTX,-1

CE,NEXT,0,60125,UX,1,125,UX,-1
CE,NEXT,0,60125,UY,1,125,UY,-1
CE,NEXT,0,60125,UZ,1,125,UZ,-1
CE,NEXT,0,60125,ROTX,1,125,ROTX,-1

CE,NEXT,0,70131,UX,1,131,UX,-1
CE,NEXT,0,70131,UY,1,131,UY,-1
CE,NEXT,0,70131,UZ,1,131,UZ,-1
CE,NEXT,0,70131,ROTX,1,131,ROTX,-1

CE,NEXT,0,60140,UX,1,140,UX,-1
CE,NEXT,0,60140,UY,1,140,UY,-1
CE,NEXT,0,60140,UZ,1,140,UZ,-1
CE,NEXT,0,60140,ROTX,1,140,ROTX,-1

CE,NEXT,0,70125,UX,1,125,UX,-1
CE,NEXT,0,70125,UY,1,125,UY,-1
CE,NEXT,0,70125,UZ,1,125,UZ,-1
CE,NEXT,0,70125,ROTX,1,125,ROTX,-1

CE,NEXT,0,60134,UX,1,134,UX,-1
CE,NEXT,0,60134,UY,1,134,UY,-1
CE,NEXT,0,60134,UZ,1,134,UZ,-1
CE,NEXT,0,60134,ROTX,1,134,ROTX,-1

CE,NEXT,0,70140,UX,1,140,UX,-1
CE,NEXT,0,70140,UY,1,140,UY,-1
CE,NEXT,0,70140,UZ,1,140,UZ,-1
CE,NEXT,0,70140,ROTX,1,140,ROTX,-1

CE,NEXT,0,60148,UX,1,148,UX,-1
CE,NEXT,0,60148,UY,1,148,UY,-1
CE,NEXT,0,60148,UZ,1,148,UZ,-1
CE,NEXT,0,60148,ROTX,1,148,ROTX,-1

CE,NEXT,0,60139,UX,1,139,UX,-1
CE,NEXT,0,60139,UY,1,139,UY,-1
CE,NEXT,0,60139,UZ,1,139,UZ,-1
CE,NEXT,0,60139,ROTX,1,139,ROTX,-1

CE,NEXT,0,60147,UX,1,147,UX,-1
CE,NEXT,0,60147,UY,1,147,UY,-1
CE,NEXT,0,60147,UZ,1,147,UZ,-1
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CE,NEXT,0,60147,ROTX,1,147,ROTX,-1

CE,NEXT,0,60138,UX,1,138,UX,-1
CE,NEXT,0,60138,UY,1,138,UY,-1
CE,NEXT,0,60138,UZ,1,138,UZ,-1
CE,NEXT,0,60138,ROTX,1,138,ROTX,-1

CE,NEXT,0,60146,UX,1,146,UX,-1
CE,NEXT,0,60146,UY,1,146,UY,-1
CE,NEXT,0,60146,UZ,1,146,UZ,-1
CE,NEXT,0,60146,ROTX,1,146,ROTX,-1

CE,NEXT,0,60137,UX,1,137,UX,-1
CE,NEXT,0,60137,UY,1,137,UY,-1
CE,NEXT,0,60137,UZ,1,137,UZ,-1
CE,NEXT,0,60137,ROTX,1,137,ROTX,-1

CE,NEXT,0,70145,UX,1,145,UX,-1
CE,NEXT,0,70145,UY,1,145,UY,-1
CE,NEXT,0,70145,UZ,1,145,UZ,-1
CE,NEXT,0,70145,ROTX,1,145,ROTX,-1

CE,NEXT,0,60136,UX,1,136,UX,-1
CE,NEXT,0,60136,UY,1,136,UY,-1
CE,NEXT,0,60136,UZ,1,136,UZ,-1
CE,NEXT,0,60136,ROTX,1,136,ROTX,-1

CE,NEXT,0,70144,UX,1,144,UX,-1
CE,NEXT,0,70144,UY,1,144,UY,-1
CE,NEXT,0,70144,UZ,1,144,UZ,-1
CE,NEXT,0,70144,ROTX,1,144,ROTX,-1

CE,NEXT,0,60135,UX,1,135,UX,-1
CE,NEXT,0,60135,UY,1,135,UY,-1
CE,NEXT,0,60135,UZ,1,135,UZ,-1
CE,NEXT,0,60135,ROTX,1,135,ROTX,-1

CE,NEXT,0,70143,UX,1,143,UX,-1
CE,NEXT,0,70143,UY,1,143,UY,-1
CE,NEXT,0,70143,UZ,1,143,UZ,-1
CE,NEXT,0,70143,ROTX,1,143,ROTX,-1

CE,NEXT,0,70134,UX,1,134,UX,-1
CE,NEXT,0,70134,UY,1,134,UY,-1
CE,NEXT,0,70134,UZ,1,134,UZ,-1
CE,NEXT,0,70134,ROTX,1,134,ROTX,-1

CE,NEXT,0,70142,UX,1,142,UX,-1
CE,NEXT,0,70142,UY,1,142,UY,-1
CE,NEXT,0,70142,UZ,1,142,UZ,-1
CE,NEXT,0,70142,ROTX,1,142,ROTX,-1

CE,NEXT,0,80102,UX,1,102,UX,-1
CE,NEXT,0,80102,UY,1,102,UY,-1
CE,NEXT,0,80102,UZ,1,102,UZ,-1
CE,NEXT,0,80102,ROTX,1,102,ROTX,-1

CE,NEXT,0,81102,UX,1,1102,UX,-1
CE,NEXT,0,81102,UY,1,1102,UY,-1
CE,NEXT,0,81102,UZ,1,1102,UZ,-1
CE,NEXT,0,81102,ROTX,1,1102,ROTX,-1

CE,NEXT,0,70148,UX,1,148,UX,-1
CE,NEXT,0,70148,UY,1,148,UY,-1
CE,NEXT,0,70148,UZ,1,148,UZ,-1
CE,NEXT,0,70148,ROTX,1,148,ROTX,-1

CE,NEXT,0,71148,UX,1,1148,UX,-1
CE,NEXT,0,71148,UY,1,1148,UY,-1
CE,NEXT,0,71148,UZ,1,1148,UZ,-1
CE,NEXT,0,71148,ROTX,1,1148,ROTX,-1

CE,NEXT,0,70147,UX,1,147,UX,-1
CE,NEXT,0,70147,UY,1,147,UY,-1
CE,NEXT,0,70147,UZ,1,147,UZ,-1
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CE,NEXT,0,70147,ROTX,1,147,ROTX,-1

CE,NEXT,0,71147,UX,1,1147,UX,-1
CE,NEXT,0,71147,UY,1,1147,UY,-1
CE,NEXT,0,71147,UZ,1,1147,UZ,-1
CE,NEXT,0,71147,ROTX,1,1147,ROTX,-1

CE,NEXT,0,70146,UX,1,146,UX,-1
CE,NEXT,0,70146,UY,1,146,UY,-1
CE,NEXT,0,70146,UZ,1,146,UZ,-1
CE,NEXT,0,70146,ROTX,1,146,ROTX,-1

CE,NEXT,0,71146,UX,1,1146,UX,-1
CE,NEXT,0,71146,UY,1,1146,UY,-1
CE,NEXT,0,71146,UZ,1,1146,UZ,-1
CE,NEXT,0,71146,ROTX,1,1146,ROTX,-1

CE,NEXT,0,80145,UX,1,145,UX,-1
CE,NEXT,0,80145,UY,1,145,UY,-1
CE,NEXT,0,80145,UZ,1,145,UZ,-1
CE,NEXT,0,80145,ROTX,1,145,ROTX,-1

CE,NEXT,0,81145,UX,1,1145,UX,-1
CE,NEXT,0,81145,UY,1,1145,UY,-1
CE,NEXT,0,81145,UZ,1,1145,UZ,-1
CE,NEXT,0,81145,ROTX,1,1145,ROTX,-1

CE,NEXT,0,60144,UX,1,144,UX,-1
CE,NEXT,0,60144,UY,1,144,UY,-1
CE,NEXT,0,60144,UZ,1,144,UZ,-1
CE,NEXT,0,60144,ROTX,1,144,ROTX,-1

CE,NEXT,0,71144,UX,1,1144,UX,-1
CE,NEXT,0,71144,UY,1,1144,UY,-1
CE,NEXT,0,71144,UZ,1,1144,UZ,-1
CE,NEXT,0,71144,ROTX,1,1144,ROTX,-1

CE,NEXT,0,60143,UX,1,143,UX,-1
CE,NEXT,0,60143,UY,1,143,UY,-1
CE,NEXT,0,60143,UZ,1,143,UZ,-1
CE,NEXT,0,60143,ROTX,1,143,ROTX,-1

CE,NEXT,0,71143,UX,1,1143,UX,-1
CE,NEXT,0,71143,UY,1,1143,UY,-1
CE,NEXT,0,71143,UZ,1,1143,UZ,-1
CE,NEXT,0,71143,ROTX,1,1143,ROTX,-1

CE,NEXT,0,60142,UX,1,142,UX,-1
CE,NEXT,0,60142,UY,1,142,UY,-1
CE,NEXT,0,60142,UZ,1,142,UZ,-1
CE,NEXT,0,60142,ROTX,1,142,ROTX,-1

CE,NEXT,0,71142,UX,1,1142,UX,-1
CE,NEXT,0,71142,UY,1,1142,UY,-1
CE,NEXT,0,71142,UZ,1,1142,UZ,-1
CE,NEXT,0,71142,ROTX,1,1142,ROTX,-1

CE,NEXT,0,80112,UX,1,112,UX,-1
CE,NEXT,0,80112,UY,1,112,UY,-1
CE,NEXT,0,80112,UZ,1,112,UZ,-1
CE,NEXT,0,80112,ROTX,1,112,ROTX,-1

CE,NEXT,0,71112,UX,1,1112,UX,-1
CE,NEXT,0,71112,UY,1,1112,UY,-1
CE,NEXT,0,71112,UZ,1,1112,UZ,-1
CE,NEXT,0,71112,ROTX,1,1112,ROTX,-1

CE,NEXT,0,71102,UX,1,1102,UX,-1
CE,NEXT,0,71102,UY,1,1102,UY,-1
CE,NEXT,0,71102,UZ,1,1102,UZ,-1
CE,NEXT,0,71102,ROTX,1,1102,ROTX,-1

CE,NEXT,0,82102,UX,1,2102,UX,-1
CE,NEXT,0,82102,UY,1,2102,UY,-1
CE,NEXT,0,82102,UZ,1,2102,UZ,-1
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CE,NEXT,0,82102,ROTX,1,2102,ROTX,-1

CE,NEXT,0,61148,UX,1,1148,UX,-1
CE,NEXT,0,61148,UY,1,1148,UY,-1
CE,NEXT,0,61148,UZ,1,1148,UZ,-1
CE,NEXT,0,61148,ROTX,1,1148,ROTX,-1

CE,NEXT,0,72148,UX,1,2148,UX,-1
CE,NEXT,0,72148,UY,1,2148,UY,-1
CE,NEXT,0,72148,UZ,1,2148,UZ,-1
CE,NEXT,0,72148,ROTX,1,2148,ROTX,-1

CE,NEXT,0,61147,UX,1,1147,UX,-1
CE,NEXT,0,61147,UY,1,1147,UY,-1
CE,NEXT,0,61147,UZ,1,1147,UZ,-1
CE,NEXT,0,61147,ROTX,1,1147,ROTX,-1

CE,NEXT,0,62147,UX,1,2147,UX,-1
CE,NEXT,0,62147,UY,1,2147,UY,-1
CE,NEXT,0,62147,UZ,1,2147,UZ,-1
CE,NEXT,0,62147,ROTX,1,2147,ROTX,-1

CE,NEXT,0,61146,UX,1,1146,UX,-1
CE,NEXT,0,61146,UY,1,1146,UY,-1
CE,NEXT,0,61146,UZ,1,1146,UZ,-1
CE,NEXT,0,61146,ROTX,1,1146,ROTX,-1

CE,NEXT,0,62146,UX,1,2146,UX,-1
CE,NEXT,0,62146,UY,1,2146,UY,-1
CE,NEXT,0,62146,UZ,1,2146,UZ,-1
CE,NEXT,0,62146,ROTX,1,2146,ROTX,-1

CE,NEXT,0,71145,UX,1,1145,UX,-1
CE,NEXT,0,71145,UY,1,1145,UY,-1
CE,NEXT,0,71145,UZ,1,1145,UZ,-1
CE,NEXT,0,71145,ROTX,1,1145,ROTX,-1

CE,NEXT,0,72145,UX,1,2145,UX,-1
CE,NEXT,0,72145,UY,1,2145,UY,-1
CE,NEXT,0,72145,UZ,1,2145,UZ,-1
CE,NEXT,0,72145,ROTX,1,2145,ROTX,-1

CE,NEXT,0,61144,UX,1,1144,UX,-1
CE,NEXT,0,61144,UY,1,1144,UY,-1
CE,NEXT,0,61144,UZ,1,1144,UZ,-1
CE,NEXT,0,61144,ROTX,1,1144,ROTX,-1

CE,NEXT,0,62144,UX,1,2144,UX,-1
CE,NEXT,0,62144,UY,1,2144,UY,-1
CE,NEXT,0,62144,UZ,1,2144,UZ,-1
CE,NEXT,0,62144,ROTX,1,2144,ROTX,-1

CE,NEXT,0,61143,UX,1,1143,UX,-1
CE,NEXT,0,61143,UY,1,1143,UY,-1
CE,NEXT,0,61143,UZ,1,1143,UZ,-1
CE,NEXT,0,61143,ROTX,1,1143,ROTX,-1

CE,NEXT,0,72143,UX,1,2143,UX,-1
CE,NEXT,0,72143,UY,1,2143,UY,-1
CE,NEXT,0,72143,UZ,1,2143,UZ,-1
CE,NEXT,0,72143,ROTX,1,2143,ROTX,-1

CE,NEXT,0,61142,UX,1,1142,UX,-1
CE,NEXT,0,61142,UY,1,1142,UY,-1
CE,NEXT,0,61142,UZ,1,1142,UZ,-1
CE,NEXT,0,61142,ROTX,1,1142,ROTX,-1

CE,NEXT,0,62142,UX,1,2142,UX,-1
CE,NEXT,0,62142,UY,1,2142,UY,-1
CE,NEXT,0,62142,UZ,1,2142,UZ,-1
CE,NEXT,0,62142,ROTX,1,2142,ROTX,-1

CE,NEXT,0,81112,UX,1,1112,UX,-1
CE,NEXT,0,81112,UY,1,1112,UY,-1
CE,NEXT,0,81112,UZ,1,1112,UZ,-1
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CE,NEXT,0,81112,ROTX,1,1112,ROTX,-1

CE,NEXT,0,82112,UX,1,2112,UX,-1
CE,NEXT,0,82112,UY,1,2112,UY,-1
CE,NEXT,0,82112,UZ,1,2112,UZ,-1
CE,NEXT,0,82112,ROTX,1,2112,ROTX,-1

CE,NEXT,0,72147,UX,1,2147,UX,-1
CE,NEXT,0,72147,UY,1,2147,UY,-1
CE,NEXT,0,72147,UZ,1,2147,UZ,-1
CE,NEXT,0,72147,ROTX,1,2147,ROTX,-1

CE,NEXT,0,73147,UX,1,3147,UX,-1
CE,NEXT,0,73147,UY,1,3147,UY,-1
CE,NEXT,0,73147,UZ,1,3147,UZ,-1
CE,NEXT,0,73147,ROTX,1,3147,ROTX,-1

CE,NEXT,0,72146,UX,1,2146,UX,-1
CE,NEXT,0,72146,UY,1,2146,UY,-1
CE,NEXT,0,72146,UZ,1,2146,UZ,-1
CE,NEXT,0,72146,ROTX,1,2146,ROTX,-1

CE,NEXT,0,73146,UX,1,3146,UX,-1
CE,NEXT,0,73146,UY,1,3146,UY,-1
CE,NEXT,0,73146,UZ,1,3146,UZ,-1
CE,NEXT,0,73146,ROTX,1,3146,ROTX,-1

CE,NEXT,0,82145,UX,1,2145,UX,-1
CE,NEXT,0,82145,UY,1,2145,UY,-1
CE,NEXT,0,82145,UZ,1,2145,UZ,-1
CE,NEXT,0,82145,ROTX,1,2145,ROTX,-1

CE,NEXT,0,83145,UX,1,3145,UX,-1
CE,NEXT,0,83145,UY,1,3145,UY,-1
CE,NEXT,0,83145,UZ,1,3145,UZ,-1
CE,NEXT,0,83145,ROTX,1,3145,ROTX,-1

CE,NEXT,0,72144,UX,1,2144,UX,-1
CE,NEXT,0,72144,UY,1,2144,UY,-1
CE,NEXT,0,72144,UZ,1,2144,UZ,-1
CE,NEXT,0,72144,ROTX,1,2144,ROTX,-1

CE,NEXT,0,73144,UX,1,3144,UX,-1
CE,NEXT,0,73144,UY,1,3144,UY,-1
CE,NEXT,0,73144,UZ,1,3144,UZ,-1
CE,NEXT,0,73144,ROTX,1,3144,ROTX,-1

CE,NEXT,0,72142,UX,1,2142,UX,-1
CE,NEXT,0,72142,UY,1,2142,UY,-1
CE,NEXT,0,72142,UZ,1,2142,UZ,-1
CE,NEXT,0,72142,ROTX,1,2142,ROTX,-1

CE,NEXT,0,62157,UX,1,2157,UX,-1
CE,NEXT,0,62157,UY,1,2157,UY,-1
CE,NEXT,0,62157,UZ,1,2157,UZ,-1
CE,NEXT,0,62157,ROTX,1,2157,ROTX,-1

CE,NEXT,0,72112,UX,1,2112,UX,-1
CE,NEXT,0,72112,UY,1,2112,UY,-1
CE,NEXT,0,72112,UZ,1,2112,UZ,-1
CE,NEXT,0,72112,ROTX,1,2112,ROTX,-1

CE,NEXT,0,152156,UX,1,52156,UX,-1
CE,NEXT,0,152156,UY,1,52156,UY,-1
CE,NEXT,0,152156,UZ,1,52156,UZ,-1
CE,NEXT,0,152156,ROTX,1,52156,ROTX,-1

CE,NEXT,0,73148,UX,1,3148,UX,-1
CE,NEXT,0,73148,UY,1,3148,UY,-1
CE,NEXT,0,73148,UZ,1,3148,UZ,-1
CE,NEXT,0,73148,ROTX,1,3148,ROTX,-1

CE,NEXT,0,63163,UX,1,3163,UX,-1
CE,NEXT,0,63163,UY,1,3163,UY,-1
CE,NEXT,0,63163,UZ,1,3163,UZ,-1
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CE,NEXT,0,63163,ROTX,1,3163,ROTX,-1

CE,NEXT,0,63147,UX,1,3147,UX,-1
CE,NEXT,0,63147,UY,1,3147,UY,-1
CE,NEXT,0,63147,UZ,1,3147,UZ,-1
CE,NEXT,0,63147,ROTX,1,3147,ROTX,-1

CE,NEXT,0,63162,UX,1,3162,UX,-1
CE,NEXT,0,63162,UY,1,3162,UY,-1
CE,NEXT,0,63162,UZ,1,3162,UZ,-1
CE,NEXT,0,63162,ROTX,1,3162,ROTX,-1

CE,NEXT,0,63146,UX,1,3146,UX,-1
CE,NEXT,0,63146,UY,1,3146,UY,-1
CE,NEXT,0,63146,UZ,1,3146,UZ,-1
CE,NEXT,0,63146,ROTX,1,3146,ROTX,-1

CE,NEXT,0,63161,UX,1,3161,UX,-1
CE,NEXT,0,63161,UY,1,3161,UY,-1
CE,NEXT,0,63161,UZ,1,3161,UZ,-1
CE,NEXT,0,63161,ROTX,1,3161,ROTX,-1

CE,NEXT,0,73145,UX,1,3145,UX,-1
CE,NEXT,0,73145,UY,1,3145,UY,-1
CE,NEXT,0,73145,UZ,1,3145,UZ,-1
CE,NEXT,0,73145,ROTX,1,3145,ROTX,-1

CE,NEXT,0,63160,UX,1,3160,UX,-1
CE,NEXT,0,63160,UY,1,3160,UY,-1
CE,NEXT,0,63160,UZ,1,3160,UZ,-1
CE,NEXT,0,63160,ROTX,1,3160,ROTX,-1

CE,NEXT,0,63144,UX,1,3144,UX,-1
CE,NEXT,0,63144,UY,1,3144,UY,-1
CE,NEXT,0,63144,UZ,1,3144,UZ,-1
CE,NEXT,0,63144,ROTX,1,3144,ROTX,-1

CE,NEXT,0,63159,UX,1,3159,UX,-1
CE,NEXT,0,63159,UY,1,3159,UY,-1
CE,NEXT,0,63159,UZ,1,3159,UZ,-1
CE,NEXT,0,63159,ROTX,1,3159,ROTX,-1

CE,NEXT,0,73143,UX,1,3143,UX,-1
CE,NEXT,0,73143,UY,1,3143,UY,-1
CE,NEXT,0,73143,UZ,1,3143,UZ,-1
CE,NEXT,0,73143,ROTX,1,3143,ROTX,-1

CE,NEXT,0,63158,UX,1,3158,UX,-1
CE,NEXT,0,63158,UY,1,3158,UY,-1
CE,NEXT,0,63158,UZ,1,3158,UZ,-1
CE,NEXT,0,63158,ROTX,1,3158,ROTX,-1

CE,NEXT,0,63142,UX,1,3142,UX,-1
CE,NEXT,0,63142,UY,1,3142,UY,-1
CE,NEXT,0,63142,UZ,1,3142,UZ,-1
CE,NEXT,0,63142,ROTX,1,3142,ROTX,-1

CE,NEXT,0,63157,UX,1,3157,UX,-1
CE,NEXT,0,63157,UY,1,3157,UY,-1
CE,NEXT,0,63157,UZ,1,3157,UZ,-1
CE,NEXT,0,63157,ROTX,1,3157,ROTX,-1

CE,NEXT,0,74112,UX,1,4112,UX,-1
CE,NEXT,0,74112,UY,1,4112,UY,-1
CE,NEXT,0,74112,UZ,1,4112,UZ,-1
CE,NEXT,0,74112,ROTX,1,4112,ROTX,-1

CE,NEXT,0,75112,UX,1,5112,UX,-1
CE,NEXT,0,75112,UY,1,5112,UY,-1
CE,NEXT,0,75112,UZ,1,5112,UZ,-1
CE,NEXT,0,75112,ROTX,1,5112,ROTX,-1

CE,NEXT,0,74102,UX,1,4102,UX,-1
CE,NEXT,0,74102,UY,1,4102,UY,-1
CE,NEXT,0,74102,UZ,1,4102,UZ,-1
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CE,NEXT,0,74102,ROTX,1,4102,ROTX,-1

CE,NEXT,0,75102,UX,1,5102,UX,-1
CE,NEXT,0,75102,UY,1,5102,UY,-1
CE,NEXT,0,75102,UZ,1,5102,UZ,-1
CE,NEXT,0,75102,ROTX,1,5102,ROTX,-1

CE,NEXT,0,67122,UX,1,7122,UX,-1
CE,NEXT,0,67122,UY,1,7122,UY,-1
CE,NEXT,0,67122,UZ,1,7122,UZ,-1
CE,NEXT,0,67122,ROTX,1,7122,ROTX,-1

CE,NEXT,0,181660,UX,1,81660,UX,-1
CE,NEXT,0,181660,UY,1,81660,UY,-1
CE,NEXT,0,181660,UZ,1,81660,UZ,-1
CE,NEXT,0,181660,ROTX,1,81660,ROTX,-1

CE,NEXT,0,75122,UX,1,5122,UX,-1
CE,NEXT,0,75122,UY,1,5122,UY,-1
CE,NEXT,0,75122,UZ,1,5122,UZ,-1
CE,NEXT,0,75122,ROTX,1,5122,ROTX,-1

CE,NEXT,0,77122,UX,1,7122,UX,-1
CE,NEXT,0,77122,UY,1,7122,UY,-1
CE,NEXT,0,77122,UZ,1,7122,UZ,-1
CE,NEXT,0,77122,ROTX,1,7122,ROTX,-1

CE,NEXT,0,60006,UX,1,6,UX,-1
CE,NEXT,0,60006,UY,1,6,UY,-1
CE,NEXT,0,60006,UZ,1,6,UZ,-1
CE,NEXT,0,60006,ROTX,1,6,ROTX,-1

CE,NEXT,0,60105,UX,1,105,UX,-1
CE,NEXT,0,60105,UY,1,105,UY,-1
CE,NEXT,0,60105,UZ,1,105,UZ,-1
CE,NEXT,0,60105,ROTX,1,105,ROTX,-1

CE,NEXT,0,70105,UX,1,105,UX,-1
CE,NEXT,0,70105,UY,1,105,UY,-1
CE,NEXT,0,70105,UZ,1,105,UZ,-1
CE,NEXT,0,70105,ROTX,1,105,ROTX,-1

CE,NEXT,0,61105,UX,1,1105,UX,-1
CE,NEXT,0,61105,UY,1,1105,UY,-1
CE,NEXT,0,61105,UZ,1,1105,UZ,-1
CE,NEXT,0,61105,ROTX,1,1105,ROTX,-1

CE,NEXT,0,71105,UX,1,1105,UX,-1
CE,NEXT,0,71105,UY,1,1105,UY,-1
CE,NEXT,0,71105,UZ,1,1105,UZ,-1
CE,NEXT,0,71105,ROTX,1,1105,ROTX,-1

CE,NEXT,0,62105,UX,1,2105,UX,-1
CE,NEXT,0,62105,UY,1,2105,UY,-1
CE,NEXT,0,62105,UZ,1,2105,UZ,-1
CE,NEXT,0,62105,ROTX,1,2105,ROTX,-1

CE,NEXT,0,72105,UX,1,2105,UX,-1
CE,NEXT,0,72105,UY,1,2105,UY,-1
CE,NEXT,0,72105,UZ,1,2105,UZ,-1
CE,NEXT,0,72105,ROTX,1,2105,ROTX,-1

CE,NEXT,0,63105,UX,1,3105,UX,-1
CE,NEXT,0,63105,UY,1,3105,UY,-1
CE,NEXT,0,63105,UZ,1,3105,UZ,-1
CE,NEXT,0,63105,ROTX,1,3105,ROTX,-1

CE,NEXT,0,73105,UX,1,3105,UX,-1
CE,NEXT,0,73105,UY,1,3105,UY,-1
CE,NEXT,0,73105,UZ,1,3105,UZ,-1
CE,NEXT,0,73105,ROTX,1,3105,ROTX,-1

CE,NEXT,0,64105,UX,1,4105,UX,-1
CE,NEXT,0,64105,UY,1,4105,UY,-1
CE,NEXT,0,64105,UZ,1,4105,UZ,-1
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CE,NEXT,0,64105,ROTX,1,4105,ROTX,-1

CE,NEXT,0,74105,UX,1,4105,UX,-1
CE,NEXT,0,74105,UY,1,4105,UY,-1
CE,NEXT,0,74105,UZ,1,4105,UZ,-1
CE,NEXT,0,74105,ROTX,1,4105,ROTX,-1

CE,NEXT,0,65105,UX,1,5105,UX,-1
CE,NEXT,0,65105,UY,1,5105,UY,-1
CE,NEXT,0,65105,UZ,1,5105,UZ,-1
CE,NEXT,0,65105,ROTX,1,5105,ROTX,-1

CE,NEXT,0,75105,UX,1,5105,UX,-1
CE,NEXT,0,75105,UY,1,5105,UY,-1
CE,NEXT,0,75105,UZ,1,5105,UZ,-1
CE,NEXT,0,75105,ROTX,1,5105,ROTX,-1

CE,NEXT,0,66105,UX,1,6105,UX,-1
CE,NEXT,0,66105,UY,1,6105,UY,-1
CE,NEXT,0,66105,UZ,1,6105,UZ,-1
CE,NEXT,0,66105,ROTX,1,6105,ROTX,-1

CE,NEXT,0,76105,UX,1,6105,UX,-1
CE,NEXT,0,76105,UY,1,6105,UY,-1
CE,NEXT,0,76105,UZ,1,6105,UZ,-1
CE,NEXT,0,76105,ROTX,1,6105,ROTX,-1

CE,NEXT,0,67105,UX,1,7105,UX,-1
CE,NEXT,0,67105,UY,1,7105,UY,-1
CE,NEXT,0,67105,UZ,1,7105,UZ,-1
CE,NEXT,0,67105,ROTX,1,7105,ROTX,-1

CE,NEXT,0,77105,UX,1,7105,UX,-1
CE,NEXT,0,77105,UY,1,7105,UY,-1
CE,NEXT,0,77105,UZ,1,7105,UZ,-1
CE,NEXT,0,77105,ROTX,1,7105,ROTX,-1

CE,NEXT,0,68105,UX,1,8105,UX,-1
CE,NEXT,0,68105,UY,1,8105,UY,-1
CE,NEXT,0,68105,UZ,1,8105,UZ,-1
CE,NEXT,0,68105,ROTX,1,8105,ROTX,-1

CE,NEXT,0,60017,UX,1,17,UX,-1
CE,NEXT,0,60017,UY,1,17,UY,-1
CE,NEXT,0,60017,UZ,1,17,UZ,-1
CE,NEXT,0,60017,ROTX,1,17,ROTX,-1

CE,NEXT,0,60116,UX,1,116,UX,-1
CE,NEXT,0,60116,UY,1,116,UY,-1
CE,NEXT,0,60116,UZ,1,116,UZ,-1
CE,NEXT,0,60116,ROTX,1,116,ROTX,-1

CE,NEXT,0,70116,UX,1,116,UX,-1
CE,NEXT,0,70116,UY,1,116,UY,-1
CE,NEXT,0,70116,UZ,1,116,UZ,-1
CE,NEXT,0,70116,ROTX,1,116,ROTX,-1

CE,NEXT,0,61116,UX,1,1116,UX,-1
CE,NEXT,0,61116,UY,1,1116,UY,-1
CE,NEXT,0,61116,UZ,1,1116,UZ,-1
CE,NEXT,0,61116,ROTX,1,1116,ROTX,-1

CE,NEXT,0,71116,UX,1,1116,UX,-1
CE,NEXT,0,71116,UY,1,1116,UY,-1
CE,NEXT,0,71116,UZ,1,1116,UZ,-1
CE,NEXT,0,71116,ROTX,1,1116,ROTX,-1

CE,NEXT,0,72116,UX,1,2116,UX,-1
CE,NEXT,0,72116,UY,1,2116,UY,-1
CE,NEXT,0,72116,UZ,1,2116,UZ,-1
CE,NEXT,0,72116,ROTX,1,2116,ROTX,-1

CE,NEXT,0,73116,UX,1,3116,UX,-1
CE,NEXT,0,73116,UY,1,3116,UY,-1
CE,NEXT,0,73116,UZ,1,3116,UZ,-1
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CE,NEXT,0,73116,ROTX,1,3116,ROTX,-1

CE,NEXT,0,64116,UX,1,4116,UX,-1
CE,NEXT,0,64116,UY,1,4116,UY,-1
CE,NEXT,0,64116,UZ,1,4116,UZ,-1
CE,NEXT,0,64116,ROTX,1,4116,ROTX,-1

CE,NEXT,0,74116,UX,1,4116,UX,-1
CE,NEXT,0,74116,UY,1,4116,UY,-1
CE,NEXT,0,74116,UZ,1,4116,UZ,-1
CE,NEXT,0,74116,ROTX,1,4116,ROTX,-1

CE,NEXT,0,65116,UX,1,5116,UX,-1
CE,NEXT,0,65116,UY,1,5116,UY,-1
CE,NEXT,0,65116,UZ,1,5116,UZ,-1
CE,NEXT,0,65116,ROTX,1,5116,ROTX,-1

CE,NEXT,0,67116,UX,1,7116,UX,-1
CE,NEXT,0,67116,UY,1,7116,UY,-1
CE,NEXT,0,67116,UZ,1,7116,UZ,-1
CE,NEXT,0,67116,ROTX,1,7116,ROTX,-1

CE,NEXT,0,68116,UX,1,8116,UX,-1
CE,NEXT,0,68116,UY,1,8116,UY,-1
CE,NEXT,0,68116,UZ,1,8116,UZ,-1
CE,NEXT,0,68116,ROTX,1,8116,ROTX,-1

CE,NEXT,0,60041,UX,1,41,UX,-1
CE,NEXT,0,60041,UY,1,41,UY,-1
CE,NEXT,0,60041,UZ,1,41,UZ,-1
CE,NEXT,0,60041,ROTX,1,41,ROTX,-1

CE,NEXT,0,60181,UX,1,181,UX,-1
CE,NEXT,0,60181,UY,1,181,UY,-1
CE,NEXT,0,60181,UZ,1,181,UZ,-1
CE,NEXT,0,60181,ROTX,1,181,ROTX,-1

CE,NEXT,0,60040,UX,1,40,UX,-1
CE,NEXT,0,60040,UY,1,40,UY,-1
CE,NEXT,0,60040,UZ,1,40,UZ,-1
CE,NEXT,0,60040,ROTX,1,40,ROTX,-1

CE,NEXT,0,60180,UX,1,180,UX,-1
CE,NEXT,0,60180,UY,1,180,UY,-1
CE,NEXT,0,60180,UZ,1,180,UZ,-1
CE,NEXT,0,60180,ROTX,1,180,ROTX,-1

CE,NEXT,0,60039,UX,1,39,UX,-1
CE,NEXT,0,60039,UY,1,39,UY,-1
CE,NEXT,0,60039,UZ,1,39,UZ,-1
CE,NEXT,0,60039,ROTX,1,39,ROTX,-1

CE,NEXT,0,60179,UX,1,179,UX,-1
CE,NEXT,0,60179,UY,1,179,UY,-1
CE,NEXT,0,60179,UZ,1,179,UZ,-1
CE,NEXT,0,60179,ROTX,1,179,ROTX,-1

CE,NEXT,0,60038,UX,1,38,UX,-1
CE,NEXT,0,60038,UY,1,38,UY,-1
CE,NEXT,0,60038,UZ,1,38,UZ,-1
CE,NEXT,0,60038,ROTX,1,38,ROTX,-1

CE,NEXT,0,60178,UX,1,178,UX,-1
CE,NEXT,0,60178,UY,1,178,UY,-1
CE,NEXT,0,60178,UZ,1,178,UZ,-1
CE,NEXT,0,60178,ROTX,1,178,ROTX,-1

CE,NEXT,0,60037,UX,1,37,UX,-1
CE,NEXT,0,60037,UY,1,37,UY,-1
CE,NEXT,0,60037,UZ,1,37,UZ,-1
CE,NEXT,0,60037,ROTX,1,37,ROTX,-1

CE,NEXT,0,60177,UX,1,177,UX,-1
CE,NEXT,0,60177,UY,1,177,UY,-1
CE,NEXT,0,60177,UZ,1,177,UZ,-1
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CE,NEXT,0,60177,ROTX,1,177,ROTX,-1

CE,NEXT,0,60036,UX,1,36,UX,-1
CE,NEXT,0,60036,UY,1,36,UY,-1
CE,NEXT,0,60036,UZ,1,36,UZ,-1
CE,NEXT,0,60036,ROTX,1,36,ROTX,-1

CE,NEXT,0,60176,UX,1,176,UX,-1
CE,NEXT,0,60176,UY,1,176,UY,-1
CE,NEXT,0,60176,UZ,1,176,UZ,-1
CE,NEXT,0,60176,ROTX,1,176,ROTX,-1

CE,NEXT,0,60035,UX,1,35,UX,-1
CE,NEXT,0,60035,UY,1,35,UY,-1
CE,NEXT,0,60035,UZ,1,35,UZ,-1
CE,NEXT,0,60035,ROTX,1,35,ROTX,-1

CE,NEXT,0,60175,UX,1,175,UX,-1
CE,NEXT,0,60175,UY,1,175,UY,-1
CE,NEXT,0,60175,UZ,1,175,UZ,-1
CE,NEXT,0,60175,ROTX,1,175,ROTX,-1

CE,NEXT,0,80107,UX,1,107,UX,-1
CE,NEXT,0,80107,UY,1,107,UY,-1
CE,NEXT,0,80107,UZ,1,107,UZ,-1
CE,NEXT,0,80107,ROTX,1,107,ROTX,-1

CE,NEXT,0,71107,UX,1,1107,UX,-1
CE,NEXT,0,71107,UY,1,1107,UY,-1
CE,NEXT,0,71107,UZ,1,1107,UZ,-1
CE,NEXT,0,71107,ROTX,1,1107,ROTX,-1

CE,NEXT,0,60155,UX,1,155,UX,-1
CE,NEXT,0,60155,UY,1,155,UY,-1
CE,NEXT,0,60155,UZ,1,155,UZ,-1
CE,NEXT,0,60155,ROTX,1,155,ROTX,-1

CE,NEXT,0,71155,UX,1,1155,UX,-1
CE,NEXT,0,71155,UY,1,1155,UY,-1
CE,NEXT,0,71155,UZ,1,1155,UZ,-1
CE,NEXT,0,71155,ROTX,1,1155,ROTX,-1

CE,NEXT,0,60154,UX,1,154,UX,-1
CE,NEXT,0,60154,UY,1,154,UY,-1
CE,NEXT,0,60154,UZ,1,154,UZ,-1
CE,NEXT,0,60154,ROTX,1,154,ROTX,-1

CE,NEXT,0,71154,UX,1,1154,UX,-1
CE,NEXT,0,71154,UY,1,1154,UY,-1
CE,NEXT,0,71154,UZ,1,1154,UZ,-1
CE,NEXT,0,71154,ROTX,1,1154,ROTX,-1

CE,NEXT,0,60153,UX,1,153,UX,-1
CE,NEXT,0,60153,UY,1,153,UY,-1
CE,NEXT,0,60153,UZ,1,153,UZ,-1
CE,NEXT,0,60153,ROTX,1,153,ROTX,-1

CE,NEXT,0,71153,UX,1,1153,UX,-1
CE,NEXT,0,71153,UY,1,1153,UY,-1
CE,NEXT,0,71153,UZ,1,1153,UZ,-1
CE,NEXT,0,71153,ROTX,1,1153,ROTX,-1

CE,NEXT,0,60152,UX,1,152,UX,-1
CE,NEXT,0,60152,UY,1,152,UY,-1
CE,NEXT,0,60152,UZ,1,152,UZ,-1
CE,NEXT,0,60152,ROTX,1,152,ROTX,-1

CE,NEXT,0,71152,UX,1,1152,UX,-1
CE,NEXT,0,71152,UY,1,1152,UY,-1
CE,NEXT,0,71152,UZ,1,1152,UZ,-1
CE,NEXT,0,71152,ROTX,1,1152,ROTX,-1

CE,NEXT,0,60151,UX,1,151,UX,-1
CE,NEXT,0,60151,UY,1,151,UY,-1
CE,NEXT,0,60151,UZ,1,151,UZ,-1
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CE,NEXT,0,60151,ROTX,1,151,ROTX,-1

CE,NEXT,0,71151,UX,1,1151,UX,-1
CE,NEXT,0,71151,UY,1,1151,UY,-1
CE,NEXT,0,71151,UZ,1,1151,UZ,-1
CE,NEXT,0,71151,ROTX,1,1151,ROTX,-1

CE,NEXT,0,60150,UX,1,150,UX,-1
CE,NEXT,0,60150,UY,1,150,UY,-1
CE,NEXT,0,60150,UZ,1,150,UZ,-1
CE,NEXT,0,60150,ROTX,1,150,ROTX,-1

CE,NEXT,0,71150,UX,1,1150,UX,-1
CE,NEXT,0,71150,UY,1,1150,UY,-1
CE,NEXT,0,71150,UZ,1,1150,UZ,-1
CE,NEXT,0,71150,ROTX,1,1150,ROTX,-1

CE,NEXT,0,60149,UX,1,149,UX,-1
CE,NEXT,0,60149,UY,1,149,UY,-1
CE,NEXT,0,60149,UZ,1,149,UZ,-1
CE,NEXT,0,60149,ROTX,1,149,ROTX,-1

CE,NEXT,0,71149,UX,1,1149,UX,-1
CE,NEXT,0,71149,UY,1,1149,UY,-1
CE,NEXT,0,71149,UZ,1,1149,UZ,-1
CE,NEXT,0,71149,ROTX,1,1149,ROTX,-1

CE,NEXT,0,80118,UX,1,118,UX,-1
CE,NEXT,0,80118,UY,1,118,UY,-1
CE,NEXT,0,80118,UZ,1,118,UZ,-1
CE,NEXT,0,80118,ROTX,1,118,ROTX,-1

CE,NEXT,0,71118,UX,1,1118,UX,-1
CE,NEXT,0,71118,UY,1,1118,UY,-1
CE,NEXT,0,71118,UZ,1,1118,UZ,-1
CE,NEXT,0,71118,ROTX,1,1118,ROTX,-1

CE,NEXT,0,81107,UX,1,1107,UX,-1
CE,NEXT,0,81107,UY,1,1107,UY,-1
CE,NEXT,0,81107,UZ,1,1107,UZ,-1
CE,NEXT,0,81107,ROTX,1,1107,ROTX,-1

CE,NEXT,0,72107,UX,1,2107,UX,-1
CE,NEXT,0,72107,UY,1,2107,UY,-1
CE,NEXT,0,72107,UZ,1,2107,UZ,-1
CE,NEXT,0,72107,ROTX,1,2107,ROTX,-1

CE,NEXT,0,61155,UX,1,1155,UX,-1
CE,NEXT,0,61155,UY,1,1155,UY,-1
CE,NEXT,0,61155,UZ,1,1155,UZ,-1
CE,NEXT,0,61155,ROTX,1,1155,ROTX,-1

CE,NEXT,0,62155,UX,1,2155,UX,-1
CE,NEXT,0,62155,UY,1,2155,UY,-1
CE,NEXT,0,62155,UZ,1,2155,UZ,-1
CE,NEXT,0,62155,ROTX,1,2155,ROTX,-1

CE,NEXT,0,61154,UX,1,1154,UX,-1
CE,NEXT,0,61154,UY,1,1154,UY,-1
CE,NEXT,0,61154,UZ,1,1154,UZ,-1
CE,NEXT,0,61154,ROTX,1,1154,ROTX,-1

CE,NEXT,0,62154,UX,1,2154,UX,-1
CE,NEXT,0,62154,UY,1,2154,UY,-1
CE,NEXT,0,62154,UZ,1,2154,UZ,-1
CE,NEXT,0,62154,ROTX,1,2154,ROTX,-1

CE,NEXT,0,61153,UX,1,1153,UX,-1
CE,NEXT,0,61153,UY,1,1153,UY,-1
CE,NEXT,0,61153,UZ,1,1153,UZ,-1
CE,NEXT,0,61153,ROTX,1,1153,ROTX,-1

CE,NEXT,0,62153,UX,1,2153,UX,-1
CE,NEXT,0,62153,UY,1,2153,UY,-1
CE,NEXT,0,62153,UZ,1,2153,UZ,-1
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```
CE,NEXT,0,62153,ROTX,1,2153,ROTX,-1

CE,NEXT,0,61152,UX,1,1152,UX,-1
CE,NEXT,0,61152,UY,1,1152,UY,-1
CE,NEXT,0,61152,UZ,1,1152,UZ,-1
CE,NEXT,0,61152,ROTX,1,1152,ROTX,-1

CE,NEXT,0,72152,UX,1,2152,UX,-1
CE,NEXT,0,72152,UY,1,2152,UY,-1
CE,NEXT,0,72152,UZ,1,2152,UZ,-1
CE,NEXT,0,72152,ROTX,1,2152,ROTX,-1

CE,NEXT,0,61151,UX,1,1151,UX,-1
CE,NEXT,0,61151,UY,1,1151,UY,-1
CE,NEXT,0,61151,UZ,1,1151,UZ,-1
CE,NEXT,0,61151,ROTX,1,1151,ROTX,-1

CE,NEXT,0,72151,UX,1,2151,UX,-1
CE,NEXT,0,72151,UY,1,2151,UY,-1
CE,NEXT,0,72151,UZ,1,2151,UZ,-1
CE,NEXT,0,72151,ROTX,1,2151,ROTX,-1

CE,NEXT,0,61150,UX,1,1150,UX,-1
CE,NEXT,0,61150,UY,1,1150,UY,-1
CE,NEXT,0,61150,UZ,1,1150,UZ,-1
CE,NEXT,0,61150,ROTX,1,1150,ROTX,-1

CE,NEXT,0,72150,UX,1,2150,UX,-1
CE,NEXT,0,72150,UY,1,2150,UY,-1
CE,NEXT,0,72150,UZ,1,2150,UZ,-1
CE,NEXT,0,72150,ROTX,1,2150,ROTX,-1

CE,NEXT,0,61149,UX,1,1149,UX,-1
CE,NEXT,0,61149,UY,1,1149,UY,-1
CE,NEXT,0,61149,UZ,1,1149,UZ,-1
CE,NEXT,0,61149,ROTX,1,1149,ROTX,-1

CE,NEXT,0,72149,UX,1,2149,UX,-1
CE,NEXT,0,72149,UY,1,2149,UY,-1
CE,NEXT,0,72149,UZ,1,2149,UZ,-1
CE,NEXT,0,72149,ROTX,1,2149,ROTX,-1

CE,NEXT,0,81118,UX,1,1118,UX,-1
CE,NEXT,0,81118,UY,1,1118,UY,-1
CE,NEXT,0,81118,UZ,1,1118,UZ,-1
CE,NEXT,0,81118,ROTX,1,1118,ROTX,-1

CE,NEXT,0,82118,UX,1,2118,UX,-1
CE,NEXT,0,82118,UY,1,2118,UY,-1
CE,NEXT,0,82118,UZ,1,2118,UZ,-1
CE,NEXT,0,82118,ROTX,1,2118,ROTX,-1

CE,NEXT,0,82107,UX,1,2107,UX,-1
CE,NEXT,0,82107,UY,1,2107,UY,-1
CE,NEXT,0,82107,UZ,1,2107,UZ,-1
CE,NEXT,0,82107,ROTX,1,2107,ROTX,-1

CE,NEXT,0,83107,UX,1,3107,UX,-1
CE,NEXT,0,83107,UY,1,3107,UY,-1
CE,NEXT,0,83107,UZ,1,3107,UZ,-1
CE,NEXT,0,83107,ROTX,1,3107,ROTX,-1

CE,NEXT,0,72155,UX,1,2155,UX,-1
CE,NEXT,0,72155,UY,1,2155,UY,-1
CE,NEXT,0,72155,UZ,1,2155,UZ,-1
CE,NEXT,0,72155,ROTX,1,2155,ROTX,-1

CE,NEXT,0,73155,UX,1,3155,UX,-1
CE,NEXT,0,73155,UY,1,3155,UY,-1
CE,NEXT,0,73155,UZ,1,3155,UZ,-1
CE,NEXT,0,73155,ROTX,1,3155,ROTX,-1

CE,NEXT,0,72154,UX,1,2154,UX,-1
CE,NEXT,0,72154,UY,1,2154,UY,-1
CE,NEXT,0,72154,UZ,1,2154,UZ,-1
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CE,NEXT,0,72154,ROTX,1,2154,ROTX,-1

CE,NEXT,0,73154,UX,1,3154,UX,-1
CE,NEXT,0,73154,UY,1,3154,UY,-1
CE,NEXT,0,73154,UZ,1,3154,UZ,-1
CE,NEXT,0,73154,ROTX,1,3154,ROTX,-1

CE,NEXT,0,72153,UX,1,2153,UX,-1
CE,NEXT,0,72153,UY,1,2153,UY,-1
CE,NEXT,0,72153,UZ,1,2153,UZ,-1
CE,NEXT,0,72153,ROTX,1,2153,ROTX,-1

CE,NEXT,0,63153,UX,1,3153,UX,-1
CE,NEXT,0,63153,UY,1,3153,UY,-1
CE,NEXT,0,63153,UZ,1,3153,UZ,-1
CE,NEXT,0,63153,ROTX,1,3153,ROTX,-1

CE,NEXT,0,62152,UX,1,2152,UX,-1
CE,NEXT,0,62152,UY,1,2152,UY,-1
CE,NEXT,0,62152,UZ,1,2152,UZ,-1
CE,NEXT,0,62152,ROTX,1,2152,ROTX,-1

CE,NEXT,0,73152,UX,1,3152,UX,-1
CE,NEXT,0,73152,UY,1,3152,UY,-1
CE,NEXT,0,73152,UZ,1,3152,UZ,-1
CE,NEXT,0,73152,ROTX,1,3152,ROTX,-1

CE,NEXT,0,62151,UX,1,2151,UX,-1
CE,NEXT,0,62151,UY,1,2151,UY,-1
CE,NEXT,0,62151,UZ,1,2151,UZ,-1
CE,NEXT,0,62151,ROTX,1,2151,ROTX,-1

CE,NEXT,0,73151,UX,1,3151,UX,-1
CE,NEXT,0,73151,UY,1,3151,UY,-1
CE,NEXT,0,73151,UZ,1,3151,UZ,-1
CE,NEXT,0,73151,ROTX,1,3151,ROTX,-1

CE,NEXT,0,62150,UX,1,2150,UX,-1
CE,NEXT,0,62150,UY,1,2150,UY,-1
CE,NEXT,0,62150,UZ,1,2150,UZ,-1
CE,NEXT,0,62150,ROTX,1,2150,ROTX,-1

CE,NEXT,0,63150,UX,1,3150,UX,-1
CE,NEXT,0,63150,UY,1,3150,UY,-1
CE,NEXT,0,63150,UZ,1,3150,UZ,-1
CE,NEXT,0,63150,ROTX,1,3150,ROTX,-1

CE,NEXT,0,62149,UX,1,2149,UX,-1
CE,NEXT,0,62149,UY,1,2149,UY,-1
CE,NEXT,0,62149,UZ,1,2149,UZ,-1
CE,NEXT,0,62149,ROTX,1,2149,ROTX,-1

CE,NEXT,0,63149,UX,1,3149,UX,-1
CE,NEXT,0,63149,UY,1,3149,UY,-1
CE,NEXT,0,63149,UZ,1,3149,UZ,-1
CE,NEXT,0,63149,ROTX,1,3149,ROTX,-1

CE,NEXT,0,72118,UX,1,2118,UX,-1
CE,NEXT,0,72118,UY,1,2118,UY,-1
CE,NEXT,0,72118,UZ,1,2118,UZ,-1
CE,NEXT,0,72118,ROTX,1,2118,ROTX,-1

CE,NEXT,0,73118,UX,1,3118,UX,-1
CE,NEXT,0,73118,UY,1,3118,UY,-1
CE,NEXT,0,73118,UZ,1,3118,UZ,-1
CE,NEXT,0,73118,ROTX,1,3118,ROTX,-1

CE,NEXT,0,73107,UX,1,3107,UX,-1
CE,NEXT,0,73107,UY,1,3107,UY,-1
CE,NEXT,0,73107,UZ,1,3107,UZ,-1
CE,NEXT,0,73107,ROTX,1,3107,ROTX,-1

CE,NEXT,0,74107,UX,1,4107,UX,-1
CE,NEXT,0,74107,UY,1,4107,UY,-1
CE,NEXT,0,74107,UZ,1,4107,UZ,-1
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CE,NEXT,0,74107,ROTX,1,4107,ROTX,-1

CE,NEXT,0,63155,UX,1,3155,UX,-1
CE,NEXT,0,63155,UY,1,3155,UY,-1
CE,NEXT,0,63155,UZ,1,3155,UZ,-1
CE,NEXT,0,63155,ROTX,1,3155,ROTX,-1

CE,NEXT,0,64155,UX,1,4155,UX,-1
CE,NEXT,0,64155,UY,1,4155,UY,-1
CE,NEXT,0,64155,UZ,1,4155,UZ,-1
CE,NEXT,0,64155,ROTX,1,4155,ROTX,-1

CE,NEXT,0,63154,UX,1,3154,UX,-1
CE,NEXT,0,63154,UY,1,3154,UY,-1
CE,NEXT,0,63154,UZ,1,3154,UZ,-1
CE,NEXT,0,63154,ROTX,1,3154,ROTX,-1

CE,NEXT,0,64154,UX,1,4154,UX,-1
CE,NEXT,0,64154,UY,1,4154,UY,-1
CE,NEXT,0,64154,UZ,1,4154,UZ,-1
CE,NEXT,0,64154,ROTX,1,4154,ROTX,-1

CE,NEXT,0,73153,UX,1,3153,UX,-1
CE,NEXT,0,73153,UY,1,3153,UY,-1
CE,NEXT,0,73153,UZ,1,3153,UZ,-1
CE,NEXT,0,73153,ROTX,1,3153,ROTX,-1

CE,NEXT,0,64153,UX,1,4153,UX,-1
CE,NEXT,0,64153,UY,1,4153,UY,-1
CE,NEXT,0,64153,UZ,1,4153,UZ,-1
CE,NEXT,0,64153,ROTX,1,4153,ROTX,-1

CE,NEXT,0,63152,UX,1,3152,UX,-1
CE,NEXT,0,63152,UY,1,3152,UY,-1
CE,NEXT,0,63152,UZ,1,3152,UZ,-1
CE,NEXT,0,63152,ROTX,1,3152,ROTX,-1

CE,NEXT,0,64152,UX,1,4152,UX,-1
CE,NEXT,0,64152,UY,1,4152,UY,-1
CE,NEXT,0,64152,UZ,1,4152,UZ,-1
CE,NEXT,0,64152,ROTX,1,4152,ROTX,-1

CE,NEXT,0,63151,UX,1,3151,UX,-1
CE,NEXT,0,63151,UY,1,3151,UY,-1
CE,NEXT,0,63151,UZ,1,3151,UZ,-1
CE,NEXT,0,63151,ROTX,1,3151,ROTX,-1

CE,NEXT,0,64151,UX,1,4151,UX,-1
CE,NEXT,0,64151,UY,1,4151,UY,-1
CE,NEXT,0,64151,UZ,1,4151,UZ,-1
CE,NEXT,0,64151,ROTX,1,4151,ROTX,-1

CE,NEXT,0,73150,UX,1,3150,UX,-1
CE,NEXT,0,73150,UY,1,3150,UY,-1
CE,NEXT,0,73150,UZ,1,3150,UZ,-1
CE,NEXT,0,73150,ROTX,1,3150,ROTX,-1

CE,NEXT,0,64150,UX,1,4150,UX,-1
CE,NEXT,0,64150,UY,1,4150,UY,-1
CE,NEXT,0,64150,UZ,1,4150,UZ,-1
CE,NEXT,0,64150,ROTX,1,4150,ROTX,-1

CE,NEXT,0,73149,UX,1,3149,UX,-1
CE,NEXT,0,73149,UY,1,3149,UY,-1
CE,NEXT,0,73149,UZ,1,3149,UZ,-1
CE,NEXT,0,73149,ROTX,1,3149,ROTX,-1

CE,NEXT,0,64149,UX,1,4149,UX,-1
CE,NEXT,0,64149,UY,1,4149,UY,-1
CE,NEXT,0,64149,UZ,1,4149,UZ,-1
CE,NEXT,0,64149,ROTX,1,4149,ROTX,-1

CE,NEXT,0,83118,UX,1,3118,UX,-1
CE,NEXT,0,83118,UY,1,3118,UY,-1
CE,NEXT,0,83118,UZ,1,3118,UZ,-1
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CE,NEXT,0,83118,ROTX,1,3118,ROTX,-1

CE,NEXT,0,74118,UX,1,4118,UX,-1
CE,NEXT,0,74118,UY,1,4118,UY,-1
CE,NEXT,0,74118,UZ,1,4118,UZ,-1
CE,NEXT,0,74118,ROTX,1,4118,ROTX,-1

CE,NEXT,0,84107,UX,1,4107,UX,-1
CE,NEXT,0,84107,UY,1,4107,UY,-1
CE,NEXT,0,84107,UZ,1,4107,UZ,-1
CE,NEXT,0,84107,ROTX,1,4107,ROTX,-1

CE,NEXT,0,75107,UX,1,5107,UX,-1
CE,NEXT,0,75107,UY,1,5107,UY,-1
CE,NEXT,0,75107,UZ,1,5107,UZ,-1
CE,NEXT,0,75107,ROTX,1,5107,ROTX,-1

CE,NEXT,0,74155,UX,1,4155,UX,-1
CE,NEXT,0,74155,UY,1,4155,UY,-1
CE,NEXT,0,74155,UZ,1,4155,UZ,-1
CE,NEXT,0,74155,ROTX,1,4155,ROTX,-1

CE,NEXT,0,65155,UX,1,5155,UX,-1
CE,NEXT,0,65155,UY,1,5155,UY,-1
CE,NEXT,0,65155,UZ,1,5155,UZ,-1
CE,NEXT,0,65155,ROTX,1,5155,ROTX,-1

CE,NEXT,0,74154,UX,1,4154,UX,-1
CE,NEXT,0,74154,UY,1,4154,UY,-1
CE,NEXT,0,74154,UZ,1,4154,UZ,-1
CE,NEXT,0,74154,ROTX,1,4154,ROTX,-1

CE,NEXT,0,65154,UX,1,5154,UX,-1
CE,NEXT,0,65154,UY,1,5154,UY,-1
CE,NEXT,0,65154,UZ,1,5154,UZ,-1
CE,NEXT,0,65154,ROTX,1,5154,ROTX,-1

CE,NEXT,0,74153,UX,1,4153,UX,-1
CE,NEXT,0,74153,UY,1,4153,UY,-1
CE,NEXT,0,74153,UZ,1,4153,UZ,-1
CE,NEXT,0,74153,ROTX,1,4153,ROTX,-1

CE,NEXT,0,65153,UX,1,5153,UX,-1
CE,NEXT,0,65153,UY,1,5153,UY,-1
CE,NEXT,0,65153,UZ,1,5153,UZ,-1
CE,NEXT,0,65153,ROTX,1,5153,ROTX,-1

CE,NEXT,0,74152,UX,1,4152,UX,-1
CE,NEXT,0,74152,UY,1,4152,UY,-1
CE,NEXT,0,74152,UZ,1,4152,UZ,-1
CE,NEXT,0,74152,ROTX,1,4152,ROTX,-1

CE,NEXT,0,65152,UX,1,5152,UX,-1
CE,NEXT,0,65152,UY,1,5152,UY,-1
CE,NEXT,0,65152,UZ,1,5152,UZ,-1
CE,NEXT,0,65152,ROTX,1,5152,ROTX,-1

CE,NEXT,0,74151,UX,1,4151,UX,-1
CE,NEXT,0,74151,UY,1,4151,UY,-1
CE,NEXT,0,74151,UZ,1,4151,UZ,-1
CE,NEXT,0,74151,ROTX,1,4151,ROTX,-1

CE,NEXT,0,65151,UX,1,5151,UX,-1
CE,NEXT,0,65151,UY,1,5151,UY,-1
CE,NEXT,0,65151,UZ,1,5151,UZ,-1
CE,NEXT,0,65151,ROTX,1,5151,ROTX,-1

CE,NEXT,0,74150,UX,1,4150,UX,-1
CE,NEXT,0,74150,UY,1,4150,UY,-1
CE,NEXT,0,74150,UZ,1,4150,UZ,-1
CE,NEXT,0,74150,ROTX,1,4150,ROTX,-1

CE,NEXT,0,75150,UX,1,5150,UX,-1
CE,NEXT,0,75150,UY,1,5150,UY,-1
CE,NEXT,0,75150,UZ,1,5150,UZ,-1
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CE,NEXT,0,75150,ROTX,1,5150,ROTX,-1

CE,NEXT,0,74149,UX,1,4149,UX,-1
CE,NEXT,0,74149,UY,1,4149,UY,-1
CE,NEXT,0,74149,UZ,1,4149,UZ,-1
CE,NEXT,0,74149,ROTX,1,4149,ROTX,-1

CE,NEXT,0,75149,UX,1,5149,UX,-1
CE,NEXT,0,75149,UY,1,5149,UY,-1
CE,NEXT,0,75149,UZ,1,5149,UZ,-1
CE,NEXT,0,75149,ROTX,1,5149,ROTX,-1

CE,NEXT,0,84118,UX,1,4118,UX,-1
CE,NEXT,0,84118,UY,1,4118,UY,-1
CE,NEXT,0,84118,UZ,1,4118,UZ,-1
CE,NEXT,0,84118,ROTX,1,4118,ROTX,-1

CE,NEXT,0,85118,UX,1,5118,UX,-1
CE,NEXT,0,85118,UY,1,5118,UY,-1
CE,NEXT,0,85118,UZ,1,5118,UZ,-1
CE,NEXT,0,85118,ROTX,1,5118,ROTX,-1

CE,NEXT,0,85107,UX,1,5107,UX,-1
CE,NEXT,0,85107,UY,1,5107,UY,-1
CE,NEXT,0,85107,UZ,1,5107,UZ,-1
CE,NEXT,0,85107,ROTX,1,5107,ROTX,-1

CE,NEXT,0,76107,UX,1,6107,UX,-1
CE,NEXT,0,76107,UY,1,6107,UY,-1
CE,NEXT,0,76107,UZ,1,6107,UZ,-1
CE,NEXT,0,76107,ROTX,1,6107,ROTX,-1

CE,NEXT,0,75155,UX,1,5155,UX,-1
CE,NEXT,0,75155,UY,1,5155,UY,-1
CE,NEXT,0,75155,UZ,1,5155,UZ,-1
CE,NEXT,0,75155,ROTX,1,5155,ROTX,-1

CE,NEXT,0,66155,UX,1,6155,UX,-1
CE,NEXT,0,66155,UY,1,6155,UY,-1
CE,NEXT,0,66155,UZ,1,6155,UZ,-1
CE,NEXT,0,66155,ROTX,1,6155,ROTX,-1

CE,NEXT,0,75154,UX,1,5154,UX,-1
CE,NEXT,0,75154,UY,1,5154,UY,-1
CE,NEXT,0,75154,UZ,1,5154,UZ,-1
CE,NEXT,0,75154,ROTX,1,5154,ROTX,-1

CE,NEXT,0,66154,UX,1,6154,UX,-1
CE,NEXT,0,66154,UY,1,6154,UY,-1
CE,NEXT,0,66154,UZ,1,6154,UZ,-1
CE,NEXT,0,66154,ROTX,1,6154,ROTX,-1

CE,NEXT,0,75153,UX,1,5153,UX,-1
CE,NEXT,0,75153,UY,1,5153,UY,-1
CE,NEXT,0,75153,UZ,1,5153,UZ,-1
CE,NEXT,0,75153,ROTX,1,5153,ROTX,-1

CE,NEXT,0,66153,UX,1,6153,UX,-1
CE,NEXT,0,66153,UY,1,6153,UY,-1
CE,NEXT,0,66153,UZ,1,6153,UZ,-1
CE,NEXT,0,66153,ROTX,1,6153,ROTX,-1

CE,NEXT,0,75152,UX,1,5152,UX,-1
CE,NEXT,0,75152,UY,1,5152,UY,-1
CE,NEXT,0,75152,UZ,1,5152,UZ,-1
CE,NEXT,0,75152,ROTX,1,5152,ROTX,-1

CE,NEXT,0,66152,UX,1,6152,UX,-1
CE,NEXT,0,66152,UY,1,6152,UY,-1
CE,NEXT,0,66152,UZ,1,6152,UZ,-1
CE,NEXT,0,66152,ROTX,1,6152,ROTX,-1

CE,NEXT,0,75151,UX,1,5151,UX,-1
CE,NEXT,0,75151,UY,1,5151,UY,-1
CE,NEXT,0,75151,UZ,1,5151,UZ,-1
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CE,NEXT,0,75151,ROTX,1,5151,ROTX,-1

CE,NEXT,0,66151,UX,1,6151,UX,-1
CE,NEXT,0,66151,UY,1,6151,UY,-1
CE,NEXT,0,66151,UZ,1,6151,UZ,-1
CE,NEXT,0,66151,ROTX,1,6151,ROTX,-1

CE,NEXT,0,65150,UX,1,5150,UX,-1
CE,NEXT,0,65150,UY,1,5150,UY,-1
CE,NEXT,0,65150,UZ,1,5150,UZ,-1
CE,NEXT,0,65150,ROTX,1,5150,ROTX,-1

CE,NEXT,0,66150,UX,1,6150,UX,-1
CE,NEXT,0,66150,UY,1,6150,UY,-1
CE,NEXT,0,66150,UZ,1,6150,UZ,-1
CE,NEXT,0,66150,ROTX,1,6150,ROTX,-1

CE,NEXT,0,65149,UX,1,5149,UX,-1
CE,NEXT,0,65149,UY,1,5149,UY,-1
CE,NEXT,0,65149,UZ,1,5149,UZ,-1
CE,NEXT,0,65149,ROTX,1,5149,ROTX,-1

CE,NEXT,0,66149,UX,1,6149,UX,-1
CE,NEXT,0,66149,UY,1,6149,UY,-1
CE,NEXT,0,66149,UZ,1,6149,UZ,-1
CE,NEXT,0,66149,ROTX,1,6149,ROTX,-1

CE,NEXT,0,86107,UX,1,6107,UX,-1
CE,NEXT,0,86107,UY,1,6107,UY,-1
CE,NEXT,0,86107,UZ,1,6107,UZ,-1
CE,NEXT,0,86107,ROTX,1,6107,ROTX,-1

CE,NEXT,0,87107,UX,1,7107,UX,-1
CE,NEXT,0,87107,UY,1,7107,UY,-1
CE,NEXT,0,87107,UZ,1,7107,UZ,-1
CE,NEXT,0,87107,ROTX,1,7107,ROTX,-1

CE,NEXT,0,76155,UX,1,6155,UX,-1
CE,NEXT,0,76155,UY,1,6155,UY,-1
CE,NEXT,0,76155,UZ,1,6155,UZ,-1
CE,NEXT,0,76155,ROTX,1,6155,ROTX,-1

CE,NEXT,0,77155,UX,1,7155,UX,-1
CE,NEXT,0,77155,UY,1,7155,UY,-1
CE,NEXT,0,77155,UZ,1,7155,UZ,-1
CE,NEXT,0,77155,ROTX,1,7155,ROTX,-1

CE,NEXT,0,76154,UX,1,6154,UX,-1
CE,NEXT,0,76154,UY,1,6154,UY,-1
CE,NEXT,0,76154,UZ,1,6154,UZ,-1
CE,NEXT,0,76154,ROTX,1,6154,ROTX,-1

CE,NEXT,0,77154,UX,1,7154,UX,-1
CE,NEXT,0,77154,UY,1,7154,UY,-1
CE,NEXT,0,77154,UZ,1,7154,UZ,-1
CE,NEXT,0,77154,ROTX,1,7154,ROTX,-1

CE,NEXT,0,76153,UX,1,6153,UX,-1
CE,NEXT,0,76153,UY,1,6153,UY,-1
CE,NEXT,0,76153,UZ,1,6153,UZ,-1
CE,NEXT,0,76153,ROTX,1,6153,ROTX,-1

CE,NEXT,0,77153,UX,1,7153,UX,-1
CE,NEXT,0,77153,UY,1,7153,UY,-1
CE,NEXT,0,77153,UZ,1,7153,UZ,-1
CE,NEXT,0,77153,ROTX,1,7153,ROTX,-1

CE,NEXT,0,76152,UX,1,6152,UX,-1
CE,NEXT,0,76152,UY,1,6152,UY,-1
CE,NEXT,0,76152,UZ,1,6152,UZ,-1
CE,NEXT,0,76152,ROTX,1,6152,ROTX,-1

CE,NEXT,0,77152,UX,1,7152,UX,-1
CE,NEXT,0,77152,UY,1,7152,UY,-1
CE,NEXT,0,77152,UZ,1,7152,UZ,-1
```

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CE,NEXT,0,77152,ROTX,1,7152,ROTX,-1

CE,NEXT,0,76151,UX,1,6151,UX,-1
CE,NEXT,0,76151,UY,1,6151,UY,-1
CE,NEXT,0,76151,UZ,1,6151,UZ,-1
CE,NEXT,0,76151,ROTX,1,6151,ROTX,-1

CE,NEXT,0,77151,UX,1,7151,UX,-1
CE,NEXT,0,77151,UY,1,7151,UY,-1
CE,NEXT,0,77151,UZ,1,7151,UZ,-1
CE,NEXT,0,77151,ROTX,1,7151,ROTX,-1

CE,NEXT,0,76150,UX,1,6150,UX,-1
CE,NEXT,0,76150,UY,1,6150,UY,-1
CE,NEXT,0,76150,UZ,1,6150,UZ,-1
CE,NEXT,0,76150,ROTX,1,6150,ROTX,-1

CE,NEXT,0,77150,UX,1,7150,UX,-1
CE,NEXT,0,77150,UY,1,7150,UY,-1
CE,NEXT,0,77150,UZ,1,7150,UZ,-1
CE,NEXT,0,77150,ROTX,1,7150,ROTX,-1

CE,NEXT,0,76149,UX,1,6149,UX,-1
CE,NEXT,0,76149,UY,1,6149,UY,-1
CE,NEXT,0,76149,UZ,1,6149,UZ,-1
CE,NEXT,0,76149,ROTX,1,6149,ROTX,-1

CE,NEXT,0,77149,UX,1,7149,UX,-1
CE,NEXT,0,77149,UY,1,7149,UY,-1
CE,NEXT,0,77149,UZ,1,7149,UZ,-1
CE,NEXT,0,77149,ROTX,1,7149,ROTX,-1

CE,NEXT,0,77107,UX,1,7107,UX,-1
CE,NEXT,0,77107,UY,1,7107,UY,-1
CE,NEXT,0,77107,UZ,1,7107,UZ,-1
CE,NEXT,0,77107,ROTX,1,7107,ROTX,-1

CE,NEXT,0,78107,UX,1,8107,UX,-1
CE,NEXT,0,78107,UY,1,8107,UY,-1
CE,NEXT,0,78107,UZ,1,8107,UZ,-1
CE,NEXT,0,78107,ROTX,1,8107,ROTX,-1

CE,NEXT,0,67155,UX,1,7155,UX,-1
CE,NEXT,0,67155,UY,1,7155,UY,-1
CE,NEXT,0,67155,UZ,1,7155,UZ,-1
CE,NEXT,0,67155,ROTX,1,7155,ROTX,-1

CE,NEXT,0,68155,UX,1,8155,UX,-1
CE,NEXT,0,68155,UY,1,8155,UY,-1
CE,NEXT,0,68155,UZ,1,8155,UZ,-1
CE,NEXT,0,68155,ROTX,1,8155,ROTX,-1

CE,NEXT,0,67154,UX,1,7154,UX,-1
CE,NEXT,0,67154,UY,1,7154,UY,-1
CE,NEXT,0,67154,UZ,1,7154,UZ,-1
CE,NEXT,0,67154,ROTX,1,7154,ROTX,-1

CE,NEXT,0,68154,UX,1,8154,UX,-1
CE,NEXT,0,68154,UY,1,8154,UY,-1
CE,NEXT,0,68154,UZ,1,8154,UZ,-1
CE,NEXT,0,68154,ROTX,1,8154,ROTX,-1

CE,NEXT,0,67153,UX,1,7153,UX,-1
CE,NEXT,0,67153,UY,1,7153,UY,-1
CE,NEXT,0,67153,UZ,1,7153,UZ,-1
CE,NEXT,0,67153,ROTX,1,7153,ROTX,-1

CE,NEXT,0,68153,UX,1,8153,UX,-1
CE,NEXT,0,68153,UY,1,8153,UY,-1
CE,NEXT,0,68153,UZ,1,8153,UZ,-1
CE,NEXT,0,68153,ROTX,1,8153,ROTX,-1

CE,NEXT,0,67152,UX,1,7152,UX,-1
CE,NEXT,0,67152,UY,1,7152,UY,-1
CE,NEXT,0,67152,UZ,1,7152,UZ,-1
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CE,NEXT,0,67152,ROTX,1,7152,ROTX,-1

CE,NEXT,0,78152,UX,1,8152,UX,-1
CE,NEXT,0,78152,UY,1,8152,UY,-1
CE,NEXT,0,78152,UZ,1,8152,UZ,-1
CE,NEXT,0,78152,ROTX,1,8152,ROTX,-1

CE,NEXT,0,67151,UX,1,7151,UX,-1
CE,NEXT,0,67151,UY,1,7151,UY,-1
CE,NEXT,0,67151,UZ,1,7151,UZ,-1
CE,NEXT,0,67151,ROTX,1,7151,ROTX,-1

CE,NEXT,0,68151,UX,1,8151,UX,-1
CE,NEXT,0,68151,UY,1,8151,UY,-1
CE,NEXT,0,68151,UZ,1,8151,UZ,-1
CE,NEXT,0,68151,ROTX,1,8151,ROTX,-1

CE,NEXT,0,67150,UX,1,7150,UX,-1
CE,NEXT,0,67150,UY,1,7150,UY,-1
CE,NEXT,0,67150,UZ,1,7150,UZ,-1
CE,NEXT,0,67150,ROTX,1,7150,ROTX,-1

CE,NEXT,0,68150,UX,1,8150,UX,-1
CE,NEXT,0,68150,UY,1,8150,UY,-1
CE,NEXT,0,68150,UZ,1,8150,UZ,-1
CE,NEXT,0,68150,ROTX,1,8150,ROTX,-1

CE,NEXT,0,67149,UX,1,7149,UX,-1
CE,NEXT,0,67149,UY,1,7149,UY,-1
CE,NEXT,0,67149,UZ,1,7149,UZ,-1
CE,NEXT,0,67149,ROTX,1,7149,ROTX,-1

CE,NEXT,0,68149,UX,1,8149,UX,-1
CE,NEXT,0,68149,UY,1,8149,UY,-1
CE,NEXT,0,68149,UZ,1,8149,UZ,-1
CE,NEXT,0,68149,ROTX,1,8149,ROTX,-1

CE,NEXT,0,87118,UX,1,7118,UX,-1
CE,NEXT,0,87118,UY,1,7118,UY,-1
CE,NEXT,0,87118,UZ,1,7118,UZ,-1
CE,NEXT,0,87118,ROTX,1,7118,ROTX,-1

CE,NEXT,0,78118,UX,1,8118,UX,-1
CE,NEXT,0,78118,UY,1,8118,UY,-1
CE,NEXT,0,78118,UZ,1,8118,UZ,-1
CE,NEXT,0,78118,ROTX,1,8118,ROTX,-1

CE,NEXT,0,70181,UX,1,181,UX,-1
CE,NEXT,0,70181,UY,1,181,UY,-1
CE,NEXT,0,70181,UZ,1,181,UZ,-1
CE,NEXT,0,70181,ROTX,1,181,ROTX,-1

CE,NEXT,0,70155,UX,1,155,UX,-1
CE,NEXT,0,70155,UY,1,155,UY,-1
CE,NEXT,0,70155,UZ,1,155,UZ,-1
CE,NEXT,0,70155,ROTX,1,155,ROTX,-1

CE,NEXT,0,70180,UX,1,180,UX,-1
CE,NEXT,0,70180,UY,1,180,UY,-1
CE,NEXT,0,70180,UZ,1,180,UZ,-1
CE,NEXT,0,70180,ROTX,1,180,ROTX,-1

CE,NEXT,0,70154,UX,1,154,UX,-1
CE,NEXT,0,70154,UY,1,154,UY,-1
CE,NEXT,0,70154,UZ,1,154,UZ,-1
CE,NEXT,0,70154,ROTX,1,154,ROTX,-1

CE,NEXT,0,70179,UX,1,179,UX,-1
CE,NEXT,0,70179,UY,1,179,UY,-1
CE,NEXT,0,70179,UZ,1,179,UZ,-1
CE,NEXT,0,70179,ROTX,1,179,ROTX,-1

CE,NEXT,0,70153,UX,1,153,UX,-1
CE,NEXT,0,70153,UY,1,153,UY,-1
CE,NEXT,0,70153,UZ,1,153,UZ,-1
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CE,NEXT,0,70153,ROTX,1,153,ROTX,-1

CE,NEXT,0,70178,UX,1,178,UX,-1
CE,NEXT,0,70178,UY,1,178,UY,-1
CE,NEXT,0,70178,UZ,1,178,UZ,-1
CE,NEXT,0,70178,ROTX,1,178,ROTX,-1

CE,NEXT,0,70152,UX,1,152,UX,-1
CE,NEXT,0,70152,UY,1,152,UY,-1
CE,NEXT,0,70152,UZ,1,152,UZ,-1
CE,NEXT,0,70152,ROTX,1,152,ROTX,-1

CE,NEXT,0,70177,UX,1,177,UX,-1
CE,NEXT,0,70177,UY,1,177,UY,-1
CE,NEXT,0,70177,UZ,1,177,UZ,-1
CE,NEXT,0,70177,ROTX,1,177,ROTX,-1

CE,NEXT,0,70151,UX,1,151,UX,-1
CE,NEXT,0,70151,UY,1,151,UY,-1
CE,NEXT,0,70151,UZ,1,151,UZ,-1
CE,NEXT,0,70151,ROTX,1,151,ROTX,-1

CE,NEXT,0,70176,UX,1,176,UX,-1
CE,NEXT,0,70176,UY,1,176,UY,-1
CE,NEXT,0,70176,UZ,1,176,UZ,-1
CE,NEXT,0,70176,ROTX,1,176,ROTX,-1

CE,NEXT,0,70150,UX,1,150,UX,-1
CE,NEXT,0,70150,UY,1,150,UY,-1
CE,NEXT,0,70150,UZ,1,150,UZ,-1
CE,NEXT,0,70150,ROTX,1,150,ROTX,-1

CE,NEXT,0,70175,UX,1,175,UX,-1
CE,NEXT,0,70175,UY,1,175,UY,-1
CE,NEXT,0,70175,UZ,1,175,UZ,-1
CE,NEXT,0,70175,ROTX,1,175,ROTX,-1

CE,NEXT,0,70149,UX,1,149,UX,-1
CE,NEXT,0,70149,UY,1,149,UY,-1
CE,NEXT,0,70149,UZ,1,149,UZ,-1
CE,NEXT,0,70149,ROTX,1,149,ROTX,-1

CE,NEXT,0,68109,UX,1,8109,UX,-1
CE,NEXT,0,68109,UY,1,8109,UY,-1
CE,NEXT,0,68109,UZ,1,8109,UZ,-1
CE,NEXT,0,68109,ROTX,1,8109,ROTX,-1

CE,NEXT,0,77109,UX,1,7109,UX,-1
CE,NEXT,0,77109,UY,1,7109,UY,-1
CE,NEXT,0,77109,UZ,1,7109,UZ,-1
CE,NEXT,0,77109,ROTX,1,7109,ROTX,-1

CE,NEXT,0,74109,UX,1,4109,UX,-1
CE,NEXT,0,74109,UY,1,4109,UY,-1
CE,NEXT,0,74109,UZ,1,4109,UZ,-1
CE,NEXT,0,74109,ROTX,1,4109,ROTX,-1

CE,NEXT,0,73109,UX,1,3109,UX,-1
CE,NEXT,0,73109,UY,1,3109,UY,-1
CE,NEXT,0,73109,UZ,1,3109,UZ,-1
CE,NEXT,0,73109,ROTX,1,3109,ROTX,-1

CE,NEXT,0,74120,UX,1,4120,UX,-1
CE,NEXT,0,74120,UY,1,4120,UY,-1
CE,NEXT,0,74120,UZ,1,4120,UZ,-1
CE,NEXT,0,74120,ROTX,1,4120,ROTX,-1

CE,NEXT,0,73120,UX,1,3120,UX,-1
CE,NEXT,0,73120,UY,1,3120,UY,-1
CE,NEXT,0,73120,UZ,1,3120,UZ,-1
CE,NEXT,0,73120,ROTX,1,3120,ROTX,-1

CE,NEXT,0,9,UY,1,60009,UY,-1

CE,NEXT,0,20,UY,1,60020,UY,-1
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CE,NEXT,0,108,UY,1,60108,UY,-1

CE,NEXT,0,119,UY,1,60119,UY,-1

CE,NEXT,0,1108,UY,1,61108,UY,-1

CE,NEXT,0,1119,UY,1,61119,UY,-1

CE,NEXT,0,2108,UY,1,62108,UY,-1

CE,NEXT,0,2119,UY,1,62119,UY,-1

CE,NEXT,0,3108,UY,1,63108,UY,-1

CE,NEXT,0,3119,UY,1,63119,UY,-1

CE,NEXT,0,4108,UY,1,64108,UY,-1

CE,NEXT,0,4119,UY,1,64119,UY,-1

CE,NEXT,0,5108,UY,1,65108,UY,-1

CE,NEXT,0,5119,UY,1,65119,UY,-1

CE,NEXT,0,6108,UY,1,66108,UY,-1

CE,NEXT,0,7108,UY,1,67108,UY,-1

CE,NEXT,0,7119,UY,1,67119,UY,-1

CE,NEXT,0,8108,UY,1,68108,UY,-1

CE,NEXT,0,8119,UY,1,68119,UY,-1

! DEFINE SUPPORTS BASED ON NODES

D,1,UX,0
D,1,UY,0
D,1,UZ,0
D,1,ROTX,0
D,1,ROTY,0

D,12,UX,0
D,12,UY,0
D,12,UZ,0
D,12,ROTX,0
D,12,ROTY,0

D,101,UX,0
D,101,UY,0
D,101,UZ,0
D,101,ROTX,0
D,101,ROTY,0

D,111,UX,0
D,111,UY,0
D,111,UZ,0
D,111,ROTX,0
D,111,ROTY,0

D,30112,UX,0
D,30112,UY,0
D,30112,UZ,0
D,30112,ROTX,0
D,30112,ROTY,0
D,30112,ROTZ,0

D,123,UX,0
D,123,UY,0
D,123,UZ,0
D,123,ROTY,0

D,1101,UX,0
D,1101,UY,0
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D,1101,UZ,0
D,1101,ROTX,0
D,1101,ROTY,0

D,1111,UX,0
D,1111,UY,0
D,1111,UZ,0
D,1111,ROTX,0
D,1111,ROTY,0

D,31112,UX,0
D,31112,UY,0
D,31112,UZ,0
D,31112,ROTX,0
D,31112,ROTY,0
D,31112,ROTZ,0

D,1123,UX,0
D,1123,UY,0
D,1123,UZ,0
D,1123,ROTY,0

D,2101,UX,0
D,2101,UY,0
D,2101,UZ,0
D,2101,ROTX,0
D,2101,ROTY,0

D,2111,UX,0
D,2111,UY,0
D,2111,UZ,0
D,2111,ROTX,0
D,2111,ROTY,0

D,2122,UX,0
D,2122,UY,0
D,2122,UZ,0
D,2122,ROTY,0

D,32112,UX,0
D,32112,UY,0
D,32112,UZ,0
D,32112,ROTX,0
D,32112,ROTY,0
D,32112,ROTZ,0

D,2123,UX,0
D,2123,UY,0
D,2123,UZ,0
D,2123,ROTY,0

D,3101,UX,0
D,3101,UY,0
D,3101,UZ,0
D,3101,ROTX,0
D,3101,ROTY,0

D,3111,UX,0
D,3111,UY,0
D,3111,UZ,0
D,3111,ROTX,0
D,3111,ROTY,0

D,33112,UX,0
D,33112,UY,0
D,33112,UZ,0
D,33112,ROTX,0
D,33112,ROTY,0
D,33112,ROTZ,0

D,3123,UX,0
D,3123,UY,0
D,3123,UZ,0
D,3123,ROTY,0

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D,4101,UX,0
D,4101,UY,0
D,4101,UZ,0
D,4101,ROTX,0
D,4101,ROTY,0

D,4111,UX,0
D,4111,UY,0
D,4111,UZ,0
D,4111,ROTX,0
D,4111,ROTY,0

D,5101,UX,0
D,5101,UY,0
D,5101,UZ,0
D,5101,ROTX,0
D,5101,ROTY,0

D,5111,UX,0
D,5111,UY,0
D,5111,UZ,0
D,5111,ROTX,0
D,5111,ROTY,0

D,5112,UZ,0

D,6101,UX,0
D,6101,UY,0
D,6101,UZ,0
D,6101,ROTY,0

D,7101,UX,0
D,7101,UY,0
D,7101,UZ,0
D,7101,ROTX,0
D,7101,ROTY,0

D,7111,UX,0
D,7111,UY,0
D,7111,UZ,0
D,7111,ROTX,0
D,7111,ROTY,0

D,8100,UX,0
D,8100,UY,0
D,8100,UZ,0
D,8100,ROTY,0

D,8101,UX,0
D,8101,UY,0
D,8101,UZ,0
D,8101,ROTX,0
D,8101,ROTY,0

D,8111,UX,0
D,8111,UY,0
D,8111,UZ,0
D,8111,ROTX,0
D,8111,ROTY,0

D,8156,UX,0
D,8156,UY,0
D,8156,UZ,0
D,8156,ROTY,0
D,8156,ROTZ,0

D,8157,UX,0
D,8157,UY,0
D,8157,UZ,0
D,8157,ROTY,0
D,8157,ROTZ,0

/SOLU
```

```
!  Dead Load

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

F,11434,FX,30000

ACEL,0,0,0                                                                    ! THIS
COMMAND ESTABLISHES THE DIRECTION AND FORCE FOR GRAVITY,
!                    USED FOR BUILDING DEAD LOAD

lswrite,1             ! Write dead load to file
SFEDELE,ALL,ALL,ALL     ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL          ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL       ! CLEAR ALL NODES LOADS
ACEL,0,0,0            ! REMOVES BUILDING DEAD LOAD FROM FUTURE LOAD STEPS

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER

F,11434,FZ,-30000

lswrite,2             ! Write dead load to file
SFEDELE,ALL,ALL,ALL     ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL          ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL       ! CLEAR ALL NODES LOADS

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

ACEL,0,GRAV,0




lswrite,5

ACEL,-GRAV,0,0




lswrite,6
ACEL,0,0,-GRAV




lswrite,7

ACEL,0,0,0

SFEDELE,ALL,ALL,ALL     ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL          ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL       ! CLEAR ALL NODES LOADS


FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

ACEL,0,0,0


F,38,FX,1950
F,152,FX,3900
F,178,FX,3900
F,1152,FX,3900
F,2152,FX,3900
F,3152,FX,3900
F,4152,FX,3900
F,5152,FX,3900
F,6152,FX,3900
F,7152,FX,3900
F,8152,FX,1950

F,27,FX,11500
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F,145,FX,23000
F,1145,FX,23000
F,2145,FX,23000
F,3145,FX,23000
F,3160,FX,11500
F,5190,FX,11500


lswrite,8             ! Write 10 KIP LOAD AT ROOF FOR BUILDING COMPARSION
SFEDELE,ALL,ALL,ALL     ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL          ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL       ! CLEAR ALL NODES LOADS

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

ACEL,0,0,0

F,38,FY,-19500
F,152,FY,-39000
F,178,FY,-39000
F,1152,FY,-39000
F,2152,FY,-39000
F,3152,FY,-39000
F,4152,FY,-39000
F,5152,FY,-39000
F,6152,FY,-39000
F,7152,FY,-39000
F,8152,FY,-19500

F,27,FY,-115000
F,145,FY,-230000
F,1145,FY,-230000
F,2145,FY,-230000
F,3145,FY,-230000
F,3160,FY,-115000
F,5190,FY,-115000

lswrite,9             ! Write 10 KIP LOAD AT ROOF FOR BUILDING COMPARSION
SFEDELE,ALL,ALL,ALL     ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL          ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL       ! CLEAR ALL NODES LOADS

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

ACEL,0,0,0

F,38,FZ,1950
F,152,FZ,3900
F,178,FZ,3900
F,1152,FZ,3900
F,2152,FZ,3900
F,3152,FZ,3900
F,4152,FZ,3900
F,5152,FZ,3900
F,6152,FZ,3900
F,7152,FZ,3900
F,8152,FZ,1950

F,27,FZ,11500
F,145,FZ,23000
F,1145,FZ,23000
F,2145,FZ,23000
F,3145,FZ,23000
F,3160,FZ,11500
F,5190,FZ,11500

lswrite,10            ! Write 10 KIP LOAD AT ROOF FOR BUILDING COMPARSION


LSSOLVE,5,10,1          ! SOLVE MODEL FOR STADIC LOADS STEEL DEAD LOAD ONLY


NSEL,S,,2
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```
NSEL,A,,,19
NSEL,A,,,27
NSEL,A,,,38
NSEL,A,,,102
NSEL,A,,,118
NSEL,A,,,128
NSEL,A,,,146
NSEL,A,,,152
NSEL,A,,,1102
NSEL,A,,,1118
NSEL,A,,,1146
NSEL,A,,,1153
NSEL,A,,,2102
NSEL,A,,,2118
NSEL,A,,,2146
NSEL,A,,,2152
NSEL,A,,,3102
NSEL,A,,,3118
NSEL,A,,,3153
NSEL,A,,,4102
NSEL,A,,,4118
NSEL,A,,,4152
NSEL,A,,,5102
NSEL,A,,,5118
NSEL,A,,,5153
NSEL,A,,,6118
NSEL,A,,,6152
NSEL,A,,,7118
NSEL,A,,,7152
NSEL,A,,,8118
NSEL,A,,,8152


/POST1
AVPRIN,0, ,
ETABLE,FX_I,SMISC, 1
ETABLE,FX_J,SMISC, 7
!*
AVPRIN,0, ,
ETABLE,FY_I,SMISC, 2
ETABLE,FY_J,SMISC, 8
!*
AVPRIN,0, ,
ETABLE,FZ_I,SMISC, 3
ETABLE,FZ_J,SMISC, 9
!*
AVPRIN,0, ,
ETABLE,MX_I,SMISC, 4
ETABLE,MX_J,SMISC, 10
!*
AVPRIN,0, ,
ETABLE,MY_I,SMISC, 5
ETABLE,MY_J,SMISC, 11
!*
AVPRIN,0, ,
ETABLE,MZ_I,SMISC, 6
ETABLE,MZ_J,SMISC, 12


FINISH
```

Attachment 9

ANSYS Coupled Building/Crane Model, Crane at S, Static Loads

```
/BATCH
/FILENAME, PGCR045
!/CWD,'C:\Documents and Settings\mkeeney\Desktop\MCK_ANSYS\Ansys\output'
/TITLE,Auxzilary Building Modifications
/PREP7

! The units for this model are INCHES POUNDS SECONDS.
! The nodal coordinates are a direct copy of the GT STRDL model.
! The node numbers match the original model were possible.

! DEFINE NODE LOCATIONS

N,1,0,0,0
N,2,0,489.96,0
N,3,0,844.08,0
N,4,0,852,0
N,5,0,852,11
N,6,0,860.04,11
N,7,0,870.6,11
N,8,0,1065.96,11
N,9,0,852,-12
N,10,0,870.6,-12
N,12,0,0,-576
N,13,0,489.96,-576
N,14,0,844.08,-576
N,15,0,852,-576
N,16,0,852,-587
N,17,0,860.04,-587
N,18,0,870.6,-587
N,19,0,1065.96,-587
N,20,0,852,-564
N,21,0,870.6,-564
N,23,0,288,-336
N,24,0,489.96,-504
N,25,0,489.96,-432
N,26,0,489.96,-360
N,27,0,489.96,-288
N,28,0,489.96,-216
N,29,0,489.96,-144
N,30,0,489.96,-72
N,31,0,672,-432
N,32,0,672,-288
N,33,0,672,-144
N,34,0,844.08,-288
N,35,0,1065.96,-512
N,36,0,1065.96,-437
N,37,0,1065.96,-362
N,38,0,1065.96,-288
N,39,0,1065.96,-214
N,40,0,1065.96,-139
N,41,0,1065.96,-64
N,101,432,288,0
N,102,432,489.96,0
N,103,432,852,0
N,104,432,852,11
N,105,432,860.04,11
N,106,432,870.6,11
N,107,432,1065.96,11
N,108,432,852,-12
N,109,432,870.6,-12
N,111,432,288,-576
N,112,432,489.96,-576
N,113,432,573,-576
N,114,432,852,-576
N,115,432,852,-587
N,116,432,860.04,-587
N,117,432,870.6,-587
N,118,432,1065.96,-587
N,119,432,852,-564
N,120,432,870.6,-564
N,123,432,288,-288
N,124,216,489.96,-576
N,125,216,489.96,-504
N,126,216,489.96,-432
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N,127,216,489.96,-360
N,128,216,489.96,-288
N,129,216,489.96,-216
N,130,216,489.96,-144
N,131,216,489.96,-72
N,132,216,489.96,0
N,133,336,489.96,-576
N,134,336,489.96,-504
N,135,336,489.96,-432
N,136,336,489.96,-360
N,137,336,489.96,-288
N,138,336,489.96,-216
N,139,336,489.96,-144
N,140,336,489.96,-72
N,141,336,489.96,0
N,142,432,489.96,-504
N,143,432,489.96,-432
N,144,432,489.96,-360
N,145,432,489.96,-288
N,146,432,489.96,-216
N,147,432,489.96,-144
N,148,432,489.96,-72
N,149,432,1065.96,-512
N,150,432,1065.96,-437
N,151,432,1065.96,-362
N,152,432,1065.96,-288
N,153,432,1065.96,-214
N,154,432,1065.96,-139
N,155,432,1065.96,-64
N,174,216,1065.96,-587
N,175,216,1065.96,-512
N,176,216,1065.96,-437
N,177,216,1065.96,-362
N,178,216,1065.96,-288
N,179,216,1065.96,-214
N,180,216,1065.96,-139
N,181,216,1065.96,-64
N,182,216,1065.96,11
N,183,577.5,573,-576
N,1101,723,288,0
N,1102,723,489.96,0
N,1103,723,852,0
N,1104,723,852,11
N,1105,723,860.04,11
N,1106,723,870.6,11
N,1107,723,1065.96,11
N,1108,723,852,-12
N,1109,723,870.6,-12
N,1111,723,288,-576
N,1112,723,489.96,-576
N,1113,723,573,-576
N,1114,723,852,-576
N,1115,723,852,-587
N,1116,723,860.04,-587
N,1117,723,870.6,-587
N,1118,723,1065.96,-587
N,1119,723,852,-564
N,1120,723,870.6,-564
N,1123,723,288,-288
N,1142,723,489.96,-504
N,1143,723,489.96,-432
N,1144,723,489.96,-360
N,1145,723,489.96,-288
N,1146,723,489.96,-216
N,1147,723,489.96,-144
N,1148,723,489.96,-72
N,1149,723,1065.96,-512
N,1150,723,1065.96,-437
N,1151,723,1065.96,-362
N,1152,723,1065.96,-288
N,1153,723,1065.96,-214
N,1154,723,1065.96,-139
N,1155,723,1065.96,-64
N,2101,1014,288,0
N,2102,1014,489.96,0
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N,2103,1014,852,0
N,2104,1014,852,11
N,2105,1014,860.04,11
N,2106,1014,870.6,11
N,2107,1014,1065.96,11
N,2108,1014,852,-12
N,2109,1014,870.6,-12
N,2111,1014,288,-576
N,2112,1014,489.96,-576
N,2113,1014,573,-576
N,2114,1014,852,-576
N,2115,1014,852,-587
N,2116,1014,860.04,-587
N,2117,1014,870.6,-587
N,2118,1014,1065.96,-587
N,2119,1014,852,-564
N,2120,1014,870.6,-564
N,2122,1159.5,288,-587
N,2123,1014,288,-288
N,2124,1118.52,489.96,0
N,2125,1118.52,489.96,-72
N,2126,1159.5,489.96,-72
N,2127,1159.5,489.96,0
N,2142,1014,489.96,-504
N,2143,1014,489.96,-432
N,2144,1014,489.96,-360
N,2145,1014,489.96,-288
N,2146,1014,489.96,-216
N,2147,1014,489.96,-144
N,2148,1014,489.96,-72
N,2149,1014,1065.96,-512
N,2150,1014,1065.96,-437
N,2151,1014,1065.96,-362
N,2152,1014,1065.96,-288
N,2153,1014,1065.96,-214
N,2154,1014,1065.96,-139
N,2155,1014,1065.96,-64
N,2156,1159.5,489.96,-587
N,2157,1159.5,489.96,-504
N,2158,1159.5,489.96,-432
N,3100,1305,459.96,0
N,3101,1305,288,0
N,3102,1305,489.96,0
N,3103,1305,852,0
N,3104,1305,852,11
N,3105,1305,860.04,11
N,3106,1305,870.6,11
N,3107,1305,1065.96,11
N,3108,1305,852,-12
N,3109,1305,870.6,-12
N,3111,1305,288,-576
N,3112,1305,489.96,-576
N,3113,1305,573,-576
N,3114,1305,852,-576
N,3115,1305,852,-587
N,3116,1305,860.04,-587
N,3117,1305,870.6,-587
N,3118,1305,1065.96,-587
N,3119,1305,852,-564
N,3120,1305,870.6,-564
N,3121,1159.5,860.04,-587
N,3123,1305,288,-288
N,3142,1305,489.96,-504
N,3143,1305,489.96,-432
N,3144,1305,489.96,-360
N,3145,1305,489.96,-288
N,3146,1305,489.96,-216
N,3147,1305,489.96,-144
N,3148,1305,489.96,-72
N,3149,1305,1065.96,-512
N,3150,1305,1065.96,-437
N,3151,1305,1065.96,-362
N,3152,1305,1065.96,-288
N,3153,1305,1065.96,-214
N,3154,1305,1065.96,-139

N,3155,1305,1065.96,-64
N,3156,1437,489.96,-576
N,3157,1437,489.96,-504
N,3158,1437,489.96,-432
N,3159,1437,489.96,-360
N,3160,1437,489.96,-288
N,3161,1437,489.96,-216
N,3162,1437,489.96,-144
N,3163,1437,489.96,-72
N,3164,1437,489.96,0
N,3165,1437,459.96,0
N,4100,1578,459.96,0
N,4101,1578,288,0
N,4102,1578,489.96,0
N,4103,1578,852,0
N,4104,1578,852,11
N,4105,1578,860.04,11
N,4106,1578,870.6,11
N,4107,1578,1065.96,11
N,4108,1578,852,-12
N,4109,1578,870.6,-12
N,4111,1578,288,-576
N,4112,1578,489.96,-576
N,4113,1578,573,-576
N,4114,1578,852,-576
N,4115,1578,852,-587
N,4116,1578,860.04,-587
N,4117,1578,870.6,-587
N,4118,1578,1065.96,-587
N,4119,1578,852,-564
N,4120,1578,870.6,-564
N,4122,1578,971.04,-587
N,4149,1578,1065.96,-512
N,4150,1578,1065.96,-437
N,4151,1578,1065.96,-362
N,4152,1578,1065.96,-288
N,4153,1578,1065.96,-214
N,4154,1578,1065.96,-139
N,4155,1578,1065.96,-64
N,4156,1717.5,971.04,-587
N,5100,1857,459.96,0
N,5101,1857,288,0
N,5102,1857,489.96,0
N,5103,1857,852,0
N,5104,1857,852,11
N,5105,1857,860.04,11
N,5106,1857,870.6,11
N,5107,1857,1065.96,11
N,5108,1857,852,-12
N,5109,1857,870.6,-12
N,5111,1857,288,-576
N,5112,1857,489.96,-576
N,5113,1857,573,-576
N,5114,1857,852,-576
N,5115,1857,852,-587
N,5116,1857,860.04,-587
N,5117,1857,870.6,-587
N,5118,1857,1065.96,-587
N,5119,1857,852,-564
N,5120,1857,870.6,-564
N,5122,1857,971.04,-587
N,5123,1717.5,573,-576
N,5149,1857,1065.96,-512
N,5150,1857,1065.96,-437
N,5151,1857,1065.96,-362
N,5152,1857,1065.96,-288
N,5153,1857,1065.96,-214
N,5154,1857,1065.96,-139
N,5155,1857,1065.96,-64
N,5187,1857,489.96,-504
N,5188,1857,489.96,-432
N,5189,1857,489.96,-360
N,5190,1857,489.96,-288
N,5191,1857,489.96,-216
N,5192,1857,489.96,-144

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N,6103,2097,852,0
N,6104,2097,852,11
N,6105,2097,860.04,11
N,6106,2097,870.6,11
N,6107,2097,1065.96,11
N,6108,2097,852,-12
N,6109,2097,870.6,-12
N,6118,2097,1065.96,-587
N,6149,2097,1065.96,-512
N,6150,2097,1065.96,-437
N,6151,2097,1065.96,-362
N,6152,2097,1065.96,-288
N,6153,2097,1065.96,-214
N,6154,2097,1065.96,-139
N,6155,2097,1065.96,-64
N,7101,2301,516,0
N,7103,2301,852,0
N,7104,2301,852,11
N,7105,2301,860.04,11
N,7106,2301,870.6,11
N,7107,2301,1065.96,11
N,7108,2301,852,-12
N,7109,2301,870.6,-12
N,7111,2301,516,-576
N,7114,2301,852,-576
N,7115,2301,852,-587
N,7116,2301,860.04,-587
N,7117,2301,870.6,-587
N,7118,2301,1065.96,-587
N,7119,2301,852,-564
N,7120,2301,870.6,-564
N,7122,2301,971.04,-587
N,7149,2301,1065.96,-512
N,7150,2301,1065.96,-437
N,7151,2301,1065.96,-362
N,7152,2301,1065.96,-288
N,7153,2301,1065.96,-214
N,7154,2301,1065.96,-139
N,7155,2301,1065.96,-64
N,8100,2505,516,-288
N,8101,2505,516,0
N,8103,2505,852,0
N,8104,2505,852,11
N,8105,2505,860.04,11
N,8106,2505,870.6,11
N,8107,2505,1065.96,11
N,8108,2505,852,-12
N,8109,2505,870.6,-12
N,8111,2505,516,-576

N,8112,2505,849.98,-288      ! NEW NODE FOR MODAL ANALISYS MCK 9/22/10

N,8114,2505,852,-576
N,8115,2505,852,-587
N,8116,2505,860.04,-587
N,8117,2505,870.6,-587
N,8118,2505,1065.96,-587
N,8119,2505,852,-564
N,8120,2505,870.6,-564
N,8149,2505,1065.96,-512
N,8150,2505,1065.96,-437
N,8151,2505,1065.96,-362
N,8152,2505,1065.96,-288
N,8153,2505,1065.96,-214
N,8154,2505,1065.96,-139
N,8155,2505,1065.96,-64
N,8156,432,288,-932
N,8157,1578,288,-900
N,21740,1159.5,573,-587
N,81660,2505,971.04,-587

!
!   Added runway girder nodes
```

```
!    Replace "CNR" with on node numbers starting at 10000.
N,10101,2241,870.6,-564
N,10102,2187,870.6,-564
N,10103,2019,870.6,-564
N,10104,1965,870.6,-564
N,10113,2241,870.6,-12
N,10114,2187,870.6,-12
N,10115,2019,870.6,-12
N,10116,1965,870.6,-12
N,10201,2139,870.6,-564
N,10202,2085,870.6,-564
N,10203,1917,870.6,-564
N,10204,1863,870.6,-564
N,10213,2139,870.6,-12
N,10214,2085,870.6,-12
N,10215,1917,870.6,-12
N,10216,1863,870.6,-12
N,10301,2106,870.6,-564
N,10302,2052,870.6,-564
N,10303,1884,870.6,-564
N,10304,1830,870.6,-564
N,10313,2106,870.6,-12
N,10314,2052,870.6,-12
N,10315,1884,870.6,-12
N,10316,1830,870.6,-12
N,10401,1296,870.6,-564
N,10402,1242,870.6,-564
N,10403,1074,870.6,-564
N,10404,1020,870.6,-564
N,10413,1296,870.6,-12
N,10414,1242,870.6,-12
N,10415,1074,870.6,-12
N,10416,1020,870.6,-12
N,10501,1263,870.6,-564
N,10502,1209,870.6,-564
N,10503,1041,870.6,-564
N,10504,987,870.6,-564
N,10513,1263,870.6,-12
N,10514,1209,870.6,-12
N,10515,1041,870.6,-12
N,10516,987,870.6,-12
N,10601,1173,870.6,-564
N,10602,1119,870.6,-564
N,10603,951,870.6,-564
N,10604,897,870.6,-564
N,10613,1173,870.6,-12
N,10614,1119,870.6,-12
N,10615,951,870.6,-12
N,10616,897,870.6,-12
N,10701,459,870.6,-564
N,10702,405,870.6,-564
N,10703,237,870.6,-564
N,10704,183,870.6,-564
N,10713,459,870.6,-12
N,10714,405,870.6,-12
N,10715,237,870.6,-12
N,10716,183,870.6,-12
N,10801,372,870.6,-564
N,10802,318,870.6,-564
N,10803,150,870.6,-564
N,10804,96,870.6,-564
N,10813,372,870.6,-12
N,10814,318,870.6,-12
N,10815,150,870.6,-12
N,10816,96,870.6,-12
N,10901,303,870.6,-564
N,10902,249,870.6,-564
N,10903,81,870.6,-564
N,10904,27,870.6,-564
N,10913,303,870.6,-12
N,10914,249,870.6,-12
N,10915,81,870.6,-12
N,10916,27,870.6,-12
!
!    Added crane nodes
```

```
! Replace "CN" with on nodes numbers starting at 11000
N,11001,345,946.1,-12
N,11002,345,946.1,-238.38
N,11003,345,946.1,-21.96
N,11004,345,946.1,-31.91
N,11005,345,946.1,-41.87
N,11006,345,946.1,-51.83
N,11007,345,946.1,-61.78
N,11008,345,946.1,-71.74
N,11009,345,946.1,-81.7
N,11010,345,946.1,-91.65
N,11011,345,946.1,-101.61
N,11012,345,946.1,-111.57
N,11013,345,946.1,-121.52
N,11014,345,946.1,-131.48
N,11015,345,946.1,-141.43
N,11016,345,946.1,-151.39
N,11017,345,946.1,-161.35
N,11018,345,946.1,-171.3
N,11019,345,946.1,-181.26
N,11020,345,946.1,-191.22
N,11021,345,946.1,-201.17
N,11022,345,946.1,-211.13
N,11023,345,946.1,-221.09
N,11024,345,946.1,-231.04
N,11025,345,946.1,-564
N,11026,345,946.1,-332.38
N,11027,345,946.1,-554.04
N,11028,345,946.1,-544.09
N,11029,345,946.1,-534.13
N,11030,345,946.1,-524.17
N,11031,345,946.1,-514.22
N,11032,345,946.1,-504.26
N,11033,345,946.1,-494.3
N,11034,345,946.1,-484.35
N,11035,345,946.1,-474.39
N,11036,345,946.1,-464.43
N,11037,345,946.1,-454.48
N,11038,345,946.1,-444.52
N,11039,345,946.1,-434.57
N,11040,345,946.1,-424.61
N,11041,345,946.1,-414.65
N,11042,345,946.1,-404.7
N,11043,345,946.1,-394.73913
N,11044,345,946.1,-384.78
N,11045,345,946.1,-374.83
N,11046,345,946.1,-364.87
N,11047,345,946.1,-354.91
N,11048,345,946.1,-344.96
N,11049,123,946.1,-12
N,11050,123,946.1,-238.38
N,11051,123,946.1,-21.96
N,11052,123,946.1,-31.91
N,11053,123,946.1,-41.87
N,11054,123,946.1,-51.83
N,11055,123,946.1,-61.78
N,11056,123,946.1,-71.74
N,11057,123,946.1,-81.7
N,11058,123,946.1,-91.65
N,11059,123,946.1,-101.61
N,11060,123,946.1,-111.57
N,11061,123,946.1,-121.52
N,11062,123,946.1,-131.48
N,11063,123,946.1,-141.43
N,11064,123,946.1,-151.39
N,11065,123,946.1,-161.35
N,11066,123,946.1,-171.3
N,11067,123,946.1,-181.26
N,11068,123,946.1,-191.22
N,11069,123,946.1,-201.17
N,11070,123,946.1,-211.13
N,11071,123,946.1,-221.09
N,11072,123,946.1,-231.04
N,11073,345,946.1,-325.6
N,11074,345,946.1,-316.2
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N,11075,345,946.1,-306.8
N,11076,345,946.1,-297.4
N,11077,345,946.1,-288
N,11078,345,946.1,-278.6
N,11079,345,946.1,-269.2
N,11080,345,946.1,-259.8
N,11081,345,946.1,-250.4
N,11082,123,946.1,-564
N,11083,123,946.1,-332.38
N,11084,123,946.1,-554.04
N,11085,123,946.1,-544.09
N,11086,123,946.1,-534.13
N,11087,123,946.1,-524.17
N,11088,123,946.1,-514.22
N,11089,123,946.1,-504.26
N,11090,123,946.1,-494.3
N,11091,123,946.1,-484.35
N,11092,123,946.1,-474.39
N,11093,123,946.1,-464.43
N,11094,123,946.1,-454.48
N,11095,123,946.1,-444.52
N,11096,123,946.1,-434.57
N,11097,123,946.1,-424.61
N,11098,123,946.1,-414.65
N,11099,123,946.1,-404.7
N,11100,123,946.1,-394.73913
N,11101,123,946.1,-384.78
N,11102,123,946.1,-374.83
N,11103,123,946.1,-364.87
N,11104,123,946.1,-354.91
N,11105,123,946.1,-344.96
N,11106,123,946.1,-325.6
N,11107,123,946.1,-316.2
N,11108,123,946.1,-306.8
N,11109,123,946.1,-297.4
N,11110,123,946.1,-288
N,11111,123,946.1,-278.6
N,11112,123,946.1,-269.2
N,11113,123,946.1,-259.8
N,11114,123,946.1,-250.4
N,11115,123,947.1,-332.38
N,11116,123,998.9,-332.38
N,11117,123,955.73333333,-332.38
N,11118,123,964.3666667,-332.38
N,11119,123,973,-332.38
N,11120,123,981.6333333,-332.38
N,11121,123,990.2666667,-332.38
N,11122,345,947.1,-332.38
N,11123,345,998.9,-332.38
N,11124,345,955.73333333,-332.38
N,11125,345,964.3666667,-332.38
N,11126,345,973,-332.38
N,11127,345,981.6333333,-332.38
N,11128,345,990.2666667,-332.38
N,11129,345,947.1,-238.38
N,11130,345,998.9,-238.38
N,11131,345,955.73333333,-238.38
N,11132,345,964.3666667,-238.38
N,11133,345,973,-238.38
N,11134,345,981.6333333,-238.38
N,11135,345,990.2666667,-238.38
N,11136,123,947.1,-238.38
N,11137,123,998.9,-238.38
N,11138,123,955.73333333,-238.38
N,11139,123,964.3666667,-238.38
N,11140,123,973,-238.38
N,11141,123,981.6333333,-238.38
N,11142,123,990.2666667,-238.38
N,11205,335.347826,946.1,-564
N,11206,325.6956522,946.1,-564
N,11207,316.0434783,946.1,-564
N,11208,306.3913043,946.1,-564
N,11209,296.7391304,946.1,-564
N,11210,287.0869565,946.1,-564
N,11211,277.4347826,946.1,-564

N,11212,267.7826087,946.1,-564
N,11213,258.1304348,946.1,-564
N,11214,248.4782609,946.1,-564
N,11215,238.82608696,946.1,-564
N,11216,229.17391304,946.1,-564
N,11217,219.5217391,946.1,-564
N,11218,209.8695652,946.1,-564
N,11219,200.2173913,946.1,-564
N,11220,190.5652174,946.1,-564
N,11221,180.9130435,946.1,-564
N,11222,171.2608696,946.1,-564
N,11223,161.6086957,946.1,-564
N,11224,151.9565217,946.1,-564
N,11225,142.3043478,946.1,-564
N,11226,132.652174,946.1,-564
N,11227,132.652174,946.1,-12
N,11228,142.3043478,946.1,-12
N,11229,151.9565217,946.1,-12
N,11230,161.6086957,946.1,-12
N,11231,171.2608696,946.1,-12
N,11232,180.9130435,946.1,-12
N,11233,190.5652174,946.1,-12
N,11234,200.2173913,946.1,-12
N,11235,209.8695652,946.1,-12
N,11236,219.5217391,946.1,-12
N,11237,229.17391304,946.1,-12
N,11238,238.82608696,946.1,-12
N,11239,248.4782609,946.1,-12
N,11240,258.1304348,946.1,-12
N,11241,267.7826087,946.1,-12
N,11242,277.4347826,946.1,-12
N,11243,287.0869565,946.1,-12
N,11244,296.7391304,946.1,-12
N,11245,306.3913043,946.1,-12
N,11246,316.0434783,946.1,-12
N,11247,325.6956522,946.1,-12
N,11248,335.347826,946.1,-12
N,11249,345,904.6,-564
N,11250,345,912.9,-564
N,11251,345,921.2,-564
N,11252,345,929.5,-564
N,11253,345,937.8,-564
N,11254,123,904.6,-564
N,11255,123,912.9,-564
N,11256,123,921.2,-564
N,11257,123,929.5,-564
N,11258,123,937.8,-564
N,11259,345,904.6,-12
N,11260,345,912.9,-12
N,11261,345,921.2,-12
N,11262,345,929.5,-12
N,11263,345,937.8,-12
N,11264,123,904.6,-12
N,11265,123,912.9,-12
N,11266,123,921.2,-12
N,11267,123,929.5,-12
N,11268,123,937.8,-12
N,11270,372,904.6,-564
N,11272,318,904.6,-564
N,11274,150,904.6,-564
N,11276,96,904.6,-564
N,11278,372,904.6,-12
N,11280,318,904.6,-12
N,11282,150,904.6,-12
N,11284,96,904.6,-12
N,11285,363,904.6,-564
N,11286,354,904.6,-564
N,11287,141,904.6,-564
N,11288,132,904.6,-564
N,11289,327,904.6,-564
N,11290,336,904.6,-564
N,11291,105,904.6,-564
N,11292,114,904.6,-564
N,11293,363,904.6,-12
N,11294,354,904.6,-12

N,11295,141,904.6,-12
N,11296,132,904.6,-12
N,11297,327,904.6,-12
N,11298,336,904.6,-12
N,11299,105,904.6,-12
N,11300,114,904.6,-12
N,11301,308.1176471,904.6,-564
N,11302,298.2352941,904.6,-564
N,11303,288.3529412,904.6,-564
N,11304,278.4705882,904.6,-564
N,11305,268.5882353,904.6,-564
N,11306,258.7058824,904.6,-564
N,11307,248.8235294,904.6,-564
N,11308,238.94117647,904.6,-564
N,11309,229.05882353,904.6,-564
N,11310,219.1764706,904.6,-564
N,11311,209.2941176,904.6,-564
N,11312,199.4117647,904.6,-564
N,11313,189.5294118,904.6,-564
N,11314,179.6470588,904.6,-564
N,11315,169.7647059,904.6,-564
N,11316,159.8823529,904.6,-564
N,11317,159.8823529,904.6,-12
N,11318,169.7647059,904.6,-12
N,11319,179.6470588,904.6,-12
N,11320,189.5294118,904.6,-12
N,11321,199.4117647,904.6,-12
N,11322,209.2941176,904.6,-12
N,11323,219.1764706,904.6,-12
N,11324,229.05882353,904.6,-12
N,11325,238.94117647,904.6,-12
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N,11327,258.7058824,904.6,-12
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N,11329,278.4705882,904.6,-12
N,11330,288.3529412,904.6,-12
N,11331,298.2352941,904.6,-12
N,11332,308.1176471,904.6,-12
N,11333,123,1011.9,-288
N,11334,123,1011.9,-229.63
N,11337,345,1011.9,-229.63
N,11338,345,1011.9,-288
N,11341,345,1011.9,-341.63
N,11344,123,1011.9,-341.63
N,11347,325.5,1011.9,-229.63
N,11348,316.81,1011.9,-229.63
N,11349,299.31,1011.9,-229.63
N,11350,283,1011.9,-229.63
N,11351,265.5,1011.9,-229.63
N,11352,257,1011.9,-229.63
N,11353,136.19,1011.9,-229.63
N,11354,142.82,1011.9,-229.63
N,11355,153.82,1011.9,-229.63
N,11356,211,1011.9,-229.63
N,11357,241.66666667,1011.9,-229.63
N,11358,226.33333333,1011.9,-229.63
N,11359,176.25,1011.9,-229.63
N,11360,165.035,1011.9,-229.63
N,11361,198.75,1011.9,-229.63
N,11362,187.5,1011.9,-229.63
N,11363,325.5,1011.9,-288
N,11365,316.81,1011.9,-288
N,11366,299.31,1011.9,-288
N,11367,283,1011.9,-288
N,11368,257,1011.9,-288
N,11369,211,1011.9,-288
N,11372,265.5,1011.9,-288
N,11373,136.19,1011.9,-288
N,11374,142.82,1011.9,-288
N,11375,153.82,1011.9,-288
N,11376,176.25,1011.9,-288
N,11377,165.035,1011.9,-288
N,11378,198.75,1011.9,-288
N,11379,187.5,1011.9,-288
N,11392,265.5,1011.9,-249.09

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N,11393,265.5,1011.9,-268.55
N,11395,198.75,1011.9,-249.09
N,11396,198.75,1011.9,-268.55
N,11397,257,1011.9,-268.38
N,11399,257,1011.9,-247.38
N,11400,211,1011.9,-247.38
N,11401,257,1011.9,-257.88
N,11402,211,1011.9,-268.38
N,11403,211,1011.9,-257.88
N,11405,241.66666667,1011.9,-268.38
N,11406,226.33333333,1011.9,-268.38
N,11408,241.66666667,1011.9,-247.38
N,11409,226.33333333,1011.9,-247.38
N,11411,316.81,1011.9,-249.09
N,11412,316.81,1011.9,-268.55
N,11414,299.31,1011.9,-249.09
N,11415,299.31,1011.9,-268.55
N,11417,283,1011.9,-249.09
N,11418,283,1011.9,-268.55
N,11420,136.19,1011.9,-249.09
N,11421,136.19,1011.9,-268.55
N,11423,153.82,1011.9,-249.09
N,11424,153.82,1011.9,-268.55
N,11426,176.25,1011.9,-249.09
N,11427,176.25,1011.9,-268.55
N,11429,325.5,1011.9,-249.09
N,11430,325.5,1011.9,-268.55
N,11432,142.82,1011.9,-249.09
N,11433,142.82,1011.9,-268.55
N,11434,234,1011.9,-288
N,11435,245.5,1011.9,-288
N,11436,222.5,1011.9,-288
N,11437,345,1011.9,-332.38
N,11438,345,1011.9,-302.8
N,11439,345,1011.9,-317.59
N,11440,123,1011.9,-332.38
N,11441,123,1011.9,-302.8
N,11442,123,1011.9,-317.59
N,11443,345,1011.9,-238.38
N,11444,345,1011.9,-254.92
N,11445,345,1011.9,-271.46
N,11446,123,1011.9,-238.38
N,11447,123,1011.9,-254.92
N,11448,123,1011.9,-271.46
N,11450,234,915.74,-288

! The following nodes are for column and beam orentation.

N,20001,100,800,-587
N,20002,100,800,-576
N,20003,100,800,-564
N,20004,100,800,-512
N,20005,100,800,-504
N,20006,100,800,-439.97
N,20007,100,800,-437
N,20008,100,800,-420.35
N,20009,100,800,-399.35
N,20010,100,800,-381.6
N,20011,100,800,-362
N,20012,100,800,-360
N,20013,100,800,-288
N,20014,100,800,-216
N,20015,100,800,-214
N,20016,100,800,-144
N,20017,100,800,-139
N,20018,100,800,-72
N,20019,100,800,-64
N,20020,100,800,-12
N,20021,100,800,0
N,20022,100,800,11
N,20030,100,800,-586
N,20035,100,800,-12
N,20036,100,800,-401.06
N,20049,100,800,-12
N,20052,10000,800,-288
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N,20054,10000,800,-586
N,20055,723,800,-586
N,20056,0,800,-586
N,20057,216,800,-586
N,20058,432,800,-586
N,20059,1014,800,-586
N,20060,1305,800,-586
N,20061,1578,800,-586
N,20062,1857,800,-586
N,20063,2097,800,-586
N,20064,2301,800,-586
N,20065,2505,800,-586
N,20066,1159.5,800,-586
N,20067,1437,800,-586
N,20068,1118.52,800,-586
N,20069,100,489.95,-576
N,20070,100,288,-336
N,20071,0,-100,-362
N,20072,0,-100,-214
N,20073,216,-100,11
N,20074,723,-100,11
N,20075,1305,-100,11
N,20076,1857,-100,11
N,20077,2301,-100,11
N,20078,2301,-100,-362
N,20079,2505,-100,-362
N,20080,1014,800,-576
N,20081,336,800,100
N,20082,100,800,-432
N,20083,-100,672,-432       !31
N,20084,-100,672,-144       !33
N,20085,-100,844.08,-288    !34
N,20086,723,-100,-288       !1145
N,20087,1014,-100,-288      !2145
N,20088,1305,-100,-288      !3145

! SPRING NODES

N,30112,432,489.96,-576
N,31112,723,489.96,-576
N,32112,1014,489.96,-576
N,33112,1305,489.96,-576
!N,35112,1857,489.96,-576

!CONSTRAINT NODES

N,40101,372,894.6,-564
N,40102,318,894.6,-564
N,40103,150,894.6,-564
N,40104,96,894.6,-564
N,40113,372,894.6,-12
N,40114,318,894.6,-12
N,40115,150,894.6,-12
N,40116,96,894.6,-12

! NODES FOR BEAM EXCENTRICITY

N,50037,0,1059.4725,-362
N,50039,0,1059.4725,-214
N,50153,432,1059.4725,-214
N,50174,216,1059.4725,-587
N,50177,216,1059.4725,-362
N,50179,216,1059.4725,-214
N,50182,216,1059.4725,11
N,51107,723,1059.4725,11
N,52153,1014,1059.4725,-214

N,52156,1159.5,489.96,-576
N,52174,1159.5,573,-576

N,53107,1305,1059.285,11
N,54153,1578,1059.285,-214
N,55107,1857,1059.285,11
N,56153,2097,1059.285,-214
N,57107,2301,1059.285,11
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N,57118,2301,1059.285,-587
N,57151,2301,1059.285,-362
N,57153,2301,1059.285,-214
N,58151,2505,1059.285,-362
N,58153,2505,1059.285,-214

! ELEMENT TYPE 2 NODES

N,60002,0,489.96,0
N,70002,0,489.96,0
N,80002,0,489.96,0
N,60008,0,1065.96,11
N,60012,0,0,-576
N,60013,0,489.96,-576
N,70013,0,489.96,-576
N,80013,0,489.96,-576
N,90013,0,489.96,-576
N,60019,0,1065.96,-587
N,70019,0,1065.96,-587
N,60031,0,672,-432
N,60034,0,844.08,-288
N,70034,0,844.08,-288
N,60113,432,573,-576
N,60124,216,489.96,-576
N,60133,336,489.96,-576
N,60174,216,1065.96,-587
N,61109,723,870.6,-12
N,61120,723,870.6,-564
N,72102,1014,489.96,0
N,62109,1014,870.6,-12
N,62116,1014,860.04,-587
N,62120,1014,870.6,-564
N,62143,1014,489.96,-432
N,62148,1014,489.96,-72
N,62156,1159.5,489.96,-587
N,63100,1305,459.96,0
N,73112,1305,489.96,-576
N,63120,1305,870.6,-564
N,63156,1437,489.96,-576
N,64113,1578,573,-576
N,64122,1578,971.04,-587
N,65112,1857,489.96,-576
N,75118,1857,1065.96,-587
N,66118,2097,1065.96,-587
N,73102,1305,489.96,0
N,63109,1305,870.6,-12
N,65109,1857,870.6,-12
N,65120,1857,870.6,-564
N,66109,2097,870.6,-12
N,67109,2301,870.6,-12
N,68120,2505,870.6,-564

! ELEMENT TYPE 3 NODES

N,60112,432,489.96,-576
N,60118,432,1065.96,-587
N,61112,723,489.96,-576
N,61118,723,1065.96,-587
N,62112,1014,489.96,-576
N,62118,1014,1065.96,-587
N,63112,1305,489.96,-576
N,63118,1305,1065.96,-587
N,64118,1578,1065.96,-587
N,65118,1857,1065.96,-587
N,67118,2301,1065.96,-587
N,68118,2505,1065.96,-587

! ELEMENT TYPE 7 NODES

N,90002,0,489.96,0
N,60033,0,672,-144
N,70033,0,672,-144
N,70008,0,1065.96,11
N,70031,0,672,-432

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N,60145,432,489.96,-288
N,60132,216,489.96,0
N,60141,336,489.96,0
N,61113,723,573,-576
N,61145,723,489.96,-288
N,62145,1014,489.96,-288
N,63121,1159.5,860.04,-587
N,63145,1305,489.96,-288
N,63164,1437,489.96,0
N,65102,1857,489.96,0
N,66107,2097,1065.96,11
N,70102,432,489.96,0
N,70112,432,489.96,-576
N,63143,1305,489.96,-432
N,64102,1578,489.96,0
N,64112,1578,489.96,-576
N,65122,1857,971.04,-587
N,65113,1857,573,-576
N,83102,1305,489.96,0
N,63148,1305,489.96,-72
N,68152,2505,1065.96,-288
N,63116,1305,860.04,-587
N,77118,2301,1065.96,-587
N,70107,432,1065.96,11
N,70118,432,1065.96,-587
N,60182,216,1065.96,11
N,76109,2097,870.6,-12
N,75109,1857,870.6,-12
N,64109,1578,870.6,-12
N,72109,1014,870.6,-12
N,71109,723,870.6,-12
N,60010,0,870.6,-12
N,75120,1857,870.6,-564
N,64120,1578,870.6,-564
N,72120,1014,870.6,-564
N,71120,723,870.6,-564
N,60021,0,870.6,-564

! ELEMENT TYPE 8 NODES

N,60102,432,489.96,0
N,60107,432,1065.96,11
N,61102,723,489.96,0
N,61107,723,1065.96,11
N,62102,1014,489.96,0
N,62107,1014,1065.96,11
N,63102,1305,489.96,0
N,63107,1305,1065.96,11
N,64100,1578,459.96,0
N,64107,1578,1065.96,11
N,65107,1857,1065.96,11
N,67107,2301,1065.96,11
N,68107,2505,1065.96,11

! ELEMENT TYPE 9 NODES

N,60003,0,844.08,0
N,60006,0,860.04,11
N,80008,0,1065.96,11
N,60014,0,844.08,-576
N,60017,0,860.04,-587
N,80019,0,1065.96,-587
N,60024,0,489.96,-504
N,60025,0,489.96,-432
N,60026,0,489.96,-360
N,60027,0,489.96,-288
N,60028,0,489.96,-216
N,60029,0,489.96,-144
N,60030,0,489.96,-72
N,80034,0,844.08,-288
N,90034,0,844.08,-288
N,100034,0,844.08,-288
N,110034,0,844.08,-288
N,60035,0,1065.96,-512
N,60036,0,1065.96,-437
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N,60037,0,1065.96,-362
N,60038,0,1065.96,-288
N,60039,0,1065.96,-214
N,60040,0,1065.96,-139
N,60041,0,1065.96,-64
N,60101,432,288,0
N,80102,432,489.96,0
N,90102,432,489.96,0
N,100102,432,489.96,0
N,60105,432,860.04,11
N,70105,432,860.04,11
N,80105,432,860.04,11
N,80107,432,1065.96,11
N,80112,432,489.96,-576
N,90112,432,489.96,-576
N,100112,432,489.96,-576
N,110112,432,489.96,-576
N,70113,432,573,-576
N,60116,432,860.04,-587
N,70116,432,860.04,-587
N,80116,432,860.04,-587
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N,70125,216,489.96,-504
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N,60129,216,489.96,-216
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N,60131,216,489.96,-72
N,70131,216,489.96,-72
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N,60137,336,489.96,-288
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N,60139,336,489.96,-144
N,60140,336,489.96,-72
N,70140,336,489.96,-72
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N,81102,723,489.96,0
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N,71105,723,860.04,11
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N,102102,1014,489.96,0
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N,72105,1014,860.04,11
N,72107,1014,1065.96,11
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N,82112,1014,489.96,-576
N,92112,1014,489.96,-576
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N,72113,1014,573,-576
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N,72142,1014,489.96,-504
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N,73155,1305,1065.96,-64
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N,63158,1437,489.96,-432
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N,63163,1437,489.96,-72
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N,64111,1578,288,-576
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N,84112,1578,489.96,-576
N,94112,1578,489.96,-576
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N,84113,1578,573,-576
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N,84116,1578,860.04,-587
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N,78118,2505,1065.96,-587
N,88118,2505,1065.96,-587
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N,68151,2505,1065.96,-362
N,78152,2505,1065.96,-288
N,68153,2505,1065.96,-214
N,68154,2505,1065.96,-139
N,68155,2505,1065.96,-64
N,150037,0,1059.4725,-362
N,250037,0,1059.4725,-362
N,150039,0,1059.4725,-214
N,250039,0,1059.4725,-214
N,150153,432,1059.4725,-214
N,250153,432,1059.4725,-214
N,150174,216,1059.4725,-587
N,150177,216,1059.4725,-362
N,150179,216,1059.4725,-214
N,150182,216,1059.4725,11
N,250182,216,1059.4725,11
N,151107,723,1059.4725,11
N,251107,723,1059.4725,11
N,152153,1014,1059.4725,-214
N,252153,1014,1059.4725,-214
N,152156,1159.5,489.96,-576
N,152174,1159.5,573,-576

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N,255107,1857,1059.285,11
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N,256153,2097,1059.285,-214
N,157107,2301,1059.285,11
N,257107,2301,1059.285,11
N,157118,2301,1059.285,-587
N,157151,2301,1059.285,-362
N,157153,2301,1059.285,-214
N,158151,2505,1059.285,-362
N,258151,2505,1059.285,-362
N,158153,2505,1059.285,-214
N,258153,2505,1059.285,-214
N,181660,2505,971.04,-587
N,281660,2505,971.04,-587

! ELEMENT TYPE 16 NODES

N,74100,1578,459.96,0
N,75100,1857,459.96,0

!RAIL GIRDER                MCK 9/10/2010

N,60009,0,852,-12
N,60020,0,852,-564
N,60108,432,852,-12
N,60119,432,852,-564
N,61108,723,852,-12
N,61119,723,852,-564
N,62108,1014,852,-12
N,62119,1014,852,-564
N,63108,1305,852,-12
N,63119,1305,852,-564
N,64108,1578,852,-12
N,64119,1578,852,-564
N,65108,1857,852,-12
N,65119,1857,852,-564
N,66108,2097,852,-12
N,67108,2301,852,-12
N,67119,2301,852,-564
N,68108,2505,852,-12
N,68119,2505,852,-564

!  ADDED RUNWAY GIRDER NODES

N,301011,372,894.6,-564
N,301021,318,894.6,-564
N,301031,150,894.6,-564
N,301041,96,894.6,-564

N,301131,372,894.6,-12
N,301141,318,894.6,-12
N,301151,150,894.6,-12
N,301161,96,894.6,-12

! DEFINE REAL CONSTANT

R,1

R,9

R,12,0.001, , ,       ! SPRING CONSTANT

R,13,18105000, , ,    ! SPRING CONSTANT

R,14,11978000, , ,    ! SPRING CONSTANT

R,15,23956000, , ,    ! SPRING CONSTANT

R,1001,2766.222961730,,,   ! HOOK X SPRING
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R,1002,2766.222961730,,,   ! HOOK Z SPRING

R,1003,2266759.624568,,,   ! HOOK Y SPRING

hookmass=688.9610669  ! hookmass = 0 for loadcase 6 and 7 all others is should be 688.9610669

R,1004,hookmass,hookmass,hookmass, ! HOOK MASS change because of change in gravity 688.4057971014

R,52,1.15,1.15,1.15
R,53,2.27743,2.27743,2.27743
R,54,3.662,3.662,3.662
R,55,0.64699,0.64699,0.64699
R,100,51.7598344,219.979296,51.7598344

R,401,14619.6 ! TORSIONAL SPRING FOR DIAGONAL WT4X12
R,402,10406.7 ! TORSIONAL SPRING FOR DIAGONAL WT4X12
R,403,56560 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X1/2_3/8
R,404,13334 ! TORSIONAL SPRING FOR DIAGONAL LL4X3X5/16_3/8
R,405,75068 ! TORSIONAL SPRING FOR DIAGONAL LL6X4X1/2_3/8
R,406,61618 ! TORSIONAL SPRING FOR DIAGONAL W14X43
R,407,215956 ! TORSIONAL SPRING FOR DIAGONAL W14X87
R,408,206514 ! TORSIONAL SPRING FOR DIAGONAL W14X87
R,409,31583 ! TORSIONAL SPRING FOR DIAGONAL LL3.5X3.5X3/8_3/8
R,410,21617 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,411,7180 ! TORSIONAL SPRING FOR DIAGONAL L4X4X5/16_3/8
R,412,25326 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,413,37519 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,414,5720 ! TORSIONAL SPRING FOR DIAGONAL LL3X3X3/8_3/8
R,415,18756 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,416,14402 ! TORSIONAL SPRING FOR DIAGONAL LL4X4X3/8_3/8
R,417,51480 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X1/2_3/8
R,418,55000 ! TORSIONAL SPRING FOR DIAGONAL LL5X5X1/2
R,419,2687 ! TORSIONAL SPRING FOR DIAGONAL LL3X3X3/16_3/8
R,420,170024 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X3/4_3/8
R,421,496078 ! TORSIONAL SPRING FOR DIAGONAL W14X119
R,422,169412 ! TORSIONAL SPRING FOR DIAGONAL W12X72

GRAV=386.08858                                                    ! in/sec^2

! DEFINE MATERIAL TYPES

Mat,1   ! BUILDING STEEL
MP,EX,1,2.90E+07
!MP,Nuxy,1,3.00E-01
MP,DENS,1,0.73377E-03
MP,GXY,1,11000000

Mat,13   ! BUILDING STEEL
MP,EX,13,2.90E+07
!MP,Nuxy,13,3.00E-01
MP,DENS,13,0.00001
MP,GXY,13,11000000

! THE FOLLOWING MATERIAL TYPES ARE FOR THE CRANE

MAT,2     !  HOOKUP MAT 1
MP,EX,2,3E+07
MP,NUXY,2,0.3
MP,DENS,2,0.745E-03

MAT,3     !  HOOKUP MAT 2
MP,EX,3,3E+07
MP,NUXY,3,0.3
MP,DENS,3,0.11660E-02

MAT,4     !  HOOKUP MAT 3
MP,EX,4,3E+07
MP,NUXY,4,0.3
MP,DENS,4,0.96E-03

MAT,5     !  HOOKUP MAT 4
MP,EX,5,3E+07
MP,NUXY,5,0.8E-03
MP,DENS,5,0.123E-02
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MAT,6     !  HOOKUP MAT 5
MP,EX,6,3E+07
MP,NUXY,6,0.3
MP,DENS,6,0

MAT,7     !  HOOKUP MAT 6
MP,EX,7,3E+07
MP,NUXY,7,0.3
MP,DENS,7,0.121E-02

MAT,8     !  HOOKUP MAT 7
MP,EX,8,3E+07
MP,NUXY,8,0.3
MP,DENS,8,0.6241E-02



! CREATE DIFFERENT ELEMENT TYPES IN ORDER TO CONTROL THE END RELEASES USING "KEYOPT"

ET,1,BEAM44

ET,2,BEAM44
!KEYOPT,2,7,11

ET,3,BEAM44
!KEYOPT,3,7,1

ET,7,BEAM44
!KEYOPT,7,8,11

ET,8,BEAM44
!KEYOPT,8,8,1

ET,9,BEAM44
!KEYOPT,9,7,11
!KEYOPT,9,8,11

ET,12,COMBIN14
KEYOPT,12,1,0
KEYOPT,12,2,3
KEYOPT,12,3,0

ET,13,COMBIN14
KEYOPT,13,1,0
KEYOPT,13,2,3
KEYOPT,13,3,0

ET,14,COMBIN14
KEYOPT,14,1,0
KEYOPT,14,2,1
KEYOPT,14,3,0

ET,15,COMBIN14
KEYOPT,15,1,0
KEYOPT,15,2,1
KEYOPT,15,3,0

ET,16,BEAM44
!KEYOPT,16,7,1
!KEYOPT,16,8,11

ET,21,BEAM44

ET,100,MASS21

ET,    1001, 14
KEYOP,    1001, 2,       1

ET,    1002, 14
KEYOP,    1002, 2,       3

ET,    1003, 14
KEYOP,    1003, 2,       2

ET,    1004, 21
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ET,300,COMBIN14  ! TORSIONAL SPRING FOR DIAGONAL BRACING
KEYOPT,300,1,0
KEYOPT,300,2,0
KEYOPT,300,3,1

! DEFINE BEAM SECTION TYPES THAT WILL BE USED IN THE MODEL

!W33X141
!SECTYPE,2,BEAM,I,W33X141
!SECDATA,11.535,11.535,33.31,0.96,0.96,0.605
R,202,41.6,246,7460,16.655,5.77,9.7
RMORE,41.6,246,7460,16.655,5.77,9.7
RMORE,,,,,,,
RMORE,2.8175,2.0642

!W12X72
!SECTYPE,3,BEAM,I,W12X72
!SECDATA,12.04,12.04,12.25,0.671,0.671,0.43
R,203,21.2,195,597,6.125,6.02,2.94
RMORE,21.2,195,597,6.125,6.02,2.94
RMORE,,,,,,,
RMORE,1.9681,4.0251

!W14X119
!SECTYPE,4,BEAM,I,W14X119
!SECDATA,14.65,14.65,14.5,0.938,0.938,0.57
R,204,35,492,1370,7.25,7.325,9.2
RMORE,35,492,1370,7.25,7.325,9.2
RMORE,,,,,,,
RMORE,1.9103,4.2347

!W36X300
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,205,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W36X300 W/ L6X8
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,244,111.3,4560.861,24519.303,15.254,14.25,70.062
RMORE,111.3,4560.861,24519.303,15.254,14.25,70.062
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W36X300 W/ L4X6
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,245,105.18,3565.207,23828.308,15.844,14.25,67.364
RMORE,105.18,3565.207,23828.308,15.844,14.25,67.364
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W14X136
!SECTYPE,6,BEAM,I,W14X136
!SECDATA,14.74,14.74,14.75,1.063,1.063,0.66
R,206,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,,
RMORE,1.9147,4.1089

!W36X230
!SECTYPE,7,BEAM,I,W36X230
!SECDATA,16.475,16.475,35.88,1.26,1.26,0.761
R,207,67.7,940,15000,17.94,8.238,28.6
RMORE,67.7,940,15000,17.94,8.238,28.6
RMORE,,,,,,,
RMORE,2.4466,2.5447

!2L3X3X5/16_3/8                                                    SEC 8
R,30,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,3.555,6.96,3.02,3.188,0.709,0.125
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RMORE,,,,,,,
RMORE,2.844,2.844

R,40,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,,,,,,,
RMORE,2.844,2.844

!W10X33
!SECTYPE,9,BEAM,I,W10X33
!SECDATA,7.964,7.964,9.75,0.433,0.433,0.292
R,209,9.71,36.5,171,4.875,3.982,0.58
RMORE,9.71,36.5,171,4.875,3.982,0.58
RMORE,,,,,,,
RMORE,2.1118,3.4106

!W30X116
!SECTYPE,10,BEAM,I,W30X116
!SECDATA,10.5,10.5,30,0.85,0.85,0.564
R,210,34.2,164,4930,15,5.25,6.43
RMORE,34.2,164,4930,15,5.25,6.43
RMORE,,,,,,,
RMORE,2.8739,2.0213

!W14X87
!SECTYPE,11,BEAM,I,W14X87
!SECDATA,14.5,14.5,14,0.688,0.688,0.42
R,211,25.6,350,967,7,7.25,3.68
RMORE,25.6,350,967,7,7.25,3.68
RMORE,,,,,,,
RMORE,1.9205,4.3537

!W14X43
!SECTYPE,12,BEAM,I,W14X43
!SECDATA,8,8,13.68,0.528,0.528,0.308
R,212,12.6,45.1,429,6.84,4,1.05
RMORE,12.6,45.1,429,6.84,4,1.05
RMORE,,,,,,,
RMORE,2.2372,2.9907

!2L6X4X1/2_3/8  SEC 13
R,31,9.5,25.641,34.79,4.188,1.737,0.792
RMORE,9.5,25.641,34.79,4.188,1.737,0.792
RMORE,,,,,,,
RMORE,3.5621,2.375
!SECTYPE,13,BEAM,ASEC,LL64X1/2
!SECDATA,9.5,25.64,,34.79,0,0.834,0,1.737,0,1.737

!2L4X3X5/16_3/8                                                    SEC 14
R,32,4.18,7.037,6.762,3.188,1.103,0.136
RMORE,4.18,7.037,6.762,3.188,1.103,0.136
RMORE,,,,,,,
RMORE,3.344,2.5075


!2L6X6X1/2_3/8                                                    SEC 15
R,33,11.5,80.128,39.816,6.188,1.435,0.958
RMORE,11.5,80.128,39.816,6.188,1.435,0.958
RMORE,,,,,,,
RMORE,2.875,2.875
!SECTYPE,15,BEAM,ASEC,LL66X1/2
!SECDATA,11.5,39.8,,80.155,0,1.002,0,1.435,0,1.435

!W24X100
!SECTYPE,16,BEAM,I,W24X100
!SECDATA,12,12,24,0.775,0.775,0.468
R,216,29.5,223,3000,12,6,4.87
RMORE,29.5,223,3000,12,6,4.87
RMORE,,,,,,,
RMORE,2.379,2.6264

!W36X280
!SECTYPE,17,BEAM,I,W36X280
!SECDATA,16.595,16.595,36.5,1.57,1.57,0.885
R,217,82.4,1200,18900,18.25,8.3,52.6
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RMORE,82.4,1200,18900,18.25,8.3,52.6
RMORE,,,,,,,
RMORE,2.372,2.5432

!W12X40
!SECTYPE,18,BEAM,I,W12X40
!SECDATA,8,8,11.94,0.516,0.516,0.294
R,218,11.8,44.1,310,5.97,4,0.956
RMORE,11.8,44.1,310,5.97,4,0.956
RMORE,,,,,,,
RMORE,2.1439,3.3618

!W14X30
!SECTYPE,19,BEAM,I,W14X30
!SECDATA,6.733,6.733,13.86,0.383,0.383,0.270
R,219,8.83,19.5,290,6.93,3.367,0.376
RMORE,8.83,19.5,290,6.93,3.367,0.376
RMORE,,,,,,,
RMORE,2.5684,2.36

!W12X27
!SECTYPE,20,BEAM,I,W12X27
!SECDATA,6.5,6.5,11.96,0.4,0.4,0.237
R,220,7.95,18.3,204,5.98,3.25,0.351
RMORE,7.95,18.3,204,5.98,3.25,0.351
RMORE,,,,,,,
RMORE,2.2944,2.8042

!W36X150
!SECTYPE,21,BEAM,I,W36X150
!SECDATA,11.972,11.972,35.84,0.94,0.94,0.625
R,221,44.2,270,9030,17.92,5.99,10.1
RMORE,44.2,270,9030,17.92,5.99,10.1
RMORE,,,,,,,
RMORE,2.9457,1.9732

!W36X160
!SECTYPE,22,BEAM,I,W36X160
!SECDATA,12,12,36,1.02,1.02,0.653
R,222,47.1,295,9760,18,6,12.4
RMORE,47.1,295,9760,18,6,12.4
RMORE,,,,,,,
RMORE,2.886,2.0036

!W24X76
!SECTYPE,23,BEAM,I,W24X76
!SECDATA,8.985,8.985,23.91,0.682,0.682,0.44
R,223,22.4,82.6,2100,11.955,4.49,2.7
RMORE,22.4,82.6,2100,11.955,4.49,2.7
RMORE,,,,,,,
RMORE,2.7417,2.1293

!W18X45
!SECTYPE,24,BEAM,I,W18X45
!SECDATA,7.477,7.477,17.86,0.499,0.499,0.335
R,224,13.2,34.8,706,8.93,3.74,0.889
RMORE,13.2,34.8,706,8.93,3.74,0.889
RMORE,,,,,,,
RMORE,2.6533,2.2063

!W10X15
!SECTYPE,25,BEAM,I,W10X15
!SECDATA,4,4,10,0.269,0.269,0.230
R,225,4.41,2.88,68.9,5,2,0.104
RMORE,4.41,2.88,68.9,5,2,0.104
RMORE,,,,,,,
RMORE,3.0732,1.9174

!W24X55
!SECTYPE,26,BEAM,I,W24X55
!SECDATA,7,7,23.55,0.503,0.503,0.396
R,226,16.2,28.9,1340,11.775,3.5,1.18
RMORE,16.2,28.9,1340,11.775,3.5,1.18
RMORE,,,,,,,
RMORE,3.4505,1.7371
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!W24X68
!SECTYPE,27,BEAM,I,W24X68
!SECDATA,8.961,8.961,23.71,0.582,0.582,0.416
R,227,20,70,1820,11.855,4.48,1.86
RMORE,20,70,1820,11.855,4.48,1.86
RMORE,,,,,,,
RMORE,2.876,2.0278

!W10X21
!SECTYPE,28,BEAM,I,W10X21
!SECDATA,5.75,5.75,9.9,0.338,0.338,0.240
R,228,6.2,10.8,107,4.95,2.875,0.21
RMORE,6.2,10.8,107,4.95,2.875,0.21
RMORE,,,,,,,
RMORE,2.3782,2.6094

!C8X11
SECTYPE,29,BEAM,CHAN,C8X11
SECDATA,2.25,2.25,8,0.39,0.39,0.220
R,229,3.38,1.32,32.6,4,1.13,1.268
RMORE,3.38,1.32,32.6,4,1.13,1.268
RMORE,,,,,,,
RMORE,2.8766,1.9205

!W30X108
!SECTYPE,30,BEAM,I,W30X108
!SECDATA,10.484,10.484,29.82,0.76,0.76,0.548
R,230,31.8,146,4470,14.91,5.24,5.02
RMORE,31.8,146,4470,14.91,5.24,5.02
RMORE,,,,,,,
RMORE,2.9932,1.946

!W14X22
!SECTYPE,31,BEAM,I,W14X22
!SECDATA,5,5,13.72,0.335,0.335,0.230
R,231,6.49,7,198,6.86,2.5,0.208
RMORE,6.49,7,198,6.86,2.5,0.208
RMORE,,,,,,,
RMORE,2.9064,2.0564

!W14X61
!SECTYPE,32,BEAM,I,W14X61
!SECDATA,10,10,13.91,0.643,0.643,0.378
R,232,17.9,107,641,6.955,5,2.19
RMORE,17.9,107,641,6.955,5,2.19
RMORE,,,,,,,
RMORE,2.088,3.4043

!W27X84
!SECTYPE,33,BEAM,I,W27X84
!SECDATA,9.963,9.963,26.69,0.636,0.636,0.463
R,233,24.8,105,2830,13.345,4.98,2.79
RMORE,24.8,105,2830,13.345,4.98,2.79
RMORE,,,,,,,
RMORE,2.9353,2.007

!W27X94
!SECTYPE,34,BEAM,I,W27X94
!SECDATA,9.99,9.99,26.91,0.745,0.745,0.49
R,234,27.7,124,3270,13.455,5,4.06
RMORE,27.7,124,3270,13.455,5,4.06
RMORE,,,,,,,
RMORE,2.7839,2.1007

!2L4X4X3/8_3/8 SEC35
R,34,5.719,18.77,8.717,4.188,0.951,0.268
RMORE,5.719,18.77,8.717,4.188,0.951,0.268
RMORE,,,,,,,
RMORE,2.8595,2.8595

!2L6X6X3/4_3/8 SEC 36
R,35,16.875,121.302,56.31,6.188,1.4,3.164
RMORE,16.875,121.302,56.31,6.188,1.4,3.164
RMORE,,,,,,,
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RMORE,2.8125,2.8125

!2L3X3X3/16_3/8 SEC 37
R,36,2.18,4.134,1.923,3.188,0.726,0.025
RMORE,2.18,4.134,1.923,3.188,0.726,0.025
RMORE,,,,,,,
RMORE,2.9067,2.9067

!2L5X5X1/2_3/8 SEC 38
R,37,9.5,47.485,22.5,5.188,1.184,0.792
RMORE,9.5,47.485,22.5,5.188,1.184,0.792
RMORE,,,,,,,
RMORE,2.8503,2.8503

!L4X4X5/16
!SECTYPE,39,BEAM,L,L44X5/16
!SECDATA,4,4,0.313,0.313
R,239,2.402,5.925,1.503,2.828,1.357,0.078
RMORE,2.402,5.925,1.503,2.828,1.357,0.078
RMORE,,,,,,,
RMORE,2.1182,2.0978,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

!L5X5X1/2
!SECTYPE,40,BEAM,L,L55X1/2
!SECDATA,5,5,0.5,0.5
R,240,4.75,17.912,4.589,3.536,1.675,0.396
RMORE,4.75,17.912,4.589,3.536,1.675,0.396
RMORE,,,,,,,
RMORE,2.1158,2.0833,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

!2L3.5X3.5X3/8_3/8 SEC 41
R,38,4.969,12.891,5.73,3.688,0.826,0.233
RMORE,4.969,12.891,5.73,3.688,0.826,0.233
RMORE,,,,,,,
RMORE,2.8394,2.8394

!2L3X3X3/8_3/8 SEC 42
R,39,4.219,8.395,3.519,3.188,0.7,0.198
RMORE,4.219,8.395,3.519,3.188,0.7,0.198
RMORE,,,,,,,
RMORE,2.7527,2.7527

!WT4X12
!SECTYPE,43,BEAM,T,WT4X12
!SECDATA,6.5,3.97,0.398,0.245
R,243,3.54,9.15,3.529,0.699,3.248,0.174
RMORE,3.54,9.15,3.529,0.699,3.248,0.174
RMORE,,,,,,,
RMORE,2.0439,5.463

!L4X4X1/2
R,241,3.75,8.828,2.295,2.828,1.320,0.312        ! NEW SECTION 9/14/2010 MCK  EL 7301,7313
RMORE,3.75,8.828,2.295,2.828,1.320,0.312
RMORE,,,,,,,
RMORE,2.1114,2.0616,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

!L6X6X3/4
R,242,8.438,44.692,11.617,4.243,1.98,1.582        ! NEW SECTION 9/14/2010 MCK  EL 7303,7315
RMORE,8.438,44.692,11.617,4.243,1.98,1.582
RMORE,,,,,,,
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RMORE,2.1121,2.0616,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

! THE FOLLOWING SECTIONS ARE FOR THE CRANE MODEL AS PROVIDED
! BY THE CRANE VENDOR

SECTYPE,44,BEAM,HREC,       !1
SECDATA,61.000,17.125,1.0000,1.0000,0.62500, 0.62500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,45,BEAM,CSOL,       !2
SECDATA,4.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,46,BEAM,RECT,trolgirt   !3
SECDATA,22.000,2.5000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,47,BEAM,HREC,endtie  !4
SECDATA,10.000,8.0000,1.0000,1.0000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,48,BEAM,HREC,asagitie   !6
SECDATA,8.0000,8.0000,0.75000,0.75000,0.75000,0.75000,
SECOFFSET,CENT
SECCONTROL,0.0000,0.0000,0.0000,0.0000

SECTYPE,49,BEAM,HREC,endtruck   !7
SECDATA,22.000,16.600,1.5000,1.5000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,50,BEAM,RECT,       !8
SECDATA,14.000,14.000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,51,BEAM,HREC,Ttrucks   !10
SECDATA,22.250,9.0000,0.75000,0.75000,0.50000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,52,BEAM,RECT,girt1   !11
SECDATA,33.000,1.2500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,53,BEAM,RECT,girt2   !12
SECDATA,42.625,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,54,BEAM,RECT,girt3   !13
SECDATA,33.000,1.2500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,55,BEAM,RECT,       !14
SECDATA,20.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,56,BEAM,RECT,stiff2    !15
SECDATA,6.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000
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SECTYPE,57,BEAM,RECT,         !16
SECDATA,15.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,58,BEAM,RECT,9luk    !17
SECDATA,9.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,59,BEAM,ASEC,STIFF    !RIGID BEAM
SECDATA,1000,1000000,,1000000,,1000000   !GT STRUDL USES AN AREA OF 10
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,60,BEAM,ASEC,STIFF    !RIGID BEAM
SECDATA,1000,1000000,,1000000,,1000000   !GT STRUDL USES AN AREA OF 10
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SAVE

! SELECT NODES IN ORDER TO DEFINE A RIGID REGION USING "CERIG"


! EBLOCK DEFINES ELEMENTS, HEADING ARE PROVIDED TO HELP DURING CHECKING
!    MAT    TYPE    REAL    SECT                        # NODES        ELM #    I      J      K
EBLOCK,19,SOLID,
(19i8)
     1     1   205     0     0     0     0     0     2     0     1     1     2     0
     1     1   205     0     0     0     0     0     2     0     2     2     3     0
     1     1   205     0     0     0     0     0     2     0     3     3     4     0
    13     1     1    59     0     0     0     0     2     0     4     4     5     0
     1     1   206     0     0     0     0     0     2     0     5     5     6     0
     1     1   206     0     0     0     0     0     2     0     6     6     7     0
     1     1   206     0     0     0     0     0     2     0     7     7     8     0
    13     1     1    59     0     0     0     0     2     0     8     4     9     0
    13     1     1    59     0     0     0     0     2     0     9 60009    10     0
    13     1     1    59     0     0     0     0     2     0    11    10     7 20056
     1     1   205     0     0     0     0     0     2     0    12    12    13     0
     1     1   205     0     0     0     0     0     2     0    13    13    14     0
     1     1   205     0     0     0     0     0     2     0    14    14    15     0
    13     1     1    59     0     0     0     0     2     0    15    15    16     0
     1     1   206     0     0     0     0     0     2     0    16    16    17     0
     1     1   206     0     0     0     0     0     2     0    17    17    18     0
     1     1   206     0     0     0     0     0     2     0    18    18    19     0
    13     1     1    59     0     0     0     0     2     0    19    15    20     0
    13     1     1    59     0     0     0     0     2     0    20 60020    21     0
    13     1     1    59     0     0     0     0     2     0    22    21    18 20056
     1     2   207     0     0     0     0     0     2     0    23 60013    24 20056
     1     1   207     0     0     0     0     0     2     0    24    24    25 20056
     1     1   207     0     0     0     0     0     2     0    25    25    26 20056
     1     1   207     0     0     0     0     0     2     0    26    26    27 20056
     1     1   207     0     0     0     0     0     2     0    27    27    28 20056
     1     1   207     0     0     0     0     0     2     0    28    28    29 20056
     1     1   207     0     0     0     0     0     2     0    29    29    30 20056
     1     7   207     0     0     0     0     0     2     0    30    30 90002 20056
     1     2    30     0     0     0     0     0     2     0    31 60031    32     0
     1     7    40     0     0     0     0     0     2     0    32    32 60033     0
     1     9   209     0     0     0     0     0     2     0    33 60014 80034 20056
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1	7	230	0	0	0	0	0	2	0	7062	3156	64112	20002
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1	9	241	0	0	0	0	0	2	0	7313	95107	84105	0
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1	1	205	0	0	0	0	0	2	0	8100	8101	8103	0
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1	9	220	0	0	0	0	0	2	0	9046	74155	65155	20019
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8	21	1	51	0	0	0	0	2	0	12457	11333	11441	0
8	21	1	51	0	0	0	0	2	0	12458	11441	11442	0
8	21	1	51	0	0	0	0	2	0	12459	11442	11440	0
8	21	1	51	0	0	0	0	2	0	12460	11443	11444	0
8	21	1	51	0	0	0	0	2	0	12461	11444	11445	0
8	21	1	51	0	0	0	0	2	0	12462	11445	11338	0
8	21	1	51	0	0	0	0	2	0	12463	11446	11447	0
8	21	1	51	0	0	0	0	2	0	12464	11447	11448	0
8	21	1	51	0	0	0	0	2	0	12465	11448	11333	0
8	21	1	51	0	0	0	0	2	0	12466	11443	11337	0
8	21	1	51	0	0	0	0	2	0	12467	11446	11334	0
8	21	1	51	0	0	0	0	2	0	12468	11437	11341	0
8	21	1	51	0	0	0	0	2	0	12469	11344	11440	0
6	21	1	50	0	0	0	0	2	0	12470	11130	11443	0
6	21	1	50	0	0	0	0	2	0	12471	11123	11437	0
6	21	1	50	0	0	0	0	2	0	12472	11116	11440	0
6	21	1	50	0	0	0	0	2	0	12473	11137	11446	0
6	1001	1001	50	0	0	0	0	2	0	12478	11434	11450	0
6	1002	1002	50	0	0	0	0	2	0	12479	11434	11450	0
6	1003	1003	50	0	0	0	0	2	0	12480	11434	11450	0
6	1004	1004	50	0	0	0	0	1	0	12481	11450	0	0
1	1	205	0	0	0	0	0	2	0	71000	7101	7103	0
13	1	1	59	0	0	0	0	2	0	71020	7103	7104	0
1	1	206	0	0	0	0	0	2	0	71030	7104	7105	0
1	1	206	0	0	0	0	0	2	0	71040	7105	7106	0
1	1	206	0	0	0	0	0	2	0	71050	7106	7107	0
13	1	1	59	0	0	0	0	2	0	71060	7103	7108	0
13	1	1	59	0	0	0	0	2	0	71070	67108	7109	0
13	1	1	59	0	0	0	0	2	0	71090	7109	7106	20064
1	1	205	0	0	0	0	0	2	0	71100	7111	7114	0
13	1	1	59	0	0	0	0	2	0	71130	7114	7115	0
1	1	206	0	0	0	0	0	2	0	71140	7115	7116	0
1	1	206	0	0	0	0	0	2	0	71150	7116	7117	0
1	1	206	0	0	0	0	0	2	0	71160	7117	7122	0
13	1	1	59	0	0	0	0	2	0	71170	7114	7119	0
13	1	1	59	0	0	0	0	2	0	71180	67119	7120	0
13	1	1	59	0	0	0	0	2	0	71200	7120	7117	20064
1	1	206	0	0	0	0	0	2	0	71210	7122	7118	0
1	1	206	0	0	0	0	0	2	0	81160	81660	8118	0
0	14	14	0	0	0	0	0	2	0	90001	112	30112	0
0	15	15	0	0	0	0	0	2	0	90002	1112	31112	0
0	12	12	0	0	0	0	0	2	0	90003	1112	31112	0
0	14	14	0	0	0	0	0	2	0	90004	2112	32112	0
0	13	13	0	0	0	0	0	2	0	90005	2112	32112	0
0	12	12	0	0	0	0	0	2	0	90006	3112	33112	0
6	1	1	60	0	0	0	0	2	0	90501	37	50037	0
6	1	1	60	0	0	0	0	2	0	90502	39	50039	0
6	1	1	60	0	0	0	0	2	0	90503	153	50153	0
6	1	1	60	0	0	0	0	2	0	90504	174	50174	0
6	1	1	60	0	0	0	0	2	0	90505	177	50177	0
6	1	1	60	0	0	0	0	2	0	90506	179	50179	0
6	1	1	60	0	0	0	0	2	0	90507	182	50182	0
6	1	1	60	0	0	0	0	2	0	90508	1107	51107	0
6	1	1	60	0	0	0	0	2	0	90509	2153	52153	0
6	1	1	60	0	0	0	0	2	0	90510	3107	53107	0
6	1	1	60	0	0	0	0	2	0	90511	4153	54153	0
6	1	1	60	0	0	0	0	2	0	90512	5107	55107	0
6	1	1	60	0	0	0	0	2	0	90513	6153	56153	0
6	1	1	60	0	0	0	0	2	0	90514	7107	57107	0
6	1	1	60	0	0	0	0	2	0	90515	7118	57118	0
6	1	1	60	0	0	0	0	2	0	90516	7151	57151	0
6	1	1	60	0	0	0	0	2	0	90517	7153	57153	0

```
   6    1    1   60    0    0    0    0    2    0  90518   8151  58151      0
   6    1    1   60    0    0    0    0    2    0  90519   8153  58153      0
   6    1    1   60    0    0    0    0    2    0  90520  21740  52174      0
   6    1    1   60    0    0    0    0    2    0  90521   2156  52156      0
   0  300  407    0    0    0    0    0    2    0  40043     12     23      0
   0  300  406    0    0    0    0    0    2    0  40044     13     23      0
   0  300  408    0    0    0    0    0    2    0  40045      2     23      0
   0  300  405    0    0    0    0    0    2    0  40046     13     31      0
   0  300  404    0    0    0    0    0    2    0  40047     14     31      0
   0  300  405    0    0    0    0    0    2    0  40048     34     31      0
   0  300  405    0    0    0    0    0    2    0  40049      2     33      0
   0  300  404    0    0    0    0    0    2    0  40050      3     33      0
   0  300  405    0    0    0    0    0    2    0  40051     34     33      0
   0  300  403    0    0    0    0    0    2    0  40052     19     34      0
   0  300  403    0    0    0    0    0    2    0  40053      8     34      0
   0  300  411    0    0    0    0    0    2    0  47301   1107    105      0
   0  300  415    0    0    0    0    0    2    0  47303   1103    102      0
   0  300  412    0    0    0    0    0    2    0  47305   1102    101      0
   0  300  411    0    0    0    0    0    2    0  47307   1118    116      0
   0  300  410    0    0    0    0    0    2    0  47309   1114    113      0
   0  300  409    0    0    0    0    0    2    0  47310    112    183      0
   0  300  409    0    0    0    0    0    2    0  47311   1112    183      0
   0  300  411    0    0    0    0    0    2    0  47313   5107   4105      0
   0  300  415    0    0    0    0    0    2    0  47315   5103   4102      0
   0  300  412    0    0    0    0    0    2    0  47317   5100   4101      0
   0  300  414    0    0    0    0    0    2    0  47320   4118   4156      0
   0  300  414    0    0    0    0    0    2    0  47321   4156   5116      0
   0  300  414    0    0    0    0    0    2    0  47322   4116   4156      0
   0  300  414    0    0    0    0    0    2    0  47323   4156   5118      0
   0  300  410    0    0    0    0    0    2    0  47325   5114   4113      0
   0  300  409    0    0    0    0    0    2    0  47326   4112   5123      0
   0  300  409    0    0    0    0    0    2    0  47327   5123   5112      0
   0  300  412    0    0    0    0    0    2    0  47329   5112   4111      0
   0  300  413    0    0    0    0    0    2    0  47333   8118   7122      0
   0  300  413    0    0    0    0    0    2    0  47335  81660   7116      0
   0  300  402    0    0    0    0    0    2    0  47336  50037  50174      0
   0  300  401    0    0    0    0    0    2    0  47337  50037  50179      0
   0  300  401    0    0    0    0    0    2    0  47338  50039  50177      0
   0  300  402    0    0    0    0    0    2    0  47339  50039  50182      0
   0  300  402    0    0    0    0    0    2    0  47340  50182  50153      0
   0  300  402    0    0    0    0    0    2    0  47341  50153  51107      0
   0  300  402    0    0    0    0    0    2    0  47342  51107  52153      0
   0  300  402    0    0    0    0    0    2    0  47343  52153  53107      0
   0  300  402    0    0    0    0    0    2    0  47344  53107  54153      0
   0  300  402    0    0    0    0    0    2    0  47345  54153  55107      0
   0  300  402    0    0    0    0    0    2    0  47346  55107  56153      0
   0  300  402    0    0    0    0    0    2    0  47347  56153  57107      0
   0  300  402    0    0    0    0    0    2    0  47348  57107  58153      0
   0  300  401    0    0    0    0    0    2    0  47349  57151  58153      0
   0  300  401    0    0    0    0    0    2    0  47350  57153  58151      0
   0  300  402    0    0    0    0    0    2    0  47351  57118  58151      0
   0  300  421    0    0    0    0    0    2    0  47352    112   8156      0
   0  300  422    0    0    0    0    0    2    0  47353   4112   8157      0
   0  300  416    0    0    0    0    0    2    0  47435    112   1145      0
   0  300  417    0    0    0    0    0    2    0  47436   1145   2102      0
   0  300  416    0    0    0    0    0    2    0  47437    102   1145      0
   0  300  417    0    0    0    0    0    2    0  47438   1145   2112      0
   0  300  420    0    0    0    0    0    2    0  47439   2112   3145      0
   0  300  419    0    0    0    0    0    2    0  47441   2145   2158      0
   0  300  417    0    0    0    0    0    2    0  47442   2102   3145      0
   0  300  418    0    0    0    0    0    2    0  47443   3145   3164      0
  13    1    1   59    0    0    0    0    2    0  30001  10801 301011      0
  13    1    1   59    0    0    0    0    2    0  30002  10802 301021      0
  13    1    1   59    0    0    0    0    2    0  30003  10803 301031      0
  13    1    1   59    0    0    0    0    2    0  30004  10804 301041      0
  13    1    1   59    0    0    0    0    2    0  30005  10813 301131      0
  13    1    1   59    0    0    0    0    2    0  30006  10814 301141      0
  13    1    1   59    0    0    0    0    2    0  30007  10815 301151      0
  13    1    1   59    0    0    0    0    2    0  30008  10816 301161      0
-1

! These constraint equiations attach the trolly to the crane bridge
!!!! Dec 20, 2010, J.Staples
!!!! See Rev 1 of Calc S10-0049.
!!!! CE equations are replaced by CP commands. The CP commands include no Rotation restriction and connections now follow NOG-1 2004
```

```
!!!! This is associated with Fig. 4154.3-1 and Table 4154.3-1
!!!! Specifically, Nodes E, F, G and H of the Figure 4154.3

!CE,1,0,11002,UZ,1,11129,UZ,-1,11129,ROTX,-1,

!CE,2,0,11002,UY,1,11129,UY,-1

!CE,3,0,11002,UX,1,11129,UX,-1,11129,ROTZ,1,

!CE,4,0,11050,UZ,1,11136,UZ,-1,11136,ROTX,-1,

!CE,5,0,11050,UY,1,11136,UY,-1

!CE,6,0,11050,UX,1,11136,UX,-1,11136,ROTZ,1,

!CE,7,0,11122,UY,1,11026,UY,-1

!CE,8,0,11122,UX,1,11026,UX,-1,11026,ROTZ,-1,

!CE,9,0,11115,UY,1,11083,UY,-1

!CE,10,0,11115,UX,1,11083,UX,-1,11083,ROTZ,-1,


CP,1,UX,     11002,    11129,
CP,2,UY,     11002,    11129,
CP,3,UZ,     11002,    11129,
CP,4,UX,     11050,    11136,
CP,5,UY,     11050,    11136,
CP,6,UZ,     11050,    11136,
CP,7,UY,     11026,    11122,
CP,8,UX,     11026,    11122,
CP,9,UY,     11083,    11115,
CP,10,UX,    11083,    11115,


!!!!
!!!! End of Dec 20 2010 changes.


! These constraint equiations attach the crane bridge to the crane rail

CE,11,0,40101,UY,1,301011,UY,-1
CE,12,0,40101,UZ,1,301011,UZ,-1

CE,13,0,40102,UY,1,301021,UY,-1
CE,14,0,40102,UZ,1,301021,UZ,-1

CE,15,0,40103,UX,1,301031,UX,-1
CE,16,0,40103,UY,1,301031,UY,-1
CE,17,0,40103,UZ,1,301031,UZ,-1

CE,18,0,40104,UX,1,301041,UX,-1
CE,19,0,40104,UY,1,301041,UY,-1
CE,20,0,40104,UZ,1,301041,UZ,-1

CE,21,0,40113,UY,1,301131,UY,-1

CE,22,0,40114,UY,1,301141,UY,-1

CE,23,0,40115,UX,1,301151,UX,-1
CE,24,0,40115,UY,1,301151,UY,-1

CE,25,0,40116,UX,1,301161,UX,-1
CE,26,0,40116,UY,1,301161,UY,-1


! ELEMENT TYPE 2


CE,101,0,60013,UX,1,13,UX,-1
CE,NEXT,0,60013,UY,1,13,UY,-1
CE,NEXT,0,60013,UZ,1,13,UZ,-1
CE,NEXT,0,60013,ROTZ,1,13,ROTZ,-1
```

```
CE,NEXT,0,60031,UX,1,31,UX,-1
CE,NEXT,0,60031,UY,1,31,UY,-1
CE,NEXT,0,60031,UZ,1,31,UZ,-1
CE,NEXT,0,60031,ROTZ,1,31,ROTZ,-1

CE,NEXT,0,60019,UX,1,19,UX,-1
CE,NEXT,0,60019,UY,1,19,UY,-1
CE,NEXT,0,60019,UZ,1,19,UZ,-1
CE,NEXT,0,60019,ROTZ,1,19,ROTZ,-1

CE,NEXT,0,60012,UX,1,12,UX,-1
CE,NEXT,0,60012,UY,1,12,UY,-1
CE,NEXT,0,60012,UZ,1,12,UZ,-1

CE,NEXT,0,70013,UX,1,13,UX,-1
CE,NEXT,0,70013,UY,1,13,UY,-1
CE,NEXT,0,70013,UZ,1,13,UZ,-1

CE,NEXT,0,60002,UX,1,2,UX,-1
CE,NEXT,0,60002,UY,1,2,UY,-1
CE,NEXT,0,60002,UZ,1,2,UZ,-1

CE,NEXT,0,80013,UX,1,13,UX,-1
CE,NEXT,0,80013,UY,1,13,UY,-1
CE,NEXT,0,80013,UZ,1,13,UZ,-1

CE,NEXT,0,60034,UX,1,34,UX,-1
CE,NEXT,0,60034,UY,1,34,UY,-1
CE,NEXT,0,60034,UZ,1,34,UZ,-1

CE,NEXT,0,70002,UX,1,2,UX,-1
CE,NEXT,0,70002,UY,1,2,UY,-1
CE,NEXT,0,70002,UZ,1,2,UZ,-1

CE,NEXT,0,70034,UX,1,34,UX,-1
CE,NEXT,0,70034,UY,1,34,UY,-1
CE,NEXT,0,70034,UZ,1,34,UZ,-1

CE,NEXT,0,60124,UX,1,124,UX,-1
CE,NEXT,0,60124,UY,1,124,UY,-1
CE,NEXT,0,60124,UZ,1,124,UZ,-1
CE,NEXT,0,60124,ROTZ,1,124,ROTZ,-1

CE,NEXT,0,60133,UX,1,133,UX,-1
CE,NEXT,0,60133,UY,1,133,UY,-1
CE,NEXT,0,60133,UZ,1,133,UZ,-1
CE,NEXT,0,60133,ROTZ,1,133,ROTZ,-1

CE,NEXT,0,60113,UX,1,113,UX,-1
CE,NEXT,0,60113,UY,1,113,UY,-1
CE,NEXT,0,60113,UZ,1,113,UZ,-1
CE,NEXT,0,60113,ROTX,1,113,ROTX,-1

CE,NEXT,0,62156,UX,1,2156,UX,-1
CE,NEXT,0,62156,UY,1,2156,UY,-1
CE,NEXT,0,62156,UZ,1,2156,UZ,-1
CE,NEXT,0,62156,ROTZ,1,2156,ROTZ,-1

CE,NEXT,0,63156,UX,1,3156,UX,-1
CE,NEXT,0,63156,UY,1,3156,UY,-1
CE,NEXT,0,63156,UZ,1,3156,UZ,-1
CE,NEXT,0,63156,ROTZ,1,3156,ROTZ,-1

CE,NEXT,0,65112,UX,1,5112,UX,-1
CE,NEXT,0,65112,UY,1,5112,UY,-1
CE,NEXT,0,65112,UZ,1,5112,UZ,-1
CE,NEXT,0,65112,ROTZ,1,5112,ROTZ,-1

CE,NEXT,0,66118,UX,1,6118,UX,-1
CE,NEXT,0,66118,UY,1,6118,UY,-1
CE,NEXT,0,66118,UZ,1,6118,UZ,-1
CE,NEXT,0,66118,ROTZ,1,6118,ROTZ,-1

CE,NEXT,0,80002,UX,1,2,UX,-1
CE,NEXT,0,80002,UY,1,2,UY,-1
```

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CE,NEXT,0,80002,UZ,1,2,UZ,-1
CE,NEXT,0,80002,ROTX,1,2,ROTX,-1

CE,NEXT,0,90013,UX,1,13,UX,-1
CE,NEXT,0,90013,UY,1,13,UY,-1
CE,NEXT,0,90013,UZ,1,13,UZ,-1
CE,NEXT,0,90013,ROTX,1,13,ROTX,-1

CE,NEXT,0,72102,UX,1,2102,UX,-1
CE,NEXT,0,72102,UY,1,2102,UY,-1
CE,NEXT,0,72102,UZ,1,2102,UZ,-1
CE,NEXT,0,72102,ROTX,1,2102,ROTX,-1

CE,NEXT,0,62148,UX,1,2148,UX,-1
CE,NEXT,0,62148,UY,1,2148,UY,-1
CE,NEXT,0,62148,UZ,1,2148,UZ,-1
CE,NEXT,0,62148,ROTX,1,2148,ROTX,-1

CE,NEXT,0,62143,UX,1,2143,UX,-1
CE,NEXT,0,62143,UY,1,2143,UY,-1
CE,NEXT,0,62143,UZ,1,2143,UZ,-1
CE,NEXT,0,62143,ROTX,1,2143,ROTX,-1

CE,NEXT,0,63100,UX,1,3100,UX,-1
CE,NEXT,0,63100,UY,1,3100,UY,-1
CE,NEXT,0,63100,UZ,1,3100,UZ,-1
CE,NEXT,0,63100,ROTX,1,3100,ROTX,-1

CE,NEXT,0,73102,UX,1,3102,UX,-1
CE,NEXT,0,73102,UY,1,3102,UY,-1
CE,NEXT,0,73102,UZ,1,3102,UZ,-1
CE,NEXT,0,73102,ROTX,1,3102,ROTX,-1

CE,NEXT,0,73112,UX,1,3112,UX,-1
CE,NEXT,0,73112,UY,1,3112,UY,-1
CE,NEXT,0,73112,UZ,1,3112,UZ,-1
CE,NEXT,0,73112,ROTX,1,3112,ROTX,-1

CE,NEXT,0,64113,UX,1,4113,UX,-1
CE,NEXT,0,64113,UY,1,4113,UY,-1
CE,NEXT,0,64113,UZ,1,4113,UZ,-1
CE,NEXT,0,64113,ROTX,1,4113,ROTX,-1

CE,NEXT,0,64122,UX,1,4122,UX,-1
CE,NEXT,0,64122,UY,1,4122,UY,-1
CE,NEXT,0,64122,UZ,1,4122,UZ,-1
CE,NEXT,0,64122,ROTX,1,4122,ROTX,-1

CE,NEXT,0,62116,UX,1,2116,UX,-1
CE,NEXT,0,62116,UY,1,2116,UY,-1
CE,NEXT,0,62116,UZ,1,2116,UZ,-1
CE,NEXT,0,62116,ROTX,1,2116,ROTX,-1

CE,NEXT,0,60008,UX,1,8,UX,-1
CE,NEXT,0,60008,UY,1,8,UY,-1
CE,NEXT,0,60008,UZ,1,8,UZ,-1
CE,NEXT,0,60008,ROTX,1,8,ROTX,-1

CE,NEXT,0,70019,UX,1,19,UX,-1
CE,NEXT,0,70019,UY,1,19,UY,-1
CE,NEXT,0,70019,UZ,1,19,UZ,-1
CE,NEXT,0,70019,ROTX,1,19,ROTX,-1

CE,NEXT,0,75118,UX,1,5118,UX,-1
CE,NEXT,0,75118,UY,1,5118,UY,-1
CE,NEXT,0,75118,UZ,1,5118,UZ,-1
CE,NEXT,0,75118,ROTX,1,5118,ROTX,-1

CE,NEXT,0,60174,UX,1,174,UX,-1
CE,NEXT,0,60174,UY,1,174,UY,-1
CE,NEXT,0,60174,UZ,1,174,UZ,-1
CE,NEXT,0,60174,ROTZ,1,174,ROTZ,-1

CE,NEXT,0,67109,UX,1,7109,UX,-1
CE,NEXT,0,67109,UY,1,7109,UY,-1
```

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CE,NEXT,0,67109,UZ,1,7109,UZ,-1
CE,NEXT,0,67109,ROTX,1,7109,ROTX,-1

CE,NEXT,0,66109,UX,1,6109,UX,-1
CE,NEXT,0,66109,UY,1,6109,UY,-1
CE,NEXT,0,66109,UZ,1,6109,UZ,-1
CE,NEXT,0,66109,ROTX,1,6109,ROTX,-1

CE,NEXT,0,65109,UX,1,5109,UX,-1
CE,NEXT,0,65109,UY,1,5109,UY,-1
CE,NEXT,0,65109,UZ,1,5109,UZ,-1
CE,NEXT,0,65109,ROTX,1,5109,ROTX,-1

CE,NEXT,0,63109,UX,1,3109,UX,-1
CE,NEXT,0,63109,UY,1,3109,UY,-1
CE,NEXT,0,63109,UZ,1,3109,UZ,-1
CE,NEXT,0,63109,ROTX,1,3109,ROTX,-1

CE,NEXT,0,62109,UX,1,2109,UX,-1
CE,NEXT,0,62109,UY,1,2109,UY,-1
CE,NEXT,0,62109,UZ,1,2109,UZ,-1
CE,NEXT,0,62109,ROTX,1,2109,ROTX,-1

CE,NEXT,0,61109,UX,1,1109,UX,-1
CE,NEXT,0,61109,UY,1,1109,UY,-1
CE,NEXT,0,61109,UZ,1,1109,UZ,-1
CE,NEXT,0,61109,ROTX,1,1109,ROTX,-1

CE,NEXT,0,68120,UX,1,8120,UX,-1
CE,NEXT,0,68120,UY,1,8120,UY,-1
CE,NEXT,0,68120,UZ,1,8120,UZ,-1
CE,NEXT,0,68120,ROTX,1,8120,ROTX,-1

CE,NEXT,0,65120,UX,1,5120,UX,-1
CE,NEXT,0,65120,UY,1,5120,UY,-1
CE,NEXT,0,65120,UZ,1,5120,UZ,-1
CE,NEXT,0,65120,ROTX,1,5120,ROTX,-1

CE,NEXT,0,63120,UX,1,3120,UX,-1
CE,NEXT,0,63120,UY,1,3120,UY,-1
CE,NEXT,0,63120,UZ,1,3120,UZ,-1
CE,NEXT,0,63120,ROTX,1,3120,ROTX,-1

CE,NEXT,0,62120,UX,1,2120,UX,-1
CE,NEXT,0,62120,UY,1,2120,UY,-1
CE,NEXT,0,62120,UZ,1,2120,UZ,-1
CE,NEXT,0,62120,ROTX,1,2120,ROTX,-1

CE,NEXT,0,61120,UX,1,1120,UX,-1
CE,NEXT,0,61120,UY,1,1120,UY,-1
CE,NEXT,0,61120,UZ,1,1120,UZ,-1
CE,NEXT,0,61120,ROTX,1,1120,ROTX,-1

!,ELEMENT,TYPE,,,,3,,

CE,NEXT,0,60112,UX,1,112,UX,-1
CE,NEXT,0,60112,UY,1,112,UY,-1
CE,NEXT,0,60112,UZ,1,112,UZ,-1
CE,NEXT,0,60112,ROTX,1,112,ROTX,-1
CE,NEXT,0,60112,ROTZ,1,112,ROTZ,-1

CE,NEXT,0,60118,UX,1,118,UX,-1
CE,NEXT,0,60118,UY,1,118,UY,-1
CE,NEXT,0,60118,UZ,1,118,UZ,-1
CE,NEXT,0,60118,ROTX,1,118,ROTX,-1
CE,NEXT,0,60118,ROTZ,1,118,ROTZ,-1

CE,NEXT,0,61112,UX,1,1112,UX,-1
CE,NEXT,0,61112,UY,1,1112,UY,-1
CE,NEXT,0,61112,UZ,1,1112,UZ,-1
CE,NEXT,0,61112,ROTX,1,1112,ROTX,-1
CE,NEXT,0,61112,ROTZ,1,1112,ROTZ,-1

CE,NEXT,0,61118,UX,1,1118,UX,-1
CE,NEXT,0,61118,UY,1,1118,UY,-1
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CE,NEXT,0,61118,UZ,1,1118,UZ,-1
CE,NEXT,0,61118,ROTX,1,1118,ROTX,-1
CE,NEXT,0,61118,ROTZ,1,1118,ROTZ,-1

CE,NEXT,0,62112,UX,1,2112,UX,-1
CE,NEXT,0,62112,UY,1,2112,UY,-1
CE,NEXT,0,62112,UZ,1,2112,UZ,-1
CE,NEXT,0,62112,ROTX,1,2112,ROTX,-1
CE,NEXT,0,62112,ROTZ,1,2112,ROTZ,-1

CE,NEXT,0,62118,UX,1,2118,UX,-1
CE,NEXT,0,62118,UY,1,2118,UY,-1
CE,NEXT,0,62118,UZ,1,2118,UZ,-1
CE,NEXT,0,62118,ROTX,1,2118,ROTX,-1
CE,NEXT,0,62118,ROTZ,1,2118,ROTZ,-1

CE,NEXT,0,63112,UX,1,3112,UX,-1
CE,NEXT,0,63112,UY,1,3112,UY,-1
CE,NEXT,0,63112,UZ,1,3112,UZ,-1
CE,NEXT,0,63112,ROTX,1,3112,ROTX,-1
CE,NEXT,0,63112,ROTZ,1,3112,ROTZ,-1

CE,NEXT,0,63118,UX,1,3118,UX,-1
CE,NEXT,0,63118,UY,1,3118,UY,-1
CE,NEXT,0,63118,UZ,1,3118,UZ,-1
CE,NEXT,0,63118,ROTX,1,3118,ROTX,-1
CE,NEXT,0,63118,ROTZ,1,3118,ROTZ,-1

CE,NEXT,0,64118,UX,1,4118,UX,-1
CE,NEXT,0,64118,UY,1,4118,UY,-1
CE,NEXT,0,64118,UZ,1,4118,UZ,-1
CE,NEXT,0,64118,ROTX,1,4118,ROTX,-1
CE,NEXT,0,64118,ROTZ,1,4118,ROTZ,-1

CE,NEXT,0,65118,UX,1,5118,UX,-1
CE,NEXT,0,65118,UY,1,5118,UY,-1
CE,NEXT,0,65118,UZ,1,5118,UZ,-1
CE,NEXT,0,65118,ROTX,1,5118,ROTX,-1
CE,NEXT,0,65118,ROTZ,1,5118,ROTZ,-1

CE,NEXT,0,67118,UX,1,7118,UX,-1
CE,NEXT,0,67118,UY,1,7118,UY,-1
CE,NEXT,0,67118,UZ,1,7118,UZ,-1
CE,NEXT,0,67118,ROTX,1,7118,ROTX,-1
CE,NEXT,0,67118,ROTZ,1,7118,ROTZ,-1

CE,NEXT,0,68118,UX,1,8118,UX,-1
CE,NEXT,0,68118,UY,1,8118,UY,-1
CE,NEXT,0,68118,UZ,1,8118,UZ,-1
CE,NEXT,0,68118,ROTX,1,8118,ROTX,-1
CE,NEXT,0,68118,ROTZ,1,8118,ROTZ,-1

!,ELEMENT,TYPE,,,,7,,

CE,NEXT,0,90002,UX,1,2,UX,-1
CE,NEXT,0,90002,UY,1,2,UY,-1
CE,NEXT,0,90002,UZ,1,2,UZ,-1
CE,NEXT,0,90002,ROTZ,1,2,ROTZ,-1

CE,NEXT,0,60033,UX,1,33,UX,-1
CE,NEXT,0,60033,UY,1,33,UY,-1
CE,NEXT,0,60033,UZ,1,33,UZ,-1
CE,NEXT,0,60033,ROTZ,1,33,ROTZ,-1

CE,NEXT,0,70008,UX,1,8,UX,-1
CE,NEXT,0,70008,UY,1,8,UY,-1
CE,NEXT,0,70008,UZ,1,8,UZ,-1
CE,NEXT,0,70008,ROTZ,1,8,ROTZ,-1

CE,NEXT,0,70031,UX,1,31,UX,-1
CE,NEXT,0,70031,UY,1,31,UY,-1
CE,NEXT,0,70031,UZ,1,31,UZ,-1

CE,NEXT,0,70033,UX,1,33,UX,-1
CE,NEXT,0,70033,UY,1,33,UY,-1
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CE,NEXT,0,70033,UZ,1,33,UZ,-1

CE,NEXT,0,60145,UX,1,145,UX,-1
CE,NEXT,0,60145,UY,1,145,UY,-1
CE,NEXT,0,60145,UZ,1,145,UZ,-1
CE,NEXT,0,60145,ROTY,1,145,ROTY,-1

CE,NEXT,0,60132,UX,1,132,UX,-1
CE,NEXT,0,60132,UY,1,132,UY,-1
CE,NEXT,0,60132,UZ,1,132,UZ,-1
CE,NEXT,0,60132,ROTZ,1,132,ROTZ,-1

CE,NEXT,0,60141,UX,1,141,UX,-1
CE,NEXT,0,60141,UY,1,141,UY,-1
CE,NEXT,0,60141,UZ,1,141,UZ,-1
CE,NEXT,0,60141,ROTZ,1,141,ROTZ,-1

CE,NEXT,0,61113,UX,1,1113,UX,-1
CE,NEXT,0,61113,UY,1,1113,UY,-1
CE,NEXT,0,61113,UZ,1,1113,UZ,-1
CE,NEXT,0,61113,ROTX,1,1113,ROTX,-1

CE,NEXT,0,61145,UX,1,1145,UX,-1
CE,NEXT,0,61145,UY,1,1145,UY,-1
CE,NEXT,0,61145,UZ,1,1145,UZ,-1
CE,NEXT,0,61145,ROTY,1,1145,ROTY,-1

CE,NEXT,0,62145,UX,1,2145,UX,-1
CE,NEXT,0,62145,UY,1,2145,UY,-1
CE,NEXT,0,62145,UZ,1,2145,UZ,-1
CE,NEXT,0,62145,ROTY,1,2145,ROTY,-1

CE,NEXT,0,63121,UX,1,3121,UX,-1
CE,NEXT,0,63121,UY,1,3121,UY,-1
CE,NEXT,0,63121,UZ,1,3121,UZ,-1
CE,NEXT,0,63121,ROTY,1,3121,ROTY,-1

CE,NEXT,0,63145,UX,1,3145,UX,-1
CE,NEXT,0,63145,UY,1,3145,UY,-1
CE,NEXT,0,63145,UZ,1,3145,UZ,-1
CE,NEXT,0,63145,ROTY,1,3145,ROTY,-1

CE,NEXT,0,63164,UX,1,3164,UX,-1
CE,NEXT,0,63164,UY,1,3164,UY,-1
CE,NEXT,0,63164,UZ,1,3164,UZ,-1
CE,NEXT,0,63164,ROTZ,1,3164,ROTZ,-1

CE,NEXT,0,65102,UX,1,5102,UX,-1
CE,NEXT,0,65102,UY,1,5102,UY,-1
CE,NEXT,0,65102,UZ,1,5102,UZ,-1
CE,NEXT,0,65102,ROTZ,1,5102,ROTZ,-1

CE,NEXT,0,66107,UX,1,6107,UX,-1
CE,NEXT,0,66107,UY,1,6107,UY,-1
CE,NEXT,0,66107,UZ,1,6107,UZ,-1
CE,NEXT,0,66107,ROTZ,1,6107,ROTZ,-1

CE,NEXT,0,70102,UX,1,102,UX,-1
CE,NEXT,0,70102,UY,1,102,UY,-1
CE,NEXT,0,70102,UZ,1,102,UZ,-1
CE,NEXT,0,70102,ROTX,1,102,ROTX,-1

CE,NEXT,0,70112,UX,1,112,UX,-1
CE,NEXT,0,70112,UY,1,112,UY,-1
CE,NEXT,0,70112,UZ,1,112,UZ,-1
CE,NEXT,0,70112,ROTX,1,112,ROTX,-1

CE,NEXT,0,63143,UX,1,3143,UX,-1
CE,NEXT,0,63143,UY,1,3143,UY,-1
CE,NEXT,0,63143,UZ,1,3143,UZ,-1
CE,NEXT,0,63143,ROTX,1,3143,ROTX,-1

CE,NEXT,0,64102,UX,1,4102,UX,-1
CE,NEXT,0,64102,UY,1,4102,UY,-1
CE,NEXT,0,64102,UZ,1,4102,UZ,-1
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CE,NEXT,0,64102,ROTX,1,4102,ROTX,-1

CE,NEXT,0,64112,UX,1,4112,UX,-1
CE,NEXT,0,64112,UY,1,4112,UY,-1
CE,NEXT,0,64112,UZ,1,4112,UZ,-1
CE,NEXT,0,64112,ROTX,1,4112,ROTX,-1

CE,NEXT,0,65122,UX,1,5122,UX,-1
CE,NEXT,0,65122,UY,1,5122,UY,-1
CE,NEXT,0,65122,UZ,1,5122,UZ,-1
CE,NEXT,0,65122,ROTX,1,5122,ROTX,-1

CE,NEXT,0,65113,UX,1,5113,UX,-1
CE,NEXT,0,65113,UY,1,5113,UY,-1
CE,NEXT,0,65113,UZ,1,5113,UZ,-1
CE,NEXT,0,65113,ROTX,1,5113,ROTX,-1

CE,NEXT,0,83102,UX,1,3102,UX,-1
CE,NEXT,0,83102,UY,1,3102,UY,-1
CE,NEXT,0,83102,UZ,1,3102,UZ,-1
CE,NEXT,0,83102,ROTX,1,3102,ROTX,-1

CE,NEXT,0,63148,UX,1,3148,UX,-1
CE,NEXT,0,63148,UY,1,3148,UY,-1
CE,NEXT,0,63148,UZ,1,3148,UZ,-1
CE,NEXT,0,63148,ROTX,1,3148,ROTX,-1

CE,NEXT,0,68152,UX,1,8152,UX,-1
CE,NEXT,0,68152,UY,1,8152,UY,-1
CE,NEXT,0,68152,UZ,1,8152,UZ,-1
CE,NEXT,0,68152,ROTY,1,8152,ROTY,-1

CE,NEXT,0,63116,UX,1,3116,UX,-1
CE,NEXT,0,63116,UY,1,3116,UY,-1
CE,NEXT,0,63116,UZ,1,3116,UZ,-1
CE,NEXT,0,63116,ROTX,1,3116,ROTX,-1

CE,NEXT,0,77118,UX,1,7118,UX,-1
CE,NEXT,0,77118,UY,1,7118,UY,-1
CE,NEXT,0,77118,UZ,1,7118,UZ,-1
CE,NEXT,0,77118,ROTX,1,7118,ROTX,-1

CE,NEXT,0,70107,UX,1,107,UX,-1
CE,NEXT,0,70107,UY,1,107,UY,-1
CE,NEXT,0,70107,UZ,1,107,UZ,-1
CE,NEXT,0,70107,ROTX,1,107,ROTX,-1

CE,NEXT,0,70118,UX,1,118,UX,-1
CE,NEXT,0,70118,UY,1,118,UY,-1
CE,NEXT,0,70118,UZ,1,118,UZ,-1
CE,NEXT,0,70118,ROTX,1,118,ROTX,-1

CE,NEXT,0,60182,UX,1,182,UX,-1
CE,NEXT,0,60182,UY,1,182,UY,-1
CE,NEXT,0,60182,UZ,1,182,UZ,-1
CE,NEXT,0,60182,ROTZ,1,182,ROTZ,-1

CE,NEXT,0,76109,UX,1,6109,UX,-1
CE,NEXT,0,76109,UY,1,6109,UY,-1
CE,NEXT,0,76109,UZ,1,6109,UZ,-1
CE,NEXT,0,76109,ROTX,1,6109,ROTX,-1

CE,NEXT,0,75109,UX,1,5109,UX,-1
CE,NEXT,0,75109,UY,1,5109,UY,-1
CE,NEXT,0,75109,UZ,1,5109,UZ,-1
CE,NEXT,0,75109,ROTX,1,5109,ROTX,-1

CE,NEXT,0,64109,UX,1,4109,UX,-1
CE,NEXT,0,64109,UY,1,4109,UY,-1
CE,NEXT,0,64109,UZ,1,4109,UZ,-1
CE,NEXT,0,64109,ROTX,1,4109,ROTX,-1

CE,NEXT,0,72109,UX,1,2109,UX,-1
CE,NEXT,0,72109,UY,1,2109,UY,-1
CE,NEXT,0,72109,UZ,1,2109,UZ,-1
```

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CE,NEXT,0,72109,ROTX,1,2109,ROTX,-1

CE,NEXT,0,71109,UX,1,1109,UX,-1
CE,NEXT,0,71109,UY,1,1109,UY,-1
CE,NEXT,0,71109,UZ,1,1109,UZ,-1
CE,NEXT,0,71109,ROTX,1,1109,ROTX,-1

CE,NEXT,0,60010,UX,1,10,UX,-1
CE,NEXT,0,60010,UY,1,10,UY,-1
CE,NEXT,0,60010,UZ,1,10,UZ,-1
CE,NEXT,0,60010,ROTX,1,10,ROTX,-1

CE,NEXT,0,75120,UX,1,5120,UX,-1
CE,NEXT,0,75120,UY,1,5120,UY,-1
CE,NEXT,0,75120,UZ,1,5120,UZ,-1
CE,NEXT,0,75120,ROTX,1,5120,ROTX,-1

CE,NEXT,0,64120,UX,1,4120,UX,-1
CE,NEXT,0,64120,UY,1,4120,UY,-1
CE,NEXT,0,64120,UZ,1,4120,UZ,-1
CE,NEXT,0,64120,ROTX,1,4120,ROTX,-1

CE,NEXT,0,72120,UX,1,2120,UX,-1
CE,NEXT,0,72120,UY,1,2120,UY,-1
CE,NEXT,0,72120,UZ,1,2120,UZ,-1
CE,NEXT,0,72120,ROTX,1,2120,ROTX,-1

CE,NEXT,0,71120,UX,1,1120,UX,-1
CE,NEXT,0,71120,UY,1,1120,UY,-1
CE,NEXT,0,71120,UZ,1,1120,UZ,-1
CE,NEXT,0,71120,ROTX,1,1120,ROTX,-1

CE,NEXT,0,60021,UX,1,21,UX,-1
CE,NEXT,0,60021,UY,1,21,UY,-1
CE,NEXT,0,60021,UZ,1,21,UZ,-1
CE,NEXT,0,60021,ROTX,1,21,ROTX,-1

!,ELEMENT,TYPE,,,,8,,

CE,NEXT,0,60102,UX,1,102,UX,-1
CE,NEXT,0,60102,UY,1,102,UY,-1
CE,NEXT,0,60102,UZ,1,102,UZ,-1
CE,NEXT,0,60102,ROTX,1,102,ROTX,-1
CE,NEXT,0,60102,ROTZ,1,102,ROTZ,-1

CE,NEXT,0,60107,UX,1,107,UX,-1
CE,NEXT,0,60107,UY,1,107,UY,-1
CE,NEXT,0,60107,UZ,1,107,UZ,-1
CE,NEXT,0,60107,ROTX,1,107,ROTX,-1
CE,NEXT,0,60107,ROTZ,1,107,ROTZ,-1

CE,NEXT,0,61102,UX,1,1102,UX,-1
CE,NEXT,0,61102,UY,1,1102,UY,-1
CE,NEXT,0,61102,UZ,1,1102,UZ,-1
CE,NEXT,0,61102,ROTX,1,1102,ROTX,-1
CE,NEXT,0,61102,ROTZ,1,1102,ROTZ,-1

CE,NEXT,0,61107,UX,1,1107,UX,-1
CE,NEXT,0,61107,UY,1,1107,UY,-1
CE,NEXT,0,61107,UZ,1,1107,UZ,-1
CE,NEXT,0,61107,ROTX,1,1107,ROTX,-1
CE,NEXT,0,61107,ROTZ,1,1107,ROTZ,-1

CE,NEXT,0,62102,UX,1,2102,UX,-1
CE,NEXT,0,62102,UY,1,2102,UY,-1
CE,NEXT,0,62102,UZ,1,2102,UZ,-1
CE,NEXT,0,62102,ROTX,1,2102,ROTX,-1
CE,NEXT,0,62102,ROTZ,1,2102,ROTZ,-1

CE,NEXT,0,62107,UX,1,2107,UX,-1
CE,NEXT,0,62107,UY,1,2107,UY,-1
CE,NEXT,0,62107,UZ,1,2107,UZ,-1
CE,NEXT,0,62107,ROTX,1,2107,ROTX,-1
CE,NEXT,0,62107,ROTZ,1,2107,ROTZ,-1
```

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CE,NEXT,0,63102,UX,1,3102,UX,-1
CE,NEXT,0,63102,UY,1,3102,UY,-1
CE,NEXT,0,63102,UZ,1,3102,UZ,-1
CE,NEXT,0,63102,ROTX,1,3102,ROTX,-1
CE,NEXT,0,63102,ROTZ,1,3102,ROTZ,-1

CE,NEXT,0,63107,UX,1,3107,UX,-1
CE,NEXT,0,63107,UY,1,3107,UY,-1
CE,NEXT,0,63107,UZ,1,3107,UZ,-1
CE,NEXT,0,63107,ROTX,1,3107,ROTX,-1
CE,NEXT,0,63107,ROTZ,1,3107,ROTZ,-1

CE,NEXT,0,64107,UX,1,4107,UX,-1
CE,NEXT,0,64107,UY,1,4107,UY,-1
CE,NEXT,0,64107,UZ,1,4107,UZ,-1
CE,NEXT,0,64107,ROTX,1,4107,ROTX,-1
CE,NEXT,0,64107,ROTZ,1,4107,ROTZ,-1

CE,NEXT,0,65107,UX,1,5107,UX,-1
CE,NEXT,0,65107,UY,1,5107,UY,-1
CE,NEXT,0,65107,UZ,1,5107,UZ,-1
CE,NEXT,0,65107,ROTX,1,5107,ROTX,-1
CE,NEXT,0,65107,ROTZ,1,5107,ROTZ,-1

CE,NEXT,0,64100,UX,1,4100,UX,-1
CE,NEXT,0,64100,UY,1,4100,UY,-1
CE,NEXT,0,64100,UZ,1,4100,UZ,-1
CE,NEXT,0,64100,ROTX,1,4100,ROTX,-1
CE,NEXT,0,64100,ROTY,1,4100,ROTY,-1

CE,NEXT,0,67107,UX,1,7107,UX,-1
CE,NEXT,0,67107,UY,1,7107,UY,-1
CE,NEXT,0,67107,UZ,1,7107,UZ,-1
CE,NEXT,0,67107,ROTX,1,7107,ROTX,-1
CE,NEXT,0,67107,ROTZ,1,7107,ROTZ,-1

CE,NEXT,0,68107,UX,1,8107,UX,-1
CE,NEXT,0,68107,UY,1,8107,UY,-1
CE,NEXT,0,68107,UZ,1,8107,UZ,-1
CE,NEXT,0,68107,ROTX,1,8107,ROTX,-1
CE,NEXT,0,68107,ROTZ,1,8107,ROTZ,-1

!,ELEMENT,TYPE,,,,16,,

CE,NEXT,0,74100,UX,1,4100,UX,-1
CE,NEXT,0,74100,UY,1,4100,UY,-1
CE,NEXT,0,74100,UZ,1,4100,UZ,-1
CE,NEXT,0,74100,ROTX,1,4100,ROTX,-1
CE,NEXT,0,74100,ROTY,1,4100,ROTY,-1

CE,NEXT,0,75100,UX,1,5100,UX,-1
CE,NEXT,0,75100,UY,1,5100,UY,-1
CE,NEXT,0,75100,UZ,1,5100,UZ,-1
CE,NEXT,0,75100,ROTX,1,5100,ROTX,-1

!,ELEMENT,TYPE,,,,9,,


CE,NEXT,0,60014,UX,1,14,UX,-1
CE,NEXT,0,60014,UY,1,14,UY,-1
CE,NEXT,0,60014,UZ,1,14,UZ,-1
CE,NEXT,0,60014,ROTZ,1,14,ROTZ,-1

CE,NEXT,0,80034,UX,1,34,UX,-1
CE,NEXT,0,80034,UY,1,34,UY,-1
CE,NEXT,0,80034,UZ,1,34,UZ,-1
CE,NEXT,0,80034,ROTZ,1,34,ROTZ,-1

CE,NEXT,0,90034,UX,1,34,UX,-1
CE,NEXT,0,90034,UY,1,34,UY,-1
CE,NEXT,0,90034,UZ,1,34,UZ,-1
CE,NEXT,0,90034,ROTZ,1,34,ROTZ,-1

CE,NEXT,0,60003,UX,1,3,UX,-1
CE,NEXT,0,60003,UY,1,3,UY,-1
```

```
CE,NEXT,0,60003,UZ,1,3,UZ,-1
CE,NEXT,0,60003,ROTZ,1,3,ROTZ,-1

CE,NEXT,0,80019,UX,1,19,UX,-1
CE,NEXT,0,80019,UY,1,19,UY,-1
CE,NEXT,0,80019,UZ,1,19,UZ,-1

CE,NEXT,0,100034,UX,1,34,UX,-1
CE,NEXT,0,100034,UY,1,34,UY,-1
CE,NEXT,0,100034,UZ,1,34,UZ,-1

CE,NEXT,0,80008,UX,1,8,UX,-1
CE,NEXT,0,80008,UY,1,8,UY,-1
CE,NEXT,0,80008,UZ,1,8,UZ,-1

CE,NEXT,0,110034,UX,1,34,UX,-1
CE,NEXT,0,110034,UY,1,34,UY,-1
CE,NEXT,0,110034,UZ,1,34,UZ,-1

CE,NEXT,0,91107,UX,1,1107,UX,-1
CE,NEXT,0,91107,UY,1,1107,UY,-1
CE,NEXT,0,91107,UZ,1,1107,UZ,-1

CE,NEXT,0,80105,UX,1,105,UX,-1
CE,NEXT,0,80105,UY,1,105,UY,-1
CE,NEXT,0,80105,UZ,1,105,UZ,-1

CE,NEXT,0,61103,UX,1,1103,UX,-1
CE,NEXT,0,61103,UY,1,1103,UY,-1
CE,NEXT,0,61103,UZ,1,1103,UZ,-1

CE,NEXT,0,90102,UX,1,102,UX,-1
CE,NEXT,0,90102,UY,1,102,UY,-1
CE,NEXT,0,90102,UZ,1,102,UZ,-1

CE,NEXT,0,91102,UX,1,1102,UX,-1
CE,NEXT,0,91102,UY,1,1102,UY,-1
CE,NEXT,0,91102,UZ,1,1102,UZ,-1

CE,NEXT,0,60101,UX,1,101,UX,-1
CE,NEXT,0,60101,UY,1,101,UY,-1
CE,NEXT,0,60101,UZ,1,101,UZ,-1

CE,NEXT,0,91118,UX,1,1118,UX,-1
CE,NEXT,0,91118,UY,1,1118,UY,-1
CE,NEXT,0,91118,UZ,1,1118,UZ,-1

CE,NEXT,0,80116,UX,1,116,UX,-1
CE,NEXT,0,80116,UY,1,116,UY,-1
CE,NEXT,0,80116,UZ,1,116,UZ,-1

CE,NEXT,0,61114,UX,1,1114,UX,-1
CE,NEXT,0,61114,UY,1,1114,UY,-1
CE,NEXT,0,61114,UZ,1,1114,UZ,-1

CE,NEXT,0,70113,UX,1,113,UX,-1
CE,NEXT,0,70113,UY,1,113,UY,-1
CE,NEXT,0,70113,UZ,1,113,UZ,-1

CE,NEXT,0,90112,UX,1,112,UX,-1
CE,NEXT,0,90112,UY,1,112,UY,-1
CE,NEXT,0,90112,UZ,1,112,UZ,-1

CE,NEXT,0,60183,UX,1,183,UX,-1
CE,NEXT,0,60183,UY,1,183,UY,-1
CE,NEXT,0,60183,UZ,1,183,UZ,-1

CE,NEXT,0,91112,UX,1,1112,UX,-1
CE,NEXT,0,91112,UY,1,1112,UY,-1
CE,NEXT,0,91112,UZ,1,1112,UZ,-1

CE,NEXT,0,70183,UX,1,183,UX,-1
CE,NEXT,0,70183,UY,1,183,UY,-1
CE,NEXT,0,70183,UZ,1,183,UZ,-1
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CE,NEXT,0,95107,UX,1,5107,UX,-1
CE,NEXT,0,95107,UY,1,5107,UY,-1
CE,NEXT,0,95107,UZ,1,5107,UZ,-1

CE,NEXT,0,84105,UX,1,4105,UX,-1
CE,NEXT,0,84105,UY,1,4105,UY,-1
CE,NEXT,0,84105,UZ,1,4105,UZ,-1

CE,NEXT,0,65103,UX,1,5103,UX,-1
CE,NEXT,0,65103,UY,1,5103,UY,-1
CE,NEXT,0,65103,UZ,1,5103,UZ,-1

CE,NEXT,0,84102,UX,1,4102,UX,-1
CE,NEXT,0,84102,UY,1,4102,UY,-1
CE,NEXT,0,84102,UZ,1,4102,UZ,-1

CE,NEXT,0,65100,UX,1,5100,UX,-1
CE,NEXT,0,65100,UY,1,5100,UY,-1
CE,NEXT,0,65100,UZ,1,5100,UZ,-1

CE,NEXT,0,64101,UX,1,4101,UX,-1
CE,NEXT,0,64101,UY,1,4101,UY,-1
CE,NEXT,0,64101,UZ,1,4101,UZ,-1

CE,NEXT,0,94118,UX,1,4118,UX,-1
CE,NEXT,0,94118,UY,1,4118,UY,-1
CE,NEXT,0,94118,UZ,1,4118,UZ,-1

CE,NEXT,0,84156,UX,1,4156,UX,-1
CE,NEXT,0,84156,UY,1,4156,UY,-1
CE,NEXT,0,84156,UZ,1,4156,UZ,-1

CE,NEXT,0,64156,UX,1,4156,UX,-1
CE,NEXT,0,64156,UY,1,4156,UY,-1
CE,NEXT,0,64156,UZ,1,4156,UZ,-1

CE,NEXT,0,75116,UX,1,5116,UX,-1
CE,NEXT,0,75116,UY,1,5116,UY,-1
CE,NEXT,0,75116,UZ,1,5116,UZ,-1

CE,NEXT,0,84116,UX,1,4116,UX,-1
CE,NEXT,0,84116,UY,1,4116,UY,-1
CE,NEXT,0,84116,UZ,1,4116,UZ,-1

CE,NEXT,0,94156,UX,1,4156,UX,-1
CE,NEXT,0,94156,UY,1,4156,UY,-1
CE,NEXT,0,94156,UZ,1,4156,UZ,-1

CE,NEXT,0,74156,UX,1,4156,UX,-1
CE,NEXT,0,74156,UY,1,4156,UY,-1
CE,NEXT,0,74156,UZ,1,4156,UZ,-1

CE,NEXT,0,95118,UX,1,5118,UX,-1
CE,NEXT,0,95118,UY,1,5118,UY,-1
CE,NEXT,0,95118,UZ,1,5118,UZ,-1

CE,NEXT,0,65114,UX,1,5114,UX,-1
CE,NEXT,0,65114,UY,1,5114,UY,-1
CE,NEXT,0,65114,UZ,1,5114,UZ,-1

CE,NEXT,0,84113,UX,1,4113,UX,-1
CE,NEXT,0,84113,UY,1,4113,UY,-1
CE,NEXT,0,84113,UZ,1,4113,UZ,-1

CE,NEXT,0,84112,UX,1,4112,UX,-1
CE,NEXT,0,84112,UY,1,4112,UY,-1
CE,NEXT,0,84112,UZ,1,4112,UZ,-1

CE,NEXT,0,65123,UX,1,5123,UX,-1
CE,NEXT,0,65123,UY,1,5123,UY,-1
CE,NEXT,0,65123,UZ,1,5123,UZ,-1

CE,NEXT,0,75123,UX,1,5123,UX,-1
CE,NEXT,0,75123,UY,1,5123,UY,-1
CE,NEXT,0,75123,UZ,1,5123,UZ,-1
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CE,NEXT,0,95112,UX,1,5112,UX,-1
CE,NEXT,0,95112,UY,1,5112,UY,-1
CE,NEXT,0,95112,UZ,1,5112,UZ,-1

CE,NEXT,0,85112,UX,1,5112,UX,-1
CE,NEXT,0,85112,UY,1,5112,UY,-1
CE,NEXT,0,85112,UZ,1,5112,UZ,-1

CE,NEXT,0,64111,UX,1,4111,UX,-1
CE,NEXT,0,64111,UY,1,4111,UY,-1
CE,NEXT,0,64111,UZ,1,4111,UZ,-1

CE,NEXT,0,88118,UX,1,8118,UX,-1
CE,NEXT,0,88118,UY,1,8118,UY,-1
CE,NEXT,0,88118,UZ,1,8118,UZ,-1

CE,NEXT,0,87122,UX,1,7122,UX,-1
CE,NEXT,0,87122,UY,1,7122,UY,-1
CE,NEXT,0,87122,UZ,1,7122,UZ,-1

CE,NEXT,0,281660,UX,1,81660,UX,-1
CE,NEXT,0,281660,UY,1,81660,UY,-1
CE,NEXT,0,281660,UZ,1,81660,UZ,-1

CE,NEXT,0,77116,UX,1,7116,UX,-1
CE,NEXT,0,77116,UY,1,7116,UY,-1
CE,NEXT,0,77116,UZ,1,7116,UZ,-1

CE,NEXT,0,150037,UX,1,50037,UX,-1
CE,NEXT,0,150037,UY,1,50037,UY,-1
CE,NEXT,0,150037,UZ,1,50037,UZ,-1

CE,NEXT,0,150174,UX,1,50174,UX,-1
CE,NEXT,0,150174,UY,1,50174,UY,-1
CE,NEXT,0,150174,UZ,1,50174,UZ,-1

CE,NEXT,0,250037,UX,1,50037,UX,-1
CE,NEXT,0,250037,UY,1,50037,UY,-1
CE,NEXT,0,250037,UZ,1,50037,UZ,-1

CE,NEXT,0,150179,UX,1,50179,UX,-1
CE,NEXT,0,150179,UY,1,50179,UY,-1
CE,NEXT,0,150179,UZ,1,50179,UZ,-1

CE,NEXT,0,150039,UX,1,50039,UX,-1
CE,NEXT,0,150039,UY,1,50039,UY,-1
CE,NEXT,0,150039,UZ,1,50039,UZ,-1

CE,NEXT,0,150177,UX,1,50177,UX,-1
CE,NEXT,0,150177,UY,1,50177,UY,-1
CE,NEXT,0,150177,UZ,1,50177,UZ,-1

CE,NEXT,0,250039,UX,1,50039,UX,-1
CE,NEXT,0,250039,UY,1,50039,UY,-1
CE,NEXT,0,250039,UZ,1,50039,UZ,-1

CE,NEXT,0,250182,UX,1,50182,UX,-1
CE,NEXT,0,250182,UY,1,50182,UY,-1
CE,NEXT,0,250182,UZ,1,50182,UZ,-1

CE,NEXT,0,150182,UX,1,50182,UX,-1
CE,NEXT,0,150182,UY,1,50182,UY,-1
CE,NEXT,0,150182,UZ,1,50182,UZ,-1

CE,NEXT,0,250153,UX,1,50153,UX,-1
CE,NEXT,0,250153,UY,1,50153,UY,-1
CE,NEXT,0,250153,UZ,1,50153,UZ,-1

CE,NEXT,0,150153,UX,1,50153,UX,-1
CE,NEXT,0,150153,UY,1,50153,UY,-1
CE,NEXT,0,150153,UZ,1,50153,UZ,-1

CE,NEXT,0,251107,UX,1,51107,UX,-1
CE,NEXT,0,251107,UY,1,51107,UY,-1
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CE,NEXT,0,251107,UZ,1,51107,UZ,-1

CE,NEXT,0,151107,UX,1,51107,UX,-1
CE,NEXT,0,151107,UY,1,51107,UY,-1
CE,NEXT,0,151107,UZ,1,51107,UZ,-1

CE,NEXT,0,252153,UX,1,52153,UX,-1
CE,NEXT,0,252153,UY,1,52153,UY,-1
CE,NEXT,0,252153,UZ,1,52153,UZ,-1

CE,NEXT,0,152153,UX,1,52153,UX,-1
CE,NEXT,0,152153,UY,1,52153,UY,-1
CE,NEXT,0,152153,UZ,1,52153,UZ,-1

CE,NEXT,0,253107,UX,1,53107,UX,-1
CE,NEXT,0,253107,UY,1,53107,UY,-1
CE,NEXT,0,253107,UZ,1,53107,UZ,-1

CE,NEXT,0,153107,UX,1,53107,UX,-1
CE,NEXT,0,153107,UY,1,53107,UY,-1
CE,NEXT,0,153107,UZ,1,53107,UZ,-1

CE,NEXT,0,254153,UX,1,54153,UX,-1
CE,NEXT,0,254153,UY,1,54153,UY,-1
CE,NEXT,0,254153,UZ,1,54153,UZ,-1

CE,NEXT,0,154153,UX,1,54153,UX,-1
CE,NEXT,0,154153,UY,1,54153,UY,-1
CE,NEXT,0,154153,UZ,1,54153,UZ,-1

CE,NEXT,0,255107,UX,1,55107,UX,-1
CE,NEXT,0,255107,UY,1,55107,UY,-1
CE,NEXT,0,255107,UZ,1,55107,UZ,-1

CE,NEXT,0,155107,UX,1,55107,UX,-1
CE,NEXT,0,155107,UY,1,55107,UY,-1
CE,NEXT,0,155107,UZ,1,55107,UZ,-1

CE,NEXT,0,256153,UX,1,56153,UX,-1
CE,NEXT,0,256153,UY,1,56153,UY,-1
CE,NEXT,0,256153,UZ,1,56153,UZ,-1

CE,NEXT,0,156153,UX,1,56153,UX,-1
CE,NEXT,0,156153,UY,1,56153,UY,-1
CE,NEXT,0,156153,UZ,1,56153,UZ,-1

CE,NEXT,0,257107,UX,1,57107,UX,-1
CE,NEXT,0,257107,UY,1,57107,UY,-1
CE,NEXT,0,257107,UZ,1,57107,UZ,-1

CE,NEXT,0,157107,UX,1,57107,UX,-1
CE,NEXT,0,157107,UY,1,57107,UY,-1
CE,NEXT,0,157107,UZ,1,57107,UZ,-1

CE,NEXT,0,158153,UX,1,58153,UX,-1
CE,NEXT,0,158153,UY,1,58153,UY,-1
CE,NEXT,0,158153,UZ,1,58153,UZ,-1

CE,NEXT,0,157151,UX,1,57151,UX,-1
CE,NEXT,0,157151,UY,1,57151,UY,-1
CE,NEXT,0,157151,UZ,1,57151,UZ,-1

CE,NEXT,0,258153,UX,1,58153,UX,-1
CE,NEXT,0,258153,UY,1,58153,UY,-1
CE,NEXT,0,258153,UZ,1,58153,UZ,-1

CE,NEXT,0,157153,UX,1,57153,UX,-1
CE,NEXT,0,157153,UY,1,57153,UY,-1
CE,NEXT,0,157153,UZ,1,57153,UZ,-1

CE,NEXT,0,158151,UX,1,58151,UX,-1
CE,NEXT,0,158151,UY,1,58151,UY,-1
CE,NEXT,0,158151,UZ,1,58151,UZ,-1

CE,NEXT,0,157118,UX,1,57118,UX,-1
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CE,NEXT,0,157118,UY,1,57118,UY,-1
CE,NEXT,0,157118,UZ,1,57118,UZ,-1

CE,NEXT,0,258151,UX,1,58151,UX,-1
CE,NEXT,0,258151,UY,1,58151,UY,-1
CE,NEXT,0,258151,UZ,1,58151,UZ,-1

CE,NEXT,0,100112,UX,1,112,UX,-1
CE,NEXT,0,100112,UY,1,112,UY,-1
CE,NEXT,0,100112,UZ,1,112,UZ,-1

CE,NEXT,0,94112,UX,1,4112,UX,-1
CE,NEXT,0,94112,UY,1,4112,UY,-1
CE,NEXT,0,94112,UZ,1,4112,UZ,-1

CE,NEXT,0,62124,UX,1,2124,UX,-1
CE,NEXT,0,62124,UY,1,2124,UY,-1
CE,NEXT,0,62124,UZ,1,2124,UZ,-1

CE,NEXT,0,62125,UX,1,2125,UX,-1
CE,NEXT,0,62125,UY,1,2125,UY,-1
CE,NEXT,0,62125,UZ,1,2125,UZ,-1

CE,NEXT,0,110112,UX,1,112,UX,-1
CE,NEXT,0,110112,UY,1,112,UY,-1
CE,NEXT,0,110112,UZ,1,112,UZ,-1

CE,NEXT,0,111145,UX,1,1145,UX,-1
CE,NEXT,0,111145,UY,1,1145,UY,-1
CE,NEXT,0,111145,UZ,1,1145,UZ,-1

CE,NEXT,0,91145,UX,1,1145,UX,-1
CE,NEXT,0,91145,UY,1,1145,UY,-1
CE,NEXT,0,91145,UZ,1,1145,UZ,-1

CE,NEXT,0,102102,UX,1,2102,UX,-1
CE,NEXT,0,102102,UY,1,2102,UY,-1
CE,NEXT,0,102102,UZ,1,2102,UZ,-1

CE,NEXT,0,100102,UX,1,102,UX,-1
CE,NEXT,0,100102,UY,1,102,UY,-1
CE,NEXT,0,100102,UZ,1,102,UZ,-1

CE,NEXT,0,121145,UX,1,1145,UX,-1
CE,NEXT,0,121145,UY,1,1145,UY,-1
CE,NEXT,0,121145,UZ,1,1145,UZ,-1

CE,NEXT,0,101145,UX,1,1145,UX,-1
CE,NEXT,0,101145,UY,1,1145,UY,-1
CE,NEXT,0,101145,UZ,1,1145,UZ,-1

CE,NEXT,0,102112,UX,1,2112,UX,-1
CE,NEXT,0,102112,UY,1,2112,UY,-1
CE,NEXT,0,102112,UZ,1,2112,UZ,-1

CE,NEXT,0,92112,UX,1,2112,UX,-1
CE,NEXT,0,92112,UY,1,2112,UY,-1
CE,NEXT,0,92112,UZ,1,2112,UZ,-1

CE,NEXT,0,103145,UX,1,3145,UX,-1
CE,NEXT,0,103145,UY,1,3145,UY,-1
CE,NEXT,0,103145,UZ,1,3145,UZ,-1

CE,NEXT,0,92145,UX,1,2145,UX,-1
CE,NEXT,0,92145,UY,1,2145,UY,-1
CE,NEXT,0,92145,UZ,1,2145,UZ,-1

CE,NEXT,0,62158,UX,1,2158,UX,-1
CE,NEXT,0,62158,UY,1,2158,UY,-1
CE,NEXT,0,62158,UZ,1,2158,UZ,-1

CE,NEXT,0,92102,UX,1,2102,UX,-1
CE,NEXT,0,92102,UY,1,2102,UY,-1
CE,NEXT,0,92102,UZ,1,2102,UZ,-1
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CE,NEXT,0,113145,UX,1,3145,UX,-1
CE,NEXT,0,113145,UY,1,3145,UY,-1
CE,NEXT,0,113145,UZ,1,3145,UZ,-1

CE,NEXT,0,93145,UX,1,3145,UX,-1
CE,NEXT,0,93145,UY,1,3145,UY,-1
CE,NEXT,0,93145,UZ,1,3145,UZ,-1

CE,NEXT,0,73164,UX,1,3164,UX,-1
CE,NEXT,0,73164,UY,1,3164,UY,-1
CE,NEXT,0,73164,UZ,1,3164,UZ,-1

CE,NEXT,0,71113,UX,1,1113,UX,-1
CE,NEXT,0,71113,UY,1,1113,UY,-1
CE,NEXT,0,71113,UZ,1,1113,UZ,-1
CE,NEXT,0,71113,ROTX,1,1113,ROTX,-1

CE,NEXT,0,62113,UX,1,2113,UX,-1
CE,NEXT,0,62113,UY,1,2113,UY,-1
CE,NEXT,0,62113,UZ,1,2113,UZ,-1
CE,NEXT,0,62113,ROTX,1,2113,ROTX,-1

CE,NEXT,0,72113,UX,1,2113,UX,-1
CE,NEXT,0,72113,UY,1,2113,UY,-1
CE,NEXT,0,72113,UZ,1,2113,UZ,-1
CE,NEXT,0,72113,ROTX,1,2113,ROTX,-1

CE,NEXT,0,152174,UX,1,52174,UX,-1
CE,NEXT,0,152174,UY,1,52174,UY,-1
CE,NEXT,0,152174,UZ,1,52174,UZ,-1
CE,NEXT,0,152174,ROTX,1,52174,ROTX,-1

CE,NEXT,0,63113,UX,1,3113,UX,-1
CE,NEXT,0,63113,UY,1,3113,UY,-1
CE,NEXT,0,63113,UZ,1,3113,UZ,-1
CE,NEXT,0,63113,ROTX,1,3113,ROTX,-1

CE,NEXT,0,74113,UX,1,4113,UX,-1
CE,NEXT,0,74113,UY,1,4113,UY,-1
CE,NEXT,0,74113,UZ,1,4113,UZ,-1
CE,NEXT,0,74113,ROTX,1,4113,ROTX,-1

CE,NEXT,0,60030,UX,1,30,UX,-1
CE,NEXT,0,60030,UY,1,30,UY,-1
CE,NEXT,0,60030,UZ,1,30,UZ,-1
CE,NEXT,0,60030,ROTX,1,30,ROTX,-1

CE,NEXT,0,60131,UX,1,131,UX,-1
CE,NEXT,0,60131,UY,1,131,UY,-1
CE,NEXT,0,60131,UZ,1,131,UZ,-1
CE,NEXT,0,60131,ROTX,1,131,ROTX,-1

CE,NEXT,0,60029,UX,1,29,UX,-1
CE,NEXT,0,60029,UY,1,29,UY,-1
CE,NEXT,0,60029,UZ,1,29,UZ,-1
CE,NEXT,0,60029,ROTX,1,29,ROTX,-1

CE,NEXT,0,60130,UX,1,130,UX,-1
CE,NEXT,0,60130,UY,1,130,UY,-1
CE,NEXT,0,60130,UZ,1,130,UZ,-1
CE,NEXT,0,60130,ROTX,1,130,ROTX,-1

CE,NEXT,0,60028,UX,1,28,UX,-1
CE,NEXT,0,60028,UY,1,28,UY,-1
CE,NEXT,0,60028,UZ,1,28,UZ,-1
CE,NEXT,0,60028,ROTX,1,28,ROTX,-1

CE,NEXT,0,60129,UX,1,129,UX,-1
CE,NEXT,0,60129,UY,1,129,UY,-1
CE,NEXT,0,60129,UZ,1,129,UZ,-1
CE,NEXT,0,60129,ROTX,1,129,ROTX,-1

CE,NEXT,0,60027,UX,1,27,UX,-1
CE,NEXT,0,60027,UY,1,27,UY,-1
CE,NEXT,0,60027,UZ,1,27,UZ,-1
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CE,NEXT,0,60027,ROTX,1,27,ROTX,-1

CE,NEXT,0,60128,UX,1,128,UX,-1
CE,NEXT,0,60128,UY,1,128,UY,-1
CE,NEXT,0,60128,UZ,1,128,UZ,-1
CE,NEXT,0,60128,ROTX,1,128,ROTX,-1

CE,NEXT,0,60026,UX,1,26,UX,-1
CE,NEXT,0,60026,UY,1,26,UY,-1
CE,NEXT,0,60026,UZ,1,26,UZ,-1
CE,NEXT,0,60026,ROTX,1,26,ROTX,-1

CE,NEXT,0,60127,UX,1,127,UX,-1
CE,NEXT,0,60127,UY,1,127,UY,-1
CE,NEXT,0,60127,UZ,1,127,UZ,-1
CE,NEXT,0,60127,ROTX,1,127,ROTX,-1

CE,NEXT,0,60025,UX,1,25,UX,-1
CE,NEXT,0,60025,UY,1,25,UY,-1
CE,NEXT,0,60025,UZ,1,25,UZ,-1
CE,NEXT,0,60025,ROTX,1,25,ROTX,-1

CE,NEXT,0,60126,UX,1,126,UX,-1
CE,NEXT,0,60126,UY,1,126,UY,-1
CE,NEXT,0,60126,UZ,1,126,UZ,-1
CE,NEXT,0,60126,ROTX,1,126,ROTX,-1

CE,NEXT,0,60024,UX,1,24,UX,-1
CE,NEXT,0,60024,UY,1,24,UY,-1
CE,NEXT,0,60024,UZ,1,24,UZ,-1
CE,NEXT,0,60024,ROTX,1,24,ROTX,-1

CE,NEXT,0,60125,UX,1,125,UX,-1
CE,NEXT,0,60125,UY,1,125,UY,-1
CE,NEXT,0,60125,UZ,1,125,UZ,-1
CE,NEXT,0,60125,ROTX,1,125,ROTX,-1

CE,NEXT,0,70131,UX,1,131,UX,-1
CE,NEXT,0,70131,UY,1,131,UY,-1
CE,NEXT,0,70131,UZ,1,131,UZ,-1
CE,NEXT,0,70131,ROTX,1,131,ROTX,-1

CE,NEXT,0,60140,UX,1,140,UX,-1
CE,NEXT,0,60140,UY,1,140,UY,-1
CE,NEXT,0,60140,UZ,1,140,UZ,-1
CE,NEXT,0,60140,ROTX,1,140,ROTX,-1

CE,NEXT,0,70125,UX,1,125,UX,-1
CE,NEXT,0,70125,UY,1,125,UY,-1
CE,NEXT,0,70125,UZ,1,125,UZ,-1
CE,NEXT,0,70125,ROTX,1,125,ROTX,-1

CE,NEXT,0,60134,UX,1,134,UX,-1
CE,NEXT,0,60134,UY,1,134,UY,-1
CE,NEXT,0,60134,UZ,1,134,UZ,-1
CE,NEXT,0,60134,ROTX,1,134,ROTX,-1

CE,NEXT,0,70140,UX,1,140,UX,-1
CE,NEXT,0,70140,UY,1,140,UY,-1
CE,NEXT,0,70140,UZ,1,140,UZ,-1
CE,NEXT,0,70140,ROTX,1,140,ROTX,-1

CE,NEXT,0,60148,UX,1,148,UX,-1
CE,NEXT,0,60148,UY,1,148,UY,-1
CE,NEXT,0,60148,UZ,1,148,UZ,-1
CE,NEXT,0,60148,ROTX,1,148,ROTX,-1

CE,NEXT,0,60139,UX,1,139,UX,-1
CE,NEXT,0,60139,UY,1,139,UY,-1
CE,NEXT,0,60139,UZ,1,139,UZ,-1
CE,NEXT,0,60139,ROTX,1,139,ROTX,-1

CE,NEXT,0,60147,UX,1,147,UX,-1
CE,NEXT,0,60147,UY,1,147,UY,-1
CE,NEXT,0,60147,UZ,1,147,UZ,-1
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CE,NEXT,0,60147,ROTX,1,147,ROTX,-1

CE,NEXT,0,60138,UX,1,138,UX,-1
CE,NEXT,0,60138,UY,1,138,UY,-1
CE,NEXT,0,60138,UZ,1,138,UZ,-1
CE,NEXT,0,60138,ROTX,1,138,ROTX,-1

CE,NEXT,0,60146,UX,1,146,UX,-1
CE,NEXT,0,60146,UY,1,146,UY,-1
CE,NEXT,0,60146,UZ,1,146,UZ,-1
CE,NEXT,0,60146,ROTX,1,146,ROTX,-1

CE,NEXT,0,60137,UX,1,137,UX,-1
CE,NEXT,0,60137,UY,1,137,UY,-1
CE,NEXT,0,60137,UZ,1,137,UZ,-1
CE,NEXT,0,60137,ROTX,1,137,ROTX,-1

CE,NEXT,0,70145,UX,1,145,UX,-1
CE,NEXT,0,70145,UY,1,145,UY,-1
CE,NEXT,0,70145,UZ,1,145,UZ,-1
CE,NEXT,0,70145,ROTX,1,145,ROTX,-1

CE,NEXT,0,60136,UX,1,136,UX,-1
CE,NEXT,0,60136,UY,1,136,UY,-1
CE,NEXT,0,60136,UZ,1,136,UZ,-1
CE,NEXT,0,60136,ROTX,1,136,ROTX,-1

CE,NEXT,0,70144,UX,1,144,UX,-1
CE,NEXT,0,70144,UY,1,144,UY,-1
CE,NEXT,0,70144,UZ,1,144,UZ,-1
CE,NEXT,0,70144,ROTX,1,144,ROTX,-1

CE,NEXT,0,60135,UX,1,135,UX,-1
CE,NEXT,0,60135,UY,1,135,UY,-1
CE,NEXT,0,60135,UZ,1,135,UZ,-1
CE,NEXT,0,60135,ROTX,1,135,ROTX,-1

CE,NEXT,0,70143,UX,1,143,UX,-1
CE,NEXT,0,70143,UY,1,143,UY,-1
CE,NEXT,0,70143,UZ,1,143,UZ,-1
CE,NEXT,0,70143,ROTX,1,143,ROTX,-1

CE,NEXT,0,70134,UX,1,134,UX,-1
CE,NEXT,0,70134,UY,1,134,UY,-1
CE,NEXT,0,70134,UZ,1,134,UZ,-1
CE,NEXT,0,70134,ROTX,1,134,ROTX,-1

CE,NEXT,0,70142,UX,1,142,UX,-1
CE,NEXT,0,70142,UY,1,142,UY,-1
CE,NEXT,0,70142,UZ,1,142,UZ,-1
CE,NEXT,0,70142,ROTX,1,142,ROTX,-1

CE,NEXT,0,80102,UX,1,102,UX,-1
CE,NEXT,0,80102,UY,1,102,UY,-1
CE,NEXT,0,80102,UZ,1,102,UZ,-1
CE,NEXT,0,80102,ROTX,1,102,ROTX,-1

CE,NEXT,0,81102,UX,1,1102,UX,-1
CE,NEXT,0,81102,UY,1,1102,UY,-1
CE,NEXT,0,81102,UZ,1,1102,UZ,-1
CE,NEXT,0,81102,ROTX,1,1102,ROTX,-1

CE,NEXT,0,70148,UX,1,148,UX,-1
CE,NEXT,0,70148,UY,1,148,UY,-1
CE,NEXT,0,70148,UZ,1,148,UZ,-1
CE,NEXT,0,70148,ROTX,1,148,ROTX,-1

CE,NEXT,0,71148,UX,1,1148,UX,-1
CE,NEXT,0,71148,UY,1,1148,UY,-1
CE,NEXT,0,71148,UZ,1,1148,UZ,-1
CE,NEXT,0,71148,ROTX,1,1148,ROTX,-1

CE,NEXT,0,70147,UX,1,147,UX,-1
CE,NEXT,0,70147,UY,1,147,UY,-1
CE,NEXT,0,70147,UZ,1,147,UZ,-1
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CE,NEXT,0,70147,ROTX,1,147,ROTX,-1

CE,NEXT,0,71147,UX,1,1147,UX,-1
CE,NEXT,0,71147,UY,1,1147,UY,-1
CE,NEXT,0,71147,UZ,1,1147,UZ,-1
CE,NEXT,0,71147,ROTX,1,1147,ROTX,-1

CE,NEXT,0,70146,UX,1,146,UX,-1
CE,NEXT,0,70146,UY,1,146,UY,-1
CE,NEXT,0,70146,UZ,1,146,UZ,-1
CE,NEXT,0,70146,ROTX,1,146,ROTX,-1

CE,NEXT,0,71146,UX,1,1146,UX,-1
CE,NEXT,0,71146,UY,1,1146,UY,-1
CE,NEXT,0,71146,UZ,1,1146,UZ,-1
CE,NEXT,0,71146,ROTX,1,1146,ROTX,-1

CE,NEXT,0,80145,UX,1,145,UX,-1
CE,NEXT,0,80145,UY,1,145,UY,-1
CE,NEXT,0,80145,UZ,1,145,UZ,-1
CE,NEXT,0,80145,ROTX,1,145,ROTX,-1

CE,NEXT,0,81145,UX,1,1145,UX,-1
CE,NEXT,0,81145,UY,1,1145,UY,-1
CE,NEXT,0,81145,UZ,1,1145,UZ,-1
CE,NEXT,0,81145,ROTX,1,1145,ROTX,-1

CE,NEXT,0,60144,UX,1,144,UX,-1
CE,NEXT,0,60144,UY,1,144,UY,-1
CE,NEXT,0,60144,UZ,1,144,UZ,-1
CE,NEXT,0,60144,ROTX,1,144,ROTX,-1

CE,NEXT,0,71144,UX,1,1144,UX,-1
CE,NEXT,0,71144,UY,1,1144,UY,-1
CE,NEXT,0,71144,UZ,1,1144,UZ,-1
CE,NEXT,0,71144,ROTX,1,1144,ROTX,-1

CE,NEXT,0,60143,UX,1,143,UX,-1
CE,NEXT,0,60143,UY,1,143,UY,-1
CE,NEXT,0,60143,UZ,1,143,UZ,-1
CE,NEXT,0,60143,ROTX,1,143,ROTX,-1

CE,NEXT,0,71143,UX,1,1143,UX,-1
CE,NEXT,0,71143,UY,1,1143,UY,-1
CE,NEXT,0,71143,UZ,1,1143,UZ,-1
CE,NEXT,0,71143,ROTX,1,1143,ROTX,-1

CE,NEXT,0,60142,UX,1,142,UX,-1
CE,NEXT,0,60142,UY,1,142,UY,-1
CE,NEXT,0,60142,UZ,1,142,UZ,-1
CE,NEXT,0,60142,ROTX,1,142,ROTX,-1

CE,NEXT,0,71142,UX,1,1142,UX,-1
CE,NEXT,0,71142,UY,1,1142,UY,-1
CE,NEXT,0,71142,UZ,1,1142,UZ,-1
CE,NEXT,0,71142,ROTX,1,1142,ROTX,-1

CE,NEXT,0,80112,UX,1,112,UX,-1
CE,NEXT,0,80112,UY,1,112,UY,-1
CE,NEXT,0,80112,UZ,1,112,UZ,-1
CE,NEXT,0,80112,ROTX,1,112,ROTX,-1

CE,NEXT,0,71112,UX,1,1112,UX,-1
CE,NEXT,0,71112,UY,1,1112,UY,-1
CE,NEXT,0,71112,UZ,1,1112,UZ,-1
CE,NEXT,0,71112,ROTX,1,1112,ROTX,-1

CE,NEXT,0,71102,UX,1,1102,UX,-1
CE,NEXT,0,71102,UY,1,1102,UY,-1
CE,NEXT,0,71102,UZ,1,1102,UZ,-1
CE,NEXT,0,71102,ROTX,1,1102,ROTX,-1

CE,NEXT,0,82102,UX,1,2102,UX,-1
CE,NEXT,0,82102,UY,1,2102,UY,-1
CE,NEXT,0,82102,UZ,1,2102,UZ,-1
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CE,NEXT,0,82102,ROTX,1,2102,ROTX,-1

CE,NEXT,0,61148,UX,1,1148,UX,-1
CE,NEXT,0,61148,UY,1,1148,UY,-1
CE,NEXT,0,61148,UZ,1,1148,UZ,-1
CE,NEXT,0,61148,ROTX,1,1148,ROTX,-1

CE,NEXT,0,72148,UX,1,2148,UX,-1
CE,NEXT,0,72148,UY,1,2148,UY,-1
CE,NEXT,0,72148,UZ,1,2148,UZ,-1
CE,NEXT,0,72148,ROTX,1,2148,ROTX,-1

CE,NEXT,0,61147,UX,1,1147,UX,-1
CE,NEXT,0,61147,UY,1,1147,UY,-1
CE,NEXT,0,61147,UZ,1,1147,UZ,-1
CE,NEXT,0,61147,ROTX,1,1147,ROTX,-1

CE,NEXT,0,62147,UX,1,2147,UX,-1
CE,NEXT,0,62147,UY,1,2147,UY,-1
CE,NEXT,0,62147,UZ,1,2147,UZ,-1
CE,NEXT,0,62147,ROTX,1,2147,ROTX,-1

CE,NEXT,0,61146,UX,1,1146,UX,-1
CE,NEXT,0,61146,UY,1,1146,UY,-1
CE,NEXT,0,61146,UZ,1,1146,UZ,-1
CE,NEXT,0,61146,ROTX,1,1146,ROTX,-1

CE,NEXT,0,62146,UX,1,2146,UX,-1
CE,NEXT,0,62146,UY,1,2146,UY,-1
CE,NEXT,0,62146,UZ,1,2146,UZ,-1
CE,NEXT,0,62146,ROTX,1,2146,ROTX,-1

CE,NEXT,0,71145,UX,1,1145,UX,-1
CE,NEXT,0,71145,UY,1,1145,UY,-1
CE,NEXT,0,71145,UZ,1,1145,UZ,-1
CE,NEXT,0,71145,ROTX,1,1145,ROTX,-1

CE,NEXT,0,72145,UX,1,2145,UX,-1
CE,NEXT,0,72145,UY,1,2145,UY,-1
CE,NEXT,0,72145,UZ,1,2145,UZ,-1
CE,NEXT,0,72145,ROTX,1,2145,ROTX,-1

CE,NEXT,0,61144,UX,1,1144,UX,-1
CE,NEXT,0,61144,UY,1,1144,UY,-1
CE,NEXT,0,61144,UZ,1,1144,UZ,-1
CE,NEXT,0,61144,ROTX,1,1144,ROTX,-1

CE,NEXT,0,62144,UX,1,2144,UX,-1
CE,NEXT,0,62144,UY,1,2144,UY,-1
CE,NEXT,0,62144,UZ,1,2144,UZ,-1
CE,NEXT,0,62144,ROTX,1,2144,ROTX,-1

CE,NEXT,0,61143,UX,1,1143,UX,-1
CE,NEXT,0,61143,UY,1,1143,UY,-1
CE,NEXT,0,61143,UZ,1,1143,UZ,-1
CE,NEXT,0,61143,ROTX,1,1143,ROTX,-1

CE,NEXT,0,72143,UX,1,2143,UX,-1
CE,NEXT,0,72143,UY,1,2143,UY,-1
CE,NEXT,0,72143,UZ,1,2143,UZ,-1
CE,NEXT,0,72143,ROTX,1,2143,ROTX,-1

CE,NEXT,0,61142,UX,1,1142,UX,-1
CE,NEXT,0,61142,UY,1,1142,UY,-1
CE,NEXT,0,61142,UZ,1,1142,UZ,-1
CE,NEXT,0,61142,ROTX,1,1142,ROTX,-1

CE,NEXT,0,62142,UX,1,2142,UX,-1
CE,NEXT,0,62142,UY,1,2142,UY,-1
CE,NEXT,0,62142,UZ,1,2142,UZ,-1
CE,NEXT,0,62142,ROTX,1,2142,ROTX,-1

CE,NEXT,0,81112,UX,1,1112,UX,-1
CE,NEXT,0,81112,UY,1,1112,UY,-1
CE,NEXT,0,81112,UZ,1,1112,UZ,-1
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CE,NEXT,0,81112,ROTX,1,1112,ROTX,-1

CE,NEXT,0,82112,UX,1,2112,UX,-1
CE,NEXT,0,82112,UY,1,2112,UY,-1
CE,NEXT,0,82112,UZ,1,2112,UZ,-1
CE,NEXT,0,82112,ROTX,1,2112,ROTX,-1

CE,NEXT,0,72147,UX,1,2147,UX,-1
CE,NEXT,0,72147,UY,1,2147,UY,-1
CE,NEXT,0,72147,UZ,1,2147,UZ,-1
CE,NEXT,0,72147,ROTX,1,2147,ROTX,-1

CE,NEXT,0,73147,UX,1,3147,UX,-1
CE,NEXT,0,73147,UY,1,3147,UY,-1
CE,NEXT,0,73147,UZ,1,3147,UZ,-1
CE,NEXT,0,73147,ROTX,1,3147,ROTX,-1

CE,NEXT,0,72146,UX,1,2146,UX,-1
CE,NEXT,0,72146,UY,1,2146,UY,-1
CE,NEXT,0,72146,UZ,1,2146,UZ,-1
CE,NEXT,0,72146,ROTX,1,2146,ROTX,-1

CE,NEXT,0,73146,UX,1,3146,UX,-1
CE,NEXT,0,73146,UY,1,3146,UY,-1
CE,NEXT,0,73146,UZ,1,3146,UZ,-1
CE,NEXT,0,73146,ROTX,1,3146,ROTX,-1

CE,NEXT,0,82145,UX,1,2145,UX,-1
CE,NEXT,0,82145,UY,1,2145,UY,-1
CE,NEXT,0,82145,UZ,1,2145,UZ,-1
CE,NEXT,0,82145,ROTX,1,2145,ROTX,-1

CE,NEXT,0,83145,UX,1,3145,UX,-1
CE,NEXT,0,83145,UY,1,3145,UY,-1
CE,NEXT,0,83145,UZ,1,3145,UZ,-1
CE,NEXT,0,83145,ROTX,1,3145,ROTX,-1

CE,NEXT,0,72144,UX,1,2144,UX,-1
CE,NEXT,0,72144,UY,1,2144,UY,-1
CE,NEXT,0,72144,UZ,1,2144,UZ,-1
CE,NEXT,0,72144,ROTX,1,2144,ROTX,-1

CE,NEXT,0,73144,UX,1,3144,UX,-1
CE,NEXT,0,73144,UY,1,3144,UY,-1
CE,NEXT,0,73144,UZ,1,3144,UZ,-1
CE,NEXT,0,73144,ROTX,1,3144,ROTX,-1

CE,NEXT,0,72142,UX,1,2142,UX,-1
CE,NEXT,0,72142,UY,1,2142,UY,-1
CE,NEXT,0,72142,UZ,1,2142,UZ,-1
CE,NEXT,0,72142,ROTX,1,2142,ROTX,-1

CE,NEXT,0,62157,UX,1,2157,UX,-1
CE,NEXT,0,62157,UY,1,2157,UY,-1
CE,NEXT,0,62157,UZ,1,2157,UZ,-1
CE,NEXT,0,62157,ROTX,1,2157,ROTX,-1

CE,NEXT,0,72112,UX,1,2112,UX,-1
CE,NEXT,0,72112,UY,1,2112,UY,-1
CE,NEXT,0,72112,UZ,1,2112,UZ,-1
CE,NEXT,0,72112,ROTX,1,2112,ROTX,-1

CE,NEXT,0,152156,UX,1,52156,UX,-1
CE,NEXT,0,152156,UY,1,52156,UY,-1
CE,NEXT,0,152156,UZ,1,52156,UZ,-1
CE,NEXT,0,152156,ROTX,1,52156,ROTX,-1

CE,NEXT,0,73148,UX,1,3148,UX,-1
CE,NEXT,0,73148,UY,1,3148,UY,-1
CE,NEXT,0,73148,UZ,1,3148,UZ,-1
CE,NEXT,0,73148,ROTX,1,3148,ROTX,-1

CE,NEXT,0,63163,UX,1,3163,UX,-1
CE,NEXT,0,63163,UY,1,3163,UY,-1
CE,NEXT,0,63163,UZ,1,3163,UZ,-1
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CE,NEXT,0,63163,ROTX,1,3163,ROTX,-1

CE,NEXT,0,63147,UX,1,3147,UX,-1
CE,NEXT,0,63147,UY,1,3147,UY,-1
CE,NEXT,0,63147,UZ,1,3147,UZ,-1
CE,NEXT,0,63147,ROTX,1,3147,ROTX,-1

CE,NEXT,0,63162,UX,1,3162,UX,-1
CE,NEXT,0,63162,UY,1,3162,UY,-1
CE,NEXT,0,63162,UZ,1,3162,UZ,-1
CE,NEXT,0,63162,ROTX,1,3162,ROTX,-1

CE,NEXT,0,63146,UX,1,3146,UX,-1
CE,NEXT,0,63146,UY,1,3146,UY,-1
CE,NEXT,0,63146,UZ,1,3146,UZ,-1
CE,NEXT,0,63146,ROTX,1,3146,ROTX,-1

CE,NEXT,0,63161,UX,1,3161,UX,-1
CE,NEXT,0,63161,UY,1,3161,UY,-1
CE,NEXT,0,63161,UZ,1,3161,UZ,-1
CE,NEXT,0,63161,ROTX,1,3161,ROTX,-1

CE,NEXT,0,73145,UX,1,3145,UX,-1
CE,NEXT,0,73145,UY,1,3145,UY,-1
CE,NEXT,0,73145,UZ,1,3145,UZ,-1
CE,NEXT,0,73145,ROTX,1,3145,ROTX,-1

CE,NEXT,0,63160,UX,1,3160,UX,-1
CE,NEXT,0,63160,UY,1,3160,UY,-1
CE,NEXT,0,63160,UZ,1,3160,UZ,-1
CE,NEXT,0,63160,ROTX,1,3160,ROTX,-1

CE,NEXT,0,63144,UX,1,3144,UX,-1
CE,NEXT,0,63144,UY,1,3144,UY,-1
CE,NEXT,0,63144,UZ,1,3144,UZ,-1
CE,NEXT,0,63144,ROTX,1,3144,ROTX,-1

CE,NEXT,0,63159,UX,1,3159,UX,-1
CE,NEXT,0,63159,UY,1,3159,UY,-1
CE,NEXT,0,63159,UZ,1,3159,UZ,-1
CE,NEXT,0,63159,ROTX,1,3159,ROTX,-1

CE,NEXT,0,73143,UX,1,3143,UX,-1
CE,NEXT,0,73143,UY,1,3143,UY,-1
CE,NEXT,0,73143,UZ,1,3143,UZ,-1
CE,NEXT,0,73143,ROTX,1,3143,ROTX,-1

CE,NEXT,0,63158,UX,1,3158,UX,-1
CE,NEXT,0,63158,UY,1,3158,UY,-1
CE,NEXT,0,63158,UZ,1,3158,UZ,-1
CE,NEXT,0,63158,ROTX,1,3158,ROTX,-1

CE,NEXT,0,63142,UX,1,3142,UX,-1
CE,NEXT,0,63142,UY,1,3142,UY,-1
CE,NEXT,0,63142,UZ,1,3142,UZ,-1
CE,NEXT,0,63142,ROTX,1,3142,ROTX,-1

CE,NEXT,0,63157,UX,1,3157,UX,-1
CE,NEXT,0,63157,UY,1,3157,UY,-1
CE,NEXT,0,63157,UZ,1,3157,UZ,-1
CE,NEXT,0,63157,ROTX,1,3157,ROTX,-1

CE,NEXT,0,74112,UX,1,4112,UX,-1
CE,NEXT,0,74112,UY,1,4112,UY,-1
CE,NEXT,0,74112,UZ,1,4112,UZ,-1
CE,NEXT,0,74112,ROTX,1,4112,ROTX,-1

CE,NEXT,0,75112,UX,1,5112,UX,-1
CE,NEXT,0,75112,UY,1,5112,UY,-1
CE,NEXT,0,75112,UZ,1,5112,UZ,-1
CE,NEXT,0,75112,ROTX,1,5112,ROTX,-1

CE,NEXT,0,74102,UX,1,4102,UX,-1
CE,NEXT,0,74102,UY,1,4102,UY,-1
CE,NEXT,0,74102,UZ,1,4102,UZ,-1
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CE,NEXT,0,74102,ROTX,1,4102,ROTX,-1

CE,NEXT,0,75102,UX,1,5102,UX,-1
CE,NEXT,0,75102,UY,1,5102,UY,-1
CE,NEXT,0,75102,UZ,1,5102,UZ,-1
CE,NEXT,0,75102,ROTX,1,5102,ROTX,-1

CE,NEXT,0,67122,UX,1,7122,UX,-1
CE,NEXT,0,67122,UY,1,7122,UY,-1
CE,NEXT,0,67122,UZ,1,7122,UZ,-1
CE,NEXT,0,67122,ROTX,1,7122,ROTX,-1

CE,NEXT,0,181660,UX,1,81660,UX,-1
CE,NEXT,0,181660,UY,1,81660,UY,-1
CE,NEXT,0,181660,UZ,1,81660,UZ,-1
CE,NEXT,0,181660,ROTX,1,81660,ROTX,-1

CE,NEXT,0,75122,UX,1,5122,UX,-1
CE,NEXT,0,75122,UY,1,5122,UY,-1
CE,NEXT,0,75122,UZ,1,5122,UZ,-1
CE,NEXT,0,75122,ROTX,1,5122,ROTX,-1

CE,NEXT,0,77122,UX,1,7122,UX,-1
CE,NEXT,0,77122,UY,1,7122,UY,-1
CE,NEXT,0,77122,UZ,1,7122,UZ,-1
CE,NEXT,0,77122,ROTX,1,7122,ROTX,-1

CE,NEXT,0,60006,UX,1,6,UX,-1
CE,NEXT,0,60006,UY,1,6,UY,-1
CE,NEXT,0,60006,UZ,1,6,UZ,-1
CE,NEXT,0,60006,ROTX,1,6,ROTX,-1

CE,NEXT,0,60105,UX,1,105,UX,-1
CE,NEXT,0,60105,UY,1,105,UY,-1
CE,NEXT,0,60105,UZ,1,105,UZ,-1
CE,NEXT,0,60105,ROTX,1,105,ROTX,-1

CE,NEXT,0,70105,UX,1,105,UX,-1
CE,NEXT,0,70105,UY,1,105,UY,-1
CE,NEXT,0,70105,UZ,1,105,UZ,-1
CE,NEXT,0,70105,ROTX,1,105,ROTX,-1

CE,NEXT,0,61105,UX,1,1105,UX,-1
CE,NEXT,0,61105,UY,1,1105,UY,-1
CE,NEXT,0,61105,UZ,1,1105,UZ,-1
CE,NEXT,0,61105,ROTX,1,1105,ROTX,-1

CE,NEXT,0,71105,UX,1,1105,UX,-1
CE,NEXT,0,71105,UY,1,1105,UY,-1
CE,NEXT,0,71105,UZ,1,1105,UZ,-1
CE,NEXT,0,71105,ROTX,1,1105,ROTX,-1

CE,NEXT,0,62105,UX,1,2105,UX,-1
CE,NEXT,0,62105,UY,1,2105,UY,-1
CE,NEXT,0,62105,UZ,1,2105,UZ,-1
CE,NEXT,0,62105,ROTX,1,2105,ROTX,-1

CE,NEXT,0,72105,UX,1,2105,UX,-1
CE,NEXT,0,72105,UY,1,2105,UY,-1
CE,NEXT,0,72105,UZ,1,2105,UZ,-1
CE,NEXT,0,72105,ROTX,1,2105,ROTX,-1

CE,NEXT,0,63105,UX,1,3105,UX,-1
CE,NEXT,0,63105,UY,1,3105,UY,-1
CE,NEXT,0,63105,UZ,1,3105,UZ,-1
CE,NEXT,0,63105,ROTX,1,3105,ROTX,-1

CE,NEXT,0,73105,UX,1,3105,UX,-1
CE,NEXT,0,73105,UY,1,3105,UY,-1
CE,NEXT,0,73105,UZ,1,3105,UZ,-1
CE,NEXT,0,73105,ROTX,1,3105,ROTX,-1

CE,NEXT,0,64105,UX,1,4105,UX,-1
CE,NEXT,0,64105,UY,1,4105,UY,-1
CE,NEXT,0,64105,UZ,1,4105,UZ,-1
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CE,NEXT,0,64105,ROTX,1,4105,ROTX,-1

CE,NEXT,0,74105,UX,1,4105,UX,-1
CE,NEXT,0,74105,UY,1,4105,UY,-1
CE,NEXT,0,74105,UZ,1,4105,UZ,-1
CE,NEXT,0,74105,ROTX,1,4105,ROTX,-1

CE,NEXT,0,65105,UX,1,5105,UX,-1
CE,NEXT,0,65105,UY,1,5105,UY,-1
CE,NEXT,0,65105,UZ,1,5105,UZ,-1
CE,NEXT,0,65105,ROTX,1,5105,ROTX,-1

CE,NEXT,0,75105,UX,1,5105,UX,-1
CE,NEXT,0,75105,UY,1,5105,UY,-1
CE,NEXT,0,75105,UZ,1,5105,UZ,-1
CE,NEXT,0,75105,ROTX,1,5105,ROTX,-1

CE,NEXT,0,66105,UX,1,6105,UX,-1
CE,NEXT,0,66105,UY,1,6105,UY,-1
CE,NEXT,0,66105,UZ,1,6105,UZ,-1
CE,NEXT,0,66105,ROTX,1,6105,ROTX,-1

CE,NEXT,0,76105,UX,1,6105,UX,-1
CE,NEXT,0,76105,UY,1,6105,UY,-1
CE,NEXT,0,76105,UZ,1,6105,UZ,-1
CE,NEXT,0,76105,ROTX,1,6105,ROTX,-1

CE,NEXT,0,67105,UX,1,7105,UX,-1
CE,NEXT,0,67105,UY,1,7105,UY,-1
CE,NEXT,0,67105,UZ,1,7105,UZ,-1
CE,NEXT,0,67105,ROTX,1,7105,ROTX,-1

CE,NEXT,0,77105,UX,1,7105,UX,-1
CE,NEXT,0,77105,UY,1,7105,UY,-1
CE,NEXT,0,77105,UZ,1,7105,UZ,-1
CE,NEXT,0,77105,ROTX,1,7105,ROTX,-1

CE,NEXT,0,68105,UX,1,8105,UX,-1
CE,NEXT,0,68105,UY,1,8105,UY,-1
CE,NEXT,0,68105,UZ,1,8105,UZ,-1
CE,NEXT,0,68105,ROTX,1,8105,ROTX,-1

CE,NEXT,0,60017,UX,1,17,UX,-1
CE,NEXT,0,60017,UY,1,17,UY,-1
CE,NEXT,0,60017,UZ,1,17,UZ,-1
CE,NEXT,0,60017,ROTX,1,17,ROTX,-1

CE,NEXT,0,60116,UX,1,116,UX,-1
CE,NEXT,0,60116,UY,1,116,UY,-1
CE,NEXT,0,60116,UZ,1,116,UZ,-1
CE,NEXT,0,60116,ROTX,1,116,ROTX,-1

CE,NEXT,0,70116,UX,1,116,UX,-1
CE,NEXT,0,70116,UY,1,116,UY,-1
CE,NEXT,0,70116,UZ,1,116,UZ,-1
CE,NEXT,0,70116,ROTX,1,116,ROTX,-1

CE,NEXT,0,61116,UX,1,1116,UX,-1
CE,NEXT,0,61116,UY,1,1116,UY,-1
CE,NEXT,0,61116,UZ,1,1116,UZ,-1
CE,NEXT,0,61116,ROTX,1,1116,ROTX,-1

CE,NEXT,0,71116,UX,1,1116,UX,-1
CE,NEXT,0,71116,UY,1,1116,UY,-1
CE,NEXT,0,71116,UZ,1,1116,UZ,-1
CE,NEXT,0,71116,ROTX,1,1116,ROTX,-1

CE,NEXT,0,72116,UX,1,2116,UX,-1
CE,NEXT,0,72116,UY,1,2116,UY,-1
CE,NEXT,0,72116,UZ,1,2116,UZ,-1
CE,NEXT,0,72116,ROTX,1,2116,ROTX,-1

CE,NEXT,0,73116,UX,1,3116,UX,-1
CE,NEXT,0,73116,UY,1,3116,UY,-1
CE,NEXT,0,73116,UZ,1,3116,UZ,-1
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CE,NEXT,0,73116,ROTX,1,3116,ROTX,-1

CE,NEXT,0,64116,UX,1,4116,UX,-1
CE,NEXT,0,64116,UY,1,4116,UY,-1
CE,NEXT,0,64116,UZ,1,4116,UZ,-1
CE,NEXT,0,64116,ROTX,1,4116,ROTX,-1

CE,NEXT,0,74116,UX,1,4116,UX,-1
CE,NEXT,0,74116,UY,1,4116,UY,-1
CE,NEXT,0,74116,UZ,1,4116,UZ,-1
CE,NEXT,0,74116,ROTX,1,4116,ROTX,-1

CE,NEXT,0,65116,UX,1,5116,UX,-1
CE,NEXT,0,65116,UY,1,5116,UY,-1
CE,NEXT,0,65116,UZ,1,5116,UZ,-1
CE,NEXT,0,65116,ROTX,1,5116,ROTX,-1

CE,NEXT,0,67116,UX,1,7116,UX,-1
CE,NEXT,0,67116,UY,1,7116,UY,-1
CE,NEXT,0,67116,UZ,1,7116,UZ,-1
CE,NEXT,0,67116,ROTX,1,7116,ROTX,-1

CE,NEXT,0,68116,UX,1,8116,UX,-1
CE,NEXT,0,68116,UY,1,8116,UY,-1
CE,NEXT,0,68116,UZ,1,8116,UZ,-1
CE,NEXT,0,68116,ROTX,1,8116,ROTX,-1

CE,NEXT,0,60041,UX,1,41,UX,-1
CE,NEXT,0,60041,UY,1,41,UY,-1
CE,NEXT,0,60041,UZ,1,41,UZ,-1
CE,NEXT,0,60041,ROTX,1,41,ROTX,-1

CE,NEXT,0,60181,UX,1,181,UX,-1
CE,NEXT,0,60181,UY,1,181,UY,-1
CE,NEXT,0,60181,UZ,1,181,UZ,-1
CE,NEXT,0,60181,ROTX,1,181,ROTX,-1

CE,NEXT,0,60040,UX,1,40,UX,-1
CE,NEXT,0,60040,UY,1,40,UY,-1
CE,NEXT,0,60040,UZ,1,40,UZ,-1
CE,NEXT,0,60040,ROTX,1,40,ROTX,-1

CE,NEXT,0,60180,UX,1,180,UX,-1
CE,NEXT,0,60180,UY,1,180,UY,-1
CE,NEXT,0,60180,UZ,1,180,UZ,-1
CE,NEXT,0,60180,ROTX,1,180,ROTX,-1

CE,NEXT,0,60039,UX,1,39,UX,-1
CE,NEXT,0,60039,UY,1,39,UY,-1
CE,NEXT,0,60039,UZ,1,39,UZ,-1
CE,NEXT,0,60039,ROTX,1,39,ROTX,-1

CE,NEXT,0,60179,UX,1,179,UX,-1
CE,NEXT,0,60179,UY,1,179,UY,-1
CE,NEXT,0,60179,UZ,1,179,UZ,-1
CE,NEXT,0,60179,ROTX,1,179,ROTX,-1

CE,NEXT,0,60038,UX,1,38,UX,-1
CE,NEXT,0,60038,UY,1,38,UY,-1
CE,NEXT,0,60038,UZ,1,38,UZ,-1
CE,NEXT,0,60038,ROTX,1,38,ROTX,-1

CE,NEXT,0,60178,UX,1,178,UX,-1
CE,NEXT,0,60178,UY,1,178,UY,-1
CE,NEXT,0,60178,UZ,1,178,UZ,-1
CE,NEXT,0,60178,ROTX,1,178,ROTX,-1

CE,NEXT,0,60037,UX,1,37,UX,-1
CE,NEXT,0,60037,UY,1,37,UY,-1
CE,NEXT,0,60037,UZ,1,37,UZ,-1
CE,NEXT,0,60037,ROTX,1,37,ROTX,-1

CE,NEXT,0,60177,UX,1,177,UX,-1
CE,NEXT,0,60177,UY,1,177,UY,-1
CE,NEXT,0,60177,UZ,1,177,UZ,-1
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CE,NEXT,0,60177,ROTX,1,177,ROTX,-1

CE,NEXT,0,60036,UX,1,36,UX,-1
CE,NEXT,0,60036,UY,1,36,UY,-1
CE,NEXT,0,60036,UZ,1,36,UZ,-1
CE,NEXT,0,60036,ROTX,1,36,ROTX,-1

CE,NEXT,0,60176,UX,1,176,UX,-1
CE,NEXT,0,60176,UY,1,176,UY,-1
CE,NEXT,0,60176,UZ,1,176,UZ,-1
CE,NEXT,0,60176,ROTX,1,176,ROTX,-1

CE,NEXT,0,60035,UX,1,35,UX,-1
CE,NEXT,0,60035,UY,1,35,UY,-1
CE,NEXT,0,60035,UZ,1,35,UZ,-1
CE,NEXT,0,60035,ROTX,1,35,ROTX,-1

CE,NEXT,0,60175,UX,1,175,UX,-1
CE,NEXT,0,60175,UY,1,175,UY,-1
CE,NEXT,0,60175,UZ,1,175,UZ,-1
CE,NEXT,0,60175,ROTX,1,175,ROTX,-1

CE,NEXT,0,80107,UX,1,107,UX,-1
CE,NEXT,0,80107,UY,1,107,UY,-1
CE,NEXT,0,80107,UZ,1,107,UZ,-1
CE,NEXT,0,80107,ROTX,1,107,ROTX,-1

CE,NEXT,0,71107,UX,1,1107,UX,-1
CE,NEXT,0,71107,UY,1,1107,UY,-1
CE,NEXT,0,71107,UZ,1,1107,UZ,-1
CE,NEXT,0,71107,ROTX,1,1107,ROTX,-1

CE,NEXT,0,60155,UX,1,155,UX,-1
CE,NEXT,0,60155,UY,1,155,UY,-1
CE,NEXT,0,60155,UZ,1,155,UZ,-1
CE,NEXT,0,60155,ROTX,1,155,ROTX,-1

CE,NEXT,0,71155,UX,1,1155,UX,-1
CE,NEXT,0,71155,UY,1,1155,UY,-1
CE,NEXT,0,71155,UZ,1,1155,UZ,-1
CE,NEXT,0,71155,ROTX,1,1155,ROTX,-1

CE,NEXT,0,60154,UX,1,154,UX,-1
CE,NEXT,0,60154,UY,1,154,UY,-1
CE,NEXT,0,60154,UZ,1,154,UZ,-1
CE,NEXT,0,60154,ROTX,1,154,ROTX,-1

CE,NEXT,0,71154,UX,1,1154,UX,-1
CE,NEXT,0,71154,UY,1,1154,UY,-1
CE,NEXT,0,71154,UZ,1,1154,UZ,-1
CE,NEXT,0,71154,ROTX,1,1154,ROTX,-1

CE,NEXT,0,60153,UX,1,153,UX,-1
CE,NEXT,0,60153,UY,1,153,UY,-1
CE,NEXT,0,60153,UZ,1,153,UZ,-1
CE,NEXT,0,60153,ROTX,1,153,ROTX,-1

CE,NEXT,0,71153,UX,1,1153,UX,-1
CE,NEXT,0,71153,UY,1,1153,UY,-1
CE,NEXT,0,71153,UZ,1,1153,UZ,-1
CE,NEXT,0,71153,ROTX,1,1153,ROTX,-1

CE,NEXT,0,60152,UX,1,152,UX,-1
CE,NEXT,0,60152,UY,1,152,UY,-1
CE,NEXT,0,60152,UZ,1,152,UZ,-1
CE,NEXT,0,60152,ROTX,1,152,ROTX,-1

CE,NEXT,0,71152,UX,1,1152,UX,-1
CE,NEXT,0,71152,UY,1,1152,UY,-1
CE,NEXT,0,71152,UZ,1,1152,UZ,-1
CE,NEXT,0,71152,ROTX,1,1152,ROTX,-1

CE,NEXT,0,60151,UX,1,151,UX,-1
CE,NEXT,0,60151,UY,1,151,UY,-1
CE,NEXT,0,60151,UZ,1,151,UZ,-1
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CE,NEXT,0,60151,ROTX,1,151,ROTX,-1

CE,NEXT,0,71151,UX,1,1151,UX,-1
CE,NEXT,0,71151,UY,1,1151,UY,-1
CE,NEXT,0,71151,UZ,1,1151,UZ,-1
CE,NEXT,0,71151,ROTX,1,1151,ROTX,-1

CE,NEXT,0,60150,UX,1,150,UX,-1
CE,NEXT,0,60150,UY,1,150,UY,-1
CE,NEXT,0,60150,UZ,1,150,UZ,-1
CE,NEXT,0,60150,ROTX,1,150,ROTX,-1

CE,NEXT,0,71150,UX,1,1150,UX,-1
CE,NEXT,0,71150,UY,1,1150,UY,-1
CE,NEXT,0,71150,UZ,1,1150,UZ,-1
CE,NEXT,0,71150,ROTX,1,1150,ROTX,-1

CE,NEXT,0,60149,UX,1,149,UX,-1
CE,NEXT,0,60149,UY,1,149,UY,-1
CE,NEXT,0,60149,UZ,1,149,UZ,-1
CE,NEXT,0,60149,ROTX,1,149,ROTX,-1

CE,NEXT,0,71149,UX,1,1149,UX,-1
CE,NEXT,0,71149,UY,1,1149,UY,-1
CE,NEXT,0,71149,UZ,1,1149,UZ,-1
CE,NEXT,0,71149,ROTX,1,1149,ROTX,-1

CE,NEXT,0,80118,UX,1,118,UX,-1
CE,NEXT,0,80118,UY,1,118,UY,-1
CE,NEXT,0,80118,UZ,1,118,UZ,-1
CE,NEXT,0,80118,ROTX,1,118,ROTX,-1

CE,NEXT,0,71118,UX,1,1118,UX,-1
CE,NEXT,0,71118,UY,1,1118,UY,-1
CE,NEXT,0,71118,UZ,1,1118,UZ,-1
CE,NEXT,0,71118,ROTX,1,1118,ROTX,-1

CE,NEXT,0,81107,UX,1,1107,UX,-1
CE,NEXT,0,81107,UY,1,1107,UY,-1
CE,NEXT,0,81107,UZ,1,1107,UZ,-1
CE,NEXT,0,81107,ROTX,1,1107,ROTX,-1

CE,NEXT,0,72107,UX,1,2107,UX,-1
CE,NEXT,0,72107,UY,1,2107,UY,-1
CE,NEXT,0,72107,UZ,1,2107,UZ,-1
CE,NEXT,0,72107,ROTX,1,2107,ROTX,-1

CE,NEXT,0,61155,UX,1,1155,UX,-1
CE,NEXT,0,61155,UY,1,1155,UY,-1
CE,NEXT,0,61155,UZ,1,1155,UZ,-1
CE,NEXT,0,61155,ROTX,1,1155,ROTX,-1

CE,NEXT,0,62155,UX,1,2155,UX,-1
CE,NEXT,0,62155,UY,1,2155,UY,-1
CE,NEXT,0,62155,UZ,1,2155,UZ,-1
CE,NEXT,0,62155,ROTX,1,2155,ROTX,-1

CE,NEXT,0,61154,UX,1,1154,UX,-1
CE,NEXT,0,61154,UY,1,1154,UY,-1
CE,NEXT,0,61154,UZ,1,1154,UZ,-1
CE,NEXT,0,61154,ROTX,1,1154,ROTX,-1

CE,NEXT,0,62154,UX,1,2154,UX,-1
CE,NEXT,0,62154,UY,1,2154,UY,-1
CE,NEXT,0,62154,UZ,1,2154,UZ,-1
CE,NEXT,0,62154,ROTX,1,2154,ROTX,-1

CE,NEXT,0,61153,UX,1,1153,UX,-1
CE,NEXT,0,61153,UY,1,1153,UY,-1
CE,NEXT,0,61153,UZ,1,1153,UZ,-1
CE,NEXT,0,61153,ROTX,1,1153,ROTX,-1

CE,NEXT,0,62153,UX,1,2153,UX,-1
CE,NEXT,0,62153,UY,1,2153,UY,-1
CE,NEXT,0,62153,UZ,1,2153,UZ,-1
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CE,NEXT,0,62153,ROTX,1,2153,ROTX,-1

CE,NEXT,0,61152,UX,1,1152,UX,-1
CE,NEXT,0,61152,UY,1,1152,UY,-1
CE,NEXT,0,61152,UZ,1,1152,UZ,-1
CE,NEXT,0,61152,ROTX,1,1152,ROTX,-1

CE,NEXT,0,72152,UX,1,2152,UX,-1
CE,NEXT,0,72152,UY,1,2152,UY,-1
CE,NEXT,0,72152,UZ,1,2152,UZ,-1
CE,NEXT,0,72152,ROTX,1,2152,ROTX,-1

CE,NEXT,0,61151,UX,1,1151,UX,-1
CE,NEXT,0,61151,UY,1,1151,UY,-1
CE,NEXT,0,61151,UZ,1,1151,UZ,-1
CE,NEXT,0,61151,ROTX,1,1151,ROTX,-1

CE,NEXT,0,72151,UX,1,2151,UX,-1
CE,NEXT,0,72151,UY,1,2151,UY,-1
CE,NEXT,0,72151,UZ,1,2151,UZ,-1
CE,NEXT,0,72151,ROTX,1,2151,ROTX,-1

CE,NEXT,0,61150,UX,1,1150,UX,-1
CE,NEXT,0,61150,UY,1,1150,UY,-1
CE,NEXT,0,61150,UZ,1,1150,UZ,-1
CE,NEXT,0,61150,ROTX,1,1150,ROTX,-1

CE,NEXT,0,72150,UX,1,2150,UX,-1
CE,NEXT,0,72150,UY,1,2150,UY,-1
CE,NEXT,0,72150,UZ,1,2150,UZ,-1
CE,NEXT,0,72150,ROTX,1,2150,ROTX,-1

CE,NEXT,0,61149,UX,1,1149,UX,-1
CE,NEXT,0,61149,UY,1,1149,UY,-1
CE,NEXT,0,61149,UZ,1,1149,UZ,-1
CE,NEXT,0,61149,ROTX,1,1149,ROTX,-1

CE,NEXT,0,72149,UX,1,2149,UX,-1
CE,NEXT,0,72149,UY,1,2149,UY,-1
CE,NEXT,0,72149,UZ,1,2149,UZ,-1
CE,NEXT,0,72149,ROTX,1,2149,ROTX,-1

CE,NEXT,0,81118,UX,1,1118,UX,-1
CE,NEXT,0,81118,UY,1,1118,UY,-1
CE,NEXT,0,81118,UZ,1,1118,UZ,-1
CE,NEXT,0,81118,ROTX,1,1118,ROTX,-1

CE,NEXT,0,82118,UX,1,2118,UX,-1
CE,NEXT,0,82118,UY,1,2118,UY,-1
CE,NEXT,0,82118,UZ,1,2118,UZ,-1
CE,NEXT,0,82118,ROTX,1,2118,ROTX,-1

CE,NEXT,0,82107,UX,1,2107,UX,-1
CE,NEXT,0,82107,UY,1,2107,UY,-1
CE,NEXT,0,82107,UZ,1,2107,UZ,-1
CE,NEXT,0,82107,ROTX,1,2107,ROTX,-1

CE,NEXT,0,83107,UX,1,3107,UX,-1
CE,NEXT,0,83107,UY,1,3107,UY,-1
CE,NEXT,0,83107,UZ,1,3107,UZ,-1
CE,NEXT,0,83107,ROTX,1,3107,ROTX,-1

CE,NEXT,0,72155,UX,1,2155,UX,-1
CE,NEXT,0,72155,UY,1,2155,UY,-1
CE,NEXT,0,72155,UZ,1,2155,UZ,-1
CE,NEXT,0,72155,ROTX,1,2155,ROTX,-1

CE,NEXT,0,73155,UX,1,3155,UX,-1
CE,NEXT,0,73155,UY,1,3155,UY,-1
CE,NEXT,0,73155,UZ,1,3155,UZ,-1
CE,NEXT,0,73155,ROTX,1,3155,ROTX,-1

CE,NEXT,0,72154,UX,1,2154,UX,-1
CE,NEXT,0,72154,UY,1,2154,UY,-1
CE,NEXT,0,72154,UZ,1,2154,UZ,-1
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CE,NEXT,0,72154,ROTX,1,2154,ROTX,-1

CE,NEXT,0,73154,UX,1,3154,UX,-1
CE,NEXT,0,73154,UY,1,3154,UY,-1
CE,NEXT,0,73154,UZ,1,3154,UZ,-1
CE,NEXT,0,73154,ROTX,1,3154,ROTX,-1

CE,NEXT,0,72153,UX,1,2153,UX,-1
CE,NEXT,0,72153,UY,1,2153,UY,-1
CE,NEXT,0,72153,UZ,1,2153,UZ,-1
CE,NEXT,0,72153,ROTX,1,2153,ROTX,-1

CE,NEXT,0,63153,UX,1,3153,UX,-1
CE,NEXT,0,63153,UY,1,3153,UY,-1
CE,NEXT,0,63153,UZ,1,3153,UZ,-1
CE,NEXT,0,63153,ROTX,1,3153,ROTX,-1

CE,NEXT,0,62152,UX,1,2152,UX,-1
CE,NEXT,0,62152,UY,1,2152,UY,-1
CE,NEXT,0,62152,UZ,1,2152,UZ,-1
CE,NEXT,0,62152,ROTX,1,2152,ROTX,-1

CE,NEXT,0,73152,UX,1,3152,UX,-1
CE,NEXT,0,73152,UY,1,3152,UY,-1
CE,NEXT,0,73152,UZ,1,3152,UZ,-1
CE,NEXT,0,73152,ROTX,1,3152,ROTX,-1

CE,NEXT,0,62151,UX,1,2151,UX,-1
CE,NEXT,0,62151,UY,1,2151,UY,-1
CE,NEXT,0,62151,UZ,1,2151,UZ,-1
CE,NEXT,0,62151,ROTX,1,2151,ROTX,-1

CE,NEXT,0,73151,UX,1,3151,UX,-1
CE,NEXT,0,73151,UY,1,3151,UY,-1
CE,NEXT,0,73151,UZ,1,3151,UZ,-1
CE,NEXT,0,73151,ROTX,1,3151,ROTX,-1

CE,NEXT,0,62150,UX,1,2150,UX,-1
CE,NEXT,0,62150,UY,1,2150,UY,-1
CE,NEXT,0,62150,UZ,1,2150,UZ,-1
CE,NEXT,0,62150,ROTX,1,2150,ROTX,-1

CE,NEXT,0,63150,UX,1,3150,UX,-1
CE,NEXT,0,63150,UY,1,3150,UY,-1
CE,NEXT,0,63150,UZ,1,3150,UZ,-1
CE,NEXT,0,63150,ROTX,1,3150,ROTX,-1

CE,NEXT,0,62149,UX,1,2149,UX,-1
CE,NEXT,0,62149,UY,1,2149,UY,-1
CE,NEXT,0,62149,UZ,1,2149,UZ,-1
CE,NEXT,0,62149,ROTX,1,2149,ROTX,-1

CE,NEXT,0,63149,UX,1,3149,UX,-1
CE,NEXT,0,63149,UY,1,3149,UY,-1
CE,NEXT,0,63149,UZ,1,3149,UZ,-1
CE,NEXT,0,63149,ROTX,1,3149,ROTX,-1

CE,NEXT,0,72118,UX,1,2118,UX,-1
CE,NEXT,0,72118,UY,1,2118,UY,-1
CE,NEXT,0,72118,UZ,1,2118,UZ,-1
CE,NEXT,0,72118,ROTX,1,2118,ROTX,-1

CE,NEXT,0,73118,UX,1,3118,UX,-1
CE,NEXT,0,73118,UY,1,3118,UY,-1
CE,NEXT,0,73118,UZ,1,3118,UZ,-1
CE,NEXT,0,73118,ROTX,1,3118,ROTX,-1

CE,NEXT,0,73107,UX,1,3107,UX,-1
CE,NEXT,0,73107,UY,1,3107,UY,-1
CE,NEXT,0,73107,UZ,1,3107,UZ,-1
CE,NEXT,0,73107,ROTX,1,3107,ROTX,-1

CE,NEXT,0,74107,UX,1,4107,UX,-1
CE,NEXT,0,74107,UY,1,4107,UY,-1
CE,NEXT,0,74107,UZ,1,4107,UZ,-1
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CE,NEXT,0,74107,ROTX,1,4107,ROTX,-1

CE,NEXT,0,63155,UX,1,3155,UX,-1
CE,NEXT,0,63155,UY,1,3155,UY,-1
CE,NEXT,0,63155,UZ,1,3155,UZ,-1
CE,NEXT,0,63155,ROTX,1,3155,ROTX,-1

CE,NEXT,0,64155,UX,1,4155,UX,-1
CE,NEXT,0,64155,UY,1,4155,UY,-1
CE,NEXT,0,64155,UZ,1,4155,UZ,-1
CE,NEXT,0,64155,ROTX,1,4155,ROTX,-1

CE,NEXT,0,63154,UX,1,3154,UX,-1
CE,NEXT,0,63154,UY,1,3154,UY,-1
CE,NEXT,0,63154,UZ,1,3154,UZ,-1
CE,NEXT,0,63154,ROTX,1,3154,ROTX,-1

CE,NEXT,0,64154,UX,1,4154,UX,-1
CE,NEXT,0,64154,UY,1,4154,UY,-1
CE,NEXT,0,64154,UZ,1,4154,UZ,-1
CE,NEXT,0,64154,ROTX,1,4154,ROTX,-1

CE,NEXT,0,73153,UX,1,3153,UX,-1
CE,NEXT,0,73153,UY,1,3153,UY,-1
CE,NEXT,0,73153,UZ,1,3153,UZ,-1
CE,NEXT,0,73153,ROTX,1,3153,ROTX,-1

CE,NEXT,0,64153,UX,1,4153,UX,-1
CE,NEXT,0,64153,UY,1,4153,UY,-1
CE,NEXT,0,64153,UZ,1,4153,UZ,-1
CE,NEXT,0,64153,ROTX,1,4153,ROTX,-1

CE,NEXT,0,63152,UX,1,3152,UX,-1
CE,NEXT,0,63152,UY,1,3152,UY,-1
CE,NEXT,0,63152,UZ,1,3152,UZ,-1
CE,NEXT,0,63152,ROTX,1,3152,ROTX,-1

CE,NEXT,0,64152,UX,1,4152,UX,-1
CE,NEXT,0,64152,UY,1,4152,UY,-1
CE,NEXT,0,64152,UZ,1,4152,UZ,-1
CE,NEXT,0,64152,ROTX,1,4152,ROTX,-1

CE,NEXT,0,63151,UX,1,3151,UX,-1
CE,NEXT,0,63151,UY,1,3151,UY,-1
CE,NEXT,0,63151,UZ,1,3151,UZ,-1
CE,NEXT,0,63151,ROTX,1,3151,ROTX,-1

CE,NEXT,0,64151,UX,1,4151,UX,-1
CE,NEXT,0,64151,UY,1,4151,UY,-1
CE,NEXT,0,64151,UZ,1,4151,UZ,-1
CE,NEXT,0,64151,ROTX,1,4151,ROTX,-1

CE,NEXT,0,73150,UX,1,3150,UX,-1
CE,NEXT,0,73150,UY,1,3150,UY,-1
CE,NEXT,0,73150,UZ,1,3150,UZ,-1
CE,NEXT,0,73150,ROTX,1,3150,ROTX,-1

CE,NEXT,0,64150,UX,1,4150,UX,-1
CE,NEXT,0,64150,UY,1,4150,UY,-1
CE,NEXT,0,64150,UZ,1,4150,UZ,-1
CE,NEXT,0,64150,ROTX,1,4150,ROTX,-1

CE,NEXT,0,73149,UX,1,3149,UX,-1
CE,NEXT,0,73149,UY,1,3149,UY,-1
CE,NEXT,0,73149,UZ,1,3149,UZ,-1
CE,NEXT,0,73149,ROTX,1,3149,ROTX,-1

CE,NEXT,0,64149,UX,1,4149,UX,-1
CE,NEXT,0,64149,UY,1,4149,UY,-1
CE,NEXT,0,64149,UZ,1,4149,UZ,-1
CE,NEXT,0,64149,ROTX,1,4149,ROTX,-1

CE,NEXT,0,83118,UX,1,3118,UX,-1
CE,NEXT,0,83118,UY,1,3118,UY,-1
CE,NEXT,0,83118,UZ,1,3118,UZ,-1
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CE,NEXT,0,83118,ROTX,1,3118,ROTX,-1

CE,NEXT,0,74118,UX,1,4118,UX,-1
CE,NEXT,0,74118,UY,1,4118,UY,-1
CE,NEXT,0,74118,UZ,1,4118,UZ,-1
CE,NEXT,0,74118,ROTX,1,4118,ROTX,-1

CE,NEXT,0,84107,UX,1,4107,UX,-1
CE,NEXT,0,84107,UY,1,4107,UY,-1
CE,NEXT,0,84107,UZ,1,4107,UZ,-1
CE,NEXT,0,84107,ROTX,1,4107,ROTX,-1

CE,NEXT,0,75107,UX,1,5107,UX,-1
CE,NEXT,0,75107,UY,1,5107,UY,-1
CE,NEXT,0,75107,UZ,1,5107,UZ,-1
CE,NEXT,0,75107,ROTX,1,5107,ROTX,-1

CE,NEXT,0,74155,UX,1,4155,UX,-1
CE,NEXT,0,74155,UY,1,4155,UY,-1
CE,NEXT,0,74155,UZ,1,4155,UZ,-1
CE,NEXT,0,74155,ROTX,1,4155,ROTX,-1

CE,NEXT,0,65155,UX,1,5155,UX,-1
CE,NEXT,0,65155,UY,1,5155,UY,-1
CE,NEXT,0,65155,UZ,1,5155,UZ,-1
CE,NEXT,0,65155,ROTX,1,5155,ROTX,-1

CE,NEXT,0,74154,UX,1,4154,UX,-1
CE,NEXT,0,74154,UY,1,4154,UY,-1
CE,NEXT,0,74154,UZ,1,4154,UZ,-1
CE,NEXT,0,74154,ROTX,1,4154,ROTX,-1

CE,NEXT,0,65154,UX,1,5154,UX,-1
CE,NEXT,0,65154,UY,1,5154,UY,-1
CE,NEXT,0,65154,UZ,1,5154,UZ,-1
CE,NEXT,0,65154,ROTX,1,5154,ROTX,-1

CE,NEXT,0,74153,UX,1,4153,UX,-1
CE,NEXT,0,74153,UY,1,4153,UY,-1
CE,NEXT,0,74153,UZ,1,4153,UZ,-1
CE,NEXT,0,74153,ROTX,1,4153,ROTX,-1

CE,NEXT,0,65153,UX,1,5153,UX,-1
CE,NEXT,0,65153,UY,1,5153,UY,-1
CE,NEXT,0,65153,UZ,1,5153,UZ,-1
CE,NEXT,0,65153,ROTX,1,5153,ROTX,-1

CE,NEXT,0,74152,UX,1,4152,UX,-1
CE,NEXT,0,74152,UY,1,4152,UY,-1
CE,NEXT,0,74152,UZ,1,4152,UZ,-1
CE,NEXT,0,74152,ROTX,1,4152,ROTX,-1

CE,NEXT,0,65152,UX,1,5152,UX,-1
CE,NEXT,0,65152,UY,1,5152,UY,-1
CE,NEXT,0,65152,UZ,1,5152,UZ,-1
CE,NEXT,0,65152,ROTX,1,5152,ROTX,-1

CE,NEXT,0,74151,UX,1,4151,UX,-1
CE,NEXT,0,74151,UY,1,4151,UY,-1
CE,NEXT,0,74151,UZ,1,4151,UZ,-1
CE,NEXT,0,74151,ROTX,1,4151,ROTX,-1

CE,NEXT,0,65151,UX,1,5151,UX,-1
CE,NEXT,0,65151,UY,1,5151,UY,-1
CE,NEXT,0,65151,UZ,1,5151,UZ,-1
CE,NEXT,0,65151,ROTX,1,5151,ROTX,-1

CE,NEXT,0,74150,UX,1,4150,UX,-1
CE,NEXT,0,74150,UY,1,4150,UY,-1
CE,NEXT,0,74150,UZ,1,4150,UZ,-1
CE,NEXT,0,74150,ROTX,1,4150,ROTX,-1

CE,NEXT,0,75150,UX,1,5150,UX,-1
CE,NEXT,0,75150,UY,1,5150,UY,-1
CE,NEXT,0,75150,UZ,1,5150,UZ,-1
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CE,NEXT,0,75150,ROTX,1,5150,ROTX,-1

CE,NEXT,0,74149,UX,1,4149,UX,-1
CE,NEXT,0,74149,UY,1,4149,UY,-1
CE,NEXT,0,74149,UZ,1,4149,UZ,-1
CE,NEXT,0,74149,ROTX,1,4149,ROTX,-1

CE,NEXT,0,75149,UX,1,5149,UX,-1
CE,NEXT,0,75149,UY,1,5149,UY,-1
CE,NEXT,0,75149,UZ,1,5149,UZ,-1
CE,NEXT,0,75149,ROTX,1,5149,ROTX,-1

CE,NEXT,0,84118,UX,1,4118,UX,-1
CE,NEXT,0,84118,UY,1,4118,UY,-1
CE,NEXT,0,84118,UZ,1,4118,UZ,-1
CE,NEXT,0,84118,ROTX,1,4118,ROTX,-1

CE,NEXT,0,85118,UX,1,5118,UX,-1
CE,NEXT,0,85118,UY,1,5118,UY,-1
CE,NEXT,0,85118,UZ,1,5118,UZ,-1
CE,NEXT,0,85118,ROTX,1,5118,ROTX,-1

CE,NEXT,0,85107,UX,1,5107,UX,-1
CE,NEXT,0,85107,UY,1,5107,UY,-1
CE,NEXT,0,85107,UZ,1,5107,UZ,-1
CE,NEXT,0,85107,ROTX,1,5107,ROTX,-1

CE,NEXT,0,76107,UX,1,6107,UX,-1
CE,NEXT,0,76107,UY,1,6107,UY,-1
CE,NEXT,0,76107,UZ,1,6107,UZ,-1
CE,NEXT,0,76107,ROTX,1,6107,ROTX,-1

CE,NEXT,0,75155,UX,1,5155,UX,-1
CE,NEXT,0,75155,UY,1,5155,UY,-1
CE,NEXT,0,75155,UZ,1,5155,UZ,-1
CE,NEXT,0,75155,ROTX,1,5155,ROTX,-1

CE,NEXT,0,66155,UX,1,6155,UX,-1
CE,NEXT,0,66155,UY,1,6155,UY,-1
CE,NEXT,0,66155,UZ,1,6155,UZ,-1
CE,NEXT,0,66155,ROTX,1,6155,ROTX,-1

CE,NEXT,0,75154,UX,1,5154,UX,-1
CE,NEXT,0,75154,UY,1,5154,UY,-1
CE,NEXT,0,75154,UZ,1,5154,UZ,-1
CE,NEXT,0,75154,ROTX,1,5154,ROTX,-1

CE,NEXT,0,66154,UX,1,6154,UX,-1
CE,NEXT,0,66154,UY,1,6154,UY,-1
CE,NEXT,0,66154,UZ,1,6154,UZ,-1
CE,NEXT,0,66154,ROTX,1,6154,ROTX,-1

CE,NEXT,0,75153,UX,1,5153,UX,-1
CE,NEXT,0,75153,UY,1,5153,UY,-1
CE,NEXT,0,75153,UZ,1,5153,UZ,-1
CE,NEXT,0,75153,ROTX,1,5153,ROTX,-1

CE,NEXT,0,66153,UX,1,6153,UX,-1
CE,NEXT,0,66153,UY,1,6153,UY,-1
CE,NEXT,0,66153,UZ,1,6153,UZ,-1
CE,NEXT,0,66153,ROTX,1,6153,ROTX,-1

CE,NEXT,0,75152,UX,1,5152,UX,-1
CE,NEXT,0,75152,UY,1,5152,UY,-1
CE,NEXT,0,75152,UZ,1,5152,UZ,-1
CE,NEXT,0,75152,ROTX,1,5152,ROTX,-1

CE,NEXT,0,66152,UX,1,6152,UX,-1
CE,NEXT,0,66152,UY,1,6152,UY,-1
CE,NEXT,0,66152,UZ,1,6152,UZ,-1
CE,NEXT,0,66152,ROTX,1,6152,ROTX,-1

CE,NEXT,0,75151,UX,1,5151,UX,-1
CE,NEXT,0,75151,UY,1,5151,UY,-1
CE,NEXT,0,75151,UZ,1,5151,UZ,-1
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CE,NEXT,0,75151,ROTX,1,5151,ROTX,-1

CE,NEXT,0,66151,UX,1,6151,UX,-1
CE,NEXT,0,66151,UY,1,6151,UY,-1
CE,NEXT,0,66151,UZ,1,6151,UZ,-1
CE,NEXT,0,66151,ROTX,1,6151,ROTX,-1

CE,NEXT,0,65150,UX,1,5150,UX,-1
CE,NEXT,0,65150,UY,1,5150,UY,-1
CE,NEXT,0,65150,UZ,1,5150,UZ,-1
CE,NEXT,0,65150,ROTX,1,5150,ROTX,-1

CE,NEXT,0,66150,UX,1,6150,UX,-1
CE,NEXT,0,66150,UY,1,6150,UY,-1
CE,NEXT,0,66150,UZ,1,6150,UZ,-1
CE,NEXT,0,66150,ROTX,1,6150,ROTX,-1

CE,NEXT,0,65149,UX,1,5149,UX,-1
CE,NEXT,0,65149,UY,1,5149,UY,-1
CE,NEXT,0,65149,UZ,1,5149,UZ,-1
CE,NEXT,0,65149,ROTX,1,5149,ROTX,-1

CE,NEXT,0,66149,UX,1,6149,UX,-1
CE,NEXT,0,66149,UY,1,6149,UY,-1
CE,NEXT,0,66149,UZ,1,6149,UZ,-1
CE,NEXT,0,66149,ROTX,1,6149,ROTX,-1

CE,NEXT,0,86107,UX,1,6107,UX,-1
CE,NEXT,0,86107,UY,1,6107,UY,-1
CE,NEXT,0,86107,UZ,1,6107,UZ,-1
CE,NEXT,0,86107,ROTX,1,6107,ROTX,-1

CE,NEXT,0,87107,UX,1,7107,UX,-1
CE,NEXT,0,87107,UY,1,7107,UY,-1
CE,NEXT,0,87107,UZ,1,7107,UZ,-1
CE,NEXT,0,87107,ROTX,1,7107,ROTX,-1

CE,NEXT,0,76155,UX,1,6155,UX,-1
CE,NEXT,0,76155,UY,1,6155,UY,-1
CE,NEXT,0,76155,UZ,1,6155,UZ,-1
CE,NEXT,0,76155,ROTX,1,6155,ROTX,-1

CE,NEXT,0,77155,UX,1,7155,UX,-1
CE,NEXT,0,77155,UY,1,7155,UY,-1
CE,NEXT,0,77155,UZ,1,7155,UZ,-1
CE,NEXT,0,77155,ROTX,1,7155,ROTX,-1

CE,NEXT,0,76154,UX,1,6154,UX,-1
CE,NEXT,0,76154,UY,1,6154,UY,-1
CE,NEXT,0,76154,UZ,1,6154,UZ,-1
CE,NEXT,0,76154,ROTX,1,6154,ROTX,-1

CE,NEXT,0,77154,UX,1,7154,UX,-1
CE,NEXT,0,77154,UY,1,7154,UY,-1
CE,NEXT,0,77154,UZ,1,7154,UZ,-1
CE,NEXT,0,77154,ROTX,1,7154,ROTX,-1

CE,NEXT,0,76153,UX,1,6153,UX,-1
CE,NEXT,0,76153,UY,1,6153,UY,-1
CE,NEXT,0,76153,UZ,1,6153,UZ,-1
CE,NEXT,0,76153,ROTX,1,6153,ROTX,-1

CE,NEXT,0,77153,UX,1,7153,UX,-1
CE,NEXT,0,77153,UY,1,7153,UY,-1
CE,NEXT,0,77153,UZ,1,7153,UZ,-1
CE,NEXT,0,77153,ROTX,1,7153,ROTX,-1

CE,NEXT,0,76152,UX,1,6152,UX,-1
CE,NEXT,0,76152,UY,1,6152,UY,-1
CE,NEXT,0,76152,UZ,1,6152,UZ,-1
CE,NEXT,0,76152,ROTX,1,6152,ROTX,-1

CE,NEXT,0,77152,UX,1,7152,UX,-1
CE,NEXT,0,77152,UY,1,7152,UY,-1
CE,NEXT,0,77152,UZ,1,7152,UZ,-1
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CE,NEXT,0,77152,ROTX,1,7152,ROTX,-1

CE,NEXT,0,76151,UX,1,6151,UX,-1
CE,NEXT,0,76151,UY,1,6151,UY,-1
CE,NEXT,0,76151,UZ,1,6151,UZ,-1
CE,NEXT,0,76151,ROTX,1,6151,ROTX,-1

CE,NEXT,0,77151,UX,1,7151,UX,-1
CE,NEXT,0,77151,UY,1,7151,UY,-1
CE,NEXT,0,77151,UZ,1,7151,UZ,-1
CE,NEXT,0,77151,ROTX,1,7151,ROTX,-1

CE,NEXT,0,76150,UX,1,6150,UX,-1
CE,NEXT,0,76150,UY,1,6150,UY,-1
CE,NEXT,0,76150,UZ,1,6150,UZ,-1
CE,NEXT,0,76150,ROTX,1,6150,ROTX,-1

CE,NEXT,0,77150,UX,1,7150,UX,-1
CE,NEXT,0,77150,UY,1,7150,UY,-1
CE,NEXT,0,77150,UZ,1,7150,UZ,-1
CE,NEXT,0,77150,ROTX,1,7150,ROTX,-1

CE,NEXT,0,76149,UX,1,6149,UX,-1
CE,NEXT,0,76149,UY,1,6149,UY,-1
CE,NEXT,0,76149,UZ,1,6149,UZ,-1
CE,NEXT,0,76149,ROTX,1,6149,ROTX,-1

CE,NEXT,0,77149,UX,1,7149,UX,-1
CE,NEXT,0,77149,UY,1,7149,UY,-1
CE,NEXT,0,77149,UZ,1,7149,UZ,-1
CE,NEXT,0,77149,ROTX,1,7149,ROTX,-1

CE,NEXT,0,77107,UX,1,7107,UX,-1
CE,NEXT,0,77107,UY,1,7107,UY,-1
CE,NEXT,0,77107,UZ,1,7107,UZ,-1
CE,NEXT,0,77107,ROTX,1,7107,ROTX,-1

CE,NEXT,0,78107,UX,1,8107,UX,-1
CE,NEXT,0,78107,UY,1,8107,UY,-1
CE,NEXT,0,78107,UZ,1,8107,UZ,-1
CE,NEXT,0,78107,ROTX,1,8107,ROTX,-1

CE,NEXT,0,67155,UX,1,7155,UX,-1
CE,NEXT,0,67155,UY,1,7155,UY,-1
CE,NEXT,0,67155,UZ,1,7155,UZ,-1
CE,NEXT,0,67155,ROTX,1,7155,ROTX,-1

CE,NEXT,0,68155,UX,1,8155,UX,-1
CE,NEXT,0,68155,UY,1,8155,UY,-1
CE,NEXT,0,68155,UZ,1,8155,UZ,-1
CE,NEXT,0,68155,ROTX,1,8155,ROTX,-1

CE,NEXT,0,67154,UX,1,7154,UX,-1
CE,NEXT,0,67154,UY,1,7154,UY,-1
CE,NEXT,0,67154,UZ,1,7154,UZ,-1
CE,NEXT,0,67154,ROTX,1,7154,ROTX,-1

CE,NEXT,0,68154,UX,1,8154,UX,-1
CE,NEXT,0,68154,UY,1,8154,UY,-1
CE,NEXT,0,68154,UZ,1,8154,UZ,-1
CE,NEXT,0,68154,ROTX,1,8154,ROTX,-1

CE,NEXT,0,67153,UX,1,7153,UX,-1
CE,NEXT,0,67153,UY,1,7153,UY,-1
CE,NEXT,0,67153,UZ,1,7153,UZ,-1
CE,NEXT,0,67153,ROTX,1,7153,ROTX,-1

CE,NEXT,0,68153,UX,1,8153,UX,-1
CE,NEXT,0,68153,UY,1,8153,UY,-1
CE,NEXT,0,68153,UZ,1,8153,UZ,-1
CE,NEXT,0,68153,ROTX,1,8153,ROTX,-1

CE,NEXT,0,67152,UX,1,7152,UX,-1
CE,NEXT,0,67152,UY,1,7152,UY,-1
CE,NEXT,0,67152,UZ,1,7152,UZ,-1
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CE,NEXT,0,67152,ROTX,1,7152,ROTX,-1

CE,NEXT,0,78152,UX,1,8152,UX,-1
CE,NEXT,0,78152,UY,1,8152,UY,-1
CE,NEXT,0,78152,UZ,1,8152,UZ,-1
CE,NEXT,0,78152,ROTX,1,8152,ROTX,-1

CE,NEXT,0,67151,UX,1,7151,UX,-1
CE,NEXT,0,67151,UY,1,7151,UY,-1
CE,NEXT,0,67151,UZ,1,7151,UZ,-1
CE,NEXT,0,67151,ROTX,1,7151,ROTX,-1

CE,NEXT,0,68151,UX,1,8151,UX,-1
CE,NEXT,0,68151,UY,1,8151,UY,-1
CE,NEXT,0,68151,UZ,1,8151,UZ,-1
CE,NEXT,0,68151,ROTX,1,8151,ROTX,-1

CE,NEXT,0,67150,UX,1,7150,UX,-1
CE,NEXT,0,67150,UY,1,7150,UY,-1
CE,NEXT,0,67150,UZ,1,7150,UZ,-1
CE,NEXT,0,67150,ROTX,1,7150,ROTX,-1

CE,NEXT,0,68150,UX,1,8150,UX,-1
CE,NEXT,0,68150,UY,1,8150,UY,-1
CE,NEXT,0,68150,UZ,1,8150,UZ,-1
CE,NEXT,0,68150,ROTX,1,8150,ROTX,-1

CE,NEXT,0,67149,UX,1,7149,UX,-1
CE,NEXT,0,67149,UY,1,7149,UY,-1
CE,NEXT,0,67149,UZ,1,7149,UZ,-1
CE,NEXT,0,67149,ROTX,1,7149,ROTX,-1

CE,NEXT,0,68149,UX,1,8149,UX,-1
CE,NEXT,0,68149,UY,1,8149,UY,-1
CE,NEXT,0,68149,UZ,1,8149,UZ,-1
CE,NEXT,0,68149,ROTX,1,8149,ROTX,-1

CE,NEXT,0,87118,UX,1,7118,UX,-1
CE,NEXT,0,87118,UY,1,7118,UY,-1
CE,NEXT,0,87118,UZ,1,7118,UZ,-1
CE,NEXT,0,87118,ROTX,1,7118,ROTX,-1

CE,NEXT,0,78118,UX,1,8118,UX,-1
CE,NEXT,0,78118,UY,1,8118,UY,-1
CE,NEXT,0,78118,UZ,1,8118,UZ,-1
CE,NEXT,0,78118,ROTX,1,8118,ROTX,-1

CE,NEXT,0,70181,UX,1,181,UX,-1
CE,NEXT,0,70181,UY,1,181,UY,-1
CE,NEXT,0,70181,UZ,1,181,UZ,-1
CE,NEXT,0,70181,ROTX,1,181,ROTX,-1

CE,NEXT,0,70155,UX,1,155,UX,-1
CE,NEXT,0,70155,UY,1,155,UY,-1
CE,NEXT,0,70155,UZ,1,155,UZ,-1
CE,NEXT,0,70155,ROTX,1,155,ROTX,-1

CE,NEXT,0,70180,UX,1,180,UX,-1
CE,NEXT,0,70180,UY,1,180,UY,-1
CE,NEXT,0,70180,UZ,1,180,UZ,-1
CE,NEXT,0,70180,ROTX,1,180,ROTX,-1

CE,NEXT,0,70154,UX,1,154,UX,-1
CE,NEXT,0,70154,UY,1,154,UY,-1
CE,NEXT,0,70154,UZ,1,154,UZ,-1
CE,NEXT,0,70154,ROTX,1,154,ROTX,-1

CE,NEXT,0,70179,UX,1,179,UX,-1
CE,NEXT,0,70179,UY,1,179,UY,-1
CE,NEXT,0,70179,UZ,1,179,UZ,-1
CE,NEXT,0,70179,ROTX,1,179,ROTX,-1

CE,NEXT,0,70153,UX,1,153,UX,-1
CE,NEXT,0,70153,UY,1,153,UY,-1
CE,NEXT,0,70153,UZ,1,153,UZ,-1
```

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CE,NEXT,0,70153,ROTX,1,153,ROTX,-1

CE,NEXT,0,70178,UX,1,178,UX,-1
CE,NEXT,0,70178,UY,1,178,UY,-1
CE,NEXT,0,70178,UZ,1,178,UZ,-1
CE,NEXT,0,70178,ROTX,1,178,ROTX,-1

CE,NEXT,0,70152,UX,1,152,UX,-1
CE,NEXT,0,70152,UY,1,152,UY,-1
CE,NEXT,0,70152,UZ,1,152,UZ,-1
CE,NEXT,0,70152,ROTX,1,152,ROTX,-1

CE,NEXT,0,70177,UX,1,177,UX,-1
CE,NEXT,0,70177,UY,1,177,UY,-1
CE,NEXT,0,70177,UZ,1,177,UZ,-1
CE,NEXT,0,70177,ROTX,1,177,ROTX,-1

CE,NEXT,0,70151,UX,1,151,UX,-1
CE,NEXT,0,70151,UY,1,151,UY,-1
CE,NEXT,0,70151,UZ,1,151,UZ,-1
CE,NEXT,0,70151,ROTX,1,151,ROTX,-1

CE,NEXT,0,70176,UX,1,176,UX,-1
CE,NEXT,0,70176,UY,1,176,UY,-1
CE,NEXT,0,70176,UZ,1,176,UZ,-1
CE,NEXT,0,70176,ROTX,1,176,ROTX,-1

CE,NEXT,0,70150,UX,1,150,UX,-1
CE,NEXT,0,70150,UY,1,150,UY,-1
CE,NEXT,0,70150,UZ,1,150,UZ,-1
CE,NEXT,0,70150,ROTX,1,150,ROTX,-1

CE,NEXT,0,70175,UX,1,175,UX,-1
CE,NEXT,0,70175,UY,1,175,UY,-1
CE,NEXT,0,70175,UZ,1,175,UZ,-1
CE,NEXT,0,70175,ROTX,1,175,ROTX,-1

CE,NEXT,0,70149,UX,1,149,UX,-1
CE,NEXT,0,70149,UY,1,149,UY,-1
CE,NEXT,0,70149,UZ,1,149,UZ,-1
CE,NEXT,0,70149,ROTX,1,149,ROTX,-1

CE,NEXT,0,68109,UX,1,8109,UX,-1
CE,NEXT,0,68109,UY,1,8109,UY,-1
CE,NEXT,0,68109,UZ,1,8109,UZ,-1
CE,NEXT,0,68109,ROTX,1,8109,ROTX,-1

CE,NEXT,0,77109,UX,1,7109,UX,-1
CE,NEXT,0,77109,UY,1,7109,UY,-1
CE,NEXT,0,77109,UZ,1,7109,UZ,-1
CE,NEXT,0,77109,ROTX,1,7109,ROTX,-1

CE,NEXT,0,74109,UX,1,4109,UX,-1
CE,NEXT,0,74109,UY,1,4109,UY,-1
CE,NEXT,0,74109,UZ,1,4109,UZ,-1
CE,NEXT,0,74109,ROTX,1,4109,ROTX,-1

CE,NEXT,0,73109,UX,1,3109,UX,-1
CE,NEXT,0,73109,UY,1,3109,UY,-1
CE,NEXT,0,73109,UZ,1,3109,UZ,-1
CE,NEXT,0,73109,ROTX,1,3109,ROTX,-1

CE,NEXT,0,74120,UX,1,4120,UX,-1
CE,NEXT,0,74120,UY,1,4120,UY,-1
CE,NEXT,0,74120,UZ,1,4120,UZ,-1
CE,NEXT,0,74120,ROTX,1,4120,ROTX,-1

CE,NEXT,0,73120,UX,1,3120,UX,-1
CE,NEXT,0,73120,UY,1,3120,UY,-1
CE,NEXT,0,73120,UZ,1,3120,UZ,-1
CE,NEXT,0,73120,ROTX,1,3120,ROTX,-1

CE,NEXT,0,9,UY,1,60009,UY,-1

CE,NEXT,0,20,UY,1,60020,UY,-1
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```
CE,NEXT,0,108,UY,1,60108,UY,-1

CE,NEXT,0,119,UY,1,60119,UY,-1

CE,NEXT,0,1108,UY,1,61108,UY,-1

CE,NEXT,0,1119,UY,1,61119,UY,-1

CE,NEXT,0,2108,UY,1,62108,UY,-1

CE,NEXT,0,2119,UY,1,62119,UY,-1

CE,NEXT,0,3108,UY,1,63108,UY,-1

CE,NEXT,0,3119,UY,1,63119,UY,-1

CE,NEXT,0,4108,UY,1,64108,UY,-1

CE,NEXT,0,4119,UY,1,64119,UY,-1

CE,NEXT,0,5108,UY,1,65108,UY,-1

CE,NEXT,0,5119,UY,1,65119,UY,-1

CE,NEXT,0,6108,UY,1,66108,UY,-1

CE,NEXT,0,7108,UY,1,67108,UY,-1

CE,NEXT,0,7119,UY,1,67119,UY,-1

CE,NEXT,0,8108,UY,1,68108,UY,-1

CE,NEXT,0,8119,UY,1,68119,UY,-1

! DEFINE SUPPORTS BASED ON NODES

D,1,UX,0
D,1,UY,0
D,1,UZ,0
D,1,ROTX,0
D,1,ROTY,0

D,12,UX,0
D,12,UY,0
D,12,UZ,0
D,12,ROTX,0
D,12,ROTY,0

D,101,UX,0
D,101,UY,0
D,101,UZ,0
D,101,ROTX,0
D,101,ROTY,0

D,111,UX,0
D,111,UY,0
D,111,UZ,0
D,111,ROTX,0
D,111,ROTY,0

D,30112,UX,0
D,30112,UY,0
D,30112,UZ,0
D,30112,ROTX,0
D,30112,ROTY,0
D,30112,ROTZ,0

D,123,UX,0
D,123,UY,0
D,123,UZ,0
D,123,ROTY,0

D,1101,UX,0
D,1101,UY,0
```

D,1101,UZ,0
D,1101,ROTX,0
D,1101,ROTY,0

D,1111,UX,0
D,1111,UY,0
D,1111,UZ,0
D,1111,ROTX,0
D,1111,ROTY,0

D,31112,UX,0
D,31112,UY,0
D,31112,UZ,0
D,31112,ROTX,0
D,31112,ROTY,0
D,31112,ROTZ,0

D,1123,UX,0
D,1123,UY,0
D,1123,UZ,0
D,1123,ROTY,0

D,2101,UX,0
D,2101,UY,0
D,2101,UZ,0
D,2101,ROTX,0
D,2101,ROTY,0

D,2111,UX,0
D,2111,UY,0
D,2111,UZ,0
D,2111,ROTX,0
D,2111,ROTY,0

D,2122,UX,0
D,2122,UY,0
D,2122,UZ,0
D,2122,ROTY,0

D,32112,UX,0
D,32112,UY,0
D,32112,UZ,0
D,32112,ROTX,0
D,32112,ROTY,0
D,32112,ROTZ,0

D,2123,UX,0
D,2123,UY,0
D,2123,UZ,0
D,2123,ROTY,0

D,3101,UX,0
D,3101,UY,0
D,3101,UZ,0
D,3101,ROTX,0
D,3101,ROTY,0

D,3111,UX,0
D,3111,UY,0
D,3111,UZ,0
D,3111,ROTX,0
D,3111,ROTY,0

D,33112,UX,0
D,33112,UY,0
D,33112,UZ,0
D,33112,ROTX,0
D,33112,ROTY,0
D,33112,ROTZ,0

D,3123,UX,0
D,3123,UY,0
D,3123,UZ,0
D,3123,ROTY,0

```
D,4101,UX,0
D,4101,UY,0
D,4101,UZ,0
D,4101,ROTX,0
D,4101,ROTY,0

D,4111,UX,0
D,4111,UY,0
D,4111,UZ,0
D,4111,ROTX,0
D,4111,ROTY,0

D,5101,UX,0
D,5101,UY,0
D,5101,UZ,0
D,5101,ROTX,0
D,5101,ROTY,0

D,5111,UX,0
D,5111,UY,0
D,5111,UZ,0
D,5111,ROTX,0
D,5111,ROTY,0

D,5112,UZ,0

D,6101,UX,0
D,6101,UY,0
D,6101,UZ,0
D,6101,ROTY,0

D,7101,UX,0
D,7101,UY,0
D,7101,UZ,0
D,7101,ROTX,0
D,7101,ROTY,0

D,7111,UX,0
D,7111,UY,0
D,7111,UZ,0
D,7111,ROTX,0
D,7111,ROTY,0

D,8100,UX,0
D,8100,UY,0
D,8100,UZ,0
D,8100,ROTY,0

D,8101,UX,0
D,8101,UY,0
D,8101,UZ,0
D,8101,ROTX,0
D,8101,ROTY,0

D,8111,UX,0
D,8111,UY,0
D,8111,UZ,0
D,8111,ROTX,0
D,8111,ROTY,0

D,8156,UX,0
D,8156,UY,0
D,8156,UZ,0
D,8156,ROTY,0
D,8156,ROTZ,0

D,8157,UX,0
D,8157,UY,0
D,8157,UZ,0
D,8157,ROTY,0
D,8157,ROTZ,0

/SOLU
```

```
!  Dead Load

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

F,11434,FX,30000

ACEL,0,0,0                                                                    ! THIS
COMMAND ESTABLISHES THE DIRECTION AND FORCE FOR GRAVITY,
!                    USED FOR BUILDING DEAD LOAD

lswrite,1             ! Write dead load to file
SFEDELE,ALL,ALL,ALL     ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL          ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL       ! CLEAR ALL NODES LOADS
ACEL,0,0,0            ! REMOVES BUILDING DEAD LOAD FROM FUTURE LOAD STEPS

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER

F,11434,FZ,-30000

lswrite,2             ! Write dead load to file
SFEDELE,ALL,ALL,ALL     ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL          ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL       ! CLEAR ALL NODES LOADS

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

ACEL,0,GRAV,0




lswrite,5

ACEL,-GRAV,0,0




lswrite,6
ACEL,0,0,-GRAV




lswrite,7

ACEL,0,0,0

SFEDELE,ALL,ALL,ALL     ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL          ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL       ! CLEAR ALL NODES LOADS


FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

ACEL,0,0,0


F,38,FX,1950
F,152,FX,3900
F,178,FX,3900
F,1152,FX,3900
F,2152,FX,3900
F,3152,FX,3900
F,4152,FX,3900
F,5152,FX,3900
F,6152,FX,3900
F,7152,FX,3900
F,8152,FX,1950

F,27,FX,11500
```

```
F,145,FX,23000
F,1145,FX,23000
F,2145,FX,23000
F,3145,FX,23000
F,3160,FX,11500
F,5190,FX,11500


lswrite,8             ! Write 10 KIP LOAD AT ROOF FOR BUILDING COMPARSION
SFEDELE,ALL,ALL,ALL     ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL          ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL       ! CLEAR ALL NODES LOADS

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

ACEL,0,0,0

F,38,FY,-19500
F,152,FY,-39000
F,178,FY,-39000
F,1152,FY,-39000
F,2152,FY,-39000
F,3152,FY,-39000
F,4152,FY,-39000
F,5152,FY,-39000
F,6152,FY,-39000
F,7152,FY,-39000
F,8152,FY,-19500

F,27,FY,-115000
F,145,FY,-230000
F,1145,FY,-230000
F,2145,FY,-230000
F,3145,FY,-230000
F,3160,FY,-115000
F,5190,FY,-115000

lswrite,9             ! Write 10 KIP LOAD AT ROOF FOR BUILDING COMPARSION
SFEDELE,ALL,ALL,ALL     ! CLEAR ALL BEAM LOADS
SFDELE,ALL,ALL          ! CLEAR ALL NODES LOADS
FDELE,ALL,ALL,ALL       ! CLEAR ALL NODES LOADS

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER

ACEL,0,0,0

F,38,FZ,1950
F,152,FZ,3900
F,178,FZ,3900
F,1152,FZ,3900
F,2152,FZ,3900
F,3152,FZ,3900
F,4152,FZ,3900
F,5152,FZ,3900
F,6152,FZ,3900
F,7152,FZ,3900
F,8152,FZ,1950

F,27,FZ,11500
F,145,FZ,23000
F,1145,FZ,23000
F,2145,FZ,23000
F,3145,FZ,23000
F,3160,FZ,11500
F,5190,FZ,11500

lswrite,10            ! Write 10 KIP LOAD AT ROOF FOR BUILDING COMPARSION


LSSOLVE,5,10,1          ! SOLVE MODEL FOR STADIC LOADS STEEL DEAD LOAD ONLY


NSEL,S,,2
```

```
NSEL,A,,,19
NSEL,A,,,27
NSEL,A,,,38
NSEL,A,,,102
NSEL,A,,,118
NSEL,A,,,128
NSEL,A,,,146
NSEL,A,,,152
NSEL,A,,,1102
NSEL,A,,,1118
NSEL,A,,,1146
NSEL,A,,,1153
NSEL,A,,,2102
NSEL,A,,,2118
NSEL,A,,,2146
NSEL,A,,,2152
NSEL,A,,,3102
NSEL,A,,,3118
NSEL,A,,,3153
NSEL,A,,,4102
NSEL,A,,,4118
NSEL,A,,,4152
NSEL,A,,,5102
NSEL,A,,,5118
NSEL,A,,,5153
NSEL,A,,,6118
NSEL,A,,,6152
NSEL,A,,,7118
NSEL,A,,,7152
NSEL,A,,,8118
NSEL,A,,,8152


/POST1
AVPRIN,0, ,
ETABLE,FX_I,SMISC, 1
ETABLE,FX_J,SMISC, 7
!*
AVPRIN,0, ,
ETABLE,FY_I,SMISC, 2
ETABLE,FY_J,SMISC, 8
!*
AVPRIN,0, ,
ETABLE,FZ_I,SMISC, 3
ETABLE,FZ_J,SMISC, 9
!*
AVPRIN,0, ,
ETABLE,MX_I,SMISC, 4
ETABLE,MX_J,SMISC, 10
!*
AVPRIN,0, ,
ETABLE,MY_I,SMISC, 5
ETABLE,MY_J,SMISC, 11
!*
AVPRIN,0, ,
ETABLE,MZ_I,SMISC, 6
ETABLE,MZ_J,SMISC, 12


FINISH
```

Attachment 10

ANSYS Coupled Building/Crane Model, Crane at K, Modal Analysis

```
/BATCH
/FILENAME, PGCR045
!/CWD,'C:\Documents and Settings\mkeeney\Desktop\MCK_ANSYS\Ansys\output'
/TITLE,Auxiliary Building Modifications
/PREP7

! The units for this model are INCHES POUNDS SECONDS.
! The nodal coordinates are a direct copy of the GT STRDL model.
! The node numbers match the original model were possible.


! DEFINE NODE LOCATIONS

N,1,0,0,0
N,2,0,489.96,0
N,3,0,844.08,0
N,4,0,852,0
N,5,0,852,11
N,6,0,860.04,11
N,7,0,870.6,11
N,8,0,1065.96,11
N,9,0,852,-12
N,10,0,870.6,-12
N,12,0,0,-576
N,13,0,489.96,-576
N,14,0,844.08,-576
N,15,0,852,-576
N,16,0,852,-587
N,17,0,860.04,-587
N,18,0,870.6,-587
N,19,0,1065.96,-587
N,20,0,852,-564
N,21,0,870.6,-564
N,23,0,288,-336
N,24,0,489.96,-504
N,25,0,489.96,-432
N,26,0,489.96,-360
N,27,0,489.96,-288
N,28,0,489.96,-216
N,29,0,489.96,-144
N,30,0,489.96,-72
N,31,0,672,-432
N,32,0,672,-288
N,33,0,672,-144
N,34,0,844.08,-288
N,35,0,1065.96,-512
N,36,0,1065.96,-437
N,37,0,1065.96,-362
N,38,0,1065.96,-288
N,39,0,1065.96,-214
N,40,0,1065.96,-139
N,41,0,1065.96,-64
N,101,432,288,0
N,102,432,489.96,0
N,103,432,852,0
N,104,432,852,11
N,105,432,860.04,11
N,106,432,870.6,11
N,107,432,1065.96,11
N,108,432,852,-12
N,109,432,870.6,-12
N,111,432,288,-576
N,112,432,489.96,-576
N,113,432,573,-576
N,114,432,852,-576
N,115,432,852,-587
N,116,432,860.04,-587
N,117,432,870.6,-587
N,118,432,1065.96,-587
N,119,432,852,-564
N,120,432,870.6,-564
N,123,432,288,-288
N,124,216,489.96,-576
N,125,216,489.96,-504
```

```
N,126,216,489.96,-432
N,127,216,489.96,-360
N,128,216,489.96,-288
N,129,216,489.96,-216
N,130,216,489.96,-144
N,131,216,489.96,-72
N,132,216,489.96,0
N,133,336,489.96,-576
N,134,336,489.96,-504
N,135,336,489.96,-432
N,136,336,489.96,-360
N,137,336,489.96,-288
N,138,336,489.96,-216
N,139,336,489.96,-144
N,140,336,489.96,-72
N,141,336,489.96,0
N,142,432,489.96,-504
N,143,432,489.96,-432
N,144,432,489.96,-360
N,145,432,489.96,-288
N,146,432,489.96,-216
N,147,432,489.96,-144
N,148,432,489.96,-72
N,149,432,1065.96,-512
N,150,432,1065.96,-437
N,151,432,1065.96,-362
N,152,432,1065.96,-288
N,153,432,1065.96,-214
N,154,432,1065.96,-139
N,155,432,1065.96,-64
N,174,216,1065.96,-587
N,175,216,1065.96,-512
N,176,216,1065.96,-437
N,177,216,1065.96,-362
N,178,216,1065.96,-288
N,179,216,1065.96,-214
N,180,216,1065.96,-139
N,181,216,1065.96,-64
N,182,216,1065.96,11
N,183,577.5,573,-576
N,1101,723,288,0
N,1102,723,489.96,0
N,1103,723,852,0
N,1104,723,852,11
N,1105,723,860.04,11
N,1106,723,870.6,11
N,1107,723,1065.96,11
N,1108,723,852,-12
N,1109,723,870.6,-12
N,1111,723,288,-576
N,1112,723,489.96,-576
N,1113,723,573,-576
N,1114,723,852,-576
N,1115,723,852,-587
N,1116,723,860.04,-587
N,1117,723,870.6,-587
N,1118,723,1065.96,-587
N,1119,723,852,-564
N,1120,723,870.6,-564
N,1123,723,288,-288
N,1142,723,489.96,-504
N,1143,723,489.96,-432
N,1144,723,489.96,-360
N,1145,723,489.96,-288
N,1146,723,489.96,-216
N,1147,723,489.96,-144
N,1148,723,489.96,-72
N,1149,723,1065.96,-512
N,1150,723,1065.96,-437
N,1151,723,1065.96,-362
N,1152,723,1065.96,-288
N,1153,723,1065.96,-214
N,1154,723,1065.96,-139
N,1155,723,1065.96,-64
N,2101,1014,288,0
```

N,2102,1014,489.96,0
N,2103,1014,852,0
N,2104,1014,852,11
N,2105,1014,860.04,11
N,2106,1014,870.6,11
N,2107,1014,1065.96,11
N,2108,1014,852,-12
N,2109,1014,870.6,-12
N,2111,1014,288,-576
N,2112,1014,489.96,-576
N,2113,1014,573,-576
N,2114,1014,852,-576
N,2115,1014,852,-587
N,2116,1014,860.04,-587
N,2117,1014,870.6,-587
N,2118,1014,1065.96,-587
N,2119,1014,852,-564
N,2120,1014,870.6,-564
N,2122,1159.5,288,-587
N,2123,1014,288,-288
N,2124,1118.52,489.96,0
N,2125,1118.52,489.96,-72
N,2126,1159.5,489.96,-72
N,2127,1159.5,489.96,0
N,2142,1014,489.96,-504
N,2143,1014,489.96,-432
N,2144,1014,489.96,-360
N,2145,1014,489.96,-288
N,2146,1014,489.96,-216
N,2147,1014,489.96,-144
N,2148,1014,489.96,-72
N,2149,1014,1065.96,-512
N,2150,1014,1065.96,-437
N,2151,1014,1065.96,-362
N,2152,1014,1065.96,-288
N,2153,1014,1065.96,-214
N,2154,1014,1065.96,-139
N,2155,1014,1065.96,-64
N,2156,1159.5,489.96,-587
N,2157,1159.5,489.96,-504
N,2158,1159.5,489.96,-432
N,3100,1305,459.96,0
N,3101,1305,288,0
N,3102,1305,489.96,0
N,3103,1305,852,0
N,3104,1305,852,11
N,3105,1305,860.04,11
N,3106,1305,870.6,11
N,3107,1305,1065.96,11
N,3108,1305,852,-12
N,3109,1305,870.6,-12
N,3111,1305,288,-576
N,3112,1305,489.96,-576
N,3113,1305,573,-576
N,3114,1305,852,-576
N,3115,1305,852,-587
N,3116,1305,860.04,-587
N,3117,1305,870.6,-587
N,3118,1305,1065.96,-587
N,3119,1305,852,-564
N,3120,1305,870.6,-564
N,3121,1159.5,860.04,-587
N,3123,1305,288,-288
N,3142,1305,489.96,-504
N,3143,1305,489.96,-432
N,3144,1305,489.96,-360
N,3145,1305,489.96,-288
N,3146,1305,489.96,-216
N,3147,1305,489.96,-144
N,3148,1305,489.96,-72
N,3149,1305,1065.96,-512
N,3150,1305,1065.96,-437
N,3151,1305,1065.96,-362
N,3152,1305,1065.96,-288
N,3153,1305,1065.96,-214

N,3154,1305,1065.96,-139
N,3155,1305,1065.96,-64
N,3156,1437,489.96,-576
N,3157,1437,489.96,-504
N,3158,1437,489.96,-432
N,3159,1437,489.96,-360
N,3160,1437,489.96,-288
N,3161,1437,489.96,-216
N,3162,1437,489.96,-144
N,3163,1437,489.96,-72
N,3164,1437,489.96,0
N,3165,1437,459.96,0
N,4100,1578,459.96,0
N,4101,1578,288,0
N,4102,1578,489.96,0
N,4103,1578,852,0
N,4104,1578,852,11
N,4105,1578,860.04,11
N,4106,1578,870.6,11
N,4107,1578,1065.96,11
N,4108,1578,852,-12
N,4109,1578,870.6,-12
N,4111,1578,288,-576
N,4112,1578,489.96,-576
N,4113,1578,573,-576
N,4114,1578,852,-576
N,4115,1578,852,-587
N,4116,1578,860.04,-587
N,4117,1578,870.6,-587
N,4118,1578,1065.96,-587
N,4119,1578,852,-564
N,4120,1578,870.6,-564
N,4122,1578,971.04,-587
N,4149,1578,1065.96,-512
N,4150,1578,1065.96,-437
N,4151,1578,1065.96,-362
N,4152,1578,1065.96,-288
N,4153,1578,1065.96,-214
N,4154,1578,1065.96,-139
N,4155,1578,1065.96,-64
N,4156,1717.5,971.04,-587
N,5100,1857,459.96,0
N,5101,1857,288,0
N,5102,1857,489.96,0
N,5103,1857,852,0
N,5104,1857,852,11
N,5105,1857,860.04,11
N,5106,1857,870.6,11
N,5107,1857,1065.96,11
N,5108,1857,852,-12
N,5109,1857,870.6,-12
N,5111,1857,288,-576
N,5112,1857,489.96,-576
N,5113,1857,573,-576
N,5114,1857,852,-576
N,5115,1857,852,-587
N,5116,1857,860.04,-587
N,5117,1857,870.6,-587
N,5118,1857,1065.96,-587
N,5119,1857,852,-564
N,5120,1857,870.6,-564
N,5122,1857,971.04,-587
N,5123,1717.5,573,-576
N,5149,1857,1065.96,-512
N,5150,1857,1065.96,-437
N,5151,1857,1065.96,-362
N,5152,1857,1065.96,-288
N,5153,1857,1065.96,-214
N,5154,1857,1065.96,-139
N,5155,1857,1065.96,-64
N,5187,1857,489.96,-504
N,5188,1857,489.96,-432
N,5189,1857,489.96,-360
N,5190,1857,489.96,-288
N,5191,1857,489.96,-216

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N,5192,1857,489.96,-144
N,5193,1857,489.96,-72
N,6101,2097,516,0
N,6103,2097,852,0
N,6104,2097,852,11
N,6105,2097,860.04,11
N,6106,2097,870.6,11
N,6107,2097,1065.96,11
N,6108,2097,852,-12
N,6109,2097,870.6,-12
N,6118,2097,1065.96,-587
N,6149,2097,1065.96,-512
N,6150,2097,1065.96,-437
N,6151,2097,1065.96,-362
N,6152,2097,1065.96,-288
N,6153,2097,1065.96,-214
N,6154,2097,1065.96,-139
N,6155,2097,1065.96,-64
N,7101,2301,516,0
N,7103,2301,852,0
N,7104,2301,852,11
N,7105,2301,860.04,11
N,7106,2301,870.6,11
N,7107,2301,1065.96,11
N,7108,2301,852,-12
N,7109,2301,870.6,-12
N,7111,2301,516,-576
N,7114,2301,852,-576
N,7115,2301,852,-587
N,7116,2301,860.04,-587
N,7117,2301,870.6,-587
N,7118,2301,1065.96,-587
N,7119,2301,852,-564
N,7120,2301,870.6,-564
N,7122,2301,971.04,-587
N,7149,2301,1065.96,-512
N,7150,2301,1065.96,-437
N,7151,2301,1065.96,-362
N,7152,2301,1065.96,-288
N,7153,2301,1065.96,-214
N,7154,2301,1065.96,-139
N,7155,2301,1065.96,-64
N,8100,2505,516,-288
N,8101,2505,516,0
N,8103,2505,852,0
N,8104,2505,852,11
N,8105,2505,860.04,11
N,8106,2505,870.6,11
N,8107,2505,1065.96,11
N,8108,2505,852,-12
N,8109,2505,870.6,-12
N,8111,2505,516,-576

N,8112,2505,849.98,-288     ! NEW NODE FOR MODAL ANALISYS MCK 9/22/10

N,8114,2505,852,-576
N,8115,2505,852,-587
N,8116,2505,860.04,-587
N,8117,2505,870.6,-587
N,8118,2505,1065.96,-587
N,8119,2505,852,-564
N,8120,2505,870.6,-564
N,8149,2505,1065.96,-512
N,8150,2505,1065.96,-437
N,8151,2505,1065.96,-362
N,8152,2505,1065.96,-288
N,8153,2505,1065.96,-214
N,8154,2505,1065.96,-139
N,8155,2505,1065.96,-64
N,8156,432,288,-932
N,8157,1578,288,-900
N,21740,1159.5,573,-587
N,81660,2505,971.04,-587

!
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!  Added runway girder nodes
!  Replace "CNR" with on node numbers starting at 10000.
N,10101,2241,870.6,-564
N,10102,2187,870.6,-564
N,10103,2019,870.6,-564
N,10104,1965,870.6,-564
N,10113,2241,870.6,-12
N,10114,2187,870.6,-12
N,10115,2019,870.6,-12
N,10116,1965,870.6,-12
N,10201,2139,870.6,-564
N,10202,2085,870.6,-564
N,10203,1917,870.6,-564
N,10204,1863,870.6,-564
N,10213,2139,870.6,-12
N,10214,2085,870.6,-12
N,10215,1917,870.6,-12
N,10216,1863,870.6,-12
N,10301,2106,870.6,-564
N,10302,2052,870.6,-564
N,10303,1884,870.6,-564
N,10304,1830,870.6,-564
N,10313,2106,870.6,-12
N,10314,2052,870.6,-12
N,10315,1884,870.6,-12
N,10316,1830,870.6,-12
N,10401,1296,870.6,-564
N,10402,1242,870.6,-564
N,10403,1074,870.6,-564
N,10404,1020,870.6,-564
N,10413,1296,870.6,-12
N,10414,1242,870.6,-12
N,10415,1074,870.6,-12
N,10416,1020,870.6,-12
N,10501,1263,870.6,-564
N,10502,1209,870.6,-564
N,10503,1041,870.6,-564
N,10504,987,870.6,-564
N,10513,1263,870.6,-12
N,10514,1209,870.6,-12
N,10515,1041,870.6,-12
N,10516,987,870.6,-12
N,10601,1173,870.6,-564
N,10602,1119,870.6,-564
N,10603,951,870.6,-564
N,10604,897,870.6,-564
N,10613,1173,870.6,-12
N,10614,1119,870.6,-12
N,10615,951,870.6,-12
N,10616,897,870.6,-12
N,10701,459,870.6,-564
N,10702,405,870.6,-564
N,10703,237,870.6,-564
N,10704,183,870.6,-564
N,10713,459,870.6,-12
N,10714,405,870.6,-12
N,10715,237,870.6,-12
N,10716,183,870.6,-12
N,10801,372,870.6,-564
N,10802,318,870.6,-564
N,10803,150,870.6,-564
N,10804,96,870.6,-564
N,10813,372,870.6,-12
N,10814,318,870.6,-12
N,10815,150,870.6,-12
N,10816,96,870.6,-12
N,10901,303,870.6,-564
N,10902,249,870.6,-564
N,10903,81,870.6,-564
N,10904,27,870.6,-564
N,10913,303,870.6,-12
N,10914,249,870.6,-12
N,10915,81,870.6,-12
N,10916,27,870.6,-12
!
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!  Added crane nodes
!  Replace "CN" with on nodes numbers starting at 11000
N,11001,2214,946.1,-12
N,11002,2214,946.1,-238.38
N,11003,2214,946.1,-21.96
N,11004,2214,946.1,-31.91
N,11005,2214,946.1,-41.87
N,11006,2214,946.1,-51.83
N,11007,2214,946.1,-61.78
N,11008,2214,946.1,-71.74
N,11009,2214,946.1,-81.7
N,11010,2214,946.1,-91.65
N,11011,2214,946.1,-101.61
N,11012,2214,946.1,-111.57
N,11013,2214,946.1,-121.52
N,11014,2214,946.1,-131.48
N,11015,2214,946.1,-141.43
N,11016,2214,946.1,-151.39
N,11017,2214,946.1,-161.35
N,11018,2214,946.1,-171.3
N,11019,2214,946.1,-181.26
N,11020,2214,946.1,-191.22
N,11021,2214,946.1,-201.17
N,11022,2214,946.1,-211.13
N,11023,2214,946.1,-221.09
N,11024,2214,946.1,-231.04
N,11025,2214,946.1,-564
N,11026,2214,946.1,-332.38
N,11027,2214,946.1,-554.04
N,11028,2214,946.1,-544.09
N,11029,2214,946.1,-534.13
N,11030,2214,946.1,-524.17
N,11031,2214,946.1,-514.22
N,11032,2214,946.1,-504.26
N,11033,2214,946.1,-494.3
N,11034,2214,946.1,-484.35
N,11035,2214,946.1,-474.39
N,11036,2214,946.1,-464.43
N,11037,2214,946.1,-454.48
N,11038,2214,946.1,-444.52
N,11039,2214,946.1,-434.57
N,11040,2214,946.1,-424.61
N,11041,2214,946.1,-414.65
N,11042,2214,946.1,-404.7
N,11043,2214,946.1,-394.73913
N,11044,2214,946.1,-384.78
N,11045,2214,946.1,-374.83
N,11046,2214,946.1,-364.87
N,11047,2214,946.1,-354.91
N,11048,2214,946.1,-344.96
N,11049,1992,946.1,-12
N,11050,1992,946.1,-238.38
N,11051,1992,946.1,-21.96
N,11052,1992,946.1,-31.91
N,11053,1992,946.1,-41.87
N,11054,1992,946.1,-51.83
N,11055,1992,946.1,-61.78
N,11056,1992,946.1,-71.74
N,11057,1992,946.1,-81.7
N,11058,1992,946.1,-91.65
N,11059,1992,946.1,-101.61
N,11060,1992,946.1,-111.57
N,11061,1992,946.1,-121.52
N,11062,1992,946.1,-131.48
N,11063,1992,946.1,-141.43
N,11064,1992,946.1,-151.39
N,11065,1992,946.1,-161.35
N,11066,1992,946.1,-171.3
N,11067,1992,946.1,-181.26
N,11068,1992,946.1,-191.22
N,11069,1992,946.1,-201.17
N,11070,1992,946.1,-211.13
N,11071,1992,946.1,-221.09
N,11072,1992,946.1,-231.04
N,11073,2214,946.1,-325.6
```

N,11074,2214,946.1,-316.2
N,11075,2214,946.1,-306.8
N,11076,2214,946.1,-297.4
N,11077,2214,946.1,-288
N,11078,2214,946.1,-278.6
N,11079,2214,946.1,-269.2
N,11080,2214,946.1,-259.8
N,11081,2214,946.1,-250.4
N,11082,1992,946.1,-564
N,11083,1992,946.1,-332.38
N,11084,1992,946.1,-554.04
N,11085,1992,946.1,-544.09
N,11086,1992,946.1,-534.13
N,11087,1992,946.1,-524.17
N,11088,1992,946.1,-514.22
N,11089,1992,946.1,-504.26
N,11090,1992,946.1,-494.3
N,11091,1992,946.1,-484.35
N,11092,1992,946.1,-474.39
N,11093,1992,946.1,-464.43
N,11094,1992,946.1,-454.48
N,11095,1992,946.1,-444.52
N,11096,1992,946.1,-434.57
N,11097,1992,946.1,-424.61
N,11098,1992,946.1,-414.65
N,11099,1992,946.1,-404.7
N,11100,1992,946.1,-394.73913
N,11101,1992,946.1,-384.78
N,11102,1992,946.1,-374.83
N,11103,1992,946.1,-364.87
N,11104,1992,946.1,-354.91
N,11105,1992,946.1,-344.96
N,11106,1992,946.1,-325.6
N,11107,1992,946.1,-316.2
N,11108,1992,946.1,-306.8
N,11109,1992,946.1,-297.4
N,11110,1992,946.1,-288
N,11111,1992,946.1,-278.6
N,11112,1992,946.1,-269.2
N,11113,1992,946.1,-259.8
N,11114,1992,946.1,-250.4
N,11115,1992,947.1,-332.38
N,11116,1992,998.9,-332.38
N,11117,1992,955.73333333,-332.38
N,11118,1992,964.3666667,-332.38
N,11119,1992,973,-332.38
N,11120,1992,981.6333333,-332.38
N,11121,1992,990.2666667,-332.38
N,11122,2214,947.1,-332.38
N,11123,2214,998.9,-332.38
N,11124,2214,955.73333333,-332.38
N,11125,2214,964.3666667,-332.38
N,11126,2214,973,-332.38
N,11127,2214,981.6333333,-332.38
N,11128,2214,990.2666667,-332.38
N,11129,2214,947.1,-238.38
N,11130,2214,998.9,-238.38
N,11131,2214,955.73333333,-238.38
N,11132,2214,964.3666667,-238.38
N,11133,2214,973,-238.38
N,11134,2214,981.6333333,-238.38
N,11135,2214,990.2666667,-238.38
N,11136,1992,947.1,-238.38
N,11137,1992,998.9,-238.38
N,11138,1992,955.73333333,-238.38
N,11139,1992,964.3666667,-238.38
N,11140,1992,973,-238.38
N,11141,1992,981.6333333,-238.38
N,11142,1992,990.2666667,-238.38
N,11205,2204.347826,946.1,-564
N,11206,2194.6956522,946.1,-564
N,11207,2185.0434783,946.1,-564
N,11208,2175.3913043,946.1,-564
N,11209,2165.7391304,946.1,-564
N,11210,2156.0869565,946.1,-564

N,11211,2146.4347826,946.1,-564
N,11212,2136.7826087,946.1,-564
N,11213,2127.1304348,946.1,-564
N,11214,2117.4782609,946.1,-564
N,11215,2107.82608696,946.1,-564
N,11216,2098.17391304,946.1,-564
N,11217,2088.5217391,946.1,-564
N,11218,2078.8695652,946.1,-564
N,11219,2069.2173913,946.1,-564
N,11220,2059.5652174,946.1,-564
N,11221,2049.9130435,946.1,-564
N,11222,2040.2608696,946.1,-564
N,11223,2030.6086957,946.1,-564
N,11224,2020.9565217,946.1,-564
N,11225,2011.3043478,946.1,-564
N,11226,2001.652174,946.1,-564
N,11227,2001.652174,946.1,-12
N,11228,2011.3043478,946.1,-12
N,11229,2020.9565217,946.1,-12
N,11230,2030.6086957,946.1,-12
N,11231,2040.2608696,946.1,-12
N,11232,2049.9130435,946.1,-12
N,11233,2059.5652174,946.1,-12
N,11234,2069.2173913,946.1,-12
N,11235,2078.8695652,946.1,-12
N,11236,2088.5217391,946.1,-12
N,11237,2098.17391304,946.1,-12
N,11238,2107.82608696,946.1,-12
N,11239,2117.4782609,946.1,-12
N,11240,2127.1304348,946.1,-12
N,11241,2136.7826087,946.1,-12
N,11242,2146.4347826,946.1,-12
N,11243,2156.0869565,946.1,-12
N,11244,2165.7391304,946.1,-12
N,11245,2175.3913043,946.1,-12
N,11246,2185.0434783,946.1,-12
N,11247,2194.6956522,946.1,-12
N,11248,2204.347826,946.1,-12
N,11249,2214,904.6,-564
N,11250,2214,912.9,-564
N,11251,2214,921.2,-564
N,11252,2214,929.5,-564
N,11253,2214,937.8,-564
N,11254,1992,904.6,-564
N,11255,1992,912.9,-564
N,11256,1992,921.2,-564
N,11257,1992,929.5,-564
N,11258,1992,937.8,-564
N,11259,2214,904.6,-12
N,11260,2214,912.9,-12
N,11261,2214,921.2,-12
N,11262,2214,929.5,-12
N,11263,2214,937.8,-12
N,11264,1992,904.6,-12
N,11265,1992,912.9,-12
N,11266,1992,921.2,-12
N,11267,1992,929.5,-12
N,11268,1992,937.8,-12
N,11270,2241,904.6,-564
N,11272,2187,904.6,-564
N,11274,2019,904.6,-564
N,11276,1965,904.6,-564
N,11278,2241,904.6,-12
N,11280,2187,904.6,-12
N,11282,2019,904.6,-12
N,11284,1965,904.6,-12
N,11285,2232,904.6,-564
N,11286,2223,904.6,-564
N,11287,2010,904.6,-564
N,11288,2001,904.6,-564
N,11289,2196,904.6,-564
N,11290,2205,904.6,-564
N,11291,1974,904.6,-564
N,11292,1983,904.6,-564
N,11293,2232,904.6,-12

N,11294,2223,904.6,-12
N,11295,2010,904.6,-12
N,11296,2001,904.6,-12
N,11297,2196,904.6,-12
N,11298,2205,904.6,-12
N,11299,1974,904.6,-12
N,11300,1983,904.6,-12
N,11301,2177.1176471,904.6,-564
N,11302,2167.2352941,904.6,-564
N,11303,2157.3529412,904.6,-564
N,11304,2147.4705882,904.6,-564
N,11305,2137.5882353,904.6,-564
N,11306,2127.7058824,904.6,-564
N,11307,2117.8235294,904.6,-564
N,11308,2107.94117647,904.6,-564
N,11309,2098.05882353,904.6,-564
N,11310,2088.1764706,904.6,-564
N,11311,2078.2941176,904.6,-564
N,11312,2068.4117647,904.6,-564
N,11313,2058.5294118,904.6,-564
N,11314,2048.6470588,904.6,-564
N,11315,2038.7647059,904.6,-564
N,11316,2028.8823529,904.6,-564
N,11317,2028.8823529,904.6,-12
N,11318,2038.7647059,904.6,-12
N,11319,2048.6470588,904.6,-12
N,11320,2058.5294118,904.6,-12
N,11321,2068.4117647,904.6,-12
N,11322,2078.2941176,904.6,-12
N,11323,2088.1764706,904.6,-12
N,11324,2098.05882353,904.6,-12
N,11325,2107.94117647,904.6,-12
N,11326,2117.8235294,904.6,-12
N,11327,2127.7058824,904.6,-12
N,11328,2137.5882353,904.6,-12
N,11329,2147.4705882,904.6,-12
N,11330,2157.3529412,904.6,-12
N,11331,2167.2352941,904.6,-12
N,11332,2177.1176471,904.6,-12
N,11333,1992,1011.9,-288
N,11334,1992,1011.9,-229.63
N,11337,2214,1011.9,-229.63
N,11338,2214,1011.9,-288
N,11341,2214,1011.9,-341.63
N,11344,1992,1011.9,-341.63
N,11347,2194.5,1011.9,-229.63
N,11348,2185.81,1011.9,-229.63
N,11349,2168.31,1011.9,-229.63
N,11350,2152,1011.9,-229.63
N,11351,2134.5,1011.9,-229.63
N,11352,2126,1011.9,-229.63
N,11353,2005.19,1011.9,-229.63
N,11354,2011.82,1011.9,-229.63
N,11355,2022.82,1011.9,-229.63
N,11356,2080,1011.9,-229.63
N,11357,2110.66666667,1011.9,-229.63
N,11358,2095.33333333,1011.9,-229.63
N,11359,2045.25,1011.9,-229.63
N,11360,2034.035,1011.9,-229.63
N,11361,2067.75,1011.9,-229.63
N,11362,2056.5,1011.9,-229.63
N,11363,2194.5,1011.9,-288
N,11365,2185.81,1011.9,-288
N,11366,2168.31,1011.9,-288
N,11367,2152,1011.9,-288
N,11368,2126,1011.9,-288
N,11369,2080,1011.9,-288
N,11372,2134.5,1011.9,-288
N,11373,2005.19,1011.9,-288
N,11374,2011.82,1011.9,-288
N,11375,2022.82,1011.9,-288
N,11376,2045.25,1011.9,-288
N,11377,2034.035,1011.9,-288
N,11378,2067.75,1011.9,-288
N,11379,2056.5,1011.9,-288

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N,11392,2134.5,1011.9,-249.09
N,11393,2134.5,1011.9,-268.55
N,11395,2067.75,1011.9,-249.09
N,11396,2067.75,1011.9,-268.55
N,11397,2126,1011.9,-268.38
N,11399,2126,1011.9,-247.38
N,11400,2080,1011.9,-247.38
N,11401,2126,1011.9,-257.88
N,11402,2080,1011.9,-268.38
N,11403,2080,1011.9,-257.88
N,11405,2110.66666667,1011.9,-268.38
N,11406,2095.33333333,1011.9,-268.38
N,11408,2110.66666667,1011.9,-247.38
N,11409,2095.33333333,1011.9,-247.38
N,11411,2185.81,1011.9,-249.09
N,11412,2185.81,1011.9,-268.55
N,11414,2168.31,1011.9,-249.09
N,11415,2168.31,1011.9,-268.55
N,11417,2152,1011.9,-249.09
N,11418,2152,1011.9,-268.55
N,11420,2005.19,1011.9,-249.09
N,11421,2005.19,1011.9,-268.55
N,11423,2022.82,1011.9,-249.09
N,11424,2022.82,1011.9,-268.55
N,11426,2045.25,1011.9,-249.09
N,11427,2045.25,1011.9,-268.55
N,11429,2194.5,1011.9,-249.09
N,11430,2194.5,1011.9,-268.55
N,11432,2011.82,1011.9,-249.09
N,11433,2011.82,1011.9,-268.55
N,11434,2103,1011.9,-288
N,11435,2114.5,1011.9,-288
N,11436,2091.5,1011.9,-288
N,11437,2214,1011.9,-332.38
N,11438,2214,1011.9,-302.8
N,11439,2214,1011.9,-317.59
N,11440,1992,1011.9,-332.38
N,11441,1992,1011.9,-302.8
N,11442,1992,1011.9,-317.59
N,11443,2214,1011.9,-238.38
N,11444,2214,1011.9,-254.92
N,11445,2214,1011.9,-271.46
N,11446,1992,1011.9,-238.38
N,11447,1992,1011.9,-254.92
N,11448,1992,1011.9,-271.46
N,11450,2103,915.74,-288

! The following nodes are for column and beam orentation.

N,20001,100,800,-587
N,20002,100,800,-576
N,20003,100,800,-564
N,20004,100,800,-512
N,20005,100,800,-504
N,20006,100,800,-439.97
N,20007,100,800,-437
N,20008,100,800,-420.35
N,20009,100,800,-399.35
N,20010,100,800,-381.6
N,20011,100,800,-362
N,20012,100,800,-360
N,20013,100,800,-288
N,20014,100,800,-216
N,20015,100,800,-214
N,20016,100,800,-144
N,20017,100,800,-139
N,20018,100,800,-72
N,20019,100,800,-64
N,20020,100,800,-12
N,20021,100,800,0
N,20022,100,800,11
N,20030,100,800,-586
N,20035,100,800,-12
N,20036,100,800,-401.06
N,20049,100,800,-12
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N,20052,10000,800,-288
N,20054,10000,800,-586
N,20055,723,800,-586
N,20056,0,800,-586
N,20057,216,800,-586
N,20058,432,800,-586
N,20059,1014,800,-586
N,20060,1305,800,-586
N,20061,1578,800,-586
N,20062,1857,800,-586
N,20063,2097,800,-586
N,20064,2301,800,-586
N,20065,2505,800,-586
N,20066,1159.5,800,-586
N,20067,1437,800,-586
N,20068,1118.52,800,-586
N,20069,100,489.95,-576
N,20070,100,288,-336
N,20071,0,-100,-362
N,20072,0,-100,-214
N,20073,216,-100,11
N,20074,723,-100,11
N,20075,1305,-100,11
N,20076,1857,-100,11
N,20077,2301,-100,11
N,20078,2301,-100,-362
N,20079,2505,-100,-362
N,20080,1014,800,-576
N,20081,336,800,100
N,20082,100,800,-432
N,20083,-100,672,-432       !31
N,20084,-100,672,-144       !33
N,20085,-100,844.08,-288    !34
N,20086,723,-100,-288       !1145
N,20087,1014,-100,-288      !2145
N,20088,1305,-100,-288      !3145

! SPRING NODES

N,30112,432,489.96,-576
N,31112,723,489.96,-576
N,32112,1014,489.96,-576
N,33112,1305,489.96,-576
!N,35112,1857,489.96,-576

!CONSTRAINT NODES

N,40101,2241,894.6,-564
N,40102,2187,894.6,-564
N,40103,2019,894.6,-564
N,40104,1965,894.6,-564
N,40113,2241,894.6,-12
N,40114,2187,894.6,-12
N,40115,2019,894.6,-12
N,40116,1965,894.6,-12

! NODES FOR BEAM EXCENTRICITY

N,50037,0,1059.4725,-362
N,50039,0,1059.4725,-214
N,50153,432,1059.4725,-214
N,50174,216,1059.4725,-587
N,50177,216,1059.4725,-362
N,50179,216,1059.4725,-214
N,50182,216,1059.4725,11
N,51107,723,1059.4725,11
N,52153,1014,1059.4725,-214

N,52156,1159.5,489.96,-576
N,52174,1159.5,573,-576

N,53107,1305,1059.285,11
N,54153,1578,1059.285,-214
N,55107,1857,1059.285,11
N,56153,2097,1059.285,-214
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N,57107,2301,1059.285,11
N,57118,2301,1059.285,-587
N,57151,2301,1059.285,-362
N,57153,2301,1059.285,-214
N,58151,2505,1059.285,-362
N,58153,2505,1059.285,-214

! ELEMENT TYPE 2 NODES

N,60002,0,489.96,0
N,70002,0,489.96,0
N,80002,0,489.96,0
N,60008,0,1065.96,11
N,60012,0,0,-576
N,60013,0,489.96,-576
N,70013,0,489.96,-576
N,80013,0,489.96,-576
N,90013,0,489.96,-576
N,60019,0,1065.96,-587
N,70019,0,1065.96,-587
N,60031,0,672,-432
N,60034,0,844.08,-288
N,70034,0,844.08,-288
N,60113,432,573,-576
N,60124,216,489.96,-576
N,60133,336,489.96,-576
N,60174,216,1065.96,-587
N,61109,723,870.6,-12
N,61120,723,870.6,-564
N,72102,1014,489.96,0
N,62109,1014,870.6,-12
N,62116,1014,860.04,-587
N,62120,1014,870.6,-564
N,62143,1014,489.96,-432
N,62148,1014,489.96,-72
N,62156,1159.5,489.96,-587
N,63100,1305,459.96,0
N,73112,1305,489.96,-576
N,63120,1305,870.6,-564
N,63156,1437,489.96,-576
N,64113,1578,573,-576
N,64122,1578,971.04,-587
N,65112,1857,489.96,-576
N,75118,1857,1065.96,-587
N,66118,2097,1065.96,-587
N,73102,1305,489.96,0
N,63109,1305,870.6,-12
N,65109,1857,870.6,-12
N,65120,1857,870.6,-564
N,66109,2097,870.6,-12
N,67109,2301,870.6,-12
N,68120,2505,870.6,-564


! ELEMENT TYPE 3 NODES

N,60112,432,489.96,-576
N,60118,432,1065.96,-587
N,61112,723,489.96,-576
N,61118,723,1065.96,-587
N,62112,1014,489.96,-576
N,62118,1014,1065.96,-587
N,63112,1305,489.96,-576
N,63118,1305,1065.96,-587
N,64118,1578,1065.96,-587
N,65118,1857,1065.96,-587
N,67118,2301,1065.96,-587
N,68118,2505,1065.96,-587

! ELEMENT TYPE 7 NODES

N,90002,0,489.96,0
N,60033,0,672,-144
N,70033,0,672,-144
N,70008,0,1065.96,11
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N,70031,0,672,-432
N,60145,432,489.96,-288
N,60132,216,489.96,0
N,60141,336,489.96,0
N,61113,723,573,-576
N,61145,723,489.96,-288
N,62145,1014,489.96,-288
N,63121,1159.5,860.04,-587
N,63145,1305,489.96,-288
N,63164,1437,489.96,0
N,65102,1857,489.96,0
N,66107,2097,1065.96,11
N,70102,432,489.96,0
N,70112,432,489.96,-576
N,63143,1305,489.96,-432
N,64102,1578,489.96,0
N,64112,1578,489.96,-576
N,65122,1857,971.04,-587
N,65113,1857,573,-576
N,83102,1305,489.96,0
N,63148,1305,489.96,-72
N,68152,2505,1065.96,-288
N,63116,1305,860.04,-587
N,77118,2301,1065.96,-587
N,70107,432,1065.96,11
N,70118,432,1065.96,-587
N,60182,216,1065.96,11
N,76109,2097,870.6,-12
N,75109,1857,870.6,-12
N,64109,1578,870.6,-12
N,72109,1014,870.6,-12
N,71109,723,870.6,-12
N,60010,0,870.6,-12
N,75120,1857,870.6,-564
N,64120,1578,870.6,-564
N,72120,1014,870.6,-564
N,71120,723,870.6,-564
N,60021,0,870.6,-564

! ELEMENT TYPE 8 NODES

N,60102,432,489.96,0
N,60107,432,1065.96,11
N,61102,723,489.96,0
N,61107,723,1065.96,11
N,62102,1014,489.96,0
N,62107,1014,1065.96,11
N,63102,1305,489.96,0
N,63107,1305,1065.96,11
N,64100,1578,459.96,0
N,64107,1578,1065.96,11
N,65107,1857,1065.96,11
N,67107,2301,1065.96,11
N,68107,2505,1065.96,11

! ELEMENT TYPE 9 NODES

N,60003,0,844.08,0
N,60006,0,860.04,11
N,80008,0,1065.96,11
N,60014,0,844.08,-576
N,60017,0,860.04,-587
N,80019,0,1065.96,-587
N,60024,0,489.96,-504
N,60025,0,489.96,-432
N,60026,0,489.96,-360
N,60027,0,489.96,-288
N,60028,0,489.96,-216
N,60029,0,489.96,-144
N,60030,0,489.96,-72
N,80034,0,844.08,-288
N,90034,0,844.08,-288
N,100034,0,844.08,-288
N,110034,0,844.08,-288
N,60035,0,1065.96,-512

N,60036,0,1065.96,-437
N,60037,0,1065.96,-362
N,60038,0,1065.96,-288
N,60039,0,1065.96,-214
N,60040,0,1065.96,-139
N,60041,0,1065.96,-64
N,60101,432,288,0
N,80102,432,489.96,0
N,90102,432,489.96,0
N,100102,432,489.96,0
N,60105,432,860.04,11
N,70105,432,860.04,11
N,80105,432,860.04,11
N,80107,432,1065.96,11
N,80112,432,489.96,-576
N,90112,432,489.96,-576
N,100112,432,489.96,-576
N,110112,432,489.96,-576
N,70113,432,573,-576
N,60116,432,860.04,-587
N,70116,432,860.04,-587
N,80116,432,860.04,-587
N,60118,432,1065.96,-587
N,80118,432,1065.96,-587
N,60125,216,489.96,-504
N,70125,216,489.96,-504
N,60126,216,489.96,-432
N,60127,216,489.96,-360
N,60128,216,489.96,-288
N,60129,216,489.96,-216
N,60130,216,489.96,-144
N,60131,216,489.96,-72
N,70131,216,489.96,-72
N,60134,336,489.96,-504
N,70134,336,489.96,-504
N,60135,336,489.96,-432
N,60136,336,489.96,-360
N,60137,336,489.96,-288
N,60138,336,489.96,-216
N,60139,336,489.96,-144
N,60140,336,489.96,-72
N,70140,336,489.96,-72
N,60142,432,489.96,-504
N,70142,432,489.96,-504
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N,70143,432,489.96,-432
N,60144,432,489.96,-360
N,70144,432,489.96,-360
N,70145,432,489.96,-288
N,80145,432,489.96,-288
N,60146,432,489.96,-216
N,70146,432,489.96,-216
N,60147,432,489.96,-144
N,70147,432,489.96,-144
N,60148,432,489.96,-72
N,70148,432,489.96,-72
N,60149,432,1065.96,-512
N,70149,432,1065.96,-512
N,60150,432,1065.96,-437
N,70150,432,1065.96,-437
N,60151,432,1065.96,-362
N,70151,432,1065.96,-362
N,60152,432,1065.96,-288
N,70152,432,1065.96,-288
N,60153,432,1065.96,-214
N,70153,432,1065.96,-214
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N,70154,432,1065.96,-139
N,60155,432,1065.96,-64
N,70155,432,1065.96,-64
N,60175,216,1065.96,-512
N,70175,216,1065.96,-512
N,60176,216,1065.96,-437
N,70176,216,1065.96,-437
N,60177,216,1065.96,-362

N,70177,216,1065.96,-362
N,60178,216,1065.96,-288
N,70178,216,1065.96,-288
N,60179,216,1065.96,-214
N,70179,216,1065.96,-214
N,60180,216,1065.96,-139
N,70180,216,1065.96,-139
N,60181,216,1065.96,-64
N,70181,216,1065.96,-64
N,60183,577.5,573,-576
N,70183,577.5,573,-576
N,71102,723,489.96,0
N,81102,723,489.96,0
N,91102,723,489.96,0
N,61103,723,852,0
N,61105,723,860.04,11
N,71105,723,860.04,11
N,71107,723,1065.96,11
N,81107,723,1065.96,11
N,91107,723,1065.96,11
N,71112,723,489.96,-576
N,81112,723,489.96,-576
N,91112,723,489.96,-576
N,71113,723,573,-576
N,61114,723,852,-576
N,61116,723,860.04,-587
N,71116,723,860.04,-587
N,71118,723,1065.96,-587
N,81118,723,1065.96,-587
N,91118,723,1065.96,-587
N,61142,723,489.96,-504
N,71142,723,489.96,-504
N,61143,723,489.96,-432
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N,61144,723,489.96,-360
N,71144,723,489.96,-360
N,71145,723,489.96,-288
N,81145,723,489.96,-288
N,91145,723,489.96,-288
N,101145,723,489.96,-288
N,111145,723,489.96,-288
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N,61148,723,489.96,-72
N,71148,723,489.96,-72
N,61149,723,1065.96,-512
N,71149,723,1065.96,-512
N,61150,723,1065.96,-437
N,71150,723,1065.96,-437
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N,71151,723,1065.96,-362
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N,71155,723,1065.96,-64
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N,92102,1014,489.96,0
N,102102,1014,489.96,0
N,62105,1014,860.04,11
N,72105,1014,860.04,11
N,72107,1014,1065.96,11
N,82107,1014,1065.96,11
N,72112,1014,489.96,-576
N,82112,1014,489.96,-576
N,92112,1014,489.96,-576
N,102112,1014,489.96,-576
N,62113,1014,573,-576
N,72113,1014,573,-576

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N,72116,1014,860.04,-587
N,72118,1014,1065.96,-587
N,82118,1014,1065.96,-587
N,62124,1118.52,489.96,0
N,62125,1118.52,489.96,-72
N,62142,1014,489.96,-504
N,72142,1014,489.96,-504
N,72143,1014,489.96,-432
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N,72144,1014,489.96,-360
N,72145,1014,489.96,-288
N,82145,1014,489.96,-288
N,92145,1014,489.96,-288
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N,72146,1014,489.96,-216
N,62147,1014,489.96,-144
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N,73107,1305,1065.96,11
N,83107,1305,1065.96,11
N,73109,1305,870.6,-12
N,63113,1305,573,-576
N,73116,1305,860.04,-587
N,73118,1305,1065.96,-587
N,83118,1305,1065.96,-587
N,73120,1305,870.6,-564
N,63142,1305,489.96,-504
N,73143,1305,489.96,-432
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N,73144,1305,489.96,-360
N,73145,1305,489.96,-288
N,83145,1305,489.96,-288
N,93145,1305,489.96,-288
N,103145,1305,489.96,-288
N,113145,1305,489.96,-288
N,63146,1305,489.96,-216
N,73146,1305,489.96,-216
N,63147,1305,489.96,-144
N,73147,1305,489.96,-144
N,73148,1305,489.96,-72
N,63149,1305,1065.96,-512
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N,63150,1305,1065.96,-437
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N,63155,1305,1065.96,-64
N,73155,1305,1065.96,-64
N,63157,1437,489.96,-504
N,63158,1437,489.96,-432
N,63159,1437,489.96,-360
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N,63160,1437,489.96,-288
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N,63163,1437,489.96,-72
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N,74102,1578,489.96,0
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N,74109,1578,870.6,-12
N,64111,1578,288,-576
N,74112,1578,489.96,-576
N,84112,1578,489.96,-576
N,94112,1578,489.96,-576
N,74113,1578,573,-576
N,84113,1578,573,-576
N,64116,1578,860.04,-587
N,74116,1578,860.04,-587
N,84116,1578,860.04,-587
N,74118,1578,1065.96,-587
N,84118,1578,1065.96,-587
N,94118,1578,1065.96,-587
N,74120,1578,870.6,-564
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N,74149,1578,1065.96,-512
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N,64154,1578,1065.96,-139
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N,74156,1717.5,971.04,-587
N,84156,1717.5,971.04,-587
N,94156,1717.5,971.04,-587
N,65100,1857,459.96,0
N,75102,1857,489.96,0
N,65103,1857,852,0
N,65105,1857,860.04,11
N,75105,1857,860.04,11
N,75107,1857,1065.96,11
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N,65114,1857,852,-576
N,65116,1857,860.04,-587
N,75116,1857,860.04,-587
N,85118,1857,1065.96,-587
N,95118,1857,1065.96,-587
N,75122,1857,971.04,-587
N,65123,1717.5,573,-576
N,75123,1717.5,573,-576
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N,75151,1857,1065.96,-362
N,65152,1857,1065.96,-288
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N,65155,1857,1065.96,-64
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N,66150,2097,1065.96,-437
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N,66151,2097,1065.96,-362
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N,66155,2097,1065.96,-64
N,76155,2097,1065.96,-64
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N,77107,2301,1065.96,11
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N,77109,2301,870.6,-12
N,67116,2301,860.04,-587
N,77116,2301,860.04,-587
N,87118,2301,1065.96,-587
N,67122,2301,971.04,-587
N,77122,2301,971.04,-587
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N,67153,2301,1065.96,-214
N,77153,2301,1065.96,-214
N,67154,2301,1065.96,-139
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N,67155,2301,1065.96,-64
N,77155,2301,1065.96,-64
N,68105,2505,860.04,11
N,78107,2505,1065.96,11
N,68109,2505,870.6,-12
N,68116,2505,860.04,-587
N,78118,2505,1065.96,-587
N,88118,2505,1065.96,-587
N,68149,2505,1065.96,-512
N,68150,2505,1065.96,-437
N,68151,2505,1065.96,-362
N,78152,2505,1065.96,-288
N,68153,2505,1065.96,-214
N,68154,2505,1065.96,-139
N,68155,2505,1065.96,-64
N,150037,0,1059.4725,-362
N,250037,0,1059.4725,-362
N,150039,0,1059.4725,-214
N,250039,0,1059.4725,-214
N,150153,432,1059.4725,-214
N,250153,432,1059.4725,-214
N,150174,216,1059.4725,-587
N,150177,216,1059.4725,-362
N,150179,216,1059.4725,-214
N,150182,216,1059.4725,11
N,250182,216,1059.4725,11
N,151107,723,1059.4725,11
N,251107,723,1059.4725,11
N,152153,1014,1059.4725,-214
N,252153,1014,1059.4725,-214
N,152156,1159.5,489.96,-576

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N,152174,1159.5,573,-576
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N,154153,1578,1059.285,-214
N,254153,1578,1059.285,-214
N,155107,1857,1059.285,11
N,255107,1857,1059.285,11
N,156153,2097,1059.285,-214
N,256153,2097,1059.285,-214
N,157107,2301,1059.285,11
N,257107,2301,1059.285,11
N,157118,2301,1059.285,-587
N,157151,2301,1059.285,-362
N,157153,2301,1059.285,-214
N,158151,2505,1059.285,-362
N,258151,2505,1059.285,-362
N,158153,2505,1059.285,-214
N,258153,2505,1059.285,-214
N,181660,2505,971.04,-587
N,281660,2505,971.04,-587

! ELEMENT TYPE 16 NODES

N,74100,1578,459.96,0
N,75100,1857,459.96,0

!RAIL GIRDER                MCK 9/10/2010

N,60009,0,852,-12
N,60020,0,852,-564
N,60108,432,852,-12
N,60119,432,852,-564
N,61108,723,852,-12
N,61119,723,852,-564
N,62108,1014,852,-12
N,62119,1014,852,-564
N,63108,1305,852,-12
N,63119,1305,852,-564
N,64108,1578,852,-12
N,64119,1578,852,-564
N,65108,1857,852,-12
N,65119,1857,852,-564
N,66108,2097,852,-12
N,67108,2301,852,-12
N,67119,2301,852,-564
N,68108,2505,852,-12
N,68119,2505,852,-564

!  ADDED RUNWAY GIRDER NODES

N,301011,2241,894.6,-564
N,301021,2187,894.6,-564
N,301031,2019,894.6,-564
N,301041,1965,894.6,-564

N,301131,2241,894.6,-12
N,301141,2187,894.6,-12
N,301151,2019,894.6,-12
N,301161,1965,894.6,-12

! DEFINE REAL CONSTANT

R,1

R,9

R,12,0.001, , ,       ! SPRING CONSTANT

R,13,18105000, , ,    ! SPRING CONSTANT

R,14,11978000, , ,    ! SPRING CONSTANT

R,15,23956000, , ,    ! SPRING CONSTANT

R,1001,2766.222961730,,,   ! HOOK X SPRING
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R,1002,2766.222961730,,,   ! HOOK Z SPRING

R,1003,2266759.624568,,,   ! HOOK Y SPRING

hookmass=688.9610669  ! hookmass = 0 for loadcase 6 and 7 all others is should be 688.9610669

R,1004,hookmass,hookmass,hookmass, ! HOOK MASS change because of change in gravity 688.4057971014

R,52,1.15,1.15,1.15
R,53,2.27743,2.27743,2.27743
R,54,3.662,3.662,3.662
R,55,0.64699,0.64699,0.64699
R,100,51.7598344,219.979296,51.7598344

R,401,14619.6 ! TORSIONAL SPRING FOR DIAGONAL WT4X12
R,402,10406.7 ! TORSIONAL SPRING FOR DIAGONAL WT4X12
R,403,56560 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X1/2_3/8
R,404,13334 ! TORSIONAL SPRING FOR DIAGONAL LL4X3X5/16_3/8
R,405,75068 ! TORSIONAL SPRING FOR DIAGONAL LL6X4X1/2_3/8
R,406,61618 ! TORSIONAL SPRING FOR DIAGONAL W14X43
R,407,215956 ! TORSIONAL SPRING FOR DIAGONAL W14X87
R,408,206514 ! TORSIONAL SPRING FOR DIAGONAL W14X87
R,409,31583 ! TORSIONAL SPRING FOR DIAGONAL LL3.5X3.5X3/8_3/8
R,410,21617 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,411,7180 ! TORSIONAL SPRING FOR DIAGONAL L4X4X5/16_3/8
R,412,25326 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,413,37519 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,414,5720 ! TORSIONAL SPRING FOR DIAGONAL LL3X3X3/8_3/8
R,415,18756 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,416,14402 ! TORSIONAL SPRING FOR DIAGONAL LL4X4X3/8_3/8
R,417,51480 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X1/2_3/8
R,418,55000 ! TORSIONAL SPRING FOR DIAGONAL LL5X5X1/2
R,419,2687 ! TORSIONAL SPRING FOR DIAGONAL LL3X3X3/16_3/8
R,420,170024 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X3/4_3/8
R,421,496078 ! TORSIONAL SPRING FOR DIAGONAL W14X119
R,422,169412 ! TORSIONAL SPRING FOR DIAGONAL W12X72

GRAV=386.08858   ! in/sec^2

! DEFINE MATERIAL TYPES

Mat,1   ! BUILDING STEEL
MP,EX,1,2.90E+07
!MP,Nuxy,1,3.00E-01
MP,DENS,1,0.73377E-03
MP,GXY,1,11000000

Mat,13   ! BUILDING STEEL
MP,EX,13,2.90E+07
!MP,Nuxy,13,3.00E-01
MP,DENS,13,0.00001
MP,GXY,13,11000000

! THE FOLLOWING MATERIAL TYPES ARE FOR THE CRANE

MAT,2     !  HOOKUP MAT 1
MP,EX,2,3E+07
MP,NUXY,2,0.3
MP,DENS,2,0.745E-03

MAT,3     !  HOOKUP MAT 2
MP,EX,3,3E+07
MP,NUXY,3,0.3
MP,DENS,3,0.11660E-02

MAT,4     !  HOOKUP MAT 3
MP,EX,4,3E+07
MP,NUXY,4,0.3
MP,DENS,4,0.96E-03

MAT,5     !  HOOKUP MAT 4
MP,EX,5,3E+07
MP,NUXY,5,0.8E-03
MP,DENS,5,0.123E-02
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MAT,6     !  HOOKUP MAT 5
MP,EX,6,3E+07
MP,NUXY,6,0.3
MP,DENS,6,0

MAT,7     !  HOOKUP MAT 6
MP,EX,7,3E+07
MP,NUXY,7,0.3
MP,DENS,7,0.121E-02

MAT,8     !  HOOKUP MAT 7
MP,EX,8,3E+07
MP,NUXY,8,0.3
MP,DENS,8,0.6241E-02


! CREATE DIFFERENT ELEMENT TYPES IN ORDER TO CONTROL THE END RELEASES USING "KEYOPT"

ET,1,BEAM44

ET,2,BEAM44
!KEYOPT,2,7,11

ET,3,BEAM44
!KEYOPT,3,7,1

ET,7,BEAM44
!KEYOPT,7,8,11

ET,8,BEAM44
!KEYOPT,8,8,1

ET,9,BEAM44
!KEYOPT,9,7,11
!KEYOPT,9,8,11

ET,12,COMBIN14
KEYOPT,12,1,0
KEYOPT,12,2,3
KEYOPT,12,3,0

ET,13,COMBIN14
KEYOPT,13,1,0
KEYOPT,13,2,3
KEYOPT,13,3,0

ET,14,COMBIN14
KEYOPT,14,1,0
KEYOPT,14,2,1
KEYOPT,14,3,0

ET,15,COMBIN14
KEYOPT,15,1,0
KEYOPT,15,2,1
KEYOPT,15,3,0

ET,16,BEAM44
!KEYOPT,16,7,1
!KEYOPT,16,8,11

ET,21,BEAM44

ET,100,MASS21

ET,    1001, 14
KEYOP,    1001, 2,       1

ET,    1002, 14
KEYOP,    1002, 2,       3

ET,    1003, 14
KEYOP,    1003, 2,       2
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ET,   1004, 21

ET,300,COMBIN14  ! TORSIONAL SPRING FOR DIAGONAL BRACING
KEYOPT,300,1,0
KEYOPT,300,2,0
KEYOPT,300,3,1

! DEFINE BEAM SECTION TYPES THAT WILL BE USED IN THE MODEL

!W33X141
!SECTYPE,2,BEAM,I,W33X141
!SECDATA,11.535,11.535,33.31,0.96,0.96,0.605
R,202,41.6,246,7460,16.655,5.77,9.7
RMORE,41.6,246,7460,16.655,5.77,9.7
RMORE,,,,,,
RMORE,2.8175,2.0642

!W12X72
!SECTYPE,3,BEAM,I,W12X72
!SECDATA,12.04,12.04,12.25,0.671,0.671,0.43
R,203,21.2,195,597,6.125,6.02,2.94
RMORE,21.2,195,597,6.125,6.02,2.94
RMORE,,,,,,
RMORE,1.9681,4.0251

!W14X119
!SECTYPE,4,BEAM,I,W14X119
!SECDATA,14.65,14.65,14.5,0.938,0.938,0.57
R,204,35,492,1370,7.25,7.325,9.2
RMORE,35,492,1370,7.25,7.325,9.2
RMORE,,,,,,
RMORE,1.9103,4.2347

!W36X300
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,205,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W36X300 W/ L6X8
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,244,111.3,4560.861,24519.303,15.254,14.25,70.062
RMORE,111.3,4560.861,24519.303,15.254,14.25,70.062
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W36X300 W/ L4X6
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,245,105.18,3565.207,23828.308,15.844,14.25,67.364
RMORE,105.18,3565.207,23828.308,15.844,14.25,67.364
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W14X136
!SECTYPE,6,BEAM,I,W14X136
!SECDATA,14.74,14.74,14.75,1.063,1.063,0.66
R,206,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089

!W36X230
!SECTYPE,7,BEAM,I,W36X230
!SECDATA,16.475,16.475,35.88,1.26,1.26,0.761
R,207,67.7,940,15000,17.94,8.238,28.6
RMORE,67.7,940,15000,17.94,8.238,28.6
RMORE,,,,,,
RMORE,2.4466,2.5447

!2L3X3X5/16_3/8     SEC 8
R,30,3.555,6.96,3.02,3.188,0.709,0.125
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RMORE,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,,,,,,
RMORE,2.844,2.844

R,40,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,,,,,,
RMORE,2.844,2.844

!W10X33
!SECTYPE,9,BEAM,I,W10X33
!SECDATA,7.964,7.964,9.75,0.433,0.433,0.292
R,209,9.71,36.5,171,4.875,3.982,0.58
RMORE,9.71,36.5,171,4.875,3.982,0.58
RMORE,,,,,,
RMORE,2.1118,3.4106

!W30X116
!SECTYPE,10,BEAM,I,W30X116
!SECDATA,10.5,10.5,30,0.85,0.85,0.564
R,210,34.2,164,4930,15,5.25,6.43
RMORE,34.2,164,4930,15,5.25,6.43
RMORE,,,,,,
RMORE,2.8739,2.0213

!W14X87
!SECTYPE,11,BEAM,I,W14X87
!SECDATA,14.5,14.5,14,0.688,0.688,0.42
R,211,25.6,350,967,7,7.25,3.68
RMORE,25.6,350,967,7,7.25,3.68
RMORE,,,,,,
RMORE,1.9205,4.3537

!W14X43
!SECTYPE,12,BEAM,I,W14X43
!SECDATA,8,8,13.68,0.528,0.528,0.308
R,212,12.6,45.1,429,6.84,4,1.05
RMORE,12.6,45.1,429,6.84,4,1.05
RMORE,,,,,,
RMORE,2.2372,2.9907

!2L6X4X1/2_3/8  SEC 13
R,31,9.5,25.641,34.79,4.188,1.737,0.792
RMORE,9.5,25.641,34.79,4.188,1.737,0.792
RMORE,,,,,,
RMORE,3.5621,2.375
!SECTYPE,13,BEAM,ASEC,LL64X1/2
!SECDATA,9.5,25.64,,34.79,0,0.834,0,1.737,0,1.737

!2L4X3X5/16_3/8     SEC 14
R,32,4.18,7.037,6.762,3.188,1.103,0.136
RMORE,4.18,7.037,6.762,3.188,1.103,0.136
RMORE,,,,,,
RMORE,3.344,2.5075
!SECTYPE,14,BEAM,ASEC,LL4X5/16
!SECDATA,4.18,6.762,,7.037,0,0.146,0,1.103,0,1.103

!2L6X6X1/2_3/8       SEC 15
R,33,11.5,80.128,39.816,6.188,1.435,0.958
RMORE,11.5,80.128,39.816,6.188,1.435,0.958
RMORE,,,,,,
RMORE,2.875,2.875
!SECTYPE,15,BEAM,ASEC,LL66X1/2
!SECDATA,11.5,39.8,,80.155,0,1.002,0,1.435,0,1.435

!W24X100
!SECTYPE,16,BEAM,I,W24X100
!SECDATA,12,12,24,0.775,0.775,0.468
R,216,29.5,223,3000,12,6,4.87
RMORE,29.5,223,3000,12,6,4.87
RMORE,,,,,,
RMORE,2.379,2.6264

!W36X280
!SECTYPE,17,BEAM,I,W36X280
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!SECDATA,16.595,16.595,36.5,1.57,1.57,0.885
R,217,82.4,1200,18900,18.25,8.3,52.6
RMORE,82.4,1200,18900,18.25,8.3,52.6
RMORE,,,,,,
RMORE,2.372,2.5432

!W12X40
!SECTYPE,18,BEAM,I,W12X40
!SECDATA,8,8,11.94,0.516,0.516,0.294
R,218,11.8,44.1,310,5.97,4,0.956
RMORE,11.8,44.1,310,5.97,4,0.956
RMORE,,,,,,
RMORE,2.1439,3.3618

!W14X30
!SECTYPE,19,BEAM,I,W14X30
!SECDATA,6.733,6.733,13.86,0.383,0.383,0.270
R,219,8.83,19.5,290,6.93,3.367,0.376
RMORE,8.83,19.5,290,6.93,3.367,0.376
RMORE,,,,,,
RMORE,2.5684,2.36

!W12X27
!SECTYPE,20,BEAM,I,W12X27
!SECDATA,6.5,6.5,11.96,0.4,0.4,0.237
R,220,7.95,18.3,204,5.98,3.25,0.351
RMORE,7.95,18.3,204,5.98,3.25,0.351
RMORE,,,,,,
RMORE,2.2944,2.8042

!W36X150
!SECTYPE,21,BEAM,I,W36X150
!SECDATA,11.972,11.972,35.84,0.94,0.94,0.625
R,221,44.2,270,9030,17.92,5.99,10.1
RMORE,44.2,270,9030,17.92,5.99,10.1
RMORE,,,,,,
RMORE,2.9457,1.9732

!W36X160
!SECTYPE,22,BEAM,I,W36X160
!SECDATA,12,12,36,1.02,1.02,0.653
R,222,47.1,295,9760,18,6,12.4
RMORE,47.1,295,9760,18,6,12.4
RMORE,,,,,,
RMORE,2.886,2.0036

!W24X76
!SECTYPE,23,BEAM,I,W24X76
!SECDATA,8.985,8.985,23.91,0.682,0.682,0.44
R,223,22.4,82.6,2100,11.955,4.49,2.7
RMORE,22.4,82.6,2100,11.955,4.49,2.7
RMORE,,,,,,
RMORE,2.7417,2.1293

!W18X45
!SECTYPE,24,BEAM,I,W18X45
!SECDATA,7.477,7.477,17.86,0.499,0.499,0.335
R,224,13.2,34.8,706,8.93,3.74,0.889
RMORE,13.2,34.8,706,8.93,3.74,0.889
RMORE,,,,,,
RMORE,2.6533,2.2063

!W10X15
!SECTYPE,25,BEAM,I,W10X15
!SECDATA,4,4,10,0.269,0.269,0.230
R,225,4.41,2.88,68.9,5,2,0.104
RMORE,4.41,2.88,68.9,5,2,0.104
RMORE,,,,,,
RMORE,3.0732,1.9174

!W24X55
!SECTYPE,26,BEAM,I,W24X55
!SECDATA,7,7,23.55,0.503,0.503,0.396
R,226,16.2,28.9,1340,11.775,3.5,1.18
RMORE,16.2,28.9,1340,11.775,3.5,1.18
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RMORE,,,,,,
RMORE,3.4505,1.7371

!W24X68
!SECTYPE,27,BEAM,I,W24X68
!SECDATA,8.961,8.961,23.71,0.582,0.582,0.416
R,227,20,70,1820,11.855,4.48,1.86
RMORE,20,70,1820,11.855,4.48,1.86
RMORE,,,,,,
RMORE,2.876,2.0278

!W10X21
!SECTYPE,28,BEAM,I,W10X21
!SECDATA,5.75,5.75,9.9,0.338,0.338,0.240
R,228,6.2,10.8,107,4.95,2.875,0.21
RMORE,6.2,10.8,107,4.95,2.875,0.21
RMORE,,,,,,
RMORE,2.3782,2.6094

!C8X11
SECTYPE,29,BEAM,CHAN,C8X11
SECDATA,2.25,2.25,8,0.39,0.39,0.220
R,229,3.38,1.32,32.6,4,1.13,1.268
RMORE,3.38,1.32,32.6,4,1.13,1.268
RMORE,,,,,,
RMORE,2.8766,1.9205

!W30X108
!SECTYPE,30,BEAM,I,W30X108
!SECDATA,10.484,10.484,29.82,0.76,0.76,0.548
R,230,31.8,146,4470,14.91,5.24,5.02
RMORE,31.8,146,4470,14.91,5.24,5.02
RMORE,,,,,,
RMORE,2.9932,1.946

!W14X22
!SECTYPE,31,BEAM,I,W14X22
!SECDATA,5,5,13.72,0.335,0.335,0.230
R,231,6.49,7,198,6.86,2.5,0.208
RMORE,6.49,7,198,6.86,2.5,0.208
RMORE,,,,,,
RMORE,2.9064,2.0564

!W14X61
!SECTYPE,32,BEAM,I,W14X61
!SECDATA,10,10,13.91,0.643,0.643,0.378
R,232,17.9,107,641,6.955,5,2.19
RMORE,17.9,107,641,6.955,5,2.19
RMORE,,,,,,
RMORE,2.088,3.4043

!W27X84
!SECTYPE,33,BEAM,I,W27X84
!SECDATA,9.963,9.963,26.69,0.636,0.636,0.463
R,233,24.8,105,2830,13.345,4.98,2.79
RMORE,24.8,105,2830,13.345,4.98,2.79
RMORE,,,,,,
RMORE,2.9353,2.007

!W27X94
!SECTYPE,34,BEAM,I,W27X94
!SECDATA,9.99,9.99,26.91,0.745,0.745,0.49
R,234,27.7,124,3270,13.455,5,4.06
RMORE,27.7,124,3270,13.455,5,4.06
RMORE,,,,,,
RMORE,2.7839,2.1007

!2L4X4X3/8_3/8 SEC35
R,34,5.719,18.77,8.717,4.188,0.951,0.268
RMORE,5.719,18.77,8.717,4.188,0.951,0.268
RMORE,,,,,,
RMORE,2.8595,2.8595

!2L6X6X3/4_3/8 SEC 36
R,35,16.875,121.302,56.31,6.188,1.4,3.164
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RMORE,16.875,121.302,56.31,6.188,1.4,3.164
RMORE,,,,,,
RMORE,2.8125,2.8125

!2L3X3X3/16_3/8 SEC 37
R,36,2.18,4.134,1.923,3.188,0.726,0.025
RMORE,2.18,4.134,1.923,3.188,0.726,0.025
RMORE,,,,,,
RMORE,2.9067,2.9067

!2L5X5X1/2_3/8 SEC 38
R,37,9.5,47.485,22.5,5.188,1.184,0.792
RMORE,9.5,47.485,22.5,5.188,1.184,0.792
RMORE,,,,,,
RMORE,2.8503,2.8503

!L4X4X5/16
!SECTYPE,39,BEAM,L,L44X5/16
!SECDATA,4,4,0.313,0.313
R,239,2.402,5.925,1.503,2.828,1.357,0.078
RMORE,2.402,5.925,1.503,2.828,1.357,0.078
RMORE,,,,,,
RMORE,2.1182,2.0978,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,45

!L5X5X1/2
!SECTYPE,40,BEAM,L,L55X1/2
!SECDATA,5,5,0.5,0.5
R,240,4.75,17.912,4.589,3.536,1.675,0.396
RMORE,4.75,17.912,4.589,3.536,1.675,0.396
RMORE,,,,,,
RMORE,2.1158,2.0833,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,45

!2L3.5X3.5X3/8_3/8 SEC 41
R,38,4.969,12.891,5.73,3.688,0.826,0.233
RMORE,4.969,12.891,5.73,3.688,0.826,0.233
RMORE,,,,,,
RMORE,2.8394,2.8394

!2L3X3X3/8_3/8 SEC 42
R,39,4.219,8.395,3.519,3.188,0.7,0.198
RMORE,4.219,8.395,3.519,3.188,0.7,0.198
RMORE,,,,,,
RMORE,2.7527,2.7527

!WT4X12
!SECTYPE,43,BEAM,T,WT4X12
!SECDATA,6.5,3.97,0.398,0.245
R,243,3.54,9.15,3.529,0.699,3.248,0.174
RMORE,3.54,9.15,3.529,0.699,3.248,0.174
RMORE,,,,,,
RMORE,2.0439,5.463


!L4X4X1/2
R,241,3.75,8.828,2.295,2.828,1.320,0.312        ! NEW SECTION 9/14/2010 MCK  EL 7301,7313
RMORE,3.75,8.828,2.295,2.828,1.320,0.312
RMORE,,,,,,,
RMORE,2.1114,2.0616,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

!L6X6X3/4
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R,242,8.438,44.692,11.617,4.243,1.98,1.582       ! NEW SECTION 9/14/2010 MCK  EL 7303,7315
RMORE,8.438,44.692,11.617,4.243,1.98,1.582
RMORE,,,,,,,
RMORE,2.1121,2.0616,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45


! THE FOLLOWING SECTIONS ARE FOR THE CRANE MODEL AS PROVIDED
! BY THE CRANE VENDOR

SECTYPE,44,BEAM,HREC,       !1
SECDATA,61.000,17.125,1.0000,1.0000,0.62500, 0.62500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,45,BEAM,CSOL,       !2
SECDATA,4.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,46,BEAM,RECT,trolgirt   !3
SECDATA,22.000,2.5000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,47,BEAM,HREC,endtie  !4
SECDATA,10.000,8.0000,1.0000,1.0000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,48,BEAM,HREC,asagitie   !6
SECDATA,8.0000,8.0000,0.75000,0.75000,0.75000,0.75000,
SECOFFSET,CENT
SECCONTROL,0.0000,0.0000,0.0000,0.0000

SECTYPE,49,BEAM,HREC,endtruck   !7
SECDATA,22.000,16.600,1.5000,1.5000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,50,BEAM,RECT,       !8
SECDATA,14.000,14.000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,51,BEAM,HREC,Ttrucks   !10
SECDATA,22.250,9.0000,0.75000,0.75000,0.50000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,52,BEAM,RECT,girt1   !11
SECDATA,33.000,1.2500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,53,BEAM,RECT,girt2   !12
SECDATA,42.625,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,54,BEAM,RECT,girt3   !13
SECDATA,33.000,1.2500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,55,BEAM,RECT,       !14
SECDATA,20.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,56,BEAM,RECT,stiff2    !15
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SECDATA,6.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,57,BEAM,RECT,         !16
SECDATA,15.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,58,BEAM,RECT,9luk    !17
SECDATA,9.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,59,BEAM,ASEC,STIFF    !RIGID BEAM
SECDATA,1000,1000000,,1000000,,1000000   !GT STRUDL USES AN AREA OF 10
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,60,BEAM,ASEC,STIFF    !RIGID BEAM
SECDATA,1000,1000000,,1000000,,1000000   !GT STRUDL USES AN AREA OF 10
SECCONTROLS,0.0000,0.0000,0.0000,0.0000




R,301,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.09173

R,302,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.08849

R,303,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.07339

R,304,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.07339

R,306,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
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RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.06497

R,307,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.06497

R,308,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.0613

R,309,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05288

R,310,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05245

R,311,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05245

R,312,29.5,223,3000,12,6,4.87
RMORE,29.5,223,3000,12,6,4.87
RMORE,,,,,,
RMORE,2.379,2.6264,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.0518

R,313,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5

RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.0518

R,314,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05072

R,315,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05072

R,316,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.04964

R,317,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.04964

R,318,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.04662

R,319,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.04662

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R,320,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03993

R,321,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03993

R,322,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03928

R,323,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
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R,360,25.6832,25.6832,25.6832
R,361,12.8882,12.8882,12.8882
R,362,22.0364,22.0364,22.0364
R,363,32.0211,32.0211,32.0211
R,364,8.96167,8.96167,8.96167

R,365,29.5,223,3000,12,6,4.87   ! NEW SECTION FOR MODAL ANALYSIS MCK 9/22/10
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SAVE

! SELECT NODES IN ORDER TO DEFINE A RIGID REGION USING "CERIG"


! EBLOCK DEFINES ELEMENTS, HEADING ARE PROVIDED TO HELP DURING CHECKING
!    MAT   TYPE    REAL    SECT                        # NODES        ELM #     I      J      K
EBLOCK,19,SOLID,
(19i8)
     1     1   205     0     0     0     0     0     2     0     1     1     2     0
     1     1   303     0     0     0     0     0     2     0     2     2     3     0
     1     1   205     0     0     0     0     0     2     0     3     3     4     0
    13     1     1    59     0     0     0     0     2     0     4     4     5     0
     1     1   206     0     0     0     0     0     2     0     5     5     6     0
     1     1   206     0     0     0     0     0     2     0     6     6     7     0
     1     1   304     0     0     0     0     0     2     0     7     7     8     0
    13     1     1    59     0     0     0     0     2     0     8     4     9     0
    13     1     1    59     0     0     0     0     2     0     9 60009    10     0
    13     1     1    59     0     0     0     0     2     0    11    10     7 20056
     1     1   205     0     0     0     0     0     2     0    12    12    13     0
     1     1   303     0     0     0     0     0     2     0    13    13    14     0
     1     1   205     0     0     0     0     0     2     0    14    14    15     0
    13     1     1    59     0     0     0     0     2     0    15    15    16     0
     1     1   206     0     0     0     0     0     2     0    16    16    17     0
     1     1   206     0     0     0     0     0     2     0    17    17    18     0
     1     1   304     0     0     0     0     0     2     0    18    18    19     0
    13     1     1    59     0     0     0     0     2     0    19    15    20     0
    13     1     1    59     0     0     0     0     2     0    20 60020    21     0
    13     1     1    59     0     0     0     0     2     0    22    21    18 20056
     1     2   207     0     0     0     0     0     2     0    23 60013    24 20056
     1     1   207     0     0     0     0     0     2     0    24    24    25 20056
     1     1   207     0     0     0     0     0     2     0    25    25    26 20056
     1     1   207     0     0     0     0     0     2     0    26    26    27 20056
     1     1   207     0     0     0     0     0     2     0    27    27    28 20056
     1     1   207     0     0     0     0     0     2     0    28    28    29 20056
     1     1   207     0     0     0     0     0     2     0    29    29    30 20056
     1     7   207     0     0     0     0     0     2     0    30    30 90002 20056
     1     2    30     0     0     0     0     0     2     0    31 60031    32     0
     1     7    40     0     0     0     0     0     2     0    32    32 60033     0
     1     9   209     0     0     0     0     0     2     0    33 60014 80034 20056
     1     9   209     0     0     0     0     0     2     0    34 90034 60003 20056
     1     2   210     0     0     0     0     0     2     0    35 60019    35 20056
     1     1   210     0     0     0     0     0     2     0    36    35    36 20056
     1     1   210     0     0     0     0     0     2     0    37    36    37 20056
     1     1   210     0     0     0     0     0     2     0    38    37    38 20056
     1     1   210     0     0     0     0     0     2     0    39    38    39 20056
     1     1   210     0     0     0     0     0     2     0    40    39    40 20056
     1     1   210     0     0     0     0     0     2     0    41    40    41 20056
     1     7   210     0     0     0     0     0     2     0    42    41 70008 20056
     1     2   211     0     0     0     0     0     2     0    43 60012    23 20070
     1     2   212     0     0     0     0     0     2     0    44 70013    23 20070
     1     2   211     0     0     0     0     0     2     0    45 60002    23 20070
     1     2    31     0     0     0     0     0     2     0    46 80013    31 20083
     1     7    32     0     0     0     0     0     2     0    47    14 70031 20083
     1     2    31     0     0     0     0     0     2     0    48 60034    31 20085
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1	2	31	0	0	0	0	0	2	0	49	70002	33	20084	
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1	2	31	0	0	0	0	0	2	0	51	70034	33	20085	
1	9	33	0	0	0	0	0	2	0	52	80019	100034	20085	
1	9	33	0	0	0	0	0	2	0	53	80008	110034	20085	
1	1	312	0	0	0	0	0	2	0	54	27	32	20052	
1	1	312	0	0	0	0	0	2	0	55	32	34	20052	
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1	1	306	0	0	0	0	0	2	0	101	102	103	0	
13	1	1	59	0	0	0	0	2	0	102	103	104	0	
1	1	206	0	0	0	0	0	2	0	103	104	105	0	
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1	1	307	0	0	0	0	0	2	0	105	106	107	0	
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13	1	1	59	0	0	0	0	2	0	107	60108	109	0	
13	1	1	59	0	0	0	0	2	0	109	109	106	20058	
1	1	326	0	0	0	0	0	2	0	110	111	112	0	
1	1	306	0	0	0	0	0	2	0	111	112	113	0	
1	1	306	0	0	0	0	0	2	0	112	113	114	0	
13	1	1	59	0	0	0	0	2	0	113	114	115	0	
1	1	206	0	0	0	0	0	2	0	114	115	116	0	
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1	1	307	0	0	0	0	0	2	0	116	117	118	0	
13	1	1	59	0	0	0	0	2	0	117	114	119	0	
13	1	1	59	0	0	0	0	2	0	118	60119	120	0	
13	1	1	59	0	0	0	0	2	0	120	120	117	20058	
1	7	313	0	0	0	0	0	2	0	121	123	60145	20052	
1	2	217	0	0	0	0	0	2	0	122	60124	125	20057	
1	1	348	0	0	0	0	0	2	0	123	125	126	20057	
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1	7	217	0	0	0	0	0	2	0	129	131	60132	20057	
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13	1	1	59	0	0	0	0	2	0	1113	1114	1115	0	

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1	1	206	0	0	0	0	0	2	0	1115	1116	1117	0
1	1	311	0	0	0	0	0	2	0	1116	1117	1118	0
13	1	1	59	0	0	0	0	2	0	1117	1114	1119	0
13	1	1	59	0	0	0	0	2	0	1118	61119	1120	0
13	1	1	59	0	0	0	0	2	0	1120	1120	1117	20055
1	7	206	0	0	0	0	0	2	0	1121	1123	61145	0
1	3	207	0	0	0	0	0	2	0	1138	61112	1142	20055
1	1	207	0	0	0	0	0	2	0	1139	1142	1143	20055
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1	1	207	0	0	0	0	0	2	0	1141	1144	1145	20055
1	1	207	0	0	0	0	0	2	0	1142	1145	1146	20055
1	1	207	0	0	0	0	0	2	0	1143	1146	1147	20055
1	1	207	0	0	0	0	0	2	0	1144	1147	1148	20055
1	8	207	0	0	0	0	0	2	0	1145	1148	61102	20055
1	3	210	0	0	0	0	0	2	0	1146	61118	1149	20055
1	1	210	0	0	0	0	0	2	0	1147	1149	1150	20055
1	1	210	0	0	0	0	0	2	0	1148	1150	1151	20055
1	1	210	0	0	0	0	0	2	0	1149	1151	1152	20055
1	1	210	0	0	0	0	0	2	0	1150	1152	1153	20055
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1	1	210	0	0	0	0	0	2	0	1152	1154	1155	20055
1	8	210	0	0	0	0	0	2	0	1153	1155	61107	20055
1	9	218	0	0	0	0	0	2	0	1157	71113	62113	20002
1	1	310	0	0	0	0	0	2	0	2100	2101	2102	0
1	1	310	0	0	0	0	0	2	0	2101	2102	2103	0
13	1	1	59	0	0	0	0	2	0	2102	2103	2104	0
1	1	206	0	0	0	0	0	2	0	2103	2104	2105	0
1	1	206	0	0	0	0	0	2	0	2104	2105	2106	0
1	1	311	0	0	0	0	0	2	0	2105	2106	2107	0
13	1	1	59	0	0	0	0	2	0	2106	2103	2108	0
13	1	1	59	0	0	0	0	2	0	2107	62108	2109	0
13	1	1	59	0	0	0	0	2	0	2109	2109	2106	20059
1	1	205	0	0	0	0	0	2	0	2110	2111	2112	0
1	1	322	0	0	0	0	0	2	0	2111	2112	2113	0
1	1	322	0	0	0	0	0	2	0	2112	2113	2114	0
13	1	1	59	0	0	0	0	2	0	2113	2114	2115	0
1	1	206	0	0	0	0	0	2	0	2114	2115	2116	0
1	1	206	0	0	0	0	0	2	0	2115	2116	2117	0
1	1	301	0	0	0	0	0	2	0	2116	2117	2118	0
13	1	1	59	0	0	0	0	2	0	2117	2114	2119	0
13	1	1	59	0	0	0	0	2	0	2118	62119	2120	0
13	1	1	59	0	0	0	0	2	0	2120	2120	2117	20059
1	7	206	0	0	0	0	0	2	0	2121	2123	62145	0
1	1	212	0	0	0	0	0	2	0	2122	2122	2156	0
1	2	219	0	0	0	0	0	2	0	2123	62156	2157	20066
1	1	219	0	0	0	0	0	2	0	2124	2157	2158	20066
1	1	328	0	0	0	0	0	2	0	2125	2156	21740	0
1	7	328	0	0	0	0	0	2	0	2126	21740	63121	0
1	3	207	0	0	0	0	0	2	0	2138	62112	2142	20059
1	1	207	0	0	0	0	0	2	0	2139	2142	2143	20059
1	1	207	0	0	0	0	0	2	0	2140	2143	2144	20059
1	1	207	0	0	0	0	0	2	0	2141	2144	2145	20059
1	1	207	0	0	0	0	0	2	0	2142	2145	2146	20059
1	1	207	0	0	0	0	0	2	0	2143	2146	2147	20059
1	1	207	0	0	0	0	0	2	0	2144	2147	2148	20059
1	8	207	0	0	0	0	0	2	0	2145	2148	62102	20059
1	3	210	0	0	0	0	0	2	0	2146	62118	2149	20059
1	1	210	0	0	0	0	0	2	0	2147	2149	2150	20059
1	1	210	0	0	0	0	0	2	0	2148	2150	2151	20059
1	1	210	0	0	0	0	0	2	0	2149	2151	2152	20059
1	1	210	0	0	0	0	0	2	0	2150	2152	2153	20059
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1	1	210	0	0	0	0	0	2	0	2152	2154	2155	20059
1	8	210	0	0	0	0	0	2	0	2153	2155	62107	20059
1	9	220	0	0	0	0	0	2	0	2157	72113	152174	20080
1	1	314	0	0	0	0	0	2	0	3100	3101	3100	0
1	1	314	0	0	0	0	0	2	0	3101	3102	3103	0
13	1	1	59	0	0	0	0	2	0	3102	3103	3104	0
1	1	206	0	0	0	0	0	2	0	3103	3104	3105	0
1	1	206	0	0	0	0	0	2	0	3104	3105	3106	0
1	1	315	0	0	0	0	0	2	0	3105	3106	3107	0
13	1	1	59	0	0	0	0	2	0	3106	3103	3108	0
13	1	1	59	0	0	0	0	2	0	3107	63108	3109	0
13	1	1	59	0	0	0	0	2	0	3109	3109	3106	20060

1	1	205	0	0	0	0	0	2	0	3110	3111	3112	0
1	1	323	0	0	0	0	0	2	0	3111	3112	3113	0
1	1	323	0	0	0	0	0	2	0	3112	3113	3114	0
13	1	1	59	0	0	0	0	2	0	3113	3114	3115	0
1	1	206	0	0	0	0	0	2	0	3114	3115	3116	0
1	1	206	0	0	0	0	0	2	0	3115	3116	3117	0
1	1	302	0	0	0	0	0	2	0	3116	3117	3118	0
13	1	1	59	0	0	0	0	2	0	3117	3114	3119	0
13	1	1	59	0	0	0	0	2	0	3118	63119	3120	0
13	1	1	59	0	0	0	0	2	0	3120	3120	3117	20060
1	7	206	0	0	0	0	0	2	0	3121	3123	63145	0
1	9	218	0	0	0	0	0	2	0	3122	63113	74113	20002
1	3	207	0	0	0	0	0	2	0	3138	63112	3142	20060
1	1	207	0	0	0	0	0	2	0	3139	3142	3143	20060
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1	1	207	0	0	0	0	0	2	0	3142	3145	3146	20060
1	1	207	0	0	0	0	0	2	0	3143	3146	3147	20060
1	1	207	0	0	0	0	0	2	0	3144	3147	3148	20060
1	8	207	0	0	0	0	0	2	0	3145	3148	63102	20060
1	3	210	0	0	0	0	0	2	0	3146	63118	3149	20060
1	1	210	0	0	0	0	0	2	0	3147	3149	3150	20060
1	1	210	0	0	0	0	0	2	0	3148	3150	3151	20060
1	1	210	0	0	0	0	0	2	0	3149	3151	3152	20060
1	1	210	0	0	0	0	0	2	0	3150	3152	3153	20060
1	1	210	0	0	0	0	0	2	0	3151	3153	3154	20060
1	1	210	0	0	0	0	0	2	0	3152	3154	3155	20060
1	8	210	0	0	0	0	0	2	0	3153	3155	63107	20060
1	2	336	0	0	0	0	0	2	0	3154	63156	3157	20067
1	1	336	0	0	0	0	0	2	0	3155	3157	3158	20067
1	1	336	0	0	0	0	0	2	0	3156	3158	3159	20067
1	1	336	0	0	0	0	0	2	0	3157	3159	3160	20067
1	1	339	0	0	0	0	0	2	0	3158	3160	3161	20067
1	1	339	0	0	0	0	0	2	0	3159	3161	3162	20067
1	1	339	0	0	0	0	0	2	0	3160	3162	3163	20067
1	7	339	0	0	0	0	0	2	0	3161	3163	63164	20067
1	1	314	0	0	0	0	0	2	0	3163	3100	3102	0
1	1	316	0	0	0	0	0	2	0	4100	4101	4100	0
1	1	316	0	0	0	0	0	2	0	4101	4102	4103	0
13	1	1	59	0	0	0	0	2	0	4102	4103	4104	0
1	1	206	0	0	0	0	0	2	0	4103	4104	4105	0
1	1	206	0	0	0	0	0	2	0	4104	4105	4106	0
1	1	317	0	0	0	0	0	2	0	4105	4106	4107	0
13	1	1	59	0	0	0	0	2	0	4106	4103	4108	0
13	1	1	59	0	0	0	0	2	0	4107	64108	4109	0
13	1	1	59	0	0	0	0	2	0	4109	4109	4106	20061
1	1	205	0	0	0	0	0	2	0	4110	4111	4112	0
1	1	316	0	0	0	0	0	2	0	4111	4112	4113	0
1	1	316	0	0	0	0	0	2	0	4112	4113	4114	0
13	1	1	59	0	0	0	0	2	0	4113	4114	4115	0
1	1	206	0	0	0	0	0	2	0	4114	4115	4116	0
1	1	206	0	0	0	0	0	2	0	4115	4116	4117	0
1	1	317	0	0	0	0	0	2	0	4116	4117	4122	0
13	1	1	59	0	0	0	0	2	0	4117	4114	4119	0
13	1	1	59	0	0	0	0	2	0	4118	64119	4120	0
13	1	1	59	0	0	0	0	2	0	4120	4120	4117	20061
1	1	317	0	0	0	0	0	2	0	4121	4122	4118	0
1	1	316	0	0	0	0	0	2	0	4122	4100	4102	0
1	3	210	0	0	0	0	0	2	0	4146	64118	4149	20061
1	1	210	0	0	0	0	0	2	0	4147	4149	4150	20061
1	1	210	0	0	0	0	0	2	0	4148	4150	4151	20061
1	1	210	0	0	0	0	0	2	0	4149	4151	4152	20061
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1	8	210	0	0	0	0	0	2	0	4153	4155	64107	20061
1	1	318	0	0	0	0	0	2	0	5100	5101	5100	0
1	1	318	0	0	0	0	0	2	0	5101	5102	5103	0
13	1	1	59	0	0	0	0	2	0	5102	5103	5104	0
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1	1	206	0	0	0	0	0	2	0	5104	5105	5106	0
1	1	319	0	0	0	0	0	2	0	5105	5106	5107	0
13	1	1	59	0	0	0	0	2	0	5106	5103	5108	0
13	1	1	59	0	0	0	0	2	0	5107	65108	5109	0
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1	1	205	0	0	0	0	0	2	0	5110	5111	5112	0
1	1	329	0	0	0	0	0	2	0	5111	5112	5113	0
1	1	329	0	0	0	0	0	2	0	5112	5113	5114	0
13	1	1	59	0	0	0	0	2	0	5113	5114	5115	0
1	1	206	0	0	0	0	0	2	0	5114	5115	5116	0
1	1	206	0	0	0	0	0	2	0	5115	5116	5117	0
1	1	340	0	0	0	0	0	2	0	5116	5117	5122	0
13	1	1	59	0	0	0	0	2	0	5117	5114	5119	0
13	1	1	59	0	0	0	0	2	0	5118	65119	5120	0
13	1	1	59	0	0	0	0	2	0	5120	5120	5117	20062
1	1	340	0	0	0	0	0	2	0	5121	5122	5118	0
1	1	205	0	0	0	0	0	2	0	5122	5100	5102	0
1	2	341	0	0	0	0	0	2	0	5138	65112	5187	20062
1	1	341	0	0	0	0	0	2	0	5139	5187	5188	20062
1	1	341	0	0	0	0	0	2	0	5140	5188	5189	20062
1	1	341	0	0	0	0	0	2	0	5141	5189	5190	20062
1	1	341	0	0	0	0	0	2	0	5142	5190	5191	20062
1	1	341	0	0	0	0	0	2	0	5143	5191	5192	20062
1	1	341	0	0	0	0	0	2	0	5144	5192	5193	20062
1	7	341	0	0	0	0	0	2	0	5145	5193	65102	20062
1	3	210	0	0	0	0	0	2	0	5146	65118	5149	20062
1	1	210	0	0	0	0	0	2	0	5147	5149	5150	20062
1	1	210	0	0	0	0	0	2	0	5148	5150	5151	20062
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1	8	210	0	0	0	0	0	2	0	5153	5155	65107	20062
13	1	1	59	0	0	0	0	2	0	5555	3165	3163	0
1	1	320	0	0	0	0	0	2	0	6100	6101	6103	0
13	1	1	59	0	0	0	0	2	0	6102	6103	6104	0
1	1	206	0	0	0	0	0	2	0	6103	6104	6105	0
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1	1	321	0	0	0	0	0	2	0	6105	6106	6107	0
13	1	1	59	0	0	0	0	2	0	6106	6103	6108	0
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1	2	223	0	0	0	0	0	2	0	6146	66118	6149	20063
1	1	223	0	0	0	0	0	2	0	6147	6149	6150	20063
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1	2	342	0	0	0	0	0	2	0	7000	80002	132	20021
1	9	351	0	0	0	0	0	2	0	7001	60030	60131	20018
1	9	351	0	0	0	0	0	2	0	7002	60029	60130	20016
1	9	351	0	0	0	0	0	2	0	7003	60028	60129	20014
1	9	351	0	0	0	0	0	2	0	7004	60027	60128	20013
1	9	351	0	0	0	0	0	2	0	7005	60026	60127	20012
1	9	351	0	0	0	0	0	2	0	7006	60025	60126	20082
1	9	351	0	0	0	0	0	2	0	7007	60024	60125	20005
1	2	342	0	0	0	0	0	2	0	7008	90013	124	20002
1	1	342	0	0	0	0	0	2	0	7009	132	141	20021
1	9	343	0	0	0	0	0	2	0	7010	70131	60140	20018
1	9	343	0	0	0	0	0	2	0	7011	70125	60134	20005
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1	9	352	0	0	0	0	0	2	0	7014	70140	60148	20018
1	9	352	0	0	0	0	0	2	0	7015	60139	60147	20016
1	9	352	0	0	0	0	0	2	0	7016	60138	60146	20014
1	9	352	0	0	0	0	0	2	0	7017	60137	70145	20013
1	9	352	0	0	0	0	0	2	0	7018	60136	70144	20012
1	9	352	0	0	0	0	0	2	0	7019	60135	70143	20082
1	9	352	0	0	0	0	0	2	0	7020	70134	70142	20005
1	7	342	0	0	0	0	0	2	0	7021	133	70112	20002
1	9	344	0	0	0	0	0	2	0	7022	80102	81102	20021
1	9	353	0	0	0	0	0	2	0	7023	70148	71148	20018
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1	9	353	0	0	0	0	0	2	0	7027	60144	71144	20012
1	9	353	0	0	0	0	0	2	0	7028	60143	71143	20082
1	9	353	0	0	0	0	0	2	0	7029	60142	71142	20005

1	9	344	0	0	0	0	0	2	0	7030	80112	71112	20002
1	9	344	0	0	0	0	0	2	0	7031	71102	82102	20021
1	9	353	0	0	0	0	0	2	0	7032	61148	72148	20018
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1	2	353	0	0	0	0	0	2	0	7041	62148	2125	20018
1	9	353	0	0	0	0	0	2	0	7042	72147	73147	20016
1	9	353	0	0	0	0	0	2	0	7043	72146	73146	20014
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1	2	354	0	0	0	0	0	2	0	7046	62143	2158	20082
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1	9	346	0	0	0	0	0	2	0	7048	72112	152156	20080
1	7	345	0	0	0	0	0	2	0	7049	2158	63143	20082
1	2	207	0	0	0	0	0	2	0	7050	63100	3165	0
1	2	347	0	0	0	0	0	2	0	7051	73102	3164	20021
1	9	355	0	0	0	0	0	2	0	7052	73148	63163	20018
1	9	355	0	0	0	0	0	2	0	7053	63147	63162	20016
1	9	355	0	0	0	0	0	2	0	7054	63146	63161	20014
1	9	355	0	0	0	0	0	2	0	7055	73145	63160	20013
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1	9	355	0	0	0	0	0	2	0	7057	73143	63158	20082
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1	2	347	0	0	0	0	0	2	0	7059	73112	3156	20002
1	8	207	0	0	0	0	0	2	0	7060	3165	64100	0
1	7	337	0	0	0	0	0	2	0	7061	3164	64102	20021
1	7	337	0	0	0	0	0	2	0	7062	3156	64112	20002
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0	300	414	0	0	0	0	0	2	0	47323	4156	5118	0
0	300	410	0	0	0	0	0	2	0	47325	5114	4113	0
0	300	409	0	0	0	0	0	2	0	47326	4112	5123	0
0	300	409	0	0	0	0	0	2	0	47327	5123	5112	0
0	300	412	0	0	0	0	0	2	0	47329	5112	4111	0
0	300	413	0	0	0	0	0	2	0	47333	8118	7122	0
0	300	413	0	0	0	0	0	2	0	47335	81660	7116	0
0	300	402	0	0	0	0	0	2	0	47336	50037	50174	0
0	300	401	0	0	0	0	0	2	0	47337	50037	50179	0
0	300	401	0	0	0	0	0	2	0	47338	50039	50177	0
0	300	402	0	0	0	0	0	2	0	47339	50039	50182	0
0	300	402	0	0	0	0	0	2	0	47340	50182	50153	0
0	300	402	0	0	0	0	0	2	0	47341	50153	51107	0
0	300	402	0	0	0	0	0	2	0	47342	51107	52153	0
0	300	402	0	0	0	0	0	2	0	47343	52153	53107	0
0	300	402	0	0	0	0	0	2	0	47344	53107	54153	0
0	300	402	0	0	0	0	0	2	0	47345	54153	55107	0
0	300	402	0	0	0	0	0	2	0	47346	55107	56153	0
0	300	402	0	0	0	0	0	2	0	47347	56153	57107	0
0	300	402	0	0	0	0	0	2	0	47348	57107	58153	0
0	300	401	0	0	0	0	0	2	0	47349	57151	58153	0
0	300	401	0	0	0	0	0	2	0	47350	57153	58151	0
0	300	402	0	0	0	0	0	2	0	47351	57118	58151	0
0	300	421	0	0	0	0	0	2	0	47352	112	8156	0
0	300	422	0	0	0	0	0	2	0	47353	4112	8157	0
0	300	416	0	0	0	0	0	2	0	47435	112	1145	0
0	300	417	0	0	0	0	0	2	0	47436	1145	2102	0
0	300	416	0	0	0	0	0	2	0	47437	102	1145	0
0	300	417	0	0	0	0	0	2	0	47438	1145	2112	0
0	300	420	0	0	0	0	0	2	0	47439	2112	3145	0
0	300	419	0	0	0	0	0	2	0	47441	2145	2158	0
0	300	417	0	0	0	0	0	2	0	47442	2102	3145	0
0	300	418	0	0	0	0	0	2	0	47443	3145	3164	0
13	1	1	59	0	0	0	0	2	0	30001	10101	301011	0
13	1	1	59	0	0	0	0	2	0	30002	10102	301021	0
13	1	1	59	0	0	0	0	2	0	30003	10103	301031	0

```
    13    1    1   59    0    0    0    0    2    0  30004  10104  301041    0
    13    1    1   59    0    0    0    0    2    0  30005  10113  301131    0
    13    1    1   59    0    0    0    0    2    0  30006  10114  301141    0
    13    1    1   59    0    0    0    0    2    0  30007  10115  301151    0
    13    1    1   59    0    0    0    0    2    0  30008  10116  301161    0
-1

! These constraint equiations attach the trolly to the crane bridge
!!!! Dec 20, 2010, J.Staples
!!!! See Rev 1 of Calc S10-0049.
!!!! CE equations are replaced by CP commands. The CP commands include no Rotation restriction and connections now follow NOG-1 2004
!!!! This is associated with Fig. 4154.3-1 and Table 4154.3-1
!!!! Specifically, Nodes E, F, G and H of the Figure 4154.3

!CE,1,0,11002,UZ,1,11129,UZ,-1,11129,ROTX,-1,

!CE,2,0,11002,UY,1,11129,UY,-1

!CE,3,0,11002,UX,1,11129,UX,-1,11129,ROTZ,1,

!CE,4,0,11050,UZ,1,11136,UZ,-1,11136,ROTX,-1,

!CE,5,0,11050,UY,1,11136,UY,-1

!CE,6,0,11050,UX,1,11136,UX,-1,11136,ROTZ,1,

!CE,7,0,11122,UY,1,11026,UY,-1

!CE,8,0,11122,UX,1,11026,UX,-1,11026,ROTZ,-1,

!CE,9,0,11115,UY,1,11083,UY,-1

!CE,10,0,11115,UX,1,11083,UX,-1,11083,ROTZ,-1,


CP,1,UX,     11002,    11129,
CP,2,UY,     11002,    11129,
CP,3,UZ,     11002,    11129,
CP,4,UX,     11050,    11136,
CP,5,UY,     11050,    11136,
CP,6,UZ,     11050,    11136,
CP,7,UY,     11026,    11122,
CP,8,UX,     11026,    11122,
CP,9,UY,     11083,    11115,
CP,10,UX,    11083,    11115,


!!!!
!!!! End of Dec 20 2010 changes.


! These constraint equiations attach the crane bridge to the crane rail

CE,11,0,40101,UY,1,301011,UY,-1
CE,12,0,40101,UZ,1,301011,UZ,-1

CE,13,0,40102,UY,1,301021,UY,-1
CE,14,0,40102,UZ,1,301021,UZ,-1

CE,15,0,40103,UX,1,301031,UX,-1
CE,16,0,40103,UY,1,301031,UY,-1
CE,17,0,40103,UZ,1,301031,UZ,-1

CE,18,0,40104,UX,1,301041,UX,-1
CE,19,0,40104,UY,1,301041,UY,-1
CE,20,0,40104,UZ,1,301041,UZ,-1

CE,21,0,40113,UY,1,301131,UY,-1

CE,22,0,40114,UY,1,301141,UY,-1

CE,23,0,40115,UX,1,301151,UX,-1
CE,24,0,40115,UY,1,10115,UY,-1

CE,25,0,40116,UX,1,301161,UX,-1
```

```
CE,26,0,40116,UY,1,301161,UY,-1

! ELEMENT TYPE 2

CE,101,0,60013,UX,1,13,UX,-1
CE,NEXT,0,60013,UY,1,13,UY,-1
CE,NEXT,0,60013,UZ,1,13,UZ,-1
CE,NEXT,0,60013,ROTZ,1,13,ROTZ,-1

CE,NEXT,0,60031,UX,1,31,UX,-1
CE,NEXT,0,60031,UY,1,31,UY,-1
CE,NEXT,0,60031,UZ,1,31,UZ,-1
CE,NEXT,0,60031,ROTZ,1,31,ROTZ,-1

CE,NEXT,0,60019,UX,1,19,UX,-1
CE,NEXT,0,60019,UY,1,19,UY,-1
CE,NEXT,0,60019,UZ,1,19,UZ,-1
CE,NEXT,0,60019,ROTZ,1,19,ROTZ,-1

CE,NEXT,0,60012,UX,1,12,UX,-1
CE,NEXT,0,60012,UY,1,12,UY,-1
CE,NEXT,0,60012,UZ,1,12,UZ,-1

CE,NEXT,0,70013,UX,1,13,UX,-1
CE,NEXT,0,70013,UY,1,13,UY,-1
CE,NEXT,0,70013,UZ,1,13,UZ,-1

CE,NEXT,0,60002,UX,1,2,UX,-1
CE,NEXT,0,60002,UY,1,2,UY,-1
CE,NEXT,0,60002,UZ,1,2,UZ,-1

CE,NEXT,0,80013,UX,1,13,UX,-1
CE,NEXT,0,80013,UY,1,13,UY,-1
CE,NEXT,0,80013,UZ,1,13,UZ,-1

CE,NEXT,0,60034,UX,1,34,UX,-1
CE,NEXT,0,60034,UY,1,34,UY,-1
CE,NEXT,0,60034,UZ,1,34,UZ,-1

CE,NEXT,0,70002,UX,1,2,UX,-1
CE,NEXT,0,70002,UY,1,2,UY,-1
CE,NEXT,0,70002,UZ,1,2,UZ,-1

CE,NEXT,0,70034,UX,1,34,UX,-1
CE,NEXT,0,70034,UY,1,34,UY,-1
CE,NEXT,0,70034,UZ,1,34,UZ,-1

CE,NEXT,0,60124,UX,1,124,UX,-1
CE,NEXT,0,60124,UY,1,124,UY,-1
CE,NEXT,0,60124,UZ,1,124,UZ,-1
CE,NEXT,0,60124,ROTZ,1,124,ROTZ,-1

CE,NEXT,0,60133,UX,1,133,UX,-1
CE,NEXT,0,60133,UY,1,133,UY,-1
CE,NEXT,0,60133,UZ,1,133,UZ,-1
CE,NEXT,0,60133,ROTZ,1,133,ROTZ,-1

CE,NEXT,0,60113,UX,1,113,UX,-1
CE,NEXT,0,60113,UY,1,113,UY,-1
CE,NEXT,0,60113,UZ,1,113,UZ,-1
CE,NEXT,0,60113,ROTX,1,113,ROTX,-1

CE,NEXT,0,62156,UX,1,2156,UX,-1
CE,NEXT,0,62156,UY,1,2156,UY,-1
CE,NEXT,0,62156,UZ,1,2156,UZ,-1
CE,NEXT,0,62156,ROTZ,1,2156,ROTZ,-1

CE,NEXT,0,63156,UX,1,3156,UX,-1
CE,NEXT,0,63156,UY,1,3156,UY,-1
CE,NEXT,0,63156,UZ,1,3156,UZ,-1
CE,NEXT,0,63156,ROTZ,1,3156,ROTZ,-1

CE,NEXT,0,65112,UX,1,5112,UX,-1
CE,NEXT,0,65112,UY,1,5112,UY,-1
CE,NEXT,0,65112,UZ,1,5112,UZ,-1
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CE,NEXT,0,65112,ROTZ,1,5112,ROTZ,-1

CE,NEXT,0,66118,UX,1,6118,UX,-1
CE,NEXT,0,66118,UY,1,6118,UY,-1
CE,NEXT,0,66118,UZ,1,6118,UZ,-1
CE,NEXT,0,66118,ROTZ,1,6118,ROTZ,-1

CE,NEXT,0,80002,UX,1,2,UX,-1
CE,NEXT,0,80002,UY,1,2,UY,-1
CE,NEXT,0,80002,UZ,1,2,UZ,-1
CE,NEXT,0,80002,ROTX,1,2,ROTX,-1

CE,NEXT,0,90013,UX,1,13,UX,-1
CE,NEXT,0,90013,UY,1,13,UY,-1
CE,NEXT,0,90013,UZ,1,13,UZ,-1
CE,NEXT,0,90013,ROTX,1,13,ROTX,-1

CE,NEXT,0,72102,UX,1,2102,UX,-1
CE,NEXT,0,72102,UY,1,2102,UY,-1
CE,NEXT,0,72102,UZ,1,2102,UZ,-1
CE,NEXT,0,72102,ROTX,1,2102,ROTX,-1

CE,NEXT,0,62148,UX,1,2148,UX,-1
CE,NEXT,0,62148,UY,1,2148,UY,-1
CE,NEXT,0,62148,UZ,1,2148,UZ,-1
CE,NEXT,0,62148,ROTX,1,2148,ROTX,-1

CE,NEXT,0,62143,UX,1,2143,UX,-1
CE,NEXT,0,62143,UY,1,2143,UY,-1
CE,NEXT,0,62143,UZ,1,2143,UZ,-1
CE,NEXT,0,62143,ROTX,1,2143,ROTX,-1

CE,NEXT,0,63100,UX,1,3100,UX,-1
CE,NEXT,0,63100,UY,1,3100,UY,-1
CE,NEXT,0,63100,UZ,1,3100,UZ,-1
CE,NEXT,0,63100,ROTX,1,3100,ROTX,-1

CE,NEXT,0,73102,UX,1,3102,UX,-1
CE,NEXT,0,73102,UY,1,3102,UY,-1
CE,NEXT,0,73102,UZ,1,3102,UZ,-1
CE,NEXT,0,73102,ROTX,1,3102,ROTX,-1

CE,NEXT,0,73112,UX,1,3112,UX,-1
CE,NEXT,0,73112,UY,1,3112,UY,-1
CE,NEXT,0,73112,UZ,1,3112,UZ,-1
CE,NEXT,0,73112,ROTX,1,3112,ROTX,-1

CE,NEXT,0,64113,UX,1,4113,UX,-1
CE,NEXT,0,64113,UY,1,4113,UY,-1
CE,NEXT,0,64113,UZ,1,4113,UZ,-1
CE,NEXT,0,64113,ROTX,1,4113,ROTX,-1

CE,NEXT,0,64122,UX,1,4122,UX,-1
CE,NEXT,0,64122,UY,1,4122,UY,-1
CE,NEXT,0,64122,UZ,1,4122,UZ,-1
CE,NEXT,0,64122,ROTX,1,4122,ROTX,-1

CE,NEXT,0,62116,UX,1,2116,UX,-1
CE,NEXT,0,62116,UY,1,2116,UY,-1
CE,NEXT,0,62116,UZ,1,2116,UZ,-1
CE,NEXT,0,62116,ROTX,1,2116,ROTX,-1

CE,NEXT,0,60008,UX,1,8,UX,-1
CE,NEXT,0,60008,UY,1,8,UY,-1
CE,NEXT,0,60008,UZ,1,8,UZ,-1
CE,NEXT,0,60008,ROTX,1,8,ROTX,-1

CE,NEXT,0,70019,UX,1,19,UX,-1
CE,NEXT,0,70019,UY,1,19,UY,-1
CE,NEXT,0,70019,UZ,1,19,UZ,-1
CE,NEXT,0,70019,ROTX,1,19,ROTX,-1

CE,NEXT,0,75118,UX,1,5118,UX,-1
CE,NEXT,0,75118,UY,1,5118,UY,-1
CE,NEXT,0,75118,UZ,1,5118,UZ,-1
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CE,NEXT,0,75118,ROTX,1,5118,ROTX,-1

CE,NEXT,0,60174,UX,1,174,UX,-1
CE,NEXT,0,60174,UY,1,174,UY,-1
CE,NEXT,0,60174,UZ,1,174,UZ,-1
CE,NEXT,0,60174,ROTZ,1,174,ROTZ,-1

CE,NEXT,0,67109,UX,1,7109,UX,-1
CE,NEXT,0,67109,UY,1,7109,UY,-1
CE,NEXT,0,67109,UZ,1,7109,UZ,-1
CE,NEXT,0,67109,ROTX,1,7109,ROTX,-1

CE,NEXT,0,66109,UX,1,6109,UX,-1
CE,NEXT,0,66109,UY,1,6109,UY,-1
CE,NEXT,0,66109,UZ,1,6109,UZ,-1
CE,NEXT,0,66109,ROTX,1,6109,ROTX,-1

CE,NEXT,0,65109,UX,1,5109,UX,-1
CE,NEXT,0,65109,UY,1,5109,UY,-1
CE,NEXT,0,65109,UZ,1,5109,UZ,-1
CE,NEXT,0,65109,ROTX,1,5109,ROTX,-1

CE,NEXT,0,63109,UX,1,3109,UX,-1
CE,NEXT,0,63109,UY,1,3109,UY,-1
CE,NEXT,0,63109,UZ,1,3109,UZ,-1
CE,NEXT,0,63109,ROTX,1,3109,ROTX,-1

CE,NEXT,0,62109,UX,1,2109,UX,-1
CE,NEXT,0,62109,UY,1,2109,UY,-1
CE,NEXT,0,62109,UZ,1,2109,UZ,-1
CE,NEXT,0,62109,ROTX,1,2109,ROTX,-1

CE,NEXT,0,61109,UX,1,1109,UX,-1
CE,NEXT,0,61109,UY,1,1109,UY,-1
CE,NEXT,0,61109,UZ,1,1109,UZ,-1
CE,NEXT,0,61109,ROTX,1,1109,ROTX,-1

CE,NEXT,0,68120,UX,1,8120,UX,-1
CE,NEXT,0,68120,UY,1,8120,UY,-1
CE,NEXT,0,68120,UZ,1,8120,UZ,-1
CE,NEXT,0,68120,ROTX,1,8120,ROTX,-1

CE,NEXT,0,65120,UX,1,5120,UX,-1
CE,NEXT,0,65120,UY,1,5120,UY,-1
CE,NEXT,0,65120,UZ,1,5120,UZ,-1
CE,NEXT,0,65120,ROTX,1,5120,ROTX,-1

CE,NEXT,0,63120,UX,1,3120,UX,-1
CE,NEXT,0,63120,UY,1,3120,UY,-1
CE,NEXT,0,63120,UZ,1,3120,UZ,-1
CE,NEXT,0,63120,ROTX,1,3120,ROTX,-1

CE,NEXT,0,62120,UX,1,2120,UX,-1
CE,NEXT,0,62120,UY,1,2120,UY,-1
CE,NEXT,0,62120,UZ,1,2120,UZ,-1
CE,NEXT,0,62120,ROTX,1,2120,ROTX,-1

CE,NEXT,0,61120,UX,1,1120,UX,-1
CE,NEXT,0,61120,UY,1,1120,UY,-1
CE,NEXT,0,61120,UZ,1,1120,UZ,-1
CE,NEXT,0,61120,ROTX,1,1120,ROTX,-1

!,ELEMENT,TYPE,,,,3,,

CE,NEXT,0,60112,UX,1,112,UX,-1
CE,NEXT,0,60112,UY,1,112,UY,-1
CE,NEXT,0,60112,UZ,1,112,UZ,-1
CE,NEXT,0,60112,ROTX,1,112,ROTX,-1
CE,NEXT,0,60112,ROTZ,1,112,ROTZ,-1

CE,NEXT,0,60118,UX,1,118,UX,-1
CE,NEXT,0,60118,UY,1,118,UY,-1
CE,NEXT,0,60118,UZ,1,118,UZ,-1
CE,NEXT,0,60118,ROTX,1,118,ROTX,-1
CE,NEXT,0,60118,ROTZ,1,118,ROTZ,-1
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CE,NEXT,0,61112,UX,1,1112,UX,-1
CE,NEXT,0,61112,UY,1,1112,UY,-1
CE,NEXT,0,61112,UZ,1,1112,UZ,-1
CE,NEXT,0,61112,ROTX,1,1112,ROTX,-1
CE,NEXT,0,61112,ROTZ,1,1112,ROTZ,-1

CE,NEXT,0,61118,UX,1,1118,UX,-1
CE,NEXT,0,61118,UY,1,1118,UY,-1
CE,NEXT,0,61118,UZ,1,1118,UZ,-1
CE,NEXT,0,61118,ROTX,1,1118,ROTX,-1
CE,NEXT,0,61118,ROTZ,1,1118,ROTZ,-1

CE,NEXT,0,62112,UX,1,2112,UX,-1
CE,NEXT,0,62112,UY,1,2112,UY,-1
CE,NEXT,0,62112,UZ,1,2112,UZ,-1
CE,NEXT,0,62112,ROTX,1,2112,ROTX,-1
CE,NEXT,0,62112,ROTZ,1,2112,ROTZ,-1

CE,NEXT,0,62118,UX,1,2118,UX,-1
CE,NEXT,0,62118,UY,1,2118,UY,-1
CE,NEXT,0,62118,UZ,1,2118,UZ,-1
CE,NEXT,0,62118,ROTX,1,2118,ROTX,-1
CE,NEXT,0,62118,ROTZ,1,2118,ROTZ,-1

CE,NEXT,0,63112,UX,1,3112,UX,-1
CE,NEXT,0,63112,UY,1,3112,UY,-1
CE,NEXT,0,63112,UZ,1,3112,UZ,-1
CE,NEXT,0,63112,ROTX,1,3112,ROTX,-1
CE,NEXT,0,63112,ROTZ,1,3112,ROTZ,-1

CE,NEXT,0,63118,UX,1,3118,UX,-1
CE,NEXT,0,63118,UY,1,3118,UY,-1
CE,NEXT,0,63118,UZ,1,3118,UZ,-1
CE,NEXT,0,63118,ROTX,1,3118,ROTX,-1
CE,NEXT,0,63118,ROTZ,1,3118,ROTZ,-1

CE,NEXT,0,64118,UX,1,4118,UX,-1
CE,NEXT,0,64118,UY,1,4118,UY,-1
CE,NEXT,0,64118,UZ,1,4118,UZ,-1
CE,NEXT,0,64118,ROTX,1,4118,ROTX,-1
CE,NEXT,0,64118,ROTZ,1,4118,ROTZ,-1

CE,NEXT,0,65118,UX,1,5118,UX,-1
CE,NEXT,0,65118,UY,1,5118,UY,-1
CE,NEXT,0,65118,UZ,1,5118,UZ,-1
CE,NEXT,0,65118,ROTX,1,5118,ROTX,-1
CE,NEXT,0,65118,ROTZ,1,5118,ROTZ,-1

CE,NEXT,0,67118,UX,1,7118,UX,-1
CE,NEXT,0,67118,UY,1,7118,UY,-1
CE,NEXT,0,67118,UZ,1,7118,UZ,-1
CE,NEXT,0,67118,ROTX,1,7118,ROTX,-1
CE,NEXT,0,67118,ROTZ,1,7118,ROTZ,-1

CE,NEXT,0,68118,UX,1,8118,UX,-1
CE,NEXT,0,68118,UY,1,8118,UY,-1
CE,NEXT,0,68118,UZ,1,8118,UZ,-1
CE,NEXT,0,68118,ROTX,1,8118,ROTX,-1
CE,NEXT,0,68118,ROTZ,1,8118,ROTZ,-1

!,ELEMENT,TYPE,,,,7,,

CE,NEXT,0,90002,UX,1,2,UX,-1
CE,NEXT,0,90002,UY,1,2,UY,-1
CE,NEXT,0,90002,UZ,1,2,UZ,-1
CE,NEXT,0,90002,ROTZ,1,2,ROTZ,-1

CE,NEXT,0,60033,UX,1,33,UX,-1
CE,NEXT,0,60033,UY,1,33,UY,-1
CE,NEXT,0,60033,UZ,1,33,UZ,-1
CE,NEXT,0,60033,ROTZ,1,33,ROTZ,-1

CE,NEXT,0,70008,UX,1,8,UX,-1
CE,NEXT,0,70008,UY,1,8,UY,-1
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CE,NEXT,0,70008,UZ,1,8,UZ,-1
CE,NEXT,0,70008,ROTZ,1,8,ROTZ,-1

CE,NEXT,0,70031,UX,1,31,UX,-1
CE,NEXT,0,70031,UY,1,31,UY,-1
CE,NEXT,0,70031,UZ,1,31,UZ,-1

CE,NEXT,0,70033,UX,1,33,UX,-1
CE,NEXT,0,70033,UY,1,33,UY,-1
CE,NEXT,0,70033,UZ,1,33,UZ,-1

CE,NEXT,0,60145,UX,1,145,UX,-1
CE,NEXT,0,60145,UY,1,145,UY,-1
CE,NEXT,0,60145,UZ,1,145,UZ,-1
CE,NEXT,0,60145,ROTY,1,145,ROTY,-1

CE,NEXT,0,60132,UX,1,132,UX,-1
CE,NEXT,0,60132,UY,1,132,UY,-1
CE,NEXT,0,60132,UZ,1,132,UZ,-1
CE,NEXT,0,60132,ROTZ,1,132,ROTZ,-1

CE,NEXT,0,60141,UX,1,141,UX,-1
CE,NEXT,0,60141,UY,1,141,UY,-1
CE,NEXT,0,60141,UZ,1,141,UZ,-1
CE,NEXT,0,60141,ROTZ,1,141,ROTZ,-1

CE,NEXT,0,61113,UX,1,1113,UX,-1
CE,NEXT,0,61113,UY,1,1113,UY,-1
CE,NEXT,0,61113,UZ,1,1113,UZ,-1
CE,NEXT,0,61113,ROTX,1,1113,ROTX,-1

CE,NEXT,0,61145,UX,1,1145,UX,-1
CE,NEXT,0,61145,UY,1,1145,UY,-1
CE,NEXT,0,61145,UZ,1,1145,UZ,-1
CE,NEXT,0,61145,ROTY,1,1145,ROTY,-1

CE,NEXT,0,62145,UX,1,2145,UX,-1
CE,NEXT,0,62145,UY,1,2145,UY,-1
CE,NEXT,0,62145,UZ,1,2145,UZ,-1
CE,NEXT,0,62145,ROTY,1,2145,ROTY,-1

CE,NEXT,0,63121,UX,1,3121,UX,-1
CE,NEXT,0,63121,UY,1,3121,UY,-1
CE,NEXT,0,63121,UZ,1,3121,UZ,-1
CE,NEXT,0,63121,ROTY,1,3121,ROTY,-1

CE,NEXT,0,63145,UX,1,3145,UX,-1
CE,NEXT,0,63145,UY,1,3145,UY,-1
CE,NEXT,0,63145,UZ,1,3145,UZ,-1
CE,NEXT,0,63145,ROTY,1,3145,ROTY,-1

CE,NEXT,0,63164,UX,1,3164,UX,-1
CE,NEXT,0,63164,UY,1,3164,UY,-1
CE,NEXT,0,63164,UZ,1,3164,UZ,-1
CE,NEXT,0,63164,ROTZ,1,3164,ROTZ,-1

CE,NEXT,0,65102,UX,1,5102,UX,-1
CE,NEXT,0,65102,UY,1,5102,UY,-1
CE,NEXT,0,65102,UZ,1,5102,UZ,-1
CE,NEXT,0,65102,ROTZ,1,5102,ROTZ,-1

CE,NEXT,0,66107,UX,1,6107,UX,-1
CE,NEXT,0,66107,UY,1,6107,UY,-1
CE,NEXT,0,66107,UZ,1,6107,UZ,-1
CE,NEXT,0,66107,ROTZ,1,6107,ROTZ,-1

CE,NEXT,0,70102,UX,1,102,UX,-1
CE,NEXT,0,70102,UY,1,102,UY,-1
CE,NEXT,0,70102,UZ,1,102,UZ,-1
CE,NEXT,0,70102,ROTX,1,102,ROTX,-1

CE,NEXT,0,70112,UX,1,112,UX,-1
CE,NEXT,0,70112,UY,1,112,UY,-1
CE,NEXT,0,70112,UZ,1,112,UZ,-1
CE,NEXT,0,70112,ROTX,1,112,ROTX,-1
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CE,NEXT,0,63143,UX,1,3143,UX,-1
CE,NEXT,0,63143,UY,1,3143,UY,-1
CE,NEXT,0,63143,UZ,1,3143,UZ,-1
CE,NEXT,0,63143,ROTX,1,3143,ROTX,-1

CE,NEXT,0,64102,UX,1,4102,UX,-1
CE,NEXT,0,64102,UY,1,4102,UY,-1
CE,NEXT,0,64102,UZ,1,4102,UZ,-1
CE,NEXT,0,64102,ROTX,1,4102,ROTX,-1

CE,NEXT,0,64112,UX,1,4112,UX,-1
CE,NEXT,0,64112,UY,1,4112,UY,-1
CE,NEXT,0,64112,UZ,1,4112,UZ,-1
CE,NEXT,0,64112,ROTX,1,4112,ROTX,-1

CE,NEXT,0,65122,UX,1,5122,UX,-1
CE,NEXT,0,65122,UY,1,5122,UY,-1
CE,NEXT,0,65122,UZ,1,5122,UZ,-1
CE,NEXT,0,65122,ROTX,1,5122,ROTX,-1

CE,NEXT,0,65113,UX,1,5113,UX,-1
CE,NEXT,0,65113,UY,1,5113,UY,-1
CE,NEXT,0,65113,UZ,1,5113,UZ,-1
CE,NEXT,0,65113,ROTX,1,5113,ROTX,-1

CE,NEXT,0,83102,UX,1,3102,UX,-1
CE,NEXT,0,83102,UY,1,3102,UY,-1
CE,NEXT,0,83102,UZ,1,3102,UZ,-1
CE,NEXT,0,83102,ROTX,1,3102,ROTX,-1

CE,NEXT,0,63148,UX,1,3148,UX,-1
CE,NEXT,0,63148,UY,1,3148,UY,-1
CE,NEXT,0,63148,UZ,1,3148,UZ,-1
CE,NEXT,0,63148,ROTX,1,3148,ROTX,-1

CE,NEXT,0,68152,UX,1,8152,UX,-1
CE,NEXT,0,68152,UY,1,8152,UY,-1
CE,NEXT,0,68152,UZ,1,8152,UZ,-1
CE,NEXT,0,68152,ROTY,1,8152,ROTY,-1

CE,NEXT,0,63116,UX,1,3116,UX,-1
CE,NEXT,0,63116,UY,1,3116,UY,-1
CE,NEXT,0,63116,UZ,1,3116,UZ,-1
CE,NEXT,0,63116,ROTX,1,3116,ROTX,-1

CE,NEXT,0,77118,UX,1,7118,UX,-1
CE,NEXT,0,77118,UY,1,7118,UY,-1
CE,NEXT,0,77118,UZ,1,7118,UZ,-1
CE,NEXT,0,77118,ROTX,1,7118,ROTX,-1

CE,NEXT,0,70107,UX,1,107,UX,-1
CE,NEXT,0,70107,UY,1,107,UY,-1
CE,NEXT,0,70107,UZ,1,107,UZ,-1
CE,NEXT,0,70107,ROTX,1,107,ROTX,-1

CE,NEXT,0,70118,UX,1,118,UX,-1
CE,NEXT,0,70118,UY,1,118,UY,-1
CE,NEXT,0,70118,UZ,1,118,UZ,-1
CE,NEXT,0,70118,ROTX,1,118,ROTX,-1

CE,NEXT,0,60182,UX,1,182,UX,-1
CE,NEXT,0,60182,UY,1,182,UY,-1
CE,NEXT,0,60182,UZ,1,182,UZ,-1
CE,NEXT,0,60182,ROTZ,1,182,ROTZ,-1

CE,NEXT,0,76109,UX,1,6109,UX,-1
CE,NEXT,0,76109,UY,1,6109,UY,-1
CE,NEXT,0,76109,UZ,1,6109,UZ,-1
CE,NEXT,0,76109,ROTX,1,6109,ROTX,-1

CE,NEXT,0,75109,UX,1,5109,UX,-1
CE,NEXT,0,75109,UY,1,5109,UY,-1
CE,NEXT,0,75109,UZ,1,5109,UZ,-1
CE,NEXT,0,75109,ROTX,1,5109,ROTX,-1
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CE,NEXT,0,64109,UX,1,4109,UX,-1
CE,NEXT,0,64109,UY,1,4109,UY,-1
CE,NEXT,0,64109,UZ,1,4109,UZ,-1
CE,NEXT,0,64109,ROTX,1,4109,ROTX,-1

CE,NEXT,0,72109,UX,1,2109,UX,-1
CE,NEXT,0,72109,UY,1,2109,UY,-1
CE,NEXT,0,72109,UZ,1,2109,UZ,-1
CE,NEXT,0,72109,ROTX,1,2109,ROTX,-1

CE,NEXT,0,71109,UX,1,1109,UX,-1
CE,NEXT,0,71109,UY,1,1109,UY,-1
CE,NEXT,0,71109,UZ,1,1109,UZ,-1
CE,NEXT,0,71109,ROTX,1,1109,ROTX,-1

CE,NEXT,0,60010,UX,1,10,UX,-1
CE,NEXT,0,60010,UY,1,10,UY,-1
CE,NEXT,0,60010,UZ,1,10,UZ,-1
CE,NEXT,0,60010,ROTX,1,10,ROTX,-1

CE,NEXT,0,75120,UX,1,5120,UX,-1
CE,NEXT,0,75120,UY,1,5120,UY,-1
CE,NEXT,0,75120,UZ,1,5120,UZ,-1
CE,NEXT,0,75120,ROTX,1,5120,ROTX,-1

CE,NEXT,0,64120,UX,1,4120,UX,-1
CE,NEXT,0,64120,UY,1,4120,UY,-1
CE,NEXT,0,64120,UZ,1,4120,UZ,-1
CE,NEXT,0,64120,ROTX,1,4120,ROTX,-1

CE,NEXT,0,72120,UX,1,2120,UX,-1
CE,NEXT,0,72120,UY,1,2120,UY,-1
CE,NEXT,0,72120,UZ,1,2120,UZ,-1
CE,NEXT,0,72120,ROTX,1,2120,ROTX,-1

CE,NEXT,0,71120,UX,1,1120,UX,-1
CE,NEXT,0,71120,UY,1,1120,UY,-1
CE,NEXT,0,71120,UZ,1,1120,UZ,-1
CE,NEXT,0,71120,ROTX,1,1120,ROTX,-1

CE,NEXT,0,60021,UX,1,21,UX,-1
CE,NEXT,0,60021,UY,1,21,UY,-1
CE,NEXT,0,60021,UZ,1,21,UZ,-1
CE,NEXT,0,60021,ROTX,1,21,ROTX,-1

!,ELEMENT,TYPE,,,,8,,

CE,NEXT,0,60102,UX,1,102,UX,-1
CE,NEXT,0,60102,UY,1,102,UY,-1
CE,NEXT,0,60102,UZ,1,102,UZ,-1
CE,NEXT,0,60102,ROTX,1,102,ROTX,-1
CE,NEXT,0,60102,ROTZ,1,102,ROTZ,-1

CE,NEXT,0,60107,UX,1,107,UX,-1
CE,NEXT,0,60107,UY,1,107,UY,-1
CE,NEXT,0,60107,UZ,1,107,UZ,-1
CE,NEXT,0,60107,ROTX,1,107,ROTX,-1
CE,NEXT,0,60107,ROTZ,1,107,ROTZ,-1

CE,NEXT,0,61102,UX,1,1102,UX,-1
CE,NEXT,0,61102,UY,1,1102,UY,-1
CE,NEXT,0,61102,UZ,1,1102,UZ,-1
CE,NEXT,0,61102,ROTX,1,1102,ROTX,-1
CE,NEXT,0,61102,ROTZ,1,1102,ROTZ,-1

CE,NEXT,0,61107,UX,1,1107,UX,-1
CE,NEXT,0,61107,UY,1,1107,UY,-1
CE,NEXT,0,61107,UZ,1,1107,UZ,-1
CE,NEXT,0,61107,ROTX,1,1107,ROTX,-1
CE,NEXT,0,61107,ROTZ,1,1107,ROTZ,-1

CE,NEXT,0,62102,UX,1,2102,UX,-1
CE,NEXT,0,62102,UY,1,2102,UY,-1
CE,NEXT,0,62102,UZ,1,2102,UZ,-1
```

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CE,NEXT,0,62102,ROTX,1,2102,ROTX,-1
CE,NEXT,0,62102,ROTZ,1,2102,ROTZ,-1

CE,NEXT,0,62107,UX,1,2107,UX,-1
CE,NEXT,0,62107,UY,1,2107,UY,-1
CE,NEXT,0,62107,UZ,1,2107,UZ,-1
CE,NEXT,0,62107,ROTX,1,2107,ROTX,-1
CE,NEXT,0,62107,ROTZ,1,2107,ROTZ,-1

CE,NEXT,0,63102,UX,1,3102,UX,-1
CE,NEXT,0,63102,UY,1,3102,UY,-1
CE,NEXT,0,63102,UZ,1,3102,UZ,-1
CE,NEXT,0,63102,ROTX,1,3102,ROTX,-1
CE,NEXT,0,63102,ROTZ,1,3102,ROTZ,-1

CE,NEXT,0,63107,UX,1,3107,UX,-1
CE,NEXT,0,63107,UY,1,3107,UY,-1
CE,NEXT,0,63107,UZ,1,3107,UZ,-1
CE,NEXT,0,63107,ROTX,1,3107,ROTX,-1
CE,NEXT,0,63107,ROTZ,1,3107,ROTZ,-1

CE,NEXT,0,64107,UX,1,4107,UX,-1
CE,NEXT,0,64107,UY,1,4107,UY,-1
CE,NEXT,0,64107,UZ,1,4107,UZ,-1
CE,NEXT,0,64107,ROTX,1,4107,ROTX,-1
CE,NEXT,0,64107,ROTZ,1,4107,ROTZ,-1

CE,NEXT,0,65107,UX,1,5107,UX,-1
CE,NEXT,0,65107,UY,1,5107,UY,-1
CE,NEXT,0,65107,UZ,1,5107,UZ,-1
CE,NEXT,0,65107,ROTX,1,5107,ROTX,-1
CE,NEXT,0,65107,ROTZ,1,5107,ROTZ,-1

CE,NEXT,0,64100,UX,1,4100,UX,-1
CE,NEXT,0,64100,UY,1,4100,UY,-1
CE,NEXT,0,64100,UZ,1,4100,UZ,-1
CE,NEXT,0,64100,ROTX,1,4100,ROTX,-1
CE,NEXT,0,64100,ROTY,1,4100,ROTY,-1

CE,NEXT,0,67107,UX,1,7107,UX,-1
CE,NEXT,0,67107,UY,1,7107,UY,-1
CE,NEXT,0,67107,UZ,1,7107,UZ,-1
CE,NEXT,0,67107,ROTX,1,7107,ROTX,-1
CE,NEXT,0,67107,ROTZ,1,7107,ROTZ,-1

CE,NEXT,0,68107,UX,1,8107,UX,-1
CE,NEXT,0,68107,UY,1,8107,UY,-1
CE,NEXT,0,68107,UZ,1,8107,UZ,-1
CE,NEXT,0,68107,ROTX,1,8107,ROTX,-1
CE,NEXT,0,68107,ROTZ,1,8107,ROTZ,-1

!,ELEMENT,TYPE,,,,16,,

CE,NEXT,0,74100,UX,1,4100,UX,-1
CE,NEXT,0,74100,UY,1,4100,UY,-1
CE,NEXT,0,74100,UZ,1,4100,UZ,-1
CE,NEXT,0,74100,ROTX,1,4100,ROTX,-1
CE,NEXT,0,74100,ROTY,1,4100,ROTY,-1

CE,NEXT,0,75100,UX,1,5100,UX,-1
CE,NEXT,0,75100,UY,1,5100,UY,-1
CE,NEXT,0,75100,UZ,1,5100,UZ,-1
CE,NEXT,0,75100,ROTX,1,5100,ROTX,-1

!,ELEMENT,TYPE,,,,9,,


CE,NEXT,0,60014,UX,1,14,UX,-1
CE,NEXT,0,60014,UY,1,14,UY,-1
CE,NEXT,0,60014,UZ,1,14,UZ,-1
CE,NEXT,0,60014,ROTZ,1,14,ROTZ,-1

CE,NEXT,0,80034,UX,1,34,UX,-1
CE,NEXT,0,80034,UY,1,34,UY,-1
CE,NEXT,0,80034,UZ,1,34,UZ,-1
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CE,NEXT,0,80034,ROTZ,1,34,ROTZ,-1

CE,NEXT,0,90034,UX,1,34,UX,-1
CE,NEXT,0,90034,UY,1,34,UY,-1
CE,NEXT,0,90034,UZ,1,34,UZ,-1
CE,NEXT,0,90034,ROTZ,1,34,ROTZ,-1

CE,NEXT,0,60003,UX,1,3,UX,-1
CE,NEXT,0,60003,UY,1,3,UY,-1
CE,NEXT,0,60003,UZ,1,3,UZ,-1
CE,NEXT,0,60003,ROTZ,1,3,ROTZ,-1

CE,NEXT,0,80019,UX,1,19,UX,-1
CE,NEXT,0,80019,UY,1,19,UY,-1
CE,NEXT,0,80019,UZ,1,19,UZ,-1

CE,NEXT,0,100034,UX,1,34,UX,-1
CE,NEXT,0,100034,UY,1,34,UY,-1
CE,NEXT,0,100034,UZ,1,34,UZ,-1

CE,NEXT,0,80008,UX,1,8,UX,-1
CE,NEXT,0,80008,UY,1,8,UY,-1
CE,NEXT,0,80008,UZ,1,8,UZ,-1

CE,NEXT,0,110034,UX,1,34,UX,-1
CE,NEXT,0,110034,UY,1,34,UY,-1
CE,NEXT,0,110034,UZ,1,34,UZ,-1

CE,NEXT,0,91107,UX,1,1107,UX,-1
CE,NEXT,0,91107,UY,1,1107,UY,-1
CE,NEXT,0,91107,UZ,1,1107,UZ,-1

CE,NEXT,0,80105,UX,1,105,UX,-1
CE,NEXT,0,80105,UY,1,105,UY,-1
CE,NEXT,0,80105,UZ,1,105,UZ,-1

CE,NEXT,0,61103,UX,1,1103,UX,-1
CE,NEXT,0,61103,UY,1,1103,UY,-1
CE,NEXT,0,61103,UZ,1,1103,UZ,-1

CE,NEXT,0,90102,UX,1,102,UX,-1
CE,NEXT,0,90102,UY,1,102,UY,-1
CE,NEXT,0,90102,UZ,1,102,UZ,-1

CE,NEXT,0,91102,UX,1,1102,UX,-1
CE,NEXT,0,91102,UY,1,1102,UY,-1
CE,NEXT,0,91102,UZ,1,1102,UZ,-1

CE,NEXT,0,60101,UX,1,101,UX,-1
CE,NEXT,0,60101,UY,1,101,UY,-1
CE,NEXT,0,60101,UZ,1,101,UZ,-1

CE,NEXT,0,91118,UX,1,1118,UX,-1
CE,NEXT,0,91118,UY,1,1118,UY,-1
CE,NEXT,0,91118,UZ,1,1118,UZ,-1

CE,NEXT,0,80116,UX,1,116,UX,-1
CE,NEXT,0,80116,UY,1,116,UY,-1
CE,NEXT,0,80116,UZ,1,116,UZ,-1

CE,NEXT,0,61114,UX,1,1114,UX,-1
CE,NEXT,0,61114,UY,1,1114,UY,-1
CE,NEXT,0,61114,UZ,1,1114,UZ,-1

CE,NEXT,0,70113,UX,1,113,UX,-1
CE,NEXT,0,70113,UY,1,113,UY,-1
CE,NEXT,0,70113,UZ,1,113,UZ,-1

CE,NEXT,0,90112,UX,1,112,UX,-1
CE,NEXT,0,90112,UY,1,112,UY,-1
CE,NEXT,0,90112,UZ,1,112,UZ,-1

CE,NEXT,0,60183,UX,1,183,UX,-1
CE,NEXT,0,60183,UY,1,183,UY,-1
CE,NEXT,0,60183,UZ,1,183,UZ,-1
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CE,NEXT,0,91112,UX,1,1112,UX,-1
CE,NEXT,0,91112,UY,1,1112,UY,-1
CE,NEXT,0,91112,UZ,1,1112,UZ,-1

CE,NEXT,0,70183,UX,1,183,UX,-1
CE,NEXT,0,70183,UY,1,183,UY,-1
CE,NEXT,0,70183,UZ,1,183,UZ,-1

CE,NEXT,0,95107,UX,1,5107,UX,-1
CE,NEXT,0,95107,UY,1,5107,UY,-1
CE,NEXT,0,95107,UZ,1,5107,UZ,-1

CE,NEXT,0,84105,UX,1,4105,UX,-1
CE,NEXT,0,84105,UY,1,4105,UY,-1
CE,NEXT,0,84105,UZ,1,4105,UZ,-1

CE,NEXT,0,65103,UX,1,5103,UX,-1
CE,NEXT,0,65103,UY,1,5103,UY,-1
CE,NEXT,0,65103,UZ,1,5103,UZ,-1

CE,NEXT,0,84102,UX,1,4102,UX,-1
CE,NEXT,0,84102,UY,1,4102,UY,-1
CE,NEXT,0,84102,UZ,1,4102,UZ,-1

CE,NEXT,0,65100,UX,1,5100,UX,-1
CE,NEXT,0,65100,UY,1,5100,UY,-1
CE,NEXT,0,65100,UZ,1,5100,UZ,-1

CE,NEXT,0,64101,UX,1,4101,UX,-1
CE,NEXT,0,64101,UY,1,4101,UY,-1
CE,NEXT,0,64101,UZ,1,4101,UZ,-1

CE,NEXT,0,94118,UX,1,4118,UX,-1
CE,NEXT,0,94118,UY,1,4118,UY,-1
CE,NEXT,0,94118,UZ,1,4118,UZ,-1

CE,NEXT,0,84156,UX,1,4156,UX,-1
CE,NEXT,0,84156,UY,1,4156,UY,-1
CE,NEXT,0,84156,UZ,1,4156,UZ,-1

CE,NEXT,0,64156,UX,1,4156,UX,-1
CE,NEXT,0,64156,UY,1,4156,UY,-1
CE,NEXT,0,64156,UZ,1,4156,UZ,-1

CE,NEXT,0,75116,UX,1,5116,UX,-1
CE,NEXT,0,75116,UY,1,5116,UY,-1
CE,NEXT,0,75116,UZ,1,5116,UZ,-1

CE,NEXT,0,84116,UX,1,4116,UX,-1
CE,NEXT,0,84116,UY,1,4116,UY,-1
CE,NEXT,0,84116,UZ,1,4116,UZ,-1

CE,NEXT,0,94156,UX,1,4156,UX,-1
CE,NEXT,0,94156,UY,1,4156,UY,-1
CE,NEXT,0,94156,UZ,1,4156,UZ,-1

CE,NEXT,0,74156,UX,1,4156,UX,-1
CE,NEXT,0,74156,UY,1,4156,UY,-1
CE,NEXT,0,74156,UZ,1,4156,UZ,-1

CE,NEXT,0,95118,UX,1,5118,UX,-1
CE,NEXT,0,95118,UY,1,5118,UY,-1
CE,NEXT,0,95118,UZ,1,5118,UZ,-1

CE,NEXT,0,65114,UX,1,5114,UX,-1
CE,NEXT,0,65114,UY,1,5114,UY,-1
CE,NEXT,0,65114,UZ,1,5114,UZ,-1

CE,NEXT,0,84113,UX,1,4113,UX,-1
CE,NEXT,0,84113,UY,1,4113,UY,-1
CE,NEXT,0,84113,UZ,1,4113,UZ,-1

CE,NEXT,0,84112,UX,1,4112,UX,-1
CE,NEXT,0,84112,UY,1,4112,UY,-1
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CE,NEXT,0,84112,UZ,1,4112,UZ,-1

CE,NEXT,0,65123,UX,1,5123,UX,-1
CE,NEXT,0,65123,UY,1,5123,UY,-1
CE,NEXT,0,65123,UZ,1,5123,UZ,-1

CE,NEXT,0,75123,UX,1,5123,UX,-1
CE,NEXT,0,75123,UY,1,5123,UY,-1
CE,NEXT,0,75123,UZ,1,5123,UZ,-1

CE,NEXT,0,95112,UX,1,5112,UX,-1
CE,NEXT,0,95112,UY,1,5112,UY,-1
CE,NEXT,0,95112,UZ,1,5112,UZ,-1

CE,NEXT,0,85112,UX,1,5112,UX,-1
CE,NEXT,0,85112,UY,1,5112,UY,-1
CE,NEXT,0,85112,UZ,1,5112,UZ,-1

CE,NEXT,0,64111,UX,1,4111,UX,-1
CE,NEXT,0,64111,UY,1,4111,UY,-1
CE,NEXT,0,64111,UZ,1,4111,UZ,-1

CE,NEXT,0,88118,UX,1,8118,UX,-1
CE,NEXT,0,88118,UY,1,8118,UY,-1
CE,NEXT,0,88118,UZ,1,8118,UZ,-1

CE,NEXT,0,87122,UX,1,7122,UX,-1
CE,NEXT,0,87122,UY,1,7122,UY,-1
CE,NEXT,0,87122,UZ,1,7122,UZ,-1

CE,NEXT,0,281660,UX,1,81660,UX,-1
CE,NEXT,0,281660,UY,1,81660,UY,-1
CE,NEXT,0,281660,UZ,1,81660,UZ,-1

CE,NEXT,0,77116,UX,1,7116,UX,-1
CE,NEXT,0,77116,UY,1,7116,UY,-1
CE,NEXT,0,77116,UZ,1,7116,UZ,-1

CE,NEXT,0,150037,UX,1,50037,UX,-1
CE,NEXT,0,150037,UY,1,50037,UY,-1
CE,NEXT,0,150037,UZ,1,50037,UZ,-1

CE,NEXT,0,150174,UX,1,50174,UX,-1
CE,NEXT,0,150174,UY,1,50174,UY,-1
CE,NEXT,0,150174,UZ,1,50174,UZ,-1

CE,NEXT,0,250037,UX,1,50037,UX,-1
CE,NEXT,0,250037,UY,1,50037,UY,-1
CE,NEXT,0,250037,UZ,1,50037,UZ,-1

CE,NEXT,0,150179,UX,1,50179,UX,-1
CE,NEXT,0,150179,UY,1,50179,UY,-1
CE,NEXT,0,150179,UZ,1,50179,UZ,-1

CE,NEXT,0,150039,UX,1,50039,UX,-1
CE,NEXT,0,150039,UY,1,50039,UY,-1
CE,NEXT,0,150039,UZ,1,50039,UZ,-1

CE,NEXT,0,150177,UX,1,50177,UX,-1
CE,NEXT,0,150177,UY,1,50177,UY,-1
CE,NEXT,0,150177,UZ,1,50177,UZ,-1

CE,NEXT,0,250039,UX,1,50039,UX,-1
CE,NEXT,0,250039,UY,1,50039,UY,-1
CE,NEXT,0,250039,UZ,1,50039,UZ,-1

CE,NEXT,0,250182,UX,1,50182,UX,-1
CE,NEXT,0,250182,UY,1,50182,UY,-1
CE,NEXT,0,250182,UZ,1,50182,UZ,-1

CE,NEXT,0,150182,UX,1,50182,UX,-1
CE,NEXT,0,150182,UY,1,50182,UY,-1
CE,NEXT,0,150182,UZ,1,50182,UZ,-1

CE,NEXT,0,250153,UX,1,50153,UX,-1
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CE,NEXT,0,250153,UY,1,50153,UY,-1
CE,NEXT,0,250153,UZ,1,50153,UZ,-1

CE,NEXT,0,150153,UX,1,50153,UX,-1
CE,NEXT,0,150153,UY,1,50153,UY,-1
CE,NEXT,0,150153,UZ,1,50153,UZ,-1

CE,NEXT,0,251107,UX,1,51107,UX,-1
CE,NEXT,0,251107,UY,1,51107,UY,-1
CE,NEXT,0,251107,UZ,1,51107,UZ,-1

CE,NEXT,0,151107,UX,1,51107,UX,-1
CE,NEXT,0,151107,UY,1,51107,UY,-1
CE,NEXT,0,151107,UZ,1,51107,UZ,-1

CE,NEXT,0,252153,UX,1,52153,UX,-1
CE,NEXT,0,252153,UY,1,52153,UY,-1
CE,NEXT,0,252153,UZ,1,52153,UZ,-1

CE,NEXT,0,152153,UX,1,52153,UX,-1
CE,NEXT,0,152153,UY,1,52153,UY,-1
CE,NEXT,0,152153,UZ,1,52153,UZ,-1

CE,NEXT,0,253107,UX,1,53107,UX,-1
CE,NEXT,0,253107,UY,1,53107,UY,-1
CE,NEXT,0,253107,UZ,1,53107,UZ,-1

CE,NEXT,0,153107,UX,1,53107,UX,-1
CE,NEXT,0,153107,UY,1,53107,UY,-1
CE,NEXT,0,153107,UZ,1,53107,UZ,-1

CE,NEXT,0,254153,UX,1,54153,UX,-1
CE,NEXT,0,254153,UY,1,54153,UY,-1
CE,NEXT,0,254153,UZ,1,54153,UZ,-1

CE,NEXT,0,154153,UX,1,54153,UX,-1
CE,NEXT,0,154153,UY,1,54153,UY,-1
CE,NEXT,0,154153,UZ,1,54153,UZ,-1

CE,NEXT,0,255107,UX,1,55107,UX,-1
CE,NEXT,0,255107,UY,1,55107,UY,-1
CE,NEXT,0,255107,UZ,1,55107,UZ,-1

CE,NEXT,0,155107,UX,1,55107,UX,-1
CE,NEXT,0,155107,UY,1,55107,UY,-1
CE,NEXT,0,155107,UZ,1,55107,UZ,-1

CE,NEXT,0,256153,UX,1,56153,UX,-1
CE,NEXT,0,256153,UY,1,56153,UY,-1
CE,NEXT,0,256153,UZ,1,56153,UZ,-1

CE,NEXT,0,156153,UX,1,56153,UX,-1
CE,NEXT,0,156153,UY,1,56153,UY,-1
CE,NEXT,0,156153,UZ,1,56153,UZ,-1

CE,NEXT,0,257107,UX,1,57107,UX,-1
CE,NEXT,0,257107,UY,1,57107,UY,-1
CE,NEXT,0,257107,UZ,1,57107,UZ,-1

CE,NEXT,0,157107,UX,1,57107,UX,-1
CE,NEXT,0,157107,UY,1,57107,UY,-1
CE,NEXT,0,157107,UZ,1,57107,UZ,-1

CE,NEXT,0,158153,UX,1,58153,UX,-1
CE,NEXT,0,158153,UY,1,58153,UY,-1
CE,NEXT,0,158153,UZ,1,58153,UZ,-1

CE,NEXT,0,157151,UX,1,57151,UX,-1
CE,NEXT,0,157151,UY,1,57151,UY,-1
CE,NEXT,0,157151,UZ,1,57151,UZ,-1

CE,NEXT,0,258153,UX,1,58153,UX,-1
CE,NEXT,0,258153,UY,1,58153,UY,-1
CE,NEXT,0,258153,UZ,1,58153,UZ,-1
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CE,NEXT,0,157153,UX,1,57153,UX,-1
CE,NEXT,0,157153,UY,1,57153,UY,-1
CE,NEXT,0,157153,UZ,1,57153,UZ,-1

CE,NEXT,0,158151,UX,1,58151,UX,-1
CE,NEXT,0,158151,UY,1,58151,UY,-1
CE,NEXT,0,158151,UZ,1,58151,UZ,-1

CE,NEXT,0,157118,UX,1,57118,UX,-1
CE,NEXT,0,157118,UY,1,57118,UY,-1
CE,NEXT,0,157118,UZ,1,57118,UZ,-1

CE,NEXT,0,258151,UX,1,58151,UX,-1
CE,NEXT,0,258151,UY,1,58151,UY,-1
CE,NEXT,0,258151,UZ,1,58151,UZ,-1

CE,NEXT,0,100112,UX,1,112,UX,-1
CE,NEXT,0,100112,UY,1,112,UY,-1
CE,NEXT,0,100112,UZ,1,112,UZ,-1

CE,NEXT,0,94112,UX,1,4112,UX,-1
CE,NEXT,0,94112,UY,1,4112,UY,-1
CE,NEXT,0,94112,UZ,1,4112,UZ,-1

CE,NEXT,0,62124,UX,1,2124,UX,-1
CE,NEXT,0,62124,UY,1,2124,UY,-1
CE,NEXT,0,62124,UZ,1,2124,UZ,-1

CE,NEXT,0,62125,UX,1,2125,UX,-1
CE,NEXT,0,62125,UY,1,2125,UY,-1
CE,NEXT,0,62125,UZ,1,2125,UZ,-1

CE,NEXT,0,110112,UX,1,112,UX,-1
CE,NEXT,0,110112,UY,1,112,UY,-1
CE,NEXT,0,110112,UZ,1,112,UZ,-1

CE,NEXT,0,111145,UX,1,1145,UX,-1
CE,NEXT,0,111145,UY,1,1145,UY,-1
CE,NEXT,0,111145,UZ,1,1145,UZ,-1

CE,NEXT,0,91145,UX,1,1145,UX,-1
CE,NEXT,0,91145,UY,1,1145,UY,-1
CE,NEXT,0,91145,UZ,1,1145,UZ,-1

CE,NEXT,0,102102,UX,1,2102,UX,-1
CE,NEXT,0,102102,UY,1,2102,UY,-1
CE,NEXT,0,102102,UZ,1,2102,UZ,-1

CE,NEXT,0,100102,UX,1,102,UX,-1
CE,NEXT,0,100102,UY,1,102,UY,-1
CE,NEXT,0,100102,UZ,1,102,UZ,-1

CE,NEXT,0,121145,UX,1,1145,UX,-1
CE,NEXT,0,121145,UY,1,1145,UY,-1
CE,NEXT,0,121145,UZ,1,1145,UZ,-1

CE,NEXT,0,101145,UX,1,1145,UX,-1
CE,NEXT,0,101145,UY,1,1145,UY,-1
CE,NEXT,0,101145,UZ,1,1145,UZ,-1

CE,NEXT,0,102112,UX,1,2112,UX,-1
CE,NEXT,0,102112,UY,1,2112,UY,-1
CE,NEXT,0,102112,UZ,1,2112,UZ,-1

CE,NEXT,0,92112,UX,1,2112,UX,-1
CE,NEXT,0,92112,UY,1,2112,UY,-1
CE,NEXT,0,92112,UZ,1,2112,UZ,-1

CE,NEXT,0,103145,UX,1,3145,UX,-1
CE,NEXT,0,103145,UY,1,3145,UY,-1
CE,NEXT,0,103145,UZ,1,3145,UZ,-1

CE,NEXT,0,92145,UX,1,2145,UX,-1
CE,NEXT,0,92145,UY,1,2145,UY,-1
CE,NEXT,0,92145,UZ,1,2145,UZ,-1
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CE,NEXT,0,62158,UX,1,2158,UX,-1
CE,NEXT,0,62158,UY,1,2158,UY,-1
CE,NEXT,0,62158,UZ,1,2158,UZ,-1

CE,NEXT,0,92102,UX,1,2102,UX,-1
CE,NEXT,0,92102,UY,1,2102,UY,-1
CE,NEXT,0,92102,UZ,1,2102,UZ,-1

CE,NEXT,0,113145,UX,1,3145,UX,-1
CE,NEXT,0,113145,UY,1,3145,UY,-1
CE,NEXT,0,113145,UZ,1,3145,UZ,-1

CE,NEXT,0,93145,UX,1,3145,UX,-1
CE,NEXT,0,93145,UY,1,3145,UY,-1
CE,NEXT,0,93145,UZ,1,3145,UZ,-1

CE,NEXT,0,73164,UX,1,3164,UX,-1
CE,NEXT,0,73164,UY,1,3164,UY,-1
CE,NEXT,0,73164,UZ,1,3164,UZ,-1

CE,NEXT,0,71113,UX,1,1113,UX,-1
CE,NEXT,0,71113,UY,1,1113,UY,-1
CE,NEXT,0,71113,UZ,1,1113,UZ,-1
CE,NEXT,0,71113,ROTX,1,1113,ROTX,-1

CE,NEXT,0,62113,UX,1,2113,UX,-1
CE,NEXT,0,62113,UY,1,2113,UY,-1
CE,NEXT,0,62113,UZ,1,2113,UZ,-1
CE,NEXT,0,62113,ROTX,1,2113,ROTX,-1

CE,NEXT,0,72113,UX,1,2113,UX,-1
CE,NEXT,0,72113,UY,1,2113,UY,-1
CE,NEXT,0,72113,UZ,1,2113,UZ,-1
CE,NEXT,0,72113,ROTX,1,2113,ROTX,-1

CE,NEXT,0,152174,UX,1,52174,UX,-1
CE,NEXT,0,152174,UY,1,52174,UY,-1
CE,NEXT,0,152174,UZ,1,52174,UZ,-1
CE,NEXT,0,152174,ROTX,1,52174,ROTX,-1

CE,NEXT,0,63113,UX,1,3113,UX,-1
CE,NEXT,0,63113,UY,1,3113,UY,-1
CE,NEXT,0,63113,UZ,1,3113,UZ,-1
CE,NEXT,0,63113,ROTX,1,3113,ROTX,-1

CE,NEXT,0,74113,UX,1,4113,UX,-1
CE,NEXT,0,74113,UY,1,4113,UY,-1
CE,NEXT,0,74113,UZ,1,4113,UZ,-1
CE,NEXT,0,74113,ROTX,1,4113,ROTX,-1

CE,NEXT,0,60030,UX,1,30,UX,-1
CE,NEXT,0,60030,UY,1,30,UY,-1
CE,NEXT,0,60030,UZ,1,30,UZ,-1
CE,NEXT,0,60030,ROTX,1,30,ROTX,-1

CE,NEXT,0,60131,UX,1,131,UX,-1
CE,NEXT,0,60131,UY,1,131,UY,-1
CE,NEXT,0,60131,UZ,1,131,UZ,-1
CE,NEXT,0,60131,ROTX,1,131,ROTX,-1

CE,NEXT,0,60029,UX,1,29,UX,-1
CE,NEXT,0,60029,UY,1,29,UY,-1
CE,NEXT,0,60029,UZ,1,29,UZ,-1
CE,NEXT,0,60029,ROTX,1,29,ROTX,-1

CE,NEXT,0,60130,UX,1,130,UX,-1
CE,NEXT,0,60130,UY,1,130,UY,-1
CE,NEXT,0,60130,UZ,1,130,UZ,-1
CE,NEXT,0,60130,ROTX,1,130,ROTX,-1

CE,NEXT,0,60028,UX,1,28,UX,-1
CE,NEXT,0,60028,UY,1,28,UY,-1
CE,NEXT,0,60028,UZ,1,28,UZ,-1
CE,NEXT,0,60028,ROTX,1,28,ROTX,-1
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CE,NEXT,0,60129,UX,1,129,UX,-1
CE,NEXT,0,60129,UY,1,129,UY,-1
CE,NEXT,0,60129,UZ,1,129,UZ,-1
CE,NEXT,0,60129,ROTX,1,129,ROTX,-1

CE,NEXT,0,60027,UX,1,27,UX,-1
CE,NEXT,0,60027,UY,1,27,UY,-1
CE,NEXT,0,60027,UZ,1,27,UZ,-1
CE,NEXT,0,60027,ROTX,1,27,ROTX,-1

CE,NEXT,0,60128,UX,1,128,UX,-1
CE,NEXT,0,60128,UY,1,128,UY,-1
CE,NEXT,0,60128,UZ,1,128,UZ,-1
CE,NEXT,0,60128,ROTX,1,128,ROTX,-1

CE,NEXT,0,60026,UX,1,26,UX,-1
CE,NEXT,0,60026,UY,1,26,UY,-1
CE,NEXT,0,60026,UZ,1,26,UZ,-1
CE,NEXT,0,60026,ROTX,1,26,ROTX,-1

CE,NEXT,0,60127,UX,1,127,UX,-1
CE,NEXT,0,60127,UY,1,127,UY,-1
CE,NEXT,0,60127,UZ,1,127,UZ,-1
CE,NEXT,0,60127,ROTX,1,127,ROTX,-1

CE,NEXT,0,60025,UX,1,25,UX,-1
CE,NEXT,0,60025,UY,1,25,UY,-1
CE,NEXT,0,60025,UZ,1,25,UZ,-1
CE,NEXT,0,60025,ROTX,1,25,ROTX,-1

CE,NEXT,0,60126,UX,1,126,UX,-1
CE,NEXT,0,60126,UY,1,126,UY,-1
CE,NEXT,0,60126,UZ,1,126,UZ,-1
CE,NEXT,0,60126,ROTX,1,126,ROTX,-1

CE,NEXT,0,60024,UX,1,24,UX,-1
CE,NEXT,0,60024,UY,1,24,UY,-1
CE,NEXT,0,60024,UZ,1,24,UZ,-1
CE,NEXT,0,60024,ROTX,1,24,ROTX,-1

CE,NEXT,0,60125,UX,1,125,UX,-1
CE,NEXT,0,60125,UY,1,125,UY,-1
CE,NEXT,0,60125,UZ,1,125,UZ,-1
CE,NEXT,0,60125,ROTX,1,125,ROTX,-1

CE,NEXT,0,70131,UX,1,131,UX,-1
CE,NEXT,0,70131,UY,1,131,UY,-1
CE,NEXT,0,70131,UZ,1,131,UZ,-1
CE,NEXT,0,70131,ROTX,1,131,ROTX,-1

CE,NEXT,0,60140,UX,1,140,UX,-1
CE,NEXT,0,60140,UY,1,140,UY,-1
CE,NEXT,0,60140,UZ,1,140,UZ,-1
CE,NEXT,0,60140,ROTX,1,140,ROTX,-1

CE,NEXT,0,70125,UX,1,125,UX,-1
CE,NEXT,0,70125,UY,1,125,UY,-1
CE,NEXT,0,70125,UZ,1,125,UZ,-1
CE,NEXT,0,70125,ROTX,1,125,ROTX,-1

CE,NEXT,0,60134,UX,1,134,UX,-1
CE,NEXT,0,60134,UY,1,134,UY,-1
CE,NEXT,0,60134,UZ,1,134,UZ,-1
CE,NEXT,0,60134,ROTX,1,134,ROTX,-1

CE,NEXT,0,70140,UX,1,140,UX,-1
CE,NEXT,0,70140,UY,1,140,UY,-1
CE,NEXT,0,70140,UZ,1,140,UZ,-1
CE,NEXT,0,70140,ROTX,1,140,ROTX,-1

CE,NEXT,0,60148,UX,1,148,UX,-1
CE,NEXT,0,60148,UY,1,148,UY,-1
CE,NEXT,0,60148,UZ,1,148,UZ,-1
CE,NEXT,0,60148,ROTX,1,148,ROTX,-1
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CE,NEXT,0,60139,UX,1,139,UX,-1
CE,NEXT,0,60139,UY,1,139,UY,-1
CE,NEXT,0,60139,UZ,1,139,UZ,-1
CE,NEXT,0,60139,ROTX,1,139,ROTX,-1

CE,NEXT,0,60147,UX,1,147,UX,-1
CE,NEXT,0,60147,UY,1,147,UY,-1
CE,NEXT,0,60147,UZ,1,147,UZ,-1
CE,NEXT,0,60147,ROTX,1,147,ROTX,-1

CE,NEXT,0,60138,UX,1,138,UX,-1
CE,NEXT,0,60138,UY,1,138,UY,-1
CE,NEXT,0,60138,UZ,1,138,UZ,-1
CE,NEXT,0,60138,ROTX,1,138,ROTX,-1

CE,NEXT,0,60146,UX,1,146,UX,-1
CE,NEXT,0,60146,UY,1,146,UY,-1
CE,NEXT,0,60146,UZ,1,146,UZ,-1
CE,NEXT,0,60146,ROTX,1,146,ROTX,-1

CE,NEXT,0,60137,UX,1,137,UX,-1
CE,NEXT,0,60137,UY,1,137,UY,-1
CE,NEXT,0,60137,UZ,1,137,UZ,-1
CE,NEXT,0,60137,ROTX,1,137,ROTX,-1

CE,NEXT,0,70145,UX,1,145,UX,-1
CE,NEXT,0,70145,UY,1,145,UY,-1
CE,NEXT,0,70145,UZ,1,145,UZ,-1
CE,NEXT,0,70145,ROTX,1,145,ROTX,-1

CE,NEXT,0,60136,UX,1,136,UX,-1
CE,NEXT,0,60136,UY,1,136,UY,-1
CE,NEXT,0,60136,UZ,1,136,UZ,-1
CE,NEXT,0,60136,ROTX,1,136,ROTX,-1

CE,NEXT,0,70144,UX,1,144,UX,-1
CE,NEXT,0,70144,UY,1,144,UY,-1
CE,NEXT,0,70144,UZ,1,144,UZ,-1
CE,NEXT,0,70144,ROTX,1,144,ROTX,-1

CE,NEXT,0,60135,UX,1,135,UX,-1
CE,NEXT,0,60135,UY,1,135,UY,-1
CE,NEXT,0,60135,UZ,1,135,UZ,-1
CE,NEXT,0,60135,ROTX,1,135,ROTX,-1

CE,NEXT,0,70143,UX,1,143,UX,-1
CE,NEXT,0,70143,UY,1,143,UY,-1
CE,NEXT,0,70143,UZ,1,143,UZ,-1
CE,NEXT,0,70143,ROTX,1,143,ROTX,-1

CE,NEXT,0,70134,UX,1,134,UX,-1
CE,NEXT,0,70134,UY,1,134,UY,-1
CE,NEXT,0,70134,UZ,1,134,UZ,-1
CE,NEXT,0,70134,ROTX,1,134,ROTX,-1

CE,NEXT,0,70142,UX,1,142,UX,-1
CE,NEXT,0,70142,UY,1,142,UY,-1
CE,NEXT,0,70142,UZ,1,142,UZ,-1
CE,NEXT,0,70142,ROTX,1,142,ROTX,-1

CE,NEXT,0,80102,UX,1,102,UX,-1
CE,NEXT,0,80102,UY,1,102,UY,-1
CE,NEXT,0,80102,UZ,1,102,UZ,-1
CE,NEXT,0,80102,ROTX,1,102,ROTX,-1

CE,NEXT,0,81102,UX,1,1102,UX,-1
CE,NEXT,0,81102,UY,1,1102,UY,-1
CE,NEXT,0,81102,UZ,1,1102,UZ,-1
CE,NEXT,0,81102,ROTX,1,1102,ROTX,-1

CE,NEXT,0,70148,UX,1,148,UX,-1
CE,NEXT,0,70148,UY,1,148,UY,-1
CE,NEXT,0,70148,UZ,1,148,UZ,-1
CE,NEXT,0,70148,ROTX,1,148,ROTX,-1
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CE,NEXT,0,71148,UX,1,1148,UX,-1
CE,NEXT,0,71148,UY,1,1148,UY,-1
CE,NEXT,0,71148,UZ,1,1148,UZ,-1
CE,NEXT,0,71148,ROTX,1,1148,ROTX,-1

CE,NEXT,0,70147,UX,1,147,UX,-1
CE,NEXT,0,70147,UY,1,147,UY,-1
CE,NEXT,0,70147,UZ,1,147,UZ,-1
CE,NEXT,0,70147,ROTX,1,147,ROTX,-1

CE,NEXT,0,71147,UX,1,1147,UX,-1
CE,NEXT,0,71147,UY,1,1147,UY,-1
CE,NEXT,0,71147,UZ,1,1147,UZ,-1
CE,NEXT,0,71147,ROTX,1,1147,ROTX,-1

CE,NEXT,0,70146,UX,1,146,UX,-1
CE,NEXT,0,70146,UY,1,146,UY,-1
CE,NEXT,0,70146,UZ,1,146,UZ,-1
CE,NEXT,0,70146,ROTX,1,146,ROTX,-1

CE,NEXT,0,71146,UX,1,1146,UX,-1
CE,NEXT,0,71146,UY,1,1146,UY,-1
CE,NEXT,0,71146,UZ,1,1146,UZ,-1
CE,NEXT,0,71146,ROTX,1,1146,ROTX,-1

CE,NEXT,0,80145,UX,1,145,UX,-1
CE,NEXT,0,80145,UY,1,145,UY,-1
CE,NEXT,0,80145,UZ,1,145,UZ,-1
CE,NEXT,0,80145,ROTX,1,145,ROTX,-1

CE,NEXT,0,81145,UX,1,1145,UX,-1
CE,NEXT,0,81145,UY,1,1145,UY,-1
CE,NEXT,0,81145,UZ,1,1145,UZ,-1
CE,NEXT,0,81145,ROTX,1,1145,ROTX,-1

CE,NEXT,0,60144,UX,1,144,UX,-1
CE,NEXT,0,60144,UY,1,144,UY,-1
CE,NEXT,0,60144,UZ,1,144,UZ,-1
CE,NEXT,0,60144,ROTX,1,144,ROTX,-1

CE,NEXT,0,71144,UX,1,1144,UX,-1
CE,NEXT,0,71144,UY,1,1144,UY,-1
CE,NEXT,0,71144,UZ,1,1144,UZ,-1
CE,NEXT,0,71144,ROTX,1,1144,ROTX,-1

CE,NEXT,0,60143,UX,1,143,UX,-1
CE,NEXT,0,60143,UY,1,143,UY,-1
CE,NEXT,0,60143,UZ,1,143,UZ,-1
CE,NEXT,0,60143,ROTX,1,143,ROTX,-1

CE,NEXT,0,71143,UX,1,1143,UX,-1
CE,NEXT,0,71143,UY,1,1143,UY,-1
CE,NEXT,0,71143,UZ,1,1143,UZ,-1
CE,NEXT,0,71143,ROTX,1,1143,ROTX,-1

CE,NEXT,0,60142,UX,1,142,UX,-1
CE,NEXT,0,60142,UY,1,142,UY,-1
CE,NEXT,0,60142,UZ,1,142,UZ,-1
CE,NEXT,0,60142,ROTX,1,142,ROTX,-1

CE,NEXT,0,71142,UX,1,1142,UX,-1
CE,NEXT,0,71142,UY,1,1142,UY,-1
CE,NEXT,0,71142,UZ,1,1142,UZ,-1
CE,NEXT,0,71142,ROTX,1,1142,ROTX,-1

CE,NEXT,0,80112,UX,1,112,UX,-1
CE,NEXT,0,80112,UY,1,112,UY,-1
CE,NEXT,0,80112,UZ,1,112,UZ,-1
CE,NEXT,0,80112,ROTX,1,112,ROTX,-1

CE,NEXT,0,71112,UX,1,1112,UX,-1
CE,NEXT,0,71112,UY,1,1112,UY,-1
CE,NEXT,0,71112,UZ,1,1112,UZ,-1
CE,NEXT,0,71112,ROTX,1,1112,ROTX,-1
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CE,NEXT,0,71102,UX,1,1102,UX,-1
CE,NEXT,0,71102,UY,1,1102,UY,-1
CE,NEXT,0,71102,UZ,1,1102,UZ,-1
CE,NEXT,0,71102,ROTX,1,1102,ROTX,-1

CE,NEXT,0,82102,UX,1,2102,UX,-1
CE,NEXT,0,82102,UY,1,2102,UY,-1
CE,NEXT,0,82102,UZ,1,2102,UZ,-1
CE,NEXT,0,82102,ROTX,1,2102,ROTX,-1

CE,NEXT,0,61148,UX,1,1148,UX,-1
CE,NEXT,0,61148,UY,1,1148,UY,-1
CE,NEXT,0,61148,UZ,1,1148,UZ,-1
CE,NEXT,0,61148,ROTX,1,1148,ROTX,-1

CE,NEXT,0,72148,UX,1,2148,UX,-1
CE,NEXT,0,72148,UY,1,2148,UY,-1
CE,NEXT,0,72148,UZ,1,2148,UZ,-1
CE,NEXT,0,72148,ROTX,1,2148,ROTX,-1

CE,NEXT,0,61147,UX,1,1147,UX,-1
CE,NEXT,0,61147,UY,1,1147,UY,-1
CE,NEXT,0,61147,UZ,1,1147,UZ,-1
CE,NEXT,0,61147,ROTX,1,1147,ROTX,-1

CE,NEXT,0,62147,UX,1,2147,UX,-1
CE,NEXT,0,62147,UY,1,2147,UY,-1
CE,NEXT,0,62147,UZ,1,2147,UZ,-1
CE,NEXT,0,62147,ROTX,1,2147,ROTX,-1

CE,NEXT,0,61146,UX,1,1146,UX,-1
CE,NEXT,0,61146,UY,1,1146,UY,-1
CE,NEXT,0,61146,UZ,1,1146,UZ,-1
CE,NEXT,0,61146,ROTX,1,1146,ROTX,-1

CE,NEXT,0,62146,UX,1,2146,UX,-1
CE,NEXT,0,62146,UY,1,2146,UY,-1
CE,NEXT,0,62146,UZ,1,2146,UZ,-1
CE,NEXT,0,62146,ROTX,1,2146,ROTX,-1

CE,NEXT,0,71145,UX,1,1145,UX,-1
CE,NEXT,0,71145,UY,1,1145,UY,-1
CE,NEXT,0,71145,UZ,1,1145,UZ,-1
CE,NEXT,0,71145,ROTX,1,1145,ROTX,-1

CE,NEXT,0,72145,UX,1,2145,UX,-1
CE,NEXT,0,72145,UY,1,2145,UY,-1
CE,NEXT,0,72145,UZ,1,2145,UZ,-1
CE,NEXT,0,72145,ROTX,1,2145,ROTX,-1

CE,NEXT,0,61144,UX,1,1144,UX,-1
CE,NEXT,0,61144,UY,1,1144,UY,-1
CE,NEXT,0,61144,UZ,1,1144,UZ,-1
CE,NEXT,0,61144,ROTX,1,1144,ROTX,-1

CE,NEXT,0,62144,UX,1,2144,UX,-1
CE,NEXT,0,62144,UY,1,2144,UY,-1
CE,NEXT,0,62144,UZ,1,2144,UZ,-1
CE,NEXT,0,62144,ROTX,1,2144,ROTX,-1

CE,NEXT,0,61143,UX,1,1143,UX,-1
CE,NEXT,0,61143,UY,1,1143,UY,-1
CE,NEXT,0,61143,UZ,1,1143,UZ,-1
CE,NEXT,0,61143,ROTX,1,1143,ROTX,-1

CE,NEXT,0,72143,UX,1,2143,UX,-1
CE,NEXT,0,72143,UY,1,2143,UY,-1
CE,NEXT,0,72143,UZ,1,2143,UZ,-1
CE,NEXT,0,72143,ROTX,1,2143,ROTX,-1

CE,NEXT,0,61142,UX,1,1142,UX,-1
CE,NEXT,0,61142,UY,1,1142,UY,-1
CE,NEXT,0,61142,UZ,1,1142,UZ,-1
CE,NEXT,0,61142,ROTX,1,1142,ROTX,-1
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CE,NEXT,0,62142,UX,1,2142,UX,-1
CE,NEXT,0,62142,UY,1,2142,UY,-1
CE,NEXT,0,62142,UZ,1,2142,UZ,-1
CE,NEXT,0,62142,ROTX,1,2142,ROTX,-1

CE,NEXT,0,81112,UX,1,1112,UX,-1
CE,NEXT,0,81112,UY,1,1112,UY,-1
CE,NEXT,0,81112,UZ,1,1112,UZ,-1
CE,NEXT,0,81112,ROTX,1,1112,ROTX,-1

CE,NEXT,0,82112,UX,1,2112,UX,-1
CE,NEXT,0,82112,UY,1,2112,UY,-1
CE,NEXT,0,82112,UZ,1,2112,UZ,-1
CE,NEXT,0,82112,ROTX,1,2112,ROTX,-1

CE,NEXT,0,72147,UX,1,2147,UX,-1
CE,NEXT,0,72147,UY,1,2147,UY,-1
CE,NEXT,0,72147,UZ,1,2147,UZ,-1
CE,NEXT,0,72147,ROTX,1,2147,ROTX,-1

CE,NEXT,0,73147,UX,1,3147,UX,-1
CE,NEXT,0,73147,UY,1,3147,UY,-1
CE,NEXT,0,73147,UZ,1,3147,UZ,-1
CE,NEXT,0,73147,ROTX,1,3147,ROTX,-1

CE,NEXT,0,72146,UX,1,2146,UX,-1
CE,NEXT,0,72146,UY,1,2146,UY,-1
CE,NEXT,0,72146,UZ,1,2146,UZ,-1
CE,NEXT,0,72146,ROTX,1,2146,ROTX,-1

CE,NEXT,0,73146,UX,1,3146,UX,-1
CE,NEXT,0,73146,UY,1,3146,UY,-1
CE,NEXT,0,73146,UZ,1,3146,UZ,-1
CE,NEXT,0,73146,ROTX,1,3146,ROTX,-1

CE,NEXT,0,82145,UX,1,2145,UX,-1
CE,NEXT,0,82145,UY,1,2145,UY,-1
CE,NEXT,0,82145,UZ,1,2145,UZ,-1
CE,NEXT,0,82145,ROTX,1,2145,ROTX,-1

CE,NEXT,0,83145,UX,1,3145,UX,-1
CE,NEXT,0,83145,UY,1,3145,UY,-1
CE,NEXT,0,83145,UZ,1,3145,UZ,-1
CE,NEXT,0,83145,ROTX,1,3145,ROTX,-1

CE,NEXT,0,72144,UX,1,2144,UX,-1
CE,NEXT,0,72144,UY,1,2144,UY,-1
CE,NEXT,0,72144,UZ,1,2144,UZ,-1
CE,NEXT,0,72144,ROTX,1,2144,ROTX,-1

CE,NEXT,0,73144,UX,1,3144,UX,-1
CE,NEXT,0,73144,UY,1,3144,UY,-1
CE,NEXT,0,73144,UZ,1,3144,UZ,-1
CE,NEXT,0,73144,ROTX,1,3144,ROTX,-1

CE,NEXT,0,72142,UX,1,2142,UX,-1
CE,NEXT,0,72142,UY,1,2142,UY,-1
CE,NEXT,0,72142,UZ,1,2142,UZ,-1
CE,NEXT,0,72142,ROTX,1,2142,ROTX,-1

CE,NEXT,0,62157,UX,1,2157,UX,-1
CE,NEXT,0,62157,UY,1,2157,UY,-1
CE,NEXT,0,62157,UZ,1,2157,UZ,-1
CE,NEXT,0,62157,ROTX,1,2157,ROTX,-1

CE,NEXT,0,72112,UX,1,2112,UX,-1
CE,NEXT,0,72112,UY,1,2112,UY,-1
CE,NEXT,0,72112,UZ,1,2112,UZ,-1
CE,NEXT,0,72112,ROTX,1,2112,ROTX,-1

CE,NEXT,0,152156,UX,1,52156,UX,-1
CE,NEXT,0,152156,UY,1,52156,UY,-1
CE,NEXT,0,152156,UZ,1,52156,UZ,-1
CE,NEXT,0,152156,ROTX,1,52156,ROTX,-1
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CE,NEXT,0,73148,UX,1,3148,UX,-1
CE,NEXT,0,73148,UY,1,3148,UY,-1
CE,NEXT,0,73148,UZ,1,3148,UZ,-1
CE,NEXT,0,73148,ROTX,1,3148,ROTX,-1

CE,NEXT,0,63163,UX,1,3163,UX,-1
CE,NEXT,0,63163,UY,1,3163,UY,-1
CE,NEXT,0,63163,UZ,1,3163,UZ,-1
CE,NEXT,0,63163,ROTX,1,3163,ROTX,-1

CE,NEXT,0,63147,UX,1,3147,UX,-1
CE,NEXT,0,63147,UY,1,3147,UY,-1
CE,NEXT,0,63147,UZ,1,3147,UZ,-1
CE,NEXT,0,63147,ROTX,1,3147,ROTX,-1

CE,NEXT,0,63162,UX,1,3162,UX,-1
CE,NEXT,0,63162,UY,1,3162,UY,-1
CE,NEXT,0,63162,UZ,1,3162,UZ,-1
CE,NEXT,0,63162,ROTX,1,3162,ROTX,-1

CE,NEXT,0,63146,UX,1,3146,UX,-1
CE,NEXT,0,63146,UY,1,3146,UY,-1
CE,NEXT,0,63146,UZ,1,3146,UZ,-1
CE,NEXT,0,63146,ROTX,1,3146,ROTX,-1

CE,NEXT,0,63161,UX,1,3161,UX,-1
CE,NEXT,0,63161,UY,1,3161,UY,-1
CE,NEXT,0,63161,UZ,1,3161,UZ,-1
CE,NEXT,0,63161,ROTX,1,3161,ROTX,-1

CE,NEXT,0,73145,UX,1,3145,UX,-1
CE,NEXT,0,73145,UY,1,3145,UY,-1
CE,NEXT,0,73145,UZ,1,3145,UZ,-1
CE,NEXT,0,73145,ROTX,1,3145,ROTX,-1

CE,NEXT,0,63160,UX,1,3160,UX,-1
CE,NEXT,0,63160,UY,1,3160,UY,-1
CE,NEXT,0,63160,UZ,1,3160,UZ,-1
CE,NEXT,0,63160,ROTX,1,3160,ROTX,-1

CE,NEXT,0,63144,UX,1,3144,UX,-1
CE,NEXT,0,63144,UY,1,3144,UY,-1
CE,NEXT,0,63144,UZ,1,3144,UZ,-1
CE,NEXT,0,63144,ROTX,1,3144,ROTX,-1

CE,NEXT,0,63159,UX,1,3159,UX,-1
CE,NEXT,0,63159,UY,1,3159,UY,-1
CE,NEXT,0,63159,UZ,1,3159,UZ,-1
CE,NEXT,0,63159,ROTX,1,3159,ROTX,-1

CE,NEXT,0,73143,UX,1,3143,UX,-1
CE,NEXT,0,73143,UY,1,3143,UY,-1
CE,NEXT,0,73143,UZ,1,3143,UZ,-1
CE,NEXT,0,73143,ROTX,1,3143,ROTX,-1

CE,NEXT,0,63158,UX,1,3158,UX,-1
CE,NEXT,0,63158,UY,1,3158,UY,-1
CE,NEXT,0,63158,UZ,1,3158,UZ,-1
CE,NEXT,0,63158,ROTX,1,3158,ROTX,-1

CE,NEXT,0,63142,UX,1,3142,UX,-1
CE,NEXT,0,63142,UY,1,3142,UY,-1
CE,NEXT,0,63142,UZ,1,3142,UZ,-1
CE,NEXT,0,63142,ROTX,1,3142,ROTX,-1

CE,NEXT,0,63157,UX,1,3157,UX,-1
CE,NEXT,0,63157,UY,1,3157,UY,-1
CE,NEXT,0,63157,UZ,1,3157,UZ,-1
CE,NEXT,0,63157,ROTX,1,3157,ROTX,-1

CE,NEXT,0,74112,UX,1,4112,UX,-1
CE,NEXT,0,74112,UY,1,4112,UY,-1
CE,NEXT,0,74112,UZ,1,4112,UZ,-1
CE,NEXT,0,74112,ROTX,1,4112,ROTX,-1
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CE,NEXT,0,75112,UX,1,5112,UX,-1
CE,NEXT,0,75112,UY,1,5112,UY,-1
CE,NEXT,0,75112,UZ,1,5112,UZ,-1
CE,NEXT,0,75112,ROTX,1,5112,ROTX,-1

CE,NEXT,0,74102,UX,1,4102,UX,-1
CE,NEXT,0,74102,UY,1,4102,UY,-1
CE,NEXT,0,74102,UZ,1,4102,UZ,-1
CE,NEXT,0,74102,ROTX,1,4102,ROTX,-1

CE,NEXT,0,75102,UX,1,5102,UX,-1
CE,NEXT,0,75102,UY,1,5102,UY,-1
CE,NEXT,0,75102,UZ,1,5102,UZ,-1
CE,NEXT,0,75102,ROTX,1,5102,ROTX,-1

CE,NEXT,0,67122,UX,1,7122,UX,-1
CE,NEXT,0,67122,UY,1,7122,UY,-1
CE,NEXT,0,67122,UZ,1,7122,UZ,-1
CE,NEXT,0,67122,ROTX,1,7122,ROTX,-1

CE,NEXT,0,181660,UX,1,81660,UX,-1
CE,NEXT,0,181660,UY,1,81660,UY,-1
CE,NEXT,0,181660,UZ,1,81660,UZ,-1
CE,NEXT,0,181660,ROTX,1,81660,ROTX,-1

CE,NEXT,0,75122,UX,1,5122,UX,-1
CE,NEXT,0,75122,UY,1,5122,UY,-1
CE,NEXT,0,75122,UZ,1,5122,UZ,-1
CE,NEXT,0,75122,ROTX,1,5122,ROTX,-1

CE,NEXT,0,77122,UX,1,7122,UX,-1
CE,NEXT,0,77122,UY,1,7122,UY,-1
CE,NEXT,0,77122,UZ,1,7122,UZ,-1
CE,NEXT,0,77122,ROTX,1,7122,ROTX,-1

CE,NEXT,0,60006,UX,1,6,UX,-1
CE,NEXT,0,60006,UY,1,6,UY,-1
CE,NEXT,0,60006,UZ,1,6,UZ,-1
CE,NEXT,0,60006,ROTX,1,6,ROTX,-1

CE,NEXT,0,60105,UX,1,105,UX,-1
CE,NEXT,0,60105,UY,1,105,UY,-1
CE,NEXT,0,60105,UZ,1,105,UZ,-1
CE,NEXT,0,60105,ROTX,1,105,ROTX,-1

CE,NEXT,0,70105,UX,1,105,UX,-1
CE,NEXT,0,70105,UY,1,105,UY,-1
CE,NEXT,0,70105,UZ,1,105,UZ,-1
CE,NEXT,0,70105,ROTX,1,105,ROTX,-1

CE,NEXT,0,61105,UX,1,1105,UX,-1
CE,NEXT,0,61105,UY,1,1105,UY,-1
CE,NEXT,0,61105,UZ,1,1105,UZ,-1
CE,NEXT,0,61105,ROTX,1,1105,ROTX,-1

CE,NEXT,0,71105,UX,1,1105,UX,-1
CE,NEXT,0,71105,UY,1,1105,UY,-1
CE,NEXT,0,71105,UZ,1,1105,UZ,-1
CE,NEXT,0,71105,ROTX,1,1105,ROTX,-1

CE,NEXT,0,62105,UX,1,2105,UX,-1
CE,NEXT,0,62105,UY,1,2105,UY,-1
CE,NEXT,0,62105,UZ,1,2105,UZ,-1
CE,NEXT,0,62105,ROTX,1,2105,ROTX,-1

CE,NEXT,0,72105,UX,1,2105,UX,-1
CE,NEXT,0,72105,UY,1,2105,UY,-1
CE,NEXT,0,72105,UZ,1,2105,UZ,-1
CE,NEXT,0,72105,ROTX,1,2105,ROTX,-1

CE,NEXT,0,63105,UX,1,3105,UX,-1
CE,NEXT,0,63105,UY,1,3105,UY,-1
CE,NEXT,0,63105,UZ,1,3105,UZ,-1
CE,NEXT,0,63105,ROTX,1,3105,ROTX,-1
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CE,NEXT,0,73105,UX,1,3105,UX,-1
CE,NEXT,0,73105,UY,1,3105,UY,-1
CE,NEXT,0,73105,UZ,1,3105,UZ,-1
CE,NEXT,0,73105,ROTX,1,3105,ROTX,-1

CE,NEXT,0,64105,UX,1,4105,UX,-1
CE,NEXT,0,64105,UY,1,4105,UY,-1
CE,NEXT,0,64105,UZ,1,4105,UZ,-1
CE,NEXT,0,64105,ROTX,1,4105,ROTX,-1

CE,NEXT,0,74105,UX,1,4105,UX,-1
CE,NEXT,0,74105,UY,1,4105,UY,-1
CE,NEXT,0,74105,UZ,1,4105,UZ,-1
CE,NEXT,0,74105,ROTX,1,4105,ROTX,-1

CE,NEXT,0,65105,UX,1,5105,UX,-1
CE,NEXT,0,65105,UY,1,5105,UY,-1
CE,NEXT,0,65105,UZ,1,5105,UZ,-1
CE,NEXT,0,65105,ROTX,1,5105,ROTX,-1

CE,NEXT,0,75105,UX,1,5105,UX,-1
CE,NEXT,0,75105,UY,1,5105,UY,-1
CE,NEXT,0,75105,UZ,1,5105,UZ,-1
CE,NEXT,0,75105,ROTX,1,5105,ROTX,-1

CE,NEXT,0,66105,UX,1,6105,UX,-1
CE,NEXT,0,66105,UY,1,6105,UY,-1
CE,NEXT,0,66105,UZ,1,6105,UZ,-1
CE,NEXT,0,66105,ROTX,1,6105,ROTX,-1

CE,NEXT,0,76105,UX,1,6105,UX,-1
CE,NEXT,0,76105,UY,1,6105,UY,-1
CE,NEXT,0,76105,UZ,1,6105,UZ,-1
CE,NEXT,0,76105,ROTX,1,6105,ROTX,-1

CE,NEXT,0,67105,UX,1,7105,UX,-1
CE,NEXT,0,67105,UY,1,7105,UY,-1
CE,NEXT,0,67105,UZ,1,7105,UZ,-1
CE,NEXT,0,67105,ROTX,1,7105,ROTX,-1

CE,NEXT,0,77105,UX,1,7105,UX,-1
CE,NEXT,0,77105,UY,1,7105,UY,-1
CE,NEXT,0,77105,UZ,1,7105,UZ,-1
CE,NEXT,0,77105,ROTX,1,7105,ROTX,-1

CE,NEXT,0,68105,UX,1,8105,UX,-1
CE,NEXT,0,68105,UY,1,8105,UY,-1
CE,NEXT,0,68105,UZ,1,8105,UZ,-1
CE,NEXT,0,68105,ROTX,1,8105,ROTX,-1

CE,NEXT,0,60017,UX,1,17,UX,-1
CE,NEXT,0,60017,UY,1,17,UY,-1
CE,NEXT,0,60017,UZ,1,17,UZ,-1
CE,NEXT,0,60017,ROTX,1,17,ROTX,-1

CE,NEXT,0,60116,UX,1,116,UX,-1
CE,NEXT,0,60116,UY,1,116,UY,-1
CE,NEXT,0,60116,UZ,1,116,UZ,-1
CE,NEXT,0,60116,ROTX,1,116,ROTX,-1

CE,NEXT,0,70116,UX,1,116,UX,-1
CE,NEXT,0,70116,UY,1,116,UY,-1
CE,NEXT,0,70116,UZ,1,116,UZ,-1
CE,NEXT,0,70116,ROTX,1,116,ROTX,-1

CE,NEXT,0,61116,UX,1,1116,UX,-1
CE,NEXT,0,61116,UY,1,1116,UY,-1
CE,NEXT,0,61116,UZ,1,1116,UZ,-1
CE,NEXT,0,61116,ROTX,1,1116,ROTX,-1

CE,NEXT,0,71116,UX,1,1116,UX,-1
CE,NEXT,0,71116,UY,1,1116,UY,-1
CE,NEXT,0,71116,UZ,1,1116,UZ,-1
CE,NEXT,0,71116,ROTX,1,1116,ROTX,-1
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CE,NEXT,0,72116,UX,1,2116,UX,-1
CE,NEXT,0,72116,UY,1,2116,UY,-1
CE,NEXT,0,72116,UZ,1,2116,UZ,-1
CE,NEXT,0,72116,ROTX,1,2116,ROTX,-1

CE,NEXT,0,73116,UX,1,3116,UX,-1
CE,NEXT,0,73116,UY,1,3116,UY,-1
CE,NEXT,0,73116,UZ,1,3116,UZ,-1
CE,NEXT,0,73116,ROTX,1,3116,ROTX,-1

CE,NEXT,0,64116,UX,1,4116,UX,-1
CE,NEXT,0,64116,UY,1,4116,UY,-1
CE,NEXT,0,64116,UZ,1,4116,UZ,-1
CE,NEXT,0,64116,ROTX,1,4116,ROTX,-1

CE,NEXT,0,74116,UX,1,4116,UX,-1
CE,NEXT,0,74116,UY,1,4116,UY,-1
CE,NEXT,0,74116,UZ,1,4116,UZ,-1
CE,NEXT,0,74116,ROTX,1,4116,ROTX,-1

CE,NEXT,0,65116,UX,1,5116,UX,-1
CE,NEXT,0,65116,UY,1,5116,UY,-1
CE,NEXT,0,65116,UZ,1,5116,UZ,-1
CE,NEXT,0,65116,ROTX,1,5116,ROTX,-1

CE,NEXT,0,67116,UX,1,7116,UX,-1
CE,NEXT,0,67116,UY,1,7116,UY,-1
CE,NEXT,0,67116,UZ,1,7116,UZ,-1
CE,NEXT,0,67116,ROTX,1,7116,ROTX,-1

CE,NEXT,0,68116,UX,1,8116,UX,-1
CE,NEXT,0,68116,UY,1,8116,UY,-1
CE,NEXT,0,68116,UZ,1,8116,UZ,-1
CE,NEXT,0,68116,ROTX,1,8116,ROTX,-1

CE,NEXT,0,60041,UX,1,41,UX,-1
CE,NEXT,0,60041,UY,1,41,UY,-1
CE,NEXT,0,60041,UZ,1,41,UZ,-1
CE,NEXT,0,60041,ROTX,1,41,ROTX,-1

CE,NEXT,0,60181,UX,1,181,UX,-1
CE,NEXT,0,60181,UY,1,181,UY,-1
CE,NEXT,0,60181,UZ,1,181,UZ,-1
CE,NEXT,0,60181,ROTX,1,181,ROTX,-1

CE,NEXT,0,60040,UX,1,40,UX,-1
CE,NEXT,0,60040,UY,1,40,UY,-1
CE,NEXT,0,60040,UZ,1,40,UZ,-1
CE,NEXT,0,60040,ROTX,1,40,ROTX,-1

CE,NEXT,0,60180,UX,1,180,UX,-1
CE,NEXT,0,60180,UY,1,180,UY,-1
CE,NEXT,0,60180,UZ,1,180,UZ,-1
CE,NEXT,0,60180,ROTX,1,180,ROTX,-1

CE,NEXT,0,60039,UX,1,39,UX,-1
CE,NEXT,0,60039,UY,1,39,UY,-1
CE,NEXT,0,60039,UZ,1,39,UZ,-1
CE,NEXT,0,60039,ROTX,1,39,ROTX,-1

CE,NEXT,0,60179,UX,1,179,UX,-1
CE,NEXT,0,60179,UY,1,179,UY,-1
CE,NEXT,0,60179,UZ,1,179,UZ,-1
CE,NEXT,0,60179,ROTX,1,179,ROTX,-1

CE,NEXT,0,60038,UX,1,38,UX,-1
CE,NEXT,0,60038,UY,1,38,UY,-1
CE,NEXT,0,60038,UZ,1,38,UZ,-1
CE,NEXT,0,60038,ROTX,1,38,ROTX,-1

CE,NEXT,0,60178,UX,1,178,UX,-1
CE,NEXT,0,60178,UY,1,178,UY,-1
CE,NEXT,0,60178,UZ,1,178,UZ,-1
CE,NEXT,0,60178,ROTX,1,178,ROTX,-1
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CE,NEXT,0,60037,UX,1,37,UX,-1
CE,NEXT,0,60037,UY,1,37,UY,-1
CE,NEXT,0,60037,UZ,1,37,UZ,-1
CE,NEXT,0,60037,ROTX,1,37,ROTX,-1

CE,NEXT,0,60177,UX,1,177,UX,-1
CE,NEXT,0,60177,UY,1,177,UY,-1
CE,NEXT,0,60177,UZ,1,177,UZ,-1
CE,NEXT,0,60177,ROTX,1,177,ROTX,-1

CE,NEXT,0,60036,UX,1,36,UX,-1
CE,NEXT,0,60036,UY,1,36,UY,-1
CE,NEXT,0,60036,UZ,1,36,UZ,-1
CE,NEXT,0,60036,ROTX,1,36,ROTX,-1

CE,NEXT,0,60176,UX,1,176,UX,-1
CE,NEXT,0,60176,UY,1,176,UY,-1
CE,NEXT,0,60176,UZ,1,176,UZ,-1
CE,NEXT,0,60176,ROTX,1,176,ROTX,-1

CE,NEXT,0,60035,UX,1,35,UX,-1
CE,NEXT,0,60035,UY,1,35,UY,-1
CE,NEXT,0,60035,UZ,1,35,UZ,-1
CE,NEXT,0,60035,ROTX,1,35,ROTX,-1

CE,NEXT,0,60175,UX,1,175,UX,-1
CE,NEXT,0,60175,UY,1,175,UY,-1
CE,NEXT,0,60175,UZ,1,175,UZ,-1
CE,NEXT,0,60175,ROTX,1,175,ROTX,-1

CE,NEXT,0,80107,UX,1,107,UX,-1
CE,NEXT,0,80107,UY,1,107,UY,-1
CE,NEXT,0,80107,UZ,1,107,UZ,-1
CE,NEXT,0,80107,ROTX,1,107,ROTX,-1

CE,NEXT,0,71107,UX,1,1107,UX,-1
CE,NEXT,0,71107,UY,1,1107,UY,-1
CE,NEXT,0,71107,UZ,1,1107,UZ,-1
CE,NEXT,0,71107,ROTX,1,1107,ROTX,-1

CE,NEXT,0,60155,UX,1,155,UX,-1
CE,NEXT,0,60155,UY,1,155,UY,-1
CE,NEXT,0,60155,UZ,1,155,UZ,-1
CE,NEXT,0,60155,ROTX,1,155,ROTX,-1

CE,NEXT,0,71155,UX,1,1155,UX,-1
CE,NEXT,0,71155,UY,1,1155,UY,-1
CE,NEXT,0,71155,UZ,1,1155,UZ,-1
CE,NEXT,0,71155,ROTX,1,1155,ROTX,-1

CE,NEXT,0,60154,UX,1,154,UX,-1
CE,NEXT,0,60154,UY,1,154,UY,-1
CE,NEXT,0,60154,UZ,1,154,UZ,-1
CE,NEXT,0,60154,ROTX,1,154,ROTX,-1

CE,NEXT,0,71154,UX,1,1154,UX,-1
CE,NEXT,0,71154,UY,1,1154,UY,-1
CE,NEXT,0,71154,UZ,1,1154,UZ,-1
CE,NEXT,0,71154,ROTX,1,1154,ROTX,-1

CE,NEXT,0,60153,UX,1,153,UX,-1
CE,NEXT,0,60153,UY,1,153,UY,-1
CE,NEXT,0,60153,UZ,1,153,UZ,-1
CE,NEXT,0,60153,ROTX,1,153,ROTX,-1

CE,NEXT,0,71153,UX,1,1153,UX,-1
CE,NEXT,0,71153,UY,1,1153,UY,-1
CE,NEXT,0,71153,UZ,1,1153,UZ,-1
CE,NEXT,0,71153,ROTX,1,1153,ROTX,-1

CE,NEXT,0,60152,UX,1,152,UX,-1
CE,NEXT,0,60152,UY,1,152,UY,-1
CE,NEXT,0,60152,UZ,1,152,UZ,-1
CE,NEXT,0,60152,ROTX,1,152,ROTX,-1
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CE,NEXT,0,71152,UX,1,1152,UX,-1
CE,NEXT,0,71152,UY,1,1152,UY,-1
CE,NEXT,0,71152,UZ,1,1152,UZ,-1
CE,NEXT,0,71152,ROTX,1,1152,ROTX,-1

CE,NEXT,0,60151,UX,1,151,UX,-1
CE,NEXT,0,60151,UY,1,151,UY,-1
CE,NEXT,0,60151,UZ,1,151,UZ,-1
CE,NEXT,0,60151,ROTX,1,151,ROTX,-1

CE,NEXT,0,71151,UX,1,1151,UX,-1
CE,NEXT,0,71151,UY,1,1151,UY,-1
CE,NEXT,0,71151,UZ,1,1151,UZ,-1
CE,NEXT,0,71151,ROTX,1,1151,ROTX,-1

CE,NEXT,0,60150,UX,1,150,UX,-1
CE,NEXT,0,60150,UY,1,150,UY,-1
CE,NEXT,0,60150,UZ,1,150,UZ,-1
CE,NEXT,0,60150,ROTX,1,150,ROTX,-1

CE,NEXT,0,71150,UX,1,1150,UX,-1
CE,NEXT,0,71150,UY,1,1150,UY,-1
CE,NEXT,0,71150,UZ,1,1150,UZ,-1
CE,NEXT,0,71150,ROTX,1,1150,ROTX,-1

CE,NEXT,0,60149,UX,1,149,UX,-1
CE,NEXT,0,60149,UY,1,149,UY,-1
CE,NEXT,0,60149,UZ,1,149,UZ,-1
CE,NEXT,0,60149,ROTX,1,149,ROTX,-1

CE,NEXT,0,71149,UX,1,1149,UX,-1
CE,NEXT,0,71149,UY,1,1149,UY,-1
CE,NEXT,0,71149,UZ,1,1149,UZ,-1
CE,NEXT,0,71149,ROTX,1,1149,ROTX,-1

CE,NEXT,0,80118,UX,1,118,UX,-1
CE,NEXT,0,80118,UY,1,118,UY,-1
CE,NEXT,0,80118,UZ,1,118,UZ,-1
CE,NEXT,0,80118,ROTX,1,118,ROTX,-1

CE,NEXT,0,71118,UX,1,1118,UX,-1
CE,NEXT,0,71118,UY,1,1118,UY,-1
CE,NEXT,0,71118,UZ,1,1118,UZ,-1
CE,NEXT,0,71118,ROTX,1,1118,ROTX,-1

CE,NEXT,0,81107,UX,1,1107,UX,-1
CE,NEXT,0,81107,UY,1,1107,UY,-1
CE,NEXT,0,81107,UZ,1,1107,UZ,-1
CE,NEXT,0,81107,ROTX,1,1107,ROTX,-1

CE,NEXT,0,72107,UX,1,2107,UX,-1
CE,NEXT,0,72107,UY,1,2107,UY,-1
CE,NEXT,0,72107,UZ,1,2107,UZ,-1
CE,NEXT,0,72107,ROTX,1,2107,ROTX,-1

CE,NEXT,0,61155,UX,1,1155,UX,-1
CE,NEXT,0,61155,UY,1,1155,UY,-1
CE,NEXT,0,61155,UZ,1,1155,UZ,-1
CE,NEXT,0,61155,ROTX,1,1155,ROTX,-1

CE,NEXT,0,62155,UX,1,2155,UX,-1
CE,NEXT,0,62155,UY,1,2155,UY,-1
CE,NEXT,0,62155,UZ,1,2155,UZ,-1
CE,NEXT,0,62155,ROTX,1,2155,ROTX,-1

CE,NEXT,0,61154,UX,1,1154,UX,-1
CE,NEXT,0,61154,UY,1,1154,UY,-1
CE,NEXT,0,61154,UZ,1,1154,UZ,-1
CE,NEXT,0,61154,ROTX,1,1154,ROTX,-1

CE,NEXT,0,62154,UX,1,2154,UX,-1
CE,NEXT,0,62154,UY,1,2154,UY,-1
CE,NEXT,0,62154,UZ,1,2154,UZ,-1
CE,NEXT,0,62154,ROTX,1,2154,ROTX,-1
```

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CE,NEXT,0,61153,UX,1,1153,UX,-1
CE,NEXT,0,61153,UY,1,1153,UY,-1
CE,NEXT,0,61153,UZ,1,1153,UZ,-1
CE,NEXT,0,61153,ROTX,1,1153,ROTX,-1

CE,NEXT,0,62153,UX,1,2153,UX,-1
CE,NEXT,0,62153,UY,1,2153,UY,-1
CE,NEXT,0,62153,UZ,1,2153,UZ,-1
CE,NEXT,0,62153,ROTX,1,2153,ROTX,-1

CE,NEXT,0,61152,UX,1,1152,UX,-1
CE,NEXT,0,61152,UY,1,1152,UY,-1
CE,NEXT,0,61152,UZ,1,1152,UZ,-1
CE,NEXT,0,61152,ROTX,1,1152,ROTX,-1

CE,NEXT,0,72152,UX,1,2152,UX,-1
CE,NEXT,0,72152,UY,1,2152,UY,-1
CE,NEXT,0,72152,UZ,1,2152,UZ,-1
CE,NEXT,0,72152,ROTX,1,2152,ROTX,-1

CE,NEXT,0,61151,UX,1,1151,UX,-1
CE,NEXT,0,61151,UY,1,1151,UY,-1
CE,NEXT,0,61151,UZ,1,1151,UZ,-1
CE,NEXT,0,61151,ROTX,1,1151,ROTX,-1

CE,NEXT,0,72151,UX,1,2151,UX,-1
CE,NEXT,0,72151,UY,1,2151,UY,-1
CE,NEXT,0,72151,UZ,1,2151,UZ,-1
CE,NEXT,0,72151,ROTX,1,2151,ROTX,-1

CE,NEXT,0,61150,UX,1,1150,UX,-1
CE,NEXT,0,61150,UY,1,1150,UY,-1
CE,NEXT,0,61150,UZ,1,1150,UZ,-1
CE,NEXT,0,61150,ROTX,1,1150,ROTX,-1

CE,NEXT,0,72150,UX,1,2150,UX,-1
CE,NEXT,0,72150,UY,1,2150,UY,-1
CE,NEXT,0,72150,UZ,1,2150,UZ,-1
CE,NEXT,0,72150,ROTX,1,2150,ROTX,-1

CE,NEXT,0,61149,UX,1,1149,UX,-1
CE,NEXT,0,61149,UY,1,1149,UY,-1
CE,NEXT,0,61149,UZ,1,1149,UZ,-1
CE,NEXT,0,61149,ROTX,1,1149,ROTX,-1

CE,NEXT,0,72149,UX,1,2149,UX,-1
CE,NEXT,0,72149,UY,1,2149,UY,-1
CE,NEXT,0,72149,UZ,1,2149,UZ,-1
CE,NEXT,0,72149,ROTX,1,2149,ROTX,-1

CE,NEXT,0,81118,UX,1,1118,UX,-1
CE,NEXT,0,81118,UY,1,1118,UY,-1
CE,NEXT,0,81118,UZ,1,1118,UZ,-1
CE,NEXT,0,81118,ROTX,1,1118,ROTX,-1

CE,NEXT,0,82118,UX,1,2118,UX,-1
CE,NEXT,0,82118,UY,1,2118,UY,-1
CE,NEXT,0,82118,UZ,1,2118,UZ,-1
CE,NEXT,0,82118,ROTX,1,2118,ROTX,-1

CE,NEXT,0,82107,UX,1,2107,UX,-1
CE,NEXT,0,82107,UY,1,2107,UY,-1
CE,NEXT,0,82107,UZ,1,2107,UZ,-1
CE,NEXT,0,82107,ROTX,1,2107,ROTX,-1

CE,NEXT,0,83107,UX,1,3107,UX,-1
CE,NEXT,0,83107,UY,1,3107,UY,-1
CE,NEXT,0,83107,UZ,1,3107,UZ,-1
CE,NEXT,0,83107,ROTX,1,3107,ROTX,-1

CE,NEXT,0,72155,UX,1,2155,UX,-1
CE,NEXT,0,72155,UY,1,2155,UY,-1
CE,NEXT,0,72155,UZ,1,2155,UZ,-1
CE,NEXT,0,72155,ROTX,1,2155,ROTX,-1
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CE,NEXT,0,73155,UX,1,3155,UX,-1
CE,NEXT,0,73155,UY,1,3155,UY,-1
CE,NEXT,0,73155,UZ,1,3155,UZ,-1
CE,NEXT,0,73155,ROTX,1,3155,ROTX,-1

CE,NEXT,0,72154,UX,1,2154,UX,-1
CE,NEXT,0,72154,UY,1,2154,UY,-1
CE,NEXT,0,72154,UZ,1,2154,UZ,-1
CE,NEXT,0,72154,ROTX,1,2154,ROTX,-1

CE,NEXT,0,73154,UX,1,3154,UX,-1
CE,NEXT,0,73154,UY,1,3154,UY,-1
CE,NEXT,0,73154,UZ,1,3154,UZ,-1
CE,NEXT,0,73154,ROTX,1,3154,ROTX,-1

CE,NEXT,0,72153,UX,1,2153,UX,-1
CE,NEXT,0,72153,UY,1,2153,UY,-1
CE,NEXT,0,72153,UZ,1,2153,UZ,-1
CE,NEXT,0,72153,ROTX,1,2153,ROTX,-1

CE,NEXT,0,63153,UX,1,3153,UX,-1
CE,NEXT,0,63153,UY,1,3153,UY,-1
CE,NEXT,0,63153,UZ,1,3153,UZ,-1
CE,NEXT,0,63153,ROTX,1,3153,ROTX,-1

CE,NEXT,0,62152,UX,1,2152,UX,-1
CE,NEXT,0,62152,UY,1,2152,UY,-1
CE,NEXT,0,62152,UZ,1,2152,UZ,-1
CE,NEXT,0,62152,ROTX,1,2152,ROTX,-1

CE,NEXT,0,73152,UX,1,3152,UX,-1
CE,NEXT,0,73152,UY,1,3152,UY,-1
CE,NEXT,0,73152,UZ,1,3152,UZ,-1
CE,NEXT,0,73152,ROTX,1,3152,ROTX,-1

CE,NEXT,0,62151,UX,1,2151,UX,-1
CE,NEXT,0,62151,UY,1,2151,UY,-1
CE,NEXT,0,62151,UZ,1,2151,UZ,-1
CE,NEXT,0,62151,ROTX,1,2151,ROTX,-1

CE,NEXT,0,73151,UX,1,3151,UX,-1
CE,NEXT,0,73151,UY,1,3151,UY,-1
CE,NEXT,0,73151,UZ,1,3151,UZ,-1
CE,NEXT,0,73151,ROTX,1,3151,ROTX,-1

CE,NEXT,0,62150,UX,1,2150,UX,-1
CE,NEXT,0,62150,UY,1,2150,UY,-1
CE,NEXT,0,62150,UZ,1,2150,UZ,-1
CE,NEXT,0,62150,ROTX,1,2150,ROTX,-1

CE,NEXT,0,63150,UX,1,3150,UX,-1
CE,NEXT,0,63150,UY,1,3150,UY,-1
CE,NEXT,0,63150,UZ,1,3150,UZ,-1
CE,NEXT,0,63150,ROTX,1,3150,ROTX,-1

CE,NEXT,0,62149,UX,1,2149,UX,-1
CE,NEXT,0,62149,UY,1,2149,UY,-1
CE,NEXT,0,62149,UZ,1,2149,UZ,-1
CE,NEXT,0,62149,ROTX,1,2149,ROTX,-1

CE,NEXT,0,63149,UX,1,3149,UX,-1
CE,NEXT,0,63149,UY,1,3149,UY,-1
CE,NEXT,0,63149,UZ,1,3149,UZ,-1
CE,NEXT,0,63149,ROTX,1,3149,ROTX,-1

CE,NEXT,0,72118,UX,1,2118,UX,-1
CE,NEXT,0,72118,UY,1,2118,UY,-1
CE,NEXT,0,72118,UZ,1,2118,UZ,-1
CE,NEXT,0,72118,ROTX,1,2118,ROTX,-1

CE,NEXT,0,73118,UX,1,3118,UX,-1
CE,NEXT,0,73118,UY,1,3118,UY,-1
CE,NEXT,0,73118,UZ,1,3118,UZ,-1
CE,NEXT,0,73118,ROTX,1,3118,ROTX,-1
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CE,NEXT,0,73107,UX,1,3107,UX,-1
CE,NEXT,0,73107,UY,1,3107,UY,-1
CE,NEXT,0,73107,UZ,1,3107,UZ,-1
CE,NEXT,0,73107,ROTX,1,3107,ROTX,-1

CE,NEXT,0,74107,UX,1,4107,UX,-1
CE,NEXT,0,74107,UY,1,4107,UY,-1
CE,NEXT,0,74107,UZ,1,4107,UZ,-1
CE,NEXT,0,74107,ROTX,1,4107,ROTX,-1

CE,NEXT,0,63155,UX,1,3155,UX,-1
CE,NEXT,0,63155,UY,1,3155,UY,-1
CE,NEXT,0,63155,UZ,1,3155,UZ,-1
CE,NEXT,0,63155,ROTX,1,3155,ROTX,-1

CE,NEXT,0,64155,UX,1,4155,UX,-1
CE,NEXT,0,64155,UY,1,4155,UY,-1
CE,NEXT,0,64155,UZ,1,4155,UZ,-1
CE,NEXT,0,64155,ROTX,1,4155,ROTX,-1

CE,NEXT,0,63154,UX,1,3154,UX,-1
CE,NEXT,0,63154,UY,1,3154,UY,-1
CE,NEXT,0,63154,UZ,1,3154,UZ,-1
CE,NEXT,0,63154,ROTX,1,3154,ROTX,-1

CE,NEXT,0,64154,UX,1,4154,UX,-1
CE,NEXT,0,64154,UY,1,4154,UY,-1
CE,NEXT,0,64154,UZ,1,4154,UZ,-1
CE,NEXT,0,64154,ROTX,1,4154,ROTX,-1

CE,NEXT,0,73153,UX,1,3153,UX,-1
CE,NEXT,0,73153,UY,1,3153,UY,-1
CE,NEXT,0,73153,UZ,1,3153,UZ,-1
CE,NEXT,0,73153,ROTX,1,3153,ROTX,-1

CE,NEXT,0,64153,UX,1,4153,UX,-1
CE,NEXT,0,64153,UY,1,4153,UY,-1
CE,NEXT,0,64153,UZ,1,4153,UZ,-1
CE,NEXT,0,64153,ROTX,1,4153,ROTX,-1

CE,NEXT,0,63152,UX,1,3152,UX,-1
CE,NEXT,0,63152,UY,1,3152,UY,-1
CE,NEXT,0,63152,UZ,1,3152,UZ,-1
CE,NEXT,0,63152,ROTX,1,3152,ROTX,-1

CE,NEXT,0,64152,UX,1,4152,UX,-1
CE,NEXT,0,64152,UY,1,4152,UY,-1
CE,NEXT,0,64152,UZ,1,4152,UZ,-1
CE,NEXT,0,64152,ROTX,1,4152,ROTX,-1

CE,NEXT,0,63151,UX,1,3151,UX,-1
CE,NEXT,0,63151,UY,1,3151,UY,-1
CE,NEXT,0,63151,UZ,1,3151,UZ,-1
CE,NEXT,0,63151,ROTX,1,3151,ROTX,-1

CE,NEXT,0,64151,UX,1,4151,UX,-1
CE,NEXT,0,64151,UY,1,4151,UY,-1
CE,NEXT,0,64151,UZ,1,4151,UZ,-1
CE,NEXT,0,64151,ROTX,1,4151,ROTX,-1

CE,NEXT,0,73150,UX,1,3150,UX,-1
CE,NEXT,0,73150,UY,1,3150,UY,-1
CE,NEXT,0,73150,UZ,1,3150,UZ,-1
CE,NEXT,0,73150,ROTX,1,3150,ROTX,-1

CE,NEXT,0,64150,UX,1,4150,UX,-1
CE,NEXT,0,64150,UY,1,4150,UY,-1
CE,NEXT,0,64150,UZ,1,4150,UZ,-1
CE,NEXT,0,64150,ROTX,1,4150,ROTX,-1

CE,NEXT,0,73149,UX,1,3149,UX,-1
CE,NEXT,0,73149,UY,1,3149,UY,-1
CE,NEXT,0,73149,UZ,1,3149,UZ,-1
CE,NEXT,0,73149,ROTX,1,3149,ROTX,-1
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CE,NEXT,0,64149,UX,1,4149,UX,-1
CE,NEXT,0,64149,UY,1,4149,UY,-1
CE,NEXT,0,64149,UZ,1,4149,UZ,-1
CE,NEXT,0,64149,ROTX,1,4149,ROTX,-1

CE,NEXT,0,83118,UX,1,3118,UX,-1
CE,NEXT,0,83118,UY,1,3118,UY,-1
CE,NEXT,0,83118,UZ,1,3118,UZ,-1
CE,NEXT,0,83118,ROTX,1,3118,ROTX,-1

CE,NEXT,0,74118,UX,1,4118,UX,-1
CE,NEXT,0,74118,UY,1,4118,UY,-1
CE,NEXT,0,74118,UZ,1,4118,UZ,-1
CE,NEXT,0,74118,ROTX,1,4118,ROTX,-1

CE,NEXT,0,84107,UX,1,4107,UX,-1
CE,NEXT,0,84107,UY,1,4107,UY,-1
CE,NEXT,0,84107,UZ,1,4107,UZ,-1
CE,NEXT,0,84107,ROTX,1,4107,ROTX,-1

CE,NEXT,0,75107,UX,1,5107,UX,-1
CE,NEXT,0,75107,UY,1,5107,UY,-1
CE,NEXT,0,75107,UZ,1,5107,UZ,-1
CE,NEXT,0,75107,ROTX,1,5107,ROTX,-1

CE,NEXT,0,74155,UX,1,4155,UX,-1
CE,NEXT,0,74155,UY,1,4155,UY,-1
CE,NEXT,0,74155,UZ,1,4155,UZ,-1
CE,NEXT,0,74155,ROTX,1,4155,ROTX,-1

CE,NEXT,0,65155,UX,1,5155,UX,-1
CE,NEXT,0,65155,UY,1,5155,UY,-1
CE,NEXT,0,65155,UZ,1,5155,UZ,-1
CE,NEXT,0,65155,ROTX,1,5155,ROTX,-1

CE,NEXT,0,74154,UX,1,4154,UX,-1
CE,NEXT,0,74154,UY,1,4154,UY,-1
CE,NEXT,0,74154,UZ,1,4154,UZ,-1
CE,NEXT,0,74154,ROTX,1,4154,ROTX,-1

CE,NEXT,0,65154,UX,1,5154,UX,-1
CE,NEXT,0,65154,UY,1,5154,UY,-1
CE,NEXT,0,65154,UZ,1,5154,UZ,-1
CE,NEXT,0,65154,ROTX,1,5154,ROTX,-1

CE,NEXT,0,74153,UX,1,4153,UX,-1
CE,NEXT,0,74153,UY,1,4153,UY,-1
CE,NEXT,0,74153,UZ,1,4153,UZ,-1
CE,NEXT,0,74153,ROTX,1,4153,ROTX,-1

CE,NEXT,0,65153,UX,1,5153,UX,-1
CE,NEXT,0,65153,UY,1,5153,UY,-1
CE,NEXT,0,65153,UZ,1,5153,UZ,-1
CE,NEXT,0,65153,ROTX,1,5153,ROTX,-1

CE,NEXT,0,74152,UX,1,4152,UX,-1
CE,NEXT,0,74152,UY,1,4152,UY,-1
CE,NEXT,0,74152,UZ,1,4152,UZ,-1
CE,NEXT,0,74152,ROTX,1,4152,ROTX,-1

CE,NEXT,0,65152,UX,1,5152,UX,-1
CE,NEXT,0,65152,UY,1,5152,UY,-1
CE,NEXT,0,65152,UZ,1,5152,UZ,-1
CE,NEXT,0,65152,ROTX,1,5152,ROTX,-1

CE,NEXT,0,74151,UX,1,4151,UX,-1
CE,NEXT,0,74151,UY,1,4151,UY,-1
CE,NEXT,0,74151,UZ,1,4151,UZ,-1
CE,NEXT,0,74151,ROTX,1,4151,ROTX,-1

CE,NEXT,0,65151,UX,1,5151,UX,-1
CE,NEXT,0,65151,UY,1,5151,UY,-1
CE,NEXT,0,65151,UZ,1,5151,UZ,-1
CE,NEXT,0,65151,ROTX,1,5151,ROTX,-1
```

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CE,NEXT,0,74150,UX,1,4150,UX,-1
CE,NEXT,0,74150,UY,1,4150,UY,-1
CE,NEXT,0,74150,UZ,1,4150,UZ,-1
CE,NEXT,0,74150,ROTX,1,4150,ROTX,-1

CE,NEXT,0,75150,UX,1,5150,UX,-1
CE,NEXT,0,75150,UY,1,5150,UY,-1
CE,NEXT,0,75150,UZ,1,5150,UZ,-1
CE,NEXT,0,75150,ROTX,1,5150,ROTX,-1

CE,NEXT,0,74149,UX,1,4149,UX,-1
CE,NEXT,0,74149,UY,1,4149,UY,-1
CE,NEXT,0,74149,UZ,1,4149,UZ,-1
CE,NEXT,0,74149,ROTX,1,4149,ROTX,-1

CE,NEXT,0,75149,UX,1,5149,UX,-1
CE,NEXT,0,75149,UY,1,5149,UY,-1
CE,NEXT,0,75149,UZ,1,5149,UZ,-1
CE,NEXT,0,75149,ROTX,1,5149,ROTX,-1

CE,NEXT,0,84118,UX,1,4118,UX,-1
CE,NEXT,0,84118,UY,1,4118,UY,-1
CE,NEXT,0,84118,UZ,1,4118,UZ,-1
CE,NEXT,0,84118,ROTX,1,4118,ROTX,-1

CE,NEXT,0,85118,UX,1,5118,UX,-1
CE,NEXT,0,85118,UY,1,5118,UY,-1
CE,NEXT,0,85118,UZ,1,5118,UZ,-1
CE,NEXT,0,85118,ROTX,1,5118,ROTX,-1

CE,NEXT,0,85107,UX,1,5107,UX,-1
CE,NEXT,0,85107,UY,1,5107,UY,-1
CE,NEXT,0,85107,UZ,1,5107,UZ,-1
CE,NEXT,0,85107,ROTX,1,5107,ROTX,-1

CE,NEXT,0,76107,UX,1,6107,UX,-1
CE,NEXT,0,76107,UY,1,6107,UY,-1
CE,NEXT,0,76107,UZ,1,6107,UZ,-1
CE,NEXT,0,76107,ROTX,1,6107,ROTX,-1

CE,NEXT,0,75155,UX,1,5155,UX,-1
CE,NEXT,0,75155,UY,1,5155,UY,-1
CE,NEXT,0,75155,UZ,1,5155,UZ,-1
CE,NEXT,0,75155,ROTX,1,5155,ROTX,-1

CE,NEXT,0,66155,UX,1,6155,UX,-1
CE,NEXT,0,66155,UY,1,6155,UY,-1
CE,NEXT,0,66155,UZ,1,6155,UZ,-1
CE,NEXT,0,66155,ROTX,1,6155,ROTX,-1

CE,NEXT,0,75154,UX,1,5154,UX,-1
CE,NEXT,0,75154,UY,1,5154,UY,-1
CE,NEXT,0,75154,UZ,1,5154,UZ,-1
CE,NEXT,0,75154,ROTX,1,5154,ROTX,-1

CE,NEXT,0,66154,UX,1,6154,UX,-1
CE,NEXT,0,66154,UY,1,6154,UY,-1
CE,NEXT,0,66154,UZ,1,6154,UZ,-1
CE,NEXT,0,66154,ROTX,1,6154,ROTX,-1

CE,NEXT,0,75153,UX,1,5153,UX,-1
CE,NEXT,0,75153,UY,1,5153,UY,-1
CE,NEXT,0,75153,UZ,1,5153,UZ,-1
CE,NEXT,0,75153,ROTX,1,5153,ROTX,-1

CE,NEXT,0,66153,UX,1,6153,UX,-1
CE,NEXT,0,66153,UY,1,6153,UY,-1
CE,NEXT,0,66153,UZ,1,6153,UZ,-1
CE,NEXT,0,66153,ROTX,1,6153,ROTX,-1

CE,NEXT,0,75152,UX,1,5152,UX,-1
CE,NEXT,0,75152,UY,1,5152,UY,-1
CE,NEXT,0,75152,UZ,1,5152,UZ,-1
CE,NEXT,0,75152,ROTX,1,5152,ROTX,-1
```

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CE,NEXT,0,66152,UX,1,6152,UX,-1
CE,NEXT,0,66152,UY,1,6152,UY,-1
CE,NEXT,0,66152,UZ,1,6152,UZ,-1
CE,NEXT,0,66152,ROTX,1,6152,ROTX,-1

CE,NEXT,0,75151,UX,1,5151,UX,-1
CE,NEXT,0,75151,UY,1,5151,UY,-1
CE,NEXT,0,75151,UZ,1,5151,UZ,-1
CE,NEXT,0,75151,ROTX,1,5151,ROTX,-1

CE,NEXT,0,66151,UX,1,6151,UX,-1
CE,NEXT,0,66151,UY,1,6151,UY,-1
CE,NEXT,0,66151,UZ,1,6151,UZ,-1
CE,NEXT,0,66151,ROTX,1,6151,ROTX,-1

CE,NEXT,0,65150,UX,1,5150,UX,-1
CE,NEXT,0,65150,UY,1,5150,UY,-1
CE,NEXT,0,65150,UZ,1,5150,UZ,-1
CE,NEXT,0,65150,ROTX,1,5150,ROTX,-1

CE,NEXT,0,66150,UX,1,6150,UX,-1
CE,NEXT,0,66150,UY,1,6150,UY,-1
CE,NEXT,0,66150,UZ,1,6150,UZ,-1
CE,NEXT,0,66150,ROTX,1,6150,ROTX,-1

CE,NEXT,0,65149,UX,1,5149,UX,-1
CE,NEXT,0,65149,UY,1,5149,UY,-1
CE,NEXT,0,65149,UZ,1,5149,UZ,-1
CE,NEXT,0,65149,ROTX,1,5149,ROTX,-1

CE,NEXT,0,66149,UX,1,6149,UX,-1
CE,NEXT,0,66149,UY,1,6149,UY,-1
CE,NEXT,0,66149,UZ,1,6149,UZ,-1
CE,NEXT,0,66149,ROTX,1,6149,ROTX,-1

CE,NEXT,0,86107,UX,1,6107,UX,-1
CE,NEXT,0,86107,UY,1,6107,UY,-1
CE,NEXT,0,86107,UZ,1,6107,UZ,-1
CE,NEXT,0,86107,ROTX,1,6107,ROTX,-1

CE,NEXT,0,87107,UX,1,7107,UX,-1
CE,NEXT,0,87107,UY,1,7107,UY,-1
CE,NEXT,0,87107,UZ,1,7107,UZ,-1
CE,NEXT,0,87107,ROTX,1,7107,ROTX,-1

CE,NEXT,0,76155,UX,1,6155,UX,-1
CE,NEXT,0,76155,UY,1,6155,UY,-1
CE,NEXT,0,76155,UZ,1,6155,UZ,-1
CE,NEXT,0,76155,ROTX,1,6155,ROTX,-1

CE,NEXT,0,77155,UX,1,7155,UX,-1
CE,NEXT,0,77155,UY,1,7155,UY,-1
CE,NEXT,0,77155,UZ,1,7155,UZ,-1
CE,NEXT,0,77155,ROTX,1,7155,ROTX,-1

CE,NEXT,0,76154,UX,1,6154,UX,-1
CE,NEXT,0,76154,UY,1,6154,UY,-1
CE,NEXT,0,76154,UZ,1,6154,UZ,-1
CE,NEXT,0,76154,ROTX,1,6154,ROTX,-1

CE,NEXT,0,77154,UX,1,7154,UX,-1
CE,NEXT,0,77154,UY,1,7154,UY,-1
CE,NEXT,0,77154,UZ,1,7154,UZ,-1
CE,NEXT,0,77154,ROTX,1,7154,ROTX,-1

CE,NEXT,0,76153,UX,1,6153,UX,-1
CE,NEXT,0,76153,UY,1,6153,UY,-1
CE,NEXT,0,76153,UZ,1,6153,UZ,-1
CE,NEXT,0,76153,ROTX,1,6153,ROTX,-1

CE,NEXT,0,77153,UX,1,7153,UX,-1
CE,NEXT,0,77153,UY,1,7153,UY,-1
CE,NEXT,0,77153,UZ,1,7153,UZ,-1
CE,NEXT,0,77153,ROTX,1,7153,ROTX,-1
```

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CE,NEXT,0,76152,UX,1,6152,UX,-1
CE,NEXT,0,76152,UY,1,6152,UY,-1
CE,NEXT,0,76152,UZ,1,6152,UZ,-1
CE,NEXT,0,76152,ROTX,1,6152,ROTX,-1

CE,NEXT,0,77152,UX,1,7152,UX,-1
CE,NEXT,0,77152,UY,1,7152,UY,-1
CE,NEXT,0,77152,UZ,1,7152,UZ,-1
CE,NEXT,0,77152,ROTX,1,7152,ROTX,-1

CE,NEXT,0,76151,UX,1,6151,UX,-1
CE,NEXT,0,76151,UY,1,6151,UY,-1
CE,NEXT,0,76151,UZ,1,6151,UZ,-1
CE,NEXT,0,76151,ROTX,1,6151,ROTX,-1

CE,NEXT,0,77151,UX,1,7151,UX,-1
CE,NEXT,0,77151,UY,1,7151,UY,-1
CE,NEXT,0,77151,UZ,1,7151,UZ,-1
CE,NEXT,0,77151,ROTX,1,7151,ROTX,-1

CE,NEXT,0,76150,UX,1,6150,UX,-1
CE,NEXT,0,76150,UY,1,6150,UY,-1
CE,NEXT,0,76150,UZ,1,6150,UZ,-1
CE,NEXT,0,76150,ROTX,1,6150,ROTX,-1

CE,NEXT,0,77150,UX,1,7150,UX,-1
CE,NEXT,0,77150,UY,1,7150,UY,-1
CE,NEXT,0,77150,UZ,1,7150,UZ,-1
CE,NEXT,0,77150,ROTX,1,7150,ROTX,-1

CE,NEXT,0,76149,UX,1,6149,UX,-1
CE,NEXT,0,76149,UY,1,6149,UY,-1
CE,NEXT,0,76149,UZ,1,6149,UZ,-1
CE,NEXT,0,76149,ROTX,1,6149,ROTX,-1

CE,NEXT,0,77149,UX,1,7149,UX,-1
CE,NEXT,0,77149,UY,1,7149,UY,-1
CE,NEXT,0,77149,UZ,1,7149,UZ,-1
CE,NEXT,0,77149,ROTX,1,7149,ROTX,-1

CE,NEXT,0,77107,UX,1,7107,UX,-1
CE,NEXT,0,77107,UY,1,7107,UY,-1
CE,NEXT,0,77107,UZ,1,7107,UZ,-1
CE,NEXT,0,77107,ROTX,1,7107,ROTX,-1

CE,NEXT,0,78107,UX,1,8107,UX,-1
CE,NEXT,0,78107,UY,1,8107,UY,-1
CE,NEXT,0,78107,UZ,1,8107,UZ,-1
CE,NEXT,0,78107,ROTX,1,8107,ROTX,-1

CE,NEXT,0,67155,UX,1,7155,UX,-1
CE,NEXT,0,67155,UY,1,7155,UY,-1
CE,NEXT,0,67155,UZ,1,7155,UZ,-1
CE,NEXT,0,67155,ROTX,1,7155,ROTX,-1

CE,NEXT,0,68155,UX,1,8155,UX,-1
CE,NEXT,0,68155,UY,1,8155,UY,-1
CE,NEXT,0,68155,UZ,1,8155,UZ,-1
CE,NEXT,0,68155,ROTX,1,8155,ROTX,-1

CE,NEXT,0,67154,UX,1,7154,UX,-1
CE,NEXT,0,67154,UY,1,7154,UY,-1
CE,NEXT,0,67154,UZ,1,7154,UZ,-1
CE,NEXT,0,67154,ROTX,1,7154,ROTX,-1

CE,NEXT,0,68154,UX,1,8154,UX,-1
CE,NEXT,0,68154,UY,1,8154,UY,-1
CE,NEXT,0,68154,UZ,1,8154,UZ,-1
CE,NEXT,0,68154,ROTX,1,8154,ROTX,-1

CE,NEXT,0,67153,UX,1,7153,UX,-1
CE,NEXT,0,67153,UY,1,7153,UY,-1
CE,NEXT,0,67153,UZ,1,7153,UZ,-1
CE,NEXT,0,67153,ROTX,1,7153,ROTX,-1
```

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CE,NEXT,0,68153,UX,1,8153,UX,-1
CE,NEXT,0,68153,UY,1,8153,UY,-1
CE,NEXT,0,68153,UZ,1,8153,UZ,-1
CE,NEXT,0,68153,ROTX,1,8153,ROTX,-1

CE,NEXT,0,67152,UX,1,7152,UX,-1
CE,NEXT,0,67152,UY,1,7152,UY,-1
CE,NEXT,0,67152,UZ,1,7152,UZ,-1
CE,NEXT,0,67152,ROTX,1,7152,ROTX,-1

CE,NEXT,0,78152,UX,1,8152,UX,-1
CE,NEXT,0,78152,UY,1,8152,UY,-1
CE,NEXT,0,78152,UZ,1,8152,UZ,-1
CE,NEXT,0,78152,ROTX,1,8152,ROTX,-1

CE,NEXT,0,67151,UX,1,7151,UX,-1
CE,NEXT,0,67151,UY,1,7151,UY,-1
CE,NEXT,0,67151,UZ,1,7151,UZ,-1
CE,NEXT,0,67151,ROTX,1,7151,ROTX,-1

CE,NEXT,0,68151,UX,1,8151,UX,-1
CE,NEXT,0,68151,UY,1,8151,UY,-1
CE,NEXT,0,68151,UZ,1,8151,UZ,-1
CE,NEXT,0,68151,ROTX,1,8151,ROTX,-1

CE,NEXT,0,67150,UX,1,7150,UX,-1
CE,NEXT,0,67150,UY,1,7150,UY,-1
CE,NEXT,0,67150,UZ,1,7150,UZ,-1
CE,NEXT,0,67150,ROTX,1,7150,ROTX,-1

CE,NEXT,0,68150,UX,1,8150,UX,-1
CE,NEXT,0,68150,UY,1,8150,UY,-1
CE,NEXT,0,68150,UZ,1,8150,UZ,-1
CE,NEXT,0,68150,ROTX,1,8150,ROTX,-1

CE,NEXT,0,67149,UX,1,7149,UX,-1
CE,NEXT,0,67149,UY,1,7149,UY,-1
CE,NEXT,0,67149,UZ,1,7149,UZ,-1
CE,NEXT,0,67149,ROTX,1,7149,ROTX,-1

CE,NEXT,0,68149,UX,1,8149,UX,-1
CE,NEXT,0,68149,UY,1,8149,UY,-1
CE,NEXT,0,68149,UZ,1,8149,UZ,-1
CE,NEXT,0,68149,ROTX,1,8149,ROTX,-1

CE,NEXT,0,87118,UX,1,7118,UX,-1
CE,NEXT,0,87118,UY,1,7118,UY,-1
CE,NEXT,0,87118,UZ,1,7118,UZ,-1
CE,NEXT,0,87118,ROTX,1,7118,ROTX,-1

CE,NEXT,0,78118,UX,1,8118,UX,-1
CE,NEXT,0,78118,UY,1,8118,UY,-1
CE,NEXT,0,78118,UZ,1,8118,UZ,-1
CE,NEXT,0,78118,ROTX,1,8118,ROTX,-1

CE,NEXT,0,70181,UX,1,181,UX,-1
CE,NEXT,0,70181,UY,1,181,UY,-1
CE,NEXT,0,70181,UZ,1,181,UZ,-1
CE,NEXT,0,70181,ROTX,1,181,ROTX,-1

CE,NEXT,0,70155,UX,1,155,UX,-1
CE,NEXT,0,70155,UY,1,155,UY,-1
CE,NEXT,0,70155,UZ,1,155,UZ,-1
CE,NEXT,0,70155,ROTX,1,155,ROTX,-1

CE,NEXT,0,70180,UX,1,180,UX,-1
CE,NEXT,0,70180,UY,1,180,UY,-1
CE,NEXT,0,70180,UZ,1,180,UZ,-1
CE,NEXT,0,70180,ROTX,1,180,ROTX,-1

CE,NEXT,0,70154,UX,1,154,UX,-1
CE,NEXT,0,70154,UY,1,154,UY,-1
CE,NEXT,0,70154,UZ,1,154,UZ,-1
CE,NEXT,0,70154,ROTX,1,154,ROTX,-1
```

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CE,NEXT,0,70179,UX,1,179,UX,-1
CE,NEXT,0,70179,UY,1,179,UY,-1
CE,NEXT,0,70179,UZ,1,179,UZ,-1
CE,NEXT,0,70179,ROTX,1,179,ROTX,-1

CE,NEXT,0,70153,UX,1,153,UX,-1
CE,NEXT,0,70153,UY,1,153,UY,-1
CE,NEXT,0,70153,UZ,1,153,UZ,-1
CE,NEXT,0,70153,ROTX,1,153,ROTX,-1

CE,NEXT,0,70178,UX,1,178,UX,-1
CE,NEXT,0,70178,UY,1,178,UY,-1
CE,NEXT,0,70178,UZ,1,178,UZ,-1
CE,NEXT,0,70178,ROTX,1,178,ROTX,-1

CE,NEXT,0,70152,UX,1,152,UX,-1
CE,NEXT,0,70152,UY,1,152,UY,-1
CE,NEXT,0,70152,UZ,1,152,UZ,-1
CE,NEXT,0,70152,ROTX,1,152,ROTX,-1

CE,NEXT,0,70177,UX,1,177,UX,-1
CE,NEXT,0,70177,UY,1,177,UY,-1
CE,NEXT,0,70177,UZ,1,177,UZ,-1
CE,NEXT,0,70177,ROTX,1,177,ROTX,-1

CE,NEXT,0,70151,UX,1,151,UX,-1
CE,NEXT,0,70151,UY,1,151,UY,-1
CE,NEXT,0,70151,UZ,1,151,UZ,-1
CE,NEXT,0,70151,ROTX,1,151,ROTX,-1

CE,NEXT,0,70176,UX,1,176,UX,-1
CE,NEXT,0,70176,UY,1,176,UY,-1
CE,NEXT,0,70176,UZ,1,176,UZ,-1
CE,NEXT,0,70176,ROTX,1,176,ROTX,-1

CE,NEXT,0,70150,UX,1,150,UX,-1
CE,NEXT,0,70150,UY,1,150,UY,-1
CE,NEXT,0,70150,UZ,1,150,UZ,-1
CE,NEXT,0,70150,ROTX,1,150,ROTX,-1

CE,NEXT,0,70175,UX,1,175,UX,-1
CE,NEXT,0,70175,UY,1,175,UY,-1
CE,NEXT,0,70175,UZ,1,175,UZ,-1
CE,NEXT,0,70175,ROTX,1,175,ROTX,-1

CE,NEXT,0,70149,UX,1,149,UX,-1
CE,NEXT,0,70149,UY,1,149,UY,-1
CE,NEXT,0,70149,UZ,1,149,UZ,-1
CE,NEXT,0,70149,ROTX,1,149,ROTX,-1

CE,NEXT,0,68109,UX,1,8109,UX,-1
CE,NEXT,0,68109,UY,1,8109,UY,-1
CE,NEXT,0,68109,UZ,1,8109,UZ,-1
CE,NEXT,0,68109,ROTX,1,8109,ROTX,-1

CE,NEXT,0,77109,UX,1,7109,UX,-1
CE,NEXT,0,77109,UY,1,7109,UY,-1
CE,NEXT,0,77109,UZ,1,7109,UZ,-1
CE,NEXT,0,77109,ROTX,1,7109,ROTX,-1

CE,NEXT,0,74109,UX,1,4109,UX,-1
CE,NEXT,0,74109,UY,1,4109,UY,-1
CE,NEXT,0,74109,UZ,1,4109,UZ,-1
CE,NEXT,0,74109,ROTX,1,4109,ROTX,-1

CE,NEXT,0,73109,UX,1,3109,UX,-1
CE,NEXT,0,73109,UY,1,3109,UY,-1
CE,NEXT,0,73109,UZ,1,3109,UZ,-1
CE,NEXT,0,73109,ROTX,1,3109,ROTX,-1

CE,NEXT,0,74120,UX,1,4120,UX,-1
CE,NEXT,0,74120,UY,1,4120,UY,-1
CE,NEXT,0,74120,UZ,1,4120,UZ,-1
CE,NEXT,0,74120,ROTX,1,4120,ROTX,-1
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CE,NEXT,0,73120,UX,1,3120,UX,-1
CE,NEXT,0,73120,UY,1,3120,UY,-1
CE,NEXT,0,73120,UZ,1,3120,UZ,-1
CE,NEXT,0,73120,ROTX,1,3120,ROTX,-1


CE,NEXT,0,9,UY,1,60009,UY,-1

CE,NEXT,0,20,UY,1,60020,UY,-1

CE,NEXT,0,108,UY,1,60108,UY,-1

CE,NEXT,0,119,UY,1,60119,UY,-1

CE,NEXT,0,1108,UY,1,61108,UY,-1

CE,NEXT,0,1119,UY,1,61119,UY,-1

CE,NEXT,0,2108,UY,1,62108,UY,-1

CE,NEXT,0,2119,UY,1,62119,UY,-1

CE,NEXT,0,3108,UY,1,63108,UY,-1

CE,NEXT,0,3119,UY,1,63119,UY,-1

CE,NEXT,0,4108,UY,1,64108,UY,-1

CE,NEXT,0,4119,UY,1,64119,UY,-1

CE,NEXT,0,5108,UY,1,65108,UY,-1

CE,NEXT,0,5119,UY,1,65119,UY,-1

CE,NEXT,0,6108,UY,1,66108,UY,-1

CE,NEXT,0,7108,UY,1,67108,UY,-1

CE,NEXT,0,7119,UY,1,67119,UY,-1

CE,NEXT,0,8108,UY,1,68108,UY,-1

CE,NEXT,0,8119,UY,1,68119,UY,-1

! DEFINE SUPPORTS BASED ON NODES

D,1,UX,0
D,1,UY,0
D,1,UZ,0
D,1,ROTX,0
D,1,ROTY,0

D,12,UX,0
D,12,UY,0
D,12,UZ,0
D,12,ROTX,0
D,12,ROTY,0

D,101,UX,0
D,101,UY,0
D,101,UZ,0
D,101,ROTX,0
D,101,ROTY,0

D,111,UX,0
D,111,UY,0
D,111,UZ,0
D,111,ROTX,0
D,111,ROTY,0

D,30112,UX,0
D,30112,UY,0
D,30112,UZ,0
D,30112,ROTX,0
```

D,30112,ROTY,0
D,30112,ROTZ,0

D,123,UX,0
D,123,UY,0
D,123,UZ,0
D,123,ROTY,0

D,1101,UX,0
D,1101,UY,0
D,1101,UZ,0
D,1101,ROTX,0
D,1101,ROTY,0

D,1111,UX,0
D,1111,UY,0
D,1111,UZ,0
D,1111,ROTX,0
D,1111,ROTY,0

D,31112,UX,0
D,31112,UY,0
D,31112,UZ,0
D,31112,ROTX,0
D,31112,ROTY,0
D,31112,ROTZ,0

D,1123,UX,0
D,1123,UY,0
D,1123,UZ,0
D,1123,ROTY,0

D,2101,UX,0
D,2101,UY,0
D,2101,UZ,0
D,2101,ROTX,0
D,2101,ROTY,0

D,2111,UX,0
D,2111,UY,0
D,2111,UZ,0
D,2111,ROTX,0
D,2111,ROTY,0

D,2122,UX,0
D,2122,UY,0
D,2122,UZ,0
D,2122,ROTY,0

D,32112,UX,0
D,32112,UY,0
D,32112,UZ,0
D,32112,ROTX,0
D,32112,ROTY,0
D,32112,ROTZ,0

D,2123,UX,0
D,2123,UY,0
D,2123,UZ,0
D,2123,ROTY,0

D,3101,UX,0
D,3101,UY,0
D,3101,UZ,0
D,3101,ROTX,0
D,3101,ROTY,0

D,3111,UX,0
D,3111,UY,0
D,3111,UZ,0
D,3111,ROTX,0
D,3111,ROTY,0

D,33112,UX,0

D,33112,UY,0
D,33112,UZ,0
D,33112,ROTX,0
D,33112,ROTY,0
D,33112,ROTZ,0

D,3123,UX,0
D,3123,UY,0
D,3123,UZ,0
D,3123,ROTY,0

D,4101,UX,0
D,4101,UY,0
D,4101,UZ,0
D,4101,ROTX,0
D,4101,ROTY,0

D,4111,UX,0
D,4111,UY,0
D,4111,UZ,0
D,4111,ROTX,0
D,4111,ROTY,0

D,5101,UX,0
D,5101,UY,0
D,5101,UZ,0
D,5101,ROTX,0
D,5101,ROTY,0

D,5111,UX,0
D,5111,UY,0
D,5111,UZ,0
D,5111,ROTX,0
D,5111,ROTY,0

D,5112,UZ,0

D,6101,UX,0
D,6101,UY,0
D,6101,UZ,0
D,6101,ROTY,0

D,7101,UX,0
D,7101,UY,0
D,7101,UZ,0
D,7101,ROTX,0
D,7101,ROTY,0

D,7111,UX,0
D,7111,UY,0
D,7111,UZ,0
D,7111,ROTX,0
D,7111,ROTY,0

D,8100,UX,0
D,8100,UY,0
D,8100,UZ,0
D,8100,ROTY,0

D,8101,UX,0
D,8101,UY,0
D,8101,UZ,0
D,8101,ROTX,0
D,8101,ROTY,0

D,8111,UX,0
D,8111,UY,0
D,8111,UZ,0
D,8111,ROTX,0
D,8111,ROTY,0

D,8156,UX,0
D,8156,UY,0
D,8156,UZ,0
D,8156,ROTY,0

```
D,8156,ROTZ,0

D,8157,UX,0
D,8157,UY,0
D,8157,UZ,0
D,8157,ROTY,0
D,8157,ROTZ,0

/SOLU

!  Dead Load

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER


ACEL,0,GRAV,0            ! THIS COMMAND ESTABLISHES THE DIRECTION AND FORCE FOR GRAVITY,
!                    USED FOR BUILDING DEAD LOAD

lswrite,1             ! Write dead load to file


LSSOLVE,1,1,1          ! SOLVE MODEL FOR STADIC LOADS STEEL DEAD LOAD ONLY



FINISH


/out,Rev1_K15_modal,out
! CALCULATE THE MODAL SOLUTIONS TO FIND MODE SHAPES


/SOLU
ALLSEL,ALL
!*
ANTYPE,2
!*
!*
MODOPT,LANB,300
EQSLV,SPAR
MXPAND,300, , ,0
LUMPM,1
PSTRES,0
!*
MODOPT,LANB,300,0,34, ,OFF

/STATUS,SOLU

SOLVE
/out
FINISH
```

Attachment 11

ANSYS Coupled Building/Crane Model, Crane at P, Modal Analysis

```
/BATCH
/BATCH
/FILENAME, PGCR045
!/CWD,'C:\Documents and Settings\mkeeney\Desktop\MCK_ANSYS\Ansys\output'
/TITLE,Auxzilary Building Modifications
/PREP7

! The units for this model are INCHES POUNDS SECONDS.
! The nodal coordinates are a direct copy of the GT STRDL model.
! The node numbers match the original model were possible.


! DEFINE NODE LOCATIONS

N,1,0,0,0
N,2,0,489.96,0
N,3,0,844.08,0
N,4,0,852,0
N,5,0,852,11
N,6,0,860.04,11
N,7,0,870.6,11
N,8,0,1065.96,11
N,9,0,852,-12
N,10,0,870.6,-12
N,12,0,0,-576
N,13,0,489.96,-576
N,14,0,844.08,-576
N,15,0,852,-576
N,16,0,852,-587
N,17,0,860.04,-587
N,18,0,870.6,-587
N,19,0,1065.96,-587
N,20,0,852,-564
N,21,0,870.6,-564
N,23,0,288,-336
N,24,0,489.96,-504
N,25,0,489.96,-432
N,26,0,489.96,-360
N,27,0,489.96,-288
N,28,0,489.96,-216
N,29,0,489.96,-144
N,30,0,489.96,-72
N,31,0,672,-432
N,32,0,672,-288
N,33,0,672,-144
N,34,0,844.08,-288
N,35,0,1065.96,-512
N,36,0,1065.96,-437
N,37,0,1065.96,-362
N,38,0,1065.96,-288
N,39,0,1065.96,-214
N,40,0,1065.96,-139
N,41,0,1065.96,-64
N,101,432,288,0
N,102,432,489.96,0
N,103,432,852,0
N,104,432,852,11
N,105,432,860.04,11
N,106,432,870.6,11
N,107,432,1065.96,11
N,108,432,852,-12
N,109,432,870.6,-12
N,111,432,288,-576
N,112,432,489.96,-576
N,113,432,573,-576
N,114,432,852,-576
N,115,432,852,-587
N,116,432,860.04,-587
N,117,432,870.6,-587
N,118,432,1065.96,-587
N,119,432,852,-564
N,120,432,870.6,-564
N,123,432,288,-288
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N,124,216,489.96,-576
N,125,216,489.96,-504
N,126,216,489.96,-432
N,127,216,489.96,-360
N,128,216,489.96,-288
N,129,216,489.96,-216
N,130,216,489.96,-144
N,131,216,489.96,-72
N,132,216,489.96,0
N,133,336,489.96,-576
N,134,336,489.96,-504
N,135,336,489.96,-432
N,136,336,489.96,-360
N,137,336,489.96,-288
N,138,336,489.96,-216
N,139,336,489.96,-144
N,140,336,489.96,-72
N,141,336,489.96,0
N,142,432,489.96,-504
N,143,432,489.96,-432
N,144,432,489.96,-360
N,145,432,489.96,-288
N,146,432,489.96,-216
N,147,432,489.96,-144
N,148,432,489.96,-72
N,149,432,1065.96,-512
N,150,432,1065.96,-437
N,151,432,1065.96,-362
N,152,432,1065.96,-288
N,153,432,1065.96,-214
N,154,432,1065.96,-139
N,155,432,1065.96,-64
N,174,216,1065.96,-587
N,175,216,1065.96,-512
N,176,216,1065.96,-437
N,177,216,1065.96,-362
N,178,216,1065.96,-288
N,179,216,1065.96,-214
N,180,216,1065.96,-139
N,181,216,1065.96,-64
N,182,216,1065.96,11
N,183,577.5,573,-576
N,1101,723,288,0
N,1102,723,489.96,0
N,1103,723,852,0
N,1104,723,852,11
N,1105,723,860.04,11
N,1106,723,870.6,11
N,1107,723,1065.96,11
N,1108,723,852,-12
N,1109,723,870.6,-12
N,1111,723,288,-576
N,1112,723,489.96,-576
N,1113,723,573,-576
N,1114,723,852,-576
N,1115,723,852,-587
N,1116,723,860.04,-587
N,1117,723,870.6,-587
N,1118,723,1065.96,-587
N,1119,723,852,-564
N,1120,723,870.6,-564
N,1123,723,288,-288
N,1142,723,489.96,-504
N,1143,723,489.96,-432
N,1144,723,489.96,-360
N,1145,723,489.96,-288
N,1146,723,489.96,-216
N,1147,723,489.96,-144
N,1148,723,489.96,-72
N,1149,723,1065.96,-512
N,1150,723,1065.96,-437
N,1151,723,1065.96,-362
N,1152,723,1065.96,-288
N,1153,723,1065.96,-214
N,1154,723,1065.96,-139

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N,1155,723,1065.96,-64
N,2101,1014,288,0
N,2102,1014,489.96,0
N,2103,1014,852,0
N,2104,1014,852,11
N,2105,1014,860.04,11
N,2106,1014,870.6,11
N,2107,1014,1065.96,11
N,2108,1014,852,-12
N,2109,1014,870.6,-12
N,2111,1014,288,-576
N,2112,1014,489.96,-576
N,2113,1014,573,-576
N,2114,1014,852,-576
N,2115,1014,852,-587
N,2116,1014,860.04,-587
N,2117,1014,870.6,-587
N,2118,1014,1065.96,-587
N,2119,1014,852,-564
N,2120,1014,870.6,-564
N,2122,1159.5,288,-587
N,2123,1014,288,-288
N,2124,1118.52,489.96,0
N,2125,1118.52,489.96,-72
N,2126,1159.5,489.96,-72
N,2127,1159.5,489.96,0
N,2142,1014,489.96,-504
N,2143,1014,489.96,-432
N,2144,1014,489.96,-360
N,2145,1014,489.96,-288
N,2146,1014,489.96,-216
N,2147,1014,489.96,-144
N,2148,1014,489.96,-72
N,2149,1014,1065.96,-512
N,2150,1014,1065.96,-437
N,2151,1014,1065.96,-362
N,2152,1014,1065.96,-288
N,2153,1014,1065.96,-214
N,2154,1014,1065.96,-139
N,2155,1014,1065.96,-64
N,2156,1159.5,489.96,-587
N,2157,1159.5,489.96,-504
N,2158,1159.5,489.96,-432
N,3100,1305,459.96,0
N,3101,1305,288,0
N,3102,1305,489.96,0
N,3103,1305,852,0
N,3104,1305,852,11
N,3105,1305,860.04,11
N,3106,1305,870.6,11
N,3107,1305,1065.96,11
N,3108,1305,852,-12
N,3109,1305,870.6,-12
N,3111,1305,288,-576
N,3112,1305,489.96,-576
N,3113,1305,573,-576
N,3114,1305,852,-576
N,3115,1305,852,-587
N,3116,1305,860.04,-587
N,3117,1305,870.6,-587
N,3118,1305,1065.96,-587
N,3119,1305,852,-564
N,3120,1305,870.6,-564
N,3121,1159.5,860.04,-587
N,3123,1305,288,-288
N,3142,1305,489.96,-504
N,3143,1305,489.96,-432
N,3144,1305,489.96,-360
N,3145,1305,489.96,-288
N,3146,1305,489.96,-216
N,3147,1305,489.96,-144
N,3148,1305,489.96,-72
N,3149,1305,1065.96,-512
N,3150,1305,1065.96,-437
N,3151,1305,1065.96,-362
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N,3152,1305,1065.96,-288
N,3153,1305,1065.96,-214
N,3154,1305,1065.96,-139
N,3155,1305,1065.96,-64
N,3156,1437,489.96,-576
N,3157,1437,489.96,-504
N,3158,1437,489.96,-432
N,3159,1437,489.96,-360
N,3160,1437,489.96,-288
N,3161,1437,489.96,-216
N,3162,1437,489.96,-144
N,3163,1437,489.96,-72
N,3164,1437,489.96,0
N,3165,1437,459.96,0
N,4100,1578,459.96,0
N,4101,1578,288,0
N,4102,1578,489.96,0
N,4103,1578,852,0
N,4104,1578,852,11
N,4105,1578,860.04,11
N,4106,1578,870.6,11
N,4107,1578,1065.96,11
N,4108,1578,852,-12
N,4109,1578,870.6,-12
N,4111,1578,288,-576
N,4112,1578,489.96,-576
N,4113,1578,573,-576
N,4114,1578,852,-576
N,4115,1578,852,-587
N,4116,1578,860.04,-587
N,4117,1578,870.6,-587
N,4118,1578,1065.96,-587
N,4119,1578,852,-564
N,4120,1578,870.6,-564
N,4122,1578,971.04,-587
N,4149,1578,1065.96,-512
N,4150,1578,1065.96,-437
N,4151,1578,1065.96,-362
N,4152,1578,1065.96,-288
N,4153,1578,1065.96,-214
N,4154,1578,1065.96,-139
N,4155,1578,1065.96,-64
N,4156,1717.5,971.04,-587
N,5100,1857,459.96,0
N,5101,1857,288,0
N,5102,1857,489.96,0
N,5103,1857,852,0
N,5104,1857,852,11
N,5105,1857,860.04,11
N,5106,1857,870.6,11
N,5107,1857,1065.96,11
N,5108,1857,852,-12
N,5109,1857,870.6,-12
N,5111,1857,288,-576
N,5112,1857,489.96,-576
N,5113,1857,573,-576
N,5114,1857,852,-576
N,5115,1857,852,-587
N,5116,1857,860.04,-587
N,5117,1857,870.6,-587
N,5118,1857,1065.96,-587
N,5119,1857,852,-564
N,5120,1857,870.6,-564
N,5122,1857,971.04,-587
N,5123,1717.5,573,-576
N,5149,1857,1065.96,-512
N,5150,1857,1065.96,-437
N,5151,1857,1065.96,-362
N,5152,1857,1065.96,-288
N,5153,1857,1065.96,-214
N,5154,1857,1065.96,-139
N,5155,1857,1065.96,-64
N,5187,1857,489.96,-504
N,5188,1857,489.96,-432
N,5189,1857,489.96,-360

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N,5190,1857,489.96,-288
N,5191,1857,489.96,-216
N,5192,1857,489.96,-144
N,5193,1857,489.96,-72
N,6101,2097,516,0
N,6103,2097,852,0
N,6104,2097,852,11
N,6105,2097,860.04,11
N,6106,2097,870.6,11
N,6107,2097,1065.96,11
N,6108,2097,852,-12
N,6109,2097,870.6,-12
N,6118,2097,1065.96,-587
N,6149,2097,1065.96,-512
N,6150,2097,1065.96,-437
N,6151,2097,1065.96,-362
N,6152,2097,1065.96,-288
N,6153,2097,1065.96,-214
N,6154,2097,1065.96,-139
N,6155,2097,1065.96,-64
N,7101,2301,516,0
N,7103,2301,852,0
N,7104,2301,852,11
N,7105,2301,860.04,11
N,7106,2301,870.6,11
N,7107,2301,1065.96,11
N,7108,2301,852,-12
N,7109,2301,870.6,-12
N,7111,2301,516,-576
N,7114,2301,852,-576
N,7115,2301,852,-587
N,7116,2301,860.04,-587
N,7117,2301,870.6,-587
N,7118,2301,1065.96,-587
N,7119,2301,852,-564
N,7120,2301,870.6,-564
N,7122,2301,971.04,-587
N,7149,2301,1065.96,-512
N,7150,2301,1065.96,-437
N,7151,2301,1065.96,-362
N,7152,2301,1065.96,-288
N,7153,2301,1065.96,-214
N,7154,2301,1065.96,-139
N,7155,2301,1065.96,-64
N,8100,2505,516,-288
N,8101,2505,516,0
N,8103,2505,852,0
N,8104,2505,852,11
N,8105,2505,860.04,11
N,8106,2505,870.6,11
N,8107,2505,1065.96,11
N,8108,2505,852,-12
N,8109,2505,870.6,-12
N,8111,2505,516,-576

N,8112,2505,849.98,-288      ! NEW NODE FOR MODAL ANALISYS MCK 9/22/10

N,8114,2505,852,-576
N,8115,2505,852,-587
N,8116,2505,860.04,-587
N,8117,2505,870.6,-587
N,8118,2505,1065.96,-587
N,8119,2505,852,-564
N,8120,2505,870.6,-564
N,8149,2505,1065.96,-512
N,8150,2505,1065.96,-437
N,8151,2505,1065.96,-362
N,8152,2505,1065.96,-288
N,8153,2505,1065.96,-214
N,8154,2505,1065.96,-139
N,8155,2505,1065.96,-64
N,8156,432,288,-932
N,8157,1578,288,-900
N,21740,1159.5,573,-587
N,81660,2505,971.04,-587
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!
!   Added runway girder nodes
!   Replace "CNR" with on node numbers starting at 10000.
N,10101,2241,870.6,-564
N,10102,2187,870.6,-564
N,10103,2019,870.6,-564
N,10104,1965,870.6,-564
N,10113,2241,870.6,-12
N,10114,2187,870.6,-12
N,10115,2019,870.6,-12
N,10116,1965,870.6,-12
N,10201,2139,870.6,-564
N,10202,2085,870.6,-564
N,10203,1917,870.6,-564
N,10204,1863,870.6,-564
N,10213,2139,870.6,-12
N,10214,2085,870.6,-12
N,10215,1917,870.6,-12
N,10216,1863,870.6,-12
N,10301,2106,870.6,-564
N,10302,2052,870.6,-564
N,10303,1884,870.6,-564
N,10304,1830,870.6,-564
N,10313,2106,870.6,-12
N,10314,2052,870.6,-12
N,10315,1884,870.6,-12
N,10316,1830,870.6,-12
N,10401,1296,870.6,-564
N,10402,1242,870.6,-564
N,10403,1074,870.6,-564
N,10404,1020,870.6,-564
N,10413,1296,870.6,-12
N,10414,1242,870.6,-12
N,10415,1074,870.6,-12
N,10416,1020,870.6,-12
N,10501,1263,870.6,-564
N,10502,1209,870.6,-564
N,10503,1041,870.6,-564
N,10504,987,870.6,-564
N,10513,1263,870.6,-12
N,10514,1209,870.6,-12
N,10515,1041,870.6,-12
N,10516,987,870.6,-12
N,10601,1173,870.6,-564
N,10602,1119,870.6,-564
N,10603,951,870.6,-564
N,10604,897,870.6,-564
N,10613,1173,870.6,-12
N,10614,1119,870.6,-12
N,10615,951,870.6,-12
N,10616,897,870.6,-12
N,10701,459,870.6,-564
N,10702,405,870.6,-564
N,10703,237,870.6,-564
N,10704,183,870.6,-564
N,10713,459,870.6,-12
N,10714,405,870.6,-12
N,10715,237,870.6,-12
N,10716,183,870.6,-12
N,10801,372,870.6,-564
N,10802,318,870.6,-564
N,10803,150,870.6,-564
N,10804,96,870.6,-564
N,10813,372,870.6,-12
N,10814,318,870.6,-12
N,10815,150,870.6,-12
N,10816,96,870.6,-12
N,10901,303,870.6,-564
N,10902,249,870.6,-564
N,10903,81,870.6,-564
N,10904,27,870.6,-564
N,10913,303,870.6,-12
N,10914,249,870.6,-12
N,10915,81,870.6,-12
```

```
N,10916,27,870.6,-12
!
!  Added crane nodes
!  Replace "CN" with on nodes numbers starting at 11000
N,11001,1146,946.1,-12
N,11002,1146,946.1,-238.38
N,11003,1146,946.1,-21.96
N,11004,1146,946.1,-31.91
N,11005,1146,946.1,-41.87
N,11006,1146,946.1,-51.83
N,11007,1146,946.1,-61.78
N,11008,1146,946.1,-71.74
N,11009,1146,946.1,-81.7
N,11010,1146,946.1,-91.65
N,11011,1146,946.1,-101.61
N,11012,1146,946.1,-111.57
N,11013,1146,946.1,-121.52
N,11014,1146,946.1,-131.48
N,11015,1146,946.1,-141.43
N,11016,1146,946.1,-151.39
N,11017,1146,946.1,-161.35
N,11018,1146,946.1,-171.3
N,11019,1146,946.1,-181.26
N,11020,1146,946.1,-191.22
N,11021,1146,946.1,-201.17
N,11022,1146,946.1,-211.13
N,11023,1146,946.1,-221.09
N,11024,1146,946.1,-231.04
N,11025,1146,946.1,-564
N,11026,1146,946.1,-332.38
N,11027,1146,946.1,-554.04
N,11028,1146,946.1,-544.09
N,11029,1146,946.1,-534.13
N,11030,1146,946.1,-524.17
N,11031,1146,946.1,-514.22
N,11032,1146,946.1,-504.26
N,11033,1146,946.1,-494.3
N,11034,1146,946.1,-484.35
N,11035,1146,946.1,-474.39
N,11036,1146,946.1,-464.43
N,11037,1146,946.1,-454.48
N,11038,1146,946.1,-444.52
N,11039,1146,946.1,-434.57
N,11040,1146,946.1,-424.61
N,11041,1146,946.1,-414.65
N,11042,1146,946.1,-404.7
N,11043,1146,946.1,-394.73913
N,11044,1146,946.1,-384.78
N,11045,1146,946.1,-374.83
N,11046,1146,946.1,-364.87
N,11047,1146,946.1,-354.91
N,11048,1146,946.1,-344.96
N,11049,924,946.1,-12
N,11050,924,946.1,-238.38
N,11051,924,946.1,-21.96
N,11052,924,946.1,-31.91
N,11053,924,946.1,-41.87
N,11054,924,946.1,-51.83
N,11055,924,946.1,-61.78
N,11056,924,946.1,-71.74
N,11057,924,946.1,-81.7
N,11058,924,946.1,-91.65
N,11059,924,946.1,-101.61
N,11060,924,946.1,-111.57
N,11061,924,946.1,-121.52
N,11062,924,946.1,-131.48
N,11063,924,946.1,-141.43
N,11064,924,946.1,-151.39
N,11065,924,946.1,-161.35
N,11066,924,946.1,-171.3
N,11067,924,946.1,-181.26
N,11068,924,946.1,-191.22
N,11069,924,946.1,-201.17
N,11070,924,946.1,-211.13
N,11071,924,946.1,-221.09
```

N,11072,924,946.1,-231.04
N,11073,1146,946.1,-325.6
N,11074,1146,946.1,-316.2
N,11075,1146,946.1,-306.8
N,11076,1146,946.1,-297.4
N,11077,1146,946.1,-288
N,11078,1146,946.1,-278.6
N,11079,1146,946.1,-269.2
N,11080,1146,946.1,-259.8
N,11081,1146,946.1,-250.4
N,11082,924,946.1,-564
N,11083,924,946.1,-332.38
N,11084,924,946.1,-554.04
N,11085,924,946.1,-544.09
N,11086,924,946.1,-534.13
N,11087,924,946.1,-524.17
N,11088,924,946.1,-514.22
N,11089,924,946.1,-504.26
N,11090,924,946.1,-494.3
N,11091,924,946.1,-484.35
N,11092,924,946.1,-474.39
N,11093,924,946.1,-464.43
N,11094,924,946.1,-454.48
N,11095,924,946.1,-444.52
N,11096,924,946.1,-434.57
N,11097,924,946.1,-424.61
N,11098,924,946.1,-414.65
N,11099,924,946.1,-404.7
N,11100,924,946.1,-394.73913
N,11101,924,946.1,-384.78
N,11102,924,946.1,-374.83
N,11103,924,946.1,-364.87
N,11104,924,946.1,-354.91
N,11105,924,946.1,-344.96
N,11106,924,946.1,-325.6
N,11107,924,946.1,-316.2
N,11108,924,946.1,-306.8
N,11109,924,946.1,-297.4
N,11110,924,946.1,-288
N,11111,924,946.1,-278.6
N,11112,924,946.1,-269.2
N,11113,924,946.1,-259.8
N,11114,924,946.1,-250.4
N,11115,924,947.1,-332.38
N,11116,924,998.9,-332.38
N,11117,924,955.73333333,-332.38
N,11118,924,964.3666667,-332.38
N,11119,924,973,-332.38
N,11120,924,981.6333333,-332.38
N,11121,924,990.2666667,-332.38
N,11122,1146,947.1,-332.38
N,11123,1146,998.9,-332.38
N,11124,1146,955.73333333,-332.38
N,11125,1146,964.3666667,-332.38
N,11126,1146,973,-332.38
N,11127,1146,981.6333333,-332.38
N,11128,1146,990.2666667,-332.38
N,11129,1146,947.1,-238.38
N,11130,1146,998.9,-238.38
N,11131,1146,955.73333333,-238.38
N,11132,1146,964.3666667,-238.38
N,11133,1146,973,-238.38
N,11134,1146,981.6333333,-238.38
N,11135,1146,990.2666667,-238.38
N,11136,924,947.1,-238.38
N,11137,924,998.9,-238.38
N,11138,924,955.73333333,-238.38
N,11139,924,964.3666667,-238.38
N,11140,924,973,-238.38
N,11141,924,981.6333333,-238.38
N,11142,924,990.2666667,-238.38
N,11205,1136.347826,946.1,-564
N,11206,1126.6956522,946.1,-564
N,11207,1117.0434783,946.1,-564
N,11208,1107.3913043,946.1,-564

N,11209,1097.7391304,946.1,-564
N,11210,1088.0869565,946.1,-564
N,11211,1078.4347826,946.1,-564
N,11212,1068.7826087,946.1,-564
N,11213,1059.1304348,946.1,-564
N,11214,1049.4782609,946.1,-564
N,11215,1039.82608696,946.1,-564
N,11216,1030.17391304,946.1,-564
N,11217,1020.5217391,946.1,-564
N,11218,1010.8695652,946.1,-564
N,11219,1001.2173913,946.1,-564
N,11220,991.5652174,946.1,-564
N,11221,981.9130435,946.1,-564
N,11222,972.2608696,946.1,-564
N,11223,962.6086957,946.1,-564
N,11224,952.9565217,946.1,-564
N,11225,943.3043478,946.1,-564
N,11226,933.652174,946.1,-564
N,11227,933.652174,946.1,-12
N,11228,943.3043478,946.1,-12
N,11229,952.9565217,946.1,-12
N,11230,962.6086957,946.1,-12
N,11231,972.2608696,946.1,-12
N,11232,981.9130435,946.1,-12
N,11233,991.5652174,946.1,-12
N,11234,1001.2173913,946.1,-12
N,11235,1010.8695652,946.1,-12
N,11236,1020.5217391,946.1,-12
N,11237,1030.17391304,946.1,-12
N,11238,1039.82608696,946.1,-12
N,11239,1049.4782609,946.1,-12
N,11240,1059.1304348,946.1,-12
N,11241,1068.7826087,946.1,-12
N,11242,1078.4347826,946.1,-12
N,11243,1088.0869565,946.1,-12
N,11244,1097.7391304,946.1,-12
N,11245,1107.3913043,946.1,-12
N,11246,1117.0434783,946.1,-12
N,11247,1126.6956522,946.1,-12
N,11248,1136.347826,946.1,-12
N,11249,1146,904.6,-564
N,11250,1146,912.9,-564
N,11251,1146,921.2,-564
N,11252,1146,929.5,-564
N,11253,1146,937.8,-564
N,11254,924,904.6,-564
N,11255,924,912.9,-564
N,11256,924,921.2,-564
N,11257,924,929.5,-564
N,11258,924,937.8,-564
N,11259,1146,904.6,-12
N,11260,1146,912.9,-12
N,11261,1146,921.2,-12
N,11262,1146,929.5,-12
N,11263,1146,937.8,-12
N,11264,924,904.6,-12
N,11265,924,912.9,-12
N,11266,924,921.2,-12
N,11267,924,929.5,-12
N,11268,924,937.8,-12
N,11270,1173,904.6,-564
N,11272,1119,904.6,-564
N,11274,951,904.6,-564
N,11276,897,904.6,-564
N,11278,1173,904.6,-12
N,11280,1119,904.6,-12
N,11282,951,904.6,-12
N,11284,897,904.6,-12
N,11285,1164,904.6,-564
N,11286,1155,904.6,-564
N,11287,942,904.6,-564
N,11288,933,904.6,-564
N,11289,1128,904.6,-564
N,11290,1137,904.6,-564
N,11291,906,904.6,-564

N,11292,915,904.6,-564
N,11293,1164,904.6,-12
N,11294,1155,904.6,-12
N,11295,942,904.6,-12
N,11296,933,904.6,-12
N,11297,1128,904.6,-12
N,11298,1137,904.6,-12
N,11299,906,904.6,-12
N,11300,915,904.6,-12
N,11301,1109.1176471,904.6,-564
N,11302,1099.2352941,904.6,-564
N,11303,1089.3529412,904.6,-564
N,11304,1079.4705882,904.6,-564
N,11305,1069.5882353,904.6,-564
N,11306,1059.7058824,904.6,-564
N,11307,1049.8235294,904.6,-564
N,11308,1039.94117647,904.6,-564
N,11309,1030.05882353,904.6,-564
N,11310,1020.1764706,904.6,-564
N,11311,1010.2941176,904.6,-564
N,11312,1000.4117647,904.6,-564
N,11313,990.5294118,904.6,-564
N,11314,980.6470588,904.6,-564
N,11315,970.7647059,904.6,-564
N,11316,960.8823529,904.6,-564
N,11317,960.8823529,904.6,-12
N,11318,970.7647059,904.6,-12
N,11319,980.6470588,904.6,-12
N,11320,990.5294118,904.6,-12
N,11321,1000.4117647,904.6,-12
N,11322,1010.2941176,904.6,-12
N,11323,1020.1764706,904.6,-12
N,11324,1030.05882353,904.6,-12
N,11325,1039.94117647,904.6,-12
N,11326,1049.8235294,904.6,-12
N,11327,1059.7058824,904.6,-12
N,11328,1069.5882353,904.6,-12
N,11329,1079.4705882,904.6,-12
N,11330,1089.3529412,904.6,-12
N,11331,1099.2352941,904.6,-12
N,11332,1109.1176471,904.6,-12
N,11333,924,1011.9,-288
N,11334,924,1011.9,-229.63
N,11337,1146,1011.9,-229.63
N,11338,1146,1011.9,-288
N,11341,1146,1011.9,-341.63
N,11344,924,1011.9,-341.63
N,11347,1126.5,1011.9,-229.63
N,11348,1117.81,1011.9,-229.63
N,11349,1100.31,1011.9,-229.63
N,11350,1084,1011.9,-229.63
N,11351,1066.5,1011.9,-229.63
N,11352,1058,1011.9,-229.63
N,11353,937.19,1011.9,-229.63
N,11354,943.82,1011.9,-229.63
N,11355,954.82,1011.9,-229.63
N,11356,1012,1011.9,-229.63
N,11357,1042.66666667,1011.9,-229.63
N,11358,1027.33333333,1011.9,-229.63
N,11359,977.25,1011.9,-229.63
N,11360,966.035,1011.9,-229.63
N,11361,999.75,1011.9,-229.63
N,11362,988.5,1011.9,-229.63
N,11363,1126.5,1011.9,-288
N,11365,1117.81,1011.9,-288
N,11366,1100.31,1011.9,-288
N,11367,1084,1011.9,-288
N,11368,1058,1011.9,-288
N,11369,1012,1011.9,-288
N,11372,1066.5,1011.9,-288
N,11373,937.19,1011.9,-288
N,11374,943.82,1011.9,-288
N,11375,954.82,1011.9,-288
N,11376,977.25,1011.9,-288
N,11377,966.035,1011.9,-288

N,11378,999.75,1011.9,-288
N,11379,988.5,1011.9,-288
N,11392,1066.5,1011.9,-249.09
N,11393,1066.5,1011.9,-268.55
N,11395,999.75,1011.9,-249.09
N,11396,999.75,1011.9,-268.55
N,11397,1058,1011.9,-268.38
N,11399,1058,1011.9,-247.38
N,11400,1012,1011.9,-247.38
N,11401,1058,1011.9,-257.88
N,11402,1012,1011.9,-268.38
N,11403,1012,1011.9,-257.88
N,11405,1042.66666667,1011.9,-268.38
N,11406,1027.33333333,1011.9,-268.38
N,11408,1042.66666667,1011.9,-247.38
N,11409,1027.33333333,1011.9,-247.38
N,11411,1117.81,1011.9,-249.09
N,11412,1117.81,1011.9,-268.55
N,11414,1100.31,1011.9,-249.09
N,11415,1100.31,1011.9,-268.55
N,11417,1084,1011.9,-249.09
N,11418,1084,1011.9,-268.55
N,11420,937.19,1011.9,-249.09
N,11421,937.19,1011.9,-268.55
N,11423,954.82,1011.9,-249.09
N,11424,954.82,1011.9,-268.55
N,11426,977.25,1011.9,-249.09
N,11427,977.25,1011.9,-268.55
N,11429,1126.5,1011.9,-249.09
N,11430,1126.5,1011.9,-268.55
N,11432,943.82,1011.9,-249.09
N,11433,943.82,1011.9,-268.55
N,11434,1035,1011.9,-288
N,11435,1046.5,1011.9,-288
N,11436,1023.5,1011.9,-288
N,11437,1146,1011.9,-332.38
N,11438,1146,1011.9,-302.8
N,11439,1146,1011.9,-317.59
N,11440,924,1011.9,-332.38
N,11441,924,1011.9,-302.8
N,11442,924,1011.9,-317.59
N,11443,1146,1011.9,-238.38
N,11444,1146,1011.9,-254.92
N,11445,1146,1011.9,-271.46
N,11446,924,1011.9,-238.38
N,11447,924,1011.9,-254.92
N,11448,924,1011.9,-271.46
N,11450,1035,915.74,-288

! The following nodes are for column and beam orentation.

N,20001,100,800,-587
N,20002,100,800,-576
N,20003,100,800,-564
N,20004,100,800,-512
N,20005,100,800,-504
N,20006,100,800,-439.97
N,20007,100,800,-437
N,20008,100,800,-420.35
N,20009,100,800,-399.35
N,20010,100,800,-381.6
N,20011,100,800,-362
N,20012,100,800,-360
N,20013,100,800,-288
N,20014,100,800,-216
N,20015,100,800,-214
N,20016,100,800,-144
N,20017,100,800,-139
N,20018,100,800,-72
N,20019,100,800,-64
N,20020,100,800,-12
N,20021,100,800,0
N,20022,100,800,11
N,20030,100,800,-586
N,20035,100,800,-12

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N,20036,100,800,-401.06
N,20049,100,800,-12
N,20052,10000,800,-288
N,20054,10000,800,-586
N,20055,723,800,-586
N,20056,0,800,-586
N,20057,216,800,-586
N,20058,432,800,-586
N,20059,1014,800,-586
N,20060,1305,800,-586
N,20061,1578,800,-586
N,20062,1857,800,-586
N,20063,2097,800,-586
N,20064,2301,800,-586
N,20065,2505,800,-586
N,20066,1159.5,800,-586
N,20067,1437,800,-586
N,20068,1118.52,800,-586
N,20069,100,489.95,-576
N,20070,100,288,-336
N,20071,0,-100,-362
N,20072,0,-100,-214
N,20073,216,-100,11
N,20074,723,-100,11
N,20075,1305,-100,11
N,20076,1857,-100,11
N,20077,2301,-100,11
N,20078,2301,-100,-362
N,20079,2505,-100,-362
N,20080,1014,800,-576
N,20081,336,800,100
N,20082,100,800,-432
N,20083,-100,672,-432       !31
N,20084,-100,672,-144       !33
N,20085,-100,844.08,-288    !34
N,20086,723,-100,-288       !1145
N,20087,1014,-100,-288      !2145
N,20088,1305,-100,-288      !3145

! SPRING NODES

N,30112,432,489.96,-576
N,31112,723,489.96,-576
N,32112,1014,489.96,-576
N,33112,1305,489.96,-576
!N,35112,1857,489.96,-576

!CONSTRAINT NODES

N,40101,1173,894.6,-564
N,40102,1119,894.6,-564
N,40103,951,894.6,-564
N,40104,897,894.6,-564
N,40113,1173,894.6,-12
N,40114,1119,894.6,-12
N,40115,951,894.6,-12
N,40116,897,894.6,-12

! NODES FOR BEAM EXCENTRICITY

N,50037,0,1059.4725,-362
N,50039,0,1059.4725,-214
N,50153,432,1059.4725,-214
N,50174,216,1059.4725,-587
N,50177,216,1059.4725,-362
N,50179,216,1059.4725,-214
N,50182,216,1059.4725,11
N,51107,723,1059.4725,11
N,52153,1014,1059.4725,-214

N,52156,1159.5,489.96,-576
N,52174,1159.5,573,-576

N,53107,1305,1059.285,11
N,54153,1578,1059.285,-214
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N,55107,1857,1059.285,11
N,56153,2097,1059.285,-214
N,57107,2301,1059.285,11
N,57118,2301,1059.285,-587
N,57151,2301,1059.285,-362
N,57153,2301,1059.285,-214
N,58151,2505,1059.285,-362
N,58153,2505,1059.285,-214

! ELEMENT TYPE 2 NODES

N,60002,0,489.96,0
N,70002,0,489.96,0
N,80002,0,489.96,0
N,60008,0,1065.96,11
N,60012,0,0,-576
N,60013,0,489.96,-576
N,70013,0,489.96,-576
N,80013,0,489.96,-576
N,90013,0,489.96,-576
N,60019,0,1065.96,-587
N,70019,0,1065.96,-587
N,60031,0,672,-432
N,60034,0,844.08,-288
N,70034,0,844.08,-288
N,60113,432,573,-576
N,60124,216,489.96,-576
N,60133,336,489.96,-576
N,60174,216,1065.96,-587
N,61109,723,870.6,-12
N,61120,723,870.6,-564
N,72102,1014,489.96,0
N,62109,1014,870.6,-12
N,62116,1014,860.04,-587
N,62120,1014,870.6,-564
N,62143,1014,489.96,-432
N,62148,1014,489.96,-72
N,62156,1159.5,489.96,-587
N,63100,1305,459.96,0
N,73112,1305,489.96,-576
N,63120,1305,870.6,-564
N,63156,1437,489.96,-576
N,64113,1578,573,-576
N,64122,1578,971.04,-587
N,65112,1857,489.96,-576
N,75118,1857,1065.96,-587
N,66118,2097,1065.96,-587
N,73102,1305,489.96,0
N,63109,1305,870.6,-12
N,65109,1857,870.6,-12
N,65120,1857,870.6,-564
N,66109,2097,870.6,-12
N,67109,2301,870.6,-12
N,68120,2505,870.6,-564


! ELEMENT TYPE 3 NODES

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N,60118,432,1065.96,-587
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N,61118,723,1065.96,-587
N,62112,1014,489.96,-576
N,62118,1014,1065.96,-587
N,63112,1305,489.96,-576
N,63118,1305,1065.96,-587
N,64118,1578,1065.96,-587
N,65118,1857,1065.96,-587
N,67118,2301,1065.96,-587
N,68118,2505,1065.96,-587

! ELEMENT TYPE 7 NODES

N,90002,0,489.96,0
N,60033,0,672,-144
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N,70033,0,672,-144
N,70008,0,1065.96,11
N,70031,0,672,-432
N,60145,432,489.96,-288
N,60132,216,489.96,0
N,60141,336,489.96,0
N,61113,723,573,-576
N,61145,723,489.96,-288
N,62145,1014,489.96,-288
N,63121,1159.5,860.04,-587
N,63145,1305,489.96,-288
N,63164,1437,489.96,0
N,65102,1857,489.96,0
N,66107,2097,1065.96,11
N,70102,432,489.96,0
N,70112,432,489.96,-576
N,63143,1305,489.96,-432
N,64102,1578,489.96,0
N,64112,1578,489.96,-576
N,65122,1857,971.04,-587
N,65113,1857,573,-576
N,83102,1305,489.96,0
N,63148,1305,489.96,-72
N,68152,2505,1065.96,-288
N,63116,1305,860.04,-587
N,77118,2301,1065.96,-587
N,70107,432,1065.96,11
N,70118,432,1065.96,-587
N,60182,216,1065.96,11
N,76109,2097,870.6,-12
N,75109,1857,870.6,-12
N,64109,1578,870.6,-12
N,72109,1014,870.6,-12
N,71109,723,870.6,-12
N,60010,0,870.6,-12
N,75120,1857,870.6,-564
N,64120,1578,870.6,-564
N,72120,1014,870.6,-564
N,71120,723,870.6,-564
N,60021,0,870.6,-564

! ELEMENT TYPE 8 NODES

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N,61102,723,489.96,0
N,61107,723,1065.96,11
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N,62107,1014,1065.96,11
N,63102,1305,489.96,0
N,63107,1305,1065.96,11
N,64100,1578,459.96,0
N,64107,1578,1065.96,11
N,65107,1857,1065.96,11
N,67107,2301,1065.96,11
N,68107,2505,1065.96,11

! ELEMENT TYPE 9 NODES

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N,80008,0,1065.96,11
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N,60017,0,860.04,-587
N,80019,0,1065.96,-587
N,60024,0,489.96,-504
N,60025,0,489.96,-432
N,60026,0,489.96,-360
N,60027,0,489.96,-288
N,60028,0,489.96,-216
N,60029,0,489.96,-144
N,60030,0,489.96,-72
N,80034,0,844.08,-288
N,90034,0,844.08,-288
N,100034,0,844.08,-288

N,110034,0,844.08,-288
N,60035,0,1065.96,-512
N,60036,0,1065.96,-437
N,60037,0,1065.96,-362
N,60038,0,1065.96,-288
N,60039,0,1065.96,-214
N,60040,0,1065.96,-139
N,60041,0,1065.96,-64
N,60101,432,288,0
N,80102,432,489.96,0
N,90102,432,489.96,0
N,100102,432,489.96,0
N,60105,432,860.04,11
N,70105,432,860.04,11
N,80105,432,860.04,11
N,80107,432,1065.96,11
N,80112,432,489.96,-576
N,90112,432,489.96,-576
N,100112,432,489.96,-576
N,110112,432,489.96,-576
N,70113,432,573,-576
N,60116,432,860.04,-587
N,70116,432,860.04,-587
N,80116,432,860.04,-587
N,60118,432,1065.96,-587
N,80118,432,1065.96,-587
N,60125,216,489.96,-504
N,70125,216,489.96,-504
N,60126,216,489.96,-432
N,60127,216,489.96,-360
N,60128,216,489.96,-288
N,60129,216,489.96,-216
N,60130,216,489.96,-144
N,60131,216,489.96,-72
N,70131,216,489.96,-72
N,60134,336,489.96,-504
N,70134,336,489.96,-504
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N,60137,336,489.96,-288
N,60138,336,489.96,-216
N,60139,336,489.96,-144
N,60140,336,489.96,-72
N,70140,336,489.96,-72
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N,70150,432,1065.96,-437
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N,70151,432,1065.96,-362
N,60152,432,1065.96,-288
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N,60153,432,1065.96,-214
N,70153,432,1065.96,-214
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N,70154,432,1065.96,-139
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N,60183,577.5,573,-576
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N,91112,723,489.96,-576
N,71113,723,573,-576
N,61114,723,852,-576
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N,81118,723,1065.96,-587
N,91118,723,1065.96,-587
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N,62142,1014,489.96,-504
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N,72148,1014,489.96,-72
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N,63113,1305,573,-576
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N,83118,1305,1065.96,-587
N,73120,1305,870.6,-564
N,63142,1305,489.96,-504
N,73143,1305,489.96,-432
N,63144,1305,489.96,-360
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N,73146,1305,489.96,-216
N,63147,1305,489.96,-144
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N,73155,1305,1065.96,-64
N,63157,1437,489.96,-504

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N,63161,1437,489.96,-216
N,63162,1437,489.96,-144
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N,74112,1578,489.96,-576
N,84112,1578,489.96,-576
N,94112,1578,489.96,-576
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N,84113,1578,573,-576
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N,84156,1717.5,971.04,-587
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N,95118,1857,1065.96,-587
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N,77151,2301,1065.96,-362
N,67152,2301,1065.96,-288
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N,67153,2301,1065.96,-214
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N,67154,2301,1065.96,-139
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N,67155,2301,1065.96,-64
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N,78107,2505,1065.96,11
N,68109,2505,870.6,-12
N,68116,2505,860.04,-587
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N,68150,2505,1065.96,-437
N,68151,2505,1065.96,-362
N,78152,2505,1065.96,-288
N,68153,2505,1065.96,-214
N,68154,2505,1065.96,-139
N,68155,2505,1065.96,-64
N,150037,0,1059.4725,-362
N,250037,0,1059.4725,-362
N,150039,0,1059.4725,-214
N,250039,0,1059.4725,-214
N,150153,432,1059.4725,-214
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N,150174,216,1059.4725,-587
N,150177,216,1059.4725,-362
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N,152153,1014,1059.4725,-214

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N,255107,1857,1059.285,11
N,156153,2097,1059.285,-214
N,256153,2097,1059.285,-214
N,157107,2301,1059.285,11
N,257107,2301,1059.285,11
N,157118,2301,1059.285,-587
N,157151,2301,1059.285,-362
N,157153,2301,1059.285,-214
N,158151,2505,1059.285,-362
N,258151,2505,1059.285,-362
N,158153,2505,1059.285,-214
N,258153,2505,1059.285,-214
N,181660,2505,971.04,-587
N,281660,2505,971.04,-587

! ELEMENT TYPE 16 NODES

N,74100,1578,459.96,0
N,75100,1857,459.96,0

!RAIL GIRDER                MCK 9/10/2010

N,60009,0,852,-12
N,60020,0,852,-564
N,60108,432,852,-12
N,60119,432,852,-564
N,61108,723,852,-12
N,61119,723,852,-564
N,62108,1014,852,-12
N,62119,1014,852,-564
N,63108,1305,852,-12
N,63119,1305,852,-564
N,64108,1578,852,-12
N,64119,1578,852,-564
N,65108,1857,852,-12
N,65119,1857,852,-564
N,66108,2097,852,-12
N,67108,2301,852,-12
N,67119,2301,852,-564
N,68108,2505,852,-12
N,68119,2505,852,-564

!  ADDED RUNWAY GIRDER NODES

N,301011,1173,894.6,-564
N,301021,1119,894.6,-564
N,301031,951,894.6,-564
N,301041,897,894.6,-564

N,301131,1173,894.6,-12
N,301141,1119,894.6,-12
N,301151,951,894.6,-12
N,301161,897,894.6,-12

! DEFINE REAL CONSTANT

R,1

R,9

R,12,0.001, , ,       ! SPRING CONSTANT

R,13,18105000, , ,    ! SPRING CONSTANT

R,14,11978000, , ,    ! SPRING CONSTANT

R,15,23956000, , ,    ! SPRING CONSTANT
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R,1001,2766.222961730,,,   ! HOOK X SPRING

R,1002,2766.222961730,,,   ! HOOK Z SPRING

R,1003,2266759.624568,,,   ! HOOK Y SPRING

hookmass=688.9610669  ! hookmass = 0 for loadcase 6 and 7 all others is should be 688.9610669

R,1004,hookmass,hookmass,hookmass, ! HOOK MASS change because of change in gravity 688.4057971014

R,52,1.15,1.15,1.15
R,53,2.27743,2.27743,2.27743
R,54,3.662,3.662,3.662
R,55,0.64699,0.64699,0.64699
R,100,51.7598344,219.979296,51.7598344

R,401,14619.6 ! TORSIONAL SPRING FOR DIAGONAL WT4X12
R,402,10406.7 ! TORSIONAL SPRING FOR DIAGONAL WT4X12
R,403,56560 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X1/2_3/8
R,404,13334 ! TORSIONAL SPRING FOR DIAGONAL LL4X3X5/16_3/8
R,405,75068 ! TORSIONAL SPRING FOR DIAGONAL LL6X4X1/2_3/8
R,406,61618 ! TORSIONAL SPRING FOR DIAGONAL W14X43
R,407,215956 ! TORSIONAL SPRING FOR DIAGONAL W14X87
R,408,206514 ! TORSIONAL SPRING FOR DIAGONAL W14X87
R,409,31583 ! TORSIONAL SPRING FOR DIAGONAL LL3.5X3.5X3/8_3/8
R,410,21617 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,411,7180 ! TORSIONAL SPRING FOR DIAGONAL L4X4X5/16_3/8
R,412,25326 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,413,37519 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,414,5720 ! TORSIONAL SPRING FOR DIAGONAL LL3X3X3/8_3/8
R,415,18756 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,416,14402 ! TORSIONAL SPRING FOR DIAGONAL LL4X4X3/8_3/8
R,417,51480 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X1/2_3/8
R,418,55000 ! TORSIONAL SPRING FOR DIAGONAL LL5X5X1/2
R,419,2687 ! TORSIONAL SPRING FOR DIAGONAL LL3X3X3/16_3/8
R,420,170024 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X3/4_3/8
R,421,496078 ! TORSIONAL SPRING FOR DIAGONAL W14X119
R,422,169412 ! TORSIONAL SPRING FOR DIAGONAL W12X72

GRAV=386.08858                                                                    ! in/sec^2

! DEFINE MATERIAL TYPES

Mat,1   ! BUILDING STEEL
MP,EX,1,2.90E+07
!MP,Nuxy,1,3.00E-01
MP,DENS,1,0.73377E-03
MP,GXY,1,11000000

Mat,13   ! BUILDING STEEL
MP,EX,13,2.90E+07
!MP,Nuxy,13,3.00E-01
MP,DENS,13,0.00001
MP,GXY,13,11000000

! THE FOLLOWING MATERIAL TYPES ARE FOR THE CRANE

MAT,2     !  HOOKUP MAT 1
MP,EX,2,3E+07
MP,NUXY,2,0.3
MP,DENS,2,0.745E-03

MAT,3     !  HOOKUP MAT 2
MP,EX,3,3E+07
MP,NUXY,3,0.3
MP,DENS,3,0.11660E-02

MAT,4     !  HOOKUP MAT 3
MP,EX,4,3E+07
MP,NUXY,4,0.3
MP,DENS,4,0.96E-03

MAT,5     !  HOOKUP MAT 4
MP,EX,5,3E+07
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MP,NUXY,5,0.8E-03
MP,DENS,5,0.123E-02

MAT,6     !  HOOKUP MAT 5
MP,EX,6,3E+07
MP,NUXY,6,0.3
MP,DENS,6,0

MAT,7     !  HOOKUP MAT 6
MP,EX,7,3E+07
MP,NUXY,7,0.3
MP,DENS,7,0.121E-02

MAT,8     !  HOOKUP MAT 7
MP,EX,8,3E+07
MP,NUXY,8,0.3
MP,DENS,8,0.6241E-02



! CREATE DIFFERENT ELEMENT TYPES IN ORDER TO CONTROL THE END RELEASES USING "KEYOPT"

ET,1,BEAM44

ET,2,BEAM44
!KEYOPT,2,7,11

ET,3,BEAM44
!KEYOPT,3,7,1

ET,7,BEAM44
!KEYOPT,7,8,11

ET,8,BEAM44
!KEYOPT,8,8,1

ET,9,BEAM44
!KEYOPT,9,7,11
!KEYOPT,9,8,11

ET,12,COMBIN14
KEYOPT,12,1,0
KEYOPT,12,2,3
KEYOPT,12,3,0

ET,13,COMBIN14
KEYOPT,13,1,0
KEYOPT,13,2,3
KEYOPT,13,3,0

ET,14,COMBIN14
KEYOPT,14,1,0
KEYOPT,14,2,1
KEYOPT,14,3,0

ET,15,COMBIN14
KEYOPT,15,1,0
KEYOPT,15,2,1
KEYOPT,15,3,0

ET,16,BEAM44
!KEYOPT,16,7,1
!KEYOPT,16,8,11

ET,21,BEAM44

ET,100,MASS21

ET,    1001, 14
KEYOP,    1001, 2,       1

ET,    1002, 14
KEYOP,    1002, 2,       3

ET,    1003, 14
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KEYOP,    1003, 2,       2

ET,    1004, 21

ET,300,COMBIN14  ! TORSIONAL SPRING FOR DIAGONAL BRACING
KEYOPT,300,1,0
KEYOPT,300,2,0
KEYOPT,300,3,1

! DEFINE BEAM SECTION TYPES THAT WILL BE USED IN THE MODEL

!W33X141
!SECTYPE,2,BEAM,I,W33X141
!SECDATA,11.535,11.535,33.31,0.96,0.96,0.605
R,202,41.6,246,7460,16.655,5.77,9.7
RMORE,41.6,246,7460,16.655,5.77,9.7
RMORE,,,,,,
RMORE,2.8175,2.0642

!W12X72
!SECTYPE,3,BEAM,I,W12X72
!SECDATA,12.04,12.04,12.25,0.671,0.671,0.43
R,203,21.2,195,597,6.125,6.02,2.94
RMORE,21.2,195,597,6.125,6.02,2.94
RMORE,,,,,,
RMORE,1.9681,4.0251

!W14X119
!SECTYPE,4,BEAM,I,W14X119
!SECDATA,14.65,14.65,14.5,0.938,0.938,0.57
R,204,35,492,1370,7.25,7.325,9.2
RMORE,35,492,1370,7.25,7.325,9.2
RMORE,,,,,,
RMORE,1.9103,4.2347

!W36X300
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,205,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W36X300 W/ L6X8
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,244,111.3,4560.861,24519.303,15.254,14.25,70.062
RMORE,111.3,4560.861,24519.303,15.254,14.25,70.062
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W36X300 W/ L4X6
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,245,105.18,3565.207,23828.308,15.844,14.25,67.364
RMORE,105.18,3565.207,23828.308,15.844,14.25,67.364
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W14X136
!SECTYPE,6,BEAM,I,W14X136
!SECDATA,14.74,14.74,14.75,1.063,1.063,0.66
R,206,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089

!W36X230
!SECTYPE,7,BEAM,I,W36X230
!SECDATA,16.475,16.475,35.88,1.26,1.26,0.761
R,207,67.7,940,15000,17.94,8.238,28.6
RMORE,67.7,940,15000,17.94,8.238,28.6
RMORE,,,,,,
RMORE,2.4466,2.5447
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!2L3X3X5/16_3/8                                                    SEC 8
R,30,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,,,,,,
RMORE,2.844,2.844

R,40,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,,,,,,
RMORE,2.844,2.844

!W10X33
!SECTYPE,9,BEAM,I,W10X33
!SECDATA,7.964,7.964,9.75,0.433,0.433,0.292
R,209,9.71,36.5,171,4.875,3.982,0.58
RMORE,9.71,36.5,171,4.875,3.982,0.58
RMORE,,,,,,
RMORE,2.1118,3.4106

!W30X116
!SECTYPE,10,BEAM,I,W30X116
!SECDATA,10.5,10.5,30,0.85,0.85,0.564
R,210,34.2,164,4930,15,5.25,6.43
RMORE,34.2,164,4930,15,5.25,6.43
RMORE,,,,,,
RMORE,2.8739,2.0213

!W14X87
!SECTYPE,11,BEAM,I,W14X87
!SECDATA,14.5,14.5,14,0.688,0.688,0.42
R,211,25.6,350,967,7,7.25,3.68
RMORE,25.6,350,967,7,7.25,3.68
RMORE,,,,,,
RMORE,1.9205,4.3537

!W14X43
!SECTYPE,12,BEAM,I,W14X43
!SECDATA,8,8,13.68,0.528,0.528,0.308
R,212,12.6,45.1,429,6.84,4,1.05
RMORE,12.6,45.1,429,6.84,4,1.05
RMORE,,,,,,
RMORE,2.2372,2.9907

!2L6X4X1/2_3/8  SEC 13
R,31,9.5,25.641,34.79,4.188,1.737,0.792
RMORE,9.5,25.641,34.79,4.188,1.737,0.792
RMORE,,,,,,
RMORE,3.5621,2.375
!SECTYPE,13,BEAM,ASEC,LL64X1/2
!SECDATA,9.5,25.64,,34.79,0,0.834,0,1.737,0,1.737

!2L4X3X5/16_3/8                                                    SEC 14
R,32,4.18,7.037,6.762,3.188,1.103,0.136
RMORE,4.18,7.037,6.762,3.188,1.103,0.136
RMORE,,,,,,
RMORE,3.344,2.5075
!SECTYPE,14,BEAM,ASEC,LL4X5/16
!SECDATA,4.18,6.762,,7.037,0,0.146,0,1.103,0,1.103

!2L6X6X1/2_3/8                                                    SEC 15
R,33,11.5,80.128,39.816,6.188,1.435,0.958
RMORE,11.5,80.128,39.816,6.188,1.435,0.958
RMORE,,,,,,
RMORE,2.875,2.875
!SECTYPE,15,BEAM,ASEC,LL66X1/2
!SECDATA,11.5,39.8,,80.155,0,1.002,0,1.435,0,1.435

!W24X100
!SECTYPE,16,BEAM,I,W24X100
!SECDATA,12,12,24,0.775,0.775,0.468
R,216,29.5,223,3000,12,6,4.87
RMORE,29.5,223,3000,12,6,4.87
RMORE,,,,,,
RMORE,2.379,2.6264
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!W36X280
!SECTYPE,17,BEAM,I,W36X280
!SECDATA,16.595,16.595,36.5,1.57,1.57,0.885
R,217,82.4,1200,18900,18.25,8.3,52.6
RMORE,82.4,1200,18900,18.25,8.3,52.6
RMORE,,,,,,
RMORE,2.372,2.5432

!W12X40
!SECTYPE,18,BEAM,I,W12X40
!SECDATA,8,8,11.94,0.516,0.516,0.294
R,218,11.8,44.1,310,5.97,4,0.956
RMORE,11.8,44.1,310,5.97,4,0.956
RMORE,,,,,,
RMORE,2.1439,3.3618

!W14X30
!SECTYPE,19,BEAM,I,W14X30
!SECDATA,6.733,6.733,13.86,0.383,0.383,0.270
R,219,8.83,19.5,290,6.93,3.367,0.376
RMORE,8.83,19.5,290,6.93,3.367,0.376
RMORE,,,,,,
RMORE,2.5684,2.36

!W12X27
!SECTYPE,20,BEAM,I,W12X27
!SECDATA,6.5,6.5,11.96,0.4,0.4,0.237
R,220,7.95,18.3,204,5.98,3.25,0.351
RMORE,7.95,18.3,204,5.98,3.25,0.351
RMORE,,,,,,
RMORE,2.2944,2.8042

!W36X150
!SECTYPE,21,BEAM,I,W36X150
!SECDATA,11.972,11.972,35.84,0.94,0.94,0.625
R,221,44.2,270,9030,17.92,5.99,10.1
RMORE,44.2,270,9030,17.92,5.99,10.1
RMORE,,,,,,
RMORE,2.9457,1.9732

!W36X160
!SECTYPE,22,BEAM,I,W36X160
!SECDATA,12,12,36,1.02,1.02,0.653
R,222,47.1,295,9760,18,6,12.4
RMORE,47.1,295,9760,18,6,12.4
RMORE,,,,,,
RMORE,2.886,2.0036

!W24X76
!SECTYPE,23,BEAM,I,W24X76
!SECDATA,8.985,8.985,23.91,0.682,0.682,0.44
R,223,22.4,82.6,2100,11.955,4.49,2.7
RMORE,22.4,82.6,2100,11.955,4.49,2.7
RMORE,,,,,,
RMORE,2.7417,2.1293

!W18X45
!SECTYPE,24,BEAM,I,W18X45
!SECDATA,7.477,7.477,17.86,0.499,0.499,0.335
R,224,13.2,34.8,706,8.93,3.74,0.889
RMORE,13.2,34.8,706,8.93,3.74,0.889
RMORE,,,,,,
RMORE,2.6533,2.2063

!W10X15
!SECTYPE,25,BEAM,I,W10X15
!SECDATA,4,4,10,0.269,0.269,0.230
R,225,4.41,2.88,68.9,5,2,0.104
RMORE,4.41,2.88,68.9,5,2,0.104
RMORE,,,,,,
RMORE,3.0732,1.9174

!W24X55
!SECTYPE,26,BEAM,I,W24X55
!SECDATA,7,7,23.55,0.503,0.503,0.396
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R,226,16.2,28.9,1340,11.775,3.5,1.18
RMORE,16.2,28.9,1340,11.775,3.5,1.18
RMORE,,,,,,
RMORE,3.4505,1.7371

!W24X68
!SECTYPE,27,BEAM,I,W24X68
!SECDATA,8.961,8.961,23.71,0.582,0.582,0.416
R,227,20,70,1820,11.855,4.48,1.86
RMORE,20,70,1820,11.855,4.48,1.86
RMORE,,,,,,
RMORE,2.876,2.0278

!W10X21
!SECTYPE,28,BEAM,I,W10X21
!SECDATA,5.75,5.75,9.9,0.338,0.338,0.240
R,228,6.2,10.8,107,4.95,2.875,0.21
RMORE,6.2,10.8,107,4.95,2.875,0.21
RMORE,,,,,,
RMORE,2.3782,2.6094

!C8X11
SECTYPE,29,BEAM,CHAN,C8X11
SECDATA,2.25,2.25,8,0.39,0.39,0.220
R,229,3.38,1.32,32.6,4,1.13,1.268
RMORE,3.38,1.32,32.6,4,1.13,1.268
RMORE,,,,,,
RMORE,2.8766,1.9205

!W30X108
!SECTYPE,30,BEAM,I,W30X108
!SECDATA,10.484,10.484,29.82,0.76,0.76,0.548
R,230,31.8,146,4470,14.91,5.24,5.02
RMORE,31.8,146,4470,14.91,5.24,5.02
RMORE,,,,,,
RMORE,2.9932,1.946

!W14X22
!SECTYPE,31,BEAM,I,W14X22
!SECDATA,5,5,13.72,0.335,0.335,0.230
R,231,6.49,7,198,6.86,2.5,0.208
RMORE,6.49,7,198,6.86,2.5,0.208
RMORE,,,,,,
RMORE,2.9064,2.0564

!W14X61
!SECTYPE,32,BEAM,I,W14X61
!SECDATA,10,10,13.91,0.643,0.643,0.378
R,232,17.9,107,641,6.955,5,2.19
RMORE,17.9,107,641,6.955,5,2.19
RMORE,,,,,,
RMORE,2.088,3.4043

!W27X84
!SECTYPE,33,BEAM,I,W27X84
!SECDATA,9.963,9.963,26.69,0.636,0.636,0.463
R,233,24.8,105,2830,13.345,4.98,2.79
RMORE,24.8,105,2830,13.345,4.98,2.79
RMORE,,,,,,
RMORE,2.9353,2.007

!W27X94
!SECTYPE,34,BEAM,I,W27X94
!SECDATA,9.99,9.99,26.91,0.745,0.745,0.49
R,234,27.7,124,3270,13.455,5,4.06
RMORE,27.7,124,3270,13.455,5,4.06
RMORE,,,,,,
RMORE,2.7839,2.1007

!2L4X4X3/8_3/8 SEC35
R,34,5.719,18.77,8.717,4.188,0.951,0.268
RMORE,5.719,18.77,8.717,4.188,0.951,0.268
RMORE,,,,,,
RMORE,2.8595,2.8595
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!2L6X6X3/4_3/8 SEC 36
R,35,16.875,121.302,56.31,6.188,1.4,3.164
RMORE,16.875,121.302,56.31,6.188,1.4,3.164
RMORE,,,,,,
RMORE,2.8125,2.8125

!2L3X3X3/16_3/8 SEC 37
R,36,2.18,4.134,1.923,3.188,0.726,0.025
RMORE,2.18,4.134,1.923,3.188,0.726,0.025
RMORE,,,,,,
RMORE,2.9067,2.9067

!2L5X5X1/2_3/8 SEC 38
R,37,9.5,47.485,22.5,5.188,1.184,0.792
RMORE,9.5,47.485,22.5,5.188,1.184,0.792
RMORE,,,,,,
RMORE,2.8503,2.8503

!L4X4X5/16
!SECTYPE,39,BEAM,L,L44X5/16
!SECDATA,4,4,0.313,0.313
R,239,2.402,5.925,1.503,2.828,1.357,0.078
RMORE,2.402,5.925,1.503,2.828,1.357,0.078
RMORE,,,,,,
RMORE,2.1182,2.0978,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,45

!L5X5X1/2
!SECTYPE,40,BEAM,L,L55X1/2
!SECDATA,5,5,0.5,0.5
R,240,4.75,17.912,4.589,3.536,1.675,0.396
RMORE,4.75,17.912,4.589,3.536,1.675,0.396
RMORE,,,,,,
RMORE,2.1158,2.0833,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,45

!2L3.5X3.5X3/8_3/8 SEC 41
R,38,4.969,12.891,5.73,3.688,0.826,0.233
RMORE,4.969,12.891,5.73,3.688,0.826,0.233
RMORE,,,,,,
RMORE,2.8394,2.8394

!2L3X3X3/8_3/8 SEC 42
R,39,4.219,8.395,3.519,3.188,0.7,0.198
RMORE,4.219,8.395,3.519,3.188,0.7,0.198
RMORE,,,,,,
RMORE,2.7527,2.7527

!WT4X12
!SECTYPE,43,BEAM,T,WT4X12
!SECDATA,6.5,3.97,0.398,0.245
R,243,3.54,9.15,3.529,0.699,3.248,0.174
RMORE,3.54,9.15,3.529,0.699,3.248,0.174
RMORE,,,,,,
RMORE,2.0439,5.463


!L4X4X1/2
R,241,3.75,8.828,2.295,2.828,1.320,0.312        ! NEW SECTION 9/14/2010 MCK  EL 7301,7313
RMORE,3.75,8.828,2.295,2.828,1.320,0.312
RMORE,,,,,,,
RMORE,2.1114,2.0616,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45
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!L6X6X3/4
R,242,8.438,44.692,11.617,4.243,1.98,1.582       ! NEW SECTION 9/14/2010 MCK  EL 7303,7315
RMORE,8.438,44.692,11.617,4.243,1.98,1.582
RMORE,,,,,,,
RMORE,2.1121,2.0616,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

! THE FOLLOWING SECTIONS ARE FOR THE CRANE MODEL AS PROVIDED
! BY THE CRANE VENDOR

SECTYPE,44,BEAM,HREC,       !1
SECDATA,61.000,17.125,1.0000,1.0000,0.62500, 0.62500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,45,BEAM,CSOL,       !2
SECDATA,4.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,46,BEAM,RECT,trolgirt   !3
SECDATA,22.000,2.5000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,47,BEAM,HREC,endtie  !4
SECDATA,10.000,8.0000,1.0000,1.0000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,48,BEAM,HREC,asagitie   !6
SECDATA,8.0000,8.0000,0.75000,0.75000,0.75000,0.75000,
SECOFFSET,CENT
SECCONTROL,0.0000,0.0000,0.0000,0.0000

SECTYPE,49,BEAM,HREC,endtruck   !7
SECDATA,22.000,16.600,1.5000,1.5000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,50,BEAM,RECT,       !8
SECDATA,14.000,14.000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,51,BEAM,HREC,Ttrucks   !10
SECDATA,22.250,9.0000,0.75000,0.75000,0.50000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,52,BEAM,RECT,girt1   !11
SECDATA,33.000,1.2500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,53,BEAM,RECT,girt2   !12
SECDATA,42.625,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,54,BEAM,RECT,girt3   !13
SECDATA,33.000,1.2500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,55,BEAM,RECT,       !14
SECDATA,20.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000
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SECTYPE,56,BEAM,RECT,stiff2    !15
SECDATA,6.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,57,BEAM,RECT,          !16
SECDATA,15.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,58,BEAM,RECT,9luk    !17
SECDATA,9.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,59,BEAM,ASEC,STIFF    !RIGID BEAM
SECDATA,1000,1000000,,1000000,,1000000   !GT STRUDL USES AN AREA OF 10
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,60,BEAM,ASEC,STIFF    !RIGID BEAM
SECDATA,1000,1000000,,1000000,,1000000   !GT STRUDL USES AN AREA OF 10
SECCONTROLS,0.0000,0.0000,0.0000,0.0000




R,301,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.09173

R,302,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.08849

R,303,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.07339

R,304,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.07339

R,306,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
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RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.06497

R,307,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.06497

R,308,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.0613

R,309,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05288

R,310,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05245

R,311,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05245

R,312,29.5,223,3000,12,6,4.87
RMORE,29.5,223,3000,12,6,4.87
RMORE,,,,,,
RMORE,2.379,2.6264,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.0518

R,313,40,568,1590,7.375,7.37,13.5

RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.0518

R,314,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05072

R,315,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05072

R,316,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.04964

R,317,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.04964

R,318,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.04662

R,319,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.04662

R,320,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03993

R,321,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03993

R,322,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03928

R,323,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03777

R,324,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03669

R,325,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03669

R,326,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,

RMORE,,,,,,
RMORE,0.03022

R,327,7.95,18.3,204,5.98,3.25,0.351
RMORE,7.95,18.3,204,5.98,3.25,0.351
RMORE,,,,,,
RMORE,2.2944,2.8042,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.02698

R,328,12.6,45.1,429,6.84,4,1.05
RMORE,12.6,45.1,429,6.84,4,1.05
RMORE,,,,,,
RMORE,2.2372,2.9907,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.02633

R,329,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.02525

R,330,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.02266

R,331,11.8,44.1,310,5.97,4,0.956
RMORE,11.8,44.1,310,5.97,4,0.956
RMORE,,,,,,
RMORE,2.1439,3.3618,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.01349

R,332,24.8,105,2830,13.345,4.98,2.79
RMORE,24.8,105,2830,13.345,4.98,2.79
RMORE,,,,,,
RMORE,2.9353,2.007,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.01349

R,333,27.7,124,3270,13.455,5,4.06
RMORE,27.7,124,3270,13.455,5,4.06
RMORE,,,,,,
RMORE,2.7839,2.1007,,,,
RMORE,,,,,,
RMORE,,,,,,

RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.01349

R,336,44.2,270,9030,17.92,5.99,10.1
RMORE,44.2,270,9030,17.92,5.99,10.1
RMORE,,,,,,
RMORE,2.9457,1.9732,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.028059

R,337,31.8,146,4470,14.91,5.24,5.02
RMORE,31.8,146,4470,14.91,5.24,5.02
RMORE,,,,,,
RMORE,2.9932,1.946,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.056118

R,338,13.2,34.8,706,8.93,3.74,0.889
RMORE,13.2,34.8,706,8.93,3.74,0.889
RMORE,,,,,,
RMORE,2.6533,2.2063,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.056118

R,339,44.2,270,9030,17.92,5.99,10.1
RMORE,44.2,270,9030,17.92,5.99,10.1
RMORE,,,,,,
RMORE,2.9457,1.9732,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
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RMORE,0.063133

R,340,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
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RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
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RMORE,0.064968

R,341,47.1,295,9760,18,6,12.4
RMORE,47.1,295,9760,18,6,12.4
RMORE,,,,,,
RMORE,2.886,2.0036,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.077271

R,342,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,

RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.084178

R,343,4.41,2.88,68.9,5,2,0.104
RMORE,4.41,2.88,68.9,5,2,0.104
RMORE,,,,,,
RMORE,3.0732,1.9174,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.084178

R,344,16.2,28.9,1340,11.775,3.5,1.18
RMORE,16.2,28.9,1340,11.775,3.5,1.18
RMORE,,,,,,
RMORE,3.4505,1.7371,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.084178

R,345,20,70,1820,11.855,4.48,1.86
RMORE,20,70,1820,11.855,4.48,1.86
RMORE,,,,,,
RMORE,2.876,2.0278,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.084178

R,346,6.2,10.8,107,4.95,2.875,0.21
RMORE,6.2,10.8,107,4.95,2.875,0.21
RMORE,,,,,,
RMORE,2.3782,2.6094,,,,
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RMORE,,,,,,
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RMORE,,,,,,
RMORE,0.084178

R,347,31.8,146,4470,14.91,5.24,5.02
RMORE,31.8,146,4470,14.91,5.24,5.02
RMORE,,,,,,
RMORE,2.9932,1.946,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.084178

R,348,82.4,1200,18900,18.25,8.3,52.6
RMORE,82.4,1200,18900,18.25,8.3,52.6
RMORE,,,,,,
RMORE,2.372,2.5432,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.10792

R,349,67.7,940,15000,17.94,8.238,28.6
RMORE,67.7,940,15000,17.94,8.238,28.6

RMORE,,,,,,
RMORE,2.4466,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.10792

R,350,8.83,19.5,290,6.93,3.367,0.376
RMORE,8.83,19.5,290,6.93,3.367,0.376
RMORE,,,,,,
RMORE,2.5684,2.36,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.168355

R,351,13.2,34.8,706,8.93,3.74,0.889
RMORE,13.2,34.8,706,8.93,3.74,0.889
RMORE,,,,,,
RMORE,2.6533,2.2063,,,,
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RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.168355

R,352,4.41,2.88,68.9,5,2,0.104
RMORE,4.41,2.88,68.9,5,2,0.104
RMORE,,,,,,
RMORE,3.0732,1.9174,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.168355

R,353,16.2,28.9,1340,11.775,3.5,1.18
RMORE,16.2,28.9,1340,11.775,3.5,1.18
RMORE,,,,,,
RMORE,3.4505,1.7371,,,,
RMORE,,,,,,
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RMORE,,,,,,
RMORE,,,,,,
RMORE,0.168355

R,354,20,70,1820,11.855,4.48,1.86
RMORE,20,70,1820,11.855,4.48,1.86
RMORE,,,,,,
RMORE,2.876,2.0278,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.168355

R,355,6.49,7,198,6.86,2.25,0.208
RMORE,6.49,7,198,6.86,2.25,0.208
RMORE,,,,,,
RMORE,2.9064,2.0564,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.168355

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R,356,13.8466,13.8466,13.8466
R,357,25.7117,25.7117,25.7117
R,358,26.4473,26.4473,26.4473
R,359,24.1887,24.1887,24.1887
R,360,25.6832,25.6832,25.6832
R,361,12.8882,12.8882,12.8882
R,362,22.0364,22.0364,22.0364
R,363,32.0211,32.0211,32.0211
R,364,8.96167,8.96167,8.96167

R,365,29.5,223,3000,12,6,4.87   ! NEW SECTION FOR MODAL ANALYSIS MCK 9/22/10
RMORE,29.5,223,3000,12,6,4.87
RMORE,,,,,,
RMORE,2.379,2.6264,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.0518

SAVE

! SELECT NODES IN ORDER TO DEFINE A RIGID REGION USING "CERIG"


! EBLOCK DEFINES ELEMENTS, HEADING ARE PROVIDED TO HELP DURING CHECKING
!    MAT   TYPE    REAL    SECT                        # NODES        ELM #     I      J      K
EBLOCK,19,SOLID,
(19i8)
     1     1   205     0     0     0     0     0     2     0     1     1     2     0
     1     1   303     0     0     0     0     0     2     0     2     2     3     0
     1     1   205     0     0     0     0     0     2     0     3     3     4     0
    13     1     1    59     0     0     0     0     2     0     4     4     5     0
     1     1   206     0     0     0     0     0     2     0     5     5     6     0
     1     1   206     0     0     0     0     0     2     0     6     6     7     0
     1     1   304     0     0     0     0     0     2     0     7     7     8     0
    13     1     1    59     0     0     0     0     2     0     8     4     9     0
    13     1     1    59     0     0     0     0     2     0     9 60009    10     0
    13     1     1    59     0     0     0     0     2     0    11    10     7 20056
     1     1   205     0     0     0     0     0     2     0    12    12    13     0
     1     1   303     0     0     0     0     0     2     0    13    13    14     0
     1     1   205     0     0     0     0     0     2     0    14    14    15     0
    13     1     1    59     0     0     0     0     2     0    15    15    16     0
     1     1   206     0     0     0     0     0     2     0    16    16    17     0
     1     1   206     0     0     0     0     0     2     0    17    17    18     0
     1     1   304     0     0     0     0     0     2     0    18    18    19     0
    13     1     1    59     0     0     0     0     2     0    19    15    20     0
    13     1     1    59     0     0     0     0     2     0    20 60020    21     0
    13     1     1    59     0     0     0     0     2     0    22    21    18 20056
     1     2   207     0     0     0     0     0     2     0    23 60013    24 20056
     1     1   207     0     0     0     0     0     2     0    24    24    25 20056
     1     1   207     0     0     0     0     0     2     0    25    25    26 20056
     1     1   207     0     0     0     0     0     2     0    26    26    27 20056
     1     1   207     0     0     0     0     0     2     0    27    27    28 20056
     1     1   207     0     0     0     0     0     2     0    28    28    29 20056
     1     1   207     0     0     0     0     0     2     0    29    29    30 20056
     1     7   207     0     0     0     0     0     2     0    30    30 90002 20056
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1	9	327	0	0	0	0	0	2	0	9046	74155	65155	20019
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1	9	327	0	0	0	0	0	2	0	9051	74150	75150	20007
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1	9	327	0	0	0	0	0	2	0	9057	75153	66153	20015
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1	9	327	0	0	0	0	0	2	0	9060	65150	66150	20007
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1	9	327	0	0	0	0	0	2	0	9064	76155	77155	20019
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8	21	1	53	0	0	0	0	2	0	12451	11435	11434	0
8	21	1	53	0	0	0	0	2	0	12452	11369	11436	0
8	21	1	53	0	0	0	0	2	0	12453	11436	11434	0
8	21	1	51	0	0	0	0	2	0	12454	11338	11438	0
8	21	1	51	0	0	0	0	2	0	12455	11438	11439	0
8	21	1	51	0	0	0	0	2	0	12456	11439	11437	0
8	21	1	51	0	0	0	0	2	0	12457	11333	11441	0
8	21	1	51	0	0	0	0	2	0	12458	11441	11442	0
8	21	1	51	0	0	0	0	2	0	12459	11442	11440	0
8	21	1	51	0	0	0	0	2	0	12460	11443	11444	0
8	21	1	51	0	0	0	0	2	0	12461	11444	11445	0
8	21	1	51	0	0	0	0	2	0	12462	11445	11338	0
8	21	1	51	0	0	0	0	2	0	12463	11446	11447	0
8	21	1	51	0	0	0	0	2	0	12464	11447	11448	0
8	21	1	51	0	0	0	0	2	0	12465	11448	11333	0
8	21	1	51	0	0	0	0	2	0	12466	11443	11337	0
8	21	1	51	0	0	0	0	2	0	12467	11446	11334	0
8	21	1	51	0	0	0	0	2	0	12468	11437	11341	0
8	21	1	51	0	0	0	0	2	0	12469	11344	11440	0
6	21	1	50	0	0	0	0	2	0	12470	11130	11443	0
6	21	1	50	0	0	0	0	2	0	12471	11123	11437	0
6	21	1	50	0	0	0	0	2	0	12472	11116	11440	0
6	21	1	50	0	0	0	0	2	0	12473	11137	11446	0
6	1001	1001	50	0	0	0	0	2	0	12478	11434	11450	0
6	1002	1002	50	0	0	0	0	2	0	12479	11434	11450	0
6	1003	1003	50	0	0	0	0	2	0	12480	11434	11450	0
6	1004	1004	50	0	0	0	0	1	0	12481	11450	0	0
1	1	324	0	0	0	0	0	2	0	71000	7101	7103	0
13	1	1	59	0	0	0	0	2	0	71020	7103	7104	0
1	1	206	0	0	0	0	0	2	0	71030	7104	7105	0
1	1	206	0	0	0	0	0	2	0	71040	7105	7106	0
1	1	325	0	0	0	0	0	2	0	71050	7106	7107	0
13	1	1	59	0	0	0	0	2	0	71060	7103	7108	0
13	1	1	59	0	0	0	0	2	0	71070	67108	7109	0
13	1	1	59	0	0	0	0	2	0	71090	7109	7106	20064
1	1	205	0	0	0	0	0	2	0	71100	7111	7114	0
13	1	1	59	0	0	0	0	2	0	71130	7114	7115	0
1	1	206	0	0	0	0	0	2	0	71140	7115	7116	0
1	1	206	0	0	0	0	0	2	0	71150	7116	7117	0
1	1	309	0	0	0	0	0	2	0	71160	7117	7122	0
13	1	1	59	0	0	0	0	2	0	71170	7114	7119	0
13	1	1	59	0	0	0	0	2	0	71180	67119	7120	0
13	1	1	59	0	0	0	0	2	0	71200	7120	7117	20064
1	1	309	0	0	0	0	0	2	0	71210	7122	7118	0
1	1	309	0	0	0	0	0	2	0	81160	81660	8118	0
0	14	14	0	0	0	0	0	2	0	90001	112	30112	0
0	15	15	0	0	0	0	0	2	0	90002	1112	31112	0
0	12	12	0	0	0	0	0	2	0	90003	1112	31112	0
0	14	14	0	0	0	0	0	2	0	90004	2112	32112	0
0	13	13	0	0	0	0	0	2	0	90005	2112	32112	0
0	12	12	0	0	0	0	0	2	0	90006	3112	33112	0
6	1	1	60	0	0	0	0	2	0	90501	37	50037	0
6	1	1	60	0	0	0	0	2	0	90502	39	50039	0
6	1	1	60	0	0	0	0	2	0	90503	153	50153	0
6	1	1	60	0	0	0	0	2	0	90504	174	50174	0
6	1	1	60	0	0	0	0	2	0	90505	177	50177	0
6	1	1	60	0	0	0	0	2	0	90506	179	50179	0
6	1	1	60	0	0	0	0	2	0	90507	182	50182	0
6	1	1	60	0	0	0	0	2	0	90508	1107	51107	0
6	1	1	60	0	0	0	0	2	0	90509	2153	52153	0
6	1	1	60	0	0	0	0	2	0	90510	3107	53107	0
6	1	1	60	0	0	0	0	2	0	90511	4153	54153	0
6	1	1	60	0	0	0	0	2	0	90512	5107	55107	0
6	1	1	60	0	0	0	0	2	0	90513	6153	56153	0
6	1	1	60	0	0	0	0	2	0	90514	7107	57107	0

6	1	1	60	0	0	0	0	2	0	90515	7118	57118	0
6	1	1	60	0	0	0	0	2	0	90516	7151	57151	0
6	1	1	60	0	0	0	0	2	0	90517	7153	57153	0
6	1	1	60	0	0	0	0	2	0	90518	8151	58151	0
6	1	1	60	0	0	0	0	2	0	90519	8153	58153	0
6	1	1	60	0	0	0	0	2	0	90520	21740	52174	0
6	1	1	60	0	0	0	0	2	0	90521	2156	52156	0
1	100	356	0	0	0	0	0	2	0	95001	113	0	0
1	100	357	0	0	0	0	0	2	0	95002	1113	0	0
1	100	358	0	0	0	0	0	2	0	95003	2113	0	0
1	100	359	0	0	0	0	0	2	0	95004	3113	0	0
1	100	360	0	0	0	0	0	2	0	95005	4113	0	0
1	100	361	0	0	0	0	0	2	0	95006	5113	0	0
1	100	362	0	0	0	0	0	2	0	95007	5122	0	0
1	100	363	0	0	0	0	0	2	0	95008	7122	0	0
1	100	364	0	0	0	0	0	2	0	95009	81660	0	0
0	300	407	0	0	0	0	0	2	0	40043	12	23	0
0	300	406	0	0	0	0	0	2	0	40044	13	23	0
0	300	408	0	0	0	0	0	2	0	40045	2	23	0
0	300	405	0	0	0	0	0	2	0	40046	13	31	0
0	300	404	0	0	0	0	0	2	0	40047	14	31	0
0	300	405	0	0	0	0	0	2	0	40048	34	31	0
0	300	405	0	0	0	0	0	2	0	40049	2	33	0
0	300	404	0	0	0	0	0	2	0	40050	3	33	0
0	300	405	0	0	0	0	0	2	0	40051	34	33	0
0	300	403	0	0	0	0	0	2	0	40052	19	34	0
0	300	403	0	0	0	0	0	2	0	40053	8	34	0
0	300	411	0	0	0	0	0	2	0	47301	1107	105	0
0	300	415	0	0	0	0	0	2	0	47303	1103	102	0
0	300	412	0	0	0	0	0	2	0	47305	1102	101	0
0	300	411	0	0	0	0	0	2	0	47307	1118	116	0
0	300	410	0	0	0	0	0	2	0	47309	1114	113	0
0	300	409	0	0	0	0	0	2	0	47310	112	183	0
0	300	409	0	0	0	0	0	2	0	47311	1112	183	0
0	300	411	0	0	0	0	0	2	0	47313	5107	4105	0
0	300	415	0	0	0	0	0	2	0	47315	5103	4102	0
0	300	412	0	0	0	0	0	2	0	47317	5100	4101	0
0	300	414	0	0	0	0	0	2	0	47320	4118	4156	0
0	300	414	0	0	0	0	0	2	0	47321	4156	5116	0
0	300	414	0	0	0	0	0	2	0	47322	4116	4156	0
0	300	414	0	0	0	0	0	2	0	47323	4156	5118	0
0	300	410	0	0	0	0	0	2	0	47325	5114	4113	0
0	300	409	0	0	0	0	0	2	0	47326	4112	5123	0
0	300	409	0	0	0	0	0	2	0	47327	5123	5112	0
0	300	412	0	0	0	0	0	2	0	47329	5112	4111	0
0	300	413	0	0	0	0	0	2	0	47333	8118	7122	0
0	300	413	0	0	0	0	0	2	0	47335	81660	7116	0
0	300	402	0	0	0	0	0	2	0	47336	50037	50174	0
0	300	401	0	0	0	0	0	2	0	47337	50037	50179	0
0	300	401	0	0	0	0	0	2	0	47338	50039	50177	0
0	300	402	0	0	0	0	0	2	0	47339	50039	50182	0
0	300	402	0	0	0	0	0	2	0	47340	50182	50153	0
0	300	402	0	0	0	0	0	2	0	47341	50153	51107	0
0	300	402	0	0	0	0	0	2	0	47342	51107	52153	0
0	300	402	0	0	0	0	0	2	0	47343	52153	53107	0
0	300	402	0	0	0	0	0	2	0	47344	53107	54153	0
0	300	402	0	0	0	0	0	2	0	47345	54153	55107	0
0	300	402	0	0	0	0	0	2	0	47346	55107	56153	0
0	300	402	0	0	0	0	0	2	0	47347	56153	57107	0
0	300	402	0	0	0	0	0	2	0	47348	57107	58153	0
0	300	401	0	0	0	0	0	2	0	47349	57151	58153	0
0	300	401	0	0	0	0	0	2	0	47350	57153	58151	0
0	300	402	0	0	0	0	0	2	0	47351	57118	58151	0
0	300	421	0	0	0	0	0	2	0	47352	112	8156	0
0	300	422	0	0	0	0	0	2	0	47353	4112	8157	0
0	300	416	0	0	0	0	0	2	0	47435	112	1145	0
0	300	417	0	0	0	0	0	2	0	47436	1145	2102	0
0	300	416	0	0	0	0	0	2	0	47437	102	1145	0
0	300	417	0	0	0	0	0	2	0	47438	1145	2112	0
0	300	420	0	0	0	0	0	2	0	47439	2112	3145	0
0	300	419	0	0	0	0	0	2	0	47441	2145	2158	0
0	300	417	0	0	0	0	0	2	0	47442	2102	3145	0
0	300	418	0	0	0	0	0	2	0	47443	3145	3164	0
13	1	1	59	0	0	0	0	2	0	30001	10601	301011	0
13	1	1	59	0	0	0	0	2	0	30002	10602	301021	0

```
    13    1    1   59    0    0    0    0    2    0  30003  10603  301031    0
    13    1    1   59    0    0    0    0    2    0  30004  10604  301041    0
    13    1    1   59    0    0    0    0    2    0  30005  10613  301131    0
    13    1    1   59    0    0    0    0    2    0  30006  10614  301141    0
    13    1    1   59    0    0    0    0    2    0  30007  10615  301151    0
    13    1    1   59    0    0    0    0    2    0  30008  10616  301161    0
-1

! These constraint equiations attach the trolly to the crane bridge
!!!! Dec 20, 2010, J.Staples
!!!! See Rev 1 of Calc S10-0049.
!!!! CE equations are replaced by CP commands. The CP commands include no Rotation restriction and connections now follow NOG-1 2004
!!!! This is associated with Fig. 4154.3-1 and Table 4154.3-1
!!!! Specifically, Nodes E, F, G and H of the Figure 4154.3

!CE,1,0,11002,UZ,1,11129,UZ,-1,11129,ROTX,-1,

!CE,2,0,11002,UY,1,11129,UY,-1

!CE,3,0,11002,UX,1,11129,UX,-1,11129,ROTZ,1,

!CE,4,0,11050,UZ,1,11136,UZ,-1,11136,ROTX,-1,

!CE,5,0,11050,UY,1,11136,UY,-1

!CE,6,0,11050,UX,1,11136,UX,-1,11136,ROTZ,1,

!CE,7,0,11122,UY,1,11026,UY,-1

!CE,8,0,11122,UX,1,11026,UX,-1,11026,ROTZ,-1,

!CE,9,0,11115,UY,1,11083,UY,-1

!CE,10,0,11115,UX,1,11083,UX,-1,11083,ROTZ,-1,


CP,1,UX,     11002,    11129,
CP,2,UY,     11002,    11129,
CP,3,UZ,     11002,    11129,
CP,4,UX,     11050,    11136,
CP,5,UY,     11050,    11136,
CP,6,UZ,     11050,    11136,
CP,7,UY,     11026,    11122,
CP,8,UX,     11026,    11122,
CP,9,UY,     11083,    11115,
CP,10,UX,    11083,    11115,


!!!!
!!!! End of Dec 20 2010 changes.


! These constraint equiations attach the crane bridge to the crane rail


CE,11,0,40101,UY,1,301011,UY,-1
CE,12,0,40101,UZ,1,301011,UZ,-1

CE,13,0,40102,UY,1,301021,UY,-1
CE,14,0,40102,UZ,1,301021,UZ,-1

CE,15,0,40103,UX,1,301031,UX,-1
CE,16,0,40103,UY,1,301031,UY,-1
CE,17,0,40103,UZ,1,301031,UZ,-1

CE,18,0,40104,UX,1,301041,UX,-1
CE,19,0,40104,UY,1,301041,UY,-1
CE,20,0,40104,UZ,1,301041,UZ,-1

CE,21,0,40113,UY,1,301131,UY,-1

CE,22,0,40114,UY,1,301141,UY,-1

CE,23,0,40115,UX,1,301151,UX,-1
CE,24,0,40115,UY,1,10115,UY,-1
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CE,25,0,40116,UX,1,301161,UX,-1
CE,26,0,40116,UY,1,301161,UY,-1

! ELEMENT TYPE 2

CE,101,0,60013,UX,1,13,UX,-1
CE,NEXT,0,60013,UY,1,13,UY,-1
CE,NEXT,0,60013,UZ,1,13,UZ,-1
CE,NEXT,0,60013,ROTZ,1,13,ROTZ,-1

CE,NEXT,0,60031,UX,1,31,UX,-1
CE,NEXT,0,60031,UY,1,31,UY,-1
CE,NEXT,0,60031,UZ,1,31,UZ,-1
CE,NEXT,0,60031,ROTZ,1,31,ROTZ,-1

CE,NEXT,0,60019,UX,1,19,UX,-1
CE,NEXT,0,60019,UY,1,19,UY,-1
CE,NEXT,0,60019,UZ,1,19,UZ,-1
CE,NEXT,0,60019,ROTZ,1,19,ROTZ,-1

CE,NEXT,0,60012,UX,1,12,UX,-1
CE,NEXT,0,60012,UY,1,12,UY,-1
CE,NEXT,0,60012,UZ,1,12,UZ,-1

CE,NEXT,0,70013,UX,1,13,UX,-1
CE,NEXT,0,70013,UY,1,13,UY,-1
CE,NEXT,0,70013,UZ,1,13,UZ,-1

CE,NEXT,0,60002,UX,1,2,UX,-1
CE,NEXT,0,60002,UY,1,2,UY,-1
CE,NEXT,0,60002,UZ,1,2,UZ,-1

CE,NEXT,0,80013,UX,1,13,UX,-1
CE,NEXT,0,80013,UY,1,13,UY,-1
CE,NEXT,0,80013,UZ,1,13,UZ,-1

CE,NEXT,0,60034,UX,1,34,UX,-1
CE,NEXT,0,60034,UY,1,34,UY,-1
CE,NEXT,0,60034,UZ,1,34,UZ,-1

CE,NEXT,0,70002,UX,1,2,UX,-1
CE,NEXT,0,70002,UY,1,2,UY,-1
CE,NEXT,0,70002,UZ,1,2,UZ,-1

CE,NEXT,0,70034,UX,1,34,UX,-1
CE,NEXT,0,70034,UY,1,34,UY,-1
CE,NEXT,0,70034,UZ,1,34,UZ,-1

CE,NEXT,0,60124,UX,1,124,UX,-1
CE,NEXT,0,60124,UY,1,124,UY,-1
CE,NEXT,0,60124,UZ,1,124,UZ,-1
CE,NEXT,0,60124,ROTZ,1,124,ROTZ,-1

CE,NEXT,0,60133,UX,1,133,UX,-1
CE,NEXT,0,60133,UY,1,133,UY,-1
CE,NEXT,0,60133,UZ,1,133,UZ,-1
CE,NEXT,0,60133,ROTZ,1,133,ROTZ,-1

CE,NEXT,0,60113,UX,1,113,UX,-1
CE,NEXT,0,60113,UY,1,113,UY,-1
CE,NEXT,0,60113,UZ,1,113,UZ,-1
CE,NEXT,0,60113,ROTX,1,113,ROTX,-1

CE,NEXT,0,62156,UX,1,2156,UX,-1
CE,NEXT,0,62156,UY,1,2156,UY,-1
CE,NEXT,0,62156,UZ,1,2156,UZ,-1
CE,NEXT,0,62156,ROTZ,1,2156,ROTZ,-1

CE,NEXT,0,63156,UX,1,3156,UX,-1
CE,NEXT,0,63156,UY,1,3156,UY,-1
CE,NEXT,0,63156,UZ,1,3156,UZ,-1
CE,NEXT,0,63156,ROTZ,1,3156,ROTZ,-1

CE,NEXT,0,65112,UX,1,5112,UX,-1
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CE,NEXT,0,65112,UY,1,5112,UY,-1
CE,NEXT,0,65112,UZ,1,5112,UZ,-1
CE,NEXT,0,65112,ROTZ,1,5112,ROTZ,-1

CE,NEXT,0,66118,UX,1,6118,UX,-1
CE,NEXT,0,66118,UY,1,6118,UY,-1
CE,NEXT,0,66118,UZ,1,6118,UZ,-1
CE,NEXT,0,66118,ROTZ,1,6118,ROTZ,-1

CE,NEXT,0,80002,UX,1,2,UX,-1
CE,NEXT,0,80002,UY,1,2,UY,-1
CE,NEXT,0,80002,UZ,1,2,UZ,-1
CE,NEXT,0,80002,ROTX,1,2,ROTX,-1

CE,NEXT,0,90013,UX,1,13,UX,-1
CE,NEXT,0,90013,UY,1,13,UY,-1
CE,NEXT,0,90013,UZ,1,13,UZ,-1
CE,NEXT,0,90013,ROTX,1,13,ROTX,-1

CE,NEXT,0,72102,UX,1,2102,UX,-1
CE,NEXT,0,72102,UY,1,2102,UY,-1
CE,NEXT,0,72102,UZ,1,2102,UZ,-1
CE,NEXT,0,72102,ROTX,1,2102,ROTX,-1

CE,NEXT,0,62148,UX,1,2148,UX,-1
CE,NEXT,0,62148,UY,1,2148,UY,-1
CE,NEXT,0,62148,UZ,1,2148,UZ,-1
CE,NEXT,0,62148,ROTX,1,2148,ROTX,-1

CE,NEXT,0,62143,UX,1,2143,UX,-1
CE,NEXT,0,62143,UY,1,2143,UY,-1
CE,NEXT,0,62143,UZ,1,2143,UZ,-1
CE,NEXT,0,62143,ROTX,1,2143,ROTX,-1

CE,NEXT,0,63100,UX,1,3100,UX,-1
CE,NEXT,0,63100,UY,1,3100,UY,-1
CE,NEXT,0,63100,UZ,1,3100,UZ,-1
CE,NEXT,0,63100,ROTX,1,3100,ROTX,-1

CE,NEXT,0,73102,UX,1,3102,UX,-1
CE,NEXT,0,73102,UY,1,3102,UY,-1
CE,NEXT,0,73102,UZ,1,3102,UZ,-1
CE,NEXT,0,73102,ROTX,1,3102,ROTX,-1

CE,NEXT,0,73112,UX,1,3112,UX,-1
CE,NEXT,0,73112,UY,1,3112,UY,-1
CE,NEXT,0,73112,UZ,1,3112,UZ,-1
CE,NEXT,0,73112,ROTX,1,3112,ROTX,-1

CE,NEXT,0,64113,UX,1,4113,UX,-1
CE,NEXT,0,64113,UY,1,4113,UY,-1
CE,NEXT,0,64113,UZ,1,4113,UZ,-1
CE,NEXT,0,64113,ROTX,1,4113,ROTX,-1

CE,NEXT,0,64122,UX,1,4122,UX,-1
CE,NEXT,0,64122,UY,1,4122,UY,-1
CE,NEXT,0,64122,UZ,1,4122,UZ,-1
CE,NEXT,0,64122,ROTX,1,4122,ROTX,-1

CE,NEXT,0,62116,UX,1,2116,UX,-1
CE,NEXT,0,62116,UY,1,2116,UY,-1
CE,NEXT,0,62116,UZ,1,2116,UZ,-1
CE,NEXT,0,62116,ROTX,1,2116,ROTX,-1

CE,NEXT,0,60008,UX,1,8,UX,-1
CE,NEXT,0,60008,UY,1,8,UY,-1
CE,NEXT,0,60008,UZ,1,8,UZ,-1
CE,NEXT,0,60008,ROTX,1,8,ROTX,-1

CE,NEXT,0,70019,UX,1,19,UX,-1
CE,NEXT,0,70019,UY,1,19,UY,-1
CE,NEXT,0,70019,UZ,1,19,UZ,-1
CE,NEXT,0,70019,ROTX,1,19,ROTX,-1

CE,NEXT,0,75118,UX,1,5118,UX,-1
```

```
CE,NEXT,0,75118,UY,1,5118,UY,-1
CE,NEXT,0,75118,UZ,1,5118,UZ,-1
CE,NEXT,0,75118,ROTX,1,5118,ROTX,-1

CE,NEXT,0,60174,UX,1,174,UX,-1
CE,NEXT,0,60174,UY,1,174,UY,-1
CE,NEXT,0,60174,UZ,1,174,UZ,-1
CE,NEXT,0,60174,ROTZ,1,174,ROTZ,-1

CE,NEXT,0,67109,UX,1,7109,UX,-1
CE,NEXT,0,67109,UY,1,7109,UY,-1
CE,NEXT,0,67109,UZ,1,7109,UZ,-1
CE,NEXT,0,67109,ROTX,1,7109,ROTX,-1

CE,NEXT,0,66109,UX,1,6109,UX,-1
CE,NEXT,0,66109,UY,1,6109,UY,-1
CE,NEXT,0,66109,UZ,1,6109,UZ,-1
CE,NEXT,0,66109,ROTX,1,6109,ROTX,-1

CE,NEXT,0,65109,UX,1,5109,UX,-1
CE,NEXT,0,65109,UY,1,5109,UY,-1
CE,NEXT,0,65109,UZ,1,5109,UZ,-1
CE,NEXT,0,65109,ROTX,1,5109,ROTX,-1

CE,NEXT,0,63109,UX,1,3109,UX,-1
CE,NEXT,0,63109,UY,1,3109,UY,-1
CE,NEXT,0,63109,UZ,1,3109,UZ,-1
CE,NEXT,0,63109,ROTX,1,3109,ROTX,-1

CE,NEXT,0,62109,UX,1,2109,UX,-1
CE,NEXT,0,62109,UY,1,2109,UY,-1
CE,NEXT,0,62109,UZ,1,2109,UZ,-1
CE,NEXT,0,62109,ROTX,1,2109,ROTX,-1

CE,NEXT,0,61109,UX,1,1109,UX,-1
CE,NEXT,0,61109,UY,1,1109,UY,-1
CE,NEXT,0,61109,UZ,1,1109,UZ,-1
CE,NEXT,0,61109,ROTX,1,1109,ROTX,-1

CE,NEXT,0,68120,UX,1,8120,UX,-1
CE,NEXT,0,68120,UY,1,8120,UY,-1
CE,NEXT,0,68120,UZ,1,8120,UZ,-1
CE,NEXT,0,68120,ROTX,1,8120,ROTX,-1

CE,NEXT,0,65120,UX,1,5120,UX,-1
CE,NEXT,0,65120,UY,1,5120,UY,-1
CE,NEXT,0,65120,UZ,1,5120,UZ,-1
CE,NEXT,0,65120,ROTX,1,5120,ROTX,-1

CE,NEXT,0,63120,UX,1,3120,UX,-1
CE,NEXT,0,63120,UY,1,3120,UY,-1
CE,NEXT,0,63120,UZ,1,3120,UZ,-1
CE,NEXT,0,63120,ROTX,1,3120,ROTX,-1

CE,NEXT,0,62120,UX,1,2120,UX,-1
CE,NEXT,0,62120,UY,1,2120,UY,-1
CE,NEXT,0,62120,UZ,1,2120,UZ,-1
CE,NEXT,0,62120,ROTX,1,2120,ROTX,-1

CE,NEXT,0,61120,UX,1,1120,UX,-1
CE,NEXT,0,61120,UY,1,1120,UY,-1
CE,NEXT,0,61120,UZ,1,1120,UZ,-1
CE,NEXT,0,61120,ROTX,1,1120,ROTX,-1

!,ELEMENT,TYPE,,,,3,,

CE,NEXT,0,60112,UX,1,112,UX,-1
CE,NEXT,0,60112,UY,1,112,UY,-1
CE,NEXT,0,60112,UZ,1,112,UZ,-1
CE,NEXT,0,60112,ROTX,1,112,ROTX,-1
CE,NEXT,0,60112,ROTZ,1,112,ROTZ,-1

CE,NEXT,0,60118,UX,1,118,UX,-1
CE,NEXT,0,60118,UY,1,118,UY,-1
CE,NEXT,0,60118,UZ,1,118,UZ,-1
```

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CE,NEXT,0,60118,ROTX,1,118,ROTX,-1
CE,NEXT,0,60118,ROTZ,1,118,ROTZ,-1

CE,NEXT,0,61112,UX,1,1112,UX,-1
CE,NEXT,0,61112,UY,1,1112,UY,-1
CE,NEXT,0,61112,UZ,1,1112,UZ,-1
CE,NEXT,0,61112,ROTX,1,1112,ROTX,-1
CE,NEXT,0,61112,ROTZ,1,1112,ROTZ,-1

CE,NEXT,0,61118,UX,1,1118,UX,-1
CE,NEXT,0,61118,UY,1,1118,UY,-1
CE,NEXT,0,61118,UZ,1,1118,UZ,-1
CE,NEXT,0,61118,ROTX,1,1118,ROTX,-1
CE,NEXT,0,61118,ROTZ,1,1118,ROTZ,-1

CE,NEXT,0,62112,UX,1,2112,UX,-1
CE,NEXT,0,62112,UY,1,2112,UY,-1
CE,NEXT,0,62112,UZ,1,2112,UZ,-1
CE,NEXT,0,62112,ROTX,1,2112,ROTX,-1
CE,NEXT,0,62112,ROTZ,1,2112,ROTZ,-1

CE,NEXT,0,62118,UX,1,2118,UX,-1
CE,NEXT,0,62118,UY,1,2118,UY,-1
CE,NEXT,0,62118,UZ,1,2118,UZ,-1
CE,NEXT,0,62118,ROTX,1,2118,ROTX,-1
CE,NEXT,0,62118,ROTZ,1,2118,ROTZ,-1

CE,NEXT,0,63112,UX,1,3112,UX,-1
CE,NEXT,0,63112,UY,1,3112,UY,-1
CE,NEXT,0,63112,UZ,1,3112,UZ,-1
CE,NEXT,0,63112,ROTX,1,3112,ROTX,-1
CE,NEXT,0,63112,ROTZ,1,3112,ROTZ,-1

CE,NEXT,0,63118,UX,1,3118,UX,-1
CE,NEXT,0,63118,UY,1,3118,UY,-1
CE,NEXT,0,63118,UZ,1,3118,UZ,-1
CE,NEXT,0,63118,ROTX,1,3118,ROTX,-1
CE,NEXT,0,63118,ROTZ,1,3118,ROTZ,-1

CE,NEXT,0,64118,UX,1,4118,UX,-1
CE,NEXT,0,64118,UY,1,4118,UY,-1
CE,NEXT,0,64118,UZ,1,4118,UZ,-1
CE,NEXT,0,64118,ROTX,1,4118,ROTX,-1
CE,NEXT,0,64118,ROTZ,1,4118,ROTZ,-1

CE,NEXT,0,65118,UX,1,5118,UX,-1
CE,NEXT,0,65118,UY,1,5118,UY,-1
CE,NEXT,0,65118,UZ,1,5118,UZ,-1
CE,NEXT,0,65118,ROTX,1,5118,ROTX,-1
CE,NEXT,0,65118,ROTZ,1,5118,ROTZ,-1

CE,NEXT,0,67118,UX,1,7118,UX,-1
CE,NEXT,0,67118,UY,1,7118,UY,-1
CE,NEXT,0,67118,UZ,1,7118,UZ,-1
CE,NEXT,0,67118,ROTX,1,7118,ROTX,-1
CE,NEXT,0,67118,ROTZ,1,7118,ROTZ,-1

CE,NEXT,0,68118,UX,1,8118,UX,-1
CE,NEXT,0,68118,UY,1,8118,UY,-1
CE,NEXT,0,68118,UZ,1,8118,UZ,-1
CE,NEXT,0,68118,ROTX,1,8118,ROTX,-1
CE,NEXT,0,68118,ROTZ,1,8118,ROTZ,-1

!,ELEMENT,TYPE,,,,7,,

CE,NEXT,0,90002,UX,1,2,UX,-1
CE,NEXT,0,90002,UY,1,2,UY,-1
CE,NEXT,0,90002,UZ,1,2,UZ,-1
CE,NEXT,0,90002,ROTZ,1,2,ROTZ,-1

CE,NEXT,0,60033,UX,1,33,UX,-1
CE,NEXT,0,60033,UY,1,33,UY,-1
CE,NEXT,0,60033,UZ,1,33,UZ,-1
CE,NEXT,0,60033,ROTZ,1,33,ROTZ,-1
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CE,NEXT,0,70008,UX,1,8,UX,-1
CE,NEXT,0,70008,UY,1,8,UY,-1
CE,NEXT,0,70008,UZ,1,8,UZ,-1
CE,NEXT,0,70008,ROTZ,1,8,ROTZ,-1

CE,NEXT,0,70031,UX,1,31,UX,-1
CE,NEXT,0,70031,UY,1,31,UY,-1
CE,NEXT,0,70031,UZ,1,31,UZ,-1

CE,NEXT,0,70033,UX,1,33,UX,-1
CE,NEXT,0,70033,UY,1,33,UY,-1
CE,NEXT,0,70033,UZ,1,33,UZ,-1

CE,NEXT,0,60145,UX,1,145,UX,-1
CE,NEXT,0,60145,UY,1,145,UY,-1
CE,NEXT,0,60145,UZ,1,145,UZ,-1
CE,NEXT,0,60145,ROTY,1,145,ROTY,-1

CE,NEXT,0,60132,UX,1,132,UX,-1
CE,NEXT,0,60132,UY,1,132,UY,-1
CE,NEXT,0,60132,UZ,1,132,UZ,-1
CE,NEXT,0,60132,ROTZ,1,132,ROTZ,-1

CE,NEXT,0,60141,UX,1,141,UX,-1
CE,NEXT,0,60141,UY,1,141,UY,-1
CE,NEXT,0,60141,UZ,1,141,UZ,-1
CE,NEXT,0,60141,ROTZ,1,141,ROTZ,-1

CE,NEXT,0,61113,UX,1,1113,UX,-1
CE,NEXT,0,61113,UY,1,1113,UY,-1
CE,NEXT,0,61113,UZ,1,1113,UZ,-1
CE,NEXT,0,61113,ROTX,1,1113,ROTX,-1

CE,NEXT,0,61145,UX,1,1145,UX,-1
CE,NEXT,0,61145,UY,1,1145,UY,-1
CE,NEXT,0,61145,UZ,1,1145,UZ,-1
CE,NEXT,0,61145,ROTY,1,1145,ROTY,-1

CE,NEXT,0,62145,UX,1,2145,UX,-1
CE,NEXT,0,62145,UY,1,2145,UY,-1
CE,NEXT,0,62145,UZ,1,2145,UZ,-1
CE,NEXT,0,62145,ROTY,1,2145,ROTY,-1

CE,NEXT,0,63121,UX,1,3121,UX,-1
CE,NEXT,0,63121,UY,1,3121,UY,-1
CE,NEXT,0,63121,UZ,1,3121,UZ,-1
CE,NEXT,0,63121,ROTY,1,3121,ROTY,-1

CE,NEXT,0,63145,UX,1,3145,UX,-1
CE,NEXT,0,63145,UY,1,3145,UY,-1
CE,NEXT,0,63145,UZ,1,3145,UZ,-1
CE,NEXT,0,63145,ROTY,1,3145,ROTY,-1

CE,NEXT,0,63164,UX,1,3164,UX,-1
CE,NEXT,0,63164,UY,1,3164,UY,-1
CE,NEXT,0,63164,UZ,1,3164,UZ,-1
CE,NEXT,0,63164,ROTZ,1,3164,ROTZ,-1

CE,NEXT,0,65102,UX,1,5102,UX,-1
CE,NEXT,0,65102,UY,1,5102,UY,-1
CE,NEXT,0,65102,UZ,1,5102,UZ,-1
CE,NEXT,0,65102,ROTZ,1,5102,ROTZ,-1

CE,NEXT,0,66107,UX,1,6107,UX,-1
CE,NEXT,0,66107,UY,1,6107,UY,-1
CE,NEXT,0,66107,UZ,1,6107,UZ,-1
CE,NEXT,0,66107,ROTZ,1,6107,ROTZ,-1

CE,NEXT,0,70102,UX,1,102,UX,-1
CE,NEXT,0,70102,UY,1,102,UY,-1
CE,NEXT,0,70102,UZ,1,102,UZ,-1
CE,NEXT,0,70102,ROTX,1,102,ROTX,-1

CE,NEXT,0,70112,UX,1,112,UX,-1
CE,NEXT,0,70112,UY,1,112,UY,-1
```

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CE,NEXT,0,70112,UZ,1,112,UZ,-1
CE,NEXT,0,70112,ROTX,1,112,ROTX,-1

CE,NEXT,0,63143,UX,1,3143,UX,-1
CE,NEXT,0,63143,UY,1,3143,UY,-1
CE,NEXT,0,63143,UZ,1,3143,UZ,-1
CE,NEXT,0,63143,ROTX,1,3143,ROTX,-1

CE,NEXT,0,64102,UX,1,4102,UX,-1
CE,NEXT,0,64102,UY,1,4102,UY,-1
CE,NEXT,0,64102,UZ,1,4102,UZ,-1
CE,NEXT,0,64102,ROTX,1,4102,ROTX,-1

CE,NEXT,0,64112,UX,1,4112,UX,-1
CE,NEXT,0,64112,UY,1,4112,UY,-1
CE,NEXT,0,64112,UZ,1,4112,UZ,-1
CE,NEXT,0,64112,ROTX,1,4112,ROTX,-1

CE,NEXT,0,65122,UX,1,5122,UX,-1
CE,NEXT,0,65122,UY,1,5122,UY,-1
CE,NEXT,0,65122,UZ,1,5122,UZ,-1
CE,NEXT,0,65122,ROTX,1,5122,ROTX,-1

CE,NEXT,0,65113,UX,1,5113,UX,-1
CE,NEXT,0,65113,UY,1,5113,UY,-1
CE,NEXT,0,65113,UZ,1,5113,UZ,-1
CE,NEXT,0,65113,ROTX,1,5113,ROTX,-1

CE,NEXT,0,83102,UX,1,3102,UX,-1
CE,NEXT,0,83102,UY,1,3102,UY,-1
CE,NEXT,0,83102,UZ,1,3102,UZ,-1
CE,NEXT,0,83102,ROTX,1,3102,ROTX,-1

CE,NEXT,0,63148,UX,1,3148,UX,-1
CE,NEXT,0,63148,UY,1,3148,UY,-1
CE,NEXT,0,63148,UZ,1,3148,UZ,-1
CE,NEXT,0,63148,ROTX,1,3148,ROTX,-1

CE,NEXT,0,68152,UX,1,8152,UX,-1
CE,NEXT,0,68152,UY,1,8152,UY,-1
CE,NEXT,0,68152,UZ,1,8152,UZ,-1
CE,NEXT,0,68152,ROTY,1,8152,ROTY,-1

CE,NEXT,0,63116,UX,1,3116,UX,-1
CE,NEXT,0,63116,UY,1,3116,UY,-1
CE,NEXT,0,63116,UZ,1,3116,UZ,-1
CE,NEXT,0,63116,ROTX,1,3116,ROTX,-1

CE,NEXT,0,77118,UX,1,7118,UX,-1
CE,NEXT,0,77118,UY,1,7118,UY,-1
CE,NEXT,0,77118,UZ,1,7118,UZ,-1
CE,NEXT,0,77118,ROTX,1,7118,ROTX,-1

CE,NEXT,0,70107,UX,1,107,UX,-1
CE,NEXT,0,70107,UY,1,107,UY,-1
CE,NEXT,0,70107,UZ,1,107,UZ,-1
CE,NEXT,0,70107,ROTX,1,107,ROTX,-1

CE,NEXT,0,70118,UX,1,118,UX,-1
CE,NEXT,0,70118,UY,1,118,UY,-1
CE,NEXT,0,70118,UZ,1,118,UZ,-1
CE,NEXT,0,70118,ROTX,1,118,ROTX,-1

CE,NEXT,0,60182,UX,1,182,UX,-1
CE,NEXT,0,60182,UY,1,182,UY,-1
CE,NEXT,0,60182,UZ,1,182,UZ,-1
CE,NEXT,0,60182,ROTZ,1,182,ROTZ,-1

CE,NEXT,0,76109,UX,1,6109,UX,-1
CE,NEXT,0,76109,UY,1,6109,UY,-1
CE,NEXT,0,76109,UZ,1,6109,UZ,-1
CE,NEXT,0,76109,ROTX,1,6109,ROTX,-1

CE,NEXT,0,75109,UX,1,5109,UX,-1
CE,NEXT,0,75109,UY,1,5109,UY,-1
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CE,NEXT,0,75109,UZ,1,5109,UZ,-1
CE,NEXT,0,75109,ROTX,1,5109,ROTX,-1

CE,NEXT,0,64109,UX,1,4109,UX,-1
CE,NEXT,0,64109,UY,1,4109,UY,-1
CE,NEXT,0,64109,UZ,1,4109,UZ,-1
CE,NEXT,0,64109,ROTX,1,4109,ROTX,-1

CE,NEXT,0,72109,UX,1,2109,UX,-1
CE,NEXT,0,72109,UY,1,2109,UY,-1
CE,NEXT,0,72109,UZ,1,2109,UZ,-1
CE,NEXT,0,72109,ROTX,1,2109,ROTX,-1

CE,NEXT,0,71109,UX,1,1109,UX,-1
CE,NEXT,0,71109,UY,1,1109,UY,-1
CE,NEXT,0,71109,UZ,1,1109,UZ,-1
CE,NEXT,0,71109,ROTX,1,1109,ROTX,-1

CE,NEXT,0,60010,UX,1,10,UX,-1
CE,NEXT,0,60010,UY,1,10,UY,-1
CE,NEXT,0,60010,UZ,1,10,UZ,-1
CE,NEXT,0,60010,ROTX,1,10,ROTX,-1

CE,NEXT,0,75120,UX,1,5120,UX,-1
CE,NEXT,0,75120,UY,1,5120,UY,-1
CE,NEXT,0,75120,UZ,1,5120,UZ,-1
CE,NEXT,0,75120,ROTX,1,5120,ROTX,-1

CE,NEXT,0,64120,UX,1,4120,UX,-1
CE,NEXT,0,64120,UY,1,4120,UY,-1
CE,NEXT,0,64120,UZ,1,4120,UZ,-1
CE,NEXT,0,64120,ROTX,1,4120,ROTX,-1

CE,NEXT,0,72120,UX,1,2120,UX,-1
CE,NEXT,0,72120,UY,1,2120,UY,-1
CE,NEXT,0,72120,UZ,1,2120,UZ,-1
CE,NEXT,0,72120,ROTX,1,2120,ROTX,-1

CE,NEXT,0,71120,UX,1,1120,UX,-1
CE,NEXT,0,71120,UY,1,1120,UY,-1
CE,NEXT,0,71120,UZ,1,1120,UZ,-1
CE,NEXT,0,71120,ROTX,1,1120,ROTX,-1

CE,NEXT,0,60021,UX,1,21,UX,-1
CE,NEXT,0,60021,UY,1,21,UY,-1
CE,NEXT,0,60021,UZ,1,21,UZ,-1
CE,NEXT,0,60021,ROTX,1,21,ROTX,-1

!,ELEMENT,TYPE,,,,8,,

CE,NEXT,0,60102,UX,1,102,UX,-1
CE,NEXT,0,60102,UY,1,102,UY,-1
CE,NEXT,0,60102,UZ,1,102,UZ,-1
CE,NEXT,0,60102,ROTX,1,102,ROTX,-1
CE,NEXT,0,60102,ROTZ,1,102,ROTZ,-1

CE,NEXT,0,60107,UX,1,107,UX,-1
CE,NEXT,0,60107,UY,1,107,UY,-1
CE,NEXT,0,60107,UZ,1,107,UZ,-1
CE,NEXT,0,60107,ROTX,1,107,ROTX,-1
CE,NEXT,0,60107,ROTZ,1,107,ROTZ,-1

CE,NEXT,0,61102,UX,1,1102,UX,-1
CE,NEXT,0,61102,UY,1,1102,UY,-1
CE,NEXT,0,61102,UZ,1,1102,UZ,-1
CE,NEXT,0,61102,ROTX,1,1102,ROTX,-1
CE,NEXT,0,61102,ROTZ,1,1102,ROTZ,-1

CE,NEXT,0,61107,UX,1,1107,UX,-1
CE,NEXT,0,61107,UY,1,1107,UY,-1
CE,NEXT,0,61107,UZ,1,1107,UZ,-1
CE,NEXT,0,61107,ROTX,1,1107,ROTX,-1
CE,NEXT,0,61107,ROTZ,1,1107,ROTZ,-1

CE,NEXT,0,62102,UX,1,2102,UX,-1
```

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CE,NEXT,0,62102,UY,1,2102,UY,-1
CE,NEXT,0,62102,UZ,1,2102,UZ,-1
CE,NEXT,0,62102,ROTX,1,2102,ROTX,-1
CE,NEXT,0,62102,ROTZ,1,2102,ROTZ,-1

CE,NEXT,0,62107,UX,1,2107,UX,-1
CE,NEXT,0,62107,UY,1,2107,UY,-1
CE,NEXT,0,62107,UZ,1,2107,UZ,-1
CE,NEXT,0,62107,ROTX,1,2107,ROTX,-1
CE,NEXT,0,62107,ROTZ,1,2107,ROTZ,-1

CE,NEXT,0,63102,UX,1,3102,UX,-1
CE,NEXT,0,63102,UY,1,3102,UY,-1
CE,NEXT,0,63102,UZ,1,3102,UZ,-1
CE,NEXT,0,63102,ROTX,1,3102,ROTX,-1
CE,NEXT,0,63102,ROTZ,1,3102,ROTZ,-1

CE,NEXT,0,63107,UX,1,3107,UX,-1
CE,NEXT,0,63107,UY,1,3107,UY,-1
CE,NEXT,0,63107,UZ,1,3107,UZ,-1
CE,NEXT,0,63107,ROTX,1,3107,ROTX,-1
CE,NEXT,0,63107,ROTZ,1,3107,ROTZ,-1

CE,NEXT,0,64107,UX,1,4107,UX,-1
CE,NEXT,0,64107,UY,1,4107,UY,-1
CE,NEXT,0,64107,UZ,1,4107,UZ,-1
CE,NEXT,0,64107,ROTX,1,4107,ROTX,-1
CE,NEXT,0,64107,ROTZ,1,4107,ROTZ,-1

CE,NEXT,0,65107,UX,1,5107,UX,-1
CE,NEXT,0,65107,UY,1,5107,UY,-1
CE,NEXT,0,65107,UZ,1,5107,UZ,-1
CE,NEXT,0,65107,ROTX,1,5107,ROTX,-1
CE,NEXT,0,65107,ROTZ,1,5107,ROTZ,-1

CE,NEXT,0,64100,UX,1,4100,UX,-1
CE,NEXT,0,64100,UY,1,4100,UY,-1
CE,NEXT,0,64100,UZ,1,4100,UZ,-1
CE,NEXT,0,64100,ROTX,1,4100,ROTX,-1
CE,NEXT,0,64100,ROTY,1,4100,ROTY,-1

CE,NEXT,0,67107,UX,1,7107,UX,-1
CE,NEXT,0,67107,UY,1,7107,UY,-1
CE,NEXT,0,67107,UZ,1,7107,UZ,-1
CE,NEXT,0,67107,ROTX,1,7107,ROTX,-1
CE,NEXT,0,67107,ROTZ,1,7107,ROTZ,-1

CE,NEXT,0,68107,UX,1,8107,UX,-1
CE,NEXT,0,68107,UY,1,8107,UY,-1
CE,NEXT,0,68107,UZ,1,8107,UZ,-1
CE,NEXT,0,68107,ROTX,1,8107,ROTX,-1
CE,NEXT,0,68107,ROTZ,1,8107,ROTZ,-1

!,ELEMENT,TYPE,,,,16,,

CE,NEXT,0,74100,UX,1,4100,UX,-1
CE,NEXT,0,74100,UY,1,4100,UY,-1
CE,NEXT,0,74100,UZ,1,4100,UZ,-1
CE,NEXT,0,74100,ROTX,1,4100,ROTX,-1
CE,NEXT,0,74100,ROTY,1,4100,ROTY,-1

CE,NEXT,0,75100,UX,1,5100,UX,-1
CE,NEXT,0,75100,UY,1,5100,UY,-1
CE,NEXT,0,75100,UZ,1,5100,UZ,-1
CE,NEXT,0,75100,ROTX,1,5100,ROTX,-1

!,ELEMENT,TYPE,,,,9,,


CE,NEXT,0,60014,UX,1,14,UX,-1
CE,NEXT,0,60014,UY,1,14,UY,-1
CE,NEXT,0,60014,UZ,1,14,UZ,-1
CE,NEXT,0,60014,ROTZ,1,14,ROTZ,-1

CE,NEXT,0,80034,UX,1,34,UX,-1
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CE,NEXT,0,80034,UY,1,34,UY,-1
CE,NEXT,0,80034,UZ,1,34,UZ,-1
CE,NEXT,0,80034,ROTZ,1,34,ROTZ,-1

CE,NEXT,0,90034,UX,1,34,UX,-1
CE,NEXT,0,90034,UY,1,34,UY,-1
CE,NEXT,0,90034,UZ,1,34,UZ,-1
CE,NEXT,0,90034,ROTZ,1,34,ROTZ,-1

CE,NEXT,0,60003,UX,1,3,UX,-1
CE,NEXT,0,60003,UY,1,3,UY,-1
CE,NEXT,0,60003,UZ,1,3,UZ,-1
CE,NEXT,0,60003,ROTZ,1,3,ROTZ,-1

CE,NEXT,0,80019,UX,1,19,UX,-1
CE,NEXT,0,80019,UY,1,19,UY,-1
CE,NEXT,0,80019,UZ,1,19,UZ,-1

CE,NEXT,0,100034,UX,1,34,UX,-1
CE,NEXT,0,100034,UY,1,34,UY,-1
CE,NEXT,0,100034,UZ,1,34,UZ,-1

CE,NEXT,0,80008,UX,1,8,UX,-1
CE,NEXT,0,80008,UY,1,8,UY,-1
CE,NEXT,0,80008,UZ,1,8,UZ,-1

CE,NEXT,0,110034,UX,1,34,UX,-1
CE,NEXT,0,110034,UY,1,34,UY,-1
CE,NEXT,0,110034,UZ,1,34,UZ,-1

CE,NEXT,0,91107,UX,1,1107,UX,-1
CE,NEXT,0,91107,UY,1,1107,UY,-1
CE,NEXT,0,91107,UZ,1,1107,UZ,-1

CE,NEXT,0,80105,UX,1,105,UX,-1
CE,NEXT,0,80105,UY,1,105,UY,-1
CE,NEXT,0,80105,UZ,1,105,UZ,-1

CE,NEXT,0,61103,UX,1,1103,UX,-1
CE,NEXT,0,61103,UY,1,1103,UY,-1
CE,NEXT,0,61103,UZ,1,1103,UZ,-1

CE,NEXT,0,90102,UX,1,102,UX,-1
CE,NEXT,0,90102,UY,1,102,UY,-1
CE,NEXT,0,90102,UZ,1,102,UZ,-1

CE,NEXT,0,91102,UX,1,1102,UX,-1
CE,NEXT,0,91102,UY,1,1102,UY,-1
CE,NEXT,0,91102,UZ,1,1102,UZ,-1

CE,NEXT,0,60101,UX,1,101,UX,-1
CE,NEXT,0,60101,UY,1,101,UY,-1
CE,NEXT,0,60101,UZ,1,101,UZ,-1

CE,NEXT,0,91118,UX,1,1118,UX,-1
CE,NEXT,0,91118,UY,1,1118,UY,-1
CE,NEXT,0,91118,UZ,1,1118,UZ,-1

CE,NEXT,0,80116,UX,1,116,UX,-1
CE,NEXT,0,80116,UY,1,116,UY,-1
CE,NEXT,0,80116,UZ,1,116,UZ,-1

CE,NEXT,0,61114,UX,1,1114,UX,-1
CE,NEXT,0,61114,UY,1,1114,UY,-1
CE,NEXT,0,61114,UZ,1,1114,UZ,-1

CE,NEXT,0,70113,UX,1,113,UX,-1
CE,NEXT,0,70113,UY,1,113,UY,-1
CE,NEXT,0,70113,UZ,1,113,UZ,-1

CE,NEXT,0,90112,UX,1,112,UX,-1
CE,NEXT,0,90112,UY,1,112,UY,-1
CE,NEXT,0,90112,UZ,1,112,UZ,-1

CE,NEXT,0,60183,UX,1,183,UX,-1
```

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CE,NEXT,0,60183,UY,1,183,UY,-1
CE,NEXT,0,60183,UZ,1,183,UZ,-1

CE,NEXT,0,91112,UX,1,1112,UX,-1
CE,NEXT,0,91112,UY,1,1112,UY,-1
CE,NEXT,0,91112,UZ,1,1112,UZ,-1

CE,NEXT,0,70183,UX,1,183,UX,-1
CE,NEXT,0,70183,UY,1,183,UY,-1
CE,NEXT,0,70183,UZ,1,183,UZ,-1

CE,NEXT,0,95107,UX,1,5107,UX,-1
CE,NEXT,0,95107,UY,1,5107,UY,-1
CE,NEXT,0,95107,UZ,1,5107,UZ,-1

CE,NEXT,0,84105,UX,1,4105,UX,-1
CE,NEXT,0,84105,UY,1,4105,UY,-1
CE,NEXT,0,84105,UZ,1,4105,UZ,-1

CE,NEXT,0,65103,UX,1,5103,UX,-1
CE,NEXT,0,65103,UY,1,5103,UY,-1
CE,NEXT,0,65103,UZ,1,5103,UZ,-1

CE,NEXT,0,84102,UX,1,4102,UX,-1
CE,NEXT,0,84102,UY,1,4102,UY,-1
CE,NEXT,0,84102,UZ,1,4102,UZ,-1

CE,NEXT,0,65100,UX,1,5100,UX,-1
CE,NEXT,0,65100,UY,1,5100,UY,-1
CE,NEXT,0,65100,UZ,1,5100,UZ,-1

CE,NEXT,0,64101,UX,1,4101,UX,-1
CE,NEXT,0,64101,UY,1,4101,UY,-1
CE,NEXT,0,64101,UZ,1,4101,UZ,-1

CE,NEXT,0,94118,UX,1,4118,UX,-1
CE,NEXT,0,94118,UY,1,4118,UY,-1
CE,NEXT,0,94118,UZ,1,4118,UZ,-1

CE,NEXT,0,84156,UX,1,4156,UX,-1
CE,NEXT,0,84156,UY,1,4156,UY,-1
CE,NEXT,0,84156,UZ,1,4156,UZ,-1

CE,NEXT,0,64156,UX,1,4156,UX,-1
CE,NEXT,0,64156,UY,1,4156,UY,-1
CE,NEXT,0,64156,UZ,1,4156,UZ,-1

CE,NEXT,0,75116,UX,1,5116,UX,-1
CE,NEXT,0,75116,UY,1,5116,UY,-1
CE,NEXT,0,75116,UZ,1,5116,UZ,-1

CE,NEXT,0,84116,UX,1,4116,UX,-1
CE,NEXT,0,84116,UY,1,4116,UY,-1
CE,NEXT,0,84116,UZ,1,4116,UZ,-1

CE,NEXT,0,94156,UX,1,4156,UX,-1
CE,NEXT,0,94156,UY,1,4156,UY,-1
CE,NEXT,0,94156,UZ,1,4156,UZ,-1

CE,NEXT,0,74156,UX,1,4156,UX,-1
CE,NEXT,0,74156,UY,1,4156,UY,-1
CE,NEXT,0,74156,UZ,1,4156,UZ,-1

CE,NEXT,0,95118,UX,1,5118,UX,-1
CE,NEXT,0,95118,UY,1,5118,UY,-1
CE,NEXT,0,95118,UZ,1,5118,UZ,-1

CE,NEXT,0,65114,UX,1,5114,UX,-1
CE,NEXT,0,65114,UY,1,5114,UY,-1
CE,NEXT,0,65114,UZ,1,5114,UZ,-1

CE,NEXT,0,84113,UX,1,4113,UX,-1
CE,NEXT,0,84113,UY,1,4113,UY,-1
CE,NEXT,0,84113,UZ,1,4113,UZ,-1
```

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CE,NEXT,0,84112,UX,1,4112,UX,-1
CE,NEXT,0,84112,UY,1,4112,UY,-1
CE,NEXT,0,84112,UZ,1,4112,UZ,-1

CE,NEXT,0,65123,UX,1,5123,UX,-1
CE,NEXT,0,65123,UY,1,5123,UY,-1
CE,NEXT,0,65123,UZ,1,5123,UZ,-1

CE,NEXT,0,75123,UX,1,5123,UX,-1
CE,NEXT,0,75123,UY,1,5123,UY,-1
CE,NEXT,0,75123,UZ,1,5123,UZ,-1

CE,NEXT,0,95112,UX,1,5112,UX,-1
CE,NEXT,0,95112,UY,1,5112,UY,-1
CE,NEXT,0,95112,UZ,1,5112,UZ,-1

CE,NEXT,0,85112,UX,1,5112,UX,-1
CE,NEXT,0,85112,UY,1,5112,UY,-1
CE,NEXT,0,85112,UZ,1,5112,UZ,-1

CE,NEXT,0,64111,UX,1,4111,UX,-1
CE,NEXT,0,64111,UY,1,4111,UY,-1
CE,NEXT,0,64111,UZ,1,4111,UZ,-1

CE,NEXT,0,88118,UX,1,8118,UX,-1
CE,NEXT,0,88118,UY,1,8118,UY,-1
CE,NEXT,0,88118,UZ,1,8118,UZ,-1

CE,NEXT,0,87122,UX,1,7122,UX,-1
CE,NEXT,0,87122,UY,1,7122,UY,-1
CE,NEXT,0,87122,UZ,1,7122,UZ,-1

CE,NEXT,0,281660,UX,1,81660,UX,-1
CE,NEXT,0,281660,UY,1,81660,UY,-1
CE,NEXT,0,281660,UZ,1,81660,UZ,-1

CE,NEXT,0,77116,UX,1,7116,UX,-1
CE,NEXT,0,77116,UY,1,7116,UY,-1
CE,NEXT,0,77116,UZ,1,7116,UZ,-1

CE,NEXT,0,150037,UX,1,50037,UX,-1
CE,NEXT,0,150037,UY,1,50037,UY,-1
CE,NEXT,0,150037,UZ,1,50037,UZ,-1

CE,NEXT,0,150174,UX,1,50174,UX,-1
CE,NEXT,0,150174,UY,1,50174,UY,-1
CE,NEXT,0,150174,UZ,1,50174,UZ,-1

CE,NEXT,0,250037,UX,1,50037,UX,-1
CE,NEXT,0,250037,UY,1,50037,UY,-1
CE,NEXT,0,250037,UZ,1,50037,UZ,-1

CE,NEXT,0,150179,UX,1,50179,UX,-1
CE,NEXT,0,150179,UY,1,50179,UY,-1
CE,NEXT,0,150179,UZ,1,50179,UZ,-1

CE,NEXT,0,150039,UX,1,50039,UX,-1
CE,NEXT,0,150039,UY,1,50039,UY,-1
CE,NEXT,0,150039,UZ,1,50039,UZ,-1

CE,NEXT,0,150177,UX,1,50177,UX,-1
CE,NEXT,0,150177,UY,1,50177,UY,-1
CE,NEXT,0,150177,UZ,1,50177,UZ,-1

CE,NEXT,0,250039,UX,1,50039,UX,-1
CE,NEXT,0,250039,UY,1,50039,UY,-1
CE,NEXT,0,250039,UZ,1,50039,UZ,-1

CE,NEXT,0,250182,UX,1,50182,UX,-1
CE,NEXT,0,250182,UY,1,50182,UY,-1
CE,NEXT,0,250182,UZ,1,50182,UZ,-1

CE,NEXT,0,150182,UX,1,50182,UX,-1
CE,NEXT,0,150182,UY,1,50182,UY,-1
CE,NEXT,0,150182,UZ,1,50182,UZ,-1
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CE,NEXT,0,250153,UX,1,50153,UX,-1
CE,NEXT,0,250153,UY,1,50153,UY,-1
CE,NEXT,0,250153,UZ,1,50153,UZ,-1

CE,NEXT,0,150153,UX,1,50153,UX,-1
CE,NEXT,0,150153,UY,1,50153,UY,-1
CE,NEXT,0,150153,UZ,1,50153,UZ,-1

CE,NEXT,0,251107,UX,1,51107,UX,-1
CE,NEXT,0,251107,UY,1,51107,UY,-1
CE,NEXT,0,251107,UZ,1,51107,UZ,-1

CE,NEXT,0,151107,UX,1,51107,UX,-1
CE,NEXT,0,151107,UY,1,51107,UY,-1
CE,NEXT,0,151107,UZ,1,51107,UZ,-1

CE,NEXT,0,252153,UX,1,52153,UX,-1
CE,NEXT,0,252153,UY,1,52153,UY,-1
CE,NEXT,0,252153,UZ,1,52153,UZ,-1

CE,NEXT,0,152153,UX,1,52153,UX,-1
CE,NEXT,0,152153,UY,1,52153,UY,-1
CE,NEXT,0,152153,UZ,1,52153,UZ,-1

CE,NEXT,0,253107,UX,1,53107,UX,-1
CE,NEXT,0,253107,UY,1,53107,UY,-1
CE,NEXT,0,253107,UZ,1,53107,UZ,-1

CE,NEXT,0,153107,UX,1,53107,UX,-1
CE,NEXT,0,153107,UY,1,53107,UY,-1
CE,NEXT,0,153107,UZ,1,53107,UZ,-1

CE,NEXT,0,254153,UX,1,54153,UX,-1
CE,NEXT,0,254153,UY,1,54153,UY,-1
CE,NEXT,0,254153,UZ,1,54153,UZ,-1

CE,NEXT,0,154153,UX,1,54153,UX,-1
CE,NEXT,0,154153,UY,1,54153,UY,-1
CE,NEXT,0,154153,UZ,1,54153,UZ,-1

CE,NEXT,0,255107,UX,1,55107,UX,-1
CE,NEXT,0,255107,UY,1,55107,UY,-1
CE,NEXT,0,255107,UZ,1,55107,UZ,-1

CE,NEXT,0,155107,UX,1,55107,UX,-1
CE,NEXT,0,155107,UY,1,55107,UY,-1
CE,NEXT,0,155107,UZ,1,55107,UZ,-1

CE,NEXT,0,256153,UX,1,56153,UX,-1
CE,NEXT,0,256153,UY,1,56153,UY,-1
CE,NEXT,0,256153,UZ,1,56153,UZ,-1

CE,NEXT,0,156153,UX,1,56153,UX,-1
CE,NEXT,0,156153,UY,1,56153,UY,-1
CE,NEXT,0,156153,UZ,1,56153,UZ,-1

CE,NEXT,0,257107,UX,1,57107,UX,-1
CE,NEXT,0,257107,UY,1,57107,UY,-1
CE,NEXT,0,257107,UZ,1,57107,UZ,-1

CE,NEXT,0,157107,UX,1,57107,UX,-1
CE,NEXT,0,157107,UY,1,57107,UY,-1
CE,NEXT,0,157107,UZ,1,57107,UZ,-1

CE,NEXT,0,158153,UX,1,58153,UX,-1
CE,NEXT,0,158153,UY,1,58153,UY,-1
CE,NEXT,0,158153,UZ,1,58153,UZ,-1

CE,NEXT,0,157151,UX,1,57151,UX,-1
CE,NEXT,0,157151,UY,1,57151,UY,-1
CE,NEXT,0,157151,UZ,1,57151,UZ,-1

CE,NEXT,0,258153,UX,1,58153,UX,-1
CE,NEXT,0,258153,UY,1,58153,UY,-1
```

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CE,NEXT,0,258153,UZ,1,58153,UZ,-1

CE,NEXT,0,157153,UX,1,57153,UX,-1
CE,NEXT,0,157153,UY,1,57153,UY,-1
CE,NEXT,0,157153,UZ,1,57153,UZ,-1

CE,NEXT,0,158151,UX,1,58151,UX,-1
CE,NEXT,0,158151,UY,1,58151,UY,-1
CE,NEXT,0,158151,UZ,1,58151,UZ,-1

CE,NEXT,0,157118,UX,1,57118,UX,-1
CE,NEXT,0,157118,UY,1,57118,UY,-1
CE,NEXT,0,157118,UZ,1,57118,UZ,-1

CE,NEXT,0,258151,UX,1,58151,UX,-1
CE,NEXT,0,258151,UY,1,58151,UY,-1
CE,NEXT,0,258151,UZ,1,58151,UZ,-1

CE,NEXT,0,100112,UX,1,112,UX,-1
CE,NEXT,0,100112,UY,1,112,UY,-1
CE,NEXT,0,100112,UZ,1,112,UZ,-1

CE,NEXT,0,94112,UX,1,4112,UX,-1
CE,NEXT,0,94112,UY,1,4112,UY,-1
CE,NEXT,0,94112,UZ,1,4112,UZ,-1

CE,NEXT,0,62124,UX,1,2124,UX,-1
CE,NEXT,0,62124,UY,1,2124,UY,-1
CE,NEXT,0,62124,UZ,1,2124,UZ,-1

CE,NEXT,0,62125,UX,1,2125,UX,-1
CE,NEXT,0,62125,UY,1,2125,UY,-1
CE,NEXT,0,62125,UZ,1,2125,UZ,-1

CE,NEXT,0,110112,UX,1,112,UX,-1
CE,NEXT,0,110112,UY,1,112,UY,-1
CE,NEXT,0,110112,UZ,1,112,UZ,-1

CE,NEXT,0,111145,UX,1,1145,UX,-1
CE,NEXT,0,111145,UY,1,1145,UY,-1
CE,NEXT,0,111145,UZ,1,1145,UZ,-1

CE,NEXT,0,91145,UX,1,1145,UX,-1
CE,NEXT,0,91145,UY,1,1145,UY,-1
CE,NEXT,0,91145,UZ,1,1145,UZ,-1

CE,NEXT,0,102102,UX,1,2102,UX,-1
CE,NEXT,0,102102,UY,1,2102,UY,-1
CE,NEXT,0,102102,UZ,1,2102,UZ,-1

CE,NEXT,0,100102,UX,1,102,UX,-1
CE,NEXT,0,100102,UY,1,102,UY,-1
CE,NEXT,0,100102,UZ,1,102,UZ,-1

CE,NEXT,0,121145,UX,1,1145,UX,-1
CE,NEXT,0,121145,UY,1,1145,UY,-1
CE,NEXT,0,121145,UZ,1,1145,UZ,-1

CE,NEXT,0,101145,UX,1,1145,UX,-1
CE,NEXT,0,101145,UY,1,1145,UY,-1
CE,NEXT,0,101145,UZ,1,1145,UZ,-1

CE,NEXT,0,102112,UX,1,2112,UX,-1
CE,NEXT,0,102112,UY,1,2112,UY,-1
CE,NEXT,0,102112,UZ,1,2112,UZ,-1

CE,NEXT,0,92112,UX,1,2112,UX,-1
CE,NEXT,0,92112,UY,1,2112,UY,-1
CE,NEXT,0,92112,UZ,1,2112,UZ,-1

CE,NEXT,0,103145,UX,1,3145,UX,-1
CE,NEXT,0,103145,UY,1,3145,UY,-1
CE,NEXT,0,103145,UZ,1,3145,UZ,-1

CE,NEXT,0,92145,UX,1,2145,UX,-1
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CE,NEXT,0,92145,UY,1,2145,UY,-1
CE,NEXT,0,92145,UZ,1,2145,UZ,-1

CE,NEXT,0,62158,UX,1,2158,UX,-1
CE,NEXT,0,62158,UY,1,2158,UY,-1
CE,NEXT,0,62158,UZ,1,2158,UZ,-1

CE,NEXT,0,92102,UX,1,2102,UX,-1
CE,NEXT,0,92102,UY,1,2102,UY,-1
CE,NEXT,0,92102,UZ,1,2102,UZ,-1

CE,NEXT,0,113145,UX,1,3145,UX,-1
CE,NEXT,0,113145,UY,1,3145,UY,-1
CE,NEXT,0,113145,UZ,1,3145,UZ,-1

CE,NEXT,0,93145,UX,1,3145,UX,-1
CE,NEXT,0,93145,UY,1,3145,UY,-1
CE,NEXT,0,93145,UZ,1,3145,UZ,-1

CE,NEXT,0,73164,UX,1,3164,UX,-1
CE,NEXT,0,73164,UY,1,3164,UY,-1
CE,NEXT,0,73164,UZ,1,3164,UZ,-1

CE,NEXT,0,71113,UX,1,1113,UX,-1
CE,NEXT,0,71113,UY,1,1113,UY,-1
CE,NEXT,0,71113,UZ,1,1113,UZ,-1
CE,NEXT,0,71113,ROTX,1,1113,ROTX,-1

CE,NEXT,0,62113,UX,1,2113,UX,-1
CE,NEXT,0,62113,UY,1,2113,UY,-1
CE,NEXT,0,62113,UZ,1,2113,UZ,-1
CE,NEXT,0,62113,ROTX,1,2113,ROTX,-1

CE,NEXT,0,72113,UX,1,2113,UX,-1
CE,NEXT,0,72113,UY,1,2113,UY,-1
CE,NEXT,0,72113,UZ,1,2113,UZ,-1
CE,NEXT,0,72113,ROTX,1,2113,ROTX,-1

CE,NEXT,0,152174,UX,1,52174,UX,-1
CE,NEXT,0,152174,UY,1,52174,UY,-1
CE,NEXT,0,152174,UZ,1,52174,UZ,-1
CE,NEXT,0,152174,ROTX,1,52174,ROTX,-1

CE,NEXT,0,63113,UX,1,3113,UX,-1
CE,NEXT,0,63113,UY,1,3113,UY,-1
CE,NEXT,0,63113,UZ,1,3113,UZ,-1
CE,NEXT,0,63113,ROTX,1,3113,ROTX,-1

CE,NEXT,0,74113,UX,1,4113,UX,-1
CE,NEXT,0,74113,UY,1,4113,UY,-1
CE,NEXT,0,74113,UZ,1,4113,UZ,-1
CE,NEXT,0,74113,ROTX,1,4113,ROTX,-1

CE,NEXT,0,60030,UX,1,30,UX,-1
CE,NEXT,0,60030,UY,1,30,UY,-1
CE,NEXT,0,60030,UZ,1,30,UZ,-1
CE,NEXT,0,60030,ROTX,1,30,ROTX,-1

CE,NEXT,0,60131,UX,1,131,UX,-1
CE,NEXT,0,60131,UY,1,131,UY,-1
CE,NEXT,0,60131,UZ,1,131,UZ,-1
CE,NEXT,0,60131,ROTX,1,131,ROTX,-1

CE,NEXT,0,60029,UX,1,29,UX,-1
CE,NEXT,0,60029,UY,1,29,UY,-1
CE,NEXT,0,60029,UZ,1,29,UZ,-1
CE,NEXT,0,60029,ROTX,1,29,ROTX,-1

CE,NEXT,0,60130,UX,1,130,UX,-1
CE,NEXT,0,60130,UY,1,130,UY,-1
CE,NEXT,0,60130,UZ,1,130,UZ,-1
CE,NEXT,0,60130,ROTX,1,130,ROTX,-1

CE,NEXT,0,60028,UX,1,28,UX,-1
CE,NEXT,0,60028,UY,1,28,UY,-1
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CE,NEXT,0,60028,UZ,1,28,UZ,-1
CE,NEXT,0,60028,ROTX,1,28,ROTX,-1

CE,NEXT,0,60129,UX,1,129,UX,-1
CE,NEXT,0,60129,UY,1,129,UY,-1
CE,NEXT,0,60129,UZ,1,129,UZ,-1
CE,NEXT,0,60129,ROTX,1,129,ROTX,-1

CE,NEXT,0,60027,UX,1,27,UX,-1
CE,NEXT,0,60027,UY,1,27,UY,-1
CE,NEXT,0,60027,UZ,1,27,UZ,-1
CE,NEXT,0,60027,ROTX,1,27,ROTX,-1

CE,NEXT,0,60128,UX,1,128,UX,-1
CE,NEXT,0,60128,UY,1,128,UY,-1
CE,NEXT,0,60128,UZ,1,128,UZ,-1
CE,NEXT,0,60128,ROTX,1,128,ROTX,-1

CE,NEXT,0,60026,UX,1,26,UX,-1
CE,NEXT,0,60026,UY,1,26,UY,-1
CE,NEXT,0,60026,UZ,1,26,UZ,-1
CE,NEXT,0,60026,ROTX,1,26,ROTX,-1

CE,NEXT,0,60127,UX,1,127,UX,-1
CE,NEXT,0,60127,UY,1,127,UY,-1
CE,NEXT,0,60127,UZ,1,127,UZ,-1
CE,NEXT,0,60127,ROTX,1,127,ROTX,-1

CE,NEXT,0,60025,UX,1,25,UX,-1
CE,NEXT,0,60025,UY,1,25,UY,-1
CE,NEXT,0,60025,UZ,1,25,UZ,-1
CE,NEXT,0,60025,ROTX,1,25,ROTX,-1

CE,NEXT,0,60126,UX,1,126,UX,-1
CE,NEXT,0,60126,UY,1,126,UY,-1
CE,NEXT,0,60126,UZ,1,126,UZ,-1
CE,NEXT,0,60126,ROTX,1,126,ROTX,-1

CE,NEXT,0,60024,UX,1,24,UX,-1
CE,NEXT,0,60024,UY,1,24,UY,-1
CE,NEXT,0,60024,UZ,1,24,UZ,-1
CE,NEXT,0,60024,ROTX,1,24,ROTX,-1

CE,NEXT,0,60125,UX,1,125,UX,-1
CE,NEXT,0,60125,UY,1,125,UY,-1
CE,NEXT,0,60125,UZ,1,125,UZ,-1
CE,NEXT,0,60125,ROTX,1,125,ROTX,-1

CE,NEXT,0,70131,UX,1,131,UX,-1
CE,NEXT,0,70131,UY,1,131,UY,-1
CE,NEXT,0,70131,UZ,1,131,UZ,-1
CE,NEXT,0,70131,ROTX,1,131,ROTX,-1

CE,NEXT,0,60140,UX,1,140,UX,-1
CE,NEXT,0,60140,UY,1,140,UY,-1
CE,NEXT,0,60140,UZ,1,140,UZ,-1
CE,NEXT,0,60140,ROTX,1,140,ROTX,-1

CE,NEXT,0,70125,UX,1,125,UX,-1
CE,NEXT,0,70125,UY,1,125,UY,-1
CE,NEXT,0,70125,UZ,1,125,UZ,-1
CE,NEXT,0,70125,ROTX,1,125,ROTX,-1

CE,NEXT,0,60134,UX,1,134,UX,-1
CE,NEXT,0,60134,UY,1,134,UY,-1
CE,NEXT,0,60134,UZ,1,134,UZ,-1
CE,NEXT,0,60134,ROTX,1,134,ROTX,-1

CE,NEXT,0,70140,UX,1,140,UX,-1
CE,NEXT,0,70140,UY,1,140,UY,-1
CE,NEXT,0,70140,UZ,1,140,UZ,-1
CE,NEXT,0,70140,ROTX,1,140,ROTX,-1

CE,NEXT,0,60148,UX,1,148,UX,-1
CE,NEXT,0,60148,UY,1,148,UY,-1
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CE,NEXT,0,60148,UZ,1,148,UZ,-1
CE,NEXT,0,60148,ROTX,1,148,ROTX,-1

CE,NEXT,0,60139,UX,1,139,UX,-1
CE,NEXT,0,60139,UY,1,139,UY,-1
CE,NEXT,0,60139,UZ,1,139,UZ,-1
CE,NEXT,0,60139,ROTX,1,139,ROTX,-1

CE,NEXT,0,60147,UX,1,147,UX,-1
CE,NEXT,0,60147,UY,1,147,UY,-1
CE,NEXT,0,60147,UZ,1,147,UZ,-1
CE,NEXT,0,60147,ROTX,1,147,ROTX,-1

CE,NEXT,0,60138,UX,1,138,UX,-1
CE,NEXT,0,60138,UY,1,138,UY,-1
CE,NEXT,0,60138,UZ,1,138,UZ,-1
CE,NEXT,0,60138,ROTX,1,138,ROTX,-1

CE,NEXT,0,60146,UX,1,146,UX,-1
CE,NEXT,0,60146,UY,1,146,UY,-1
CE,NEXT,0,60146,UZ,1,146,UZ,-1
CE,NEXT,0,60146,ROTX,1,146,ROTX,-1

CE,NEXT,0,60137,UX,1,137,UX,-1
CE,NEXT,0,60137,UY,1,137,UY,-1
CE,NEXT,0,60137,UZ,1,137,UZ,-1
CE,NEXT,0,60137,ROTX,1,137,ROTX,-1

CE,NEXT,0,70145,UX,1,145,UX,-1
CE,NEXT,0,70145,UY,1,145,UY,-1
CE,NEXT,0,70145,UZ,1,145,UZ,-1
CE,NEXT,0,70145,ROTX,1,145,ROTX,-1

CE,NEXT,0,60136,UX,1,136,UX,-1
CE,NEXT,0,60136,UY,1,136,UY,-1
CE,NEXT,0,60136,UZ,1,136,UZ,-1
CE,NEXT,0,60136,ROTX,1,136,ROTX,-1

CE,NEXT,0,70144,UX,1,144,UX,-1
CE,NEXT,0,70144,UY,1,144,UY,-1
CE,NEXT,0,70144,UZ,1,144,UZ,-1
CE,NEXT,0,70144,ROTX,1,144,ROTX,-1

CE,NEXT,0,60135,UX,1,135,UX,-1
CE,NEXT,0,60135,UY,1,135,UY,-1
CE,NEXT,0,60135,UZ,1,135,UZ,-1
CE,NEXT,0,60135,ROTX,1,135,ROTX,-1

CE,NEXT,0,70143,UX,1,143,UX,-1
CE,NEXT,0,70143,UY,1,143,UY,-1
CE,NEXT,0,70143,UZ,1,143,UZ,-1
CE,NEXT,0,70143,ROTX,1,143,ROTX,-1

CE,NEXT,0,70134,UX,1,134,UX,-1
CE,NEXT,0,70134,UY,1,134,UY,-1
CE,NEXT,0,70134,UZ,1,134,UZ,-1
CE,NEXT,0,70134,ROTX,1,134,ROTX,-1

CE,NEXT,0,70142,UX,1,142,UX,-1
CE,NEXT,0,70142,UY,1,142,UY,-1
CE,NEXT,0,70142,UZ,1,142,UZ,-1
CE,NEXT,0,70142,ROTX,1,142,ROTX,-1

CE,NEXT,0,80102,UX,1,102,UX,-1
CE,NEXT,0,80102,UY,1,102,UY,-1
CE,NEXT,0,80102,UZ,1,102,UZ,-1
CE,NEXT,0,80102,ROTX,1,102,ROTX,-1

CE,NEXT,0,81102,UX,1,1102,UX,-1
CE,NEXT,0,81102,UY,1,1102,UY,-1
CE,NEXT,0,81102,UZ,1,1102,UZ,-1
CE,NEXT,0,81102,ROTX,1,1102,ROTX,-1

CE,NEXT,0,70148,UX,1,148,UX,-1
CE,NEXT,0,70148,UY,1,148,UY,-1
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CE,NEXT,0,70148,UZ,1,148,UZ,-1
CE,NEXT,0,70148,ROTX,1,148,ROTX,-1

CE,NEXT,0,71148,UX,1,1148,UX,-1
CE,NEXT,0,71148,UY,1,1148,UY,-1
CE,NEXT,0,71148,UZ,1,1148,UZ,-1
CE,NEXT,0,71148,ROTX,1,1148,ROTX,-1

CE,NEXT,0,70147,UX,1,147,UX,-1
CE,NEXT,0,70147,UY,1,147,UY,-1
CE,NEXT,0,70147,UZ,1,147,UZ,-1
CE,NEXT,0,70147,ROTX,1,147,ROTX,-1

CE,NEXT,0,71147,UX,1,1147,UX,-1
CE,NEXT,0,71147,UY,1,1147,UY,-1
CE,NEXT,0,71147,UZ,1,1147,UZ,-1
CE,NEXT,0,71147,ROTX,1,1147,ROTX,-1

CE,NEXT,0,70146,UX,1,146,UX,-1
CE,NEXT,0,70146,UY,1,146,UY,-1
CE,NEXT,0,70146,UZ,1,146,UZ,-1
CE,NEXT,0,70146,ROTX,1,146,ROTX,-1

CE,NEXT,0,71146,UX,1,1146,UX,-1
CE,NEXT,0,71146,UY,1,1146,UY,-1
CE,NEXT,0,71146,UZ,1,1146,UZ,-1
CE,NEXT,0,71146,ROTX,1,1146,ROTX,-1

CE,NEXT,0,80145,UX,1,145,UX,-1
CE,NEXT,0,80145,UY,1,145,UY,-1
CE,NEXT,0,80145,UZ,1,145,UZ,-1
CE,NEXT,0,80145,ROTX,1,145,ROTX,-1

CE,NEXT,0,81145,UX,1,1145,UX,-1
CE,NEXT,0,81145,UY,1,1145,UY,-1
CE,NEXT,0,81145,UZ,1,1145,UZ,-1
CE,NEXT,0,81145,ROTX,1,1145,ROTX,-1

CE,NEXT,0,60144,UX,1,144,UX,-1
CE,NEXT,0,60144,UY,1,144,UY,-1
CE,NEXT,0,60144,UZ,1,144,UZ,-1
CE,NEXT,0,60144,ROTX,1,144,ROTX,-1

CE,NEXT,0,71144,UX,1,1144,UX,-1
CE,NEXT,0,71144,UY,1,1144,UY,-1
CE,NEXT,0,71144,UZ,1,1144,UZ,-1
CE,NEXT,0,71144,ROTX,1,1144,ROTX,-1

CE,NEXT,0,60143,UX,1,143,UX,-1
CE,NEXT,0,60143,UY,1,143,UY,-1
CE,NEXT,0,60143,UZ,1,143,UZ,-1
CE,NEXT,0,60143,ROTX,1,143,ROTX,-1

CE,NEXT,0,71143,UX,1,1143,UX,-1
CE,NEXT,0,71143,UY,1,1143,UY,-1
CE,NEXT,0,71143,UZ,1,1143,UZ,-1
CE,NEXT,0,71143,ROTX,1,1143,ROTX,-1

CE,NEXT,0,60142,UX,1,142,UX,-1
CE,NEXT,0,60142,UY,1,142,UY,-1
CE,NEXT,0,60142,UZ,1,142,UZ,-1
CE,NEXT,0,60142,ROTX,1,142,ROTX,-1

CE,NEXT,0,71142,UX,1,1142,UX,-1
CE,NEXT,0,71142,UY,1,1142,UY,-1
CE,NEXT,0,71142,UZ,1,1142,UZ,-1
CE,NEXT,0,71142,ROTX,1,1142,ROTX,-1

CE,NEXT,0,80112,UX,1,112,UX,-1
CE,NEXT,0,80112,UY,1,112,UY,-1
CE,NEXT,0,80112,UZ,1,112,UZ,-1
CE,NEXT,0,80112,ROTX,1,112,ROTX,-1

CE,NEXT,0,71112,UX,1,1112,UX,-1
CE,NEXT,0,71112,UY,1,1112,UY,-1
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CE,NEXT,0,71112,UZ,1,1112,UZ,-1
CE,NEXT,0,71112,ROTX,1,1112,ROTX,-1

CE,NEXT,0,71102,UX,1,1102,UX,-1
CE,NEXT,0,71102,UY,1,1102,UY,-1
CE,NEXT,0,71102,UZ,1,1102,UZ,-1
CE,NEXT,0,71102,ROTX,1,1102,ROTX,-1

CE,NEXT,0,82102,UX,1,2102,UX,-1
CE,NEXT,0,82102,UY,1,2102,UY,-1
CE,NEXT,0,82102,UZ,1,2102,UZ,-1
CE,NEXT,0,82102,ROTX,1,2102,ROTX,-1

CE,NEXT,0,61148,UX,1,1148,UX,-1
CE,NEXT,0,61148,UY,1,1148,UY,-1
CE,NEXT,0,61148,UZ,1,1148,UZ,-1
CE,NEXT,0,61148,ROTX,1,1148,ROTX,-1

CE,NEXT,0,72148,UX,1,2148,UX,-1
CE,NEXT,0,72148,UY,1,2148,UY,-1
CE,NEXT,0,72148,UZ,1,2148,UZ,-1
CE,NEXT,0,72148,ROTX,1,2148,ROTX,-1

CE,NEXT,0,61147,UX,1,1147,UX,-1
CE,NEXT,0,61147,UY,1,1147,UY,-1
CE,NEXT,0,61147,UZ,1,1147,UZ,-1
CE,NEXT,0,61147,ROTX,1,1147,ROTX,-1

CE,NEXT,0,62147,UX,1,2147,UX,-1
CE,NEXT,0,62147,UY,1,2147,UY,-1
CE,NEXT,0,62147,UZ,1,2147,UZ,-1
CE,NEXT,0,62147,ROTX,1,2147,ROTX,-1

CE,NEXT,0,61146,UX,1,1146,UX,-1
CE,NEXT,0,61146,UY,1,1146,UY,-1
CE,NEXT,0,61146,UZ,1,1146,UZ,-1
CE,NEXT,0,61146,ROTX,1,1146,ROTX,-1

CE,NEXT,0,62146,UX,1,2146,UX,-1
CE,NEXT,0,62146,UY,1,2146,UY,-1
CE,NEXT,0,62146,UZ,1,2146,UZ,-1
CE,NEXT,0,62146,ROTX,1,2146,ROTX,-1

CE,NEXT,0,71145,UX,1,1145,UX,-1
CE,NEXT,0,71145,UY,1,1145,UY,-1
CE,NEXT,0,71145,UZ,1,1145,UZ,-1
CE,NEXT,0,71145,ROTX,1,1145,ROTX,-1

CE,NEXT,0,72145,UX,1,2145,UX,-1
CE,NEXT,0,72145,UY,1,2145,UY,-1
CE,NEXT,0,72145,UZ,1,2145,UZ,-1
CE,NEXT,0,72145,ROTX,1,2145,ROTX,-1

CE,NEXT,0,61144,UX,1,1144,UX,-1
CE,NEXT,0,61144,UY,1,1144,UY,-1
CE,NEXT,0,61144,UZ,1,1144,UZ,-1
CE,NEXT,0,61144,ROTX,1,1144,ROTX,-1

CE,NEXT,0,62144,UX,1,2144,UX,-1
CE,NEXT,0,62144,UY,1,2144,UY,-1
CE,NEXT,0,62144,UZ,1,2144,UZ,-1
CE,NEXT,0,62144,ROTX,1,2144,ROTX,-1

CE,NEXT,0,61143,UX,1,1143,UX,-1
CE,NEXT,0,61143,UY,1,1143,UY,-1
CE,NEXT,0,61143,UZ,1,1143,UZ,-1
CE,NEXT,0,61143,ROTX,1,1143,ROTX,-1

CE,NEXT,0,72143,UX,1,2143,UX,-1
CE,NEXT,0,72143,UY,1,2143,UY,-1
CE,NEXT,0,72143,UZ,1,2143,UZ,-1
CE,NEXT,0,72143,ROTX,1,2143,ROTX,-1

CE,NEXT,0,61142,UX,1,1142,UX,-1
CE,NEXT,0,61142,UY,1,1142,UY,-1
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CE,NEXT,0,61142,UZ,1,1142,UZ,-1
CE,NEXT,0,61142,ROTX,1,1142,ROTX,-1

CE,NEXT,0,62142,UX,1,2142,UX,-1
CE,NEXT,0,62142,UY,1,2142,UY,-1
CE,NEXT,0,62142,UZ,1,2142,UZ,-1
CE,NEXT,0,62142,ROTX,1,2142,ROTX,-1

CE,NEXT,0,81112,UX,1,1112,UX,-1
CE,NEXT,0,81112,UY,1,1112,UY,-1
CE,NEXT,0,81112,UZ,1,1112,UZ,-1
CE,NEXT,0,81112,ROTX,1,1112,ROTX,-1

CE,NEXT,0,82112,UX,1,2112,UX,-1
CE,NEXT,0,82112,UY,1,2112,UY,-1
CE,NEXT,0,82112,UZ,1,2112,UZ,-1
CE,NEXT,0,82112,ROTX,1,2112,ROTX,-1

CE,NEXT,0,72147,UX,1,2147,UX,-1
CE,NEXT,0,72147,UY,1,2147,UY,-1
CE,NEXT,0,72147,UZ,1,2147,UZ,-1
CE,NEXT,0,72147,ROTX,1,2147,ROTX,-1

CE,NEXT,0,73147,UX,1,3147,UX,-1
CE,NEXT,0,73147,UY,1,3147,UY,-1
CE,NEXT,0,73147,UZ,1,3147,UZ,-1
CE,NEXT,0,73147,ROTX,1,3147,ROTX,-1

CE,NEXT,0,72146,UX,1,2146,UX,-1
CE,NEXT,0,72146,UY,1,2146,UY,-1
CE,NEXT,0,72146,UZ,1,2146,UZ,-1
CE,NEXT,0,72146,ROTX,1,2146,ROTX,-1

CE,NEXT,0,73146,UX,1,3146,UX,-1
CE,NEXT,0,73146,UY,1,3146,UY,-1
CE,NEXT,0,73146,UZ,1,3146,UZ,-1
CE,NEXT,0,73146,ROTX,1,3146,ROTX,-1

CE,NEXT,0,82145,UX,1,2145,UX,-1
CE,NEXT,0,82145,UY,1,2145,UY,-1
CE,NEXT,0,82145,UZ,1,2145,UZ,-1
CE,NEXT,0,82145,ROTX,1,2145,ROTX,-1

CE,NEXT,0,83145,UX,1,3145,UX,-1
CE,NEXT,0,83145,UY,1,3145,UY,-1
CE,NEXT,0,83145,UZ,1,3145,UZ,-1
CE,NEXT,0,83145,ROTX,1,3145,ROTX,-1

CE,NEXT,0,72144,UX,1,2144,UX,-1
CE,NEXT,0,72144,UY,1,2144,UY,-1
CE,NEXT,0,72144,UZ,1,2144,UZ,-1
CE,NEXT,0,72144,ROTX,1,2144,ROTX,-1

CE,NEXT,0,73144,UX,1,3144,UX,-1
CE,NEXT,0,73144,UY,1,3144,UY,-1
CE,NEXT,0,73144,UZ,1,3144,UZ,-1
CE,NEXT,0,73144,ROTX,1,3144,ROTX,-1

CE,NEXT,0,72142,UX,1,2142,UX,-1
CE,NEXT,0,72142,UY,1,2142,UY,-1
CE,NEXT,0,72142,UZ,1,2142,UZ,-1
CE,NEXT,0,72142,ROTX,1,2142,ROTX,-1

CE,NEXT,0,62157,UX,1,2157,UX,-1
CE,NEXT,0,62157,UY,1,2157,UY,-1
CE,NEXT,0,62157,UZ,1,2157,UZ,-1
CE,NEXT,0,62157,ROTX,1,2157,ROTX,-1

CE,NEXT,0,72112,UX,1,2112,UX,-1
CE,NEXT,0,72112,UY,1,2112,UY,-1
CE,NEXT,0,72112,UZ,1,2112,UZ,-1
CE,NEXT,0,72112,ROTX,1,2112,ROTX,-1

CE,NEXT,0,152156,UX,1,52156,UX,-1
CE,NEXT,0,152156,UY,1,52156,UY,-1
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CE,NEXT,0,152156,UZ,1,52156,UZ,-1
CE,NEXT,0,152156,ROTX,1,52156,ROTX,-1

CE,NEXT,0,73148,UX,1,3148,UX,-1
CE,NEXT,0,73148,UY,1,3148,UY,-1
CE,NEXT,0,73148,UZ,1,3148,UZ,-1
CE,NEXT,0,73148,ROTX,1,3148,ROTX,-1

CE,NEXT,0,63163,UX,1,3163,UX,-1
CE,NEXT,0,63163,UY,1,3163,UY,-1
CE,NEXT,0,63163,UZ,1,3163,UZ,-1
CE,NEXT,0,63163,ROTX,1,3163,ROTX,-1

CE,NEXT,0,63147,UX,1,3147,UX,-1
CE,NEXT,0,63147,UY,1,3147,UY,-1
CE,NEXT,0,63147,UZ,1,3147,UZ,-1
CE,NEXT,0,63147,ROTX,1,3147,ROTX,-1

CE,NEXT,0,63162,UX,1,3162,UX,-1
CE,NEXT,0,63162,UY,1,3162,UY,-1
CE,NEXT,0,63162,UZ,1,3162,UZ,-1
CE,NEXT,0,63162,ROTX,1,3162,ROTX,-1

CE,NEXT,0,63146,UX,1,3146,UX,-1
CE,NEXT,0,63146,UY,1,3146,UY,-1
CE,NEXT,0,63146,UZ,1,3146,UZ,-1
CE,NEXT,0,63146,ROTX,1,3146,ROTX,-1

CE,NEXT,0,63161,UX,1,3161,UX,-1
CE,NEXT,0,63161,UY,1,3161,UY,-1
CE,NEXT,0,63161,UZ,1,3161,UZ,-1
CE,NEXT,0,63161,ROTX,1,3161,ROTX,-1

CE,NEXT,0,73145,UX,1,3145,UX,-1
CE,NEXT,0,73145,UY,1,3145,UY,-1
CE,NEXT,0,73145,UZ,1,3145,UZ,-1
CE,NEXT,0,73145,ROTX,1,3145,ROTX,-1

CE,NEXT,0,63160,UX,1,3160,UX,-1
CE,NEXT,0,63160,UY,1,3160,UY,-1
CE,NEXT,0,63160,UZ,1,3160,UZ,-1
CE,NEXT,0,63160,ROTX,1,3160,ROTX,-1

CE,NEXT,0,63144,UX,1,3144,UX,-1
CE,NEXT,0,63144,UY,1,3144,UY,-1
CE,NEXT,0,63144,UZ,1,3144,UZ,-1
CE,NEXT,0,63144,ROTX,1,3144,ROTX,-1

CE,NEXT,0,63159,UX,1,3159,UX,-1
CE,NEXT,0,63159,UY,1,3159,UY,-1
CE,NEXT,0,63159,UZ,1,3159,UZ,-1
CE,NEXT,0,63159,ROTX,1,3159,ROTX,-1

CE,NEXT,0,73143,UX,1,3143,UX,-1
CE,NEXT,0,73143,UY,1,3143,UY,-1
CE,NEXT,0,73143,UZ,1,3143,UZ,-1
CE,NEXT,0,73143,ROTX,1,3143,ROTX,-1

CE,NEXT,0,63158,UX,1,3158,UX,-1
CE,NEXT,0,63158,UY,1,3158,UY,-1
CE,NEXT,0,63158,UZ,1,3158,UZ,-1
CE,NEXT,0,63158,ROTX,1,3158,ROTX,-1

CE,NEXT,0,63142,UX,1,3142,UX,-1
CE,NEXT,0,63142,UY,1,3142,UY,-1
CE,NEXT,0,63142,UZ,1,3142,UZ,-1
CE,NEXT,0,63142,ROTX,1,3142,ROTX,-1

CE,NEXT,0,63157,UX,1,3157,UX,-1
CE,NEXT,0,63157,UY,1,3157,UY,-1
CE,NEXT,0,63157,UZ,1,3157,UZ,-1
CE,NEXT,0,63157,ROTX,1,3157,ROTX,-1

CE,NEXT,0,74112,UX,1,4112,UX,-1
CE,NEXT,0,74112,UY,1,4112,UY,-1
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CE,NEXT,0,74112,UZ,1,4112,UZ,-1
CE,NEXT,0,74112,ROTX,1,4112,ROTX,-1

CE,NEXT,0,75112,UX,1,5112,UX,-1
CE,NEXT,0,75112,UY,1,5112,UY,-1
CE,NEXT,0,75112,UZ,1,5112,UZ,-1
CE,NEXT,0,75112,ROTX,1,5112,ROTX,-1

CE,NEXT,0,74102,UX,1,4102,UX,-1
CE,NEXT,0,74102,UY,1,4102,UY,-1
CE,NEXT,0,74102,UZ,1,4102,UZ,-1
CE,NEXT,0,74102,ROTX,1,4102,ROTX,-1

CE,NEXT,0,75102,UX,1,5102,UX,-1
CE,NEXT,0,75102,UY,1,5102,UY,-1
CE,NEXT,0,75102,UZ,1,5102,UZ,-1
CE,NEXT,0,75102,ROTX,1,5102,ROTX,-1

CE,NEXT,0,67122,UX,1,7122,UX,-1
CE,NEXT,0,67122,UY,1,7122,UY,-1
CE,NEXT,0,67122,UZ,1,7122,UZ,-1
CE,NEXT,0,67122,ROTX,1,7122,ROTX,-1

CE,NEXT,0,181660,UX,1,81660,UX,-1
CE,NEXT,0,181660,UY,1,81660,UY,-1
CE,NEXT,0,181660,UZ,1,81660,UZ,-1
CE,NEXT,0,181660,ROTX,1,81660,ROTX,-1

CE,NEXT,0,75122,UX,1,5122,UX,-1
CE,NEXT,0,75122,UY,1,5122,UY,-1
CE,NEXT,0,75122,UZ,1,5122,UZ,-1
CE,NEXT,0,75122,ROTX,1,5122,ROTX,-1

CE,NEXT,0,77122,UX,1,7122,UX,-1
CE,NEXT,0,77122,UY,1,7122,UY,-1
CE,NEXT,0,77122,UZ,1,7122,UZ,-1
CE,NEXT,0,77122,ROTX,1,7122,ROTX,-1

CE,NEXT,0,60006,UX,1,6,UX,-1
CE,NEXT,0,60006,UY,1,6,UY,-1
CE,NEXT,0,60006,UZ,1,6,UZ,-1
CE,NEXT,0,60006,ROTX,1,6,ROTX,-1

CE,NEXT,0,60105,UX,1,105,UX,-1
CE,NEXT,0,60105,UY,1,105,UY,-1
CE,NEXT,0,60105,UZ,1,105,UZ,-1
CE,NEXT,0,60105,ROTX,1,105,ROTX,-1

CE,NEXT,0,70105,UX,1,105,UX,-1
CE,NEXT,0,70105,UY,1,105,UY,-1
CE,NEXT,0,70105,UZ,1,105,UZ,-1
CE,NEXT,0,70105,ROTX,1,105,ROTX,-1

CE,NEXT,0,61105,UX,1,1105,UX,-1
CE,NEXT,0,61105,UY,1,1105,UY,-1
CE,NEXT,0,61105,UZ,1,1105,UZ,-1
CE,NEXT,0,61105,ROTX,1,1105,ROTX,-1

CE,NEXT,0,71105,UX,1,1105,UX,-1
CE,NEXT,0,71105,UY,1,1105,UY,-1
CE,NEXT,0,71105,UZ,1,1105,UZ,-1
CE,NEXT,0,71105,ROTX,1,1105,ROTX,-1

CE,NEXT,0,62105,UX,1,2105,UX,-1
CE,NEXT,0,62105,UY,1,2105,UY,-1
CE,NEXT,0,62105,UZ,1,2105,UZ,-1
CE,NEXT,0,62105,ROTX,1,2105,ROTX,-1

CE,NEXT,0,72105,UX,1,2105,UX,-1
CE,NEXT,0,72105,UY,1,2105,UY,-1
CE,NEXT,0,72105,UZ,1,2105,UZ,-1
CE,NEXT,0,72105,ROTX,1,2105,ROTX,-1

CE,NEXT,0,63105,UX,1,3105,UX,-1
CE,NEXT,0,63105,UY,1,3105,UY,-1
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CE,NEXT,0,63105,UZ,1,3105,UZ,-1
CE,NEXT,0,63105,ROTX,1,3105,ROTX,-1

CE,NEXT,0,73105,UX,1,3105,UX,-1
CE,NEXT,0,73105,UY,1,3105,UY,-1
CE,NEXT,0,73105,UZ,1,3105,UZ,-1
CE,NEXT,0,73105,ROTX,1,3105,ROTX,-1

CE,NEXT,0,64105,UX,1,4105,UX,-1
CE,NEXT,0,64105,UY,1,4105,UY,-1
CE,NEXT,0,64105,UZ,1,4105,UZ,-1
CE,NEXT,0,64105,ROTX,1,4105,ROTX,-1

CE,NEXT,0,74105,UX,1,4105,UX,-1
CE,NEXT,0,74105,UY,1,4105,UY,-1
CE,NEXT,0,74105,UZ,1,4105,UZ,-1
CE,NEXT,0,74105,ROTX,1,4105,ROTX,-1

CE,NEXT,0,65105,UX,1,5105,UX,-1
CE,NEXT,0,65105,UY,1,5105,UY,-1
CE,NEXT,0,65105,UZ,1,5105,UZ,-1
CE,NEXT,0,65105,ROTX,1,5105,ROTX,-1

CE,NEXT,0,75105,UX,1,5105,UX,-1
CE,NEXT,0,75105,UY,1,5105,UY,-1
CE,NEXT,0,75105,UZ,1,5105,UZ,-1
CE,NEXT,0,75105,ROTX,1,5105,ROTX,-1

CE,NEXT,0,66105,UX,1,6105,UX,-1
CE,NEXT,0,66105,UY,1,6105,UY,-1
CE,NEXT,0,66105,UZ,1,6105,UZ,-1
CE,NEXT,0,66105,ROTX,1,6105,ROTX,-1

CE,NEXT,0,76105,UX,1,6105,UX,-1
CE,NEXT,0,76105,UY,1,6105,UY,-1
CE,NEXT,0,76105,UZ,1,6105,UZ,-1
CE,NEXT,0,76105,ROTX,1,6105,ROTX,-1

CE,NEXT,0,67105,UX,1,7105,UX,-1
CE,NEXT,0,67105,UY,1,7105,UY,-1
CE,NEXT,0,67105,UZ,1,7105,UZ,-1
CE,NEXT,0,67105,ROTX,1,7105,ROTX,-1

CE,NEXT,0,77105,UX,1,7105,UX,-1
CE,NEXT,0,77105,UY,1,7105,UY,-1
CE,NEXT,0,77105,UZ,1,7105,UZ,-1
CE,NEXT,0,77105,ROTX,1,7105,ROTX,-1

CE,NEXT,0,68105,UX,1,8105,UX,-1
CE,NEXT,0,68105,UY,1,8105,UY,-1
CE,NEXT,0,68105,UZ,1,8105,UZ,-1
CE,NEXT,0,68105,ROTX,1,8105,ROTX,-1

CE,NEXT,0,60017,UX,1,17,UX,-1
CE,NEXT,0,60017,UY,1,17,UY,-1
CE,NEXT,0,60017,UZ,1,17,UZ,-1
CE,NEXT,0,60017,ROTX,1,17,ROTX,-1

CE,NEXT,0,60116,UX,1,116,UX,-1
CE,NEXT,0,60116,UY,1,116,UY,-1
CE,NEXT,0,60116,UZ,1,116,UZ,-1
CE,NEXT,0,60116,ROTX,1,116,ROTX,-1

CE,NEXT,0,70116,UX,1,116,UX,-1
CE,NEXT,0,70116,UY,1,116,UY,-1
CE,NEXT,0,70116,UZ,1,116,UZ,-1
CE,NEXT,0,70116,ROTX,1,116,ROTX,-1

CE,NEXT,0,61116,UX,1,1116,UX,-1
CE,NEXT,0,61116,UY,1,1116,UY,-1
CE,NEXT,0,61116,UZ,1,1116,UZ,-1
CE,NEXT,0,61116,ROTX,1,1116,ROTX,-1

CE,NEXT,0,71116,UX,1,1116,UX,-1
CE,NEXT,0,71116,UY,1,1116,UY,-1
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CE,NEXT,0,71116,UZ,1,1116,UZ,-1
CE,NEXT,0,71116,ROTX,1,1116,ROTX,-1

CE,NEXT,0,72116,UX,1,2116,UX,-1
CE,NEXT,0,72116,UY,1,2116,UY,-1
CE,NEXT,0,72116,UZ,1,2116,UZ,-1
CE,NEXT,0,72116,ROTX,1,2116,ROTX,-1

CE,NEXT,0,73116,UX,1,3116,UX,-1
CE,NEXT,0,73116,UY,1,3116,UY,-1
CE,NEXT,0,73116,UZ,1,3116,UZ,-1
CE,NEXT,0,73116,ROTX,1,3116,ROTX,-1

CE,NEXT,0,64116,UX,1,4116,UX,-1
CE,NEXT,0,64116,UY,1,4116,UY,-1
CE,NEXT,0,64116,UZ,1,4116,UZ,-1
CE,NEXT,0,64116,ROTX,1,4116,ROTX,-1

CE,NEXT,0,74116,UX,1,4116,UX,-1
CE,NEXT,0,74116,UY,1,4116,UY,-1
CE,NEXT,0,74116,UZ,1,4116,UZ,-1
CE,NEXT,0,74116,ROTX,1,4116,ROTX,-1

CE,NEXT,0,65116,UX,1,5116,UX,-1
CE,NEXT,0,65116,UY,1,5116,UY,-1
CE,NEXT,0,65116,UZ,1,5116,UZ,-1
CE,NEXT,0,65116,ROTX,1,5116,ROTX,-1

CE,NEXT,0,67116,UX,1,7116,UX,-1
CE,NEXT,0,67116,UY,1,7116,UY,-1
CE,NEXT,0,67116,UZ,1,7116,UZ,-1
CE,NEXT,0,67116,ROTX,1,7116,ROTX,-1

CE,NEXT,0,68116,UX,1,8116,UX,-1
CE,NEXT,0,68116,UY,1,8116,UY,-1
CE,NEXT,0,68116,UZ,1,8116,UZ,-1
CE,NEXT,0,68116,ROTX,1,8116,ROTX,-1

CE,NEXT,0,60041,UX,1,41,UX,-1
CE,NEXT,0,60041,UY,1,41,UY,-1
CE,NEXT,0,60041,UZ,1,41,UZ,-1
CE,NEXT,0,60041,ROTX,1,41,ROTX,-1

CE,NEXT,0,60181,UX,1,181,UX,-1
CE,NEXT,0,60181,UY,1,181,UY,-1
CE,NEXT,0,60181,UZ,1,181,UZ,-1
CE,NEXT,0,60181,ROTX,1,181,ROTX,-1

CE,NEXT,0,60040,UX,1,40,UX,-1
CE,NEXT,0,60040,UY,1,40,UY,-1
CE,NEXT,0,60040,UZ,1,40,UZ,-1
CE,NEXT,0,60040,ROTX,1,40,ROTX,-1

CE,NEXT,0,60180,UX,1,180,UX,-1
CE,NEXT,0,60180,UY,1,180,UY,-1
CE,NEXT,0,60180,UZ,1,180,UZ,-1
CE,NEXT,0,60180,ROTX,1,180,ROTX,-1

CE,NEXT,0,60039,UX,1,39,UX,-1
CE,NEXT,0,60039,UY,1,39,UY,-1
CE,NEXT,0,60039,UZ,1,39,UZ,-1
CE,NEXT,0,60039,ROTX,1,39,ROTX,-1

CE,NEXT,0,60179,UX,1,179,UX,-1
CE,NEXT,0,60179,UY,1,179,UY,-1
CE,NEXT,0,60179,UZ,1,179,UZ,-1
CE,NEXT,0,60179,ROTX,1,179,ROTX,-1

CE,NEXT,0,60038,UX,1,38,UX,-1
CE,NEXT,0,60038,UY,1,38,UY,-1
CE,NEXT,0,60038,UZ,1,38,UZ,-1
CE,NEXT,0,60038,ROTX,1,38,ROTX,-1

CE,NEXT,0,60178,UX,1,178,UX,-1
CE,NEXT,0,60178,UY,1,178,UY,-1
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CE,NEXT,0,60178,UZ,1,178,UZ,-1
CE,NEXT,0,60178,ROTX,1,178,ROTX,-1

CE,NEXT,0,60037,UX,1,37,UX,-1
CE,NEXT,0,60037,UY,1,37,UY,-1
CE,NEXT,0,60037,UZ,1,37,UZ,-1
CE,NEXT,0,60037,ROTX,1,37,ROTX,-1

CE,NEXT,0,60177,UX,1,177,UX,-1
CE,NEXT,0,60177,UY,1,177,UY,-1
CE,NEXT,0,60177,UZ,1,177,UZ,-1
CE,NEXT,0,60177,ROTX,1,177,ROTX,-1

CE,NEXT,0,60036,UX,1,36,UX,-1
CE,NEXT,0,60036,UY,1,36,UY,-1
CE,NEXT,0,60036,UZ,1,36,UZ,-1
CE,NEXT,0,60036,ROTX,1,36,ROTX,-1

CE,NEXT,0,60176,UX,1,176,UX,-1
CE,NEXT,0,60176,UY,1,176,UY,-1
CE,NEXT,0,60176,UZ,1,176,UZ,-1
CE,NEXT,0,60176,ROTX,1,176,ROTX,-1

CE,NEXT,0,60035,UX,1,35,UX,-1
CE,NEXT,0,60035,UY,1,35,UY,-1
CE,NEXT,0,60035,UZ,1,35,UZ,-1
CE,NEXT,0,60035,ROTX,1,35,ROTX,-1

CE,NEXT,0,60175,UX,1,175,UX,-1
CE,NEXT,0,60175,UY,1,175,UY,-1
CE,NEXT,0,60175,UZ,1,175,UZ,-1
CE,NEXT,0,60175,ROTX,1,175,ROTX,-1

CE,NEXT,0,80107,UX,1,107,UX,-1
CE,NEXT,0,80107,UY,1,107,UY,-1
CE,NEXT,0,80107,UZ,1,107,UZ,-1
CE,NEXT,0,80107,ROTX,1,107,ROTX,-1

CE,NEXT,0,71107,UX,1,1107,UX,-1
CE,NEXT,0,71107,UY,1,1107,UY,-1
CE,NEXT,0,71107,UZ,1,1107,UZ,-1
CE,NEXT,0,71107,ROTX,1,1107,ROTX,-1

CE,NEXT,0,60155,UX,1,155,UX,-1
CE,NEXT,0,60155,UY,1,155,UY,-1
CE,NEXT,0,60155,UZ,1,155,UZ,-1
CE,NEXT,0,60155,ROTX,1,155,ROTX,-1

CE,NEXT,0,71155,UX,1,1155,UX,-1
CE,NEXT,0,71155,UY,1,1155,UY,-1
CE,NEXT,0,71155,UZ,1,1155,UZ,-1
CE,NEXT,0,71155,ROTX,1,1155,ROTX,-1

CE,NEXT,0,60154,UX,1,154,UX,-1
CE,NEXT,0,60154,UY,1,154,UY,-1
CE,NEXT,0,60154,UZ,1,154,UZ,-1
CE,NEXT,0,60154,ROTX,1,154,ROTX,-1

CE,NEXT,0,71154,UX,1,1154,UX,-1
CE,NEXT,0,71154,UY,1,1154,UY,-1
CE,NEXT,0,71154,UZ,1,1154,UZ,-1
CE,NEXT,0,71154,ROTX,1,1154,ROTX,-1

CE,NEXT,0,60153,UX,1,153,UX,-1
CE,NEXT,0,60153,UY,1,153,UY,-1
CE,NEXT,0,60153,UZ,1,153,UZ,-1
CE,NEXT,0,60153,ROTX,1,153,ROTX,-1

CE,NEXT,0,71153,UX,1,1153,UX,-1
CE,NEXT,0,71153,UY,1,1153,UY,-1
CE,NEXT,0,71153,UZ,1,1153,UZ,-1
CE,NEXT,0,71153,ROTX,1,1153,ROTX,-1

CE,NEXT,0,60152,UX,1,152,UX,-1
CE,NEXT,0,60152,UY,1,152,UY,-1
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CE,NEXT,0,60152,UZ,1,152,UZ,-1
CE,NEXT,0,60152,ROTX,1,152,ROTX,-1

CE,NEXT,0,71152,UX,1,1152,UX,-1
CE,NEXT,0,71152,UY,1,1152,UY,-1
CE,NEXT,0,71152,UZ,1,1152,UZ,-1
CE,NEXT,0,71152,ROTX,1,1152,ROTX,-1

CE,NEXT,0,60151,UX,1,151,UX,-1
CE,NEXT,0,60151,UY,1,151,UY,-1
CE,NEXT,0,60151,UZ,1,151,UZ,-1
CE,NEXT,0,60151,ROTX,1,151,ROTX,-1

CE,NEXT,0,71151,UX,1,1151,UX,-1
CE,NEXT,0,71151,UY,1,1151,UY,-1
CE,NEXT,0,71151,UZ,1,1151,UZ,-1
CE,NEXT,0,71151,ROTX,1,1151,ROTX,-1

CE,NEXT,0,60150,UX,1,150,UX,-1
CE,NEXT,0,60150,UY,1,150,UY,-1
CE,NEXT,0,60150,UZ,1,150,UZ,-1
CE,NEXT,0,60150,ROTX,1,150,ROTX,-1

CE,NEXT,0,71150,UX,1,1150,UX,-1
CE,NEXT,0,71150,UY,1,1150,UY,-1
CE,NEXT,0,71150,UZ,1,1150,UZ,-1
CE,NEXT,0,71150,ROTX,1,1150,ROTX,-1

CE,NEXT,0,60149,UX,1,149,UX,-1
CE,NEXT,0,60149,UY,1,149,UY,-1
CE,NEXT,0,60149,UZ,1,149,UZ,-1
CE,NEXT,0,60149,ROTX,1,149,ROTX,-1

CE,NEXT,0,71149,UX,1,1149,UX,-1
CE,NEXT,0,71149,UY,1,1149,UY,-1
CE,NEXT,0,71149,UZ,1,1149,UZ,-1
CE,NEXT,0,71149,ROTX,1,1149,ROTX,-1

CE,NEXT,0,80118,UX,1,118,UX,-1
CE,NEXT,0,80118,UY,1,118,UY,-1
CE,NEXT,0,80118,UZ,1,118,UZ,-1
CE,NEXT,0,80118,ROTX,1,118,ROTX,-1

CE,NEXT,0,71118,UX,1,1118,UX,-1
CE,NEXT,0,71118,UY,1,1118,UY,-1
CE,NEXT,0,71118,UZ,1,1118,UZ,-1
CE,NEXT,0,71118,ROTX,1,1118,ROTX,-1

CE,NEXT,0,81107,UX,1,1107,UX,-1
CE,NEXT,0,81107,UY,1,1107,UY,-1
CE,NEXT,0,81107,UZ,1,1107,UZ,-1
CE,NEXT,0,81107,ROTX,1,1107,ROTX,-1

CE,NEXT,0,72107,UX,1,2107,UX,-1
CE,NEXT,0,72107,UY,1,2107,UY,-1
CE,NEXT,0,72107,UZ,1,2107,UZ,-1
CE,NEXT,0,72107,ROTX,1,2107,ROTX,-1

CE,NEXT,0,61155,UX,1,1155,UX,-1
CE,NEXT,0,61155,UY,1,1155,UY,-1
CE,NEXT,0,61155,UZ,1,1155,UZ,-1
CE,NEXT,0,61155,ROTX,1,1155,ROTX,-1

CE,NEXT,0,62155,UX,1,2155,UX,-1
CE,NEXT,0,62155,UY,1,2155,UY,-1
CE,NEXT,0,62155,UZ,1,2155,UZ,-1
CE,NEXT,0,62155,ROTX,1,2155,ROTX,-1

CE,NEXT,0,61154,UX,1,1154,UX,-1
CE,NEXT,0,61154,UY,1,1154,UY,-1
CE,NEXT,0,61154,UZ,1,1154,UZ,-1
CE,NEXT,0,61154,ROTX,1,1154,ROTX,-1

CE,NEXT,0,62154,UX,1,2154,UX,-1
CE,NEXT,0,62154,UY,1,2154,UY,-1
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CE,NEXT,0,62154,UZ,1,2154,UZ,-1
CE,NEXT,0,62154,ROTX,1,2154,ROTX,-1

CE,NEXT,0,61153,UX,1,1153,UX,-1
CE,NEXT,0,61153,UY,1,1153,UY,-1
CE,NEXT,0,61153,UZ,1,1153,UZ,-1
CE,NEXT,0,61153,ROTX,1,1153,ROTX,-1

CE,NEXT,0,62153,UX,1,2153,UX,-1
CE,NEXT,0,62153,UY,1,2153,UY,-1
CE,NEXT,0,62153,UZ,1,2153,UZ,-1
CE,NEXT,0,62153,ROTX,1,2153,ROTX,-1

CE,NEXT,0,61152,UX,1,1152,UX,-1
CE,NEXT,0,61152,UY,1,1152,UY,-1
CE,NEXT,0,61152,UZ,1,1152,UZ,-1
CE,NEXT,0,61152,ROTX,1,1152,ROTX,-1

CE,NEXT,0,72152,UX,1,2152,UX,-1
CE,NEXT,0,72152,UY,1,2152,UY,-1
CE,NEXT,0,72152,UZ,1,2152,UZ,-1
CE,NEXT,0,72152,ROTX,1,2152,ROTX,-1

CE,NEXT,0,61151,UX,1,1151,UX,-1
CE,NEXT,0,61151,UY,1,1151,UY,-1
CE,NEXT,0,61151,UZ,1,1151,UZ,-1
CE,NEXT,0,61151,ROTX,1,1151,ROTX,-1

CE,NEXT,0,72151,UX,1,2151,UX,-1
CE,NEXT,0,72151,UY,1,2151,UY,-1
CE,NEXT,0,72151,UZ,1,2151,UZ,-1
CE,NEXT,0,72151,ROTX,1,2151,ROTX,-1

CE,NEXT,0,61150,UX,1,1150,UX,-1
CE,NEXT,0,61150,UY,1,1150,UY,-1
CE,NEXT,0,61150,UZ,1,1150,UZ,-1
CE,NEXT,0,61150,ROTX,1,1150,ROTX,-1

CE,NEXT,0,72150,UX,1,2150,UX,-1
CE,NEXT,0,72150,UY,1,2150,UY,-1
CE,NEXT,0,72150,UZ,1,2150,UZ,-1
CE,NEXT,0,72150,ROTX,1,2150,ROTX,-1

CE,NEXT,0,61149,UX,1,1149,UX,-1
CE,NEXT,0,61149,UY,1,1149,UY,-1
CE,NEXT,0,61149,UZ,1,1149,UZ,-1
CE,NEXT,0,61149,ROTX,1,1149,ROTX,-1

CE,NEXT,0,72149,UX,1,2149,UX,-1
CE,NEXT,0,72149,UY,1,2149,UY,-1
CE,NEXT,0,72149,UZ,1,2149,UZ,-1
CE,NEXT,0,72149,ROTX,1,2149,ROTX,-1

CE,NEXT,0,81118,UX,1,1118,UX,-1
CE,NEXT,0,81118,UY,1,1118,UY,-1
CE,NEXT,0,81118,UZ,1,1118,UZ,-1
CE,NEXT,0,81118,ROTX,1,1118,ROTX,-1

CE,NEXT,0,82118,UX,1,2118,UX,-1
CE,NEXT,0,82118,UY,1,2118,UY,-1
CE,NEXT,0,82118,UZ,1,2118,UZ,-1
CE,NEXT,0,82118,ROTX,1,2118,ROTX,-1

CE,NEXT,0,82107,UX,1,2107,UX,-1
CE,NEXT,0,82107,UY,1,2107,UY,-1
CE,NEXT,0,82107,UZ,1,2107,UZ,-1
CE,NEXT,0,82107,ROTX,1,2107,ROTX,-1

CE,NEXT,0,83107,UX,1,3107,UX,-1
CE,NEXT,0,83107,UY,1,3107,UY,-1
CE,NEXT,0,83107,UZ,1,3107,UZ,-1
CE,NEXT,0,83107,ROTX,1,3107,ROTX,-1

CE,NEXT,0,72155,UX,1,2155,UX,-1
CE,NEXT,0,72155,UY,1,2155,UY,-1
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CE,NEXT,0,72155,UZ,1,2155,UZ,-1
CE,NEXT,0,72155,ROTX,1,2155,ROTX,-1

CE,NEXT,0,73155,UX,1,3155,UX,-1
CE,NEXT,0,73155,UY,1,3155,UY,-1
CE,NEXT,0,73155,UZ,1,3155,UZ,-1
CE,NEXT,0,73155,ROTX,1,3155,ROTX,-1

CE,NEXT,0,72154,UX,1,2154,UX,-1
CE,NEXT,0,72154,UY,1,2154,UY,-1
CE,NEXT,0,72154,UZ,1,2154,UZ,-1
CE,NEXT,0,72154,ROTX,1,2154,ROTX,-1

CE,NEXT,0,73154,UX,1,3154,UX,-1
CE,NEXT,0,73154,UY,1,3154,UY,-1
CE,NEXT,0,73154,UZ,1,3154,UZ,-1
CE,NEXT,0,73154,ROTX,1,3154,ROTX,-1

CE,NEXT,0,72153,UX,1,2153,UX,-1
CE,NEXT,0,72153,UY,1,2153,UY,-1
CE,NEXT,0,72153,UZ,1,2153,UZ,-1
CE,NEXT,0,72153,ROTX,1,2153,ROTX,-1

CE,NEXT,0,63153,UX,1,3153,UX,-1
CE,NEXT,0,63153,UY,1,3153,UY,-1
CE,NEXT,0,63153,UZ,1,3153,UZ,-1
CE,NEXT,0,63153,ROTX,1,3153,ROTX,-1

CE,NEXT,0,62152,UX,1,2152,UX,-1
CE,NEXT,0,62152,UY,1,2152,UY,-1
CE,NEXT,0,62152,UZ,1,2152,UZ,-1
CE,NEXT,0,62152,ROTX,1,2152,ROTX,-1

CE,NEXT,0,73152,UX,1,3152,UX,-1
CE,NEXT,0,73152,UY,1,3152,UY,-1
CE,NEXT,0,73152,UZ,1,3152,UZ,-1
CE,NEXT,0,73152,ROTX,1,3152,ROTX,-1

CE,NEXT,0,62151,UX,1,2151,UX,-1
CE,NEXT,0,62151,UY,1,2151,UY,-1
CE,NEXT,0,62151,UZ,1,2151,UZ,-1
CE,NEXT,0,62151,ROTX,1,2151,ROTX,-1

CE,NEXT,0,73151,UX,1,3151,UX,-1
CE,NEXT,0,73151,UY,1,3151,UY,-1
CE,NEXT,0,73151,UZ,1,3151,UZ,-1
CE,NEXT,0,73151,ROTX,1,3151,ROTX,-1

CE,NEXT,0,62150,UX,1,2150,UX,-1
CE,NEXT,0,62150,UY,1,2150,UY,-1
CE,NEXT,0,62150,UZ,1,2150,UZ,-1
CE,NEXT,0,62150,ROTX,1,2150,ROTX,-1

CE,NEXT,0,63150,UX,1,3150,UX,-1
CE,NEXT,0,63150,UY,1,3150,UY,-1
CE,NEXT,0,63150,UZ,1,3150,UZ,-1
CE,NEXT,0,63150,ROTX,1,3150,ROTX,-1

CE,NEXT,0,62149,UX,1,2149,UX,-1
CE,NEXT,0,62149,UY,1,2149,UY,-1
CE,NEXT,0,62149,UZ,1,2149,UZ,-1
CE,NEXT,0,62149,ROTX,1,2149,ROTX,-1

CE,NEXT,0,63149,UX,1,3149,UX,-1
CE,NEXT,0,63149,UY,1,3149,UY,-1
CE,NEXT,0,63149,UZ,1,3149,UZ,-1
CE,NEXT,0,63149,ROTX,1,3149,ROTX,-1

CE,NEXT,0,72118,UX,1,2118,UX,-1
CE,NEXT,0,72118,UY,1,2118,UY,-1
CE,NEXT,0,72118,UZ,1,2118,UZ,-1
CE,NEXT,0,72118,ROTX,1,2118,ROTX,-1

CE,NEXT,0,73118,UX,1,3118,UX,-1
CE,NEXT,0,73118,UY,1,3118,UY,-1
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CE,NEXT,0,73118,UZ,1,3118,UZ,-1
CE,NEXT,0,73118,ROTX,1,3118,ROTX,-1

CE,NEXT,0,73107,UX,1,3107,UX,-1
CE,NEXT,0,73107,UY,1,3107,UY,-1
CE,NEXT,0,73107,UZ,1,3107,UZ,-1
CE,NEXT,0,73107,ROTX,1,3107,ROTX,-1

CE,NEXT,0,74107,UX,1,4107,UX,-1
CE,NEXT,0,74107,UY,1,4107,UY,-1
CE,NEXT,0,74107,UZ,1,4107,UZ,-1
CE,NEXT,0,74107,ROTX,1,4107,ROTX,-1

CE,NEXT,0,63155,UX,1,3155,UX,-1
CE,NEXT,0,63155,UY,1,3155,UY,-1
CE,NEXT,0,63155,UZ,1,3155,UZ,-1
CE,NEXT,0,63155,ROTX,1,3155,ROTX,-1

CE,NEXT,0,64155,UX,1,4155,UX,-1
CE,NEXT,0,64155,UY,1,4155,UY,-1
CE,NEXT,0,64155,UZ,1,4155,UZ,-1
CE,NEXT,0,64155,ROTX,1,4155,ROTX,-1

CE,NEXT,0,63154,UX,1,3154,UX,-1
CE,NEXT,0,63154,UY,1,3154,UY,-1
CE,NEXT,0,63154,UZ,1,3154,UZ,-1
CE,NEXT,0,63154,ROTX,1,3154,ROTX,-1

CE,NEXT,0,64154,UX,1,4154,UX,-1
CE,NEXT,0,64154,UY,1,4154,UY,-1
CE,NEXT,0,64154,UZ,1,4154,UZ,-1
CE,NEXT,0,64154,ROTX,1,4154,ROTX,-1

CE,NEXT,0,73153,UX,1,3153,UX,-1
CE,NEXT,0,73153,UY,1,3153,UY,-1
CE,NEXT,0,73153,UZ,1,3153,UZ,-1
CE,NEXT,0,73153,ROTX,1,3153,ROTX,-1

CE,NEXT,0,64153,UX,1,4153,UX,-1
CE,NEXT,0,64153,UY,1,4153,UY,-1
CE,NEXT,0,64153,UZ,1,4153,UZ,-1
CE,NEXT,0,64153,ROTX,1,4153,ROTX,-1

CE,NEXT,0,63152,UX,1,3152,UX,-1
CE,NEXT,0,63152,UY,1,3152,UY,-1
CE,NEXT,0,63152,UZ,1,3152,UZ,-1
CE,NEXT,0,63152,ROTX,1,3152,ROTX,-1

CE,NEXT,0,64152,UX,1,4152,UX,-1
CE,NEXT,0,64152,UY,1,4152,UY,-1
CE,NEXT,0,64152,UZ,1,4152,UZ,-1
CE,NEXT,0,64152,ROTX,1,4152,ROTX,-1

CE,NEXT,0,63151,UX,1,3151,UX,-1
CE,NEXT,0,63151,UY,1,3151,UY,-1
CE,NEXT,0,63151,UZ,1,3151,UZ,-1
CE,NEXT,0,63151,ROTX,1,3151,ROTX,-1

CE,NEXT,0,64151,UX,1,4151,UX,-1
CE,NEXT,0,64151,UY,1,4151,UY,-1
CE,NEXT,0,64151,UZ,1,4151,UZ,-1
CE,NEXT,0,64151,ROTX,1,4151,ROTX,-1

CE,NEXT,0,73150,UX,1,3150,UX,-1
CE,NEXT,0,73150,UY,1,3150,UY,-1
CE,NEXT,0,73150,UZ,1,3150,UZ,-1
CE,NEXT,0,73150,ROTX,1,3150,ROTX,-1

CE,NEXT,0,64150,UX,1,4150,UX,-1
CE,NEXT,0,64150,UY,1,4150,UY,-1
CE,NEXT,0,64150,UZ,1,4150,UZ,-1
CE,NEXT,0,64150,ROTX,1,4150,ROTX,-1

CE,NEXT,0,73149,UX,1,3149,UX,-1
CE,NEXT,0,73149,UY,1,3149,UY,-1
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CE,NEXT,0,73149,UZ,1,3149,UZ,-1
CE,NEXT,0,73149,ROTX,1,3149,ROTX,-1

CE,NEXT,0,64149,UX,1,4149,UX,-1
CE,NEXT,0,64149,UY,1,4149,UY,-1
CE,NEXT,0,64149,UZ,1,4149,UZ,-1
CE,NEXT,0,64149,ROTX,1,4149,ROTX,-1

CE,NEXT,0,83118,UX,1,3118,UX,-1
CE,NEXT,0,83118,UY,1,3118,UY,-1
CE,NEXT,0,83118,UZ,1,3118,UZ,-1
CE,NEXT,0,83118,ROTX,1,3118,ROTX,-1

CE,NEXT,0,74118,UX,1,4118,UX,-1
CE,NEXT,0,74118,UY,1,4118,UY,-1
CE,NEXT,0,74118,UZ,1,4118,UZ,-1
CE,NEXT,0,74118,ROTX,1,4118,ROTX,-1

CE,NEXT,0,84107,UX,1,4107,UX,-1
CE,NEXT,0,84107,UY,1,4107,UY,-1
CE,NEXT,0,84107,UZ,1,4107,UZ,-1
CE,NEXT,0,84107,ROTX,1,4107,ROTX,-1

CE,NEXT,0,75107,UX,1,5107,UX,-1
CE,NEXT,0,75107,UY,1,5107,UY,-1
CE,NEXT,0,75107,UZ,1,5107,UZ,-1
CE,NEXT,0,75107,ROTX,1,5107,ROTX,-1

CE,NEXT,0,74155,UX,1,4155,UX,-1
CE,NEXT,0,74155,UY,1,4155,UY,-1
CE,NEXT,0,74155,UZ,1,4155,UZ,-1
CE,NEXT,0,74155,ROTX,1,4155,ROTX,-1

CE,NEXT,0,65155,UX,1,5155,UX,-1
CE,NEXT,0,65155,UY,1,5155,UY,-1
CE,NEXT,0,65155,UZ,1,5155,UZ,-1
CE,NEXT,0,65155,ROTX,1,5155,ROTX,-1

CE,NEXT,0,74154,UX,1,4154,UX,-1
CE,NEXT,0,74154,UY,1,4154,UY,-1
CE,NEXT,0,74154,UZ,1,4154,UZ,-1
CE,NEXT,0,74154,ROTX,1,4154,ROTX,-1

CE,NEXT,0,65154,UX,1,5154,UX,-1
CE,NEXT,0,65154,UY,1,5154,UY,-1
CE,NEXT,0,65154,UZ,1,5154,UZ,-1
CE,NEXT,0,65154,ROTX,1,5154,ROTX,-1

CE,NEXT,0,74153,UX,1,4153,UX,-1
CE,NEXT,0,74153,UY,1,4153,UY,-1
CE,NEXT,0,74153,UZ,1,4153,UZ,-1
CE,NEXT,0,74153,ROTX,1,4153,ROTX,-1

CE,NEXT,0,65153,UX,1,5153,UX,-1
CE,NEXT,0,65153,UY,1,5153,UY,-1
CE,NEXT,0,65153,UZ,1,5153,UZ,-1
CE,NEXT,0,65153,ROTX,1,5153,ROTX,-1

CE,NEXT,0,74152,UX,1,4152,UX,-1
CE,NEXT,0,74152,UY,1,4152,UY,-1
CE,NEXT,0,74152,UZ,1,4152,UZ,-1
CE,NEXT,0,74152,ROTX,1,4152,ROTX,-1

CE,NEXT,0,65152,UX,1,5152,UX,-1
CE,NEXT,0,65152,UY,1,5152,UY,-1
CE,NEXT,0,65152,UZ,1,5152,UZ,-1
CE,NEXT,0,65152,ROTX,1,5152,ROTX,-1

CE,NEXT,0,74151,UX,1,4151,UX,-1
CE,NEXT,0,74151,UY,1,4151,UY,-1
CE,NEXT,0,74151,UZ,1,4151,UZ,-1
CE,NEXT,0,74151,ROTX,1,4151,ROTX,-1

CE,NEXT,0,65151,UX,1,5151,UX,-1
CE,NEXT,0,65151,UY,1,5151,UY,-1
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CE,NEXT,0,65151,UZ,1,5151,UZ,-1
CE,NEXT,0,65151,ROTX,1,5151,ROTX,-1

CE,NEXT,0,74150,UX,1,4150,UX,-1
CE,NEXT,0,74150,UY,1,4150,UY,-1
CE,NEXT,0,74150,UZ,1,4150,UZ,-1
CE,NEXT,0,74150,ROTX,1,4150,ROTX,-1

CE,NEXT,0,75150,UX,1,5150,UX,-1
CE,NEXT,0,75150,UY,1,5150,UY,-1
CE,NEXT,0,75150,UZ,1,5150,UZ,-1
CE,NEXT,0,75150,ROTX,1,5150,ROTX,-1

CE,NEXT,0,74149,UX,1,4149,UX,-1
CE,NEXT,0,74149,UY,1,4149,UY,-1
CE,NEXT,0,74149,UZ,1,4149,UZ,-1
CE,NEXT,0,74149,ROTX,1,4149,ROTX,-1

CE,NEXT,0,75149,UX,1,5149,UX,-1
CE,NEXT,0,75149,UY,1,5149,UY,-1
CE,NEXT,0,75149,UZ,1,5149,UZ,-1
CE,NEXT,0,75149,ROTX,1,5149,ROTX,-1

CE,NEXT,0,84118,UX,1,4118,UX,-1
CE,NEXT,0,84118,UY,1,4118,UY,-1
CE,NEXT,0,84118,UZ,1,4118,UZ,-1
CE,NEXT,0,84118,ROTX,1,4118,ROTX,-1

CE,NEXT,0,85118,UX,1,5118,UX,-1
CE,NEXT,0,85118,UY,1,5118,UY,-1
CE,NEXT,0,85118,UZ,1,5118,UZ,-1
CE,NEXT,0,85118,ROTX,1,5118,ROTX,-1

CE,NEXT,0,85107,UX,1,5107,UX,-1
CE,NEXT,0,85107,UY,1,5107,UY,-1
CE,NEXT,0,85107,UZ,1,5107,UZ,-1
CE,NEXT,0,85107,ROTX,1,5107,ROTX,-1

CE,NEXT,0,76107,UX,1,6107,UX,-1
CE,NEXT,0,76107,UY,1,6107,UY,-1
CE,NEXT,0,76107,UZ,1,6107,UZ,-1
CE,NEXT,0,76107,ROTX,1,6107,ROTX,-1

CE,NEXT,0,75155,UX,1,5155,UX,-1
CE,NEXT,0,75155,UY,1,5155,UY,-1
CE,NEXT,0,75155,UZ,1,5155,UZ,-1
CE,NEXT,0,75155,ROTX,1,5155,ROTX,-1

CE,NEXT,0,66155,UX,1,6155,UX,-1
CE,NEXT,0,66155,UY,1,6155,UY,-1
CE,NEXT,0,66155,UZ,1,6155,UZ,-1
CE,NEXT,0,66155,ROTX,1,6155,ROTX,-1

CE,NEXT,0,75154,UX,1,5154,UX,-1
CE,NEXT,0,75154,UY,1,5154,UY,-1
CE,NEXT,0,75154,UZ,1,5154,UZ,-1
CE,NEXT,0,75154,ROTX,1,5154,ROTX,-1

CE,NEXT,0,66154,UX,1,6154,UX,-1
CE,NEXT,0,66154,UY,1,6154,UY,-1
CE,NEXT,0,66154,UZ,1,6154,UZ,-1
CE,NEXT,0,66154,ROTX,1,6154,ROTX,-1

CE,NEXT,0,75153,UX,1,5153,UX,-1
CE,NEXT,0,75153,UY,1,5153,UY,-1
CE,NEXT,0,75153,UZ,1,5153,UZ,-1
CE,NEXT,0,75153,ROTX,1,5153,ROTX,-1

CE,NEXT,0,66153,UX,1,6153,UX,-1
CE,NEXT,0,66153,UY,1,6153,UY,-1
CE,NEXT,0,66153,UZ,1,6153,UZ,-1
CE,NEXT,0,66153,ROTX,1,6153,ROTX,-1

CE,NEXT,0,75152,UX,1,5152,UX,-1
CE,NEXT,0,75152,UY,1,5152,UY,-1
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CE,NEXT,0,75152,UZ,1,5152,UZ,-1
CE,NEXT,0,75152,ROTX,1,5152,ROTX,-1

CE,NEXT,0,66152,UX,1,6152,UX,-1
CE,NEXT,0,66152,UY,1,6152,UY,-1
CE,NEXT,0,66152,UZ,1,6152,UZ,-1
CE,NEXT,0,66152,ROTX,1,6152,ROTX,-1

CE,NEXT,0,75151,UX,1,5151,UX,-1
CE,NEXT,0,75151,UY,1,5151,UY,-1
CE,NEXT,0,75151,UZ,1,5151,UZ,-1
CE,NEXT,0,75151,ROTX,1,5151,ROTX,-1

CE,NEXT,0,66151,UX,1,6151,UX,-1
CE,NEXT,0,66151,UY,1,6151,UY,-1
CE,NEXT,0,66151,UZ,1,6151,UZ,-1
CE,NEXT,0,66151,ROTX,1,6151,ROTX,-1

CE,NEXT,0,65150,UX,1,5150,UX,-1
CE,NEXT,0,65150,UY,1,5150,UY,-1
CE,NEXT,0,65150,UZ,1,5150,UZ,-1
CE,NEXT,0,65150,ROTX,1,5150,ROTX,-1

CE,NEXT,0,66150,UX,1,6150,UX,-1
CE,NEXT,0,66150,UY,1,6150,UY,-1
CE,NEXT,0,66150,UZ,1,6150,UZ,-1
CE,NEXT,0,66150,ROTX,1,6150,ROTX,-1

CE,NEXT,0,65149,UX,1,5149,UX,-1
CE,NEXT,0,65149,UY,1,5149,UY,-1
CE,NEXT,0,65149,UZ,1,5149,UZ,-1
CE,NEXT,0,65149,ROTX,1,5149,ROTX,-1

CE,NEXT,0,66149,UX,1,6149,UX,-1
CE,NEXT,0,66149,UY,1,6149,UY,-1
CE,NEXT,0,66149,UZ,1,6149,UZ,-1
CE,NEXT,0,66149,ROTX,1,6149,ROTX,-1

CE,NEXT,0,86107,UX,1,6107,UX,-1
CE,NEXT,0,86107,UY,1,6107,UY,-1
CE,NEXT,0,86107,UZ,1,6107,UZ,-1
CE,NEXT,0,86107,ROTX,1,6107,ROTX,-1

CE,NEXT,0,87107,UX,1,7107,UX,-1
CE,NEXT,0,87107,UY,1,7107,UY,-1
CE,NEXT,0,87107,UZ,1,7107,UZ,-1
CE,NEXT,0,87107,ROTX,1,7107,ROTX,-1

CE,NEXT,0,76155,UX,1,6155,UX,-1
CE,NEXT,0,76155,UY,1,6155,UY,-1
CE,NEXT,0,76155,UZ,1,6155,UZ,-1
CE,NEXT,0,76155,ROTX,1,6155,ROTX,-1

CE,NEXT,0,77155,UX,1,7155,UX,-1
CE,NEXT,0,77155,UY,1,7155,UY,-1
CE,NEXT,0,77155,UZ,1,7155,UZ,-1
CE,NEXT,0,77155,ROTX,1,7155,ROTX,-1

CE,NEXT,0,76154,UX,1,6154,UX,-1
CE,NEXT,0,76154,UY,1,6154,UY,-1
CE,NEXT,0,76154,UZ,1,6154,UZ,-1
CE,NEXT,0,76154,ROTX,1,6154,ROTX,-1

CE,NEXT,0,77154,UX,1,7154,UX,-1
CE,NEXT,0,77154,UY,1,7154,UY,-1
CE,NEXT,0,77154,UZ,1,7154,UZ,-1
CE,NEXT,0,77154,ROTX,1,7154,ROTX,-1

CE,NEXT,0,76153,UX,1,6153,UX,-1
CE,NEXT,0,76153,UY,1,6153,UY,-1
CE,NEXT,0,76153,UZ,1,6153,UZ,-1
CE,NEXT,0,76153,ROTX,1,6153,ROTX,-1

CE,NEXT,0,77153,UX,1,7153,UX,-1
CE,NEXT,0,77153,UY,1,7153,UY,-1
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CE,NEXT,0,77153,UZ,1,7153,UZ,-1
CE,NEXT,0,77153,ROTX,1,7153,ROTX,-1

CE,NEXT,0,76152,UX,1,6152,UX,-1
CE,NEXT,0,76152,UY,1,6152,UY,-1
CE,NEXT,0,76152,UZ,1,6152,UZ,-1
CE,NEXT,0,76152,ROTX,1,6152,ROTX,-1

CE,NEXT,0,77152,UX,1,7152,UX,-1
CE,NEXT,0,77152,UY,1,7152,UY,-1
CE,NEXT,0,77152,UZ,1,7152,UZ,-1
CE,NEXT,0,77152,ROTX,1,7152,ROTX,-1

CE,NEXT,0,76151,UX,1,6151,UX,-1
CE,NEXT,0,76151,UY,1,6151,UY,-1
CE,NEXT,0,76151,UZ,1,6151,UZ,-1
CE,NEXT,0,76151,ROTX,1,6151,ROTX,-1

CE,NEXT,0,77151,UX,1,7151,UX,-1
CE,NEXT,0,77151,UY,1,7151,UY,-1
CE,NEXT,0,77151,UZ,1,7151,UZ,-1
CE,NEXT,0,77151,ROTX,1,7151,ROTX,-1

CE,NEXT,0,76150,UX,1,6150,UX,-1
CE,NEXT,0,76150,UY,1,6150,UY,-1
CE,NEXT,0,76150,UZ,1,6150,UZ,-1
CE,NEXT,0,76150,ROTX,1,6150,ROTX,-1

CE,NEXT,0,77150,UX,1,7150,UX,-1
CE,NEXT,0,77150,UY,1,7150,UY,-1
CE,NEXT,0,77150,UZ,1,7150,UZ,-1
CE,NEXT,0,77150,ROTX,1,7150,ROTX,-1

CE,NEXT,0,76149,UX,1,6149,UX,-1
CE,NEXT,0,76149,UY,1,6149,UY,-1
CE,NEXT,0,76149,UZ,1,6149,UZ,-1
CE,NEXT,0,76149,ROTX,1,6149,ROTX,-1

CE,NEXT,0,77149,UX,1,7149,UX,-1
CE,NEXT,0,77149,UY,1,7149,UY,-1
CE,NEXT,0,77149,UZ,1,7149,UZ,-1
CE,NEXT,0,77149,ROTX,1,7149,ROTX,-1

CE,NEXT,0,77107,UX,1,7107,UX,-1
CE,NEXT,0,77107,UY,1,7107,UY,-1
CE,NEXT,0,77107,UZ,1,7107,UZ,-1
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CE,NEXT,0,78107,UX,1,8107,UX,-1
CE,NEXT,0,78107,UY,1,8107,UY,-1
CE,NEXT,0,78107,UZ,1,8107,UZ,-1
CE,NEXT,0,78107,ROTX,1,8107,ROTX,-1

CE,NEXT,0,67155,UX,1,7155,UX,-1
CE,NEXT,0,67155,UY,1,7155,UY,-1
CE,NEXT,0,67155,UZ,1,7155,UZ,-1
CE,NEXT,0,67155,ROTX,1,7155,ROTX,-1

CE,NEXT,0,68155,UX,1,8155,UX,-1
CE,NEXT,0,68155,UY,1,8155,UY,-1
CE,NEXT,0,68155,UZ,1,8155,UZ,-1
CE,NEXT,0,68155,ROTX,1,8155,ROTX,-1

CE,NEXT,0,67154,UX,1,7154,UX,-1
CE,NEXT,0,67154,UY,1,7154,UY,-1
CE,NEXT,0,67154,UZ,1,7154,UZ,-1
CE,NEXT,0,67154,ROTX,1,7154,ROTX,-1

CE,NEXT,0,68154,UX,1,8154,UX,-1
CE,NEXT,0,68154,UY,1,8154,UY,-1
CE,NEXT,0,68154,UZ,1,8154,UZ,-1
CE,NEXT,0,68154,ROTX,1,8154,ROTX,-1

CE,NEXT,0,67153,UX,1,7153,UX,-1
CE,NEXT,0,67153,UY,1,7153,UY,-1
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CE,NEXT,0,67153,UZ,1,7153,UZ,-1
CE,NEXT,0,67153,ROTX,1,7153,ROTX,-1

CE,NEXT,0,68153,UX,1,8153,UX,-1
CE,NEXT,0,68153,UY,1,8153,UY,-1
CE,NEXT,0,68153,UZ,1,8153,UZ,-1
CE,NEXT,0,68153,ROTX,1,8153,ROTX,-1

CE,NEXT,0,67152,UX,1,7152,UX,-1
CE,NEXT,0,67152,UY,1,7152,UY,-1
CE,NEXT,0,67152,UZ,1,7152,UZ,-1
CE,NEXT,0,67152,ROTX,1,7152,ROTX,-1

CE,NEXT,0,78152,UX,1,8152,UX,-1
CE,NEXT,0,78152,UY,1,8152,UY,-1
CE,NEXT,0,78152,UZ,1,8152,UZ,-1
CE,NEXT,0,78152,ROTX,1,8152,ROTX,-1

CE,NEXT,0,67151,UX,1,7151,UX,-1
CE,NEXT,0,67151,UY,1,7151,UY,-1
CE,NEXT,0,67151,UZ,1,7151,UZ,-1
CE,NEXT,0,67151,ROTX,1,7151,ROTX,-1

CE,NEXT,0,68151,UX,1,8151,UX,-1
CE,NEXT,0,68151,UY,1,8151,UY,-1
CE,NEXT,0,68151,UZ,1,8151,UZ,-1
CE,NEXT,0,68151,ROTX,1,8151,ROTX,-1

CE,NEXT,0,67150,UX,1,7150,UX,-1
CE,NEXT,0,67150,UY,1,7150,UY,-1
CE,NEXT,0,67150,UZ,1,7150,UZ,-1
CE,NEXT,0,67150,ROTX,1,7150,ROTX,-1

CE,NEXT,0,68150,UX,1,8150,UX,-1
CE,NEXT,0,68150,UY,1,8150,UY,-1
CE,NEXT,0,68150,UZ,1,8150,UZ,-1
CE,NEXT,0,68150,ROTX,1,8150,ROTX,-1

CE,NEXT,0,67149,UX,1,7149,UX,-1
CE,NEXT,0,67149,UY,1,7149,UY,-1
CE,NEXT,0,67149,UZ,1,7149,UZ,-1
CE,NEXT,0,67149,ROTX,1,7149,ROTX,-1

CE,NEXT,0,68149,UX,1,8149,UX,-1
CE,NEXT,0,68149,UY,1,8149,UY,-1
CE,NEXT,0,68149,UZ,1,8149,UZ,-1
CE,NEXT,0,68149,ROTX,1,8149,ROTX,-1

CE,NEXT,0,87118,UX,1,7118,UX,-1
CE,NEXT,0,87118,UY,1,7118,UY,-1
CE,NEXT,0,87118,UZ,1,7118,UZ,-1
CE,NEXT,0,87118,ROTX,1,7118,ROTX,-1

CE,NEXT,0,78118,UX,1,8118,UX,-1
CE,NEXT,0,78118,UY,1,8118,UY,-1
CE,NEXT,0,78118,UZ,1,8118,UZ,-1
CE,NEXT,0,78118,ROTX,1,8118,ROTX,-1

CE,NEXT,0,70181,UX,1,181,UX,-1
CE,NEXT,0,70181,UY,1,181,UY,-1
CE,NEXT,0,70181,UZ,1,181,UZ,-1
CE,NEXT,0,70181,ROTX,1,181,ROTX,-1

CE,NEXT,0,70155,UX,1,155,UX,-1
CE,NEXT,0,70155,UY,1,155,UY,-1
CE,NEXT,0,70155,UZ,1,155,UZ,-1
CE,NEXT,0,70155,ROTX,1,155,ROTX,-1

CE,NEXT,0,70180,UX,1,180,UX,-1
CE,NEXT,0,70180,UY,1,180,UY,-1
CE,NEXT,0,70180,UZ,1,180,UZ,-1
CE,NEXT,0,70180,ROTX,1,180,ROTX,-1

CE,NEXT,0,70154,UX,1,154,UX,-1
CE,NEXT,0,70154,UY,1,154,UY,-1
```

```
CE,NEXT,0,70154,UZ,1,154,UZ,-1
CE,NEXT,0,70154,ROTX,1,154,ROTX,-1

CE,NEXT,0,70179,UX,1,179,UX,-1
CE,NEXT,0,70179,UY,1,179,UY,-1
CE,NEXT,0,70179,UZ,1,179,UZ,-1
CE,NEXT,0,70179,ROTX,1,179,ROTX,-1

CE,NEXT,0,70153,UX,1,153,UX,-1
CE,NEXT,0,70153,UY,1,153,UY,-1
CE,NEXT,0,70153,UZ,1,153,UZ,-1
CE,NEXT,0,70153,ROTX,1,153,ROTX,-1

CE,NEXT,0,70178,UX,1,178,UX,-1
CE,NEXT,0,70178,UY,1,178,UY,-1
CE,NEXT,0,70178,UZ,1,178,UZ,-1
CE,NEXT,0,70178,ROTX,1,178,ROTX,-1

CE,NEXT,0,70152,UX,1,152,UX,-1
CE,NEXT,0,70152,UY,1,152,UY,-1
CE,NEXT,0,70152,UZ,1,152,UZ,-1
CE,NEXT,0,70152,ROTX,1,152,ROTX,-1

CE,NEXT,0,70177,UX,1,177,UX,-1
CE,NEXT,0,70177,UY,1,177,UY,-1
CE,NEXT,0,70177,UZ,1,177,UZ,-1
CE,NEXT,0,70177,ROTX,1,177,ROTX,-1

CE,NEXT,0,70151,UX,1,151,UX,-1
CE,NEXT,0,70151,UY,1,151,UY,-1
CE,NEXT,0,70151,UZ,1,151,UZ,-1
CE,NEXT,0,70151,ROTX,1,151,ROTX,-1

CE,NEXT,0,70176,UX,1,176,UX,-1
CE,NEXT,0,70176,UY,1,176,UY,-1
CE,NEXT,0,70176,UZ,1,176,UZ,-1
CE,NEXT,0,70176,ROTX,1,176,ROTX,-1

CE,NEXT,0,70150,UX,1,150,UX,-1
CE,NEXT,0,70150,UY,1,150,UY,-1
CE,NEXT,0,70150,UZ,1,150,UZ,-1
CE,NEXT,0,70150,ROTX,1,150,ROTX,-1

CE,NEXT,0,70175,UX,1,175,UX,-1
CE,NEXT,0,70175,UY,1,175,UY,-1
CE,NEXT,0,70175,UZ,1,175,UZ,-1
CE,NEXT,0,70175,ROTX,1,175,ROTX,-1

CE,NEXT,0,70149,UX,1,149,UX,-1
CE,NEXT,0,70149,UY,1,149,UY,-1
CE,NEXT,0,70149,UZ,1,149,UZ,-1
CE,NEXT,0,70149,ROTX,1,149,ROTX,-1

CE,NEXT,0,68109,UX,1,8109,UX,-1
CE,NEXT,0,68109,UY,1,8109,UY,-1
CE,NEXT,0,68109,UZ,1,8109,UZ,-1
CE,NEXT,0,68109,ROTX,1,8109,ROTX,-1

CE,NEXT,0,77109,UX,1,7109,UX,-1
CE,NEXT,0,77109,UY,1,7109,UY,-1
CE,NEXT,0,77109,UZ,1,7109,UZ,-1
CE,NEXT,0,77109,ROTX,1,7109,ROTX,-1

CE,NEXT,0,74109,UX,1,4109,UX,-1
CE,NEXT,0,74109,UY,1,4109,UY,-1
CE,NEXT,0,74109,UZ,1,4109,UZ,-1
CE,NEXT,0,74109,ROTX,1,4109,ROTX,-1

CE,NEXT,0,73109,UX,1,3109,UX,-1
CE,NEXT,0,73109,UY,1,3109,UY,-1
CE,NEXT,0,73109,UZ,1,3109,UZ,-1
CE,NEXT,0,73109,ROTX,1,3109,ROTX,-1

CE,NEXT,0,74120,UX,1,4120,UX,-1
CE,NEXT,0,74120,UY,1,4120,UY,-1
```

```
CE,NEXT,0,74120,UZ,1,4120,UZ,-1
CE,NEXT,0,74120,ROTX,1,4120,ROTX,-1

CE,NEXT,0,73120,UX,1,3120,UX,-1
CE,NEXT,0,73120,UY,1,3120,UY,-1
CE,NEXT,0,73120,UZ,1,3120,UZ,-1
CE,NEXT,0,73120,ROTX,1,3120,ROTX,-1


CE,NEXT,0,9,UY,1,60009,UY,-1

CE,NEXT,0,20,UY,1,60020,UY,-1

CE,NEXT,0,108,UY,1,60108,UY,-1

CE,NEXT,0,119,UY,1,60119,UY,-1

CE,NEXT,0,1108,UY,1,61108,UY,-1

CE,NEXT,0,1119,UY,1,61119,UY,-1

CE,NEXT,0,2108,UY,1,62108,UY,-1

CE,NEXT,0,2119,UY,1,62119,UY,-1

CE,NEXT,0,3108,UY,1,63108,UY,-1

CE,NEXT,0,3119,UY,1,63119,UY,-1

CE,NEXT,0,4108,UY,1,64108,UY,-1

CE,NEXT,0,4119,UY,1,64119,UY,-1

CE,NEXT,0,5108,UY,1,65108,UY,-1

CE,NEXT,0,5119,UY,1,65119,UY,-1

CE,NEXT,0,6108,UY,1,66108,UY,-1

CE,NEXT,0,7108,UY,1,67108,UY,-1

CE,NEXT,0,7119,UY,1,67119,UY,-1

CE,NEXT,0,8108,UY,1,68108,UY,-1

CE,NEXT,0,8119,UY,1,68119,UY,-1

! DEFINE SUPPORTS BASED ON NODES

D,1,UX,0
D,1,UY,0
D,1,UZ,0
D,1,ROTX,0
D,1,ROTY,0

D,12,UX,0
D,12,UY,0
D,12,UZ,0
D,12,ROTX,0
D,12,ROTY,0

D,101,UX,0
D,101,UY,0
D,101,UZ,0
D,101,ROTX,0
D,101,ROTY,0

D,111,UX,0
D,111,UY,0
D,111,UZ,0
D,111,ROTX,0
D,111,ROTY,0

D,30112,UX,0
D,30112,UY,0
```

D,30112,UZ,0
D,30112,ROTX,0
D,30112,ROTY,0
D,30112,ROTZ,0

D,123,UX,0
D,123,UY,0
D,123,UZ,0
D,123,ROTY,0

D,1101,UX,0
D,1101,UY,0
D,1101,UZ,0
D,1101,ROTX,0
D,1101,ROTY,0

D,1111,UX,0
D,1111,UY,0
D,1111,UZ,0
D,1111,ROTX,0
D,1111,ROTY,0

D,31112,UX,0
D,31112,UY,0
D,31112,UZ,0
D,31112,ROTX,0
D,31112,ROTY,0
D,31112,ROTZ,0

D,1123,UX,0
D,1123,UY,0
D,1123,UZ,0
D,1123,ROTY,0

D,2101,UX,0
D,2101,UY,0
D,2101,UZ,0
D,2101,ROTX,0
D,2101,ROTY,0

D,2111,UX,0
D,2111,UY,0
D,2111,UZ,0
D,2111,ROTX,0
D,2111,ROTY,0

D,2122,UX,0
D,2122,UY,0
D,2122,UZ,0
D,2122,ROTY,0

D,32112,UX,0
D,32112,UY,0
D,32112,UZ,0
D,32112,ROTX,0
D,32112,ROTY,0
D,32112,ROTZ,0

D,2123,UX,0
D,2123,UY,0
D,2123,UZ,0
D,2123,ROTY,0

D,3101,UX,0
D,3101,UY,0
D,3101,UZ,0
D,3101,ROTX,0
D,3101,ROTY,0

D,3111,UX,0
D,3111,UY,0
D,3111,UZ,0
D,3111,ROTX,0
D,3111,ROTY,0

D,33112,UX,0
D,33112,UY,0
D,33112,UZ,0
D,33112,ROTX,0
D,33112,ROTY,0
D,33112,ROTZ,0

D,3123,UX,0
D,3123,UY,0
D,3123,UZ,0
D,3123,ROTY,0

D,4101,UX,0
D,4101,UY,0
D,4101,UZ,0
D,4101,ROTX,0
D,4101,ROTY,0

D,4111,UX,0
D,4111,UY,0
D,4111,UZ,0
D,4111,ROTX,0
D,4111,ROTY,0

D,5101,UX,0
D,5101,UY,0
D,5101,UZ,0
D,5101,ROTX,0
D,5101,ROTY,0

D,5111,UX,0
D,5111,UY,0
D,5111,UZ,0
D,5111,ROTX,0
D,5111,ROTY,0

D,5112,UZ,0

D,6101,UX,0
D,6101,UY,0
D,6101,UZ,0
D,6101,ROTY,0

D,7101,UX,0
D,7101,UY,0
D,7101,UZ,0
D,7101,ROTX,0
D,7101,ROTY,0

D,7111,UX,0
D,7111,UY,0
D,7111,UZ,0
D,7111,ROTX,0
D,7111,ROTY,0

D,8100,UX,0
D,8100,UY,0
D,8100,UZ,0
D,8100,ROTY,0

D,8101,UX,0
D,8101,UY,0
D,8101,UZ,0
D,8101,ROTX,0
D,8101,ROTY,0

D,8111,UX,0
D,8111,UY,0
D,8111,UZ,0
D,8111,ROTX,0
D,8111,ROTY,0

D,8156,UX,0
D,8156,UY,0

```
D,8156,UZ,0
D,8156,ROTY,0
D,8156,ROTZ,0

D,8157,UX,0
D,8157,UY,0
D,8157,UZ,0
D,8157,ROTY,0
D,8157,ROTZ,0

/SOLU

!  Dead Load

FCUM,ADD,1,1      ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER


ACEL,0,GRAV,0                                                                    ! THIS
COMMAND ESTABLISHES THE DIRECTION AND FORCE FOR GRAVITY,
!                    USED FOR BUILDING DEAD LOAD

lswrite,1              ! Write dead load to file


LSSOLVE,1,1,1          ! SOLVE MODEL FOR STADIC LOADS STEEL DEAD LOAD ONLY



FINISH


/out,Rev1_P1_modal,out
! CALCULATE THE MODAL SOLUTIONS TO FIND MODE SHAPES


/SOLU
ALLSEL,ALL
!*
ANTYPE,2
!*
!*
MODOPT,LANB,300
EQSLV,SPAR
MXPAND,300, , ,0
LUMPM,1
PSTRES,0
!*
MODOPT,LANB,300,0,34, ,OFF

/STATUS,SOLU

SOLVE
/out
FINISH
```

Attachment 12

ANSYS Coupled Building/Crane Model, Crane at S, Modal Analysis

```
/BATCH
/FILENAME, PGCR045
!/CWD,'C:\Documents and Settings\mkeeney\Desktop\MCK_ANSYS\Ansys\output'
/TITLE,Auxzilary Building Modifications
/PREP7

! The units for this model are INCHES POUNDS SECONDS.
! The nodal coordinates are a direct copy of the GT STRDL model.
! The node numbers match the original model were possible.


! DEFINE NODE LOCATIONS

N,1,0,0,0
N,2,0,489.96,0
N,3,0,844.08,0
N,4,0,852,0
N,5,0,852,11
N,6,0,860.04,11
N,7,0,870.6,11
N,8,0,1065.96,11
N,9,0,852,-12
N,10,0,870.6,-12
N,12,0,0,-576
N,13,0,489.96,-576
N,14,0,844.08,-576
N,15,0,852,-576
N,16,0,852,-587
N,17,0,860.04,-587
N,18,0,870.6,-587
N,19,0,1065.96,-587
N,20,0,852,-564
N,21,0,870.6,-564
N,23,0,288,-336
N,24,0,489.96,-504
N,25,0,489.96,-432
N,26,0,489.96,-360
N,27,0,489.96,-288
N,28,0,489.96,-216
N,29,0,489.96,-144
N,30,0,489.96,-72
N,31,0,672,-432
N,32,0,672,-288
N,33,0,672,-144
N,34,0,844.08,-288
N,35,0,1065.96,-512
N,36,0,1065.96,-437
N,37,0,1065.96,-362
N,38,0,1065.96,-288
N,39,0,1065.96,-214
N,40,0,1065.96,-139
N,41,0,1065.96,-64
N,101,432,288,0
N,102,432,489.96,0
N,103,432,852,0
N,104,432,852,11
N,105,432,860.04,11
N,106,432,870.6,11
N,107,432,1065.96,11
N,108,432,852,-12
N,109,432,870.6,-12
N,111,432,288,-576
N,112,432,489.96,-576
N,113,432,573,-576
N,114,432,852,-576
N,115,432,852,-587
N,116,432,860.04,-587
N,117,432,870.6,-587
N,118,432,1065.96,-587
N,119,432,852,-564
N,120,432,870.6,-564
N,123,432,288,-288
N,124,216,489.96,-576
```

N,125,216,489.96,-504
N,126,216,489.96,-432
N,127,216,489.96,-360
N,128,216,489.96,-288
N,129,216,489.96,-216
N,130,216,489.96,-144
N,131,216,489.96,-72
N,132,216,489.96,0
N,133,336,489.96,-576
N,134,336,489.96,-504
N,135,336,489.96,-432
N,136,336,489.96,-360
N,137,336,489.96,-288
N,138,336,489.96,-216
N,139,336,489.96,-144
N,140,336,489.96,-72
N,141,336,489.96,0
N,142,432,489.96,-504
N,143,432,489.96,-432
N,144,432,489.96,-360
N,145,432,489.96,-288
N,146,432,489.96,-216
N,147,432,489.96,-144
N,148,432,489.96,-72
N,149,432,1065.96,-512
N,150,432,1065.96,-437
N,151,432,1065.96,-362
N,152,432,1065.96,-288
N,153,432,1065.96,-214
N,154,432,1065.96,-139
N,155,432,1065.96,-64
N,174,216,1065.96,-587
N,175,216,1065.96,-512
N,176,216,1065.96,-437
N,177,216,1065.96,-362
N,178,216,1065.96,-288
N,179,216,1065.96,-214
N,180,216,1065.96,-139
N,181,216,1065.96,-64
N,182,216,1065.96,11
N,183,577.5,573,-576
N,1101,723,288,0
N,1102,723,489.96,0
N,1103,723,852,0
N,1104,723,852,11
N,1105,723,860.04,11
N,1106,723,870.6,11
N,1107,723,1065.96,11
N,1108,723,852,-12
N,1109,723,870.6,-12
N,1111,723,288,-576
N,1112,723,489.96,-576
N,1113,723,573,-576
N,1114,723,852,-576
N,1115,723,852,-587
N,1116,723,860.04,-587
N,1117,723,870.6,-587
N,1118,723,1065.96,-587
N,1119,723,852,-564
N,1120,723,870.6,-564
N,1123,723,288,-288
N,1142,723,489.96,-504
N,1143,723,489.96,-432
N,1144,723,489.96,-360
N,1145,723,489.96,-288
N,1146,723,489.96,-216
N,1147,723,489.96,-144
N,1148,723,489.96,-72
N,1149,723,1065.96,-512
N,1150,723,1065.96,-437
N,1151,723,1065.96,-362
N,1152,723,1065.96,-288
N,1153,723,1065.96,-214
N,1154,723,1065.96,-139
N,1155,723,1065.96,-64

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N,2101,1014,288,0
N,2102,1014,489.96,0
N,2103,1014,852,0
N,2104,1014,852,11
N,2105,1014,860.04,11
N,2106,1014,870.6,11
N,2107,1014,1065.96,11
N,2108,1014,852,-12
N,2109,1014,870.6,-12
N,2111,1014,288,-576
N,2112,1014,489.96,-576
N,2113,1014,573,-576
N,2114,1014,852,-576
N,2115,1014,852,-587
N,2116,1014,860.04,-587
N,2117,1014,870.6,-587
N,2118,1014,1065.96,-587
N,2119,1014,852,-564
N,2120,1014,870.6,-564
N,2122,1159.5,288,-587
N,2123,1014,288,-288
N,2124,1118.52,489.96,0
N,2125,1118.52,489.96,-72
N,2126,1159.5,489.96,-72
N,2127,1159.5,489.96,0
N,2142,1014,489.96,-504
N,2143,1014,489.96,-432
N,2144,1014,489.96,-360
N,2145,1014,489.96,-288
N,2146,1014,489.96,-216
N,2147,1014,489.96,-144
N,2148,1014,489.96,-72
N,2149,1014,1065.96,-512
N,2150,1014,1065.96,-437
N,2151,1014,1065.96,-362
N,2152,1014,1065.96,-288
N,2153,1014,1065.96,-214
N,2154,1014,1065.96,-139
N,2155,1014,1065.96,-64
N,2156,1159.5,489.96,-587
N,2157,1159.5,489.96,-504
N,2158,1159.5,489.96,-432
N,3100,1305,459.96,0
N,3101,1305,288,0
N,3102,1305,489.96,0
N,3103,1305,852,0
N,3104,1305,852,11
N,3105,1305,860.04,11
N,3106,1305,870.6,11
N,3107,1305,1065.96,11
N,3108,1305,852,-12
N,3109,1305,870.6,-12
N,3111,1305,288,-576
N,3112,1305,489.96,-576
N,3113,1305,573,-576
N,3114,1305,852,-576
N,3115,1305,852,-587
N,3116,1305,860.04,-587
N,3117,1305,870.6,-587
N,3118,1305,1065.96,-587
N,3119,1305,852,-564
N,3120,1305,870.6,-564
N,3121,1159.5,860.04,-587
N,3123,1305,288,-288
N,3142,1305,489.96,-504
N,3143,1305,489.96,-432
N,3144,1305,489.96,-360
N,3145,1305,489.96,-288
N,3146,1305,489.96,-216
N,3147,1305,489.96,-144
N,3148,1305,489.96,-72
N,3149,1305,1065.96,-512
N,3150,1305,1065.96,-437
N,3151,1305,1065.96,-362
N,3152,1305,1065.96,-288
```

N,3153,1305,1065.96,-214
N,3154,1305,1065.96,-139
N,3155,1305,1065.96,-64
N,3156,1437,489.96,-576
N,3157,1437,489.96,-504
N,3158,1437,489.96,-432
N,3159,1437,489.96,-360
N,3160,1437,489.96,-288
N,3161,1437,489.96,-216
N,3162,1437,489.96,-144
N,3163,1437,489.96,-72
N,3164,1437,489.96,0
N,3165,1437,459.96,0
N,4100,1578,459.96,0
N,4101,1578,288,0
N,4102,1578,489.96,0
N,4103,1578,852,0
N,4104,1578,852,11
N,4105,1578,860.04,11
N,4106,1578,870.6,11
N,4107,1578,1065.96,11
N,4108,1578,852,-12
N,4109,1578,870.6,-12
N,4111,1578,288,-576
N,4112,1578,489.96,-576
N,4113,1578,573,-576
N,4114,1578,852,-576
N,4115,1578,852,-587
N,4116,1578,860.04,-587
N,4117,1578,870.6,-587
N,4118,1578,1065.96,-587
N,4119,1578,852,-564
N,4120,1578,870.6,-564
N,4122,1578,971.04,-587
N,4149,1578,1065.96,-512
N,4150,1578,1065.96,-437
N,4151,1578,1065.96,-362
N,4152,1578,1065.96,-288
N,4153,1578,1065.96,-214
N,4154,1578,1065.96,-139
N,4155,1578,1065.96,-64
N,4156,1717.5,971.04,-587
N,5100,1857,459.96,0
N,5101,1857,288,0
N,5102,1857,489.96,0
N,5103,1857,852,0
N,5104,1857,852,11
N,5105,1857,860.04,11
N,5106,1857,870.6,11
N,5107,1857,1065.96,11
N,5108,1857,852,-12
N,5109,1857,870.6,-12
N,5111,1857,288,-576
N,5112,1857,489.96,-576
N,5113,1857,573,-576
N,5114,1857,852,-576
N,5115,1857,852,-587
N,5116,1857,860.04,-587
N,5117,1857,870.6,-587
N,5118,1857,1065.96,-587
N,5119,1857,852,-564
N,5120,1857,870.6,-564
N,5122,1857,971.04,-587
N,5123,1717.5,573,-576
N,5149,1857,1065.96,-512
N,5150,1857,1065.96,-437
N,5151,1857,1065.96,-362
N,5152,1857,1065.96,-288
N,5153,1857,1065.96,-214
N,5154,1857,1065.96,-139
N,5155,1857,1065.96,-64
N,5187,1857,489.96,-504
N,5188,1857,489.96,-432
N,5189,1857,489.96,-360
N,5190,1857,489.96,-288

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N,5191,1857,489.96,-216
N,5192,1857,489.96,-144
N,5193,1857,489.96,-72
N,6101,2097,516,0
N,6103,2097,852,0
N,6104,2097,852,11
N,6105,2097,860.04,11
N,6106,2097,870.6,11
N,6107,2097,1065.96,11
N,6108,2097,852,-12
N,6109,2097,870.6,-12
N,6118,2097,1065.96,-587
N,6149,2097,1065.96,-512
N,6150,2097,1065.96,-437
N,6151,2097,1065.96,-362
N,6152,2097,1065.96,-288
N,6153,2097,1065.96,-214
N,6154,2097,1065.96,-139
N,6155,2097,1065.96,-64
N,7101,2301,516,0
N,7103,2301,852,0
N,7104,2301,852,11
N,7105,2301,860.04,11
N,7106,2301,870.6,11
N,7107,2301,1065.96,11
N,7108,2301,852,-12
N,7109,2301,870.6,-12
N,7111,2301,516,-576
N,7114,2301,852,-576
N,7115,2301,852,-587
N,7116,2301,860.04,-587
N,7117,2301,870.6,-587
N,7118,2301,1065.96,-587
N,7119,2301,852,-564
N,7120,2301,870.6,-564
N,7122,2301,971.04,-587
N,7149,2301,1065.96,-512
N,7150,2301,1065.96,-437
N,7151,2301,1065.96,-362
N,7152,2301,1065.96,-288
N,7153,2301,1065.96,-214
N,7154,2301,1065.96,-139
N,7155,2301,1065.96,-64
N,8100,2505,516,-288
N,8101,2505,516,0
N,8103,2505,852,0
N,8104,2505,852,11
N,8105,2505,860.04,11
N,8106,2505,870.6,11
N,8107,2505,1065.96,11
N,8108,2505,852,-12
N,8109,2505,870.6,-12
N,8111,2505,516,-576

N,8112,2505,849.98,-288     ! NEW NODE FOR MODAL ANALISYS MCK 9/22/10

N,8114,2505,852,-576
N,8115,2505,852,-587
N,8116,2505,860.04,-587
N,8117,2505,870.6,-587
N,8118,2505,1065.96,-587
N,8119,2505,852,-564
N,8120,2505,870.6,-564
N,8149,2505,1065.96,-512
N,8150,2505,1065.96,-437
N,8151,2505,1065.96,-362
N,8152,2505,1065.96,-288
N,8153,2505,1065.96,-214
N,8154,2505,1065.96,-139
N,8155,2505,1065.96,-64
N,8156,432,288,-932
N,8157,1578,288,-900
N,21740,1159.5,573,-587
N,81660,2505,971.04,-587
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!
!   Added runway girder nodes
!   Replace "CNR" with on node numbers starting at 10000.
N,10101,2241,870.6,-564
N,10102,2187,870.6,-564
N,10103,2019,870.6,-564
N,10104,1965,870.6,-564
N,10113,2241,870.6,-12
N,10114,2187,870.6,-12
N,10115,2019,870.6,-12
N,10116,1965,870.6,-12
N,10201,2139,870.6,-564
N,10202,2085,870.6,-564
N,10203,1917,870.6,-564
N,10204,1863,870.6,-564
N,10213,2139,870.6,-12
N,10214,2085,870.6,-12
N,10215,1917,870.6,-12
N,10216,1863,870.6,-12
N,10301,2106,870.6,-564
N,10302,2052,870.6,-564
N,10303,1884,870.6,-564
N,10304,1830,870.6,-564
N,10313,2106,870.6,-12
N,10314,2052,870.6,-12
N,10315,1884,870.6,-12
N,10316,1830,870.6,-12
N,10401,1296,870.6,-564
N,10402,1242,870.6,-564
N,10403,1074,870.6,-564
N,10404,1020,870.6,-564
N,10413,1296,870.6,-12
N,10414,1242,870.6,-12
N,10415,1074,870.6,-12
N,10416,1020,870.6,-12
N,10501,1263,870.6,-564
N,10502,1209,870.6,-564
N,10503,1041,870.6,-564
N,10504,987,870.6,-564
N,10513,1263,870.6,-12
N,10514,1209,870.6,-12
N,10515,1041,870.6,-12
N,10516,987,870.6,-12
N,10601,1173,870.6,-564
N,10602,1119,870.6,-564
N,10603,951,870.6,-564
N,10604,897,870.6,-564
N,10613,1173,870.6,-12
N,10614,1119,870.6,-12
N,10615,951,870.6,-12
N,10616,897,870.6,-12
N,10701,459,870.6,-564
N,10702,405,870.6,-564
N,10703,237,870.6,-564
N,10704,183,870.6,-564
N,10713,459,870.6,-12
N,10714,405,870.6,-12
N,10715,237,870.6,-12
N,10716,183,870.6,-12
N,10801,372,870.6,-564
N,10802,318,870.6,-564
N,10803,150,870.6,-564
N,10804,96,870.6,-564
N,10813,372,870.6,-12
N,10814,318,870.6,-12
N,10815,150,870.6,-12
N,10816,96,870.6,-12
N,10901,303,870.6,-564
N,10902,249,870.6,-564
N,10903,81,870.6,-564
N,10904,27,870.6,-564
N,10913,303,870.6,-12
N,10914,249,870.6,-12
N,10915,81,870.6,-12
N,10916,27,870.6,-12
```

```
!
!  Added crane nodes
!  Replace "CN" with on nodes numbers starting at 11000
N,11001,345,946.1,-12
N,11002,345,946.1,-238.38
N,11003,345,946.1,-21.96
N,11004,345,946.1,-31.91
N,11005,345,946.1,-41.87
N,11006,345,946.1,-51.83
N,11007,345,946.1,-61.78
N,11008,345,946.1,-71.74
N,11009,345,946.1,-81.7
N,11010,345,946.1,-91.65
N,11011,345,946.1,-101.61
N,11012,345,946.1,-111.57
N,11013,345,946.1,-121.52
N,11014,345,946.1,-131.48
N,11015,345,946.1,-141.43
N,11016,345,946.1,-151.39
N,11017,345,946.1,-161.35
N,11018,345,946.1,-171.3
N,11019,345,946.1,-181.26
N,11020,345,946.1,-191.22
N,11021,345,946.1,-201.17
N,11022,345,946.1,-211.13
N,11023,345,946.1,-221.09
N,11024,345,946.1,-231.04
N,11025,345,946.1,-564
N,11026,345,946.1,-332.38
N,11027,345,946.1,-554.04
N,11028,345,946.1,-544.09
N,11029,345,946.1,-534.13
N,11030,345,946.1,-524.17
N,11031,345,946.1,-514.22
N,11032,345,946.1,-504.26
N,11033,345,946.1,-494.3
N,11034,345,946.1,-484.35
N,11035,345,946.1,-474.39
N,11036,345,946.1,-464.43
N,11037,345,946.1,-454.48
N,11038,345,946.1,-444.52
N,11039,345,946.1,-434.57
N,11040,345,946.1,-424.61
N,11041,345,946.1,-414.65
N,11042,345,946.1,-404.7
N,11043,345,946.1,-394.73913
N,11044,345,946.1,-384.78
N,11045,345,946.1,-374.83
N,11046,345,946.1,-364.87
N,11047,345,946.1,-354.91
N,11048,345,946.1,-344.96
N,11049,123,946.1,-12
N,11050,123,946.1,-238.38
N,11051,123,946.1,-21.96
N,11052,123,946.1,-31.91
N,11053,123,946.1,-41.87
N,11054,123,946.1,-51.83
N,11055,123,946.1,-61.78
N,11056,123,946.1,-71.74
N,11057,123,946.1,-81.7
N,11058,123,946.1,-91.65
N,11059,123,946.1,-101.61
N,11060,123,946.1,-111.57
N,11061,123,946.1,-121.52
N,11062,123,946.1,-131.48
N,11063,123,946.1,-141.43
N,11064,123,946.1,-151.39
N,11065,123,946.1,-161.35
N,11066,123,946.1,-171.3
N,11067,123,946.1,-181.26
N,11068,123,946.1,-191.22
N,11069,123,946.1,-201.17
N,11070,123,946.1,-211.13
N,11071,123,946.1,-221.09
N,11072,123,946.1,-231.04
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N,11073,345,946.1,-325.6
N,11074,345,946.1,-316.2
N,11075,345,946.1,-306.8
N,11076,345,946.1,-297.4
N,11077,345,946.1,-288
N,11078,345,946.1,-278.6
N,11079,345,946.1,-269.2
N,11080,345,946.1,-259.8
N,11081,345,946.1,-250.4
N,11082,123,946.1,-564
N,11083,123,946.1,-332.38
N,11084,123,946.1,-554.04
N,11085,123,946.1,-544.09
N,11086,123,946.1,-534.13
N,11087,123,946.1,-524.17
N,11088,123,946.1,-514.22
N,11089,123,946.1,-504.26
N,11090,123,946.1,-494.3
N,11091,123,946.1,-484.35
N,11092,123,946.1,-474.39
N,11093,123,946.1,-464.43
N,11094,123,946.1,-454.48
N,11095,123,946.1,-444.52
N,11096,123,946.1,-434.57
N,11097,123,946.1,-424.61
N,11098,123,946.1,-414.65
N,11099,123,946.1,-404.7
N,11100,123,946.1,-394.73913
N,11101,123,946.1,-384.78
N,11102,123,946.1,-374.83
N,11103,123,946.1,-364.87
N,11104,123,946.1,-354.91
N,11105,123,946.1,-344.96
N,11106,123,946.1,-325.6
N,11107,123,946.1,-316.2
N,11108,123,946.1,-306.8
N,11109,123,946.1,-297.4
N,11110,123,946.1,-288
N,11111,123,946.1,-278.6
N,11112,123,946.1,-269.2
N,11113,123,946.1,-259.8
N,11114,123,946.1,-250.4
N,11115,123,947.1,-332.38
N,11116,123,998.9,-332.38
N,11117,123,955.73333333,-332.38
N,11118,123,964.3666667,-332.38
N,11119,123,973,-332.38
N,11120,123,981.6333333,-332.38
N,11121,123,990.2666667,-332.38
N,11122,345,947.1,-332.38
N,11123,345,998.9,-332.38
N,11124,345,955.73333333,-332.38
N,11125,345,964.3666667,-332.38
N,11126,345,973,-332.38
N,11127,345,981.6333333,-332.38
N,11128,345,990.2666667,-332.38
N,11129,345,947.1,-238.38
N,11130,345,998.9,-238.38
N,11131,345,955.73333333,-238.38
N,11132,345,964.3666667,-238.38
N,11133,345,973,-238.38
N,11134,345,981.6333333,-238.38
N,11135,345,990.2666667,-238.38
N,11136,123,947.1,-238.38
N,11137,123,998.9,-238.38
N,11138,123,955.73333333,-238.38
N,11139,123,964.3666667,-238.38
N,11140,123,973,-238.38
N,11141,123,981.6333333,-238.38
N,11142,123,990.2666667,-238.38
N,11205,335.347826,946.1,-564
N,11206,325.6956522,946.1,-564
N,11207,316.0434783,946.1,-564
N,11208,306.3913043,946.1,-564
N,11209,296.7391304,946.1,-564

N,11210,287.0869565,946.1,-564
N,11211,277.4347826,946.1,-564
N,11212,267.7826087,946.1,-564
N,11213,258.1304348,946.1,-564
N,11214,248.4782609,946.1,-564
N,11215,238.82608696,946.1,-564
N,11216,229.17391304,946.1,-564
N,11217,219.5217391,946.1,-564
N,11218,209.8695652,946.1,-564
N,11219,200.2173913,946.1,-564
N,11220,190.5652174,946.1,-564
N,11221,180.9130435,946.1,-564
N,11222,171.2608696,946.1,-564
N,11223,161.6086957,946.1,-564
N,11224,151.9565217,946.1,-564
N,11225,142.3043478,946.1,-564
N,11226,132.652174,946.1,-564
N,11227,132.652174,946.1,-12
N,11228,142.3043478,946.1,-12
N,11229,151.9565217,946.1,-12
N,11230,161.6086957,946.1,-12
N,11231,171.2608696,946.1,-12
N,11232,180.9130435,946.1,-12
N,11233,190.5652174,946.1,-12
N,11234,200.2173913,946.1,-12
N,11235,209.8695652,946.1,-12
N,11236,219.5217391,946.1,-12
N,11237,229.17391304,946.1,-12
N,11238,238.82608696,946.1,-12
N,11239,248.4782609,946.1,-12
N,11240,258.1304348,946.1,-12
N,11241,267.7826087,946.1,-12
N,11242,277.4347826,946.1,-12
N,11243,287.0869565,946.1,-12
N,11244,296.7391304,946.1,-12
N,11245,306.3913043,946.1,-12
N,11246,316.0434783,946.1,-12
N,11247,325.6956522,946.1,-12
N,11248,335.347826,946.1,-12
N,11249,345,904.6,-564
N,11250,345,912.9,-564
N,11251,345,921.2,-564
N,11252,345,929.5,-564
N,11253,345,937.8,-564
N,11254,123,904.6,-564
N,11255,123,912.9,-564
N,11256,123,921.2,-564
N,11257,123,929.5,-564
N,11258,123,937.8,-564
N,11259,345,904.6,-12
N,11260,345,912.9,-12
N,11261,345,921.2,-12
N,11262,345,929.5,-12
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N,11265,123,912.9,-12
N,11266,123,921.2,-12
N,11267,123,929.5,-12
N,11268,123,937.8,-12
N,11270,372,904.6,-564
N,11272,318,904.6,-564
N,11274,150,904.6,-564
N,11276,96,904.6,-564
N,11278,372,904.6,-12
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N,11282,150,904.6,-12
N,11284,96,904.6,-12
N,11285,363,904.6,-564
N,11286,354,904.6,-564
N,11287,141,904.6,-564
N,11288,132,904.6,-564
N,11289,327,904.6,-564
N,11290,336,904.6,-564
N,11291,105,904.6,-564
N,11292,114,904.6,-564

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N,11294,354,904.6,-12
N,11295,141,904.6,-12
N,11296,132,904.6,-12
N,11297,327,904.6,-12
N,11298,336,904.6,-12
N,11299,105,904.6,-12
N,11300,114,904.6,-12
N,11301,308.1176471,904.6,-564
N,11302,298.2352941,904.6,-564
N,11303,288.3529412,904.6,-564
N,11304,278.4705882,904.6,-564
N,11305,268.5882353,904.6,-564
N,11306,258.7058824,904.6,-564
N,11307,248.8235294,904.6,-564
N,11308,238.94117647,904.6,-564
N,11309,229.05882353,904.6,-564
N,11310,219.1764706,904.6,-564
N,11311,209.2941176,904.6,-564
N,11312,199.4117647,904.6,-564
N,11313,189.5294118,904.6,-564
N,11314,179.6470588,904.6,-564
N,11315,169.7647059,904.6,-564
N,11316,159.8823529,904.6,-564
N,11317,159.8823529,904.6,-12
N,11318,169.7647059,904.6,-12
N,11319,179.6470588,904.6,-12
N,11320,189.5294118,904.6,-12
N,11321,199.4117647,904.6,-12
N,11322,209.2941176,904.6,-12
N,11323,219.1764706,904.6,-12
N,11324,229.05882353,904.6,-12
N,11325,238.94117647,904.6,-12
N,11326,248.8235294,904.6,-12
N,11327,258.7058824,904.6,-12
N,11328,268.5882353,904.6,-12
N,11329,278.4705882,904.6,-12
N,11330,288.3529412,904.6,-12
N,11331,298.2352941,904.6,-12
N,11332,308.1176471,904.6,-12
N,11333,123,1011.9,-288
N,11334,123,1011.9,-229.63
N,11337,345,1011.9,-229.63
N,11338,345,1011.9,-288
N,11341,345,1011.9,-341.63
N,11344,123,1011.9,-341.63
N,11347,325.5,1011.9,-229.63
N,11348,316.81,1011.9,-229.63
N,11349,299.31,1011.9,-229.63
N,11350,283,1011.9,-229.63
N,11351,265.5,1011.9,-229.63
N,11352,257,1011.9,-229.63
N,11353,136.19,1011.9,-229.63
N,11354,142.82,1011.9,-229.63
N,11355,153.82,1011.9,-229.63
N,11356,211,1011.9,-229.63
N,11357,241.66666667,1011.9,-229.63
N,11358,226.33333333,1011.9,-229.63
N,11359,176.25,1011.9,-229.63
N,11360,165.035,1011.9,-229.63
N,11361,198.75,1011.9,-229.63
N,11362,187.5,1011.9,-229.63
N,11363,325.5,1011.9,-288
N,11365,316.81,1011.9,-288
N,11366,299.31,1011.9,-288
N,11367,283,1011.9,-288
N,11368,257,1011.9,-288
N,11369,211,1011.9,-288
N,11372,265.5,1011.9,-288
N,11373,136.19,1011.9,-288
N,11374,142.82,1011.9,-288
N,11375,153.82,1011.9,-288
N,11376,176.25,1011.9,-288
N,11377,165.035,1011.9,-288
N,11378,198.75,1011.9,-288

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N,11379,187.5,1011.9,-288
N,11392,265.5,1011.9,-249.09
N,11393,265.5,1011.9,-268.55
N,11395,198.75,1011.9,-249.09
N,11396,198.75,1011.9,-268.55
N,11397,257,1011.9,-268.38
N,11399,257,1011.9,-247.38
N,11400,211,1011.9,-247.38
N,11401,257,1011.9,-257.88
N,11402,211,1011.9,-268.38
N,11403,211,1011.9,-257.88
N,11405,241.66666667,1011.9,-268.38
N,11406,226.33333333,1011.9,-268.38
N,11408,241.66666667,1011.9,-247.38
N,11409,226.33333333,1011.9,-247.38
N,11411,316.81,1011.9,-249.09
N,11412,316.81,1011.9,-268.55
N,11414,299.31,1011.9,-249.09
N,11415,299.31,1011.9,-268.55
N,11417,283,1011.9,-249.09
N,11418,283,1011.9,-268.55
N,11420,136.19,1011.9,-249.09
N,11421,136.19,1011.9,-268.55
N,11423,153.82,1011.9,-249.09
N,11424,153.82,1011.9,-268.55
N,11426,176.25,1011.9,-249.09
N,11427,176.25,1011.9,-268.55
N,11429,325.5,1011.9,-249.09
N,11430,325.5,1011.9,-268.55
N,11432,142.82,1011.9,-249.09
N,11433,142.82,1011.9,-268.55
N,11434,234,1011.9,-288
N,11435,245.5,1011.9,-288
N,11436,222.5,1011.9,-288
N,11437,345,1011.9,-332.38
N,11438,345,1011.9,-302.8
N,11439,345,1011.9,-317.59
N,11440,123,1011.9,-332.38
N,11441,123,1011.9,-302.8
N,11442,123,1011.9,-317.59
N,11443,345,1011.9,-238.38
N,11444,345,1011.9,-254.92
N,11445,345,1011.9,-271.46
N,11446,123,1011.9,-238.38
N,11447,123,1011.9,-254.92
N,11448,123,1011.9,-271.46
N,11450,234,915.74,-288

! The following nodes are for column and beam orentation.

N,20001,100,800,-587
N,20002,100,800,-576
N,20003,100,800,-564
N,20004,100,800,-512
N,20005,100,800,-504
N,20006,100,800,-439.97
N,20007,100,800,-437
N,20008,100,800,-420.35
N,20009,100,800,-399.35
N,20010,100,800,-381.6
N,20011,100,800,-362
N,20012,100,800,-360
N,20013,100,800,-288
N,20014,100,800,-216
N,20015,100,800,-214
N,20016,100,800,-144
N,20017,100,800,-139
N,20018,100,800,-72
N,20019,100,800,-64
N,20020,100,800,-12
N,20021,100,800,0
N,20022,100,800,11
N,20030,100,800,-586
N,20035,100,800,-12
N,20036,100,800,-401.06
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N,20049,100,800,-12
N,20052,10000,800,-288
N,20054,10000,800,-586
N,20055,723,800,-586
N,20056,0,800,-586
N,20057,216,800,-586
N,20058,432,800,-586
N,20059,1014,800,-586
N,20060,1305,800,-586
N,20061,1578,800,-586
N,20062,1857,800,-586
N,20063,2097,800,-586
N,20064,2301,800,-586
N,20065,2505,800,-586
N,20066,1159.5,800,-586
N,20067,1437,800,-586
N,20068,1118.52,800,-586
N,20069,100,489.95,-576
N,20070,100,288,-336
N,20071,0,-100,-362
N,20072,0,-100,-214
N,20073,216,-100,11
N,20074,723,-100,11
N,20075,1305,-100,11
N,20076,1857,-100,11
N,20077,2301,-100,11
N,20078,2301,-100,-362
N,20079,2505,-100,-362
N,20080,1014,800,-576
N,20081,336,800,100
N,20082,100,800,-432
N,20083,-100,672,-432      !31
N,20084,-100,672,-144      !33
N,20085,-100,844.08,-288   !34
N,20086,723,-100,-288      !1145
N,20087,1014,-100,-288     !2145
N,20088,1305,-100,-288     !3145

! SPRING NODES

N,30112,432,489.96,-576
N,31112,723,489.96,-576
N,32112,1014,489.96,-576
N,33112,1305,489.96,-576
!N,35112,1857,489.96,-576

!CONSTRAINT NODES

N,40101,372,894.6,-564
N,40102,318,894.6,-564
N,40103,150,894.6,-564
N,40104,96,894.6,-564
N,40113,372,894.6,-12
N,40114,318,894.6,-12
N,40115,150,894.6,-12
N,40116,96,894.6,-12

! NODES FOR BEAM EXCENTRICITY

N,50037,0,1059.4725,-362
N,50039,0,1059.4725,-214
N,50153,432,1059.4725,-214
N,50174,216,1059.4725,-587
N,50177,216,1059.4725,-362
N,50179,216,1059.4725,-214
N,50182,216,1059.4725,11
N,51107,723,1059.4725,11
N,52153,1014,1059.4725,-214

N,52156,1159.5,489.96,-576
N,52174,1159.5,573,-576

N,53107,1305,1059.285,11
N,54153,1578,1059.285,-214
N,55107,1857,1059.285,11
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N,56153,2097,1059.285,-214
N,57107,2301,1059.285,11
N,57118,2301,1059.285,-587
N,57151,2301,1059.285,-362
N,57153,2301,1059.285,-214
N,58151,2505,1059.285,-362
N,58153,2505,1059.285,-214

! ELEMENT TYPE 2 NODES

N,60002,0,489.96,0
N,70002,0,489.96,0
N,80002,0,489.96,0
N,60008,0,1065.96,11
N,60012,0,0,-576
N,60013,0,489.96,-576
N,70013,0,489.96,-576
N,80013,0,489.96,-576
N,90013,0,489.96,-576
N,60019,0,1065.96,-587
N,70019,0,1065.96,-587
N,60031,0,672,-432
N,60034,0,844.08,-288
N,70034,0,844.08,-288
N,60113,432,573,-576
N,60124,216,489.96,-576
N,60133,336,489.96,-576
N,60174,216,1065.96,-587
N,61109,723,870.6,-12
N,61120,723,870.6,-564
N,72102,1014,489.96,0
N,62109,1014,870.6,-12
N,62116,1014,860.04,-587
N,62120,1014,870.6,-564
N,62143,1014,489.96,-432
N,62148,1014,489.96,-72
N,62156,1159.5,489.96,-587
N,63100,1305,459.96,0
N,73112,1305,489.96,-576
N,63120,1305,870.6,-564
N,63156,1437,489.96,-576
N,64113,1578,573,-576
N,64122,1578,971.04,-587
N,65112,1857,489.96,-576
N,75118,1857,1065.96,-587
N,66118,2097,1065.96,-587
N,73102,1305,489.96,0
N,63109,1305,870.6,-12
N,65109,1857,870.6,-12
N,65120,1857,870.6,-564
N,66109,2097,870.6,-12
N,67109,2301,870.6,-12
N,68120,2505,870.6,-564


! ELEMENT TYPE 3 NODES

N,60112,432,489.96,-576
N,60118,432,1065.96,-587
N,61112,723,489.96,-576
N,61118,723,1065.96,-587
N,62112,1014,489.96,-576
N,62118,1014,1065.96,-587
N,63112,1305,489.96,-576
N,63118,1305,1065.96,-587
N,64118,1578,1065.96,-587
N,65118,1857,1065.96,-587
N,67118,2301,1065.96,-587
N,68118,2505,1065.96,-587

! ELEMENT TYPE 7 NODES

N,90002,0,489.96,0
N,60033,0,672,-144
N,70033,0,672,-144
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N,70008,0,1065.96,11
N,70031,0,672,-432
N,60145,432,489.96,-288
N,60132,216,489.96,0
N,60141,336,489.96,0
N,61113,723,573,-576
N,61145,723,489.96,-288
N,62145,1014,489.96,-288
N,63121,1159.5,860.04,-587
N,63145,1305,489.96,-288
N,63164,1437,489.96,0
N,65102,1857,489.96,0
N,66107,2097,1065.96,11
N,70102,432,489.96,0
N,70112,432,489.96,-576
N,63143,1305,489.96,-432
N,64102,1578,489.96,0
N,64112,1578,489.96,-576
N,65122,1857,971.04,-587
N,65113,1857,573,-576
N,83102,1305,489.96,0
N,63148,1305,489.96,-72
N,68152,2505,1065.96,-288
N,63116,1305,860.04,-587
N,77118,2301,1065.96,-587
N,70107,432,1065.96,11
N,70118,432,1065.96,-587
N,60182,216,1065.96,11
N,76109,2097,870.6,-12
N,75109,1857,870.6,-12
N,64109,1578,870.6,-12
N,72109,1014,870.6,-12
N,71109,723,870.6,-12
N,60010,0,870.6,-12
N,75120,1857,870.6,-564
N,64120,1578,870.6,-564
N,72120,1014,870.6,-564
N,71120,723,870.6,-564
N,60021,0,870.6,-564

! ELEMENT TYPE 8 NODES

N,60102,432,489.96,0
N,60107,432,1065.96,11
N,61102,723,489.96,0
N,61107,723,1065.96,11
N,62102,1014,489.96,0
N,62107,1014,1065.96,11
N,63102,1305,489.96,0
N,63107,1305,1065.96,11
N,64100,1578,459.96,0
N,64107,1578,1065.96,11
N,65107,1857,1065.96,11
N,67107,2301,1065.96,11
N,68107,2505,1065.96,11

! ELEMENT TYPE 9 NODES

N,60003,0,844.08,0
N,60006,0,860.04,11
N,80008,0,1065.96,11
N,60014,0,844.08,-576
N,60017,0,860.04,-587
N,80019,0,1065.96,-587
N,60024,0,489.96,-504
N,60025,0,489.96,-432
N,60026,0,489.96,-360
N,60027,0,489.96,-288
N,60028,0,489.96,-216
N,60029,0,489.96,-144
N,60030,0,489.96,-72
N,80034,0,844.08,-288
N,90034,0,844.08,-288
N,100034,0,844.08,-288
N,110034,0,844.08,-288
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N,60035,0,1065.96,-512
N,60036,0,1065.96,-437
N,60037,0,1065.96,-362
N,60038,0,1065.96,-288
N,60039,0,1065.96,-214
N,60040,0,1065.96,-139
N,60041,0,1065.96,-64
N,60101,432,288,0
N,80102,432,489.96,0
N,90102,432,489.96,0
N,100102,432,489.96,0
N,60105,432,860.04,11
N,70105,432,860.04,11
N,80105,432,860.04,11
N,80107,432,1065.96,11
N,80112,432,489.96,-576
N,90112,432,489.96,-576
N,100112,432,489.96,-576
N,110112,432,489.96,-576
N,70113,432,573,-576
N,60116,432,860.04,-587
N,70116,432,860.04,-587
N,80116,432,860.04,-587
N,60118,432,1065.96,-587
N,80118,432,1065.96,-587
N,60125,216,489.96,-504
N,70125,216,489.96,-504
N,60126,216,489.96,-432
N,60127,216,489.96,-360
N,60128,216,489.96,-288
N,60129,216,489.96,-216
N,60130,216,489.96,-144
N,60131,216,489.96,-72
N,70131,216,489.96,-72
N,60134,336,489.96,-504
N,70134,336,489.96,-504
N,60135,336,489.96,-432
N,60136,336,489.96,-360
N,60137,336,489.96,-288
N,60138,336,489.96,-216
N,60139,336,489.96,-144
N,60140,336,489.96,-72
N,70140,336,489.96,-72
N,60142,432,489.96,-504
N,70142,432,489.96,-504
N,60143,432,489.96,-432
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N,60144,432,489.96,-360
N,70144,432,489.96,-360
N,70145,432,489.96,-288
N,80145,432,489.96,-288
N,60146,432,489.96,-216
N,70146,432,489.96,-216
N,60147,432,489.96,-144
N,70147,432,489.96,-144
N,60148,432,489.96,-72
N,70148,432,489.96,-72
N,60149,432,1065.96,-512
N,70149,432,1065.96,-512
N,60150,432,1065.96,-437
N,70150,432,1065.96,-437
N,60151,432,1065.96,-362
N,70151,432,1065.96,-362
N,60152,432,1065.96,-288
N,70152,432,1065.96,-288
N,60153,432,1065.96,-214
N,70153,432,1065.96,-214
N,60154,432,1065.96,-139
N,70154,432,1065.96,-139
N,60155,432,1065.96,-64
N,70155,432,1065.96,-64
N,60175,216,1065.96,-512
N,70175,216,1065.96,-512
N,60176,216,1065.96,-437
N,70176,216,1065.96,-437

N,60177,216,1065.96,-362
N,70177,216,1065.96,-362
N,60178,216,1065.96,-288
N,70178,216,1065.96,-288
N,60179,216,1065.96,-214
N,70179,216,1065.96,-214
N,60180,216,1065.96,-139
N,70180,216,1065.96,-139
N,60181,216,1065.96,-64
N,70181,216,1065.96,-64
N,60183,577.5,573,-576
N,70183,577.5,573,-576
N,71102,723,489.96,0
N,81102,723,489.96,0
N,91102,723,489.96,0
N,61103,723,852,0
N,61105,723,860.04,11
N,71105,723,860.04,11
N,71107,723,1065.96,11
N,81107,723,1065.96,11
N,91107,723,1065.96,11
N,71112,723,489.96,-576
N,81112,723,489.96,-576
N,91112,723,489.96,-576
N,71113,723,573,-576
N,61114,723,852,-576
N,61116,723,860.04,-587
N,71116,723,860.04,-587
N,71118,723,1065.96,-587
N,81118,723,1065.96,-587
N,91118,723,1065.96,-587
N,61142,723,489.96,-504
N,71142,723,489.96,-504
N,61143,723,489.96,-432
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N,61144,723,489.96,-360
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N,101145,723,489.96,-288
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N,71148,723,489.96,-72
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N,61152,723,1065.96,-288
N,71152,723,1065.96,-288
N,61153,723,1065.96,-214
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N,61154,723,1065.96,-139
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N,61155,723,1065.96,-64
N,71155,723,1065.96,-64
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N,92102,1014,489.96,0
N,102102,1014,489.96,0
N,62105,1014,860.04,11
N,72105,1014,860.04,11
N,72107,1014,1065.96,11
N,82107,1014,1065.96,11
N,72112,1014,489.96,-576
N,82112,1014,489.96,-576
N,92112,1014,489.96,-576
N,102112,1014,489.96,-576
N,62113,1014,573,-576

N,72113,1014,573,-576
N,72116,1014,860.04,-587
N,72118,1014,1065.96,-587
N,82118,1014,1065.96,-587
N,62124,1118.52,489.96,0
N,62125,1118.52,489.96,-72
N,62142,1014,489.96,-504
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N,72144,1014,489.96,-360
N,72145,1014,489.96,-288
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N,92145,1014,489.96,-288
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N,62150,1014,1065.96,-437
N,72150,1014,1065.96,-437
N,62151,1014,1065.96,-362
N,72151,1014,1065.96,-362
N,62152,1014,1065.96,-288
N,72152,1014,1065.96,-288
N,62153,1014,1065.96,-214
N,72153,1014,1065.96,-214
N,62154,1014,1065.96,-139
N,72154,1014,1065.96,-139
N,62155,1014,1065.96,-64
N,72155,1014,1065.96,-64
N,62157,1159.5,489.96,-504
N,62158,1159.5,489.96,-432
N,63105,1305,860.04,11
N,73105,1305,860.04,11
N,73107,1305,1065.96,11
N,83107,1305,1065.96,11
N,73109,1305,870.6,-12
N,63113,1305,573,-576
N,73116,1305,860.04,-587
N,73118,1305,1065.96,-587
N,83118,1305,1065.96,-587
N,73120,1305,870.6,-564
N,63142,1305,489.96,-504
N,73143,1305,489.96,-432
N,63144,1305,489.96,-360
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N,73145,1305,489.96,-288
N,83145,1305,489.96,-288
N,93145,1305,489.96,-288
N,103145,1305,489.96,-288
N,113145,1305,489.96,-288
N,63146,1305,489.96,-216
N,73146,1305,489.96,-216
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N,73147,1305,489.96,-144
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N,73153,1305,1065.96,-214
N,63154,1305,1065.96,-139
N,73154,1305,1065.96,-139
N,63155,1305,1065.96,-64
N,73155,1305,1065.96,-64
N,63157,1437,489.96,-504
N,63158,1437,489.96,-432

N,63159,1437,489.96,-360
N,63160,1437,489.96,-288
N,63161,1437,489.96,-216
N,63162,1437,489.96,-144
N,63163,1437,489.96,-72
N,73164,1437,489.96,0
N,64101,1578,288,0
N,74102,1578,489.96,0
N,84102,1578,489.96,0
N,64105,1578,860.04,11
N,74105,1578,860.04,11
N,84105,1578,860.04,11
N,74107,1578,1065.96,11
N,84107,1578,1065.96,11
N,74109,1578,870.6,-12
N,64111,1578,288,-576
N,74112,1578,489.96,-576
N,84112,1578,489.96,-576
N,94112,1578,489.96,-576
N,74113,1578,573,-576
N,84113,1578,573,-576
N,64116,1578,860.04,-587
N,74116,1578,860.04,-587
N,84116,1578,860.04,-587
N,74118,1578,1065.96,-587
N,84118,1578,1065.96,-587
N,94118,1578,1065.96,-587
N,74120,1578,870.6,-564
N,64149,1578,1065.96,-512
N,74149,1578,1065.96,-512
N,64150,1578,1065.96,-437
N,74150,1578,1065.96,-437
N,64151,1578,1065.96,-362
N,74151,1578,1065.96,-362
N,64152,1578,1065.96,-288
N,74152,1578,1065.96,-288
N,64153,1578,1065.96,-214
N,74153,1578,1065.96,-214
N,64154,1578,1065.96,-139
N,74154,1578,1065.96,-139
N,64155,1578,1065.96,-64
N,74155,1578,1065.96,-64
N,64156,1717.5,971.04,-587
N,74156,1717.5,971.04,-587
N,84156,1717.5,971.04,-587
N,94156,1717.5,971.04,-587
N,65100,1857,459.96,0
N,75102,1857,489.96,0
N,65103,1857,852,0
N,65105,1857,860.04,11
N,75105,1857,860.04,11
N,75107,1857,1065.96,11
N,85107,1857,1065.96,11
N,95107,1857,1065.96,11
N,75112,1857,489.96,-576
N,85112,1857,489.96,-576
N,95112,1857,489.96,-576
N,65114,1857,852,-576
N,65116,1857,860.04,-587
N,75116,1857,860.04,-587
N,85118,1857,1065.96,-587
N,95118,1857,1065.96,-587
N,75122,1857,971.04,-587
N,65123,1717.5,573,-576
N,75123,1717.5,573,-576
N,65149,1857,1065.96,-512
N,75149,1857,1065.96,-512
N,65150,1857,1065.96,-437
N,75150,1857,1065.96,-437
N,65151,1857,1065.96,-362
N,75151,1857,1065.96,-362
N,65152,1857,1065.96,-288
N,75152,1857,1065.96,-288
N,65153,1857,1065.96,-214
N,75153,1857,1065.96,-214

N,65154,1857,1065.96,-139
N,75154,1857,1065.96,-139
N,65155,1857,1065.96,-64
N,75155,1857,1065.96,-64
N,66105,2097,860.04,11
N,76105,2097,860.04,11
N,76107,2097,1065.96,11
N,86107,2097,1065.96,11
N,66149,2097,1065.96,-512
N,76149,2097,1065.96,-512
N,66150,2097,1065.96,-437
N,76150,2097,1065.96,-437
N,66151,2097,1065.96,-362
N,76151,2097,1065.96,-362
N,66152,2097,1065.96,-288
N,76152,2097,1065.96,-288
N,66153,2097,1065.96,-214
N,76153,2097,1065.96,-214
N,66154,2097,1065.96,-139
N,76154,2097,1065.96,-139
N,66155,2097,1065.96,-64
N,76155,2097,1065.96,-64
N,67105,2301,860.04,11
N,77105,2301,860.04,11
N,77107,2301,1065.96,11
N,87107,2301,1065.96,11
N,77109,2301,870.6,-12
N,67116,2301,860.04,-587
N,77116,2301,860.04,-587
N,87118,2301,1065.96,-587
N,67122,2301,971.04,-587
N,77122,2301,971.04,-587
N,87122,2301,971.04,-587
N,67149,2301,1065.96,-512
N,77149,2301,1065.96,-512
N,67150,2301,1065.96,-437
N,77150,2301,1065.96,-437
N,67151,2301,1065.96,-362
N,77151,2301,1065.96,-362
N,67152,2301,1065.96,-288
N,77152,2301,1065.96,-288
N,67153,2301,1065.96,-214
N,77153,2301,1065.96,-214
N,67154,2301,1065.96,-139
N,77154,2301,1065.96,-139
N,67155,2301,1065.96,-64
N,77155,2301,1065.96,-64
N,68105,2505,860.04,11
N,78107,2505,1065.96,11
N,68109,2505,870.6,-12
N,68116,2505,860.04,-587
N,78118,2505,1065.96,-587
N,88118,2505,1065.96,-587
N,68149,2505,1065.96,-512
N,68150,2505,1065.96,-437
N,68151,2505,1065.96,-362
N,78152,2505,1065.96,-288
N,68153,2505,1065.96,-214
N,68154,2505,1065.96,-139
N,68155,2505,1065.96,-64
N,150037,0,1059.4725,-362
N,250037,0,1059.4725,-362
N,150039,0,1059.4725,-214
N,250039,0,1059.4725,-214
N,150153,432,1059.4725,-214
N,250153,432,1059.4725,-214
N,150174,216,1059.4725,-587
N,150177,216,1059.4725,-362
N,150179,216,1059.4725,-214
N,150182,216,1059.4725,11
N,250182,216,1059.4725,11
N,151107,723,1059.4725,11
N,251107,723,1059.4725,11
N,152153,1014,1059.4725,-214
N,252153,1014,1059.4725,-214

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N,152156,1159.5,489.96,-576
N,152174,1159.5,573,-576
N,153107,1305,1059.285,11
N,253107,1305,1059.285,11
N,154153,1578,1059.285,-214
N,254153,1578,1059.285,-214
N,155107,1857,1059.285,11
N,255107,1857,1059.285,11
N,156153,2097,1059.285,-214
N,256153,2097,1059.285,-214
N,157107,2301,1059.285,11
N,257107,2301,1059.285,11
N,157118,2301,1059.285,-587
N,157151,2301,1059.285,-362
N,157153,2301,1059.285,-214
N,158151,2505,1059.285,-362
N,258151,2505,1059.285,-362
N,158153,2505,1059.285,-214
N,258153,2505,1059.285,-214
N,181660,2505,971.04,-587
N,281660,2505,971.04,-587

! ELEMENT TYPE 16 NODES

N,74100,1578,459.96,0
N,75100,1857,459.96,0

!RAIL GIRDER                MCK 9/10/2010

N,60009,0,852,-12
N,60020,0,852,-564
N,60108,432,852,-12
N,60119,432,852,-564
N,61108,723,852,-12
N,61119,723,852,-564
N,62108,1014,852,-12
N,62119,1014,852,-564
N,63108,1305,852,-12
N,63119,1305,852,-564
N,64108,1578,852,-12
N,64119,1578,852,-564
N,65108,1857,852,-12
N,65119,1857,852,-564
N,66108,2097,852,-12
N,67108,2301,852,-12
N,67119,2301,852,-564
N,68108,2505,852,-12
N,68119,2505,852,-564

!  ADDED RUNWAY GIRDER NODES

N,301011,372,894.6,-564
N,301021,318,894.6,-564
N,301031,150,894.6,-564
N,301041,96,894.6,-564

N,301131,372,894.6,-12
N,301141,318,894.6,-12
N,301151,150,894.6,-12
N,301161,96,894.6,-12

! DEFINE REAL CONSTANT

R,1

R,9

R,12,0.001, , ,       ! SPRING CONSTANT

R,13,18105000, , ,    ! SPRING CONSTANT

R,14,11978000, , ,    ! SPRING CONSTANT

R,15,23956000, , ,    ! SPRING CONSTANT
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R,1001,2766.222961730,,,   ! HOOK X SPRING

R,1002,2766.222961730,,,   ! HOOK Z SPRING

R,1003,2266759.624568,,,   ! HOOK Y SPRING

hookmass=688.9610669  ! hookmass = 0 for loadcase 6 and 7 all others is should be 688.9610669

R,1004,hookmass,hookmass,hookmass, ! HOOK MASS change because of change in gravity 688.4057971014

R,52,1.15,1.15,1.15
R,53,2.27743,2.27743,2.27743
R,54,3.662,3.662,3.662
R,55,0.64699,0.64699,0.64699
R,100,51.7598344,219.979296,51.7598344

R,401,14619.6 ! TORSIONAL SPRING FOR DIAGONAL WT4X12
R,402,10406.7 ! TORSIONAL SPRING FOR DIAGONAL WT4X12
R,403,56560 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X1/2_3/8
R,404,13334 ! TORSIONAL SPRING FOR DIAGONAL LL4X3X5/16_3/8
R,405,75068 ! TORSIONAL SPRING FOR DIAGONAL LL6X4X1/2_3/8
R,406,61618 ! TORSIONAL SPRING FOR DIAGONAL W14X43
R,407,215956 ! TORSIONAL SPRING FOR DIAGONAL W14X87
R,408,206514 ! TORSIONAL SPRING FOR DIAGONAL W14X87
R,409,31583 ! TORSIONAL SPRING FOR DIAGONAL LL3.5X3.5X3/8_3/8
R,410,21617 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,411,7180 ! TORSIONAL SPRING FOR DIAGONAL L4X4X5/16_3/8
R,412,25326 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,413,37519 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,414,5720 ! TORSIONAL SPRING FOR DIAGONAL LL3X3X3/8_3/8
R,415,18756 ! TORSIONAL SPRING FOR DIAGONAL L5X5X1/2
R,416,14402 ! TORSIONAL SPRING FOR DIAGONAL LL4X4X3/8_3/8
R,417,51480 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X1/2_3/8
R,418,55000 ! TORSIONAL SPRING FOR DIAGONAL LL5X5X1/2
R,419,2687 ! TORSIONAL SPRING FOR DIAGONAL LL3X3X3/16_3/8
R,420,170024 ! TORSIONAL SPRING FOR DIAGONAL LL6X6X3/4_3/8
R,421,496078 ! TORSIONAL SPRING FOR DIAGONAL W14X119
R,422,169412 ! TORSIONAL SPRING FOR DIAGONAL W12X72

GRAV=386.08858                                                    ! in/sec^2

! DEFINE MATERIAL TYPES

Mat,1   ! BUILDING STEEL
MP,EX,1,2.90E+07
!MP,Nuxy,1,3.00E-01
MP,DENS,1,0.73377E-03
MP,GXY,1,11000000

Mat,13   ! BUILDING STEEL
MP,EX,13,2.90E+07
!MP,Nuxy,13,3.00E-01
MP,DENS,13,0.00001
MP,GXY,13,11000000

! THE FOLLOWING MATERIAL TYPES ARE FOR THE CRANE

MAT,2     !  HOOKUP MAT 1
MP,EX,2,3E+07
MP,NUXY,2,0.3
MP,DENS,2,0.745E-03

MAT,3     !  HOOKUP MAT 2
MP,EX,3,3E+07
MP,NUXY,3,0.3
MP,DENS,3,0.11660E-02

MAT,4     !  HOOKUP MAT 3
MP,EX,4,3E+07
MP,NUXY,4,0.3
MP,DENS,4,0.96E-03

MAT,5     !  HOOKUP MAT 4
MP,EX,5,3E+07
MP,NUXY,5,0.8E-03
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MP,DENS,5,0.123E-02

MAT,6     !  HOOKUP MAT 5
MP,EX,6,3E+07
MP,NUXY,6,0.3
MP,DENS,6,0

MAT,7     !  HOOKUP MAT 6
MP,EX,7,3E+07
MP,NUXY,7,0.3
MP,DENS,7,0.121E-02

MAT,8     !  HOOKUP MAT 7
MP,EX,8,3E+07
MP,NUXY,8,0.3
MP,DENS,8,0.6241E-02



! CREATE DIFFERENT ELEMENT TYPES IN ORDER TO CONTROL THE END RELEASES USING "KEYOPT"

ET,1,BEAM44

ET,2,BEAM44
!KEYOPT,2,7,11

ET,3,BEAM44
!KEYOPT,3,7,1

ET,7,BEAM44
!KEYOPT,7,8,11

ET,8,BEAM44
!KEYOPT,8,8,1

ET,9,BEAM44
!KEYOPT,9,7,11
!KEYOPT,9,8,11

ET,12,COMBIN14
KEYOPT,12,1,0
KEYOPT,12,2,3
KEYOPT,12,3,0

ET,13,COMBIN14
KEYOPT,13,1,0
KEYOPT,13,2,3
KEYOPT,13,3,0

ET,14,COMBIN14
KEYOPT,14,1,0
KEYOPT,14,2,1
KEYOPT,14,3,0

ET,15,COMBIN14
KEYOPT,15,1,0
KEYOPT,15,2,1
KEYOPT,15,3,0

ET,16,BEAM44
!KEYOPT,16,7,1
!KEYOPT,16,8,11

ET,21,BEAM44

ET,100,MASS21

ET,    1001, 14
KEYOP,    1001, 2,       1

ET,    1002, 14
KEYOP,    1002, 2,       3

ET,    1003, 14
KEYOP,    1003, 2,       2
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ET,   1004, 21

ET,300,COMBIN14  ! TORSIONAL SPRING FOR DIAGONAL BRACING
KEYOPT,300,1,0
KEYOPT,300,2,0
KEYOPT,300,3,1

! DEFINE BEAM SECTION TYPES THAT WILL BE USED IN THE MODEL

!W33X141
!SECTYPE,2,BEAM,I,W33X141
!SECDATA,11.535,11.535,33.31,0.96,0.96,0.605
R,202,41.6,246,7460,16.655,5.77,9.7
RMORE,41.6,246,7460,16.655,5.77,9.7
RMORE,,,,,,
RMORE,2.8175,2.0642

!W12X72
!SECTYPE,3,BEAM,I,W12X72
!SECDATA,12.04,12.04,12.25,0.671,0.671,0.43
R,203,21.2,195,597,6.125,6.02,2.94
RMORE,21.2,195,597,6.125,6.02,2.94
RMORE,,,,,,
RMORE,1.9681,4.0251

!W14X119
!SECTYPE,4,BEAM,I,W14X119
!SECDATA,14.65,14.65,14.5,0.938,0.938,0.57
R,204,35,492,1370,7.25,7.325,9.2
RMORE,35,492,1370,7.25,7.325,9.2
RMORE,,,,,,
RMORE,1.9103,4.2347

!W36X300
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,205,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W36X300 W/ L6X8
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,244,111.3,4560.861,24519.303,15.254,14.25,70.062
RMORE,111.3,4560.861,24519.303,15.254,14.25,70.062
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W36X300 W/ L4X6
!SECTYPE,5,BEAM,I,W36X300
!SECDATA,16.655,16.655,36.72,1.68,1.68,0.945
R,245,105.18,3565.207,23828.308,15.844,14.25,67.364
RMORE,105.18,3565.207,23828.308,15.844,14.25,67.364
RMORE,,,,,,,
RMORE,2.3668,2.5447

!W14X136
!SECTYPE,6,BEAM,I,W14X136
!SECDATA,14.74,14.74,14.75,1.063,1.063,0.66
R,206,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089

!W36X230
!SECTYPE,7,BEAM,I,W36X230
!SECDATA,16.475,16.475,35.88,1.26,1.26,0.761
R,207,67.7,940,15000,17.94,8.238,28.6
RMORE,67.7,940,15000,17.94,8.238,28.6
RMORE,,,,,,
RMORE,2.4466,2.5447
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R,30,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,,,,,,
RMORE,2.844,2.844

R,40,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,3.555,6.96,3.02,3.188,0.709,0.125
RMORE,,,,,,
RMORE,2.844,2.844

!W10X33
!SECTYPE,9,BEAM,I,W10X33
!SECDATA,7.964,7.964,9.75,0.433,0.433,0.292
R,209,9.71,36.5,171,4.875,3.982,0.58
RMORE,9.71,36.5,171,4.875,3.982,0.58
RMORE,,,,,,
RMORE,2.1118,3.4106

!W30X116
!SECTYPE,10,BEAM,I,W30X116
!SECDATA,10.5,10.5,30,0.85,0.85,0.564
R,210,34.2,164,4930,15,5.25,6.43
RMORE,34.2,164,4930,15,5.25,6.43
RMORE,,,,,,
RMORE,2.8739,2.0213

!W14X87
!SECTYPE,11,BEAM,I,W14X87
!SECDATA,14.5,14.5,14,0.688,0.688,0.42
R,211,25.6,350,967,7,7.25,3.68
RMORE,25.6,350,967,7,7.25,3.68
RMORE,,,,,,
RMORE,1.9205,4.3537

!W14X43
!SECTYPE,12,BEAM,I,W14X43
!SECDATA,8,8,13.68,0.528,0.528,0.308
R,212,12.6,45.1,429,6.84,4,1.05
RMORE,12.6,45.1,429,6.84,4,1.05
RMORE,,,,,,
RMORE,2.2372,2.9907

!2L6X4X1/2_3/8  SEC 13
R,31,9.5,25.641,34.79,4.188,1.737,0.792
RMORE,9.5,25.641,34.79,4.188,1.737,0.792
RMORE,,,,,,
RMORE,3.5621,2.375
!SECTYPE,13,BEAM,ASEC,LL64X1/2
!SECDATA,9.5,25.64,,34.79,0,0.834,0,1.737,0,1.737

!2L4X3X5/16_3/8                                                    SEC 14
R,32,4.18,7.037,6.762,3.188,1.103,0.136
RMORE,4.18,7.037,6.762,3.188,1.103,0.136
RMORE,,,,,,
RMORE,3.344,2.5075
!SECTYPE,14,BEAM,ASEC,LL4X5/16
!SECDATA,4.18,6.762,,7.037,0,0.146,0,1.103,0,1.103

!2L6X6X1/2_3/8                                                     SEC 15
R,33,11.5,80.128,39.816,6.188,1.435,0.958
RMORE,11.5,80.128,39.816,6.188,1.435,0.958
RMORE,,,,,,
RMORE,2.875,2.875
!SECTYPE,15,BEAM,ASEC,LL66X1/2
!SECDATA,11.5,39.8,,80.155,0,1.002,0,1.435,0,1.435

!W24X100
!SECTYPE,16,BEAM,I,W24X100
!SECDATA,12,12,24,0.775,0.775,0.468
R,216,29.5,223,3000,12,6,4.87
RMORE,29.5,223,3000,12,6,4.87
RMORE,,,,,,
RMORE,2.379,2.6264

!W36X280
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!SECTYPE,17,BEAM,I,W36X280
!SECDATA,16.595,16.595,36.5,1.57,1.57,0.885
R,217,82.4,1200,18900,18.25,8.3,52.6
RMORE,82.4,1200,18900,18.25,8.3,52.6
RMORE,,,,,,
RMORE,2.372,2.5432

!W12X40
!SECTYPE,18,BEAM,I,W12X40
!SECDATA,8,8,11.94,0.516,0.516,0.294
R,218,11.8,44.1,310,5.97,4,0.956
RMORE,11.8,44.1,310,5.97,4,0.956
RMORE,,,,,,
RMORE,2.1439,3.3618

!W14X30
!SECTYPE,19,BEAM,I,W14X30
!SECDATA,6.733,6.733,13.86,0.383,0.383,0.270
R,219,8.83,19.5,290,6.93,3.367,0.376
RMORE,8.83,19.5,290,6.93,3.367,0.376
RMORE,,,,,,
RMORE,2.5684,2.36

!W12X27
!SECTYPE,20,BEAM,I,W12X27
!SECDATA,6.5,6.5,11.96,0.4,0.4,0.237
R,220,7.95,18.3,204,5.98,3.25,0.351
RMORE,7.95,18.3,204,5.98,3.25,0.351
RMORE,,,,,,
RMORE,2.2944,2.8042

!W36X150
!SECTYPE,21,BEAM,I,W36X150
!SECDATA,11.972,11.972,35.84,0.94,0.94,0.625
R,221,44.2,270,9030,17.92,5.99,10.1
RMORE,44.2,270,9030,17.92,5.99,10.1
RMORE,,,,,,
RMORE,2.9457,1.9732

!W36X160
!SECTYPE,22,BEAM,I,W36X160
!SECDATA,12,12,36,1.02,1.02,0.653
R,222,47.1,295,9760,18,6,12.4
RMORE,47.1,295,9760,18,6,12.4
RMORE,,,,,,
RMORE,2.886,2.0036

!W24X76
!SECTYPE,23,BEAM,I,W24X76
!SECDATA,8.985,8.985,23.91,0.682,0.682,0.44
R,223,22.4,82.6,2100,11.955,4.49,2.7
RMORE,22.4,82.6,2100,11.955,4.49,2.7
RMORE,,,,,,
RMORE,2.7417,2.1293

!W18X45
!SECTYPE,24,BEAM,I,W18X45
!SECDATA,7.477,7.477,17.86,0.499,0.499,0.335
R,224,13.2,34.8,706,8.93,3.74,0.889
RMORE,13.2,34.8,706,8.93,3.74,0.889
RMORE,,,,,,
RMORE,2.6533,2.2063

!W10X15
!SECTYPE,25,BEAM,I,W10X15
!SECDATA,4,4,10,0.269,0.269,0.230
R,225,4.41,2.88,68.9,5,2,0.104
RMORE,4.41,2.88,68.9,5,2,0.104
RMORE,,,,,,
RMORE,3.0732,1.9174

!W24X55
!SECTYPE,26,BEAM,I,W24X55
!SECDATA,7,7,23.55,0.503,0.503,0.396
R,226,16.2,28.9,1340,11.775,3.5,1.18
```

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RMORE,16.2,28.9,1340,11.775,3.5,1.18
RMORE,,,,,,
RMORE,3.4505,1.7371

!W24X68
!SECTYPE,27,BEAM,I,W24X68
!SECDATA,8.961,8.961,23.71,0.582,0.582,0.416
R,227,20,70,1820,11.855,4.48,1.86
RMORE,20,70,1820,11.855,4.48,1.86
RMORE,,,,,,
RMORE,2.876,2.0278

!W10X21
!SECTYPE,28,BEAM,I,W10X21
!SECDATA,5.75,5.75,9.9,0.338,0.338,0.240
R,228,6.2,10.8,107,4.95,2.875,0.21
RMORE,6.2,10.8,107,4.95,2.875,0.21
RMORE,,,,,,
RMORE,2.3782,2.6094

!C8X11
SECTYPE,29,BEAM,CHAN,C8X11
SECDATA,2.25,2.25,8,0.39,0.39,0.220
R,229,3.38,1.32,32.6,4,1.13,1.268
RMORE,3.38,1.32,32.6,4,1.13,1.268
RMORE,,,,,,
RMORE,2.8766,1.9205

!W30X108
!SECTYPE,30,BEAM,I,W30X108
!SECDATA,10.484,10.484,29.82,0.76,0.76,0.548
R,230,31.8,146,4470,14.91,5.24,5.02
RMORE,31.8,146,4470,14.91,5.24,5.02
RMORE,,,,,,
RMORE,2.9932,1.946

!W14X22
!SECTYPE,31,BEAM,I,W14X22
!SECDATA,5,5,13.72,0.335,0.335,0.230
R,231,6.49,7,198,6.86,2.5,0.208
RMORE,6.49,7,198,6.86,2.5,0.208
RMORE,,,,,,
RMORE,2.9064,2.0564

!W14X61
!SECTYPE,32,BEAM,I,W14X61
!SECDATA,10,10,13.91,0.643,0.643,0.378
R,232,17.9,107,641,6.955,5,2.19
RMORE,17.9,107,641,6.955,5,2.19
RMORE,,,,,,
RMORE,2.088,3.4043

!W27X84
!SECTYPE,33,BEAM,I,W27X84
!SECDATA,9.963,9.963,26.69,0.636,0.636,0.463
R,233,24.8,105,2830,13.345,4.98,2.79
RMORE,24.8,105,2830,13.345,4.98,2.79
RMORE,,,,,,
RMORE,2.9353,2.007

!W27X94
!SECTYPE,34,BEAM,I,W27X94
!SECDATA,9.99,9.99,26.91,0.745,0.745,0.49
R,234,27.7,124,3270,13.455,5,4.06
RMORE,27.7,124,3270,13.455,5,4.06
RMORE,,,,,,
RMORE,2.7839,2.1007

!2L4X4X3/8_3/8 SEC35
R,34,5.719,18.77,8.717,4.188,0.951,0.268
RMORE,5.719,18.77,8.717,4.188,0.951,0.268
RMORE,,,,,,
RMORE,2.8595,2.8595

!2L6X6X3/4_3/8 SEC 36
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R,35,16.875,121.302,56.31,6.188,1.4,3.164
RMORE,16.875,121.302,56.31,6.188,1.4,3.164
RMORE,,,,,,
RMORE,2.8125,2.8125

!2L3X3X3/16_3/8 SEC 37
R,36,2.18,4.134,1.923,3.188,0.726,0.025
RMORE,2.18,4.134,1.923,3.188,0.726,0.025
RMORE,,,,,,
RMORE,2.9067,2.9067

!2L5X5X1/2_3/8 SEC 38
R,37,9.5,47.485,22.5,5.188,1.184,0.792
RMORE,9.5,47.485,22.5,5.188,1.184,0.792
RMORE,,,,,,
RMORE,2.8503,2.8503

!L4X4X5/16
!SECTYPE,39,BEAM,L,L44X5/16
!SECDATA,4,4,0.313,0.313
R,239,2.402,5.925,1.503,2.828,1.357,0.078
RMORE,2.402,5.925,1.503,2.828,1.357,0.078
RMORE,,,,,,
RMORE,2.1182,2.0978,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,45

!L5X5X1/2
!SECTYPE,40,BEAM,L,L55X1/2
!SECDATA,5,5,0.5,0.5
R,240,4.75,17.912,4.589,3.536,1.675,0.396
RMORE,4.75,17.912,4.589,3.536,1.675,0.396
RMORE,,,,,,
RMORE,2.1158,2.0833,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,45

!2L3.5X3.5X3/8_3/8 SEC 41
R,38,4.969,12.891,5.73,3.688,0.826,0.233
RMORE,4.969,12.891,5.73,3.688,0.826,0.233
RMORE,,,,,,
RMORE,2.8394,2.8394

!2L3X3X3/8_3/8 SEC 42
R,39,4.219,8.395,3.519,3.188,0.7,0.198
RMORE,4.219,8.395,3.519,3.188,0.7,0.198
RMORE,,,,,,
RMORE,2.7527,2.7527

!WT4X12
!SECTYPE,43,BEAM,T,WT4X12
!SECDATA,6.5,3.97,0.398,0.245
R,243,3.54,9.15,3.529,0.699,3.248,0.174
RMORE,3.54,9.15,3.529,0.699,3.248,0.174
RMORE,,,,,,
RMORE,2.0439,5.463


!L4X4X1/2
R,241,3.75,8.828,2.295,2.828,1.320,0.312       ! NEW SECTION 9/14/2010 MCK  EL 7301,7313
RMORE,3.75,8.828,2.295,2.828,1.320,0.312
RMORE,,,,,,,
RMORE,2.1114,2.0616,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45
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!L6X6X3/4
R,242,8.438,44.692,11.617,4.243,1.98,1.582       ! NEW SECTION 9/14/2010 MCK  EL 7303,7315
RMORE,8.438,44.692,11.617,4.243,1.98,1.582
RMORE,,,,,,,
RMORE,2.1121,2.0616,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,,,
RMORE,,,,,45

! THE FOLLOWING SECTIONS ARE FOR THE CRANE MODEL AS PROVIDED
! BY THE CRANE VENDOR

SECTYPE,44,BEAM,HREC,       !1
SECDATA,61.000,17.125,1.0000,1.0000,0.62500, 0.62500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,45,BEAM,CSOL,       !2
SECDATA,4.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,46,BEAM,RECT,trolgirt   !3
SECDATA,22.000,2.5000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,47,BEAM,HREC,endtie  !4
SECDATA,10.000,8.0000,1.0000,1.0000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,48,BEAM,HREC,asagitie   !6
SECDATA,8.0000,8.0000,0.75000,0.75000,0.75000,0.75000,
SECOFFSET,CENT
SECCONTROL,0.0000,0.0000,0.0000,0.0000

SECTYPE,49,BEAM,HREC,endtruck   !7
SECDATA,22.000,16.600,1.5000,1.5000,1.0000,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,50,BEAM,RECT,       !8
SECDATA,14.000,14.000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,51,BEAM,HREC,Ttrucks   !10
SECDATA,22.250,9.0000,0.75000,0.75000,0.50000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,52,BEAM,RECT,girt1   !11
SECDATA,33.000,1.2500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,53,BEAM,RECT,girt2   !12
SECDATA,42.625,1.0000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,54,BEAM,RECT,girt3   !13
SECDATA,33.000,1.2500,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,55,BEAM,RECT,       !14
SECDATA,20.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,56,BEAM,RECT,stiff2    !15
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SECDATA,6.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,57,BEAM,RECT,         !16
SECDATA,15.000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,58,BEAM,RECT,9luk    !17
SECDATA,9.0000,0.50000,
SECOFFSET,CENT
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,59,BEAM,ASEC,STIFF    !RIGID BEAM
SECDATA,1000,1000000,,1000000,,1000000   !GT STRUDL USES AN AREA OF 10
SECCONTROLS,0.0000,0.0000,0.0000,0.0000

SECTYPE,60,BEAM,ASEC,STIFF    !RIGID BEAM
SECDATA,1000,1000000,,1000000,,1000000   !GT STRUDL USES AN AREA OF 10
SECCONTROLS,0.0000,0.0000,0.0000,0.0000




R,301,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.09173

R,302,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.08849

R,303,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.07339

R,304,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.07339

R,306,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
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RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.06497

R,307,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.06497

R,308,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.0613

R,309,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05288

R,310,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05245

R,311,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05245

R,312,29.5,223,3000,12,6,4.87
RMORE,29.5,223,3000,12,6,4.87
RMORE,,,,,,
RMORE,2.379,2.6264,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.0518

R,313,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5

RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.0518

R,314,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05072

R,315,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.05072

R,316,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.04964

R,317,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.04964

R,318,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.04662

R,319,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.04662

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R,320,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03993

R,321,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03993

R,322,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03928

R,323,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03777

R,324,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03669

R,325,40,568,1590,7.375,7.37,13.5
RMORE,40,568,1590,7.375,7.37,13.5
RMORE,,,,,,
RMORE,1.9147,4.1089,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.03669

R,326,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
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RMORE,0.03022

R,327,7.95,18.3,204,5.98,3.25,0.351
RMORE,7.95,18.3,204,5.98,3.25,0.351
RMORE,,,,,,
RMORE,2.2944,2.8042,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.02698

R,328,12.6,45.1,429,6.84,4,1.05
RMORE,12.6,45.1,429,6.84,4,1.05
RMORE,,,,,,
RMORE,2.2372,2.9907,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.02633

R,329,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.02525

R,330,88.3,1300,20300,18.36,8.328,64.2
RMORE,88.3,1300,20300,18.36,8.328,64.2
RMORE,,,,,,
RMORE,2.3668,2.5447,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.02266

R,331,11.8,44.1,310,5.97,4,0.956
RMORE,11.8,44.1,310,5.97,4,0.956
RMORE,,,,,,
RMORE,2.1439,3.3618,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.01349

R,332,24.8,105,2830,13.345,4.98,2.79
RMORE,24.8,105,2830,13.345,4.98,2.79
RMORE,,,,,,
RMORE,2.9353,2.007,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.01349

R,333,27.7,124,3270,13.455,5,4.06
RMORE,27.7,124,3270,13.455,5,4.06
RMORE,,,,,,
RMORE,2.7839,2.1007,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,

RMORE,,,,,,
RMORE,,,,,,
RMORE,0.01349

R,336,44.2,270,9030,17.92,5.99,10.1
RMORE,44.2,270,9030,17.92,5.99,10.1
RMORE,,,,,,
RMORE,2.9457,1.9732,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.028059

R,337,31.8,146,4470,14.91,5.24,5.02
RMORE,31.8,146,4470,14.91,5.24,5.02
RMORE,,,,,,
RMORE,2.9932,1.946,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.056118

R,338,13.2,34.8,706,8.93,3.74,0.889
RMORE,13.2,34.8,706,8.93,3.74,0.889
RMORE,,,,,,
RMORE,2.6533,2.2063,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,0.056118

R,339,44.2,270,9030,17.92,5.99,10.1
RMORE,44.2,270,9030,17.92,5.99,10.1
RMORE,,,,,,
RMORE,2.9457,1.9732,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
RMORE,,,,,,
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R,341,47.1,295,9760,18,6,12.4
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R,356,13.8466,13.8466,13.8466

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R,358,26.4473,26.4473,26.4473
R,359,24.1887,24.1887,24.1887
R,360,25.6832,25.6832,25.6832
R,361,12.8882,12.8882,12.8882
R,362,22.0364,22.0364,22.0364
R,363,32.0211,32.0211,32.0211
R,364,8.96167,8.96167,8.96167

R,365,29.5,223,3000,12,6,4.87   ! NEW SECTION FOR MODAL ANALYSIS MCK 9/22/10
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SAVE

! SELECT NODES IN ORDER TO DEFINE A RIGID REGION USING "CERIG"


! EBLOCK DEFINES ELEMENTS, HEADING ARE PROVIDED TO HELP DURING CHECKING
!    MAT   TYPE    REAL    SECT                        # NODES        ELM #     I      J      K
EBLOCK,19,SOLID,
(19i8)
     1     1   205     0     0     0     0     0     2     0     1     1     2     0
     1     1   303     0     0     0     0     0     2     0     2     2     3     0
     1     1   205     0     0     0     0     0     2     0     3     3     4     0
    13     1     1    59     0     0     0     0     2     0     4     4     5     0
     1     1   206     0     0     0     0     0     2     0     5     5     6     0
     1     1   206     0     0     0     0     0     2     0     6     6     7     0
     1     1   304     0     0     0     0     0     2     0     7     7     8     0
    13     1     1    59     0     0     0     0     2     0     8     4     9     0
    13     1     1    59     0     0     0     0     2     0     9 60009    10     0
    13     1     1    59     0     0     0     0     2     0    11    10     7 20056
     1     1   205     0     0     0     0     0     2     0    12    12    13     0
     1     1   303     0     0     0     0     0     2     0    13    13    14     0
     1     1   205     0     0     0     0     0     2     0    14    14    15     0
    13     1     1    59     0     0     0     0     2     0    15    15    16     0
     1     1   206     0     0     0     0     0     2     0    16    16    17     0
     1     1   206     0     0     0     0     0     2     0    17    17    18     0
     1     1   304     0     0     0     0     0     2     0    18    18    19     0
    13     1     1    59     0     0     0     0     2     0    19    15    20     0
    13     1     1    59     0     0     0     0     2     0    20 60020    21     0
    13     1     1    59     0     0     0     0     2     0    22    21    18 20056
     1     2   207     0     0     0     0     0     2     0    23 60013    24 20056
     1     1   207     0     0     0     0     0     2     0    24    24    25 20056
     1     1   207     0     0     0     0     0     2     0    25    25    26 20056
     1     1   207     0     0     0     0     0     2     0    26    26    27 20056
     1     1   207     0     0     0     0     0     2     0    27    27    28 20056
     1     1   207     0     0     0     0     0     2     0    28    28    29 20056
     1     1   207     0     0     0     0     0     2     0    29    29    30 20056
     1     7   207     0     0     0     0     0     2     0    30    30 90002 20056
     1     2    30     0     0     0     0     0     2     0    31 60031    32     0
     1     7    40     0     0     0     0     0     2     0    32    32 60033     0
     1     9   209     0     0     0     0     0     2     0    33 60014 80034 20056
     1     9   209     0     0     0     0     0     2     0    34 90034 60003 20056
     1     2   210     0     0     0     0     0     2     0    35 60019    35 20056
     1     1   210     0     0     0     0     0     2     0    36    35    36 20056
     1     1   210     0     0     0     0     0     2     0    37    36    37 20056
     1     1   210     0     0     0     0     0     2     0    38    37    38 20056
     1     1   210     0     0     0     0     0     2     0    39    38    39 20056
     1     1   210     0     0     0     0     0     2     0    40    39    40 20056
     1     1   210     0     0     0     0     0     2     0    41    40    41 20056
     1     7   210     0     0     0     0     0     2     0    42    41 70008 20056
     1     2   211     0     0     0     0     0     2     0    43 60012    23 20070
     1     2   212     0     0     0     0     0     2     0    44 70013    23 20070
     1     2   211     0     0     0     0     0     2     0    45 60002    23 20070
     1     2    31     0     0     0     0     0     2     0    46 80013    31 20083
     1     7    32     0     0     0     0     0     2     0    47    14 70031 20083
     1     2    31     0     0     0     0     0     2     0    48 60034    31 20085
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1	2	31	0	0	0	0	0	2	0	49	70002	33	20084	
1	7	32	0	0	0	0	0	2	0	50	3	70033	20084	
1	2	31	0	0	0	0	0	2	0	51	70034	33	20085	
1	9	33	0	0	0	0	0	2	0	52	80019	100034	20085	
1	9	33	0	0	0	0	0	2	0	53	80008	110034	20085	
1	1	312	0	0	0	0	0	2	0	54	27	32	20052	
1	1	312	0	0	0	0	0	2	0	55	32	34	20052	
1	1	312	0	0	0	0	0	2	0	56	34	38	20052	
1	1	308	0	0	0	0	0	2	0	100	101	102	0	
1	1	306	0	0	0	0	0	2	0	101	102	103	0	
13	1	1	59	0	0	0	0	2	0	102	103	104	0	
1	1	206	0	0	0	0	0	2	0	103	104	105	0	
1	1	206	0	0	0	0	0	2	0	104	105	106	0	
1	1	307	0	0	0	0	0	2	0	105	106	107	0	
13	1	1	59	0	0	0	0	2	0	106	103	108	0	
13	1	1	59	0	0	0	0	2	0	107	60108	109	0	
13	1	1	59	0	0	0	0	2	0	109	109	106	20058	
1	1	326	0	0	0	0	0	2	0	110	111	112	0	
1	1	306	0	0	0	0	0	2	0	111	112	113	0	
1	1	306	0	0	0	0	0	2	0	112	113	114	0	
13	1	1	59	0	0	0	0	2	0	113	114	115	0	
1	1	206	0	0	0	0	0	2	0	114	115	116	0	
1	1	206	0	0	0	0	0	2	0	115	116	117	0	
1	1	307	0	0	0	0	0	2	0	116	117	118	0	
13	1	1	59	0	0	0	0	2	0	117	114	119	0	
13	1	1	59	0	0	0	0	2	0	118	60119	120	0	
13	1	1	59	0	0	0	0	2	0	120	120	117	20058	
1	7	313	0	0	0	0	0	2	0	121	123	60145	20052	
1	2	217	0	0	0	0	0	2	0	122	60124	125	20057	
1	1	348	0	0	0	0	0	2	0	123	125	126	20057	
1	1	348	0	0	0	0	0	2	0	124	126	127	20057	
1	1	348	0	0	0	0	0	2	0	125	127	128	20057	
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1	1	348	0	0	0	0	0	2	0	128	130	131	20057	
1	7	217	0	0	0	0	0	2	0	129	131	60132	20057	
1	2	207	0	0	0	0	0	2	0	130	60133	134	20081	
1	1	349	0	0	0	0	0	2	0	131	134	135	20081	
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1	3	207	0	0	0	0	0	2	0	138	60112	142	20058	
1	1	207	0	0	0	0	0	2	0	139	142	143	20058	
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1	8	207	0	0	0	0	0	2	0	145	148	60102	20058	
1	3	210	0	0	0	0	0	2	0	146	60118	149	20058	
1	1	210	0	0	0	0	0	2	0	147	149	150	20058	
1	1	210	0	0	0	0	0	2	0	148	150	151	20058	
1	1	210	0	0	0	0	0	2	0	149	151	152	20058	
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1	8	210	0	0	0	0	0	2	0	153	155	60107	20058	
1	2	218	0	0	0	0	0	2	0	157	60113	183	20002	
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1	1	310	0	0	0	0	0	2	0	1100	1101	1102	0	
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13	1	1	59	0	0	0	0	2	0	1102	1103	1104	0	
1	1	206	0	0	0	0	0	2	0	1103	1104	1105	0	
1	1	206	0	0	0	0	0	2	0	1104	1105	1106	0	
1	1	311	0	0	0	0	0	2	0	1105	1106	1107	0	
13	1	1	59	0	0	0	0	2	0	1106	1103	1108	0	
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1	1	310	0	0	0	0	0	2	0	1111	1112	1113	0	
1	1	310	0	0	0	0	0	2	0	1112	1113	1114	0	
13	1	1	59	0	0	0	0	2	0	1113	1114	1115	0	

1	1	206	0	0	0	0	0	2	0	1114	1115	1116	0
1	1	206	0	0	0	0	0	2	0	1115	1116	1117	0
1	1	311	0	0	0	0	0	2	0	1116	1117	1118	0
13	1	1	59	0	0	0	0	2	0	1117	1114	1119	0
13	1	1	59	0	0	0	0	2	0	1118	61119	1120	0
13	1	1	59	0	0	0	0	2	0	1120	1120	1117	20055
1	7	206	0	0	0	0	0	2	0	1121	1123	61145	0
1	3	207	0	0	0	0	0	2	0	1138	61112	1142	20055
1	1	207	0	0	0	0	0	2	0	1139	1142	1143	20055
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1	8	207	0	0	0	0	0	2	0	1145	1148	61102	20055
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1	9	218	0	0	0	0	0	2	0	1157	71113	62113	20002
1	1	310	0	0	0	0	0	2	0	2100	2101	2102	0
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13	1	1	59	0	0	0	0	2	0	2102	2103	2104	0
1	1	206	0	0	0	0	0	2	0	2103	2104	2105	0
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1	1	311	0	0	0	0	0	2	0	2105	2106	2107	0
13	1	1	59	0	0	0	0	2	0	2106	2103	2108	0
13	1	1	59	0	0	0	0	2	0	2107	62108	2109	0
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13	1	1	59	0	0	0	0	2	0	2113	2114	2115	0
1	1	206	0	0	0	0	0	2	0	2114	2115	2116	0
1	1	206	0	0	0	0	0	2	0	2115	2116	2117	0
1	1	301	0	0	0	0	0	2	0	2116	2117	2118	0
13	1	1	59	0	0	0	0	2	0	2117	2114	2119	0
13	1	1	59	0	0	0	0	2	0	2118	62119	2120	0
13	1	1	59	0	0	0	0	2	0	2120	2120	2117	20059
1	7	206	0	0	0	0	0	2	0	2121	2123	62145	0
1	1	212	0	0	0	0	0	2	0	2122	2122	2156	0
1	2	219	0	0	0	0	0	2	0	2123	62156	2157	20066
1	1	219	0	0	0	0	0	2	0	2124	2157	2158	20066
1	1	328	0	0	0	0	0	2	0	2125	2156	21740	0
1	7	328	0	0	0	0	0	2	0	2126	21740	63121	0
1	3	207	0	0	0	0	0	2	0	2138	62112	2142	20059
1	1	207	0	0	0	0	0	2	0	2139	2142	2143	20059
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1	1	207	0	0	0	0	0	2	0	2144	2147	2148	20059
1	8	207	0	0	0	0	0	2	0	2145	2148	62102	20059
1	3	210	0	0	0	0	0	2	0	2146	62118	2149	20059
1	1	210	0	0	0	0	0	2	0	2147	2149	2150	20059
1	1	210	0	0	0	0	0	2	0	2148	2150	2151	20059
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1	1	210	0	0	0	0	0	2	0	2150	2152	2153	20059
1	1	210	0	0	0	0	0	2	0	2151	2153	2154	20059
1	1	210	0	0	0	0	0	2	0	2152	2154	2155	20059
1	8	210	0	0	0	0	0	2	0	2153	2155	62107	20059
1	9	220	0	0	0	0	0	2	0	2157	72113	152174	20080
1	1	314	0	0	0	0	0	2	0	3100	3101	3100	0
1	1	314	0	0	0	0	0	2	0	3101	3102	3103	0
13	1	1	59	0	0	0	0	2	0	3102	3103	3104	0
1	1	206	0	0	0	0	0	2	0	3103	3104	3105	0
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1	1	315	0	0	0	0	0	2	0	3105	3106	3107	0
13	1	1	59	0	0	0	0	2	0	3106	3103	3108	0
13	1	1	59	0	0	0	0	2	0	3107	63108	3109	0
13	1	1	59	0	0	0	0	2	0	3109	3109	3106	20060

1	1	205	0	0	0	0	0	2	0	3110	3111	3112	0
1	1	323	0	0	0	0	0	2	0	3111	3112	3113	0
1	1	323	0	0	0	0	0	2	0	3112	3113	3114	0
13	1	1	59	0	0	0	0	2	0	3113	3114	3115	0
1	1	206	0	0	0	0	0	2	0	3114	3115	3116	0
1	1	206	0	0	0	0	0	2	0	3115	3116	3117	0
1	1	302	0	0	0	0	0	2	0	3116	3117	3118	0
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13	1	1	59	0	0	0	0	2	0	3118	63119	3120	0
13	1	1	59	0	0	0	0	2	0	3120	3120	3117	20060
1	7	206	0	0	0	0	0	2	0	3121	3123	63145	0
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1	3	207	0	0	0	0	0	2	0	3138	63112	3142	20060
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1	1	207	0	0	0	0	0	2	0	3143	3146	3147	20060
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1	3	210	0	0	0	0	0	2	0	3146	63118	3149	20060
1	1	210	0	0	0	0	0	2	0	3147	3149	3150	20060
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1	2	336	0	0	0	0	0	2	0	3154	63156	3157	20067
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1	7	339	0	0	0	0	0	2	0	3161	3163	63164	20067
1	1	314	0	0	0	0	0	2	0	3163	3100	3102	0
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13	1	1	59	0	0	0	0	2	0	4102	4103	4104	0
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13	1	1	59	0	0	0	0	2	0	4106	4103	4108	0
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1	1	205	0	0	0	0	0	2	0	4110	4111	4112	0
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13	1	1	59	0	0	0	0	2	0	4113	4114	4115	0
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1	1	206	0	0	0	0	0	2	0	4115	4116	4117	0
1	1	317	0	0	0	0	0	2	0	4116	4117	4122	0
13	1	1	59	0	0	0	0	2	0	4117	4114	4119	0
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1	1	317	0	0	0	0	0	2	0	4121	4122	4118	0
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1	3	210	0	0	0	0	0	2	0	4146	64118	4149	20061
1	1	210	0	0	0	0	0	2	0	4147	4149	4150	20061
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1	8	210	0	0	0	0	0	2	0	4153	4155	64107	20061
1	1	318	0	0	0	0	0	2	0	5100	5101	5100	0
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13	1	1	59	0	0	0	0	2	0	5102	5103	5104	0
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1	1	206	0	0	0	0	0	2	0	5104	5105	5106	0
1	1	319	0	0	0	0	0	2	0	5105	5106	5107	0
13	1	1	59	0	0	0	0	2	0	5106	5103	5108	0
13	1	1	59	0	0	0	0	2	0	5107	65108	5109	0
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1	1	205	0	0	0	0	0	2	0	5110	5111	5112	0
1	1	329	0	0	0	0	0	2	0	5111	5112	5113	0
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13	1	1	59	0	0	0	0	2	0	5113	5114	5115	0
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1	1	340	0	0	0	0	0	2	0	5116	5117	5122	0
13	1	1	59	0	0	0	0	2	0	5117	5114	5119	0
13	1	1	59	0	0	0	0	2	0	5118	65119	5120	0
13	1	1	59	0	0	0	0	2	0	5120	5120	5117	20062
1	1	340	0	0	0	0	0	2	0	5121	5122	5118	0
1	1	205	0	0	0	0	0	2	0	5122	5100	5102	0
1	2	341	0	0	0	0	0	2	0	5138	65112	5187	20062
1	1	341	0	0	0	0	0	2	0	5139	5187	5188	20062
1	1	341	0	0	0	0	0	2	0	5140	5188	5189	20062
1	1	341	0	0	0	0	0	2	0	5141	5189	5190	20062
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1	1	341	0	0	0	0	0	2	0	5144	5192	5193	20062
1	7	341	0	0	0	0	0	2	0	5145	5193	65102	20062
1	3	210	0	0	0	0	0	2	0	5146	65118	5149	20062
1	1	210	0	0	0	0	0	2	0	5147	5149	5150	20062
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1	8	210	0	0	0	0	0	2	0	5153	5155	65107	20062
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13	1	1	59	0	0	0	0	2	0	6102	6103	6104	0
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13	1	1	59	0	0	0	0	2	0	6106	6103	6108	0
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1	2	223	0	0	0	0	0	2	0	6146	66118	6149	20063
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1	2	342	0	0	0	0	0	2	0	7000	80002	132	20021
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1	9	351	0	0	0	0	0	2	0	7002	60029	60130	20016
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1	7	345	0	0	0	0	0	2	0	7049	2158	63143	20082
1	2	207	0	0	0	0	0	2	0	7050	63100	3165	0
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1	9	355	0	0	0	0	0	2	0	7052	73148	63163	20018
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1	9	355	0	0	0	0	0	2	0	7057	73143	63158	20082
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1	1	210	0	0	0	0	0	2	0	7247	7149	7150	20064
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1	9	243	0	0	0	0	0	2	0	7337	250037	150179	20071
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1	7	227	0	0	0	0	0	2	0	7360	2127	83102	20021
1	1	344	0	0	0	0	0	2	0	7361	2125	2126	20018
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1	9	229	0	0	0	0	0	2	0	7363	62124	62125	20068
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1	9	33	0	0	0	0	0	2	0	7436	91145	102102	20086
1	9	34	0	0	0	0	0	2	0	7437	100102	121145	20086
1	9	33	0	0	0	0	0	2	0	7438	101145	102112	20086
1	9	35	0	0	0	0	0	2	0	7439	92112	103145	20088
1	9	36	0	0	0	0	0	2	0	7441	92145	62158	20087
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1	1	330	0	0	0	0	0	2	0	8100	8101	8103	0
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1	1	309	0	0	0	0	0	2	0	8105	8106	8107	0
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1	7	216	0	0	0	0	0	2	0	8121	8100	8112	20052
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1	1	210	0	0	0	0	0	2	0	8147	8149	8150	20065
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1	9	232	0	0	0	0	0	2	0	8700	60006	60105	20022
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1	2	212	0	0	0	0	0	2	0	8803	62116	3121	20001
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5	21	1	48	0	0	0	0	2	0	12329	11323	11324	0
5	21	1	48	0	0	0	0	2	0	12330	11324	11325	0
5	21	1	48	0	0	0	0	2	0	12331	11325	11326	0
5	21	1	48	0	0	0	0	2	0	12332	11326	11327	0
5	21	1	48	0	0	0	0	2	0	12333	11327	11328	0
5	21	1	48	0	0	0	0	2	0	12334	11328	11329	0
5	21	1	48	0	0	0	0	2	0	12335	11329	11330	0
5	21	1	48	0	0	0	0	2	0	12336	11330	11331	0
5	21	1	48	0	0	0	0	2	0	12337	11331	11332	0
5	21	1	48	0	0	0	0	2	0	12338	11332	11280	0
2	100	52	45	0	0	0	0	2	0	12339	11006	0	0

2	100	52	45	0	0	0	0	2	0	12340	11007	0	0
2	100	53	45	0	0	0	0	2	0	12341	11285	0	0
2	100	54	45	0	0	0	0	2	0	12342	11270	0	0
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2	100	55	45	0	0	0	0	2	0	12344	11003	0	0
2	100	55	45	0	0	0	0	2	0	12345	11027	0	0
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8	21	1	52	0	0	0	0	2	0	12370	11357	11358	0
8	21	1	52	0	0	0	0	2	0	12371	11358	11356	0
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8	21	1	52	0	0	0	0	2	0	12373	11360	11359	0
8	21	1	52	0	0	0	0	2	0	12374	11359	11362	0
8	21	1	52	0	0	0	0	2	0	12375	11362	11361	0
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8	21	1	53	0	0	0	0	2	0	12386	11333	11373	0
8	21	1	53	0	0	0	0	2	0	12387	11373	11374	0
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8	21	1	55	0	0	0	0	2	0	12412	11368	11397	0
8	21	1	55	0	0	0	0	2	0	12413	11352	11399	0
8	21	1	55	0	0	0	0	2	0	12414	11356	11400	0
8	21	1	55	0	0	0	0	2	0	12415	11399	11401	0
8	21	1	55	0	0	0	0	2	0	12416	11401	11397	0
8	21	1	55	0	0	0	0	2	0	12417	11369	11402	0
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8	21	1	55	0	0	0	0	2	0	12419	11403	11402	0
8	21	1	56	0	0	0	0	2	0	12420	11397	11405	0
8	21	1	56	0	0	0	0	2	0	12421	11405	11406	0
8	21	1	56	0	0	0	0	2	0	12422	11406	11402	0
8	21	1	57	0	0	0	0	2	0	12423	11399	11408	0
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8	21	1	56	0	0	0	0	2	0	12426	11348	11411	0
8	21	1	56	0	0	0	0	2	0	12427	11411	11412	0
8	21	1	56	0	0	0	0	2	0	12428	11412	11365	0
8	21	1	56	0	0	0	0	2	0	12429	11349	11414	0
8	21	1	56	0	0	0	0	2	0	12430	11414	11415	0
8	21	1	56	0	0	0	0	2	0	12431	11415	11366	0
8	21	1	56	0	0	0	0	2	0	12432	11350	11417	0
8	21	1	56	0	0	0	0	2	0	12433	11417	11418	0
8	21	1	56	0	0	0	0	2	0	12434	11418	11367	0
8	21	1	56	0	0	0	0	2	0	12435	11353	11420	0
8	21	1	56	0	0	0	0	2	0	12436	11420	11421	0
8	21	1	56	0	0	0	0	2	0	12437	11421	11373	0
8	21	1	56	0	0	0	0	2	0	12438	11355	11423	0
8	21	1	56	0	0	0	0	2	0	12439	11423	11424	0
8	21	1	56	0	0	0	0	2	0	12440	11424	11375	0
8	21	1	56	0	0	0	0	2	0	12441	11359	11426	0

8	21	1	56	0	0	0	0	2	0	12442	11426	11427	0
8	21	1	56	0	0	0	0	2	0	12443	11427	11376	0
8	21	1	58	0	0	0	0	2	0	12444	11347	11429	0
8	21	1	58	0	0	0	0	2	0	12445	11429	11430	0
8	21	1	58	0	0	0	0	2	0	12446	11430	11363	0
8	21	1	58	0	0	0	0	2	0	12447	11354	11432	0
8	21	1	58	0	0	0	0	2	0	12448	11432	11433	0
8	21	1	58	0	0	0	0	2	0	12449	11433	11374	0
8	21	1	53	0	0	0	0	2	0	12450	11368	11435	0
8	21	1	53	0	0	0	0	2	0	12451	11435	11434	0
8	21	1	53	0	0	0	0	2	0	12452	11369	11436	0
8	21	1	53	0	0	0	0	2	0	12453	11436	11434	0
8	21	1	51	0	0	0	0	2	0	12454	11338	11438	0
8	21	1	51	0	0	0	0	2	0	12455	11438	11439	0
8	21	1	51	0	0	0	0	2	0	12456	11439	11437	0
8	21	1	51	0	0	0	0	2	0	12457	11333	11441	0
8	21	1	51	0	0	0	0	2	0	12458	11441	11442	0
8	21	1	51	0	0	0	0	2	0	12459	11442	11440	0
8	21	1	51	0	0	0	0	2	0	12460	11443	11444	0
8	21	1	51	0	0	0	0	2	0	12461	11444	11445	0
8	21	1	51	0	0	0	0	2	0	12462	11445	11338	0
8	21	1	51	0	0	0	0	2	0	12463	11446	11447	0
8	21	1	51	0	0	0	0	2	0	12464	11447	11448	0
8	21	1	51	0	0	0	0	2	0	12465	11448	11333	0
8	21	1	51	0	0	0	0	2	0	12466	11443	11337	0
8	21	1	51	0	0	0	0	2	0	12467	11446	11334	0
8	21	1	51	0	0	0	0	2	0	12468	11437	11341	0
8	21	1	51	0	0	0	0	2	0	12469	11344	11440	0
6	21	1	50	0	0	0	0	2	0	12470	11130	11443	0
6	21	1	50	0	0	0	0	2	0	12471	11123	11437	0
6	21	1	50	0	0	0	0	2	0	12472	11116	11440	0
6	21	1	50	0	0	0	0	2	0	12473	11137	11446	0
6	1001	1001	50	0	0	0	0	2	0	12478	11434	11450	0
6	1002	1002	50	0	0	0	0	2	0	12479	11434	11450	0
6	1003	1003	50	0	0	0	0	2	0	12480	11434	11450	0
6	1004	1004	50	0	0	0	0	1	0	12481	11450	0	0
1	1	324	0	0	0	0	0	2	0	71000	7101	7103	0
13	1	1	59	0	0	0	0	2	0	71020	7103	7104	0
1	1	206	0	0	0	0	0	2	0	71030	7104	7105	0
1	1	206	0	0	0	0	0	2	0	71040	7105	7106	0
1	1	325	0	0	0	0	0	2	0	71050	7106	7107	0
13	1	1	59	0	0	0	0	2	0	71060	7103	7108	0
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13	1	1	59	0	0	0	0	2	0	71090	7109	7106	20064
1	1	205	0	0	0	0	0	2	0	71100	7111	7114	0
13	1	1	59	0	0	0	0	2	0	71130	7114	7115	0
1	1	206	0	0	0	0	0	2	0	71140	7115	7116	0
1	1	206	0	0	0	0	0	2	0	71150	7116	7117	0
1	1	309	0	0	0	0	0	2	0	71160	7117	7122	0
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13	1	1	59	0	0	0	0	2	0	71180	67119	7120	0
13	1	1	59	0	0	0	0	2	0	71200	7120	7117	20064
1	1	309	0	0	0	0	0	2	0	71210	7122	7118	0
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0	14	14	0	0	0	0	0	2	0	90001	112	30112	0
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0	13	13	0	0	0	0	0	2	0	90005	2112	32112	0
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6	1	1	60	0	0	0	0	2	0	90503	153	50153	0
6	1	1	60	0	0	0	0	2	0	90504	174	50174	0
6	1	1	60	0	0	0	0	2	0	90505	177	50177	0
6	1	1	60	0	0	0	0	2	0	90506	179	50179	0
6	1	1	60	0	0	0	0	2	0	90507	182	50182	0
6	1	1	60	0	0	0	0	2	0	90508	1107	51107	0
6	1	1	60	0	0	0	0	2	0	90509	2153	52153	0
6	1	1	60	0	0	0	0	2	0	90510	3107	53107	0
6	1	1	60	0	0	0	0	2	0	90511	4153	54153	0
6	1	1	60	0	0	0	0	2	0	90512	5107	55107	0
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6	1	1	60	0	0	0	0	2	0	90516	7151	57151	0
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6	1	1	60	0	0	0	0	2	0	90518	8151	58151	0
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6	1	1	60	0	0	0	0	2	0	90520	21740	52174	0
6	1	1	60	0	0	0	0	2	0	90521	2156	52156	0
1	100	356	0	0	0	0	0	2	0	95001	113	0	0
1	100	357	0	0	0	0	0	2	0	95002	1113	0	0
1	100	358	0	0	0	0	0	2	0	95003	2113	0	0
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1	100	360	0	0	0	0	0	2	0	95005	4113	0	0
1	100	361	0	0	0	0	0	2	0	95006	5113	0	0
1	100	362	0	0	0	0	0	2	0	95007	5122	0	0
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1	100	364	0	0	0	0	0	2	0	95009	81660	0	0
0	300	407	0	0	0	0	0	2	0	40043	12	23	0
0	300	406	0	0	0	0	0	2	0	40044	13	23	0
0	300	408	0	0	0	0	0	2	0	40045	2	23	0
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0	300	405	0	0	0	0	0	2	0	40049	2	33	0
0	300	404	0	0	0	0	0	2	0	40050	3	33	0
0	300	405	0	0	0	0	0	2	0	40051	34	33	0
0	300	403	0	0	0	0	0	2	0	40052	19	34	0
0	300	403	0	0	0	0	0	2	0	40053	8	34	0
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0	300	401	0	0	0	0	0	2	0	47337	50037	50179	0
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0	300	421	0	0	0	0	0	2	0	47352	112	8156	0
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0	300	417	0	0	0	0	0	2	0	47438	1145	2112	0
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0	300	418	0	0	0	0	0	2	0	47443	3145	3164	0
13	1	1	59	0	0	0	0	2	0	30001	10801	301011	0
13	1	1	59	0	0	0	0	2	0	30002	10802	301021	0
13	1	1	59	0	0	0	0	2	0	30003	10803	301031	0

```
    13    1    1    59    0    0    0    0    2    0  30004  10804  301041    0
    13    1    1    59    0    0    0    0    2    0  30005  10813  301131    0
    13    1    1    59    0    0    0    0    2    0  30006  10814  301141    0
    13    1    1    59    0    0    0    0    2    0  30007  10815  301151    0
    13    1    1    59    0    0    0    0    2    0  30008  10816  301161    0
-1

! These constraint equiations attach the trolly to the crane bridge
!!!! Dec 20, 2010, J.Staples
!!!! See Rev 1 of Calc S10-0049.
!!!! CE equations are replaced by CP commands. The CP commands include no Rotation restriction and connections now follow NOG-1 2004
!!!! This is associated with Fig. 4154.3-1 and Table 4154.3-1
!!!! Specifically, Nodes E, F, G and H of the Figure 4154.3

!CE,1,0,11002,UZ,1,11129,UZ,-1,11129,ROTX,-1,

!CE,2,0,11002,UY,1,11129,UY,-1

!CE,3,0,11002,UX,1,11129,UX,-1,11129,ROTZ,1,

!CE,4,0,11050,UZ,1,11136,UZ,-1,11136,ROTX,-1,

!CE,5,0,11050,UY,1,11136,UY,-1

!CE,6,0,11050,UX,1,11136,UX,-1,11136,ROTZ,1,

!CE,7,0,11122,UY,1,11026,UY,-1

!CE,8,0,11122,UX,1,11026,UX,-1,11026,ROTZ,-1,

!CE,9,0,11115,UY,1,11083,UY,-1

!CE,10,0,11115,UX,1,11083,UX,-1,11083,ROTZ,-1,


CP,1,UX,     11002,    11129,
CP,2,UY,     11002,    11129,
CP,3,UZ,     11002,    11129,
CP,4,UX,     11050,    11136,
CP,5,UY,     11050,    11136,
CP,6,UZ,     11050,    11136,
CP,7,UY,     11026,    11122,
CP,8,UX,     11026,    11122,
CP,9,UY,     11083,    11115,
CP,10,UX,    11083,    11115,


!!!!
!!!! End of Dec 20 2010 changes.


! These constraint equiations attach the crane bridge to the crane rail

CE,11,0,40101,UY,1,301011,UY,-1
CE,12,0,40101,UZ,1,301011,UZ,-1

CE,13,0,40102,UY,1,301021,UY,-1
CE,14,0,40102,UZ,1,301021,UZ,-1

CE,15,0,40103,UX,1,301031,UX,-1
CE,16,0,40103,UY,1,301031,UY,-1
CE,17,0,40103,UZ,1,301031,UZ,-1

CE,18,0,40104,UX,1,301041,UX,-1
CE,19,0,40104,UY,1,301041,UY,-1
CE,20,0,40104,UZ,1,301041,UZ,-1

CE,21,0,40113,UY,1,301131,UY,-1

CE,22,0,40114,UY,1,301141,UY,-1

CE,23,0,40115,UX,1,301151,UX,-1
CE,24,0,40115,UY,1,10115,UY,-1

CE,25,0,40116,UX,1,301161,UX,-1
```

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CE,26,0,40116,UY,1,301161,UY,-1

! ELEMENT TYPE 2

CE,101,0,60013,UX,1,13,UX,-1
CE,NEXT,0,60013,UY,1,13,UY,-1
CE,NEXT,0,60013,UZ,1,13,UZ,-1
CE,NEXT,0,60013,ROTZ,1,13,ROTZ,-1

CE,NEXT,0,60031,UX,1,31,UX,-1
CE,NEXT,0,60031,UY,1,31,UY,-1
CE,NEXT,0,60031,UZ,1,31,UZ,-1
CE,NEXT,0,60031,ROTZ,1,31,ROTZ,-1

CE,NEXT,0,60019,UX,1,19,UX,-1
CE,NEXT,0,60019,UY,1,19,UY,-1
CE,NEXT,0,60019,UZ,1,19,UZ,-1
CE,NEXT,0,60019,ROTZ,1,19,ROTZ,-1

CE,NEXT,0,60012,UX,1,12,UX,-1
CE,NEXT,0,60012,UY,1,12,UY,-1
CE,NEXT,0,60012,UZ,1,12,UZ,-1

CE,NEXT,0,70013,UX,1,13,UX,-1
CE,NEXT,0,70013,UY,1,13,UY,-1
CE,NEXT,0,70013,UZ,1,13,UZ,-1

CE,NEXT,0,60002,UX,1,2,UX,-1
CE,NEXT,0,60002,UY,1,2,UY,-1
CE,NEXT,0,60002,UZ,1,2,UZ,-1

CE,NEXT,0,80013,UX,1,13,UX,-1
CE,NEXT,0,80013,UY,1,13,UY,-1
CE,NEXT,0,80013,UZ,1,13,UZ,-1

CE,NEXT,0,60034,UX,1,34,UX,-1
CE,NEXT,0,60034,UY,1,34,UY,-1
CE,NEXT,0,60034,UZ,1,34,UZ,-1

CE,NEXT,0,70002,UX,1,2,UX,-1
CE,NEXT,0,70002,UY,1,2,UY,-1
CE,NEXT,0,70002,UZ,1,2,UZ,-1

CE,NEXT,0,70034,UX,1,34,UX,-1
CE,NEXT,0,70034,UY,1,34,UY,-1
CE,NEXT,0,70034,UZ,1,34,UZ,-1

CE,NEXT,0,60124,UX,1,124,UX,-1
CE,NEXT,0,60124,UY,1,124,UY,-1
CE,NEXT,0,60124,UZ,1,124,UZ,-1
CE,NEXT,0,60124,ROTZ,1,124,ROTZ,-1

CE,NEXT,0,60133,UX,1,133,UX,-1
CE,NEXT,0,60133,UY,1,133,UY,-1
CE,NEXT,0,60133,UZ,1,133,UZ,-1
CE,NEXT,0,60133,ROTZ,1,133,ROTZ,-1

CE,NEXT,0,60113,UX,1,113,UX,-1
CE,NEXT,0,60113,UY,1,113,UY,-1
CE,NEXT,0,60113,UZ,1,113,UZ,-1
CE,NEXT,0,60113,ROTX,1,113,ROTX,-1

CE,NEXT,0,62156,UX,1,2156,UX,-1
CE,NEXT,0,62156,UY,1,2156,UY,-1
CE,NEXT,0,62156,UZ,1,2156,UZ,-1
CE,NEXT,0,62156,ROTZ,1,2156,ROTZ,-1

CE,NEXT,0,63156,UX,1,3156,UX,-1
CE,NEXT,0,63156,UY,1,3156,UY,-1
CE,NEXT,0,63156,UZ,1,3156,UZ,-1
CE,NEXT,0,63156,ROTZ,1,3156,ROTZ,-1

CE,NEXT,0,65112,UX,1,5112,UX,-1
CE,NEXT,0,65112,UY,1,5112,UY,-1
CE,NEXT,0,65112,UZ,1,5112,UZ,-1
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CE,NEXT,0,65112,ROTZ,1,5112,ROTZ,-1

CE,NEXT,0,66118,UX,1,6118,UX,-1
CE,NEXT,0,66118,UY,1,6118,UY,-1
CE,NEXT,0,66118,UZ,1,6118,UZ,-1
CE,NEXT,0,66118,ROTZ,1,6118,ROTZ,-1

CE,NEXT,0,80002,UX,1,2,UX,-1
CE,NEXT,0,80002,UY,1,2,UY,-1
CE,NEXT,0,80002,UZ,1,2,UZ,-1
CE,NEXT,0,80002,ROTX,1,2,ROTX,-1

CE,NEXT,0,90013,UX,1,13,UX,-1
CE,NEXT,0,90013,UY,1,13,UY,-1
CE,NEXT,0,90013,UZ,1,13,UZ,-1
CE,NEXT,0,90013,ROTX,1,13,ROTX,-1

CE,NEXT,0,72102,UX,1,2102,UX,-1
CE,NEXT,0,72102,UY,1,2102,UY,-1
CE,NEXT,0,72102,UZ,1,2102,UZ,-1
CE,NEXT,0,72102,ROTX,1,2102,ROTX,-1

CE,NEXT,0,62148,UX,1,2148,UX,-1
CE,NEXT,0,62148,UY,1,2148,UY,-1
CE,NEXT,0,62148,UZ,1,2148,UZ,-1
CE,NEXT,0,62148,ROTX,1,2148,ROTX,-1

CE,NEXT,0,62143,UX,1,2143,UX,-1
CE,NEXT,0,62143,UY,1,2143,UY,-1
CE,NEXT,0,62143,UZ,1,2143,UZ,-1
CE,NEXT,0,62143,ROTX,1,2143,ROTX,-1

CE,NEXT,0,63100,UX,1,3100,UX,-1
CE,NEXT,0,63100,UY,1,3100,UY,-1
CE,NEXT,0,63100,UZ,1,3100,UZ,-1
CE,NEXT,0,63100,ROTX,1,3100,ROTX,-1

CE,NEXT,0,73102,UX,1,3102,UX,-1
CE,NEXT,0,73102,UY,1,3102,UY,-1
CE,NEXT,0,73102,UZ,1,3102,UZ,-1
CE,NEXT,0,73102,ROTX,1,3102,ROTX,-1

CE,NEXT,0,73112,UX,1,3112,UX,-1
CE,NEXT,0,73112,UY,1,3112,UY,-1
CE,NEXT,0,73112,UZ,1,3112,UZ,-1
CE,NEXT,0,73112,ROTX,1,3112,ROTX,-1

CE,NEXT,0,64113,UX,1,4113,UX,-1
CE,NEXT,0,64113,UY,1,4113,UY,-1
CE,NEXT,0,64113,UZ,1,4113,UZ,-1
CE,NEXT,0,64113,ROTX,1,4113,ROTX,-1

CE,NEXT,0,64122,UX,1,4122,UX,-1
CE,NEXT,0,64122,UY,1,4122,UY,-1
CE,NEXT,0,64122,UZ,1,4122,UZ,-1
CE,NEXT,0,64122,ROTX,1,4122,ROTX,-1

CE,NEXT,0,62116,UX,1,2116,UX,-1
CE,NEXT,0,62116,UY,1,2116,UY,-1
CE,NEXT,0,62116,UZ,1,2116,UZ,-1
CE,NEXT,0,62116,ROTX,1,2116,ROTX,-1

CE,NEXT,0,60008,UX,1,8,UX,-1
CE,NEXT,0,60008,UY,1,8,UY,-1
CE,NEXT,0,60008,UZ,1,8,UZ,-1
CE,NEXT,0,60008,ROTX,1,8,ROTX,-1

CE,NEXT,0,70019,UX,1,19,UX,-1
CE,NEXT,0,70019,UY,1,19,UY,-1
CE,NEXT,0,70019,UZ,1,19,UZ,-1
CE,NEXT,0,70019,ROTX,1,19,ROTX,-1

CE,NEXT,0,75118,UX,1,5118,UX,-1
CE,NEXT,0,75118,UY,1,5118,UY,-1
CE,NEXT,0,75118,UZ,1,5118,UZ,-1
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CE,NEXT,0,75118,ROTX,1,5118,ROTX,-1

CE,NEXT,0,60174,UX,1,174,UX,-1
CE,NEXT,0,60174,UY,1,174,UY,-1
CE,NEXT,0,60174,UZ,1,174,UZ,-1
CE,NEXT,0,60174,ROTZ,1,174,ROTZ,-1

CE,NEXT,0,67109,UX,1,7109,UX,-1
CE,NEXT,0,67109,UY,1,7109,UY,-1
CE,NEXT,0,67109,UZ,1,7109,UZ,-1
CE,NEXT,0,67109,ROTX,1,7109,ROTX,-1

CE,NEXT,0,66109,UX,1,6109,UX,-1
CE,NEXT,0,66109,UY,1,6109,UY,-1
CE,NEXT,0,66109,UZ,1,6109,UZ,-1
CE,NEXT,0,66109,ROTX,1,6109,ROTX,-1

CE,NEXT,0,65109,UX,1,5109,UX,-1
CE,NEXT,0,65109,UY,1,5109,UY,-1
CE,NEXT,0,65109,UZ,1,5109,UZ,-1
CE,NEXT,0,65109,ROTX,1,5109,ROTX,-1

CE,NEXT,0,63109,UX,1,3109,UX,-1
CE,NEXT,0,63109,UY,1,3109,UY,-1
CE,NEXT,0,63109,UZ,1,3109,UZ,-1
CE,NEXT,0,63109,ROTX,1,3109,ROTX,-1

CE,NEXT,0,62109,UX,1,2109,UX,-1
CE,NEXT,0,62109,UY,1,2109,UY,-1
CE,NEXT,0,62109,UZ,1,2109,UZ,-1
CE,NEXT,0,62109,ROTX,1,2109,ROTX,-1

CE,NEXT,0,61109,UX,1,1109,UX,-1
CE,NEXT,0,61109,UY,1,1109,UY,-1
CE,NEXT,0,61109,UZ,1,1109,UZ,-1
CE,NEXT,0,61109,ROTX,1,1109,ROTX,-1

CE,NEXT,0,68120,UX,1,8120,UX,-1
CE,NEXT,0,68120,UY,1,8120,UY,-1
CE,NEXT,0,68120,UZ,1,8120,UZ,-1
CE,NEXT,0,68120,ROTX,1,8120,ROTX,-1

CE,NEXT,0,65120,UX,1,5120,UX,-1
CE,NEXT,0,65120,UY,1,5120,UY,-1
CE,NEXT,0,65120,UZ,1,5120,UZ,-1
CE,NEXT,0,65120,ROTX,1,5120,ROTX,-1

CE,NEXT,0,63120,UX,1,3120,UX,-1
CE,NEXT,0,63120,UY,1,3120,UY,-1
CE,NEXT,0,63120,UZ,1,3120,UZ,-1
CE,NEXT,0,63120,ROTX,1,3120,ROTX,-1

CE,NEXT,0,62120,UX,1,2120,UX,-1
CE,NEXT,0,62120,UY,1,2120,UY,-1
CE,NEXT,0,62120,UZ,1,2120,UZ,-1
CE,NEXT,0,62120,ROTX,1,2120,ROTX,-1

CE,NEXT,0,61120,UX,1,1120,UX,-1
CE,NEXT,0,61120,UY,1,1120,UY,-1
CE,NEXT,0,61120,UZ,1,1120,UZ,-1
CE,NEXT,0,61120,ROTX,1,1120,ROTX,-1

!,ELEMENT,TYPE,,,,3,,

CE,NEXT,0,60112,UX,1,112,UX,-1
CE,NEXT,0,60112,UY,1,112,UY,-1
CE,NEXT,0,60112,UZ,1,112,UZ,-1
CE,NEXT,0,60112,ROTX,1,112,ROTX,-1
CE,NEXT,0,60112,ROTZ,1,112,ROTZ,-1

CE,NEXT,0,60118,UX,1,118,UX,-1
CE,NEXT,0,60118,UY,1,118,UY,-1
CE,NEXT,0,60118,UZ,1,118,UZ,-1
CE,NEXT,0,60118,ROTX,1,118,ROTX,-1
CE,NEXT,0,60118,ROTZ,1,118,ROTZ,-1
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CE,NEXT,0,61112,UX,1,1112,UX,-1
CE,NEXT,0,61112,UY,1,1112,UY,-1
CE,NEXT,0,61112,UZ,1,1112,UZ,-1
CE,NEXT,0,61112,ROTX,1,1112,ROTX,-1
CE,NEXT,0,61112,ROTZ,1,1112,ROTZ,-1

CE,NEXT,0,61118,UX,1,1118,UX,-1
CE,NEXT,0,61118,UY,1,1118,UY,-1
CE,NEXT,0,61118,UZ,1,1118,UZ,-1
CE,NEXT,0,61118,ROTX,1,1118,ROTX,-1
CE,NEXT,0,61118,ROTZ,1,1118,ROTZ,-1

CE,NEXT,0,62112,UX,1,2112,UX,-1
CE,NEXT,0,62112,UY,1,2112,UY,-1
CE,NEXT,0,62112,UZ,1,2112,UZ,-1
CE,NEXT,0,62112,ROTX,1,2112,ROTX,-1
CE,NEXT,0,62112,ROTZ,1,2112,ROTZ,-1

CE,NEXT,0,62118,UX,1,2118,UX,-1
CE,NEXT,0,62118,UY,1,2118,UY,-1
CE,NEXT,0,62118,UZ,1,2118,UZ,-1
CE,NEXT,0,62118,ROTX,1,2118,ROTX,-1
CE,NEXT,0,62118,ROTZ,1,2118,ROTZ,-1

CE,NEXT,0,63112,UX,1,3112,UX,-1
CE,NEXT,0,63112,UY,1,3112,UY,-1
CE,NEXT,0,63112,UZ,1,3112,UZ,-1
CE,NEXT,0,63112,ROTX,1,3112,ROTX,-1
CE,NEXT,0,63112,ROTZ,1,3112,ROTZ,-1

CE,NEXT,0,63118,UX,1,3118,UX,-1
CE,NEXT,0,63118,UY,1,3118,UY,-1
CE,NEXT,0,63118,UZ,1,3118,UZ,-1
CE,NEXT,0,63118,ROTX,1,3118,ROTX,-1
CE,NEXT,0,63118,ROTZ,1,3118,ROTZ,-1

CE,NEXT,0,64118,UX,1,4118,UX,-1
CE,NEXT,0,64118,UY,1,4118,UY,-1
CE,NEXT,0,64118,UZ,1,4118,UZ,-1
CE,NEXT,0,64118,ROTX,1,4118,ROTX,-1
CE,NEXT,0,64118,ROTZ,1,4118,ROTZ,-1

CE,NEXT,0,65118,UX,1,5118,UX,-1
CE,NEXT,0,65118,UY,1,5118,UY,-1
CE,NEXT,0,65118,UZ,1,5118,UZ,-1
CE,NEXT,0,65118,ROTX,1,5118,ROTX,-1
CE,NEXT,0,65118,ROTZ,1,5118,ROTZ,-1

CE,NEXT,0,67118,UX,1,7118,UX,-1
CE,NEXT,0,67118,UY,1,7118,UY,-1
CE,NEXT,0,67118,UZ,1,7118,UZ,-1
CE,NEXT,0,67118,ROTX,1,7118,ROTX,-1
CE,NEXT,0,67118,ROTZ,1,7118,ROTZ,-1

CE,NEXT,0,68118,UX,1,8118,UX,-1
CE,NEXT,0,68118,UY,1,8118,UY,-1
CE,NEXT,0,68118,UZ,1,8118,UZ,-1
CE,NEXT,0,68118,ROTX,1,8118,ROTX,-1
CE,NEXT,0,68118,ROTZ,1,8118,ROTZ,-1

!,ELEMENT,TYPE,,,,7,,

CE,NEXT,0,90002,UX,1,2,UX,-1
CE,NEXT,0,90002,UY,1,2,UY,-1
CE,NEXT,0,90002,UZ,1,2,UZ,-1
CE,NEXT,0,90002,ROTZ,1,2,ROTZ,-1

CE,NEXT,0,60033,UX,1,33,UX,-1
CE,NEXT,0,60033,UY,1,33,UY,-1
CE,NEXT,0,60033,UZ,1,33,UZ,-1
CE,NEXT,0,60033,ROTZ,1,33,ROTZ,-1

CE,NEXT,0,70008,UX,1,8,UX,-1
CE,NEXT,0,70008,UY,1,8,UY,-1
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CE,NEXT,0,70008,UZ,1,8,UZ,-1
CE,NEXT,0,70008,ROTZ,1,8,ROTZ,-1

CE,NEXT,0,70031,UX,1,31,UX,-1
CE,NEXT,0,70031,UY,1,31,UY,-1
CE,NEXT,0,70031,UZ,1,31,UZ,-1

CE,NEXT,0,70033,UX,1,33,UX,-1
CE,NEXT,0,70033,UY,1,33,UY,-1
CE,NEXT,0,70033,UZ,1,33,UZ,-1

CE,NEXT,0,60145,UX,1,145,UX,-1
CE,NEXT,0,60145,UY,1,145,UY,-1
CE,NEXT,0,60145,UZ,1,145,UZ,-1
CE,NEXT,0,60145,ROTY,1,145,ROTY,-1

CE,NEXT,0,60132,UX,1,132,UX,-1
CE,NEXT,0,60132,UY,1,132,UY,-1
CE,NEXT,0,60132,UZ,1,132,UZ,-1
CE,NEXT,0,60132,ROTZ,1,132,ROTZ,-1

CE,NEXT,0,60141,UX,1,141,UX,-1
CE,NEXT,0,60141,UY,1,141,UY,-1
CE,NEXT,0,60141,UZ,1,141,UZ,-1
CE,NEXT,0,60141,ROTZ,1,141,ROTZ,-1

CE,NEXT,0,61113,UX,1,1113,UX,-1
CE,NEXT,0,61113,UY,1,1113,UY,-1
CE,NEXT,0,61113,UZ,1,1113,UZ,-1
CE,NEXT,0,61113,ROTX,1,1113,ROTX,-1

CE,NEXT,0,61145,UX,1,1145,UX,-1
CE,NEXT,0,61145,UY,1,1145,UY,-1
CE,NEXT,0,61145,UZ,1,1145,UZ,-1
CE,NEXT,0,61145,ROTY,1,1145,ROTY,-1

CE,NEXT,0,62145,UX,1,2145,UX,-1
CE,NEXT,0,62145,UY,1,2145,UY,-1
CE,NEXT,0,62145,UZ,1,2145,UZ,-1
CE,NEXT,0,62145,ROTY,1,2145,ROTY,-1

CE,NEXT,0,63121,UX,1,3121,UX,-1
CE,NEXT,0,63121,UY,1,3121,UY,-1
CE,NEXT,0,63121,UZ,1,3121,UZ,-1
CE,NEXT,0,63121,ROTY,1,3121,ROTY,-1

CE,NEXT,0,63145,UX,1,3145,UX,-1
CE,NEXT,0,63145,UY,1,3145,UY,-1
CE,NEXT,0,63145,UZ,1,3145,UZ,-1
CE,NEXT,0,63145,ROTY,1,3145,ROTY,-1

CE,NEXT,0,63164,UX,1,3164,UX,-1
CE,NEXT,0,63164,UY,1,3164,UY,-1
CE,NEXT,0,63164,UZ,1,3164,UZ,-1
CE,NEXT,0,63164,ROTZ,1,3164,ROTZ,-1

CE,NEXT,0,65102,UX,1,5102,UX,-1
CE,NEXT,0,65102,UY,1,5102,UY,-1
CE,NEXT,0,65102,UZ,1,5102,UZ,-1
CE,NEXT,0,65102,ROTZ,1,5102,ROTZ,-1

CE,NEXT,0,66107,UX,1,6107,UX,-1
CE,NEXT,0,66107,UY,1,6107,UY,-1
CE,NEXT,0,66107,UZ,1,6107,UZ,-1
CE,NEXT,0,66107,ROTZ,1,6107,ROTZ,-1

CE,NEXT,0,70102,UX,1,102,UX,-1
CE,NEXT,0,70102,UY,1,102,UY,-1
CE,NEXT,0,70102,UZ,1,102,UZ,-1
CE,NEXT,0,70102,ROTX,1,102,ROTX,-1

CE,NEXT,0,70112,UX,1,112,UX,-1
CE,NEXT,0,70112,UY,1,112,UY,-1
CE,NEXT,0,70112,UZ,1,112,UZ,-1
CE,NEXT,0,70112,ROTX,1,112,ROTX,-1
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CE,NEXT,0,63143,UX,1,3143,UX,-1
CE,NEXT,0,63143,UY,1,3143,UY,-1
CE,NEXT,0,63143,UZ,1,3143,UZ,-1
CE,NEXT,0,63143,ROTX,1,3143,ROTX,-1

CE,NEXT,0,64102,UX,1,4102,UX,-1
CE,NEXT,0,64102,UY,1,4102,UY,-1
CE,NEXT,0,64102,UZ,1,4102,UZ,-1
CE,NEXT,0,64102,ROTX,1,4102,ROTX,-1

CE,NEXT,0,64112,UX,1,4112,UX,-1
CE,NEXT,0,64112,UY,1,4112,UY,-1
CE,NEXT,0,64112,UZ,1,4112,UZ,-1
CE,NEXT,0,64112,ROTX,1,4112,ROTX,-1

CE,NEXT,0,65122,UX,1,5122,UX,-1
CE,NEXT,0,65122,UY,1,5122,UY,-1
CE,NEXT,0,65122,UZ,1,5122,UZ,-1
CE,NEXT,0,65122,ROTX,1,5122,ROTX,-1

CE,NEXT,0,65113,UX,1,5113,UX,-1
CE,NEXT,0,65113,UY,1,5113,UY,-1
CE,NEXT,0,65113,UZ,1,5113,UZ,-1
CE,NEXT,0,65113,ROTX,1,5113,ROTX,-1

CE,NEXT,0,83102,UX,1,3102,UX,-1
CE,NEXT,0,83102,UY,1,3102,UY,-1
CE,NEXT,0,83102,UZ,1,3102,UZ,-1
CE,NEXT,0,83102,ROTX,1,3102,ROTX,-1

CE,NEXT,0,63148,UX,1,3148,UX,-1
CE,NEXT,0,63148,UY,1,3148,UY,-1
CE,NEXT,0,63148,UZ,1,3148,UZ,-1
CE,NEXT,0,63148,ROTX,1,3148,ROTX,-1

CE,NEXT,0,68152,UX,1,8152,UX,-1
CE,NEXT,0,68152,UY,1,8152,UY,-1
CE,NEXT,0,68152,UZ,1,8152,UZ,-1
CE,NEXT,0,68152,ROTY,1,8152,ROTY,-1

CE,NEXT,0,63116,UX,1,3116,UX,-1
CE,NEXT,0,63116,UY,1,3116,UY,-1
CE,NEXT,0,63116,UZ,1,3116,UZ,-1
CE,NEXT,0,63116,ROTX,1,3116,ROTX,-1

CE,NEXT,0,77118,UX,1,7118,UX,-1
CE,NEXT,0,77118,UY,1,7118,UY,-1
CE,NEXT,0,77118,UZ,1,7118,UZ,-1
CE,NEXT,0,77118,ROTX,1,7118,ROTX,-1

CE,NEXT,0,70107,UX,1,107,UX,-1
CE,NEXT,0,70107,UY,1,107,UY,-1
CE,NEXT,0,70107,UZ,1,107,UZ,-1
CE,NEXT,0,70107,ROTX,1,107,ROTX,-1

CE,NEXT,0,70118,UX,1,118,UX,-1
CE,NEXT,0,70118,UY,1,118,UY,-1
CE,NEXT,0,70118,UZ,1,118,UZ,-1
CE,NEXT,0,70118,ROTX,1,118,ROTX,-1

CE,NEXT,0,60182,UX,1,182,UX,-1
CE,NEXT,0,60182,UY,1,182,UY,-1
CE,NEXT,0,60182,UZ,1,182,UZ,-1
CE,NEXT,0,60182,ROTZ,1,182,ROTZ,-1

CE,NEXT,0,76109,UX,1,6109,UX,-1
CE,NEXT,0,76109,UY,1,6109,UY,-1
CE,NEXT,0,76109,UZ,1,6109,UZ,-1
CE,NEXT,0,76109,ROTX,1,6109,ROTX,-1

CE,NEXT,0,75109,UX,1,5109,UX,-1
CE,NEXT,0,75109,UY,1,5109,UY,-1
CE,NEXT,0,75109,UZ,1,5109,UZ,-1
CE,NEXT,0,75109,ROTX,1,5109,ROTX,-1
```

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CE,NEXT,0,64109,UX,1,4109,UX,-1
CE,NEXT,0,64109,UY,1,4109,UY,-1
CE,NEXT,0,64109,UZ,1,4109,UZ,-1
CE,NEXT,0,64109,ROTX,1,4109,ROTX,-1

CE,NEXT,0,72109,UX,1,2109,UX,-1
CE,NEXT,0,72109,UY,1,2109,UY,-1
CE,NEXT,0,72109,UZ,1,2109,UZ,-1
CE,NEXT,0,72109,ROTX,1,2109,ROTX,-1

CE,NEXT,0,71109,UX,1,1109,UX,-1
CE,NEXT,0,71109,UY,1,1109,UY,-1
CE,NEXT,0,71109,UZ,1,1109,UZ,-1
CE,NEXT,0,71109,ROTX,1,1109,ROTX,-1

CE,NEXT,0,60010,UX,1,10,UX,-1
CE,NEXT,0,60010,UY,1,10,UY,-1
CE,NEXT,0,60010,UZ,1,10,UZ,-1
CE,NEXT,0,60010,ROTX,1,10,ROTX,-1

CE,NEXT,0,75120,UX,1,5120,UX,-1
CE,NEXT,0,75120,UY,1,5120,UY,-1
CE,NEXT,0,75120,UZ,1,5120,UZ,-1
CE,NEXT,0,75120,ROTX,1,5120,ROTX,-1

CE,NEXT,0,64120,UX,1,4120,UX,-1
CE,NEXT,0,64120,UY,1,4120,UY,-1
CE,NEXT,0,64120,UZ,1,4120,UZ,-1
CE,NEXT,0,64120,ROTX,1,4120,ROTX,-1

CE,NEXT,0,72120,UX,1,2120,UX,-1
CE,NEXT,0,72120,UY,1,2120,UY,-1
CE,NEXT,0,72120,UZ,1,2120,UZ,-1
CE,NEXT,0,72120,ROTX,1,2120,ROTX,-1

CE,NEXT,0,71120,UX,1,1120,UX,-1
CE,NEXT,0,71120,UY,1,1120,UY,-1
CE,NEXT,0,71120,UZ,1,1120,UZ,-1
CE,NEXT,0,71120,ROTX,1,1120,ROTX,-1

CE,NEXT,0,60021,UX,1,21,UX,-1
CE,NEXT,0,60021,UY,1,21,UY,-1
CE,NEXT,0,60021,UZ,1,21,UZ,-1
CE,NEXT,0,60021,ROTX,1,21,ROTX,-1

!,ELEMENT,TYPE,,,,8,,

CE,NEXT,0,60102,UX,1,102,UX,-1
CE,NEXT,0,60102,UY,1,102,UY,-1
CE,NEXT,0,60102,UZ,1,102,UZ,-1
CE,NEXT,0,60102,ROTX,1,102,ROTX,-1
CE,NEXT,0,60102,ROTZ,1,102,ROTZ,-1

CE,NEXT,0,60107,UX,1,107,UX,-1
CE,NEXT,0,60107,UY,1,107,UY,-1
CE,NEXT,0,60107,UZ,1,107,UZ,-1
CE,NEXT,0,60107,ROTX,1,107,ROTX,-1
CE,NEXT,0,60107,ROTZ,1,107,ROTZ,-1

CE,NEXT,0,61102,UX,1,1102,UX,-1
CE,NEXT,0,61102,UY,1,1102,UY,-1
CE,NEXT,0,61102,UZ,1,1102,UZ,-1
CE,NEXT,0,61102,ROTX,1,1102,ROTX,-1
CE,NEXT,0,61102,ROTZ,1,1102,ROTZ,-1

CE,NEXT,0,61107,UX,1,1107,UX,-1
CE,NEXT,0,61107,UY,1,1107,UY,-1
CE,NEXT,0,61107,UZ,1,1107,UZ,-1
CE,NEXT,0,61107,ROTX,1,1107,ROTX,-1
CE,NEXT,0,61107,ROTZ,1,1107,ROTZ,-1

CE,NEXT,0,62102,UX,1,2102,UX,-1
CE,NEXT,0,62102,UY,1,2102,UY,-1
CE,NEXT,0,62102,UZ,1,2102,UZ,-1
```

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CE,NEXT,0,62102,ROTX,1,2102,ROTX,-1
CE,NEXT,0,62102,ROTZ,1,2102,ROTZ,-1

CE,NEXT,0,62107,UX,1,2107,UX,-1
CE,NEXT,0,62107,UY,1,2107,UY,-1
CE,NEXT,0,62107,UZ,1,2107,UZ,-1
CE,NEXT,0,62107,ROTX,1,2107,ROTX,-1
CE,NEXT,0,62107,ROTZ,1,2107,ROTZ,-1

CE,NEXT,0,63102,UX,1,3102,UX,-1
CE,NEXT,0,63102,UY,1,3102,UY,-1
CE,NEXT,0,63102,UZ,1,3102,UZ,-1
CE,NEXT,0,63102,ROTX,1,3102,ROTX,-1
CE,NEXT,0,63102,ROTZ,1,3102,ROTZ,-1

CE,NEXT,0,63107,UX,1,3107,UX,-1
CE,NEXT,0,63107,UY,1,3107,UY,-1
CE,NEXT,0,63107,UZ,1,3107,UZ,-1
CE,NEXT,0,63107,ROTX,1,3107,ROTX,-1
CE,NEXT,0,63107,ROTZ,1,3107,ROTZ,-1

CE,NEXT,0,64107,UX,1,4107,UX,-1
CE,NEXT,0,64107,UY,1,4107,UY,-1
CE,NEXT,0,64107,UZ,1,4107,UZ,-1
CE,NEXT,0,64107,ROTX,1,4107,ROTX,-1
CE,NEXT,0,64107,ROTZ,1,4107,ROTZ,-1

CE,NEXT,0,65107,UX,1,5107,UX,-1
CE,NEXT,0,65107,UY,1,5107,UY,-1
CE,NEXT,0,65107,UZ,1,5107,UZ,-1
CE,NEXT,0,65107,ROTX,1,5107,ROTX,-1
CE,NEXT,0,65107,ROTZ,1,5107,ROTZ,-1

CE,NEXT,0,64100,UX,1,4100,UX,-1
CE,NEXT,0,64100,UY,1,4100,UY,-1
CE,NEXT,0,64100,UZ,1,4100,UZ,-1
CE,NEXT,0,64100,ROTX,1,4100,ROTX,-1
CE,NEXT,0,64100,ROTY,1,4100,ROTY,-1

CE,NEXT,0,67107,UX,1,7107,UX,-1
CE,NEXT,0,67107,UY,1,7107,UY,-1
CE,NEXT,0,67107,UZ,1,7107,UZ,-1
CE,NEXT,0,67107,ROTX,1,7107,ROTX,-1
CE,NEXT,0,67107,ROTZ,1,7107,ROTZ,-1

CE,NEXT,0,68107,UX,1,8107,UX,-1
CE,NEXT,0,68107,UY,1,8107,UY,-1
CE,NEXT,0,68107,UZ,1,8107,UZ,-1
CE,NEXT,0,68107,ROTX,1,8107,ROTX,-1
CE,NEXT,0,68107,ROTZ,1,8107,ROTZ,-1

!,ELEMENT,TYPE,,,,16,,

CE,NEXT,0,74100,UX,1,4100,UX,-1
CE,NEXT,0,74100,UY,1,4100,UY,-1
CE,NEXT,0,74100,UZ,1,4100,UZ,-1
CE,NEXT,0,74100,ROTX,1,4100,ROTX,-1
CE,NEXT,0,74100,ROTY,1,4100,ROTY,-1

CE,NEXT,0,75100,UX,1,5100,UX,-1
CE,NEXT,0,75100,UY,1,5100,UY,-1
CE,NEXT,0,75100,UZ,1,5100,UZ,-1
CE,NEXT,0,75100,ROTX,1,5100,ROTX,-1

!,ELEMENT,TYPE,,,,9,,


CE,NEXT,0,60014,UX,1,14,UX,-1
CE,NEXT,0,60014,UY,1,14,UY,-1
CE,NEXT,0,60014,UZ,1,14,UZ,-1
CE,NEXT,0,60014,ROTZ,1,14,ROTZ,-1

CE,NEXT,0,80034,UX,1,34,UX,-1
CE,NEXT,0,80034,UY,1,34,UY,-1
CE,NEXT,0,80034,UZ,1,34,UZ,-1
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CE,NEXT,0,80034,ROTZ,1,34,ROTZ,-1

CE,NEXT,0,90034,UX,1,34,UX,-1
CE,NEXT,0,90034,UY,1,34,UY,-1
CE,NEXT,0,90034,UZ,1,34,UZ,-1
CE,NEXT,0,90034,ROTZ,1,34,ROTZ,-1

CE,NEXT,0,60003,UX,1,3,UX,-1
CE,NEXT,0,60003,UY,1,3,UY,-1
CE,NEXT,0,60003,UZ,1,3,UZ,-1
CE,NEXT,0,60003,ROTZ,1,3,ROTZ,-1

CE,NEXT,0,80019,UX,1,19,UX,-1
CE,NEXT,0,80019,UY,1,19,UY,-1
CE,NEXT,0,80019,UZ,1,19,UZ,-1

CE,NEXT,0,100034,UX,1,34,UX,-1
CE,NEXT,0,100034,UY,1,34,UY,-1
CE,NEXT,0,100034,UZ,1,34,UZ,-1

CE,NEXT,0,80008,UX,1,8,UX,-1
CE,NEXT,0,80008,UY,1,8,UY,-1
CE,NEXT,0,80008,UZ,1,8,UZ,-1

CE,NEXT,0,110034,UX,1,34,UX,-1
CE,NEXT,0,110034,UY,1,34,UY,-1
CE,NEXT,0,110034,UZ,1,34,UZ,-1

CE,NEXT,0,91107,UX,1,1107,UX,-1
CE,NEXT,0,91107,UY,1,1107,UY,-1
CE,NEXT,0,91107,UZ,1,1107,UZ,-1

CE,NEXT,0,80105,UX,1,105,UX,-1
CE,NEXT,0,80105,UY,1,105,UY,-1
CE,NEXT,0,80105,UZ,1,105,UZ,-1

CE,NEXT,0,61103,UX,1,1103,UX,-1
CE,NEXT,0,61103,UY,1,1103,UY,-1
CE,NEXT,0,61103,UZ,1,1103,UZ,-1

CE,NEXT,0,90102,UX,1,102,UX,-1
CE,NEXT,0,90102,UY,1,102,UY,-1
CE,NEXT,0,90102,UZ,1,102,UZ,-1

CE,NEXT,0,91102,UX,1,1102,UX,-1
CE,NEXT,0,91102,UY,1,1102,UY,-1
CE,NEXT,0,91102,UZ,1,1102,UZ,-1

CE,NEXT,0,60101,UX,1,101,UX,-1
CE,NEXT,0,60101,UY,1,101,UY,-1
CE,NEXT,0,60101,UZ,1,101,UZ,-1

CE,NEXT,0,91118,UX,1,1118,UX,-1
CE,NEXT,0,91118,UY,1,1118,UY,-1
CE,NEXT,0,91118,UZ,1,1118,UZ,-1

CE,NEXT,0,80116,UX,1,116,UX,-1
CE,NEXT,0,80116,UY,1,116,UY,-1
CE,NEXT,0,80116,UZ,1,116,UZ,-1

CE,NEXT,0,61114,UX,1,1114,UX,-1
CE,NEXT,0,61114,UY,1,1114,UY,-1
CE,NEXT,0,61114,UZ,1,1114,UZ,-1

CE,NEXT,0,70113,UX,1,113,UX,-1
CE,NEXT,0,70113,UY,1,113,UY,-1
CE,NEXT,0,70113,UZ,1,113,UZ,-1

CE,NEXT,0,90112,UX,1,112,UX,-1
CE,NEXT,0,90112,UY,1,112,UY,-1
CE,NEXT,0,90112,UZ,1,112,UZ,-1

CE,NEXT,0,60183,UX,1,183,UX,-1
CE,NEXT,0,60183,UY,1,183,UY,-1
CE,NEXT,0,60183,UZ,1,183,UZ,-1
```

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CE,NEXT,0,91112,UX,1,1112,UX,-1
CE,NEXT,0,91112,UY,1,1112,UY,-1
CE,NEXT,0,91112,UZ,1,1112,UZ,-1

CE,NEXT,0,70183,UX,1,183,UX,-1
CE,NEXT,0,70183,UY,1,183,UY,-1
CE,NEXT,0,70183,UZ,1,183,UZ,-1

CE,NEXT,0,95107,UX,1,5107,UX,-1
CE,NEXT,0,95107,UY,1,5107,UY,-1
CE,NEXT,0,95107,UZ,1,5107,UZ,-1

CE,NEXT,0,84105,UX,1,4105,UX,-1
CE,NEXT,0,84105,UY,1,4105,UY,-1
CE,NEXT,0,84105,UZ,1,4105,UZ,-1

CE,NEXT,0,65103,UX,1,5103,UX,-1
CE,NEXT,0,65103,UY,1,5103,UY,-1
CE,NEXT,0,65103,UZ,1,5103,UZ,-1

CE,NEXT,0,84102,UX,1,4102,UX,-1
CE,NEXT,0,84102,UY,1,4102,UY,-1
CE,NEXT,0,84102,UZ,1,4102,UZ,-1

CE,NEXT,0,65100,UX,1,5100,UX,-1
CE,NEXT,0,65100,UY,1,5100,UY,-1
CE,NEXT,0,65100,UZ,1,5100,UZ,-1

CE,NEXT,0,64101,UX,1,4101,UX,-1
CE,NEXT,0,64101,UY,1,4101,UY,-1
CE,NEXT,0,64101,UZ,1,4101,UZ,-1

CE,NEXT,0,94118,UX,1,4118,UX,-1
CE,NEXT,0,94118,UY,1,4118,UY,-1
CE,NEXT,0,94118,UZ,1,4118,UZ,-1

CE,NEXT,0,84156,UX,1,4156,UX,-1
CE,NEXT,0,84156,UY,1,4156,UY,-1
CE,NEXT,0,84156,UZ,1,4156,UZ,-1

CE,NEXT,0,64156,UX,1,4156,UX,-1
CE,NEXT,0,64156,UY,1,4156,UY,-1
CE,NEXT,0,64156,UZ,1,4156,UZ,-1

CE,NEXT,0,75116,UX,1,5116,UX,-1
CE,NEXT,0,75116,UY,1,5116,UY,-1
CE,NEXT,0,75116,UZ,1,5116,UZ,-1

CE,NEXT,0,84116,UX,1,4116,UX,-1
CE,NEXT,0,84116,UY,1,4116,UY,-1
CE,NEXT,0,84116,UZ,1,4116,UZ,-1

CE,NEXT,0,94156,UX,1,4156,UX,-1
CE,NEXT,0,94156,UY,1,4156,UY,-1
CE,NEXT,0,94156,UZ,1,4156,UZ,-1

CE,NEXT,0,74156,UX,1,4156,UX,-1
CE,NEXT,0,74156,UY,1,4156,UY,-1
CE,NEXT,0,74156,UZ,1,4156,UZ,-1

CE,NEXT,0,95118,UX,1,5118,UX,-1
CE,NEXT,0,95118,UY,1,5118,UY,-1
CE,NEXT,0,95118,UZ,1,5118,UZ,-1

CE,NEXT,0,65114,UX,1,5114,UX,-1
CE,NEXT,0,65114,UY,1,5114,UY,-1
CE,NEXT,0,65114,UZ,1,5114,UZ,-1

CE,NEXT,0,84113,UX,1,4113,UX,-1
CE,NEXT,0,84113,UY,1,4113,UY,-1
CE,NEXT,0,84113,UZ,1,4113,UZ,-1

CE,NEXT,0,84112,UX,1,4112,UX,-1
CE,NEXT,0,84112,UY,1,4112,UY,-1
```

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CE,NEXT,0,84112,UZ,1,4112,UZ,-1

CE,NEXT,0,65123,UX,1,5123,UX,-1
CE,NEXT,0,65123,UY,1,5123,UY,-1
CE,NEXT,0,65123,UZ,1,5123,UZ,-1

CE,NEXT,0,75123,UX,1,5123,UX,-1
CE,NEXT,0,75123,UY,1,5123,UY,-1
CE,NEXT,0,75123,UZ,1,5123,UZ,-1

CE,NEXT,0,95112,UX,1,5112,UX,-1
CE,NEXT,0,95112,UY,1,5112,UY,-1
CE,NEXT,0,95112,UZ,1,5112,UZ,-1

CE,NEXT,0,85112,UX,1,5112,UX,-1
CE,NEXT,0,85112,UY,1,5112,UY,-1
CE,NEXT,0,85112,UZ,1,5112,UZ,-1

CE,NEXT,0,64111,UX,1,4111,UX,-1
CE,NEXT,0,64111,UY,1,4111,UY,-1
CE,NEXT,0,64111,UZ,1,4111,UZ,-1

CE,NEXT,0,88118,UX,1,8118,UX,-1
CE,NEXT,0,88118,UY,1,8118,UY,-1
CE,NEXT,0,88118,UZ,1,8118,UZ,-1

CE,NEXT,0,87122,UX,1,7122,UX,-1
CE,NEXT,0,87122,UY,1,7122,UY,-1
CE,NEXT,0,87122,UZ,1,7122,UZ,-1

CE,NEXT,0,281660,UX,1,81660,UX,-1
CE,NEXT,0,281660,UY,1,81660,UY,-1
CE,NEXT,0,281660,UZ,1,81660,UZ,-1

CE,NEXT,0,77116,UX,1,7116,UX,-1
CE,NEXT,0,77116,UY,1,7116,UY,-1
CE,NEXT,0,77116,UZ,1,7116,UZ,-1

CE,NEXT,0,150037,UX,1,50037,UX,-1
CE,NEXT,0,150037,UY,1,50037,UY,-1
CE,NEXT,0,150037,UZ,1,50037,UZ,-1

CE,NEXT,0,150174,UX,1,50174,UX,-1
CE,NEXT,0,150174,UY,1,50174,UY,-1
CE,NEXT,0,150174,UZ,1,50174,UZ,-1

CE,NEXT,0,250037,UX,1,50037,UX,-1
CE,NEXT,0,250037,UY,1,50037,UY,-1
CE,NEXT,0,250037,UZ,1,50037,UZ,-1

CE,NEXT,0,150179,UX,1,50179,UX,-1
CE,NEXT,0,150179,UY,1,50179,UY,-1
CE,NEXT,0,150179,UZ,1,50179,UZ,-1

CE,NEXT,0,150039,UX,1,50039,UX,-1
CE,NEXT,0,150039,UY,1,50039,UY,-1
CE,NEXT,0,150039,UZ,1,50039,UZ,-1

CE,NEXT,0,150177,UX,1,50177,UX,-1
CE,NEXT,0,150177,UY,1,50177,UY,-1
CE,NEXT,0,150177,UZ,1,50177,UZ,-1

CE,NEXT,0,250039,UX,1,50039,UX,-1
CE,NEXT,0,250039,UY,1,50039,UY,-1
CE,NEXT,0,250039,UZ,1,50039,UZ,-1

CE,NEXT,0,250182,UX,1,50182,UX,-1
CE,NEXT,0,250182,UY,1,50182,UY,-1
CE,NEXT,0,250182,UZ,1,50182,UZ,-1

CE,NEXT,0,150182,UX,1,50182,UX,-1
CE,NEXT,0,150182,UY,1,50182,UY,-1
CE,NEXT,0,150182,UZ,1,50182,UZ,-1

CE,NEXT,0,250153,UX,1,50153,UX,-1
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CE,NEXT,0,250153,UY,1,50153,UY,-1
CE,NEXT,0,250153,UZ,1,50153,UZ,-1

CE,NEXT,0,150153,UX,1,50153,UX,-1
CE,NEXT,0,150153,UY,1,50153,UY,-1
CE,NEXT,0,150153,UZ,1,50153,UZ,-1

CE,NEXT,0,251107,UX,1,51107,UX,-1
CE,NEXT,0,251107,UY,1,51107,UY,-1
CE,NEXT,0,251107,UZ,1,51107,UZ,-1

CE,NEXT,0,151107,UX,1,51107,UX,-1
CE,NEXT,0,151107,UY,1,51107,UY,-1
CE,NEXT,0,151107,UZ,1,51107,UZ,-1

CE,NEXT,0,252153,UX,1,52153,UX,-1
CE,NEXT,0,252153,UY,1,52153,UY,-1
CE,NEXT,0,252153,UZ,1,52153,UZ,-1

CE,NEXT,0,152153,UX,1,52153,UX,-1
CE,NEXT,0,152153,UY,1,52153,UY,-1
CE,NEXT,0,152153,UZ,1,52153,UZ,-1

CE,NEXT,0,253107,UX,1,53107,UX,-1
CE,NEXT,0,253107,UY,1,53107,UY,-1
CE,NEXT,0,253107,UZ,1,53107,UZ,-1

CE,NEXT,0,153107,UX,1,53107,UX,-1
CE,NEXT,0,153107,UY,1,53107,UY,-1
CE,NEXT,0,153107,UZ,1,53107,UZ,-1

CE,NEXT,0,254153,UX,1,54153,UX,-1
CE,NEXT,0,254153,UY,1,54153,UY,-1
CE,NEXT,0,254153,UZ,1,54153,UZ,-1

CE,NEXT,0,154153,UX,1,54153,UX,-1
CE,NEXT,0,154153,UY,1,54153,UY,-1
CE,NEXT,0,154153,UZ,1,54153,UZ,-1

CE,NEXT,0,255107,UX,1,55107,UX,-1
CE,NEXT,0,255107,UY,1,55107,UY,-1
CE,NEXT,0,255107,UZ,1,55107,UZ,-1

CE,NEXT,0,155107,UX,1,55107,UX,-1
CE,NEXT,0,155107,UY,1,55107,UY,-1
CE,NEXT,0,155107,UZ,1,55107,UZ,-1

CE,NEXT,0,256153,UX,1,56153,UX,-1
CE,NEXT,0,256153,UY,1,56153,UY,-1
CE,NEXT,0,256153,UZ,1,56153,UZ,-1

CE,NEXT,0,156153,UX,1,56153,UX,-1
CE,NEXT,0,156153,UY,1,56153,UY,-1
CE,NEXT,0,156153,UZ,1,56153,UZ,-1

CE,NEXT,0,257107,UX,1,57107,UX,-1
CE,NEXT,0,257107,UY,1,57107,UY,-1
CE,NEXT,0,257107,UZ,1,57107,UZ,-1

CE,NEXT,0,157107,UX,1,57107,UX,-1
CE,NEXT,0,157107,UY,1,57107,UY,-1
CE,NEXT,0,157107,UZ,1,57107,UZ,-1

CE,NEXT,0,158153,UX,1,58153,UX,-1
CE,NEXT,0,158153,UY,1,58153,UY,-1
CE,NEXT,0,158153,UZ,1,58153,UZ,-1

CE,NEXT,0,157151,UX,1,57151,UX,-1
CE,NEXT,0,157151,UY,1,57151,UY,-1
CE,NEXT,0,157151,UZ,1,57151,UZ,-1

CE,NEXT,0,258153,UX,1,58153,UX,-1
CE,NEXT,0,258153,UY,1,58153,UY,-1
CE,NEXT,0,258153,UZ,1,58153,UZ,-1
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CE,NEXT,0,157153,UX,1,57153,UX,-1
CE,NEXT,0,157153,UY,1,57153,UY,-1
CE,NEXT,0,157153,UZ,1,57153,UZ,-1

CE,NEXT,0,158151,UX,1,58151,UX,-1
CE,NEXT,0,158151,UY,1,58151,UY,-1
CE,NEXT,0,158151,UZ,1,58151,UZ,-1

CE,NEXT,0,157118,UX,1,57118,UX,-1
CE,NEXT,0,157118,UY,1,57118,UY,-1
CE,NEXT,0,157118,UZ,1,57118,UZ,-1

CE,NEXT,0,258151,UX,1,58151,UX,-1
CE,NEXT,0,258151,UY,1,58151,UY,-1
CE,NEXT,0,258151,UZ,1,58151,UZ,-1

CE,NEXT,0,100112,UX,1,112,UX,-1
CE,NEXT,0,100112,UY,1,112,UY,-1
CE,NEXT,0,100112,UZ,1,112,UZ,-1

CE,NEXT,0,94112,UX,1,4112,UX,-1
CE,NEXT,0,94112,UY,1,4112,UY,-1
CE,NEXT,0,94112,UZ,1,4112,UZ,-1

CE,NEXT,0,62124,UX,1,2124,UX,-1
CE,NEXT,0,62124,UY,1,2124,UY,-1
CE,NEXT,0,62124,UZ,1,2124,UZ,-1

CE,NEXT,0,62125,UX,1,2125,UX,-1
CE,NEXT,0,62125,UY,1,2125,UY,-1
CE,NEXT,0,62125,UZ,1,2125,UZ,-1

CE,NEXT,0,110112,UX,1,112,UX,-1
CE,NEXT,0,110112,UY,1,112,UY,-1
CE,NEXT,0,110112,UZ,1,112,UZ,-1

CE,NEXT,0,111145,UX,1,1145,UX,-1
CE,NEXT,0,111145,UY,1,1145,UY,-1
CE,NEXT,0,111145,UZ,1,1145,UZ,-1

CE,NEXT,0,91145,UX,1,1145,UX,-1
CE,NEXT,0,91145,UY,1,1145,UY,-1
CE,NEXT,0,91145,UZ,1,1145,UZ,-1

CE,NEXT,0,102102,UX,1,2102,UX,-1
CE,NEXT,0,102102,UY,1,2102,UY,-1
CE,NEXT,0,102102,UZ,1,2102,UZ,-1

CE,NEXT,0,100102,UX,1,102,UX,-1
CE,NEXT,0,100102,UY,1,102,UY,-1
CE,NEXT,0,100102,UZ,1,102,UZ,-1

CE,NEXT,0,121145,UX,1,1145,UX,-1
CE,NEXT,0,121145,UY,1,1145,UY,-1
CE,NEXT,0,121145,UZ,1,1145,UZ,-1

CE,NEXT,0,101145,UX,1,1145,UX,-1
CE,NEXT,0,101145,UY,1,1145,UY,-1
CE,NEXT,0,101145,UZ,1,1145,UZ,-1

CE,NEXT,0,102112,UX,1,2112,UX,-1
CE,NEXT,0,102112,UY,1,2112,UY,-1
CE,NEXT,0,102112,UZ,1,2112,UZ,-1

CE,NEXT,0,92112,UX,1,2112,UX,-1
CE,NEXT,0,92112,UY,1,2112,UY,-1
CE,NEXT,0,92112,UZ,1,2112,UZ,-1

CE,NEXT,0,103145,UX,1,3145,UX,-1
CE,NEXT,0,103145,UY,1,3145,UY,-1
CE,NEXT,0,103145,UZ,1,3145,UZ,-1

CE,NEXT,0,92145,UX,1,2145,UX,-1
CE,NEXT,0,92145,UY,1,2145,UY,-1
CE,NEXT,0,92145,UZ,1,2145,UZ,-1
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CE,NEXT,0,62158,UX,1,2158,UX,-1
CE,NEXT,0,62158,UY,1,2158,UY,-1
CE,NEXT,0,62158,UZ,1,2158,UZ,-1

CE,NEXT,0,92102,UX,1,2102,UX,-1
CE,NEXT,0,92102,UY,1,2102,UY,-1
CE,NEXT,0,92102,UZ,1,2102,UZ,-1

CE,NEXT,0,113145,UX,1,3145,UX,-1
CE,NEXT,0,113145,UY,1,3145,UY,-1
CE,NEXT,0,113145,UZ,1,3145,UZ,-1

CE,NEXT,0,93145,UX,1,3145,UX,-1
CE,NEXT,0,93145,UY,1,3145,UY,-1
CE,NEXT,0,93145,UZ,1,3145,UZ,-1

CE,NEXT,0,73164,UX,1,3164,UX,-1
CE,NEXT,0,73164,UY,1,3164,UY,-1
CE,NEXT,0,73164,UZ,1,3164,UZ,-1

CE,NEXT,0,71113,UX,1,1113,UX,-1
CE,NEXT,0,71113,UY,1,1113,UY,-1
CE,NEXT,0,71113,UZ,1,1113,UZ,-1
CE,NEXT,0,71113,ROTX,1,1113,ROTX,-1

CE,NEXT,0,62113,UX,1,2113,UX,-1
CE,NEXT,0,62113,UY,1,2113,UY,-1
CE,NEXT,0,62113,UZ,1,2113,UZ,-1
CE,NEXT,0,62113,ROTX,1,2113,ROTX,-1

CE,NEXT,0,72113,UX,1,2113,UX,-1
CE,NEXT,0,72113,UY,1,2113,UY,-1
CE,NEXT,0,72113,UZ,1,2113,UZ,-1
CE,NEXT,0,72113,ROTX,1,2113,ROTX,-1

CE,NEXT,0,152174,UX,1,52174,UX,-1
CE,NEXT,0,152174,UY,1,52174,UY,-1
CE,NEXT,0,152174,UZ,1,52174,UZ,-1
CE,NEXT,0,152174,ROTX,1,52174,ROTX,-1

CE,NEXT,0,63113,UX,1,3113,UX,-1
CE,NEXT,0,63113,UY,1,3113,UY,-1
CE,NEXT,0,63113,UZ,1,3113,UZ,-1
CE,NEXT,0,63113,ROTX,1,3113,ROTX,-1

CE,NEXT,0,74113,UX,1,4113,UX,-1
CE,NEXT,0,74113,UY,1,4113,UY,-1
CE,NEXT,0,74113,UZ,1,4113,UZ,-1
CE,NEXT,0,74113,ROTX,1,4113,ROTX,-1

CE,NEXT,0,60030,UX,1,30,UX,-1
CE,NEXT,0,60030,UY,1,30,UY,-1
CE,NEXT,0,60030,UZ,1,30,UZ,-1
CE,NEXT,0,60030,ROTX,1,30,ROTX,-1

CE,NEXT,0,60131,UX,1,131,UX,-1
CE,NEXT,0,60131,UY,1,131,UY,-1
CE,NEXT,0,60131,UZ,1,131,UZ,-1
CE,NEXT,0,60131,ROTX,1,131,ROTX,-1

CE,NEXT,0,60029,UX,1,29,UX,-1
CE,NEXT,0,60029,UY,1,29,UY,-1
CE,NEXT,0,60029,UZ,1,29,UZ,-1
CE,NEXT,0,60029,ROTX,1,29,ROTX,-1

CE,NEXT,0,60130,UX,1,130,UX,-1
CE,NEXT,0,60130,UY,1,130,UY,-1
CE,NEXT,0,60130,UZ,1,130,UZ,-1
CE,NEXT,0,60130,ROTX,1,130,ROTX,-1

CE,NEXT,0,60028,UX,1,28,UX,-1
CE,NEXT,0,60028,UY,1,28,UY,-1
CE,NEXT,0,60028,UZ,1,28,UZ,-1
CE,NEXT,0,60028,ROTX,1,28,ROTX,-1
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CE,NEXT,0,60129,UX,1,129,UX,-1
CE,NEXT,0,60129,UY,1,129,UY,-1
CE,NEXT,0,60129,UZ,1,129,UZ,-1
CE,NEXT,0,60129,ROTX,1,129,ROTX,-1

CE,NEXT,0,60027,UX,1,27,UX,-1
CE,NEXT,0,60027,UY,1,27,UY,-1
CE,NEXT,0,60027,UZ,1,27,UZ,-1
CE,NEXT,0,60027,ROTX,1,27,ROTX,-1

CE,NEXT,0,60128,UX,1,128,UX,-1
CE,NEXT,0,60128,UY,1,128,UY,-1
CE,NEXT,0,60128,UZ,1,128,UZ,-1
CE,NEXT,0,60128,ROTX,1,128,ROTX,-1

CE,NEXT,0,60026,UX,1,26,UX,-1
CE,NEXT,0,60026,UY,1,26,UY,-1
CE,NEXT,0,60026,UZ,1,26,UZ,-1
CE,NEXT,0,60026,ROTX,1,26,ROTX,-1

CE,NEXT,0,60127,UX,1,127,UX,-1
CE,NEXT,0,60127,UY,1,127,UY,-1
CE,NEXT,0,60127,UZ,1,127,UZ,-1
CE,NEXT,0,60127,ROTX,1,127,ROTX,-1

CE,NEXT,0,60025,UX,1,25,UX,-1
CE,NEXT,0,60025,UY,1,25,UY,-1
CE,NEXT,0,60025,UZ,1,25,UZ,-1
CE,NEXT,0,60025,ROTX,1,25,ROTX,-1

CE,NEXT,0,60126,UX,1,126,UX,-1
CE,NEXT,0,60126,UY,1,126,UY,-1
CE,NEXT,0,60126,UZ,1,126,UZ,-1
CE,NEXT,0,60126,ROTX,1,126,ROTX,-1

CE,NEXT,0,60024,UX,1,24,UX,-1
CE,NEXT,0,60024,UY,1,24,UY,-1
CE,NEXT,0,60024,UZ,1,24,UZ,-1
CE,NEXT,0,60024,ROTX,1,24,ROTX,-1

CE,NEXT,0,60125,UX,1,125,UX,-1
CE,NEXT,0,60125,UY,1,125,UY,-1
CE,NEXT,0,60125,UZ,1,125,UZ,-1
CE,NEXT,0,60125,ROTX,1,125,ROTX,-1

CE,NEXT,0,70131,UX,1,131,UX,-1
CE,NEXT,0,70131,UY,1,131,UY,-1
CE,NEXT,0,70131,UZ,1,131,UZ,-1
CE,NEXT,0,70131,ROTX,1,131,ROTX,-1

CE,NEXT,0,60140,UX,1,140,UX,-1
CE,NEXT,0,60140,UY,1,140,UY,-1
CE,NEXT,0,60140,UZ,1,140,UZ,-1
CE,NEXT,0,60140,ROTX,1,140,ROTX,-1

CE,NEXT,0,70125,UX,1,125,UX,-1
CE,NEXT,0,70125,UY,1,125,UY,-1
CE,NEXT,0,70125,UZ,1,125,UZ,-1
CE,NEXT,0,70125,ROTX,1,125,ROTX,-1

CE,NEXT,0,60134,UX,1,134,UX,-1
CE,NEXT,0,60134,UY,1,134,UY,-1
CE,NEXT,0,60134,UZ,1,134,UZ,-1
CE,NEXT,0,60134,ROTX,1,134,ROTX,-1

CE,NEXT,0,70140,UX,1,140,UX,-1
CE,NEXT,0,70140,UY,1,140,UY,-1
CE,NEXT,0,70140,UZ,1,140,UZ,-1
CE,NEXT,0,70140,ROTX,1,140,ROTX,-1

CE,NEXT,0,60148,UX,1,148,UX,-1
CE,NEXT,0,60148,UY,1,148,UY,-1
CE,NEXT,0,60148,UZ,1,148,UZ,-1
CE,NEXT,0,60148,ROTX,1,148,ROTX,-1
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CE,NEXT,0,60139,UX,1,139,UX,-1
CE,NEXT,0,60139,UY,1,139,UY,-1
CE,NEXT,0,60139,UZ,1,139,UZ,-1
CE,NEXT,0,60139,ROTX,1,139,ROTX,-1

CE,NEXT,0,60147,UX,1,147,UX,-1
CE,NEXT,0,60147,UY,1,147,UY,-1
CE,NEXT,0,60147,UZ,1,147,UZ,-1
CE,NEXT,0,60147,ROTX,1,147,ROTX,-1

CE,NEXT,0,60138,UX,1,138,UX,-1
CE,NEXT,0,60138,UY,1,138,UY,-1
CE,NEXT,0,60138,UZ,1,138,UZ,-1
CE,NEXT,0,60138,ROTX,1,138,ROTX,-1

CE,NEXT,0,60146,UX,1,146,UX,-1
CE,NEXT,0,60146,UY,1,146,UY,-1
CE,NEXT,0,60146,UZ,1,146,UZ,-1
CE,NEXT,0,60146,ROTX,1,146,ROTX,-1

CE,NEXT,0,60137,UX,1,137,UX,-1
CE,NEXT,0,60137,UY,1,137,UY,-1
CE,NEXT,0,60137,UZ,1,137,UZ,-1
CE,NEXT,0,60137,ROTX,1,137,ROTX,-1

CE,NEXT,0,70145,UX,1,145,UX,-1
CE,NEXT,0,70145,UY,1,145,UY,-1
CE,NEXT,0,70145,UZ,1,145,UZ,-1
CE,NEXT,0,70145,ROTX,1,145,ROTX,-1

CE,NEXT,0,60136,UX,1,136,UX,-1
CE,NEXT,0,60136,UY,1,136,UY,-1
CE,NEXT,0,60136,UZ,1,136,UZ,-1
CE,NEXT,0,60136,ROTX,1,136,ROTX,-1

CE,NEXT,0,70144,UX,1,144,UX,-1
CE,NEXT,0,70144,UY,1,144,UY,-1
CE,NEXT,0,70144,UZ,1,144,UZ,-1
CE,NEXT,0,70144,ROTX,1,144,ROTX,-1

CE,NEXT,0,60135,UX,1,135,UX,-1
CE,NEXT,0,60135,UY,1,135,UY,-1
CE,NEXT,0,60135,UZ,1,135,UZ,-1
CE,NEXT,0,60135,ROTX,1,135,ROTX,-1

CE,NEXT,0,70143,UX,1,143,UX,-1
CE,NEXT,0,70143,UY,1,143,UY,-1
CE,NEXT,0,70143,UZ,1,143,UZ,-1
CE,NEXT,0,70143,ROTX,1,143,ROTX,-1

CE,NEXT,0,70134,UX,1,134,UX,-1
CE,NEXT,0,70134,UY,1,134,UY,-1
CE,NEXT,0,70134,UZ,1,134,UZ,-1
CE,NEXT,0,70134,ROTX,1,134,ROTX,-1

CE,NEXT,0,70142,UX,1,142,UX,-1
CE,NEXT,0,70142,UY,1,142,UY,-1
CE,NEXT,0,70142,UZ,1,142,UZ,-1
CE,NEXT,0,70142,ROTX,1,142,ROTX,-1

CE,NEXT,0,80102,UX,1,102,UX,-1
CE,NEXT,0,80102,UY,1,102,UY,-1
CE,NEXT,0,80102,UZ,1,102,UZ,-1
CE,NEXT,0,80102,ROTX,1,102,ROTX,-1

CE,NEXT,0,81102,UX,1,1102,UX,-1
CE,NEXT,0,81102,UY,1,1102,UY,-1
CE,NEXT,0,81102,UZ,1,1102,UZ,-1
CE,NEXT,0,81102,ROTX,1,1102,ROTX,-1

CE,NEXT,0,70148,UX,1,148,UX,-1
CE,NEXT,0,70148,UY,1,148,UY,-1
CE,NEXT,0,70148,UZ,1,148,UZ,-1
CE,NEXT,0,70148,ROTX,1,148,ROTX,-1
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CE,NEXT,0,71148,UX,1,1148,UX,-1
CE,NEXT,0,71148,UY,1,1148,UY,-1
CE,NEXT,0,71148,UZ,1,1148,UZ,-1
CE,NEXT,0,71148,ROTX,1,1148,ROTX,-1

CE,NEXT,0,70147,UX,1,147,UX,-1
CE,NEXT,0,70147,UY,1,147,UY,-1
CE,NEXT,0,70147,UZ,1,147,UZ,-1
CE,NEXT,0,70147,ROTX,1,147,ROTX,-1

CE,NEXT,0,71147,UX,1,1147,UX,-1
CE,NEXT,0,71147,UY,1,1147,UY,-1
CE,NEXT,0,71147,UZ,1,1147,UZ,-1
CE,NEXT,0,71147,ROTX,1,1147,ROTX,-1

CE,NEXT,0,70146,UX,1,146,UX,-1
CE,NEXT,0,70146,UY,1,146,UY,-1
CE,NEXT,0,70146,UZ,1,146,UZ,-1
CE,NEXT,0,70146,ROTX,1,146,ROTX,-1

CE,NEXT,0,71146,UX,1,1146,UX,-1
CE,NEXT,0,71146,UY,1,1146,UY,-1
CE,NEXT,0,71146,UZ,1,1146,UZ,-1
CE,NEXT,0,71146,ROTX,1,1146,ROTX,-1

CE,NEXT,0,80145,UX,1,145,UX,-1
CE,NEXT,0,80145,UY,1,145,UY,-1
CE,NEXT,0,80145,UZ,1,145,UZ,-1
CE,NEXT,0,80145,ROTX,1,145,ROTX,-1

CE,NEXT,0,81145,UX,1,1145,UX,-1
CE,NEXT,0,81145,UY,1,1145,UY,-1
CE,NEXT,0,81145,UZ,1,1145,UZ,-1
CE,NEXT,0,81145,ROTX,1,1145,ROTX,-1

CE,NEXT,0,60144,UX,1,144,UX,-1
CE,NEXT,0,60144,UY,1,144,UY,-1
CE,NEXT,0,60144,UZ,1,144,UZ,-1
CE,NEXT,0,60144,ROTX,1,144,ROTX,-1

CE,NEXT,0,71144,UX,1,1144,UX,-1
CE,NEXT,0,71144,UY,1,1144,UY,-1
CE,NEXT,0,71144,UZ,1,1144,UZ,-1
CE,NEXT,0,71144,ROTX,1,1144,ROTX,-1

CE,NEXT,0,60143,UX,1,143,UX,-1
CE,NEXT,0,60143,UY,1,143,UY,-1
CE,NEXT,0,60143,UZ,1,143,UZ,-1
CE,NEXT,0,60143,ROTX,1,143,ROTX,-1

CE,NEXT,0,71143,UX,1,1143,UX,-1
CE,NEXT,0,71143,UY,1,1143,UY,-1
CE,NEXT,0,71143,UZ,1,1143,UZ,-1
CE,NEXT,0,71143,ROTX,1,1143,ROTX,-1

CE,NEXT,0,60142,UX,1,142,UX,-1
CE,NEXT,0,60142,UY,1,142,UY,-1
CE,NEXT,0,60142,UZ,1,142,UZ,-1
CE,NEXT,0,60142,ROTX,1,142,ROTX,-1

CE,NEXT,0,71142,UX,1,1142,UX,-1
CE,NEXT,0,71142,UY,1,1142,UY,-1
CE,NEXT,0,71142,UZ,1,1142,UZ,-1
CE,NEXT,0,71142,ROTX,1,1142,ROTX,-1

CE,NEXT,0,80112,UX,1,112,UX,-1
CE,NEXT,0,80112,UY,1,112,UY,-1
CE,NEXT,0,80112,UZ,1,112,UZ,-1
CE,NEXT,0,80112,ROTX,1,112,ROTX,-1

CE,NEXT,0,71112,UX,1,1112,UX,-1
CE,NEXT,0,71112,UY,1,1112,UY,-1
CE,NEXT,0,71112,UZ,1,1112,UZ,-1
CE,NEXT,0,71112,ROTX,1,1112,ROTX,-1
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CE,NEXT,0,71102,UX,1,1102,UX,-1
CE,NEXT,0,71102,UY,1,1102,UY,-1
CE,NEXT,0,71102,UZ,1,1102,UZ,-1
CE,NEXT,0,71102,ROTX,1,1102,ROTX,-1

CE,NEXT,0,82102,UX,1,2102,UX,-1
CE,NEXT,0,82102,UY,1,2102,UY,-1
CE,NEXT,0,82102,UZ,1,2102,UZ,-1
CE,NEXT,0,82102,ROTX,1,2102,ROTX,-1

CE,NEXT,0,61148,UX,1,1148,UX,-1
CE,NEXT,0,61148,UY,1,1148,UY,-1
CE,NEXT,0,61148,UZ,1,1148,UZ,-1
CE,NEXT,0,61148,ROTX,1,1148,ROTX,-1

CE,NEXT,0,72148,UX,1,2148,UX,-1
CE,NEXT,0,72148,UY,1,2148,UY,-1
CE,NEXT,0,72148,UZ,1,2148,UZ,-1
CE,NEXT,0,72148,ROTX,1,2148,ROTX,-1

CE,NEXT,0,61147,UX,1,1147,UX,-1
CE,NEXT,0,61147,UY,1,1147,UY,-1
CE,NEXT,0,61147,UZ,1,1147,UZ,-1
CE,NEXT,0,61147,ROTX,1,1147,ROTX,-1

CE,NEXT,0,62147,UX,1,2147,UX,-1
CE,NEXT,0,62147,UY,1,2147,UY,-1
CE,NEXT,0,62147,UZ,1,2147,UZ,-1
CE,NEXT,0,62147,ROTX,1,2147,ROTX,-1

CE,NEXT,0,61146,UX,1,1146,UX,-1
CE,NEXT,0,61146,UY,1,1146,UY,-1
CE,NEXT,0,61146,UZ,1,1146,UZ,-1
CE,NEXT,0,61146,ROTX,1,1146,ROTX,-1

CE,NEXT,0,62146,UX,1,2146,UX,-1
CE,NEXT,0,62146,UY,1,2146,UY,-1
CE,NEXT,0,62146,UZ,1,2146,UZ,-1
CE,NEXT,0,62146,ROTX,1,2146,ROTX,-1

CE,NEXT,0,71145,UX,1,1145,UX,-1
CE,NEXT,0,71145,UY,1,1145,UY,-1
CE,NEXT,0,71145,UZ,1,1145,UZ,-1
CE,NEXT,0,71145,ROTX,1,1145,ROTX,-1

CE,NEXT,0,72145,UX,1,2145,UX,-1
CE,NEXT,0,72145,UY,1,2145,UY,-1
CE,NEXT,0,72145,UZ,1,2145,UZ,-1
CE,NEXT,0,72145,ROTX,1,2145,ROTX,-1

CE,NEXT,0,61144,UX,1,1144,UX,-1
CE,NEXT,0,61144,UY,1,1144,UY,-1
CE,NEXT,0,61144,UZ,1,1144,UZ,-1
CE,NEXT,0,61144,ROTX,1,1144,ROTX,-1

CE,NEXT,0,62144,UX,1,2144,UX,-1
CE,NEXT,0,62144,UY,1,2144,UY,-1
CE,NEXT,0,62144,UZ,1,2144,UZ,-1
CE,NEXT,0,62144,ROTX,1,2144,ROTX,-1

CE,NEXT,0,61143,UX,1,1143,UX,-1
CE,NEXT,0,61143,UY,1,1143,UY,-1
CE,NEXT,0,61143,UZ,1,1143,UZ,-1
CE,NEXT,0,61143,ROTX,1,1143,ROTX,-1

CE,NEXT,0,72143,UX,1,2143,UX,-1
CE,NEXT,0,72143,UY,1,2143,UY,-1
CE,NEXT,0,72143,UZ,1,2143,UZ,-1
CE,NEXT,0,72143,ROTX,1,2143,ROTX,-1

CE,NEXT,0,61142,UX,1,1142,UX,-1
CE,NEXT,0,61142,UY,1,1142,UY,-1
CE,NEXT,0,61142,UZ,1,1142,UZ,-1
CE,NEXT,0,61142,ROTX,1,1142,ROTX,-1
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CE,NEXT,0,62142,UX,1,2142,UX,-1
CE,NEXT,0,62142,UY,1,2142,UY,-1
CE,NEXT,0,62142,UZ,1,2142,UZ,-1
CE,NEXT,0,62142,ROTX,1,2142,ROTX,-1

CE,NEXT,0,81112,UX,1,1112,UX,-1
CE,NEXT,0,81112,UY,1,1112,UY,-1
CE,NEXT,0,81112,UZ,1,1112,UZ,-1
CE,NEXT,0,81112,ROTX,1,1112,ROTX,-1

CE,NEXT,0,82112,UX,1,2112,UX,-1
CE,NEXT,0,82112,UY,1,2112,UY,-1
CE,NEXT,0,82112,UZ,1,2112,UZ,-1
CE,NEXT,0,82112,ROTX,1,2112,ROTX,-1

CE,NEXT,0,72147,UX,1,2147,UX,-1
CE,NEXT,0,72147,UY,1,2147,UY,-1
CE,NEXT,0,72147,UZ,1,2147,UZ,-1
CE,NEXT,0,72147,ROTX,1,2147,ROTX,-1

CE,NEXT,0,73147,UX,1,3147,UX,-1
CE,NEXT,0,73147,UY,1,3147,UY,-1
CE,NEXT,0,73147,UZ,1,3147,UZ,-1
CE,NEXT,0,73147,ROTX,1,3147,ROTX,-1

CE,NEXT,0,72146,UX,1,2146,UX,-1
CE,NEXT,0,72146,UY,1,2146,UY,-1
CE,NEXT,0,72146,UZ,1,2146,UZ,-1
CE,NEXT,0,72146,ROTX,1,2146,ROTX,-1

CE,NEXT,0,73146,UX,1,3146,UX,-1
CE,NEXT,0,73146,UY,1,3146,UY,-1
CE,NEXT,0,73146,UZ,1,3146,UZ,-1
CE,NEXT,0,73146,ROTX,1,3146,ROTX,-1

CE,NEXT,0,82145,UX,1,2145,UX,-1
CE,NEXT,0,82145,UY,1,2145,UY,-1
CE,NEXT,0,82145,UZ,1,2145,UZ,-1
CE,NEXT,0,82145,ROTX,1,2145,ROTX,-1

CE,NEXT,0,83145,UX,1,3145,UX,-1
CE,NEXT,0,83145,UY,1,3145,UY,-1
CE,NEXT,0,83145,UZ,1,3145,UZ,-1
CE,NEXT,0,83145,ROTX,1,3145,ROTX,-1

CE,NEXT,0,72144,UX,1,2144,UX,-1
CE,NEXT,0,72144,UY,1,2144,UY,-1
CE,NEXT,0,72144,UZ,1,2144,UZ,-1
CE,NEXT,0,72144,ROTX,1,2144,ROTX,-1

CE,NEXT,0,73144,UX,1,3144,UX,-1
CE,NEXT,0,73144,UY,1,3144,UY,-1
CE,NEXT,0,73144,UZ,1,3144,UZ,-1
CE,NEXT,0,73144,ROTX,1,3144,ROTX,-1

CE,NEXT,0,72142,UX,1,2142,UX,-1
CE,NEXT,0,72142,UY,1,2142,UY,-1
CE,NEXT,0,72142,UZ,1,2142,UZ,-1
CE,NEXT,0,72142,ROTX,1,2142,ROTX,-1

CE,NEXT,0,62157,UX,1,2157,UX,-1
CE,NEXT,0,62157,UY,1,2157,UY,-1
CE,NEXT,0,62157,UZ,1,2157,UZ,-1
CE,NEXT,0,62157,ROTX,1,2157,ROTX,-1

CE,NEXT,0,72112,UX,1,2112,UX,-1
CE,NEXT,0,72112,UY,1,2112,UY,-1
CE,NEXT,0,72112,UZ,1,2112,UZ,-1
CE,NEXT,0,72112,ROTX,1,2112,ROTX,-1

CE,NEXT,0,152156,UX,1,52156,UX,-1
CE,NEXT,0,152156,UY,1,52156,UY,-1
CE,NEXT,0,152156,UZ,1,52156,UZ,-1
CE,NEXT,0,152156,ROTX,1,52156,ROTX,-1
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CE,NEXT,0,73148,UX,1,3148,UX,-1
CE,NEXT,0,73148,UY,1,3148,UY,-1
CE,NEXT,0,73148,UZ,1,3148,UZ,-1
CE,NEXT,0,73148,ROTX,1,3148,ROTX,-1

CE,NEXT,0,63163,UX,1,3163,UX,-1
CE,NEXT,0,63163,UY,1,3163,UY,-1
CE,NEXT,0,63163,UZ,1,3163,UZ,-1
CE,NEXT,0,63163,ROTX,1,3163,ROTX,-1

CE,NEXT,0,63147,UX,1,3147,UX,-1
CE,NEXT,0,63147,UY,1,3147,UY,-1
CE,NEXT,0,63147,UZ,1,3147,UZ,-1
CE,NEXT,0,63147,ROTX,1,3147,ROTX,-1

CE,NEXT,0,63162,UX,1,3162,UX,-1
CE,NEXT,0,63162,UY,1,3162,UY,-1
CE,NEXT,0,63162,UZ,1,3162,UZ,-1
CE,NEXT,0,63162,ROTX,1,3162,ROTX,-1

CE,NEXT,0,63146,UX,1,3146,UX,-1
CE,NEXT,0,63146,UY,1,3146,UY,-1
CE,NEXT,0,63146,UZ,1,3146,UZ,-1
CE,NEXT,0,63146,ROTX,1,3146,ROTX,-1

CE,NEXT,0,63161,UX,1,3161,UX,-1
CE,NEXT,0,63161,UY,1,3161,UY,-1
CE,NEXT,0,63161,UZ,1,3161,UZ,-1
CE,NEXT,0,63161,ROTX,1,3161,ROTX,-1

CE,NEXT,0,73145,UX,1,3145,UX,-1
CE,NEXT,0,73145,UY,1,3145,UY,-1
CE,NEXT,0,73145,UZ,1,3145,UZ,-1
CE,NEXT,0,73145,ROTX,1,3145,ROTX,-1

CE,NEXT,0,63160,UX,1,3160,UX,-1
CE,NEXT,0,63160,UY,1,3160,UY,-1
CE,NEXT,0,63160,UZ,1,3160,UZ,-1
CE,NEXT,0,63160,ROTX,1,3160,ROTX,-1

CE,NEXT,0,63144,UX,1,3144,UX,-1
CE,NEXT,0,63144,UY,1,3144,UY,-1
CE,NEXT,0,63144,UZ,1,3144,UZ,-1
CE,NEXT,0,63144,ROTX,1,3144,ROTX,-1

CE,NEXT,0,63159,UX,1,3159,UX,-1
CE,NEXT,0,63159,UY,1,3159,UY,-1
CE,NEXT,0,63159,UZ,1,3159,UZ,-1
CE,NEXT,0,63159,ROTX,1,3159,ROTX,-1

CE,NEXT,0,73143,UX,1,3143,UX,-1
CE,NEXT,0,73143,UY,1,3143,UY,-1
CE,NEXT,0,73143,UZ,1,3143,UZ,-1
CE,NEXT,0,73143,ROTX,1,3143,ROTX,-1

CE,NEXT,0,63158,UX,1,3158,UX,-1
CE,NEXT,0,63158,UY,1,3158,UY,-1
CE,NEXT,0,63158,UZ,1,3158,UZ,-1
CE,NEXT,0,63158,ROTX,1,3158,ROTX,-1

CE,NEXT,0,63142,UX,1,3142,UX,-1
CE,NEXT,0,63142,UY,1,3142,UY,-1
CE,NEXT,0,63142,UZ,1,3142,UZ,-1
CE,NEXT,0,63142,ROTX,1,3142,ROTX,-1

CE,NEXT,0,63157,UX,1,3157,UX,-1
CE,NEXT,0,63157,UY,1,3157,UY,-1
CE,NEXT,0,63157,UZ,1,3157,UZ,-1
CE,NEXT,0,63157,ROTX,1,3157,ROTX,-1

CE,NEXT,0,74112,UX,1,4112,UX,-1
CE,NEXT,0,74112,UY,1,4112,UY,-1
CE,NEXT,0,74112,UZ,1,4112,UZ,-1
CE,NEXT,0,74112,ROTX,1,4112,ROTX,-1
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CE,NEXT,0,75112,UX,1,5112,UX,-1
CE,NEXT,0,75112,UY,1,5112,UY,-1
CE,NEXT,0,75112,UZ,1,5112,UZ,-1
CE,NEXT,0,75112,ROTX,1,5112,ROTX,-1

CE,NEXT,0,74102,UX,1,4102,UX,-1
CE,NEXT,0,74102,UY,1,4102,UY,-1
CE,NEXT,0,74102,UZ,1,4102,UZ,-1
CE,NEXT,0,74102,ROTX,1,4102,ROTX,-1

CE,NEXT,0,75102,UX,1,5102,UX,-1
CE,NEXT,0,75102,UY,1,5102,UY,-1
CE,NEXT,0,75102,UZ,1,5102,UZ,-1
CE,NEXT,0,75102,ROTX,1,5102,ROTX,-1

CE,NEXT,0,67122,UX,1,7122,UX,-1
CE,NEXT,0,67122,UY,1,7122,UY,-1
CE,NEXT,0,67122,UZ,1,7122,UZ,-1
CE,NEXT,0,67122,ROTX,1,7122,ROTX,-1

CE,NEXT,0,181660,UX,1,81660,UX,-1
CE,NEXT,0,181660,UY,1,81660,UY,-1
CE,NEXT,0,181660,UZ,1,81660,UZ,-1
CE,NEXT,0,181660,ROTX,1,81660,ROTX,-1

CE,NEXT,0,75122,UX,1,5122,UX,-1
CE,NEXT,0,75122,UY,1,5122,UY,-1
CE,NEXT,0,75122,UZ,1,5122,UZ,-1
CE,NEXT,0,75122,ROTX,1,5122,ROTX,-1

CE,NEXT,0,77122,UX,1,7122,UX,-1
CE,NEXT,0,77122,UY,1,7122,UY,-1
CE,NEXT,0,77122,UZ,1,7122,UZ,-1
CE,NEXT,0,77122,ROTX,1,7122,ROTX,-1

CE,NEXT,0,60006,UX,1,6,UX,-1
CE,NEXT,0,60006,UY,1,6,UY,-1
CE,NEXT,0,60006,UZ,1,6,UZ,-1
CE,NEXT,0,60006,ROTX,1,6,ROTX,-1

CE,NEXT,0,60105,UX,1,105,UX,-1
CE,NEXT,0,60105,UY,1,105,UY,-1
CE,NEXT,0,60105,UZ,1,105,UZ,-1
CE,NEXT,0,60105,ROTX,1,105,ROTX,-1

CE,NEXT,0,70105,UX,1,105,UX,-1
CE,NEXT,0,70105,UY,1,105,UY,-1
CE,NEXT,0,70105,UZ,1,105,UZ,-1
CE,NEXT,0,70105,ROTX,1,105,ROTX,-1

CE,NEXT,0,61105,UX,1,1105,UX,-1
CE,NEXT,0,61105,UY,1,1105,UY,-1
CE,NEXT,0,61105,UZ,1,1105,UZ,-1
CE,NEXT,0,61105,ROTX,1,1105,ROTX,-1

CE,NEXT,0,71105,UX,1,1105,UX,-1
CE,NEXT,0,71105,UY,1,1105,UY,-1
CE,NEXT,0,71105,UZ,1,1105,UZ,-1
CE,NEXT,0,71105,ROTX,1,1105,ROTX,-1

CE,NEXT,0,62105,UX,1,2105,UX,-1
CE,NEXT,0,62105,UY,1,2105,UY,-1
CE,NEXT,0,62105,UZ,1,2105,UZ,-1
CE,NEXT,0,62105,ROTX,1,2105,ROTX,-1

CE,NEXT,0,72105,UX,1,2105,UX,-1
CE,NEXT,0,72105,UY,1,2105,UY,-1
CE,NEXT,0,72105,UZ,1,2105,UZ,-1
CE,NEXT,0,72105,ROTX,1,2105,ROTX,-1

CE,NEXT,0,63105,UX,1,3105,UX,-1
CE,NEXT,0,63105,UY,1,3105,UY,-1
CE,NEXT,0,63105,UZ,1,3105,UZ,-1
CE,NEXT,0,63105,ROTX,1,3105,ROTX,-1
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CE,NEXT,0,73105,UX,1,3105,UX,-1
CE,NEXT,0,73105,UY,1,3105,UY,-1
CE,NEXT,0,73105,UZ,1,3105,UZ,-1
CE,NEXT,0,73105,ROTX,1,3105,ROTX,-1

CE,NEXT,0,64105,UX,1,4105,UX,-1
CE,NEXT,0,64105,UY,1,4105,UY,-1
CE,NEXT,0,64105,UZ,1,4105,UZ,-1
CE,NEXT,0,64105,ROTX,1,4105,ROTX,-1

CE,NEXT,0,74105,UX,1,4105,UX,-1
CE,NEXT,0,74105,UY,1,4105,UY,-1
CE,NEXT,0,74105,UZ,1,4105,UZ,-1
CE,NEXT,0,74105,ROTX,1,4105,ROTX,-1

CE,NEXT,0,65105,UX,1,5105,UX,-1
CE,NEXT,0,65105,UY,1,5105,UY,-1
CE,NEXT,0,65105,UZ,1,5105,UZ,-1
CE,NEXT,0,65105,ROTX,1,5105,ROTX,-1

CE,NEXT,0,75105,UX,1,5105,UX,-1
CE,NEXT,0,75105,UY,1,5105,UY,-1
CE,NEXT,0,75105,UZ,1,5105,UZ,-1
CE,NEXT,0,75105,ROTX,1,5105,ROTX,-1

CE,NEXT,0,66105,UX,1,6105,UX,-1
CE,NEXT,0,66105,UY,1,6105,UY,-1
CE,NEXT,0,66105,UZ,1,6105,UZ,-1
CE,NEXT,0,66105,ROTX,1,6105,ROTX,-1

CE,NEXT,0,76105,UX,1,6105,UX,-1
CE,NEXT,0,76105,UY,1,6105,UY,-1
CE,NEXT,0,76105,UZ,1,6105,UZ,-1
CE,NEXT,0,76105,ROTX,1,6105,ROTX,-1

CE,NEXT,0,67105,UX,1,7105,UX,-1
CE,NEXT,0,67105,UY,1,7105,UY,-1
CE,NEXT,0,67105,UZ,1,7105,UZ,-1
CE,NEXT,0,67105,ROTX,1,7105,ROTX,-1

CE,NEXT,0,77105,UX,1,7105,UX,-1
CE,NEXT,0,77105,UY,1,7105,UY,-1
CE,NEXT,0,77105,UZ,1,7105,UZ,-1
CE,NEXT,0,77105,ROTX,1,7105,ROTX,-1

CE,NEXT,0,68105,UX,1,8105,UX,-1
CE,NEXT,0,68105,UY,1,8105,UY,-1
CE,NEXT,0,68105,UZ,1,8105,UZ,-1
CE,NEXT,0,68105,ROTX,1,8105,ROTX,-1

CE,NEXT,0,60017,UX,1,17,UX,-1
CE,NEXT,0,60017,UY,1,17,UY,-1
CE,NEXT,0,60017,UZ,1,17,UZ,-1
CE,NEXT,0,60017,ROTX,1,17,ROTX,-1

CE,NEXT,0,60116,UX,1,116,UX,-1
CE,NEXT,0,60116,UY,1,116,UY,-1
CE,NEXT,0,60116,UZ,1,116,UZ,-1
CE,NEXT,0,60116,ROTX,1,116,ROTX,-1

CE,NEXT,0,70116,UX,1,116,UX,-1
CE,NEXT,0,70116,UY,1,116,UY,-1
CE,NEXT,0,70116,UZ,1,116,UZ,-1
CE,NEXT,0,70116,ROTX,1,116,ROTX,-1

CE,NEXT,0,61116,UX,1,1116,UX,-1
CE,NEXT,0,61116,UY,1,1116,UY,-1
CE,NEXT,0,61116,UZ,1,1116,UZ,-1
CE,NEXT,0,61116,ROTX,1,1116,ROTX,-1

CE,NEXT,0,71116,UX,1,1116,UX,-1
CE,NEXT,0,71116,UY,1,1116,UY,-1
CE,NEXT,0,71116,UZ,1,1116,UZ,-1
CE,NEXT,0,71116,ROTX,1,1116,ROTX,-1
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CE,NEXT,0,72116,UX,1,2116,UX,-1
CE,NEXT,0,72116,UY,1,2116,UY,-1
CE,NEXT,0,72116,UZ,1,2116,UZ,-1
CE,NEXT,0,72116,ROTX,1,2116,ROTX,-1

CE,NEXT,0,73116,UX,1,3116,UX,-1
CE,NEXT,0,73116,UY,1,3116,UY,-1
CE,NEXT,0,73116,UZ,1,3116,UZ,-1
CE,NEXT,0,73116,ROTX,1,3116,ROTX,-1

CE,NEXT,0,64116,UX,1,4116,UX,-1
CE,NEXT,0,64116,UY,1,4116,UY,-1
CE,NEXT,0,64116,UZ,1,4116,UZ,-1
CE,NEXT,0,64116,ROTX,1,4116,ROTX,-1

CE,NEXT,0,74116,UX,1,4116,UX,-1
CE,NEXT,0,74116,UY,1,4116,UY,-1
CE,NEXT,0,74116,UZ,1,4116,UZ,-1
CE,NEXT,0,74116,ROTX,1,4116,ROTX,-1

CE,NEXT,0,65116,UX,1,5116,UX,-1
CE,NEXT,0,65116,UY,1,5116,UY,-1
CE,NEXT,0,65116,UZ,1,5116,UZ,-1
CE,NEXT,0,65116,ROTX,1,5116,ROTX,-1

CE,NEXT,0,67116,UX,1,7116,UX,-1
CE,NEXT,0,67116,UY,1,7116,UY,-1
CE,NEXT,0,67116,UZ,1,7116,UZ,-1
CE,NEXT,0,67116,ROTX,1,7116,ROTX,-1

CE,NEXT,0,68116,UX,1,8116,UX,-1
CE,NEXT,0,68116,UY,1,8116,UY,-1
CE,NEXT,0,68116,UZ,1,8116,UZ,-1
CE,NEXT,0,68116,ROTX,1,8116,ROTX,-1

CE,NEXT,0,60041,UX,1,41,UX,-1
CE,NEXT,0,60041,UY,1,41,UY,-1
CE,NEXT,0,60041,UZ,1,41,UZ,-1
CE,NEXT,0,60041,ROTX,1,41,ROTX,-1

CE,NEXT,0,60181,UX,1,181,UX,-1
CE,NEXT,0,60181,UY,1,181,UY,-1
CE,NEXT,0,60181,UZ,1,181,UZ,-1
CE,NEXT,0,60181,ROTX,1,181,ROTX,-1

CE,NEXT,0,60040,UX,1,40,UX,-1
CE,NEXT,0,60040,UY,1,40,UY,-1
CE,NEXT,0,60040,UZ,1,40,UZ,-1
CE,NEXT,0,60040,ROTX,1,40,ROTX,-1

CE,NEXT,0,60180,UX,1,180,UX,-1
CE,NEXT,0,60180,UY,1,180,UY,-1
CE,NEXT,0,60180,UZ,1,180,UZ,-1
CE,NEXT,0,60180,ROTX,1,180,ROTX,-1

CE,NEXT,0,60039,UX,1,39,UX,-1
CE,NEXT,0,60039,UY,1,39,UY,-1
CE,NEXT,0,60039,UZ,1,39,UZ,-1
CE,NEXT,0,60039,ROTX,1,39,ROTX,-1

CE,NEXT,0,60179,UX,1,179,UX,-1
CE,NEXT,0,60179,UY,1,179,UY,-1
CE,NEXT,0,60179,UZ,1,179,UZ,-1
CE,NEXT,0,60179,ROTX,1,179,ROTX,-1

CE,NEXT,0,60038,UX,1,38,UX,-1
CE,NEXT,0,60038,UY,1,38,UY,-1
CE,NEXT,0,60038,UZ,1,38,UZ,-1
CE,NEXT,0,60038,ROTX,1,38,ROTX,-1

CE,NEXT,0,60178,UX,1,178,UX,-1
CE,NEXT,0,60178,UY,1,178,UY,-1
CE,NEXT,0,60178,UZ,1,178,UZ,-1
CE,NEXT,0,60178,ROTX,1,178,ROTX,-1
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CE,NEXT,0,60037,UX,1,37,UX,-1
CE,NEXT,0,60037,UY,1,37,UY,-1
CE,NEXT,0,60037,UZ,1,37,UZ,-1
CE,NEXT,0,60037,ROTX,1,37,ROTX,-1

CE,NEXT,0,60177,UX,1,177,UX,-1
CE,NEXT,0,60177,UY,1,177,UY,-1
CE,NEXT,0,60177,UZ,1,177,UZ,-1
CE,NEXT,0,60177,ROTX,1,177,ROTX,-1

CE,NEXT,0,60036,UX,1,36,UX,-1
CE,NEXT,0,60036,UY,1,36,UY,-1
CE,NEXT,0,60036,UZ,1,36,UZ,-1
CE,NEXT,0,60036,ROTX,1,36,ROTX,-1

CE,NEXT,0,60176,UX,1,176,UX,-1
CE,NEXT,0,60176,UY,1,176,UY,-1
CE,NEXT,0,60176,UZ,1,176,UZ,-1
CE,NEXT,0,60176,ROTX,1,176,ROTX,-1

CE,NEXT,0,60035,UX,1,35,UX,-1
CE,NEXT,0,60035,UY,1,35,UY,-1
CE,NEXT,0,60035,UZ,1,35,UZ,-1
CE,NEXT,0,60035,ROTX,1,35,ROTX,-1

CE,NEXT,0,60175,UX,1,175,UX,-1
CE,NEXT,0,60175,UY,1,175,UY,-1
CE,NEXT,0,60175,UZ,1,175,UZ,-1
CE,NEXT,0,60175,ROTX,1,175,ROTX,-1

CE,NEXT,0,80107,UX,1,107,UX,-1
CE,NEXT,0,80107,UY,1,107,UY,-1
CE,NEXT,0,80107,UZ,1,107,UZ,-1
CE,NEXT,0,80107,ROTX,1,107,ROTX,-1

CE,NEXT,0,71107,UX,1,1107,UX,-1
CE,NEXT,0,71107,UY,1,1107,UY,-1
CE,NEXT,0,71107,UZ,1,1107,UZ,-1
CE,NEXT,0,71107,ROTX,1,1107,ROTX,-1

CE,NEXT,0,60155,UX,1,155,UX,-1
CE,NEXT,0,60155,UY,1,155,UY,-1
CE,NEXT,0,60155,UZ,1,155,UZ,-1
CE,NEXT,0,60155,ROTX,1,155,ROTX,-1

CE,NEXT,0,71155,UX,1,1155,UX,-1
CE,NEXT,0,71155,UY,1,1155,UY,-1
CE,NEXT,0,71155,UZ,1,1155,UZ,-1
CE,NEXT,0,71155,ROTX,1,1155,ROTX,-1

CE,NEXT,0,60154,UX,1,154,UX,-1
CE,NEXT,0,60154,UY,1,154,UY,-1
CE,NEXT,0,60154,UZ,1,154,UZ,-1
CE,NEXT,0,60154,ROTX,1,154,ROTX,-1

CE,NEXT,0,71154,UX,1,1154,UX,-1
CE,NEXT,0,71154,UY,1,1154,UY,-1
CE,NEXT,0,71154,UZ,1,1154,UZ,-1
CE,NEXT,0,71154,ROTX,1,1154,ROTX,-1

CE,NEXT,0,60153,UX,1,153,UX,-1
CE,NEXT,0,60153,UY,1,153,UY,-1
CE,NEXT,0,60153,UZ,1,153,UZ,-1
CE,NEXT,0,60153,ROTX,1,153,ROTX,-1

CE,NEXT,0,71153,UX,1,1153,UX,-1
CE,NEXT,0,71153,UY,1,1153,UY,-1
CE,NEXT,0,71153,UZ,1,1153,UZ,-1
CE,NEXT,0,71153,ROTX,1,1153,ROTX,-1

CE,NEXT,0,60152,UX,1,152,UX,-1
CE,NEXT,0,60152,UY,1,152,UY,-1
CE,NEXT,0,60152,UZ,1,152,UZ,-1
CE,NEXT,0,60152,ROTX,1,152,ROTX,-1
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CE,NEXT,0,71152,UX,1,1152,UX,-1
CE,NEXT,0,71152,UY,1,1152,UY,-1
CE,NEXT,0,71152,UZ,1,1152,UZ,-1
CE,NEXT,0,71152,ROTX,1,1152,ROTX,-1

CE,NEXT,0,60151,UX,1,151,UX,-1
CE,NEXT,0,60151,UY,1,151,UY,-1
CE,NEXT,0,60151,UZ,1,151,UZ,-1
CE,NEXT,0,60151,ROTX,1,151,ROTX,-1

CE,NEXT,0,71151,UX,1,1151,UX,-1
CE,NEXT,0,71151,UY,1,1151,UY,-1
CE,NEXT,0,71151,UZ,1,1151,UZ,-1
CE,NEXT,0,71151,ROTX,1,1151,ROTX,-1

CE,NEXT,0,60150,UX,1,150,UX,-1
CE,NEXT,0,60150,UY,1,150,UY,-1
CE,NEXT,0,60150,UZ,1,150,UZ,-1
CE,NEXT,0,60150,ROTX,1,150,ROTX,-1

CE,NEXT,0,71150,UX,1,1150,UX,-1
CE,NEXT,0,71150,UY,1,1150,UY,-1
CE,NEXT,0,71150,UZ,1,1150,UZ,-1
CE,NEXT,0,71150,ROTX,1,1150,ROTX,-1

CE,NEXT,0,60149,UX,1,149,UX,-1
CE,NEXT,0,60149,UY,1,149,UY,-1
CE,NEXT,0,60149,UZ,1,149,UZ,-1
CE,NEXT,0,60149,ROTX,1,149,ROTX,-1

CE,NEXT,0,71149,UX,1,1149,UX,-1
CE,NEXT,0,71149,UY,1,1149,UY,-1
CE,NEXT,0,71149,UZ,1,1149,UZ,-1
CE,NEXT,0,71149,ROTX,1,1149,ROTX,-1

CE,NEXT,0,80118,UX,1,118,UX,-1
CE,NEXT,0,80118,UY,1,118,UY,-1
CE,NEXT,0,80118,UZ,1,118,UZ,-1
CE,NEXT,0,80118,ROTX,1,118,ROTX,-1

CE,NEXT,0,71118,UX,1,1118,UX,-1
CE,NEXT,0,71118,UY,1,1118,UY,-1
CE,NEXT,0,71118,UZ,1,1118,UZ,-1
CE,NEXT,0,71118,ROTX,1,1118,ROTX,-1

CE,NEXT,0,81107,UX,1,1107,UX,-1
CE,NEXT,0,81107,UY,1,1107,UY,-1
CE,NEXT,0,81107,UZ,1,1107,UZ,-1
CE,NEXT,0,81107,ROTX,1,1107,ROTX,-1

CE,NEXT,0,72107,UX,1,2107,UX,-1
CE,NEXT,0,72107,UY,1,2107,UY,-1
CE,NEXT,0,72107,UZ,1,2107,UZ,-1
CE,NEXT,0,72107,ROTX,1,2107,ROTX,-1

CE,NEXT,0,61155,UX,1,1155,UX,-1
CE,NEXT,0,61155,UY,1,1155,UY,-1
CE,NEXT,0,61155,UZ,1,1155,UZ,-1
CE,NEXT,0,61155,ROTX,1,1155,ROTX,-1

CE,NEXT,0,62155,UX,1,2155,UX,-1
CE,NEXT,0,62155,UY,1,2155,UY,-1
CE,NEXT,0,62155,UZ,1,2155,UZ,-1
CE,NEXT,0,62155,ROTX,1,2155,ROTX,-1

CE,NEXT,0,61154,UX,1,1154,UX,-1
CE,NEXT,0,61154,UY,1,1154,UY,-1
CE,NEXT,0,61154,UZ,1,1154,UZ,-1
CE,NEXT,0,61154,ROTX,1,1154,ROTX,-1

CE,NEXT,0,62154,UX,1,2154,UX,-1
CE,NEXT,0,62154,UY,1,2154,UY,-1
CE,NEXT,0,62154,UZ,1,2154,UZ,-1
CE,NEXT,0,62154,ROTX,1,2154,ROTX,-1
```

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CE,NEXT,0,61153,UX,1,1153,UX,-1
CE,NEXT,0,61153,UY,1,1153,UY,-1
CE,NEXT,0,61153,UZ,1,1153,UZ,-1
CE,NEXT,0,61153,ROTX,1,1153,ROTX,-1

CE,NEXT,0,62153,UX,1,2153,UX,-1
CE,NEXT,0,62153,UY,1,2153,UY,-1
CE,NEXT,0,62153,UZ,1,2153,UZ,-1
CE,NEXT,0,62153,ROTX,1,2153,ROTX,-1

CE,NEXT,0,61152,UX,1,1152,UX,-1
CE,NEXT,0,61152,UY,1,1152,UY,-1
CE,NEXT,0,61152,UZ,1,1152,UZ,-1
CE,NEXT,0,61152,ROTX,1,1152,ROTX,-1

CE,NEXT,0,72152,UX,1,2152,UX,-1
CE,NEXT,0,72152,UY,1,2152,UY,-1
CE,NEXT,0,72152,UZ,1,2152,UZ,-1
CE,NEXT,0,72152,ROTX,1,2152,ROTX,-1

CE,NEXT,0,61151,UX,1,1151,UX,-1
CE,NEXT,0,61151,UY,1,1151,UY,-1
CE,NEXT,0,61151,UZ,1,1151,UZ,-1
CE,NEXT,0,61151,ROTX,1,1151,ROTX,-1

CE,NEXT,0,72151,UX,1,2151,UX,-1
CE,NEXT,0,72151,UY,1,2151,UY,-1
CE,NEXT,0,72151,UZ,1,2151,UZ,-1
CE,NEXT,0,72151,ROTX,1,2151,ROTX,-1

CE,NEXT,0,61150,UX,1,1150,UX,-1
CE,NEXT,0,61150,UY,1,1150,UY,-1
CE,NEXT,0,61150,UZ,1,1150,UZ,-1
CE,NEXT,0,61150,ROTX,1,1150,ROTX,-1

CE,NEXT,0,72150,UX,1,2150,UX,-1
CE,NEXT,0,72150,UY,1,2150,UY,-1
CE,NEXT,0,72150,UZ,1,2150,UZ,-1
CE,NEXT,0,72150,ROTX,1,2150,ROTX,-1

CE,NEXT,0,61149,UX,1,1149,UX,-1
CE,NEXT,0,61149,UY,1,1149,UY,-1
CE,NEXT,0,61149,UZ,1,1149,UZ,-1
CE,NEXT,0,61149,ROTX,1,1149,ROTX,-1

CE,NEXT,0,72149,UX,1,2149,UX,-1
CE,NEXT,0,72149,UY,1,2149,UY,-1
CE,NEXT,0,72149,UZ,1,2149,UZ,-1
CE,NEXT,0,72149,ROTX,1,2149,ROTX,-1

CE,NEXT,0,81118,UX,1,1118,UX,-1
CE,NEXT,0,81118,UY,1,1118,UY,-1
CE,NEXT,0,81118,UZ,1,1118,UZ,-1
CE,NEXT,0,81118,ROTX,1,1118,ROTX,-1

CE,NEXT,0,82118,UX,1,2118,UX,-1
CE,NEXT,0,82118,UY,1,2118,UY,-1
CE,NEXT,0,82118,UZ,1,2118,UZ,-1
CE,NEXT,0,82118,ROTX,1,2118,ROTX,-1

CE,NEXT,0,82107,UX,1,2107,UX,-1
CE,NEXT,0,82107,UY,1,2107,UY,-1
CE,NEXT,0,82107,UZ,1,2107,UZ,-1
CE,NEXT,0,82107,ROTX,1,2107,ROTX,-1

CE,NEXT,0,83107,UX,1,3107,UX,-1
CE,NEXT,0,83107,UY,1,3107,UY,-1
CE,NEXT,0,83107,UZ,1,3107,UZ,-1
CE,NEXT,0,83107,ROTX,1,3107,ROTX,-1

CE,NEXT,0,72155,UX,1,2155,UX,-1
CE,NEXT,0,72155,UY,1,2155,UY,-1
CE,NEXT,0,72155,UZ,1,2155,UZ,-1
CE,NEXT,0,72155,ROTX,1,2155,ROTX,-1
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CE,NEXT,0,73155,UX,1,3155,UX,-1
CE,NEXT,0,73155,UY,1,3155,UY,-1
CE,NEXT,0,73155,UZ,1,3155,UZ,-1
CE,NEXT,0,73155,ROTX,1,3155,ROTX,-1

CE,NEXT,0,72154,UX,1,2154,UX,-1
CE,NEXT,0,72154,UY,1,2154,UY,-1
CE,NEXT,0,72154,UZ,1,2154,UZ,-1
CE,NEXT,0,72154,ROTX,1,2154,ROTX,-1

CE,NEXT,0,73154,UX,1,3154,UX,-1
CE,NEXT,0,73154,UY,1,3154,UY,-1
CE,NEXT,0,73154,UZ,1,3154,UZ,-1
CE,NEXT,0,73154,ROTX,1,3154,ROTX,-1

CE,NEXT,0,72153,UX,1,2153,UX,-1
CE,NEXT,0,72153,UY,1,2153,UY,-1
CE,NEXT,0,72153,UZ,1,2153,UZ,-1
CE,NEXT,0,72153,ROTX,1,2153,ROTX,-1

CE,NEXT,0,63153,UX,1,3153,UX,-1
CE,NEXT,0,63153,UY,1,3153,UY,-1
CE,NEXT,0,63153,UZ,1,3153,UZ,-1
CE,NEXT,0,63153,ROTX,1,3153,ROTX,-1

CE,NEXT,0,62152,UX,1,2152,UX,-1
CE,NEXT,0,62152,UY,1,2152,UY,-1
CE,NEXT,0,62152,UZ,1,2152,UZ,-1
CE,NEXT,0,62152,ROTX,1,2152,ROTX,-1

CE,NEXT,0,73152,UX,1,3152,UX,-1
CE,NEXT,0,73152,UY,1,3152,UY,-1
CE,NEXT,0,73152,UZ,1,3152,UZ,-1
CE,NEXT,0,73152,ROTX,1,3152,ROTX,-1

CE,NEXT,0,62151,UX,1,2151,UX,-1
CE,NEXT,0,62151,UY,1,2151,UY,-1
CE,NEXT,0,62151,UZ,1,2151,UZ,-1
CE,NEXT,0,62151,ROTX,1,2151,ROTX,-1

CE,NEXT,0,73151,UX,1,3151,UX,-1
CE,NEXT,0,73151,UY,1,3151,UY,-1
CE,NEXT,0,73151,UZ,1,3151,UZ,-1
CE,NEXT,0,73151,ROTX,1,3151,ROTX,-1

CE,NEXT,0,62150,UX,1,2150,UX,-1
CE,NEXT,0,62150,UY,1,2150,UY,-1
CE,NEXT,0,62150,UZ,1,2150,UZ,-1
CE,NEXT,0,62150,ROTX,1,2150,ROTX,-1

CE,NEXT,0,63150,UX,1,3150,UX,-1
CE,NEXT,0,63150,UY,1,3150,UY,-1
CE,NEXT,0,63150,UZ,1,3150,UZ,-1
CE,NEXT,0,63150,ROTX,1,3150,ROTX,-1

CE,NEXT,0,62149,UX,1,2149,UX,-1
CE,NEXT,0,62149,UY,1,2149,UY,-1
CE,NEXT,0,62149,UZ,1,2149,UZ,-1
CE,NEXT,0,62149,ROTX,1,2149,ROTX,-1

CE,NEXT,0,63149,UX,1,3149,UX,-1
CE,NEXT,0,63149,UY,1,3149,UY,-1
CE,NEXT,0,63149,UZ,1,3149,UZ,-1
CE,NEXT,0,63149,ROTX,1,3149,ROTX,-1

CE,NEXT,0,72118,UX,1,2118,UX,-1
CE,NEXT,0,72118,UY,1,2118,UY,-1
CE,NEXT,0,72118,UZ,1,2118,UZ,-1
CE,NEXT,0,72118,ROTX,1,2118,ROTX,-1

CE,NEXT,0,73118,UX,1,3118,UX,-1
CE,NEXT,0,73118,UY,1,3118,UY,-1
CE,NEXT,0,73118,UZ,1,3118,UZ,-1
CE,NEXT,0,73118,ROTX,1,3118,ROTX,-1
```

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CE,NEXT,0,73107,UX,1,3107,UX,-1
CE,NEXT,0,73107,UY,1,3107,UY,-1
CE,NEXT,0,73107,UZ,1,3107,UZ,-1
CE,NEXT,0,73107,ROTX,1,3107,ROTX,-1

CE,NEXT,0,74107,UX,1,4107,UX,-1
CE,NEXT,0,74107,UY,1,4107,UY,-1
CE,NEXT,0,74107,UZ,1,4107,UZ,-1
CE,NEXT,0,74107,ROTX,1,4107,ROTX,-1

CE,NEXT,0,63155,UX,1,3155,UX,-1
CE,NEXT,0,63155,UY,1,3155,UY,-1
CE,NEXT,0,63155,UZ,1,3155,UZ,-1
CE,NEXT,0,63155,ROTX,1,3155,ROTX,-1

CE,NEXT,0,64155,UX,1,4155,UX,-1
CE,NEXT,0,64155,UY,1,4155,UY,-1
CE,NEXT,0,64155,UZ,1,4155,UZ,-1
CE,NEXT,0,64155,ROTX,1,4155,ROTX,-1

CE,NEXT,0,63154,UX,1,3154,UX,-1
CE,NEXT,0,63154,UY,1,3154,UY,-1
CE,NEXT,0,63154,UZ,1,3154,UZ,-1
CE,NEXT,0,63154,ROTX,1,3154,ROTX,-1

CE,NEXT,0,64154,UX,1,4154,UX,-1
CE,NEXT,0,64154,UY,1,4154,UY,-1
CE,NEXT,0,64154,UZ,1,4154,UZ,-1
CE,NEXT,0,64154,ROTX,1,4154,ROTX,-1

CE,NEXT,0,73153,UX,1,3153,UX,-1
CE,NEXT,0,73153,UY,1,3153,UY,-1
CE,NEXT,0,73153,UZ,1,3153,UZ,-1
CE,NEXT,0,73153,ROTX,1,3153,ROTX,-1

CE,NEXT,0,64153,UX,1,4153,UX,-1
CE,NEXT,0,64153,UY,1,4153,UY,-1
CE,NEXT,0,64153,UZ,1,4153,UZ,-1
CE,NEXT,0,64153,ROTX,1,4153,ROTX,-1

CE,NEXT,0,63152,UX,1,3152,UX,-1
CE,NEXT,0,63152,UY,1,3152,UY,-1
CE,NEXT,0,63152,UZ,1,3152,UZ,-1
CE,NEXT,0,63152,ROTX,1,3152,ROTX,-1

CE,NEXT,0,64152,UX,1,4152,UX,-1
CE,NEXT,0,64152,UY,1,4152,UY,-1
CE,NEXT,0,64152,UZ,1,4152,UZ,-1
CE,NEXT,0,64152,ROTX,1,4152,ROTX,-1

CE,NEXT,0,63151,UX,1,3151,UX,-1
CE,NEXT,0,63151,UY,1,3151,UY,-1
CE,NEXT,0,63151,UZ,1,3151,UZ,-1
CE,NEXT,0,63151,ROTX,1,3151,ROTX,-1

CE,NEXT,0,64151,UX,1,4151,UX,-1
CE,NEXT,0,64151,UY,1,4151,UY,-1
CE,NEXT,0,64151,UZ,1,4151,UZ,-1
CE,NEXT,0,64151,ROTX,1,4151,ROTX,-1

CE,NEXT,0,73150,UX,1,3150,UX,-1
CE,NEXT,0,73150,UY,1,3150,UY,-1
CE,NEXT,0,73150,UZ,1,3150,UZ,-1
CE,NEXT,0,73150,ROTX,1,3150,ROTX,-1

CE,NEXT,0,64150,UX,1,4150,UX,-1
CE,NEXT,0,64150,UY,1,4150,UY,-1
CE,NEXT,0,64150,UZ,1,4150,UZ,-1
CE,NEXT,0,64150,ROTX,1,4150,ROTX,-1

CE,NEXT,0,73149,UX,1,3149,UX,-1
CE,NEXT,0,73149,UY,1,3149,UY,-1
CE,NEXT,0,73149,UZ,1,3149,UZ,-1
CE,NEXT,0,73149,ROTX,1,3149,ROTX,-1
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CE,NEXT,0,64149,UX,1,4149,UX,-1
CE,NEXT,0,64149,UY,1,4149,UY,-1
CE,NEXT,0,64149,UZ,1,4149,UZ,-1
CE,NEXT,0,64149,ROTX,1,4149,ROTX,-1

CE,NEXT,0,83118,UX,1,3118,UX,-1
CE,NEXT,0,83118,UY,1,3118,UY,-1
CE,NEXT,0,83118,UZ,1,3118,UZ,-1
CE,NEXT,0,83118,ROTX,1,3118,ROTX,-1

CE,NEXT,0,74118,UX,1,4118,UX,-1
CE,NEXT,0,74118,UY,1,4118,UY,-1
CE,NEXT,0,74118,UZ,1,4118,UZ,-1
CE,NEXT,0,74118,ROTX,1,4118,ROTX,-1

CE,NEXT,0,84107,UX,1,4107,UX,-1
CE,NEXT,0,84107,UY,1,4107,UY,-1
CE,NEXT,0,84107,UZ,1,4107,UZ,-1
CE,NEXT,0,84107,ROTX,1,4107,ROTX,-1

CE,NEXT,0,75107,UX,1,5107,UX,-1
CE,NEXT,0,75107,UY,1,5107,UY,-1
CE,NEXT,0,75107,UZ,1,5107,UZ,-1
CE,NEXT,0,75107,ROTX,1,5107,ROTX,-1

CE,NEXT,0,74155,UX,1,4155,UX,-1
CE,NEXT,0,74155,UY,1,4155,UY,-1
CE,NEXT,0,74155,UZ,1,4155,UZ,-1
CE,NEXT,0,74155,ROTX,1,4155,ROTX,-1

CE,NEXT,0,65155,UX,1,5155,UX,-1
CE,NEXT,0,65155,UY,1,5155,UY,-1
CE,NEXT,0,65155,UZ,1,5155,UZ,-1
CE,NEXT,0,65155,ROTX,1,5155,ROTX,-1

CE,NEXT,0,74154,UX,1,4154,UX,-1
CE,NEXT,0,74154,UY,1,4154,UY,-1
CE,NEXT,0,74154,UZ,1,4154,UZ,-1
CE,NEXT,0,74154,ROTX,1,4154,ROTX,-1

CE,NEXT,0,65154,UX,1,5154,UX,-1
CE,NEXT,0,65154,UY,1,5154,UY,-1
CE,NEXT,0,65154,UZ,1,5154,UZ,-1
CE,NEXT,0,65154,ROTX,1,5154,ROTX,-1

CE,NEXT,0,74153,UX,1,4153,UX,-1
CE,NEXT,0,74153,UY,1,4153,UY,-1
CE,NEXT,0,74153,UZ,1,4153,UZ,-1
CE,NEXT,0,74153,ROTX,1,4153,ROTX,-1

CE,NEXT,0,65153,UX,1,5153,UX,-1
CE,NEXT,0,65153,UY,1,5153,UY,-1
CE,NEXT,0,65153,UZ,1,5153,UZ,-1
CE,NEXT,0,65153,ROTX,1,5153,ROTX,-1

CE,NEXT,0,74152,UX,1,4152,UX,-1
CE,NEXT,0,74152,UY,1,4152,UY,-1
CE,NEXT,0,74152,UZ,1,4152,UZ,-1
CE,NEXT,0,74152,ROTX,1,4152,ROTX,-1

CE,NEXT,0,65152,UX,1,5152,UX,-1
CE,NEXT,0,65152,UY,1,5152,UY,-1
CE,NEXT,0,65152,UZ,1,5152,UZ,-1
CE,NEXT,0,65152,ROTX,1,5152,ROTX,-1

CE,NEXT,0,74151,UX,1,4151,UX,-1
CE,NEXT,0,74151,UY,1,4151,UY,-1
CE,NEXT,0,74151,UZ,1,4151,UZ,-1
CE,NEXT,0,74151,ROTX,1,4151,ROTX,-1

CE,NEXT,0,65151,UX,1,5151,UX,-1
CE,NEXT,0,65151,UY,1,5151,UY,-1
CE,NEXT,0,65151,UZ,1,5151,UZ,-1
CE,NEXT,0,65151,ROTX,1,5151,ROTX,-1
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CE,NEXT,0,74150,UX,1,4150,UX,-1
CE,NEXT,0,74150,UY,1,4150,UY,-1
CE,NEXT,0,74150,UZ,1,4150,UZ,-1
CE,NEXT,0,74150,ROTX,1,4150,ROTX,-1

CE,NEXT,0,75150,UX,1,5150,UX,-1
CE,NEXT,0,75150,UY,1,5150,UY,-1
CE,NEXT,0,75150,UZ,1,5150,UZ,-1
CE,NEXT,0,75150,ROTX,1,5150,ROTX,-1

CE,NEXT,0,74149,UX,1,4149,UX,-1
CE,NEXT,0,74149,UY,1,4149,UY,-1
CE,NEXT,0,74149,UZ,1,4149,UZ,-1
CE,NEXT,0,74149,ROTX,1,4149,ROTX,-1

CE,NEXT,0,75149,UX,1,5149,UX,-1
CE,NEXT,0,75149,UY,1,5149,UY,-1
CE,NEXT,0,75149,UZ,1,5149,UZ,-1
CE,NEXT,0,75149,ROTX,1,5149,ROTX,-1

CE,NEXT,0,84118,UX,1,4118,UX,-1
CE,NEXT,0,84118,UY,1,4118,UY,-1
CE,NEXT,0,84118,UZ,1,4118,UZ,-1
CE,NEXT,0,84118,ROTX,1,4118,ROTX,-1

CE,NEXT,0,85118,UX,1,5118,UX,-1
CE,NEXT,0,85118,UY,1,5118,UY,-1
CE,NEXT,0,85118,UZ,1,5118,UZ,-1
CE,NEXT,0,85118,ROTX,1,5118,ROTX,-1

CE,NEXT,0,85107,UX,1,5107,UX,-1
CE,NEXT,0,85107,UY,1,5107,UY,-1
CE,NEXT,0,85107,UZ,1,5107,UZ,-1
CE,NEXT,0,85107,ROTX,1,5107,ROTX,-1

CE,NEXT,0,76107,UX,1,6107,UX,-1
CE,NEXT,0,76107,UY,1,6107,UY,-1
CE,NEXT,0,76107,UZ,1,6107,UZ,-1
CE,NEXT,0,76107,ROTX,1,6107,ROTX,-1

CE,NEXT,0,75155,UX,1,5155,UX,-1
CE,NEXT,0,75155,UY,1,5155,UY,-1
CE,NEXT,0,75155,UZ,1,5155,UZ,-1
CE,NEXT,0,75155,ROTX,1,5155,ROTX,-1

CE,NEXT,0,66155,UX,1,6155,UX,-1
CE,NEXT,0,66155,UY,1,6155,UY,-1
CE,NEXT,0,66155,UZ,1,6155,UZ,-1
CE,NEXT,0,66155,ROTX,1,6155,ROTX,-1

CE,NEXT,0,75154,UX,1,5154,UX,-1
CE,NEXT,0,75154,UY,1,5154,UY,-1
CE,NEXT,0,75154,UZ,1,5154,UZ,-1
CE,NEXT,0,75154,ROTX,1,5154,ROTX,-1

CE,NEXT,0,66154,UX,1,6154,UX,-1
CE,NEXT,0,66154,UY,1,6154,UY,-1
CE,NEXT,0,66154,UZ,1,6154,UZ,-1
CE,NEXT,0,66154,ROTX,1,6154,ROTX,-1

CE,NEXT,0,75153,UX,1,5153,UX,-1
CE,NEXT,0,75153,UY,1,5153,UY,-1
CE,NEXT,0,75153,UZ,1,5153,UZ,-1
CE,NEXT,0,75153,ROTX,1,5153,ROTX,-1

CE,NEXT,0,66153,UX,1,6153,UX,-1
CE,NEXT,0,66153,UY,1,6153,UY,-1
CE,NEXT,0,66153,UZ,1,6153,UZ,-1
CE,NEXT,0,66153,ROTX,1,6153,ROTX,-1

CE,NEXT,0,75152,UX,1,5152,UX,-1
CE,NEXT,0,75152,UY,1,5152,UY,-1
CE,NEXT,0,75152,UZ,1,5152,UZ,-1
CE,NEXT,0,75152,ROTX,1,5152,ROTX,-1
```

```
CE,NEXT,0,66152,UX,1,6152,UX,-1
CE,NEXT,0,66152,UY,1,6152,UY,-1
CE,NEXT,0,66152,UZ,1,6152,UZ,-1
CE,NEXT,0,66152,ROTX,1,6152,ROTX,-1

CE,NEXT,0,75151,UX,1,5151,UX,-1
CE,NEXT,0,75151,UY,1,5151,UY,-1
CE,NEXT,0,75151,UZ,1,5151,UZ,-1
CE,NEXT,0,75151,ROTX,1,5151,ROTX,-1

CE,NEXT,0,66151,UX,1,6151,UX,-1
CE,NEXT,0,66151,UY,1,6151,UY,-1
CE,NEXT,0,66151,UZ,1,6151,UZ,-1
CE,NEXT,0,66151,ROTX,1,6151,ROTX,-1

CE,NEXT,0,65150,UX,1,5150,UX,-1
CE,NEXT,0,65150,UY,1,5150,UY,-1
CE,NEXT,0,65150,UZ,1,5150,UZ,-1
CE,NEXT,0,65150,ROTX,1,5150,ROTX,-1

CE,NEXT,0,66150,UX,1,6150,UX,-1
CE,NEXT,0,66150,UY,1,6150,UY,-1
CE,NEXT,0,66150,UZ,1,6150,UZ,-1
CE,NEXT,0,66150,ROTX,1,6150,ROTX,-1

CE,NEXT,0,65149,UX,1,5149,UX,-1
CE,NEXT,0,65149,UY,1,5149,UY,-1
CE,NEXT,0,65149,UZ,1,5149,UZ,-1
CE,NEXT,0,65149,ROTX,1,5149,ROTX,-1

CE,NEXT,0,66149,UX,1,6149,UX,-1
CE,NEXT,0,66149,UY,1,6149,UY,-1
CE,NEXT,0,66149,UZ,1,6149,UZ,-1
CE,NEXT,0,66149,ROTX,1,6149,ROTX,-1

CE,NEXT,0,86107,UX,1,6107,UX,-1
CE,NEXT,0,86107,UY,1,6107,UY,-1
CE,NEXT,0,86107,UZ,1,6107,UZ,-1
CE,NEXT,0,86107,ROTX,1,6107,ROTX,-1

CE,NEXT,0,87107,UX,1,7107,UX,-1
CE,NEXT,0,87107,UY,1,7107,UY,-1
CE,NEXT,0,87107,UZ,1,7107,UZ,-1
CE,NEXT,0,87107,ROTX,1,7107,ROTX,-1

CE,NEXT,0,76155,UX,1,6155,UX,-1
CE,NEXT,0,76155,UY,1,6155,UY,-1
CE,NEXT,0,76155,UZ,1,6155,UZ,-1
CE,NEXT,0,76155,ROTX,1,6155,ROTX,-1

CE,NEXT,0,77155,UX,1,7155,UX,-1
CE,NEXT,0,77155,UY,1,7155,UY,-1
CE,NEXT,0,77155,UZ,1,7155,UZ,-1
CE,NEXT,0,77155,ROTX,1,7155,ROTX,-1

CE,NEXT,0,76154,UX,1,6154,UX,-1
CE,NEXT,0,76154,UY,1,6154,UY,-1
CE,NEXT,0,76154,UZ,1,6154,UZ,-1
CE,NEXT,0,76154,ROTX,1,6154,ROTX,-1

CE,NEXT,0,77154,UX,1,7154,UX,-1
CE,NEXT,0,77154,UY,1,7154,UY,-1
CE,NEXT,0,77154,UZ,1,7154,UZ,-1
CE,NEXT,0,77154,ROTX,1,7154,ROTX,-1

CE,NEXT,0,76153,UX,1,6153,UX,-1
CE,NEXT,0,76153,UY,1,6153,UY,-1
CE,NEXT,0,76153,UZ,1,6153,UZ,-1
CE,NEXT,0,76153,ROTX,1,6153,ROTX,-1

CE,NEXT,0,77153,UX,1,7153,UX,-1
CE,NEXT,0,77153,UY,1,7153,UY,-1
CE,NEXT,0,77153,UZ,1,7153,UZ,-1
CE,NEXT,0,77153,ROTX,1,7153,ROTX,-1
```

```
CE,NEXT,0,76152,UX,1,6152,UX,-1
CE,NEXT,0,76152,UY,1,6152,UY,-1
CE,NEXT,0,76152,UZ,1,6152,UZ,-1
CE,NEXT,0,76152,ROTX,1,6152,ROTX,-1

CE,NEXT,0,77152,UX,1,7152,UX,-1
CE,NEXT,0,77152,UY,1,7152,UY,-1
CE,NEXT,0,77152,UZ,1,7152,UZ,-1
CE,NEXT,0,77152,ROTX,1,7152,ROTX,-1

CE,NEXT,0,76151,UX,1,6151,UX,-1
CE,NEXT,0,76151,UY,1,6151,UY,-1
CE,NEXT,0,76151,UZ,1,6151,UZ,-1
CE,NEXT,0,76151,ROTX,1,6151,ROTX,-1

CE,NEXT,0,77151,UX,1,7151,UX,-1
CE,NEXT,0,77151,UY,1,7151,UY,-1
CE,NEXT,0,77151,UZ,1,7151,UZ,-1
CE,NEXT,0,77151,ROTX,1,7151,ROTX,-1

CE,NEXT,0,76150,UX,1,6150,UX,-1
CE,NEXT,0,76150,UY,1,6150,UY,-1
CE,NEXT,0,76150,UZ,1,6150,UZ,-1
CE,NEXT,0,76150,ROTX,1,6150,ROTX,-1

CE,NEXT,0,77150,UX,1,7150,UX,-1
CE,NEXT,0,77150,UY,1,7150,UY,-1
CE,NEXT,0,77150,UZ,1,7150,UZ,-1
CE,NEXT,0,77150,ROTX,1,7150,ROTX,-1

CE,NEXT,0,76149,UX,1,6149,UX,-1
CE,NEXT,0,76149,UY,1,6149,UY,-1
CE,NEXT,0,76149,UZ,1,6149,UZ,-1
CE,NEXT,0,76149,ROTX,1,6149,ROTX,-1

CE,NEXT,0,77149,UX,1,7149,UX,-1
CE,NEXT,0,77149,UY,1,7149,UY,-1
CE,NEXT,0,77149,UZ,1,7149,UZ,-1
CE,NEXT,0,77149,ROTX,1,7149,ROTX,-1

CE,NEXT,0,77107,UX,1,7107,UX,-1
CE,NEXT,0,77107,UY,1,7107,UY,-1
CE,NEXT,0,77107,UZ,1,7107,UZ,-1
CE,NEXT,0,77107,ROTX,1,7107,ROTX,-1

CE,NEXT,0,78107,UX,1,8107,UX,-1
CE,NEXT,0,78107,UY,1,8107,UY,-1
CE,NEXT,0,78107,UZ,1,8107,UZ,-1
CE,NEXT,0,78107,ROTX,1,8107,ROTX,-1

CE,NEXT,0,67155,UX,1,7155,UX,-1
CE,NEXT,0,67155,UY,1,7155,UY,-1
CE,NEXT,0,67155,UZ,1,7155,UZ,-1
CE,NEXT,0,67155,ROTX,1,7155,ROTX,-1

CE,NEXT,0,68155,UX,1,8155,UX,-1
CE,NEXT,0,68155,UY,1,8155,UY,-1
CE,NEXT,0,68155,UZ,1,8155,UZ,-1
CE,NEXT,0,68155,ROTX,1,8155,ROTX,-1

CE,NEXT,0,67154,UX,1,7154,UX,-1
CE,NEXT,0,67154,UY,1,7154,UY,-1
CE,NEXT,0,67154,UZ,1,7154,UZ,-1
CE,NEXT,0,67154,ROTX,1,7154,ROTX,-1

CE,NEXT,0,68154,UX,1,8154,UX,-1
CE,NEXT,0,68154,UY,1,8154,UY,-1
CE,NEXT,0,68154,UZ,1,8154,UZ,-1
CE,NEXT,0,68154,ROTX,1,8154,ROTX,-1

CE,NEXT,0,67153,UX,1,7153,UX,-1
CE,NEXT,0,67153,UY,1,7153,UY,-1
CE,NEXT,0,67153,UZ,1,7153,UZ,-1
CE,NEXT,0,67153,ROTX,1,7153,ROTX,-1
```

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CE,NEXT,0,68153,UX,1,8153,UX,-1
CE,NEXT,0,68153,UY,1,8153,UY,-1
CE,NEXT,0,68153,UZ,1,8153,UZ,-1
CE,NEXT,0,68153,ROTX,1,8153,ROTX,-1

CE,NEXT,0,67152,UX,1,7152,UX,-1
CE,NEXT,0,67152,UY,1,7152,UY,-1
CE,NEXT,0,67152,UZ,1,7152,UZ,-1
CE,NEXT,0,67152,ROTX,1,7152,ROTX,-1

CE,NEXT,0,78152,UX,1,8152,UX,-1
CE,NEXT,0,78152,UY,1,8152,UY,-1
CE,NEXT,0,78152,UZ,1,8152,UZ,-1
CE,NEXT,0,78152,ROTX,1,8152,ROTX,-1

CE,NEXT,0,67151,UX,1,7151,UX,-1
CE,NEXT,0,67151,UY,1,7151,UY,-1
CE,NEXT,0,67151,UZ,1,7151,UZ,-1
CE,NEXT,0,67151,ROTX,1,7151,ROTX,-1

CE,NEXT,0,68151,UX,1,8151,UX,-1
CE,NEXT,0,68151,UY,1,8151,UY,-1
CE,NEXT,0,68151,UZ,1,8151,UZ,-1
CE,NEXT,0,68151,ROTX,1,8151,ROTX,-1

CE,NEXT,0,67150,UX,1,7150,UX,-1
CE,NEXT,0,67150,UY,1,7150,UY,-1
CE,NEXT,0,67150,UZ,1,7150,UZ,-1
CE,NEXT,0,67150,ROTX,1,7150,ROTX,-1

CE,NEXT,0,68150,UX,1,8150,UX,-1
CE,NEXT,0,68150,UY,1,8150,UY,-1
CE,NEXT,0,68150,UZ,1,8150,UZ,-1
CE,NEXT,0,68150,ROTX,1,8150,ROTX,-1

CE,NEXT,0,67149,UX,1,7149,UX,-1
CE,NEXT,0,67149,UY,1,7149,UY,-1
CE,NEXT,0,67149,UZ,1,7149,UZ,-1
CE,NEXT,0,67149,ROTX,1,7149,ROTX,-1

CE,NEXT,0,68149,UX,1,8149,UX,-1
CE,NEXT,0,68149,UY,1,8149,UY,-1
CE,NEXT,0,68149,UZ,1,8149,UZ,-1
CE,NEXT,0,68149,ROTX,1,8149,ROTX,-1

CE,NEXT,0,87118,UX,1,7118,UX,-1
CE,NEXT,0,87118,UY,1,7118,UY,-1
CE,NEXT,0,87118,UZ,1,7118,UZ,-1
CE,NEXT,0,87118,ROTX,1,7118,ROTX,-1

CE,NEXT,0,78118,UX,1,8118,UX,-1
CE,NEXT,0,78118,UY,1,8118,UY,-1
CE,NEXT,0,78118,UZ,1,8118,UZ,-1
CE,NEXT,0,78118,ROTX,1,8118,ROTX,-1

CE,NEXT,0,70181,UX,1,181,UX,-1
CE,NEXT,0,70181,UY,1,181,UY,-1
CE,NEXT,0,70181,UZ,1,181,UZ,-1
CE,NEXT,0,70181,ROTX,1,181,ROTX,-1

CE,NEXT,0,70155,UX,1,155,UX,-1
CE,NEXT,0,70155,UY,1,155,UY,-1
CE,NEXT,0,70155,UZ,1,155,UZ,-1
CE,NEXT,0,70155,ROTX,1,155,ROTX,-1

CE,NEXT,0,70180,UX,1,180,UX,-1
CE,NEXT,0,70180,UY,1,180,UY,-1
CE,NEXT,0,70180,UZ,1,180,UZ,-1
CE,NEXT,0,70180,ROTX,1,180,ROTX,-1

CE,NEXT,0,70154,UX,1,154,UX,-1
CE,NEXT,0,70154,UY,1,154,UY,-1
CE,NEXT,0,70154,UZ,1,154,UZ,-1
CE,NEXT,0,70154,ROTX,1,154,ROTX,-1
```

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CE,NEXT,0,70179,UX,1,179,UX,-1
CE,NEXT,0,70179,UY,1,179,UY,-1
CE,NEXT,0,70179,UZ,1,179,UZ,-1
CE,NEXT,0,70179,ROTX,1,179,ROTX,-1

CE,NEXT,0,70153,UX,1,153,UX,-1
CE,NEXT,0,70153,UY,1,153,UY,-1
CE,NEXT,0,70153,UZ,1,153,UZ,-1
CE,NEXT,0,70153,ROTX,1,153,ROTX,-1

CE,NEXT,0,70178,UX,1,178,UX,-1
CE,NEXT,0,70178,UY,1,178,UY,-1
CE,NEXT,0,70178,UZ,1,178,UZ,-1
CE,NEXT,0,70178,ROTX,1,178,ROTX,-1

CE,NEXT,0,70152,UX,1,152,UX,-1
CE,NEXT,0,70152,UY,1,152,UY,-1
CE,NEXT,0,70152,UZ,1,152,UZ,-1
CE,NEXT,0,70152,ROTX,1,152,ROTX,-1

CE,NEXT,0,70177,UX,1,177,UX,-1
CE,NEXT,0,70177,UY,1,177,UY,-1
CE,NEXT,0,70177,UZ,1,177,UZ,-1
CE,NEXT,0,70177,ROTX,1,177,ROTX,-1

CE,NEXT,0,70151,UX,1,151,UX,-1
CE,NEXT,0,70151,UY,1,151,UY,-1
CE,NEXT,0,70151,UZ,1,151,UZ,-1
CE,NEXT,0,70151,ROTX,1,151,ROTX,-1

CE,NEXT,0,70176,UX,1,176,UX,-1
CE,NEXT,0,70176,UY,1,176,UY,-1
CE,NEXT,0,70176,UZ,1,176,UZ,-1
CE,NEXT,0,70176,ROTX,1,176,ROTX,-1

CE,NEXT,0,70150,UX,1,150,UX,-1
CE,NEXT,0,70150,UY,1,150,UY,-1
CE,NEXT,0,70150,UZ,1,150,UZ,-1
CE,NEXT,0,70150,ROTX,1,150,ROTX,-1

CE,NEXT,0,70175,UX,1,175,UX,-1
CE,NEXT,0,70175,UY,1,175,UY,-1
CE,NEXT,0,70175,UZ,1,175,UZ,-1
CE,NEXT,0,70175,ROTX,1,175,ROTX,-1

CE,NEXT,0,70149,UX,1,149,UX,-1
CE,NEXT,0,70149,UY,1,149,UY,-1
CE,NEXT,0,70149,UZ,1,149,UZ,-1
CE,NEXT,0,70149,ROTX,1,149,ROTX,-1

CE,NEXT,0,68109,UX,1,8109,UX,-1
CE,NEXT,0,68109,UY,1,8109,UY,-1
CE,NEXT,0,68109,UZ,1,8109,UZ,-1
CE,NEXT,0,68109,ROTX,1,8109,ROTX,-1

CE,NEXT,0,77109,UX,1,7109,UX,-1
CE,NEXT,0,77109,UY,1,7109,UY,-1
CE,NEXT,0,77109,UZ,1,7109,UZ,-1
CE,NEXT,0,77109,ROTX,1,7109,ROTX,-1

CE,NEXT,0,74109,UX,1,4109,UX,-1
CE,NEXT,0,74109,UY,1,4109,UY,-1
CE,NEXT,0,74109,UZ,1,4109,UZ,-1
CE,NEXT,0,74109,ROTX,1,4109,ROTX,-1

CE,NEXT,0,73109,UX,1,3109,UX,-1
CE,NEXT,0,73109,UY,1,3109,UY,-1
CE,NEXT,0,73109,UZ,1,3109,UZ,-1
CE,NEXT,0,73109,ROTX,1,3109,ROTX,-1

CE,NEXT,0,74120,UX,1,4120,UX,-1
CE,NEXT,0,74120,UY,1,4120,UY,-1
CE,NEXT,0,74120,UZ,1,4120,UZ,-1
CE,NEXT,0,74120,ROTX,1,4120,ROTX,-1
```

```
CE,NEXT,0,73120,UX,1,3120,UX,-1
CE,NEXT,0,73120,UY,1,3120,UY,-1
CE,NEXT,0,73120,UZ,1,3120,UZ,-1
CE,NEXT,0,73120,ROTX,1,3120,ROTX,-1


CE,NEXT,0,9,UY,1,60009,UY,-1

CE,NEXT,0,20,UY,1,60020,UY,-1

CE,NEXT,0,108,UY,1,60108,UY,-1

CE,NEXT,0,119,UY,1,60119,UY,-1

CE,NEXT,0,1108,UY,1,61108,UY,-1

CE,NEXT,0,1119,UY,1,61119,UY,-1

CE,NEXT,0,2108,UY,1,62108,UY,-1

CE,NEXT,0,2119,UY,1,62119,UY,-1

CE,NEXT,0,3108,UY,1,63108,UY,-1

CE,NEXT,0,3119,UY,1,63119,UY,-1

CE,NEXT,0,4108,UY,1,64108,UY,-1

CE,NEXT,0,4119,UY,1,64119,UY,-1

CE,NEXT,0,5108,UY,1,65108,UY,-1

CE,NEXT,0,5119,UY,1,65119,UY,-1

CE,NEXT,0,6108,UY,1,66108,UY,-1

CE,NEXT,0,7108,UY,1,67108,UY,-1

CE,NEXT,0,7119,UY,1,67119,UY,-1

CE,NEXT,0,8108,UY,1,68108,UY,-1

CE,NEXT,0,8119,UY,1,68119,UY,-1

! DEFINE SUPPORTS BASED ON NODES

D,1,UX,0
D,1,UY,0
D,1,UZ,0
D,1,ROTX,0
D,1,ROTY,0

D,12,UX,0
D,12,UY,0
D,12,UZ,0
D,12,ROTX,0
D,12,ROTY,0

D,101,UX,0
D,101,UY,0
D,101,UZ,0
D,101,ROTX,0
D,101,ROTY,0

D,111,UX,0
D,111,UY,0
D,111,UZ,0
D,111,ROTX,0
D,111,ROTY,0

D,30112,UX,0
D,30112,UY,0
D,30112,UZ,0
D,30112,ROTX,0
```

D,30112,ROTY,0
D,30112,ROTZ,0

D,123,UX,0
D,123,UY,0
D,123,UZ,0
D,123,ROTY,0

D,1101,UX,0
D,1101,UY,0
D,1101,UZ,0
D,1101,ROTX,0
D,1101,ROTY,0

D,1111,UX,0
D,1111,UY,0
D,1111,UZ,0
D,1111,ROTX,0
D,1111,ROTY,0

D,31112,UX,0
D,31112,UY,0
D,31112,UZ,0
D,31112,ROTX,0
D,31112,ROTY,0
D,31112,ROTZ,0

D,1123,UX,0
D,1123,UY,0
D,1123,UZ,0
D,1123,ROTY,0

D,2101,UX,0
D,2101,UY,0
D,2101,UZ,0
D,2101,ROTX,0
D,2101,ROTY,0

D,2111,UX,0
D,2111,UY,0
D,2111,UZ,0
D,2111,ROTX,0
D,2111,ROTY,0

D,2122,UX,0
D,2122,UY,0
D,2122,UZ,0
D,2122,ROTY,0

D,32112,UX,0
D,32112,UY,0
D,32112,UZ,0
D,32112,ROTX,0
D,32112,ROTY,0
D,32112,ROTZ,0

D,2123,UX,0
D,2123,UY,0
D,2123,UZ,0
D,2123,ROTY,0

D,3101,UX,0
D,3101,UY,0
D,3101,UZ,0
D,3101,ROTX,0
D,3101,ROTY,0

D,3111,UX,0
D,3111,UY,0
D,3111,UZ,0
D,3111,ROTX,0
D,3111,ROTY,0

D,33112,UX,0

D,33112,UY,0
D,33112,UZ,0
D,33112,ROTX,0
D,33112,ROTY,0
D,33112,ROTZ,0

D,3123,UX,0
D,3123,UY,0
D,3123,UZ,0
D,3123,ROTY,0

D,4101,UX,0
D,4101,UY,0
D,4101,UZ,0
D,4101,ROTX,0
D,4101,ROTY,0

D,4111,UX,0
D,4111,UY,0
D,4111,UZ,0
D,4111,ROTX,0
D,4111,ROTY,0

D,5101,UX,0
D,5101,UY,0
D,5101,UZ,0
D,5101,ROTX,0
D,5101,ROTY,0

D,5111,UX,0
D,5111,UY,0
D,5111,UZ,0
D,5111,ROTX,0
D,5111,ROTY,0

D,5112,UZ,0

D,6101,UX,0
D,6101,UY,0
D,6101,UZ,0
D,6101,ROTY,0

D,7101,UX,0
D,7101,UY,0
D,7101,UZ,0
D,7101,ROTX,0
D,7101,ROTY,0

D,7111,UX,0
D,7111,UY,0
D,7111,UZ,0
D,7111,ROTX,0
D,7111,ROTY,0

D,8100,UX,0
D,8100,UY,0
D,8100,UZ,0
D,8100,ROTY,0

D,8101,UX,0
D,8101,UY,0
D,8101,UZ,0
D,8101,ROTX,0
D,8101,ROTY,0

D,8111,UX,0
D,8111,UY,0
D,8111,UZ,0
D,8111,ROTX,0
D,8111,ROTY,0

D,8156,UX,0
D,8156,UY,0
D,8156,UZ,0
D,8156,ROTY,0

```
D,8156,ROTZ,0

D,8157,UX,0
D,8157,UY,0
D,8157,UZ,0
D,8157,ROTY,0
D,8157,ROTZ,0

/SOLU

!  Dead Load

FCUM,ADD,1,1       ! THIS COMMAND MAKES ALL CO-NODAL FORCES ADD TOGETHER
SFCUM,ALL,ADD,1    ! THIS COMMAND MAKES ALL CO-ELEMENTAL PRESSURES ADD TOGETHER


ACEL,0,GRAV,0                                                                                    ! THIS
COMMAND ESTABLISHES THE DIRECTION AND FORCE FOR GRAVITY,
!                       USED FOR BUILDING DEAD LOAD

lswrite,1              ! Write dead load to file


LSSOLVE,1,1,1           ! SOLVE MODEL FOR STADIC LOADS STEEL DEAD LOAD ONLY



FINISH


/out,Rev1_S1_modal,out
! CALCULATE THE MODAL SOLUTIONS TO FIND MODE SHAPES


/SOLU
ALLSEL,ALL
!*
ANTYPE,2
!*
!*
MODOPT,LANB,300
EQSLV,SPAR
MXPAND,300, , ,0
LUMPM,1
PSTRES,0
!*
MODOPT,LANB,300,0,34, ,OFF

/STATUS,SOLU

SOLVE
/out
FINISH
```

Attachment 13

GT STRUDL Coupled Building/Crane Model, Crane at K, All Analyses

```
STRUDL 'N1E3_HU_WL_MHE' 'BRIDGE LOCATION 1 TROLLEY POSITION 3 - LOAD UP - MHE'
COUTPUT 'N1E3_HU_WL_MHE.GTO'

$ N1E3_HU_WL_MHE (Model No. 07)
$ CRYSTAL RIVER NUCLEAR PLANT
$ ISFSI AUXILIARY BUILDING CRANE UPGRADES
$ FHCR-5
$=============================================================================================

LARGE PROBLEM SIZE 5
TYPE  SPACE FRAME
UNITS  INCH  LBS   DEG
JOINT COORDINATES GLOBAL
   1              0.0000       0.0000       0.0000
   12             0.0000       0.0000    -576.0000
   101          432.0000     288.0000       0.0000
   111          432.0000     288.0000    -576.0000
   123          432.0000     288.0000    -288.0000
   1101         723.0000     288.0000       0.0000
   1111         723.0000     288.0000    -576.0000
   1123         723.0000     288.0000    -288.0000
   2101        1014.0000     288.0000       0.0000
   2111        1014.0000     288.0000    -576.0000
   2123        1014.0000     288.0000    -288.0000
   3101        1305.0000     288.0000       0.0000
   3111        1305.0000     288.0000    -576.0000
   3123        1305.0000     288.0000    -288.0000
   4101        1578.0000     288.0000       0.0000
   4111        1578.0000     288.0000    -576.0000
   5101        1857.0000     288.0000       0.0000
   5111        1857.0000     288.0000    -576.0000
   6101        2097.0000     516.0000       0.0000
   7101        2301.0000     516.0000       0.0000
   7111        2301.0000     516.0000    -576.0000
   8100        2505.0000     516.0000    -288.0000
   8101        2505.0000     516.0000       0.0000
   8111        2505.0000     516.0000    -576.0000
   2              0.0000     489.9600       0.0000
   3              0.0000     844.0800       0.0000
   4              0.0000     852.0000       0.0000
   5              0.0000     852.0000      11.0000
   6              0.0000     860.0400      11.0000
   7              0.0000     870.6000      11.0000
   8              0.0000    1065.9600      11.0000
   9              0.0000     852.0000     -12.0000
   10             0.0000     870.6000     -12.0000
   13             0.0000     489.9600    -576.0000
   14             0.0000     844.0800    -576.0000
   15             0.0000     852.0000    -576.0000
   16             0.0000     852.0000    -587.0000
   17             0.0000     860.0400    -587.0000
   18             0.0000     870.6000    -587.0000
   19             0.0000    1065.9600    -587.0000
   20             0.0000     852.0000    -564.0000
   21             0.0000     870.6000    -564.0000
   23             0.0000     288.0000    -336.0000
   24             0.0000     489.9600    -504.0000
   25             0.0000     489.9600    -432.0000
   26             0.0000     489.9600    -360.0000
   27             0.0000     489.9600    -288.0000
   28             0.0000     489.9600    -216.0000
   29             0.0000     489.9600    -144.0000
   30             0.0000     489.9600     -72.0000
   31             0.0000     672.0000    -432.0000
   32             0.0000     672.0000    -288.0000
   33             0.0000     672.0000    -144.0000
   34             0.0000     844.0800    -288.0000
   35             0.0000    1065.9600    -512.0000
   36             0.0000    1065.9600    -437.0000
   37             0.0000    1065.9600    -362.0000
   38             0.0000    1065.9600    -288.0000
```

39	0.0000	1065.9600	-214.0000
40	0.0000	1065.9600	-139.0000
41	0.0000	1065.9600	-64.0000
102	432.0000	489.9600	0.0000
103	432.0000	852.0000	0.0000
104	432.0000	852.0000	11.0000
105	432.0000	860.0400	11.0000
106	432.0000	870.6000	11.0000
107	432.0000	1065.9600	11.0000
108	432.0000	852.0000	-12.0000
109	432.0000	870.6000	-12.0000
112	432.0000	489.9600	-576.0000
113	432.0000	573.0000	-576.0000
114	432.0000	852.0000	-576.0000
115	432.0000	852.0000	-587.0000
116	432.0000	860.0400	-587.0000
117	432.0000	870.6000	-587.0000
118	432.0000	1065.9600	-587.0000
119	432.0000	852.0000	-564.0000
120	432.0000	870.6000	-564.0000
124	216.0000	489.9600	-576.0000
125	216.0000	489.9600	-504.0000
126	216.0000	489.9600	-432.0000
127	216.0000	489.9600	-360.0000
128	216.0000	489.9600	-288.0000
129	216.0000	489.9600	-216.0000
130	216.0000	489.9600	-144.0000
131	216.0000	489.9600	-72.0000
132	216.0000	489.9600	0.0000
133	336.0000	489.9600	-576.0000
134	336.0000	489.9600	-504.0000
135	336.0000	489.9600	-432.0000
136	336.0000	489.9600	-360.0000
137	336.0000	489.9600	-288.0000
138	336.0000	489.9600	-216.0000
139	336.0000	489.9600	-144.0000
140	336.0000	489.9600	-72.0000
141	336.0000	489.9600	0.0000
142	432.0000	489.9600	-504.0000
143	432.0000	489.9600	-432.0000
144	432.0000	489.9600	-360.0000
145	432.0000	489.9600	-288.0000
146	432.0000	489.9600	-216.0000
147	432.0000	489.9600	-144.0000
148	432.0000	489.9600	-72.0000
149	432.0000	1065.9600	-512.0000
150	432.0000	1065.9600	-437.0000
151	432.0000	1065.9600	-362.0000
152	432.0000	1065.9600	-288.0000
153	432.0000	1065.9600	-214.0000
154	432.0000	1065.9600	-139.0000
155	432.0000	1065.9600	-64.0000
183	577.5000	573.0000	-576.0000
174	216.0000	1065.9600	-587.0000
175	216.0000	1065.9600	-512.0000
176	216.0000	1065.9600	-437.0000
177	216.0000	1065.9600	-362.0000
178	216.0000	1065.9600	-288.0000
179	216.0000	1065.9600	-214.0000
180	216.0000	1065.9600	-139.0000
181	216.0000	1065.9600	-64.0000
182	216.0000	1065.9600	11.0000
1102	723.0000	489.9600	0.0000
1103	723.0000	852.0000	0.0000
1104	723.0000	852.0000	11.0000
1105	723.0000	860.0400	11.0000
1106	723.0000	870.6000	11.0000
1107	723.0000	1065.9600	11.0000
1108	723.0000	852.0000	-12.0000
1109	723.0000	870.6000	-12.0000
1112	723.0000	489.9600	-576.0000
1113	723.0000	573.0000	-576.0000
1114	723.0000	852.0000	-576.0000
1115	723.0000	852.0000	-587.0000
1116	723.0000	860.0400	-587.0000

1117	723.0000	870.6000	-587.0000
1118	723.0000	1065.9600	-587.0000
1119	723.0000	852.0000	-564.0000
1120	723.0000	870.6000	-564.0000
1142	723.0000	489.9600	-504.0000
1143	723.0000	489.9600	-432.0000
1144	723.0000	489.9600	-360.0000
1145	723.0000	489.9600	-288.0000
1146	723.0000	489.9600	-216.0000
1147	723.0000	489.9600	-144.0000
1148	723.0000	489.9600	-72.0000
1149	723.0000	1065.9600	-512.0000
1150	723.0000	1065.9600	-437.0000
1151	723.0000	1065.9600	-362.0000
1152	723.0000	1065.9600	-288.0000
1153	723.0000	1065.9600	-214.0000
1154	723.0000	1065.9600	-139.0000
1155	723.0000	1065.9600	-64.0000
2102	1014.0000	489.9600	0.0000
2103	1014.0000	852.0000	0.0000
2104	1014.0000	852.0000	11.0000
2105	1014.0000	860.0400	11.0000
2106	1014.0000	870.6000	11.0000
2107	1014.0000	1065.9600	11.0000
2108	1014.0000	852.0000	-12.0000
2109	1014.0000	870.6000	-12.0000
2112	1014.0000	489.9600	-576.0000
2113	1014.0000	573.0000	-576.0000
2114	1014.0000	852.0000	-576.0000
2115	1014.0000	852.0000	-587.0000
2116	1014.0000	860.0400	-587.0000
2117	1014.0000	870.6000	-587.0000
2118	1014.0000	1065.9600	-587.0000
2119	1014.0000	852.0000	-564.0000
2120	1014.0000	870.6000	-564.0000
2122	1159.5000	288.0000	-587.0000
2124	1118.5200	489.9600	0.0000
2125	1118.5200	489.9600	-72.0000
2126	1159.5000	489.9600	-72.0000
2127	1159.5000	489.9600	0.0000
2142	1014.0000	489.9600	-504.0000
2143	1014.0000	489.9600	-432.0000
2144	1014.0000	489.9600	-360.0000
2145	1014.0000	489.9600	-288.0000
2146	1014.0000	489.9600	-216.0000
2147	1014.0000	489.9600	-144.0000
2148	1014.0000	489.9600	-72.0000
2149	1014.0000	1065.9600	-512.0000
2150	1014.0000	1065.9600	-437.0000
2151	1014.0000	1065.9600	-362.0000
2152	1014.0000	1065.9600	-288.0000
2153	1014.0000	1065.9600	-214.0000
2154	1014.0000	1065.9600	-139.0000
2155	1014.0000	1065.9600	-64.0000
2156	1159.5000	489.9600	-587.0000
2157	1159.5000	489.9600	-504.0000
2158	1159.5000	489.9600	-432.0000
21740	1159.5000	573.0000	-587.0000
3100	1305.0000	459.9600	0.0000
3102	1305.0000	489.9600	0.0000
3103	1305.0000	852.0000	0.0000
3104	1305.0000	852.0000	11.0000
3105	1305.0000	860.0400	11.0000
3106	1305.0000	870.6000	11.0000
3107	1305.0000	1065.9600	11.0000
3108	1305.0000	852.0000	-12.0000
3109	1305.0000	870.6000	-12.0000
3112	1305.0000	489.9600	-576.0000
3113	1305.0000	573.0000	-576.0000
3114	1305.0000	852.0000	-576.0000
3115	1305.0000	852.0000	-587.0000
3116	1305.0000	860.0400	-587.0000
3117	1305.0000	870.6000	-587.0000
3118	1305.0000	1065.9600	-587.0000
3119	1305.0000	852.0000	-564.0000

3120	1305.0000	870.6000	-564.0000
3121	1159.5000	860.0400	-587.0000
3142	1305.0000	489.9600	-504.0000
3143	1305.0000	489.9600	-432.0000
3144	1305.0000	489.9600	-360.0000
3145	1305.0000	489.9600	-288.0000
3146	1305.0000	489.9600	-216.0000
3147	1305.0000	489.9600	-144.0000
3148	1305.0000	489.9600	-72.0000
3149	1305.0000	1065.9600	-512.0000
3150	1305.0000	1065.9600	-437.0000
3151	1305.0000	1065.9600	-362.0000
3152	1305.0000	1065.9600	-288.0000
3153	1305.0000	1065.9600	-214.0000
3154	1305.0000	1065.9600	-139.0000
3155	1305.0000	1065.9600	-64.0000
3156	1437.0000	489.9600	-576.0000
3157	1437.0000	489.9600	-504.0000
3158	1437.0000	489.9600	-432.0000
3159	1437.0000	489.9600	-360.0000
3160	1437.0000	489.9600	-288.0000
3161	1437.0000	489.9600	-216.0000
3162	1437.0000	489.9600	-144.0000
3163	1437.0000	489.9600	-72.0000
3164	1437.0000	489.9600	0.0000
3165	1437.0000	459.9600	0.0000
4100	1578.0000	459.9600	0.0000
4102	1578.0000	489.9600	0.0000
4103	1578.0000	852.0000	0.0000
4104	1578.0000	852.0000	11.0000
4105	1578.0000	860.0400	11.0000
4106	1578.0000	870.6000	11.0000
4107	1578.0000	1065.9600	11.0000
4108	1578.0000	852.0000	-12.0000
4109	1578.0000	870.6000	-12.0000
4112	1578.0000	489.9600	-576.0000
4113	1578.0000	573.0000	-576.0000
4114	1578.0000	852.0000	-576.0000
4115	1578.0000	852.0000	-587.0000
4116	1578.0000	860.0400	-587.0000
4117	1578.0000	870.6000	-587.0000
4118	1578.0000	1065.9600	-587.0000
4119	1578.0000	852.0000	-564.0000
4120	1578.0000	870.6000	-564.0000
4122	1578.0000	971.0400	-587.0000
4149	1578.0000	1065.9600	-512.0000
4150	1578.0000	1065.9600	-437.0000
4151	1578.0000	1065.9600	-362.0000
4152	1578.0000	1065.9600	-288.0000
4153	1578.0000	1065.9600	-214.0000
4154	1578.0000	1065.9600	-139.0000
4155	1578.0000	1065.9600	-64.0000
4156	1717.5000	971.0400	-587.0000
5100	1857.0000	459.9600	0.0000
5102	1857.0000	489.9600	0.0000
5103	1857.0000	852.0000	0.0000
5104	1857.0000	852.0000	11.0000
5105	1857.0000	860.0400	11.0000
5106	1857.0000	870.6000	11.0000
5107	1857.0000	1065.9600	11.0000
5108	1857.0000	852.0000	-12.0000
5109	1857.0000	870.6000	-12.0000
5112	1857.0000	489.9600	-576.0000
5113	1857.0000	573.0000	-576.0000
5114	1857.0000	852.0000	-576.0000
5115	1857.0000	852.0000	-587.0000
5116	1857.0000	860.0400	-587.0000
5117	1857.0000	870.6000	-587.0000
5118	1857.0000	1065.9600	-587.0000
5119	1857.0000	852.0000	-564.0000
5120	1857.0000	870.6000	-564.0000
5122	1857.0000	971.0400	-587.0000
5123	1717.5000	573.0000	-576.0000
5149	1857.0000	1065.9600	-512.0000
5150	1857.0000	1065.9600	-437.0000

5151	1857.0000	1065.9600	-362.0000
5152	1857.0000	1065.9600	-288.0000
5153	1857.0000	1065.9600	-214.0000
5154	1857.0000	1065.9600	-139.0000
5155	1857.0000	1065.9600	-64.0000
5187	1857.0000	489.9600	-504.0000
5188	1857.0000	489.9600	-432.0000
5189	1857.0000	489.9600	-360.0000
5190	1857.0000	489.9600	-288.0000
5191	1857.0000	489.9600	-216.0000
5192	1857.0000	489.9600	-144.0000
5193	1857.0000	489.9600	-72.0000
6103	2097.0000	852.0000	0.0000
6104	2097.0000	852.0000	11.0000
6105	2097.0000	860.0400	11.0000
6106	2097.0000	870.6000	11.0000
6107	2097.0000	1065.9600	11.0000
6108	2097.0000	852.0000	-12.0000
6109	2097.0000	870.6000	-12.0000
6118	2097.0000	1065.9600	-587.0000
6149	2097.0000	1065.9600	-512.0000
6150	2097.0000	1065.9600	-437.0000
6151	2097.0000	1065.9600	-362.0000
6152	2097.0000	1065.9600	-288.0000
6153	2097.0000	1065.9600	-214.0000
6154	2097.0000	1065.9600	-139.0000
6155	2097.0000	1065.9600	-64.0000
7103	2301.0000	852.0000	0.0000
7104	2301.0000	852.0000	11.0000
7105	2301.0000	860.0400	11.0000
7106	2301.0000	870.6000	11.0000
7107	2301.0000	1065.9600	11.0000
7108	2301.0000	852.0000	-12.0000
7109	2301.0000	870.6000	-12.0000
7114	2301.0000	852.0000	-576.0000
7115	2301.0000	852.0000	-587.0000
7116	2301.0000	860.0400	-587.0000
7117	2301.0000	870.6000	-587.0000
7118	2301.0000	1065.9600	-587.0000
7119	2301.0000	852.0000	-564.0000
7120	2301.0000	870.6000	-564.0000
7122	2301.0000	971.0400	-587.0000
7149	2301.0000	1065.9600	-512.0000
7150	2301.0000	1065.9600	-437.0000
7151	2301.0000	1065.9600	-362.0000
7152	2301.0000	1065.9600	-288.0000
7153	2301.0000	1065.9600	-214.0000
7154	2301.0000	1065.9600	-139.0000
7155	2301.0000	1065.9600	-64.0000
8103	2505.0000	852.0000	0.0000
8104	2505.0000	852.0000	11.0000
8105	2505.0000	860.0400	11.0000
8106	2505.0000	870.6000	11.0000
8107	2505.0000	1065.9600	11.0000
8108	2505.0000	852.0000	-12.0000
8109	2505.0000	870.6000	-12.0000
8114	2505.0000	852.0000	-576.0000
8115	2505.0000	852.0000	-587.0000
8116	2505.0000	860.0400	-587.0000
8117	2505.0000	870.6000	-587.0000
8118	2505.0000	1065.9600	-587.0000
8119	2505.0000	852.0000	-564.0000
8120	2505.0000	870.6000	-564.0000
81660	2505.0000	971.0400	-587.0000
8149	2505.0000	1065.9600	-512.0000
8150	2505.0000	1065.9600	-437.0000
8151	2505.0000	1065.9600	-362.0000
8152	2505.0000	1065.9600	-288.0000
8153	2505.0000	1065.9600	-214.0000
8154	2505.0000	1065.9600	-139.0000
8155	2505.0000	1065.9600	-64.0000
8156	432.0000	288.0000	-932.0000
8157	1578.0000	288.0000	-900.0000

$
$ Added runway girder nodes

```
$
'CNR1011'     2241.0    894.6     -564.0
'CNR1021'     2187.0    894.6     -564.0
'CNR1031'     2019.0    894.6     -564.0
'CNR1041'     1965.0    894.6     -564.0

'CNR101' 2241.0    870.6     -564.0
'CNR102' 2187.0    870.6     -564.0
'CNR103' 2019.0    870.6     -564.0
'CNR104' 1965.0    870.6     -564.0

'CNR2011'     2139.0    894.6     -564.0
'CNR2021'     2085.0    894.6     -564.0
'CNR2031'     1917.0    894.6     -564.0
'CNR2041'     1863.0    894.6     -564.0

'CNR201' 2139.0    870.6     -564.0
'CNR202' 2085.0    870.6     -564.0
'CNR203' 1917.0    870.6     -564.0
'CNR204' 1863.0    870.6     -564.0

'CNR3011'     2106.0    894.6     -564.0
'CNR3021'     2052.0    894.6     -564.0
'CNR3031'     1884.0    894.6     -564.0
'CNR3041'     1830.0    894.6     -564.0

'CNR301' 2106.0    870.6     -564.0
'CNR302' 2052.0    870.6     -564.0
'CNR303' 1884.0    870.6     -564.0
'CNR304' 1830.0    870.6     -564.0

'CNR4011'     1296.0    894.6     -564.0
'CNR4021'     1242.0    894.6     -564.0
'CNR4031'     1074.0    894.6     -564.0
'CNR4041'     1020.0    894.6     -564.0

'CNR401' 1296.0    870.6     -564.0
'CNR402' 1242.0    870.6     -564.0
'CNR403' 1074.0    870.6     -564.0
'CNR404' 1020.0    870.6     -564.0

'CNR5011'     1263.0    894.6     -564.0
'CNR5021'     1209.0    894.6     -564.0
'CNR5031'     1041.0    894.6     -564.0
'CNR5041'     987.0     894.6     -564.0

'CNR501' 1263.0    870.6     -564.0
'CNR502' 1209.0    870.6     -564.0
'CNR503' 1041.0    870.6     -564.0
'CNR504' 987.0     870.6     -564.0

'CNR6011'     1173.0    894.6     -564.0
'CNR6021'     1119.0    894.6     -564.0
'CNR6031'     951.0     894.6     -564.0
'CNR6041'     897.0     894.6     -564.0

'CNR601' 1173.0    870.6     -564.0
'CNR602' 1119.0    870.6     -564.0
'CNR603' 951.0     870.6     -564.0
'CNR604' 897.0     870.6     -564.0

'CNR7011'     459.0     894.6     -564.0
'CNR7021'     405.0     894.6     -564.0
'CNR7031'     237.0     894.6     -564.0
'CNR7041'     183.0     894.6     -564.0

'CNR701' 459.0     870.6     -564.0
'CNR702' 405.0     870.6     -564.0
'CNR703' 237.0     870.6     -564.0
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'RG4'     'CNR114' 'CNR213'
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'RG16'    'CNR316' 4109
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'RG45'    'CNR916' 10
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'CM112' 'CN114' 'CN50'


'CM113' 'CN452' 'CN117'

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$ CHANGE MEM INCIDENCES
$ PER TROLLEY LCOATION
$ TROLLEY 1 - 'CN91' -> 'CN60'
$ TROLLEY 2 - 'CN91' -> 'CN68'
$ TROLLEY 3 - 'CN91' -> 'CN83'
$ TROLLEY 4 - 'CN91'
'CM480' 'CN83'  'CN452'
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'CM114' 'CN117' 'CN118'
'CM115' 'CN118' 'CN119'
'CM116' 'CN119' 'CN120'
'CM117' 'CN120' 'CN121'
'CM118' 'CN121' 'CN116'
'CM119' 'CN451'  'CN124'

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$ CHANGE MEM INCIDENCES
$ PER TROLLEY LCOATION
$ TROLLEY 1 - 'CN34' -> 'CN12'
$ TROLLEY 2 - 'CN34' -> 'CN20'
$ TROLLEY 3 - 'CN34' -> 'CN26'
$ TROLLEY 4 - 'CN34'
'CM479' 'CN26'  'CN451'
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'CM120' 'CN124' 'CN125'
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'CM124' 'CN128' 'CN123'

$------------------
$ CHANGE MEM INCIDENCES
$ PER TROLLEY LCOATION
$ TROLLEY 1 - 'CN43' -> 'CN3'
$ TROLLEY 2 - 'CN43' -> 'CN11'
$ TROLLEY 3 - 'CN43' -> 'CN2'
$ TROLLEY 4 - 'CN43'
'CM125' 'CN2'  'CN131'
$------------------

'CM126' 'CN131' 'CN132'
'CM127' 'CN132' 'CN133'
'CM128' 'CN133' 'CN134'
'CM129' 'CN134' 'CN135'
'CM130' 'CN135' 'CN130'

$------------------
$ CHANGE MEM INCIDENCES
$ PER TROLLEY LCOATION (DONT CHANGE 'CN138'
$ TROLLEY 1 - 'CN100' -> 'CN51'
$ TROLLEY 2 - 'CN100' -> 'CN59'
$ TROLLEY 3 - 'CN100' -> 'CN50'
$ TROLLEY 4 - 'CN100'
'CM131' 'CN50' 'CN138'
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'CM132' 'CN138' 'CN139'
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'CM270' 'CN266' 'CN267'
'CM271' 'CN267' 'CN268'
'CM272' 'CN268' 'CN49'
$=======================================
$ CHANGE MEM INCIDENCE PER CRANE LOCATION
$ EG. N1 USE CNR1xx1
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$     N2 USE CNR2xx1

'CM273' 'CNR1011' 'CN270'
'CM274' 'CNR1021' 'CN272'
'CM275' 'CNR1031' 'CN274'
'CM276' 'CNR1041' 'CN276'
'CM277' 'CNR1131' 'CN278'
'CM278' 'CNR1141' 'CN280'
'CM279' 'CNR1151' 'CN282'
'CM280' 'CNR1161' 'CN284'

$=======================================


'CM281' 'CN270' 'CN285'
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'CM471' 'CN123' 'CN437'
'CM472' 'CN116' 'CN440'
'CM473' 'CN137' 'CN446'

'CM483' 'CN434' 'CN450'

'R1' 'CNR101' 'CNR1011'
'R2' 'CNR102' 'CNR1021'
'R3' 'CNR103' 'CNR1031'
'R4' 'CNR104' 'CNR1041'
'R5' 'CNR113' 'CNR1131'
'R6' 'CNR114' 'CNR1141'
'R7' 'CNR115' 'CNR1151'
'R8' 'CNR116' 'CNR1161'

'R21' 'CNR201' 'CNR2011'
'R22' 'CNR202' 'CNR2021'
'R23' 'CNR203' 'CNR2031'
'R24' 'CNR204' 'CNR2041'
'R25' 'CNR213' 'CNR2131'
'R26' 'CNR214' 'CNR2141'
'R27' 'CNR215' 'CNR2151'
'R28' 'CNR216' 'CNR2161'

'R31' 'CNR301' 'CNR3011'
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'R34' 'CNR304' 'CNR3041'
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'R36' 'CNR314' 'CNR3141'
'R37' 'CNR315' 'CNR3151'
'R38' 'CNR316' 'CNR3161'

'R41' 'CNR401' 'CNR4011'
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'R43' 'CNR403' 'CNR4031'
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'R45' 'CNR413' 'CNR4131'
'R46' 'CNR414' 'CNR4141'
'R47' 'CNR415' 'CNR4151'
'R48' 'CNR416' 'CNR4161'

'R51' 'CNR501' 'CNR5011'
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'R53' 'CNR503' 'CNR5031'
'R54' 'CNR504' 'CNR5041'
'R55' 'CNR513' 'CNR5131'
'R56' 'CNR514' 'CNR5141'
'R57' 'CNR515' 'CNR5151'
'R58' 'CNR516' 'CNR5161'

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'R61' 'CNR601' 'CNR6011'
'R62' 'CNR602' 'CNR6021'
'R63' 'CNR603' 'CNR6031'
'R64' 'CNR604' 'CNR6041'
'R65' 'CNR613' 'CNR6131'
'R66' 'CNR614' 'CNR6141'
'R67' 'CNR615' 'CNR6151'
'R68' 'CNR616' 'CNR6161'

'R71' 'CNR701' 'CNR7011'
'R72' 'CNR702' 'CNR7021'
'R73' 'CNR703' 'CNR7031'
'R74' 'CNR704' 'CNR7041'
'R75' 'CNR713' 'CNR7131'
'R76' 'CNR714' 'CNR7141'
'R77' 'CNR715' 'CNR7151'
'R78' 'CNR716' 'CNR7161'


'R81' 'CNR801' 'CNR8011'
'R82' 'CNR802' 'CNR8021'
'R83' 'CNR803' 'CNR8031'
'R84' 'CNR804' 'CNR8041'
'R85' 'CNR813' 'CNR8131'
'R86' 'CNR814' 'CNR8141'
'R87' 'CNR815' 'CNR8151'
'R88' 'CNR816' 'CNR8161'

'R91' 'CNR901' 'CNR9011'
'R92' 'CNR902' 'CNR9021'
'R93' 'CNR903' 'CNR9031'
'R94' 'CNR904' 'CNR9041'
'R95' 'CNR913' 'CNR9131'
'R96' 'CNR914' 'CNR9141'
'R97' 'CNR915' 'CNR9151'
'R98' 'CNR916' 'CNR9161'


ELEMENT INC

'CM478' 'CN434' 'CN450'
'CM481' 'CN434' 'CN450'
'CM482' 'CN434' 'CN450'

NONLINEAR SPRING PROPERTIES

CURVE 'FY' FORCE SYMMETRY
0.0 0.0  2266759.624568 1.0

CURVE 'FX' FORCE SYMMETRY
0.0 0.0 2766222.961730 1000.0

CURVE 'FZ' FORCE SYMMETRY
0.0 0.0 2766222.961730 1000.0

PRINT ALL
END

ELEMENT PROPS
'CM478' TYPE 'NLS'
'CM481' TYPE 'NLS'
'CM482' TYPE 'NLS'


NONLINEAR SPRING ELEMENT DATA

STIFFNESS
'CM478' Y CURVE 'FY'
'CM481' X CURVE 'FX'
'CM482' Z CURVE 'FZ'

END

$ Rigid link members with small density
MATERIAL STEEL
```

```
CONSTANT
DENSITY 0.0001 MEM -
   4         8         9                        -
   15        19        20        22               -
   102       106       107                        -
   113       117       118       120              -
   1102      1106      1107                       -
   1113      1117      1118      1120             -
   2102      2106      2107                       -
   2113      2117      2118      2120             -
   3102      3106      3107                       -
   3113      3117      3118      3120             -
   4102      4106      4107                       -
   4113      4117      4118                       -
   4120      5102      5106      5107             -
   5113      5117      5118                       -
   5120      6102      6106      6107             -
   71020     71060     71070                      -
   71130     71170     71180                      -
   71200     8102      8106      8107             -
   8113      8117      8118                       -
   8120   5555                                    -
   11        109       1109      2109      3109   -
   4109      5109      6109      71090     8109   -
   22        120       1120      2120      3120   -
   4120      5120      71200     8120             -
'R1' TO 'R8' 'R21' TO 'R28' 'R31' TO 'R38' 'R41' TO 'R48'       -
'R51' TO 'R58' 'R61' TO 'R68' 'R71' TO 'R78' 'R81' TO 'R88'     -
'R91' TO 'R98'
$
$ Added crane members
$
UNITS INCH LBS
$ MATERIAL STEEL
CONSTANT
E 0.3E8 MEMBER -
'CM1' 'CM2' 'CM3' 'CM4' 'CM5' 'CM6' 'CM7' 'CM8' 'CM9' 'CM10' -
'CM11' 'CM12' 'CM13' 'CM14' 'CM15' 'CM16' 'CM17' 'CM18' 'CM19' -
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'CM415' 'CM416' 'CM417' 'CM418' 'CM419' 'CM420' 'CM421' 'CM422' -
'CM423' 'CM424' 'CM425' 'CM426' 'CM427' 'CM428' 'CM429' 'CM430' -
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'CM431' 'CM432' 'CM433' 'CM434' 'CM435' 'CM436' 'CM437' 'CM438' -
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'CM463' 'CM464' 'CM465' 'CM466' 'CM467' 'CM468' 'CM469' 'CM470' -
'CM471' 'CM472' 'CM473'

$ E 13137518 MEM 'CM478'

$'CM479' 'CM480'
$
$ Added crane member material property 2
$
DENSITY 0.45 MEMBER                                  -
'CM47'  'CM48'  'CM49'  'CM50'  'CM51'  'CM52'  'CM53'  'CM54'  -
'CM55'  'CM56'  'CM57'  'CM58'  'CM59'  'CM60'  'CM61'  'CM62'  -
'CM63'  'CM64'  'CM65'  'CM66'  'CM67'  'CM68'  'CM69'  'CM80'  -
'CM81'  'CM82'  'CM83'  'CM84'  'CM85'  'CM86'  'CM87'  'CM88'  -
'CM89'  'CM90'  'CM91'  'CM92'  'CM93'  'CM94'  'CM95'  'CM96'  -
'CM97'  'CM98'  'CM99'  'CM100' 'CM101' 'CM102' 'CM103' 'CM104' -
'CM105' 'CM106' 'CM107' 'CM108' 'CM109' 'CM110' 'CM111' 'CM112'
$
$ Added crane member material property 3
$
DENSITY 0.37 MEMBER                                  -
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'CM215' 'CM216' 'CM217' 'CM218' 'CM219' 'CM220' 'CM221' 'CM222' -
'CM223' 'CM224' 'CM225' 'CM226' 'CM227' 'CM228' 'CM229' 'CM230' -
'CM231' 'CM232' 'CM233' 'CM234' 'CM235' 'CM236' 'CM237' 'CM238' -
'CM239' 'CM240' 'CM241' 'CM242' 'CM243' 'CM244' 'CM245' 'CM246' -
'CM247' 'CM248' 'CM249' 'CM250' 'CM251' 'CM252'
$
$ Added crane member material property 4
$
DENSITY 0.47 MEMBER                                  -
'CM273' 'CM274' 'CM275' 'CM276' 'CM277' 'CM278' 'CM279' 'CM280' -
'CM305' 'CM306' 'CM307' 'CM308' 'CM309' 'CM310' 'CM311' 'CM312' -
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'CM337' 'CM338' 'CM281' 'CM282' 'CM283' 'CM284' 'CM285' 'CM286' -
'CM287' 'CM288' 'CM289' 'CM290' 'CM291' 'CM292' 'CM293' 'CM294' -
'CM295' 'CM296' 'CM297' 'CM298' 'CM299' 'CM300' 'CM301' 'CM302' -
'CM303' 'CM304'
$
$ Added crane member material property 5
$
DENSITY 0.0000 MEMBER                                -
'CM113' 'CM119' 'CM125' 'CM114' 'CM115' 'CM116' 'CM117' 'CM118' -
'CM120' 'CM121' 'CM122' 'CM123' 'CM124' 'CM126' 'CM127' 'CM128' -
'CM129' 'CM130' 'CM131' 'CM132' 'CM133' 'CM134' 'CM135' 'CM136' -
'CM253' 'CM254' 'CM255' 'CM256' 'CM257' 'CM258' 'CM259' 'CM260' -
'CM261' 'CM262' 'CM263' 'CM264' 'CM265' 'CM266' 'CM267' 'CM268' -
'CM269' 'CM270' 'CM271' 'CM272' 'CM470' 'CM471' 'CM472' 'CM473' -
'CM483' 'CM479' 'CM480'


$
$ Added crane member material property 6
$
DENSITY 0.47 MEMBER                                  -
'CM1'   'CM2'   'CM3'   'CM4'   'CM5'   'CM6'   'CM7'   'CM8'   -
'CM9'   'CM10'  'CM11'  'CM12'  'CM13'  'CM14'  'CM15'  'CM16'  -
'CM17'  'CM18'  'CM19'  'CM20'  'CM21'  'CM22'  'CM23'  'CM24'  -
'CM25'  'CM26'  'CM27'  'CM28'  'CM29'  'CM30'  'CM31'  'CM32'  -
'CM33'  'CM34'  'CM35'  'CM36'  'CM37'  'CM38'  'CM39'  'CM40'  -
'CM41'  'CM42'  'CM43'  'CM44'  'CM45'  'CM46'  'CM70'  'CM71'  -
'CM72'  'CM73'  'CM74'  'CM75'  'CM76'  'CM77'  'CM78'  'CM79'
$
$ Added crane member material property 7
$
DENSITY 2.41 MEMBER                                  -
'CM454' 'CM455' 'CM456' 'CM457' 'CM458' 'CM459' 'CM460' 'CM461' -
'CM462' 'CM463' 'CM464' 'CM465' 'CM466' 'CM467' 'CM468' 'CM469' -
'CM360' 'CM361' 'CM362' 'CM363' 'CM364' 'CM365' 'CM366' 'CM367' -
```

```
'CM368' 'CM369' 'CM370' 'CM371' 'CM372' 'CM373' 'CM374' 'CM375' -
'CM376' 'CM377' 'CM378' 'CM379' 'CM380' 'CM384' 'CM385' 'CM386' -
'CM387' 'CM388' 'CM389' 'CM390' 'CM391' 'CM392' 'CM393' 'CM450' -
'CM451' 'CM452' 'CM453' 'CM406' 'CM407' 'CM408' 'CM409' 'CM410' -
'CM411' 'CM412' 'CM413' 'CM414' 'CM415' 'CM416' 'CM417' 'CM418' -
'CM419' 'CM420' 'CM421' 'CM422' 'CM426' 'CM427' 'CM428' 'CM429' -
'CM430' 'CM431' 'CM432' 'CM433' 'CM434' 'CM435' 'CM436' 'CM437' -
'CM438' 'CM439' 'CM440' 'CM441' 'CM442' 'CM443' 'CM423' 'CM424' -
'CM425' 'CM444' 'CM445' 'CM446' 'CM447' 'CM448' 'CM449'

$=============================================================================================

UNITS  INCH  LBS   DEG


MEMBER PROPERTIES TABLE 'STEELW' 'W27X84'
7354

$ MEMBER PROPERTIES    TABLE 'STEELW  '  'W33x141               '

MEMBER PROPERTIES    TABLE 'STEELW  '  'W12x72                '
   7353
MEMBER PROPERTIES    TABLE 'STEELW  '  'W14x119               '
   7352
MEMBER PROPERTIES    TABLE 'STEELW  '  'W36x300               '
   1          2          3          12          13       -
   14         100        101        110         111      -
   112        1100       1101       1110        1111     -
   1112       2100       2101       2110        2111     -
   2112       3100       3101       3110        3111     -
   3112       3163       4100       4101        4110     -
   4111       4112       4122       5100        5101     -
   5110       5111       5112       5122        6100     -
   71000      71100      8100       8110        7000     -
   7008       7009       7012       7013        7021



$ W36 + L6
MEMBER PROPERTIES   PRISMATIC   AX  111.3  AY  41.719        -
AZ  55.974  IX  70.062  IY  4560.861  IZ  24519.303      -
YD  36.74  YC  15.254  ZD 28.5  ZC 8.328

   'RG34' TO 'RG45' 'RG51' TO 'RG62' 'RG82' TO 'RG93'

$ W36 + L4
MEMBER PROPERTIES   PRISMATIC   AX  105.18  AY  38.719        -
AZ  53.307  IX  67.364  IY  3565.207  IZ  23828.308      -
YD  36.74  YC  15.844  ZD 28.5  ZC 8.328

   'RG1' TO 'RG33' 'RG50' 'RG63' TO 'RG81'

MEMBER PROPERTIES    TABLE 'STEELW  '  'W14x136               '
   5          6          7          16          17       -
   18         103        104        105         114      -
   115        116        121        1103        1104     -
   1105       1114       1115       1116        1121     -
   2103       2104       2105       2114        2115     -
   2116       2121       3103       3104        3105     -
   3114       3115       3116       3121        4103     -
   4104       4105       4114       4115        4116     -
   4121       5103       5104       5105        5114     -
   5115       5116       5121       6103        6104     -
   6105       71030      71040      71050       71140    -
   71150      71160      71210      8103        8104     -
   8105       8114       8115       8116        81160

MEMBER PROPERTIES    TABLE 'STEELW  '  'W36x230               '
   23         24         25         26          27       -
   28         29         30         130         131      -
   132        133        134        135         136      -
   137        138        139        140         141      -
   142        143        144        145         1138     -
   1139       1140       1141       1142        1143     -
   1144       1145       2138       2139        2140     -
```

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   2141     2142     2143     2144     2145     -
   3138     3139     3140     3141     3142     -
   3143     3144     3145     7050     7060     -
   7066

MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L3x3x5/16_3/8       '
   31       32

MEMBER PROPERTIES    TABLE 'STEELW '  'W10x33              '
   33       34

MEMBER PROPERTIES    TABLE 'STEELW '  'W30x116             '
   35       36       37       38       39       -
   40       41       42       146      147      -
   148      149      150      151      152      -
   153      1146     1147     1148     1149     -
   1150     1151     1152     1153     2146     -
   2147     2148     2149     2150     2151     -
   2152     2153     3146     3147     3148     -
   3149     3150     3151     3152     3153     -
   4146     4147     4148     4149     4150     -
   4151     4152     4153     5146     5147     -
   5148     5149     5150     5151     5152     -
   5153     7246     7247     7248     7249     -
   7250     7251     7252     7253     8146     -
   8147     8148     8149     8150     8151     -
   8152     8153

MEMBER PROPERTIES    TABLE 'STEELW '  'W14x87              '
   43       45

MEMBER PROPERTIES    TABLE 'STEELW '  'W14x43              '
   44       2122     2125     8701     8702     -
   8703     8704     8705     8706     8707     -
   8708     8801     8802     8803     8804     -
   8805     8807     8806     2126

MEMBER PROPERTIES    TABLE 'LLDBLANG'  '2L6x4x1/2_3/8       '
   46       48       49       51
MEMBER PROPERTIES    TABLE 'LLDBLANG'  '2L4x3x5/16_3/8      '
   47       50
MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L6x6x1/2_3/8       '
   52       53       7436     7438     7442
MEMBER PROPERTIES    TABLE 'STEELW '  'W24x100             '
   54       55       56       8121
MEMBER PROPERTIES    TABLE 'STEELW '  'W36x280             '
   122      123      124      125      126      -
   127      128      129
MEMBER PROPERTIES    TABLE 'STEELW '  'W12x40              '
   157      158      1157     3122     7063     -
   7330     9009     9017     9018     9026     -
   9027     9035     9036     9044     9045     -
   9053     9054     9063     9072     9080
MEMBER PROPERTIES    TABLE 'STEELW '  'W14x30              '
   2123     2124     7047
MEMBER PROPERTIES    TABLE 'STEELW '  'W12x27              '
   2157     9001     9002     9003     9004     -
   9005     9006     9007     9082     9083     -
   9084     9085     9086     9087     9088     -
   9010     9011     9012     9013     9014     -
   9015     9016     9019     9020     9021     -
   9022     9023     9024     9025     9028     -
   9029     9030     9031     9032     9033     -
   9034     9037     9038     9039     9040     -
   9041     9042     9043     9046     9047     -
   9048     9049     9050     9051     9052     -
   9055     9056     9057     9058     9059     -
   9060     9061     9064     9065     9066     -
   9067     9068     9069     9070     9073     -
   9074     9075     9076     9077     9078     -
   9079
MEMBER PROPERTIES    TABLE 'STEELW '  'W36x150             '
   3154     3155     3156     3157     3158     -
   3159     3160     3161
MEMBER PROPERTIES    TABLE 'STEELW '  'W36x160             '
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   5138       5139       5140       5141       5142     -
   5143       5144       5145
MEMBER PROPERTIES    TABLE 'STEELW '  'W24x76             '
   6146       6147       6148       6149       6150     -
   6151       6152       6153
MEMBER PROPERTIES    TABLE 'STEELW '  'W18x45             '
   7001       7002       7003       7004       7005     -
   7006       7007       7064       7065
MEMBER PROPERTIES    TABLE 'STEELW '  'W10x15             '
   7010       7011       7014       7015       7016     -
   7017       7018       7019       7020
MEMBER PROPERTIES    TABLE 'STEELW '  'W24x55             '
   7022       7023       7024       7025       7026     -
   7027       7028       7029       7030       7031     -
   7032       7033       7034       7035       7036     -
   7037       7038       7039       7041       7042     -
   7043       7044       7045       7361       7362
MEMBER PROPERTIES    TABLE 'STEELW '  'W24x68             '
   7040       7046       7049       7360       7364
MEMBER PROPERTIES    TABLE 'STEELW '  'W10x21             '
   7048       7318       7319       7331
MEMBER PROPERTIES    TABLE 'CHANNELS'  'C8x11              '
   7363
MEMBER PROPERTIES    TABLE 'STEELW '  'W30x108             '
   7051       7059       7061       7062
MEMBER PROPERTIES    TABLE 'STEELW '  'W14x22             '
   7052       7053       7054       7055       7056     -
   7057       7058
MEMBER PROPERTIES    TABLE 'STEELW '  'W14x61             '
   8700       8800
MEMBER PROPERTIES    TABLE 'STEELW '  'W27x84             '
   9000       9008       9081       9089       9090     -
   9091       9092       9093       9094       9095     -
   9096       9097
MEMBER PROPERTIES    TABLE 'STEELW '  'W27x94             '
   9062       9071
MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L4x4x3/8_3/8        '
   7435       7437
MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L6x6x3/4_3/8        '
   7439
MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L3x3x3/16_3/8       '
   7441
MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L5x5x1/2_3/8        '
   7443
MEMBER PROPERTIES    TABLE 'ANGLES '  'L4x4x5/16           '
  7307

MEMBER PROPERTIES    TABLE 'ANGLES '  'L4x4x1/2           '
   7301  7313

MEMBER PROPERTIES    TABLE 'ANGLES '  'L5x5x1/2           '
    7305 7317  73297309732573337335

MEMBER PROPERTIES    TABLE 'ANGLES '  'L6x6x3/4           '
   7303  7315

MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L3.5x3.5x3/8_3/8     '
   7310       7311       7326       7327
MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L3x3x3/8_3/8        '
   7320       7321       7322       7323
MEMBER PROPERTIES    TABLE 'TEES   '  'WT4X12             '
   7337       7338         -
   7342     7343           7344       7345     -
   7346       7347   7348       7349       7350     -
   7351

MEMBER PROPERTIES    TABLE 'TEES   '  'WT4X12             '
   7340 7341 7336 7339


MEMBER PROPERTIES   PRISMATIC   AX  1000.0000        -
IX  1000000.0000  IY  1000000.0000  IZ  1000000.0000     -
SY  1000000.0000  SZ  1000000.0000
   4          8          9                          -
   15         19         20                           -
```

```
   102        106        107                        -
   113        117        118                        -
   1102       1106       1107                         -
   1113       1117       1118                         -
   2102       2106       2107                         -
   2113       2117       2118                         -
   3102       3106       3107                         -
   3113       3117       3118                         -
   4102       4106       4107                         -
   4113       4117       4118                         -
   5102       5106       5107                         -
   5113       5117       5118                         -
   6102       6106       6107                         -
   71020      71060      71070                          -
   71130      71170      71180                          -
   8102       8106       8107                         -
   8113       8117       8118  5555                 -
   11         109        1109       2109       3109     -
   4109       5109       6109       71090      8109     -
   22         120        1120       2120       3120     -
   4120       5120       71200      8120               -
'R1' TO 'R8' 'R21' TO 'R28' 'R31' TO 'R38' 'R41' TO 'R48'        -
'R51' TO 'R58' 'R61' TO 'R68' 'R71' TO 'R78' 'R81' TO 'R88'      -
'R91' TO 'R98'



$ Added crane section property 1
$
MEMBER PROPERTIES PRISMATIC                              -
AX 108.0   AY 71.65   AZ 13.80                          -
IX 17697   IY 5859.0  IZ 52222.0
'CM1'  'CM2'  'CM3'  'CM4'  'CM5'  'CM6'  'CM7'  'CM8'  -
'CM9'  'CM10' 'CM11' 'CM12' 'CM13' 'CM14' 'CM15' 'CM16' -
'CM17' 'CM18' 'CM19' 'CM20' 'CM21' 'CM22' 'CM23' 'CM24' -
'CM25' 'CM26' 'CM27' 'CM28' 'CM29' 'CM30' 'CM31' 'CM32' -
'CM33' 'CM34' 'CM35' 'CM36' 'CM37' 'CM38' 'CM39' 'CM40' -
'CM41' 'CM42' 'CM43' 'CM44' 'CM45' 'CM46' 'CM47' 'CM48' -
'CM49' 'CM50' 'CM51' 'CM52' 'CM53' 'CM54' 'CM55' 'CM56' -
'CM57' 'CM58' 'CM59' 'CM60' 'CM61' 'CM62' 'CM63' 'CM64' -
'CM65' 'CM66' 'CM67' 'CM68' 'CM69' 'CM70' 'CM71' 'CM72' -
'CM73' 'CM74' 'CM75' 'CM76' 'CM77' 'CM78' 'CM79' 'CM80' -
'CM81' 'CM82' 'CM83' 'CM84' 'CM85' 'CM86' 'CM87' 'CM88' -
'CM89' 'CM90' 'CM91' 'CM92' 'CM93' 'CM94' 'CM95' 'CM96' -
'CM97' 'CM98' 'CM99' 'CM100' 'CM101' 'CM102' 'CM103' 'CM104' -
'CM105' 'CM106' 'CM107' 'CM108' 'CM109' 'CM110' 'CM111' 'CM112'

$
$ Added crane section property 2
$
MEMBER PROPERTIES PRISMATIC                              -
AX 50.226  AY 43.039  AZ 43.039                          -
IX 401.29  IY 200.65  IZ 200.65
'CM113' 'CM119' 'CM125' 'CM273' 'CM274' 'CM275' 'CM276' 'CM277' -
'CM278' 'CM279' 'CM280' 'CM479' 'CM480'

$
$ Added crane section property 3 (not used in P&H ANSYS model)
$

$
$ Added crane section property 4
$
MEMBER PROPERTIES PRISMATIC                              -
AX 32.0    AY 16.95   AZ 12.248                          -
IX 534.79  IY 282.67  IZ 410.67
'CM207' 'CM208' 'CM209' 'CM210' 'CM211' 'CM212' 'CM213' 'CM214' -
'CM215' 'CM216' 'CM217' 'CM218' 'CM219' 'CM220' 'CM221' 'CM222' -
'CM223' 'CM224' 'CM225' 'CM226' 'CM227' 'CM228' 'CM229' 'CM230' -
'CM231' 'CM232' 'CM233' 'CM234' 'CM235' 'CM236' 'CM237' 'CM238' -
'CM239' 'CM240' 'CM241' 'CM242' 'CM243' 'CM244' 'CM245' 'CM246' -
'CM247' 'CM248' 'CM249' 'CM250' 'CM251' 'CM252'

$
$ Added crane section property 5 (not used in P&H ANSYS model)
```

```
$

$
$ Added crane section property 6
$
MEMBER PROPERTIES PRISMATIC                              -
AX 21.75   AY 9.7879   AZ 9.7879                         -
IX 304.54  IY 192.58  IZ 192.58
'CM305' 'CM306' 'CM307' 'CM308' 'CM309' 'CM310' 'CM311' 'CM312' -
'CM313' 'CM314' 'CM315' 'CM316' 'CM317' 'CM318' 'CM319' 'CM320' -
'CM321' 'CM322' 'CM323' 'CM324' 'CM325' 'CM326' 'CM327' 'CM328' -
'CM329' 'CM330' 'CM331' 'CM332' 'CM333' 'CM334' 'CM335' 'CM336' -
'CM337' 'CM338'

$
$ Added crane section property 7
$
MEMBER PROPERTIES PRISMATIC                              -
AX 87.8    AY 38.73    AZ 36.679                         -
IX 6940.5  IY 3458.7  IZ 6384.6
'CM281' 'CM282' 'CM283' 'CM284' 'CM285' 'CM286' 'CM287' 'CM288' -
'CM289' 'CM290' 'CM291' 'CM292' 'CM293' 'CM294' 'CM295' 'CM296' -
'CM297' 'CM298' 'CM299' 'CM300' 'CM301' 'CM302' 'CM303' 'CM304'

$
$ Added crane section property 8
$
MEMBER PROPERTIES PRISMATIC                              -
AX 196.0   AY 165.053   AZ 165.053                       -
IX 5479.2  IY 3201.3  IZ 3201.3
'CM114' 'CM115' 'CM116' 'CM117' 'CM118' 'CM120' 'CM121' 'CM122' -
'CM123' 'CM124' 'CM126' 'CM127' 'CM128' 'CM129' 'CM130' 'CM131' -
'CM132' 'CM133' 'CM134' 'CM135' 'CM136' 'CM253' 'CM254' 'CM255' -
'CM256' 'CM257' 'CM258' 'CM259' 'CM260' 'CM261' 'CM262' 'CM263' -
'CM264' 'CM265' 'CM266' 'CM267' 'CM268' 'CM269' 'CM270' 'CM271' -
'CM272' 'CM470' 'CM471' 'CM472' 'CM473'

$
$ Added crane section property 9 (not used in P&H ANSYS model)
$

$
$ Added crane section property 10
$
MEMBER PROPERTIES PRISMATIC                              -
AX 34.25   AY 20.6188   AZ 7.162                         -
IX 1264.9  IY 466.354 IZ 2305.0
'CM454' 'CM455' 'CM456' 'CM457' 'CM458' 'CM459' 'CM460' 'CM461' -
'CM462' 'CM463' 'CM464' 'CM465' 'CM466' 'CM467' 'CM468' 'CM469'

$
$ Added crane section property 11
$
MEMBER PROPERTIES PRISMATIC                              -
AX 41.25   AY 34.737   AZ 34.737                         -
IX 21.388  IY 5.371   IZ 3743.0
'CM360' 'CM361' 'CM362' 'CM363' 'CM364' 'CM365' 'CM366' 'CM367' -
'CM368' 'CM369' 'CM370' 'CM371' 'CM372' 'CM373' 'CM374' 'CM375' -
'CM376'

$
$ Added crane section property 12
$
MEMBER PROPERTIES PRISMATIC                              -
AX 42.625  AY 35.8949  AZ 35.8949                        -
IX 14.184  IY 3.552   IZ 6454.0
'CM377' 'CM378' 'CM379' 'CM380' 'CM384' 'CM385' 'CM386' 'CM387' -
'CM388' 'CM389' 'CM390' 'CM391' 'CM392' 'CM393' 'CM450' 'CM451' -
'CM452' 'CM453'

$
$ Added crane section property 13 (not used in P&H ANSYS model)
$

$
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```
$ Added crane section property 14
$
MEMBER PROPERTIES PRISMATIC                              -
AX 10.0    AY 8.4211    AZ 8.4211                    -
IX 0.83169 IY 0.208   IZ 333.333
'CM406' 'CM407' 'CM408' 'CM409' 'CM410' 'CM411' 'CM412' 'CM413' -
'CM414' 'CM415' 'CM416' 'CM417' 'CM418' 'CM419'

$
$ Added crane section property 15
$
MEMBER PROPERTIES PRISMATIC                              -
AX 3.0     AY 2.526     AZ 2.526                     -
IX 0.24485 IY 0.0625  IZ 9.0
'CM420' 'CM421' 'CM422' 'CM426' 'CM427' 'CM428' 'CM429' 'CM430' -
'CM431' 'CM432' 'CM433' 'CM434' 'CM435' 'CM436' 'CM437' 'CM438' -
'CM439' 'CM440' 'CM441' 'CM442' 'CM443'

$
$ Added crane section property 16
$
MEMBER PROPERTIES PRISMATIC                              -
AX 7.5     AY 6.3158     AZ 6.3158                     -
IX 0.62282 IY 0.15625 IZ 140.625
'CM423' 'CM424' 'CM425'

$
$ Added crane section property 17
$
MEMBER PROPERTIES PRISMATIC                              -
AX 4.5     AY 3.789     AZ 3.789                     -
IX 0.37144  IY 0.09375 IZ 30.375
'CM444' 'CM445' 'CM446' 'CM447' 'CM448' 'CM449'


$$ HOOK IS REPRESENTED BY THREE NONLINEAR SPRINGS
$ THIS IS DUMMY HOOK MEMBER TO GIVE GRAPHICAL REPRESENTATION
$ AS SPRINGS ARE NOT DISPLAYED IN GRAPHICAL VIEWER

MEMBER PROPERTIES PRISMATIC  -
AX 0.01 -
IX 0.001    IY 0.001   IZ 0.001
'CM483'


$=============================================================================

UNITS  INCH  LBS   DEG


MEMBER ECCENTRICITY
2157 7048 STAT Z -11
7336 TO 7351 STA Y -6.675 END Y -6.675

STATUS SUPPORT                                   -
   1         12         101        111        123      -
   1101       1111       1123       2101              -
   2111       2123       3101       3111       3123     -
   4101       4111       5101       5111       6101     -
   7101       7111       8100       8101       8111     -
   2122       1112       2112       3112       5112     -
   8156       8157       112    5112

JOINT RELEASES
5112 FOR Y X MOM X Y Z

JOINT RELEASES
   1         101        1101       2101       3101     -
   4101       5101       7101       8101              -
   12         111        1111       2111              -
   3111       4111       5111       7111       8111     -
     MOM  Z
   123        1123       2123       3123        6101     -
     MOM  X   Z                                          $ MM 6101 CHANGED TO PIN CONNECTION
   8100 2122                                    -
```

```
     MOM  X Z
$
$ Conservatively use the stifness from reactor building steel
$
     3112                          -
     FOR  X   Y      MOM  X  Y  Z                    -
     KFZ  0.001
$
$ Shear Wall Stiffness
$
   2112                                    -
     FOR        Y     MOM  X   Y  Z                   -
     KFZ  18105E3  KFX 11978E3

   1112                                      -
     FOR        Y     MOM  X   Y  Z                   -
     KFZ  0.001       KFX 23956E3

   112                                       -
     FOR Z Y   MOM  X   Y  Z                    -
     KFX 11978E3

CONSTANTS
    BETA     90.00000                          -
   43 44 45  7318 7319
    BETA     90.00000                          -
   7352     7353        7066        7060           7050
    BETA     45.00000                          -
   7301        7303                            -
   7305        7307        7309                -
   7313        7315                            -
   7317        7325        7329                -
   7333        7335
$
$ Deleted single angle bracing
$
$  7306        7308        7324        7328        7332      -
$  7334        7300        7302        7304        7312      -
$  7314        7316
    BETA     90.00000                          -
   1           2           3          5          6       -
   7           12          13         14         16      -
   17          18          46         49         100     -
   101         103         104        105        110     -
   111         112         114        115        116     -
   1100        1101        1103       1104               -
   1105        1110        1111       1112       1114    -
   1115        1116        1121       2100       2101    -
   2103        2104        2105       2110       2111    -
   2112        2114        2115       2116       2121    -
   3100        3101        3103       3104       3105    -
   3110        3111        3112       3114       3115    -
   3116        3121        3163       4100              -
   4101        4103        4104       4105       4110    -
   4111        4112        4114       4115       4116    -
   4121        4122        5100       5101       5103    -
   5104        5105        5110       5111       5112    -
   5114        5115        5116       5121       5122    -
   6100        6103        6104       6105       71000   -
   71030       71040       71050      71100      71140   -
   71150       71160       71210      8100       8103    -
   8104        8105        8110       8114       8115    -
   8116        81160           2125           2122 2126

    BETA    180.00000                          -
   31          32
    BETA    270.00000                          -
   47          48          50         51         52      -
   53


MEMBER RELEASES

7354STA MOM Y Z END MOM Y Z
```

```
 33 34 7331 STA MOM Y Z
  33 34 7331 END MOM Y Z
  7318      STA MOM Y Z
  7319      END MOM Y Z
  7066      END MOM Y Z
  7066      STA MOM Y
  7060      END MOM Y
  7050      STA MOM Y Z

$
$  Moment connections
  8146 7246 5146 4146 3146 2146 1146 146  STA MOM Y
  8153 7253 5153 4153 3153 2153 1153 153  END MOM Y
$
 35 23      44      46      48      31      -
  49      51      122     130          -
  157          2123                -
          3154                -
  5138    6146                     -
  7000    7008    7040    7041    43      -
  7046    7051    7059    7063    9000    -
  9008    9090    9062    7065    45      -
STA MOM  Y  Z
  42 30      129     137          47      -
  158              50            -
       3161                     -
  5145    6153                     -
  7013    7021    7049    7360    7362    -
  7062    7065    7330    9081    9089    -
  9097    9071    7061    2126     32       -
END MOM  Y  Z

145 1145 2145 3145 END MOM Y  $ MM 6-23

138 1138 2138 3138 STA MOM Y   $ MM 6-23
                          -
        52      53      1157    2157    -
  3122    7001    7002    7003    7004    -
  7005    7006    7007    7010    7011    -
  7014    7015    7016    7017    7018    -
  7019    7020    7022    7023    7024    -
  7025    7026    7027    7028    7029    -
  7030    7031    7032    7033    7034    -
  7035    7036    7037    7038    7039    -
  7042    7043    7044    7045    7047    -
  7048    7363    7052    7053    7054    -
  7055    7056    7057    7058    8700    -
  8701    8702    8703    8704    8705    -
  8706    8707    8708    9001    9002    -
  9003    9004    9005    9006    9007    -
  9082    9083    9084    9085    9086    -
  9087    9088    9009    9010    9011    -
  9012    9013    9014    9015    9016    -
  9017    9018    9019    9020    9021    -
  9022    9023    9024    9025    9026    -
  8800    8801    8802        8804    -
  8805    8807    7064                -

STA MOM  Y  Z  END MOM  Y  Z
  9027    9028    9029    9030    9031    -
  9032    9033    9034    9035    9036    -
  9037    9038    9039    9040    9041    -
  9042    9043    9044    9045    9046    -
  9047    9048    9049    9050    9051    -
  9052    9053    9054    9055    9056    -
  9057    9058    9059    9060    9061    -
  9063    9064    9065    9066    9067    -
  9068    9069    9070    9072    9073    -
  9074    9075    9076    9077    9078    -
  9079    9080    7435    7436    7437    -
  7438    7439    7441    7442    7443    -
  7301    7303                     -
  7305    7307    7309                -
  7310    7311    7313                -
  7315    7317    7320    7321          -
```

```
   7322       7323       7325       7326              -
   7327       7329       7333                    -
   7335       7336       7337       7338            -
   7339       7340       7341       7342       7343    -
STA MOM  Y   Z  END MOM  Y   Z
   7344       7345       7346       7347       7348    -
   7349       7350       7351       7352       7353    -
STA MOM  Y   Z  END MOM  Y   Z
   8121                                        -
END MOM  Y   Z
   121        1121       2121       3121              -
END MOM  Y   Z
'RG1' 'RG2' 'RG7' 'RG15' 'RG17' 'RG18' 'RG28' 'RG32'          -
'RG50' 'RG63' 'RG65' 'RG66' 'RG76' 'RG80'                 -
STA MOM  Y   Z
'RG1' 'RG6' 'RG14' 'RG16' 'RG17' 'RG27' 'RG31' 'RG45'              -
'RG62' 'RG64' 'RG65' 'RG75' 'RG79' 'RG93'                 -
END MOM  Y   Z
$
$ Added member releases of crane member and crane runway
$
$ The wheels are restrained at the west runway girder since it has
$ longer span and will impact the runway girder more.
$ Note P&H's ANSYS model restrains at the east side.



'CM277'   STA   MOM X Y Z   FOR Y Z
'CM278'   STA   MOM X Y Z   FOR Y Z
'CM279'   STA   MOM X Y Z   FOR Z
'CM280'   STA   MOM X Y Z   FOR Z
'CM273'   STA   MOM X Y Z   FOR Y
'CM274'   STA   MOM X Y Z   FOR Y
'CM275'   STA   MOM X Y Z
'CM276'   STA   MOM X Y Z

'CM131'   STA   MOM X Y Z   FOR Z
'CM125'   STA   MOM X Y Z   FOR Z
'CM113'   STA   MOM X Y Z
'CM119'   STA   MOM X Y Z
$
$ Deleted single angle bracing
$ STA MOM  Y   Z  END MOM  Y   Z
$   7306       7308       7324       7328       7332      -
$   7334       7300       7302       7304       7312      -
$   7314       7316


8806 END MOM Y Z            $ MM

8803 STA MOM Y Z            $ MM


9 107 1107 2107 3107 4107 5107 6107 71070 8107     -
20 118 1118 2118 3118 4118 5118 71180 8118 STA FOR Y Z MOM X Y Z



$=============================================================================================

$=============================================================================================

UNITS  FEET  SECONDS CYCLES

STORE RESPONSE SPECTRUM ACCELERATION LINEAR vs -
      NATURAL FREQUENCY LOGARITHMIC 'HSSE162'
$---------------------------------------------------------------------------------------
$ The SSE values for accelerations are in g unit.
$ FACTOR = 32.185 ft/sec^2
$---------------------------------------------------------------------------------------
$ SPECTRAL ACCELERATION INCREASED BY 5%
      DAMPING 0.07 FACTOR 32.185 $ 7.0% Critical Damping
1.050E-04             0.000E+00
1.050E-04             8.500E-02
```

1.313E-02	1.700E-01
7.819E-02	3.400E-01
8.316E-02	5.100E-01
1.209E-01	6.600E-01
1.756E-01	8.500E-01
2.758E-01	1.001E+00
2.769E-01	1.004E+00
2.773E-01	1.005E+00
2.795E-01	1.012E+00
2.802E-01	1.014E+00
2.832E-01	1.022E+00
2.837E-01	1.023E+00
2.837E-01	1.023E+00
2.872E-01	1.032E+00
2.876E-01	1.034E+00
2.906E-01	1.042E+00
2.911E-01	1.043E+00
2.915E-01	1.044E+00
2.941E-01	1.051E+00
2.950E-01	1.054E+00
2.954E-01	1.055E+00
2.976E-01	1.061E+00
2.989E-01	1.065E+00
3.011E-01	1.071E+00
3.028E-01	1.076E+00
3.046E-01	1.081E+00
3.067E-01	1.087E+00
3.080E-01	1.091E+00
3.105E-01	1.097E+00
3.110E-01	1.099E+00
3.115E-01	1.100E+00
3.141E-01	1.109E+00
3.144E-01	1.111E+00
3.149E-01	1.112E+00
3.179E-01	1.121E+00
3.188E-01	1.124E+00
3.214E-01	1.132E+00
3.227E-01	1.137E+00
3.249E-01	1.144E+00
3.253E-01	1.145E+00
3.270E-01	1.151E+00
3.283E-01	1.155E+00
3.292E-01	1.158E+00
3.310E-01	1.164E+00
3.318E-01	1.167E+00
3.331E-01	1.171E+00
3.353E-01	1.179E+00
3.366E-01	1.183E+00
3.388E-01	1.191E+00
3.391E-01	1.192E+00
3.402E-01	1.197E+00
3.417E-01	1.203E+00
3.430E-01	1.208E+00
3.439E-01	1.211E+00
3.452E-01	1.216E+00
3.462E-01	1.222E+00
3.467E-01	1.225E+00
3.475E-01	1.230E+00
3.475E-01	1.239E+00
3.475E-01	1.240E+00
3.475E-01	1.247E+00
3.475E-01	1.255E+00
3.475E-01	1.257E+00
3.475E-01	1.264E+00
3.475E-01	1.273E+00
3.475E-01	1.274E+00
3.475E-01	1.282E+00
3.472E-01	1.291E+00
3.471E-01	1.292E+00
3.469E-01	1.300E+00
3.466E-01	1.309E+00
3.466E-01	1.311E+00
3.463E-01	1.318E+00
3.460E-01	1.328E+00
3.459E-01	1.329E+00

3.457E-01	1.335E+00
3.455E-01	1.345E+00
3.453E-01	1.349E+00
3.452E-01	1.355E+00
3.446E-01	1.365E+00
3.445E-01	1.367E+00
3.440E-01	1.375E+00
3.437E-01	1.385E+00
3.437E-01	1.387E+00
3.434E-01	1.396E+00
3.428E-01	1.406E+00
3.427E-01	1.409E+00
3.423E-01	1.415E+00
3.416E-01	1.428E+00
3.415E-01	1.430E+00
3.411E-01	1.437E+00
3.407E-01	1.451E+00
3.407E-01	1.453E+00
3.405E-01	1.457E+00
3.397E-01	1.474E+00
3.394E-01	1.481E+00
3.385E-01	1.498E+00
3.382E-01	1.502E+00
3.374E-01	1.520E+00
3.373E-01	1.522E+00
3.370E-01	1.527E+00
3.361E-01	1.545E+00
3.359E-01	1.550E+00
3.350E-01	1.571E+00
3.347E-01	1.577E+00
3.337E-01	1.599E+00
3.336E-01	1.601E+00
3.322E-01	1.624E+00
3.318E-01	1.630E+00
3.309E-01	1.653E+00
3.307E-01	1.659E+00
3.291E-01	1.683E+00
3.289E-01	1.686E+00
3.280E-01	1.711E+00
3.278E-01	1.717E+00
3.264E-01	1.740E+00
3.262E-01	1.743E+00
3.260E-01	1.747E+00
3.246E-01	1.774E+00
3.245E-01	1.777E+00
3.243E-01	1.780E+00
3.229E-01	1.805E+00
3.227E-01	1.808E+00
3.225E-01	1.812E+00
3.211E-01	1.841E+00
3.210E-01	1.844E+00
3.208E-01	1.848E+00
3.190E-01	1.874E+00
3.185E-01	1.882E+00
3.171E-01	1.913E+00
3.169E-01	1.917E+00
3.167E-01	1.921E+00
3.158E-01	1.949E+00
3.156E-01	1.958E+00
3.142E-01	1.991E+00
3.140E-01	1.996E+00
3.138E-01	2.000E+00
3.125E-01	2.031E+00
3.121E-01	2.040E+00
3.112E-01	2.076E+00
3.111E-01	2.081E+00
3.109E-01	2.086E+00
3.094E-01	2.124E+00
3.092E-01	2.129E+00
3.083E-01	2.169E+00
3.082E-01	2.174E+00
3.080E-01	2.179E+00
3.070E-01	2.221E+00
3.069E-01	2.227E+00
3.069E-01	2.227E+00

3.058E-01	2.276E+00
3.057E-01	2.281E+00
3.047E-01	2.333E+00
3.046E-01	2.339E+00
3.035E-01	2.388E+00
3.034E-01	2.394E+00
3.034E-01	2.394E+00
3.029E-01	2.451E+00
3.028E-01	2.457E+00
3.023E-01	2.518E+00
3.022E-01	2.525E+00
3.017E-01	2.581E+00
3.017E-01	2.588E+00
3.011E-01	2.655E+00
3.011E-01	2.663E+00
3.006E-01	2.726E+00
3.006E-01	2.734E+00
3.005E-01	2.742E+00
3.005E-01	2.809E+00
3.005E-01	2.826E+00
3.001E-01	2.888E+00
3.000E-01	2.897E+00
2.999E-01	2.915E+00
2.999E-01	2.981E+00
2.999E-01	2.990E+00
2.999E-01	3.010E+00
2.999E-01	3.070E+00
2.999E-01	3.090E+00
2.999E-01	3.111E+00
2.999E-01	3.175E+00
2.999E-01	3.186E+00
2.999E-01	3.220E+00
2.999E-01	3.288E+00
2.999E-01	3.300E+00
2.999E-01	3.336E+00
2.999E-01	3.397E+00
2.999E-01	3.422E+00
2.999E-01	3.461E+00
2.996E-01	3.527E+00
2.995E-01	3.554E+00
2.993E-01	3.581E+00
2.990E-01	3.652E+00
2.989E-01	3.681E+00
2.988E-01	3.726E+00
2.985E-01	3.787E+00
2.984E-01	3.834E+00
2.982E-01	3.882E+00
2.977E-01	3.949E+00
2.973E-01	4.000E+00
2.970E-01	4.035E+00
2.968E-01	4.107E+00
2.966E-01	4.162E+00
2.964E-01	4.219E+00
2.959E-01	4.278E+00
2.952E-01	4.358E+00
2.947E-01	4.421E+00
2.943E-01	4.464E+00
2.935E-01	4.552E+00
2.930E-01	4.620E+00
2.923E-01	4.667E+00
2.910E-01	4.763E+00
2.901E-01	4.838E+00
2.893E-01	4.889E+00
2.879E-01	4.995E+00
2.872E-01	5.049E+00
2.858E-01	5.133E+00
2.845E-01	5.220E+00
2.837E-01	5.280E+00
2.816E-01	5.404E+00
2.806E-01	5.467E+00
2.796E-01	5.533E+00
2.767E-01	5.704E+00
2.756E-01	5.775E+00
2.722E-01	5.961E+00
2.715E-01	6.000E+00

2.715E-01	6.000E+00
2.669E-01	6.243E+00
2.645E-01	6.372E+00
2.622E-01	6.507E+00
2.622E-01	6.507E+00
2.570E-01	6.745E+00
2.518E-01	6.947E+00
2.505E-01	7.000E+00
2.465E-01	7.163E+00
2.445E-01	7.276E+00
2.413E-01	7.452E+00
2.378E-01	7.574E+00
2.361E-01	7.636E+00
2.347E-01	7.700E+00
2.318E-01	7.830E+00
2.319E-01	7.890E+00
2.428E-01	8.160E+00
2.531E-01	8.330E+00
2.655E-01	8.500E+00
2.820E-01	8.670E+00
2.931E-01	8.840E+00
3.280E-01	9.010E+00
5.014E-01	9.180E+00
5.280E-01	9.350E+00
5.573E-01	9.520E+00
5.878E-01	9.690E+00
6.193E-01	9.860E+00
6.528E-01	1.003E+01
6.863E-01	1.020E+01
7.230E-01	1.037E+01
7.623E-01	1.054E+01
8.052E-01	1.071E+01
8.561E-01	1.088E+01
9.032E-01	1.105E+01
9.325E-01	1.122E+01
9.392E-01	1.139E+01
9.441E-01	1.541E+01
9.209E-01	1.564E+01
8.723E-01	1.587E+01
8.461E-01	1.610E+01
7.918E-01	1.633E+01
7.642E-01	1.656E+01
7.529E-01	1.679E+01
7.215E-01	1.702E+01
6.993E-01	1.725E+01
6.761E-01	1.748E+01
6.542E-01	1.771E+01
6.332E-01	1.784E+01
6.233E-01	1.817E+01
5.949E-01	1.840E+01
5.774E-01	1.883E+01
5.611E-01	1.896E+01
5.464E-01	1.909E+01
5.327E-01	1.932E+01
5.214E-01	1.955E+01
5.107E-01	1.978E+01
5.006E-01	2.001E+01
4.919E-01	2.024E+01
4.830E-01	2.047E+01
4.701E-01	2.070E+01
4.674E-01	2.093E+01
4.603E-01	2.116E+01
4.537E-01	2.139E+01
4.473E-01	2.162E+01
4.444E-01	2.185E+01
4.350E-01	2.206E+01
4.292E-01	2.231E+01
4.234E-01	2.254E+01
4.180E-01	2.277E+01
4.127E-01	2.300E+01
4.078E-01	2.323E+01
4.029E-01	2.346E+01
3.983E-01	2.369E+01
3.939E-01	2.392E+01
3.897E-01	2.415E+01

3.881E-01	2.422E+01
3.898E-01	2.431E+01
3.930E-01	2.448E+01
3.967E-01	2.465E+01
4.005E-01	2.482E+01
4.047E-01	2.499E+01
4.092E-01	2.516E+01
4.140E-01	2.533E+01
4.192E-01	2.550E+01
4.246E-01	2.567E+01
4.299E-01	2.584E+01
4.333E-01	2.601E+01
4.368E-01	2.618E+01
4.400E-01	2.635E+01
4.406E-01	2.652E+01
4.409E-01	2.669E+01
4.429E-01	3.611E+01
4.393E-01	3.634E+01
4.335E-01	3.657E+01
4.269E-01	3.680E+01
4.221E-01	3.703E+01
4.160E-01	3.726E+01
4.097E-01	3.749E+01
4.035E-01	3.772E+01
3.997E-01	3.795E+01
3.946E-01	3.818E+01
3.897E-01	3.841E+01
3.865E-01	3.864E+01
3.835E-01	3.887E+01
3.805E-01	3.910E+01
3.777E-01	3.933E+01
3.748E-01	3.956E+01
3.719E-01	3.979E+01
3.691E-01	4.002E+01
3.657E-01	4.025E+01
3.623E-01	4.048E+01
3.589E-01	4.071E+01
3.558E-01	4.094E+01
3.527E-01	4.117E+01
3.496E-01	4.140E+01
3.466E-01	4.163E+01
3.438E-01	4.185E+01
3.411E-01	4.209E+01
3.382E-01	4.232E+01
3.356E-01	4.255E+01
3.331E-01	4.278E+01
3.305E-01	4.301E+01
3.281E-01	4.324E+01
3.258E-01	4.347E+01
3.236E-01	4.370E+01
3.214E-01	4.383E+01
3.192E-01	4.416E+01
3.173E-01	4.439E+01
3.153E-01	4.462E+01
3.133E-01	4.485E+01
3.116E-01	4.508E+01
3.100E-01	4.531E+01
3.084E-01	4.554E+01
3.070E-01	4.577E+01
3.056E-01	4.600E+01
3.043E-01	4.623E+01
3.029E-01	4.646E+01
3.016E-01	4.669E+01
3.005E-01	4.692E+01
2.995E-01	4.715E+01
2.985E-01	4.738E+01
2.974E-01	4.761E+01
2.964E-01	4.784E+01
2.954E-01	4.807E+01
2.944E-01	4.830E+01
2.935E-01	4.853E+01
2.930E-01	4.876E+01
2.924E-01	4.899E+01
2.918E-01	4.922E+01
2.912E-01	4.945E+01

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2.906E-01       4.968E+01
2.897E-01       4.981E+01
2.895E-01       5.014E+01
2.889E-01       5.037E+01
2.875E-01       5.060E+01
2.857E-01       5.083E+01
2.845E-01       5.106E+01
2.830E-01       5.129E+01
2.816E-01       5.152E+01
2.801E-01       5.175E+01
2.787E-01       5.196E+01
2.773E-01       5.221E+01
2.761E-01       5.244E+01
2.747E-01       5.267E+01
2.734E-01       5.290E+01
2.721E-01       5.313E+01
2.709E-01       5.336E+01
2.699E-01       5.358E+01
2.688E-01       5.382E+01
2.677E-01       5.406E+01
2.667E-01       5.426E+01
2.657E-01       5.451E+01
2.648E-01       5.474E+01
2.639E-01       5.497E+01
2.629E-01       5.520E+01
2.620E-01       5.543E+01
2.610E-01       5.566E+01
2.601E-01       5.586E+01
2.591E-01       5.612E+01
2.583E-01       5.635E+01
2.572E-01       5.656E+01
2.554E-01       5.681E+01
2.655E-01       5.704E+01
2.646E-01       5.727E+01
2.637E-01       5.750E+01

END OF RESPONSE SPECTRUM
$
$
STORE RESPONSE SPECTRUM ACCELERATION LINEAR vs -
      NATURAL FREQUENCY LOGARITHMIC 'VSSE162'
$-------------------------------------------------------------------------------
$ The SSE values for accelerations are in g unit.
$ FACTOR = 32.185 ft/sec^2 x 2/3 = 21.457
$-------------------------------------------------------------------------------
$
      DAMPING 0.07 FACTOR 21.457 $ 7.0% Critical Damping
1.050E-04       0.000E+00
1.050E-04       8.500E-02
1.313E-02       1.700E-01
7.819E-02       3.400E-01
8.316E-02       5.100E-01
1.209E-01       6.600E-01
1.756E-01       8.500E-01
2.758E-01       1.001E+00
2.769E-01       1.004E+00
2.773E-01       1.005E+00
2.795E-01       1.012E+00
2.802E-01       1.014E+00
2.832E-01       1.022E+00
2.837E-01       1.023E+00
2.837E-01       1.023E+00
2.872E-01       1.032E+00
2.876E-01       1.034E+00
2.906E-01       1.042E+00
2.911E-01       1.043E+00
2.915E-01       1.044E+00
2.941E-01       1.051E+00
2.950E-01       1.054E+00
2.954E-01       1.055E+00
2.976E-01       1.061E+00
2.989E-01       1.065E+00
3.011E-01       1.071E+00
3.028E-01       1.076E+00
3.046E-01       1.081E+00
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3.067E-01	1.087E+00
3.080E-01	1.091E+00
3.105E-01	1.097E+00
3.110E-01	1.099E+00
3.115E-01	1.100E+00
3.141E-01	1.109E+00
3.144E-01	1.111E+00
3.149E-01	1.112E+00
3.179E-01	1.121E+00
3.188E-01	1.124E+00
3.214E-01	1.132E+00
3.227E-01	1.137E+00
3.249E-01	1.144E+00
3.253E-01	1.145E+00
3.270E-01	1.151E+00
3.283E-01	1.155E+00
3.292E-01	1.158E+00
3.310E-01	1.164E+00
3.318E-01	1.167E+00
3.331E-01	1.171E+00
3.353E-01	1.179E+00
3.366E-01	1.183E+00
3.388E-01	1.191E+00
3.391E-01	1.192E+00
3.402E-01	1.197E+00
3.417E-01	1.203E+00
3.430E-01	1.208E+00
3.439E-01	1.211E+00
3.452E-01	1.216E+00
3.462E-01	1.222E+00
3.467E-01	1.225E+00
3.475E-01	1.230E+00
3.475E-01	1.239E+00
3.475E-01	1.240E+00
3.475E-01	1.247E+00
3.475E-01	1.255E+00
3.475E-01	1.257E+00
3.475E-01	1.264E+00
3.475E-01	1.273E+00
3.475E-01	1.274E+00
3.475E-01	1.282E+00
3.472E-01	1.291E+00
3.471E-01	1.292E+00
3.469E-01	1.300E+00
3.466E-01	1.309E+00
3.466E-01	1.311E+00
3.463E-01	1.318E+00
3.460E-01	1.328E+00
3.459E-01	1.329E+00
3.457E-01	1.335E+00
3.455E-01	1.345E+00
3.453E-01	1.349E+00
3.452E-01	1.355E+00
3.446E-01	1.365E+00
3.445E-01	1.367E+00
3.440E-01	1.375E+00
3.437E-01	1.385E+00
3.437E-01	1.387E+00
3.434E-01	1.396E+00
3.428E-01	1.406E+00
3.427E-01	1.409E+00
3.423E-01	1.415E+00
3.416E-01	1.428E+00
3.415E-01	1.430E+00
3.411E-01	1.437E+00
3.407E-01	1.451E+00
3.407E-01	1.453E+00
3.405E-01	1.457E+00
3.397E-01	1.474E+00
3.394E-01	1.481E+00
3.385E-01	1.498E+00
3.382E-01	1.502E+00
3.374E-01	1.520E+00
3.373E-01	1.522E+00
3.370E-01	1.527E+00

3.361E-01	1.545E+00
3.359E-01	1.550E+00
3.350E-01	1.571E+00
3.347E-01	1.577E+00
3.337E-01	1.599E+00
3.336E-01	1.601E+00
3.322E-01	1.624E+00
3.318E-01	1.630E+00
3.309E-01	1.653E+00
3.307E-01	1.659E+00
3.291E-01	1.683E+00
3.289E-01	1.686E+00
3.280E-01	1.711E+00
3.278E-01	1.717E+00
3.264E-01	1.740E+00
3.262E-01	1.743E+00
3.260E-01	1.747E+00
3.246E-01	1.774E+00
3.245E-01	1.777E+00
3.243E-01	1.780E+00
3.229E-01	1.805E+00
3.227E-01	1.808E+00
3.225E-01	1.812E+00
3.211E-01	1.841E+00
3.210E-01	1.844E+00
3.208E-01	1.848E+00
3.190E-01	1.874E+00
3.185E-01	1.882E+00
3.171E-01	1.913E+00
3.169E-01	1.917E+00
3.167E-01	1.921E+00
3.158E-01	1.949E+00
3.156E-01	1.958E+00
3.142E-01	1.991E+00
3.140E-01	1.996E+00
3.138E-01	2.000E+00
3.125E-01	2.031E+00
3.121E-01	2.040E+00
3.112E-01	2.076E+00
3.111E-01	2.081E+00
3.109E-01	2.086E+00
3.094E-01	2.124E+00
3.092E-01	2.129E+00
3.083E-01	2.169E+00
3.082E-01	2.174E+00
3.080E-01	2.179E+00
3.070E-01	2.221E+00
3.069E-01	2.227E+00
3.069E-01	2.227E+00
3.058E-01	2.276E+00
3.057E-01	2.281E+00
3.047E-01	2.333E+00
3.046E-01	2.339E+00
3.035E-01	2.388E+00
3.034E-01	2.394E+00
3.034E-01	2.394E+00
3.029E-01	2.451E+00
3.028E-01	2.457E+00
3.023E-01	2.518E+00
3.022E-01	2.525E+00
3.017E-01	2.581E+00
3.017E-01	2.588E+00
3.011E-01	2.655E+00
3.011E-01	2.663E+00
3.006E-01	2.726E+00
3.006E-01	2.734E+00
3.005E-01	2.742E+00
3.005E-01	2.809E+00
3.005E-01	2.826E+00
3.001E-01	2.888E+00
3.000E-01	2.897E+00
2.999E-01	2.915E+00
2.999E-01	2.981E+00
2.999E-01	2.990E+00
2.999E-01	3.010E+00

2.999E-01	3.070E+00
2.999E-01	3.090E+00
2.999E-01	3.111E+00
2.999E-01	3.175E+00
2.999E-01	3.186E+00
2.999E-01	3.220E+00
2.999E-01	3.288E+00
2.999E-01	3.300E+00
2.999E-01	3.336E+00
2.999E-01	3.397E+00
2.999E-01	3.422E+00
2.999E-01	3.461E+00
2.996E-01	3.527E+00
2.995E-01	3.554E+00
2.993E-01	3.581E+00
2.990E-01	3.652E+00
2.989E-01	3.681E+00
2.988E-01	3.726E+00
2.985E-01	3.787E+00
2.984E-01	3.834E+00
2.982E-01	3.882E+00
2.977E-01	3.949E+00
2.973E-01	4.000E+00
2.970E-01	4.035E+00
2.968E-01	4.107E+00
2.966E-01	4.162E+00
2.964E-01	4.219E+00
2.959E-01	4.278E+00
2.952E-01	4.358E+00
2.947E-01	4.421E+00
2.943E-01	4.464E+00
2.935E-01	4.552E+00
2.930E-01	4.620E+00
2.923E-01	4.667E+00
2.910E-01	4.763E+00
2.901E-01	4.838E+00
2.893E-01	4.889E+00
2.879E-01	4.995E+00
2.872E-01	5.049E+00
2.858E-01	5.133E+00
2.845E-01	5.220E+00
2.837E-01	5.280E+00
2.816E-01	5.404E+00
2.806E-01	5.467E+00
2.796E-01	5.533E+00
2.767E-01	5.704E+00
2.756E-01	5.775E+00
2.722E-01	5.961E+00
2.715E-01	6.000E+00
2.715E-01	6.000E+00
2.669E-01	6.243E+00
2.645E-01	6.372E+00
2.622E-01	6.507E+00
2.622E-01	6.507E+00
2.570E-01	6.745E+00
2.518E-01	6.947E+00
2.505E-01	7.000E+00
2.465E-01	7.163E+00
2.445E-01	7.276E+00
2.413E-01	7.452E+00
2.378E-01	7.574E+00
2.361E-01	7.636E+00
2.347E-01	7.700E+00
2.318E-01	7.830E+00
2.319E-01	7.890E+00
2.428E-01	8.160E+00
2.531E-01	8.330E+00
2.655E-01	8.500E+00
2.820E-01	8.670E+00
2.931E-01	8.840E+00
3.280E-01	9.010E+00
5.014E-01	9.180E+00
5.280E-01	9.350E+00
5.573E-01	9.520E+00
5.878E-01	9.690E+00

6.193E-01	9.860E+00
6.528E-01	1.003E+01
6.863E-01	1.020E+01
7.230E-01	1.037E+01
7.623E-01	1.054E+01
8.052E-01	1.071E+01
8.561E-01	1.088E+01
9.032E-01	1.105E+01
9.325E-01	1.122E+01
9.392E-01	1.139E+01
9.441E-01	1.541E+01
9.209E-01	1.564E+01
8.723E-01	1.587E+01
8.461E-01	1.610E+01
7.918E-01	1.633E+01
7.642E-01	1.656E+01
7.529E-01	1.679E+01
7.215E-01	1.702E+01
6.993E-01	1.725E+01
6.761E-01	1.748E+01
6.542E-01	1.771E+01
6.332E-01	1.784E+01
6.233E-01	1.817E+01
5.949E-01	1.840E+01
5.774E-01	1.883E+01
5.611E-01	1.896E+01
5.464E-01	1.909E+01
5.327E-01	1.932E+01
5.214E-01	1.955E+01
5.107E-01	1.978E+01
5.006E-01	2.001E+01
4.919E-01	2.024E+01
4.830E-01	2.047E+01
4.701E-01	2.070E+01
4.674E-01	2.093E+01
4.603E-01	2.116E+01
4.537E-01	2.139E+01
4.473E-01	2.162E+01
4.444E-01	2.185E+01
4.350E-01	2.206E+01
4.292E-01	2.231E+01
4.234E-01	2.254E+01
4.180E-01	2.277E+01
4.127E-01	2.300E+01
4.078E-01	2.323E+01
4.029E-01	2.346E+01
3.983E-01	2.369E+01
3.939E-01	2.392E+01
3.897E-01	2.415E+01
3.881E-01	2.422E+01
3.898E-01	2.431E+01
3.930E-01	2.448E+01
3.967E-01	2.465E+01
4.005E-01	2.482E+01
4.047E-01	2.499E+01
4.092E-01	2.516E+01
4.140E-01	2.533E+01
4.192E-01	2.550E+01
4.246E-01	2.567E+01
4.299E-01	2.584E+01
4.333E-01	2.601E+01
4.368E-01	2.618E+01
4.400E-01	2.635E+01
4.406E-01	2.652E+01
4.409E-01	2.669E+01
4.429E-01	3.611E+01
4.393E-01	3.634E+01
4.335E-01	3.657E+01
4.269E-01	3.680E+01
4.221E-01	3.703E+01
4.160E-01	3.726E+01
4.097E-01	3.749E+01
4.035E-01	3.772E+01
3.997E-01	3.795E+01
3.946E-01	3.818E+01

3.897E-01	3.841E+01
3.865E-01	3.864E+01
3.835E-01	3.887E+01
3.805E-01	3.910E+01
3.777E-01	3.933E+01
3.748E-01	3.956E+01
3.719E-01	3.979E+01
3.691E-01	4.002E+01
3.657E-01	4.025E+01
3.623E-01	4.048E+01
3.589E-01	4.071E+01
3.558E-01	4.094E+01
3.527E-01	4.117E+01
3.496E-01	4.140E+01
3.466E-01	4.163E+01
3.438E-01	4.185E+01
3.411E-01	4.209E+01
3.382E-01	4.232E+01
3.356E-01	4.255E+01
3.331E-01	4.278E+01
3.305E-01	4.301E+01
3.281E-01	4.324E+01
3.258E-01	4.347E+01
3.236E-01	4.370E+01
3.214E-01	4.383E+01
3.192E-01	4.416E+01
3.173E-01	4.439E+01
3.153E-01	4.462E+01
3.133E-01	4.485E+01
3.116E-01	4.508E+01
3.100E-01	4.531E+01
3.084E-01	4.554E+01
3.070E-01	4.577E+01
3.056E-01	4.600E+01
3.043E-01	4.623E+01
3.029E-01	4.646E+01
3.016E-01	4.669E+01
3.005E-01	4.692E+01
2.995E-01	4.715E+01
2.985E-01	4.738E+01
2.974E-01	4.761E+01
2.964E-01	4.784E+01
2.954E-01	4.807E+01
2.944E-01	4.830E+01
2.935E-01	4.853E+01
2.930E-01	4.876E+01
2.924E-01	4.899E+01
2.918E-01	4.922E+01
2.912E-01	4.945E+01
2.906E-01	4.968E+01
2.897E-01	4.981E+01
2.895E-01	5.014E+01
2.889E-01	5.037E+01
2.875E-01	5.060E+01
2.857E-01	5.083E+01
2.845E-01	5.106E+01
2.830E-01	5.129E+01
2.816E-01	5.152E+01
2.801E-01	5.175E+01
2.787E-01	5.196E+01
2.773E-01	5.221E+01
2.761E-01	5.244E+01
2.747E-01	5.267E+01
2.734E-01	5.290E+01
2.721E-01	5.313E+01
2.709E-01	5.336E+01
2.699E-01	5.358E+01
2.688E-01	5.382E+01
2.677E-01	5.406E+01
2.667E-01	5.426E+01
2.657E-01	5.451E+01
2.648E-01	5.474E+01
2.639E-01	5.497E+01
2.629E-01	5.520E+01
2.620E-01	5.543E+01

```
2.610E-01           5.566E+01
2.601E-01           5.586E+01
2.591E-01           5.612E+01
2.583E-01           5.635E+01
2.572E-01           5.656E+01
2.554E-01           5.681E+01
2.655E-01           5.704E+01
2.646E-01           5.727E+01
2.637E-01           5.750E+01

END OF RESPONSE SPECTRUM
$
$
$=============================================================================

$ DPENENDING ON CRANE LOCATION PUT '$' SIGN IN FRONT OF MEMBERS AND JOINTS AT CRANE LOCATION
$ R1 CRANE LCOATION 1
$ RX1  x = CRANE LOCATION 2 TO 9
$ CNRX011, CNRX041....  X = CRANE LOCATION 1 TO 9


$INACTIVE MEMBERS 'R1' TO 'R8'
INACTIVE MEMBERS 'R21' TO 'R28'
INACTIVE MEMBERS 'R31' TO 'R38'
INACTIVE MEMBERS 'R41' TO 'R48'
INACTIVE MEMBERS 'R51' TO 'R58'
INACTIVE MEMBERS 'R61' TO 'R68'
INACTIVE MEMBERS 'R71' TO 'R78'
INACTIVE MEMBERS 'R81' TO 'R88'
INACTIVE MEMBERS 'R91' TO 'R98'


$ INACTIVE JOINTS 'CNR1011' 'CNR1021' 'CNR1031' 'CNR1041' -
$              'CNR1131' 'CNR1141' 'CNR1151' 'CNR1161'

INACTIVE JOINTS 'CNR2011' 'CNR2021' 'CNR2031' 'CNR2041' -
             'CNR2131' 'CNR2141' 'CNR2151' 'CNR2161'
INACTIVE JOINTS 'CNR3011' 'CNR3021' 'CNR3031' 'CNR3041' -
             'CNR3131' 'CNR3141' 'CNR3151' 'CNR3161'
INACTIVE JOINTS 'CNR4011' 'CNR4021' 'CNR4031' 'CNR4041' -
             'CNR4131' 'CNR4141' 'CNR4151' 'CNR4161'
INACTIVE JOINTS 'CNR5011' 'CNR5021' 'CNR5031' 'CNR5041' -
             'CNR5131' 'CNR5141' 'CNR5151' 'CNR5161'
INACTIVE JOINTS 'CNR6011' 'CNR6021' 'CNR6031' 'CNR6041' -
             'CNR6131' 'CNR6141' 'CNR6151' 'CNR6161'
INACTIVE JOINTS 'CNR7011' 'CNR7021' 'CNR7031' 'CNR7041' -
             'CNR7131' 'CNR7141' 'CNR7151' 'CNR7161'
INACTIVE JOINTS 'CNR8011' 'CNR8021' 'CNR8031' 'CNR8041' -
             'CNR8131' 'CNR8141' 'CNR8151' 'CNR8161'
INACTIVE JOINTS 'CNR9011' 'CNR9021' 'CNR9031' 'CNR9041' -
             'CNR9131' 'CNR9141' 'CNR9151' 'CNR9161'



$=============================================================================
$=============================================================================


UNITS  FT  KIP   DEG   FAH
DEAD LOAD  1 'Dead Load including Crane Members' DIRECTION -Y FACTOR 1.0
$ Concrete floor dead load = 150 pcf x (8/12)ft x 6ft = 0.6 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.6 WB     -0.6       -
     LA    0.000 LB    1.000
    7001       7002       7003       7004              -
    7005       7006       7007                   -
    7014                                  -
    7015       7016       7017       7018       7019     -
    7020       7023       7024                   -
    7025       7026       7027       7028       7029     -
    7032       7033       7034                   -
    7035       7036       7037       7038             -
    7041       7042       7043       7044             -
    7045       7046       7047                   -
    7052                                  -
```

```
   7053       7054       7055       7056       7057     -
   7058
$
$ Concrete floor dead load = 150 pcf x (8/12)ft x 3ft = 0.3 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.3 WB     -0.3       -
     LA     0.000 LB     1.000
   7000 7009 7013 7022 7031 7040 7051                      -
   7008 7012 7021 7030 7039 7048 7059                      -
   7010 7011 7361 7362 7049
$
$ Concrete floor dead load around decontamination pit
$ 150 pcf x (8/12)ft x 1ft = 0.1 kip/ft
$ 150 pcf x (8/12)ft x 2.25ft = 0.225 kip/ft
$ 150 pcf x (8/12)ft x 2ft = 0.2 kip/ft
$ 150 pcf x (8/12)ft x 2.75ft = 0.275 kip/ft
$
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.1 WB     -0.1       -
     LA     0.000 LB     1.000
   3154 TO 3157
$
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.225 WB    -0.225     -
     LA     0.000 LB     1.000
   3158 TO 3161
$
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.2 WB     -0.2       -
     LA     0.000 LB     1.000
   7061 7065 7062 7064
$
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.275 WB    -0.275     -
     LA     0.000 LB     1.000
   5138 TO 5145
$
$ Roof dead load = 20 psf x 6.25ft = 0.125 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.125 WB     -0.125    -
     LA     0.000 LB     1.000
   9001       9002       9003       9004       9005     -
   9006       9007       9082       9083                -
   9084       9085       9086       9087       9088     -
   9010       9011       9012       9013                -
   9014       9015       9016       9019                -
   9020       9021       9022       9023       9024     -
   9025       9028       9029       9030                -
   9031       9032       9033       9034                -
   9037       9038       9039       9040       9041     -
   9042       9043       9046       9047                -
   9048       9049       9050       9051       9052     -
   9055       9056       9057       9058                -
   9059       9060       9061       9064                -
   9065       9066       9067       9068       9069     -
   9070       9073       9074       9075                -
   9076       9077       9078       9079
$
$ Roof dead load = 20 psf x 6.25ft x 0.5 = 0.0625 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.0625 WB     -0.0625  -
     LA     0.000 LB     1.000
   9000       9081       9009       9018       9027     -
   9036       9045       9054       9063       9072     -
   9008       9089       9017       9026       9035     -
   9044       9053       9062       9071       9080
$
$ Adjacent Bldg partial roof selfweight
  JOINT LOADS
    113        FORCE   Y      -1.746
    1113       FORCE   Y      -2.727
    2113       FORCE   Y      -3.011
    3113       FORCE   Y      -2.339
    4113       FORCE   Y      -3.016
    5113       FORCE   Y      -1.476
    5122       FORCE   Y      -3.008
    7122       FORCE   Y      -4.263
    81660      FORCE   Y      -0.860
$
$ Adjacent Bldg partial roof dead load
  JOINT LOADS
    113        FORCE   Y      -3.6
```

```
   1113       FORCE   Y      -7.2
   2113       FORCE   Y      -7.2
   3113       FORCE   Y      -7.0
   4113       FORCE   Y      -6.9
   5113       FORCE   Y      -3.5
   5122       FORCE   Y      -5.5
   7122       FORCE   Y      -8.1
   81660      FORCE   Y      -2.6
$
$ Concrete blocks at hatch
$ 150 pcf x (8/12)ft x 5ft = 0.5 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.5 WB      -0.5       -
      LA     0.000 LB     1.000
   123 TO 128 131 TO 136


$
$SIDING AND GIRTS DEAD LOAD
$SIDING = 1.5 PSF
$GIRTS = 8.5 PSF
$TOTAL = 10 PSF

MEM LOADS
$ WEST FACE OF BUILDING COLUMN LINE 302A

8116 81160     FOR Y GLO UNIF -0.105
71160 71210    FOR Y GLO UNIF -0.27
5116 5121      FOR Y GLO UNIF -0.301
5111 5112      FOR Y GLO UNIF -0.117

4111 4112 4116 4121     FOR Y GLO UNIF -0.23
3111 3112 3116          FOR Y GLO UNIF -0.175

2125 2126      FOR Y GLO UNIF -0.122

2111 2112 2116      FOR Y GLO UNIF -0.182
1111 1112 1116      FOR Y GLO UNIF -0.243
111 112 116    FOR Y GLO UNIF -0.301
13 18          FOR Y GLO UNIF -0.2

3116       FOR Y GLO UNIF -0.235
2116       FOR Y GLO UNIF -0.243

$ EAST FACE OF BUILDING COLUMNS LINE 301

2 7          FOR Y GLO UNIF -0.2
105 101          FOR Y GLO UNIF -0.301
100         FOR Y GLO UNIF -0.144
1100 1101 1105      FOR Y GLO UNIF -0.243
2100 2101 2105      FOR Y GLO UNIF -0.243
3100 3101 3105 3163     FOR Y GLO UNIF -0.235
4100 4101 4105 4122     FOR Y GLO UNIF -0.23
5100 5101 5105      FOR Y GLO UNIF -0.216
6100 6105      FOR Y GLO UNIF -0.185
71000 71050    FOR Y GLO UNIF -0.17
8100 8105      FOR Y GLO UNIF -0.105

$ NORTH FACE
8121           FOR Y GLO UNIF FRA -0.24 0.6 1.0
8116 81160 8105 FOR Y GLO UNIF -0.14

$ SOUTH FACE
100 110 2 7 13 18 FOR Y GLO UNIF -0.14
121 54 55 56 FOR Y GLO UNIF -0.24

LOADING  2 'Crane Component Dead Load'
$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'     FORCE Y     -1.13
'CN6'       FORCE Y     -0.444
'CN7'       FORCE Y     -0.444
'CN285'     FORCE Y     -0.880
'CN270'     FORCE Y     -1.415
```

```
'CN278'     FORCE Y     -1.415
'CN3'       FORCE Y     -0.250
'CN27'      FORCE Y     -0.250
'CN51'      FORCE Y     -0.250
'CN84'      FORCE Y     -0.250

LOADING  30 '10% Live Load'
$ 10% 300 psf @ South of Spent Fuel Pools
$ 300 psf x 6 ft x 0.1 = 0.18 kip/ft
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.18 WB     -0.18     -
     LA    0.000 LB    1.000
   7001       7002       7003       7004              -
   7005       7006       7007                        -
   7014                                          -
   7015       7016       7017       7018       7019     -
   7020       7023       7024                        -
   7025       7026       7027       7028       7029     -
   7032       7033       7034                        -
   7035       7036       7037       7038              -
   7041       7042       7043       7044              -
   7045       7046       7047                        -
   7052                                          -
   7053       7054       7055       7056       7057     -
   7058
$
$ 300 psf x 3 ft x 0.1 = 0.09 kip/ft
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.09 WB     -0.09     -
     LA    0.000 LB    1.000
   7000 7009 7013 7022 7031 7040 7051                    -
   7008 7012 7021 7030 7039 7048 7059                    -
   7010 7011 7361 7362 7049
$
$ Floor live load around decontamination pit
$ 300 psf x 1ft x 0.1 = 0.03 kip/ft
$ 300 psf x 2.25ft x 0.1 = 0.0675 kip/ft
$ 300 psf x 2ft x 0.25 = 0.06 kip/ft
$ 300 psf x 2.75ft x 0.25 = 0.083 kip/ft
$
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.03 WB    -0.03     -
     LA    0.000 LB    1.000
   3154 TO 3157
$
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.0675 WB    -0.0675     -
     LA    0.000 LB    1.000
   3158 TO 3161
$
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.06 WB     -0.06      -
     LA    0.000 LB    1.000
   7061 7065 7062 7064
$
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.083 WB    -0.083     -
     LA    0.000 LB    1.000
   5138 TO 5145

LOADING  16 'CASK WEIGHT FOR PENDULUM EFFECT'
 JOINT LOADS
      'CN450'       FORCE Y     -266.0

UNITS  INCH  LBS   DEG   FAH


LOADING  35 'UNIT LOAD IN X DIRECTION'
 JOINT LOADS FOR  X  1950
38   -
8152

 JOINT LOADS FOR  X  3900
152  -
178 -
1152 -
2152  -
3152 -
4152 -
5152 -
6152 -
```

```
 7152

  JOINT LOADS FOR  X  11500
 27 -
 3160 -
 5190

  JOINT LOADS FOR  X  23000
 145 -
 1145 -
 2145 -
 3145

LOADING  36 'UNIT LOADS IN Y DIRECTION'
  JOINT LOADS FOR  Y  -19500
 38   -
 8152

  JOINT LOADS FOR  Y  -39000
 152  -
 178 -
 1152 -
 2152  -
 3152 -
 4152 -
 5152 -
 6152 -
 7152

  JOINT LOADS FOR  Y  -115000
 27 -
 3160 -
 5190

  JOINT LOADS FOR  Y  -230000
 145 -
 1145 -
 2145 -
 3145

LOADING  37 'UNIT LOAD IN Z DIRECTION'
  JOINT LOADS FOR  Z  1950
 38   -
 8152

  JOINT LOADS FOR  Z  3900
 152  -
 178 -
 1152 -
 2152  -
 3152 -
 4152 -
 5152 -
 6152 -
 7152

  JOINT LOADS FOR  Z  11500
 27 -
 3160 -
 5190

  JOINT LOADS FOR  Z  23000
 145 -
 1145 -
 2145 -
 3145

DEAD LOAD  38 'ACCELERATION Y' DIRECTION -Y FACTOR 1.0

$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'      FORCE Y      -266000
'CN6'        FORCE Y      -444
```

```
'CN7'       FORCE Y     -444
'CN285'     FORCE Y     -880
'CN270'     FORCE Y     -1415
'CN278'     FORCE Y     -1415
'CN3'       FORCE Y     -250
'CN27'      FORCE Y     -250
'CN51'      FORCE Y     -250
'CN84'      FORCE Y     -250

DEAD LOAD  39 'ACCELERATION X' DIRECTION X FACTOR 1.0

$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'     FORCE X     266000
'CN6'       FORCE X     444
'CN7'       FORCE X     444
'CN285'     FORCE X     880
'CN270'     FORCE X     1415
'CN278'     FORCE X     1415
'CN3'       FORCE X     250
'CN27'      FORCE X     250
'CN51'      FORCE X     250
'CN84'      FORCE X     250

DEAD LOAD  40 'ACCELERATION Z' DIRECTION Z FACTOR 1.0

$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'     FORCE Z     266000
'CN6'       FORCE Z     444
'CN7'       FORCE Z     444
'CN285'     FORCE Z     880
'CN270'     FORCE Z     1415
'CN278'     FORCE Z     1415
'CN3'       FORCE Z     250
'CN27'      FORCE Z     250
'CN51'      FORCE Z     250
'CN84'      FORCE Z     250

$============================================================================================
MAXIMUM NUMBER OF CYCLES 40
CONVERGENCE TOL 0.001
NONLINEAR ANALYSIS
$============================================================================================

$ Create [M] from 100% Load Case 1 & 2 16 and 10% Load Case 3
$ Automatically calculate masses for all members and additional
$ masses as defined in static Load Case 1 2 16 and 30.
$ Masses are applied in global X, Y, and Z-directions
$
UNITS  FEET  KIP

INERTIA OF JOINTS FROM LOAD 1 2 16 30 ALL DOF
PRINT DYNAMIC JOINT INERTIA
PRINT DYNAMIC MEMBER ADDED MASS

$ CUT OFF MODE SHAPE 300
EIGEN PARAMETERS
  NUMBER OF MODES 300
  SOLVE USING GTLANCZOS
  PRINT MAX
END
DAMPING PERCENT 7.0 300
PRINT DYNAMIC MODAL DAMPING

$ Eigen solution
DYNAMIC ANALYSIS EIGENSOLUTION
LIST DYNAMIC PARTICIPATION FACTORS

BYPASS
$--------------------------------------------------------------------------------------
```

```
$ Apply Response Spectrum Loading
$
DYNAMIC PARAMETERS
 USE EXTERNAL FILE SOLVER
END

RESPONSE SPECTRA LOAD 'RSX_SSE'  'HORIZONTAL SSE IN X-DIRECTION'
  SUPPORT ACCELERATIONS
  TRANS X 1.0 FILE 'HSSE162'
END OF RESPONSE SPECTRA LOADING

RESPONSE SPECTRA LOAD 'RSZ_SSE'  'HORIZONTAL SSE IN Z-DIRECTION'
  SUPPORT ACCELERATIONS
  TRANS Z 1.0 FILE 'HSSE162'
END OF RESPONSE SPECTRA LOADING

RESPONSE SPECTRA LOAD 'RSY_SSE'  'VERTICAL SSE IN Y-DIRECTION'
  SUPPORT ACCELERATIONS
  TRANS Y 1.0 FILE 'VSSE162'
END OF RESPONSE SPECTRA LOADING

$-------------------------------------------------------------------------------

UNITS INCH POUND CYCLES SECONDS

LOAD LIST 'RSX_SSE' 'RSY_SSE' 'RSZ_SSE'
EIGENVALUE PARAMETERS
  SOLVE USING GTLANCZOS
  PRINT MAXIMUM
  INITIAL STRESS LOADING OFF
END EIGENVALUE PARAMETERS

DYNAMIC ANALYSIS MODAL

PERFORM RESPONSE SPECTRUM ANALYSIS

LIST RESPONSE SPECTRUM SPECTRUAL ACCELERATIONS
LIST RESPONSE SPECTRUM PARTICIPATION FACTORS

COMPUTE RESPONSE SPECTRUM DISPLACEMENTS ACCELERATIONS MODE COMBINATIONS CQC
COMPUTE RESPONSE SPECTRUM FORCES REACTIONS MODE COMBINATIONS CQC
COMPUTE RESPONSE SPECTRUM STRESSES LOADS MODE COMBINATIONS CQC

LOAD LIST 'RSX_SSE' 'RSY_SSE' 'RSZ_SSE'


COUTPUT '(07)SPECTRA RESULTS.TXT'
UNITS KIP FT
OUTPUT DEC 2
OUTPUT ORDERED
OUTPUT BY MEMBER

LIST DYNAMIC MASS SUMMARY

LIST RESPONSE SPECTRA DISPLACEMENTS MODAL COMBINATION CQC -
JOINTS 'CNR213' 'CNR214' 'CNR215' 'CNR216' 'CNR201' 'CNR202' -
'CNR203' 'CNR203' 'CNR204' 'CN59' 'CN264' 'CN249' 'CN254' 'CN450' 'CN434'

LIST RESPONSE SPECTRA ACCELERATIONS MODAL COMBINATION CQC JOINTS -
JOINTS 'CNR213' 'CNR214' 'CNR215' 'CNR216' 'CNR201' 'CNR202' -
'CNR203' 'CNR203' 'CNR204' 'CN59' 'CN264' 'CN249' 'CN254' 'CN450' 'CN434'

COUTPUT 'N1E3_HU_WL_MHE.GTO'

SAVE 'N1E3_HU_WL_MHE_1.GTS'

$-------------------------------------------------------------------------------

FORM MISSING MASS LOAD 'MMX_SSE' 'MISSING MASS LOAD IN X-DIRECTION' FROM -
  RESPONSE SPECTRA LOAD 'RSX_SSE' CUTOFF FREQUENCY 33.0 DAMPING RATIO 0.07
FORM MISSING MASS LOAD 'MMZ_SSE' 'MISSING MASS LOAD IN Z-DIRECTION' FROM -
  RESPONSE SPECTRA LOAD 'RSZ_SSE' CUTOFF FREQUENCY 33.0 DAMPING RATIO 0.07
FORM MISSING MASS LOAD 'MMY_SSE' 'MISSING MASS LOAD IN Y-DIRECTION' FROM -
  RESPONSE SPECTRA LOAD 'RSY_SSE' CUTOFF FREQUENCY 33.0 DAMPING RATIO 0.07
```

```
STIFFNESS ANALYSIS
LIST REACTION
LIST MAXIMUM JOINT DISPLACEMENT SUMMARY ONLY LOADS ACTIVE

$-------------------------------------------------------------------------------

LOAD LIST 'RSX_SSE' 'RSZ_SSE' 'RSY_SSE'

CREATE PSEUDOSTATIC LOADING 'PSX_SSE' 'PSEUDOSTATIC LOAD IN X-DIRECTION' FROM -
  CQC OF LOADING 'RSX_SSE'
CREATE PSEUDOSTATIC LOADING 'PSZ_SSE' 'PSEUDOSTATIC LOAD IN Z-DIRECTION' FROM -
   CQC OF LOADING 'RSZ_SSE'
CREATE PSEUDOSTATIC LOADING 'PSY_SSE' 'PSEUDOSTATIC LOAD IN Y-DIRECTION' FROM -
   CQC OF LOADING 'RSY_SSE'

LOAD LIST 'PSX_SSE' 'PSZ_SSE' 'PSY_SSE'
LIST REACTION

$-------------------------------------------------------------------------------

LOAD LIST 'PSX_SSE' 'PSZ_SSE' 'PSY_SSE' 'MMX_SSE' 'MMZ_SSE' 'MMY_SSE'
CREATE LOAD COMBINATION 'XRMS_SSE' TYPE RMS SPECS 'PSX_SSE' 1.0 'MMX_SSE' 1.0
CREATE LOAD COMBINATION 'ZRMS_SSE' TYPE RMS SPECS 'PSZ_SSE' 1.0 'MMZ_SSE' 1.0
CREATE LOAD COMBINATION 'YRMS_SSE' TYPE RMS SPECS 'PSY_SSE' 1.0 'MMY_SSE' 1.0

CREATE LOAD COMBINATION 14 TYPE ABSOLUTE SPECS 'XRMS_SSE' 1.0 'YRMS_SSE' 1.0
CREATE LOAD COMBINATION 15 TYPE ABSOLUTE SPECS 'ZRMS_SSE' 1.0 'YRMS_SSE' 1.0
CREATE LOAD COMBINATION 18 TYPE RMS SPECS 'XRMS_SSE' 1.0 'YRMS_SSE' 1.0 'ZRMS_SSE' 1.0



LOAD LIST  14 15 18

LIST MAXIMUM JOINT DISPLACEMENT SUMMARY ONLY LOADS ACTIVE
LIST REACTION



$-------------------------------------------------------------------------------

STIFFNESS ANALYSIS


UNITS  INCH  LBS   DEG   FAH

 BYPASS
```

Attachment 14

GT STRUDL Coupled Building/Crane Model, Crane at P, All Analyses

```
STRUDL 'N1E3_HU_WL_MHE' 'BRIDGE LOCATION 1 TROLLEY POSITION 3 - LOAD UP - MHE'
COUTPUT 'N1E3_HU_WL_MHE.GTO'

$ N1E3_HU_WL_MHE (Model No. 07)
$ CRYSTAL RIVER NUCLEAR PLANT
$ ISFSI AUXILIARY BUILDING CRANE UPGRADES
$ FHCR-5
$=============================================================================================

LARGE PROBLEM SIZE 5
TYPE  SPACE FRAME
UNITS  INCH  LBS   DEG
JOINT COORDINATES GLOBAL
   1              0.0000        0.0000        0.0000
   12             0.0000        0.0000     -576.0000
   101          432.0000      288.0000        0.0000
   111          432.0000      288.0000     -576.0000
   123          432.0000      288.0000     -288.0000
   1101         723.0000      288.0000        0.0000
   1111         723.0000      288.0000     -576.0000
   1123         723.0000      288.0000     -288.0000
   2101        1014.0000      288.0000        0.0000
   2111        1014.0000      288.0000     -576.0000
   2123        1014.0000      288.0000     -288.0000
   3101        1305.0000      288.0000        0.0000
   3111        1305.0000      288.0000     -576.0000
   3123        1305.0000      288.0000     -288.0000
   4101        1578.0000      288.0000        0.0000
   4111        1578.0000      288.0000     -576.0000
   5101        1857.0000      288.0000        0.0000
   5111        1857.0000      288.0000     -576.0000
   6101        2097.0000      516.0000        0.0000
   7101        2301.0000      516.0000        0.0000
   7111        2301.0000      516.0000     -576.0000
   8100        2505.0000      516.0000     -288.0000
   8101        2505.0000      516.0000        0.0000
   8111        2505.0000      516.0000     -576.0000
   2              0.0000      489.9600        0.0000
   3              0.0000      844.0800        0.0000
   4              0.0000      852.0000        0.0000
   5              0.0000      852.0000       11.0000
   6              0.0000      860.0400       11.0000
   7              0.0000      870.6000       11.0000
   8              0.0000     1065.9600       11.0000
   9              0.0000      852.0000      -12.0000
   10             0.0000      870.6000      -12.0000
   13             0.0000      489.9600     -576.0000
   14             0.0000      844.0800     -576.0000
   15             0.0000      852.0000     -576.0000
   16             0.0000      852.0000     -587.0000
   17             0.0000      860.0400     -587.0000
   18             0.0000      870.6000     -587.0000
   19             0.0000     1065.9600      -587.0000
   20             0.0000      852.0000     -564.0000
   21             0.0000      870.6000     -564.0000
   23             0.0000      288.0000     -336.0000
   24             0.0000      489.9600     -504.0000
   25             0.0000      489.9600     -432.0000
   26             0.0000      489.9600     -360.0000
   27             0.0000      489.9600     -288.0000
   28             0.0000      489.9600     -216.0000
   29             0.0000      489.9600     -144.0000
   30             0.0000      489.9600      -72.0000
   31             0.0000      672.0000     -432.0000
   32             0.0000      672.0000     -288.0000
   33             0.0000      672.0000     -144.0000
   34             0.0000      844.0800     -288.0000
   35             0.0000     1065.9600      -512.0000
   36             0.0000     1065.9600      -437.0000
```

37	0.0000	1065.9600	-362.0000
38	0.0000	1065.9600	-288.0000
39	0.0000	1065.9600	-214.0000
40	0.0000	1065.9600	-139.0000
41	0.0000	1065.9600	-64.0000
102	432.0000	489.9600	0.0000
103	432.0000	852.0000	0.0000
104	432.0000	852.0000	11.0000
105	432.0000	860.0400	11.0000
106	432.0000	870.6000	11.0000
107	432.0000	1065.9600	11.0000
108	432.0000	852.0000	-12.0000
109	432.0000	870.6000	-12.0000
112	432.0000	489.9600	-576.0000
113	432.0000	573.0000	-576.0000
114	432.0000	852.0000	-576.0000
115	432.0000	852.0000	-587.0000
116	432.0000	860.0400	-587.0000
117	432.0000	870.6000	-587.0000
118	432.0000	1065.9600	-587.0000
119	432.0000	852.0000	-564.0000
120	432.0000	870.6000	-564.0000
124	216.0000	489.9600	-576.0000
125	216.0000	489.9600	-504.0000
126	216.0000	489.9600	-432.0000
127	216.0000	489.9600	-360.0000
128	216.0000	489.9600	-288.0000
129	216.0000	489.9600	-216.0000
130	216.0000	489.9600	-144.0000
131	216.0000	489.9600	-72.0000
132	216.0000	489.9600	0.0000
133	336.0000	489.9600	-576.0000
134	336.0000	489.9600	-504.0000
135	336.0000	489.9600	-432.0000
136	336.0000	489.9600	-360.0000
137	336.0000	489.9600	-288.0000
138	336.0000	489.9600	-216.0000
139	336.0000	489.9600	-144.0000
140	336.0000	489.9600	-72.0000
141	336.0000	489.9600	0.0000
142	432.0000	489.9600	-504.0000
143	432.0000	489.9600	-432.0000
144	432.0000	489.9600	-360.0000
145	432.0000	489.9600	-288.0000
146	432.0000	489.9600	-216.0000
147	432.0000	489.9600	-144.0000
148	432.0000	489.9600	-72.0000
149	432.0000	1065.9600	-512.0000
150	432.0000	1065.9600	-437.0000
151	432.0000	1065.9600	-362.0000
152	432.0000	1065.9600	-288.0000
153	432.0000	1065.9600	-214.0000
154	432.0000	1065.9600	-139.0000
155	432.0000	1065.9600	-64.0000
183	577.5000	573.0000	-576.0000
174	216.0000	1065.9600	-587.0000
175	216.0000	1065.9600	-512.0000
176	216.0000	1065.9600	-437.0000
177	216.0000	1065.9600	-362.0000
178	216.0000	1065.9600	-288.0000
179	216.0000	1065.9600	-214.0000
180	216.0000	1065.9600	-139.0000
181	216.0000	1065.9600	-64.0000
182	216.0000	1065.9600	11.0000
1102	723.0000	489.9600	0.0000
1103	723.0000	852.0000	0.0000
1104	723.0000	852.0000	11.0000
1105	723.0000	860.0400	11.0000
1106	723.0000	870.6000	11.0000
1107	723.0000	1065.9600	11.0000
1108	723.0000	852.0000	-12.0000
1109	723.0000	870.6000	-12.0000
1112	723.0000	489.9600	-576.0000
1113	723.0000	573.0000	-576.0000
1114	723.0000	852.0000	-576.0000

1115	723.0000	852.0000	-587.0000
1116	723.0000	860.0400	-587.0000
1117	723.0000	870.6000	-587.0000
1118	723.0000	1065.9600	-587.0000
1119	723.0000	852.0000	-564.0000
1120	723.0000	870.6000	-564.0000
1142	723.0000	489.9600	-504.0000
1143	723.0000	489.9600	-432.0000
1144	723.0000	489.9600	-360.0000
1145	723.0000	489.9600	-288.0000
1146	723.0000	489.9600	-216.0000
1147	723.0000	489.9600	-144.0000
1148	723.0000	489.9600	-72.0000
1149	723.0000	1065.9600	-512.0000
1150	723.0000	1065.9600	-437.0000
1151	723.0000	1065.9600	-362.0000
1152	723.0000	1065.9600	-288.0000
1153	723.0000	1065.9600	-214.0000
1154	723.0000	1065.9600	-139.0000
1155	723.0000	1065.9600	-64.0000
2102	1014.0000	489.9600	0.0000
2103	1014.0000	852.0000	0.0000
2104	1014.0000	852.0000	11.0000
2105	1014.0000	860.0400	11.0000
2106	1014.0000	870.6000	11.0000
2107	1014.0000	1065.9600	11.0000
2108	1014.0000	852.0000	-12.0000
2109	1014.0000	870.6000	-12.0000
2112	1014.0000	489.9600	-576.0000
2113	1014.0000	573.0000	-576.0000
2114	1014.0000	852.0000	-576.0000
2115	1014.0000	852.0000	-587.0000
2116	1014.0000	860.0400	-587.0000
2117	1014.0000	870.6000	-587.0000
2118	1014.0000	1065.9600	-587.0000
2119	1014.0000	852.0000	-564.0000
2120	1014.0000	870.6000	-564.0000
2122	1159.5000	288.0000	-587.0000
2124	1118.5200	489.9600	0.0000
2125	1118.5200	489.9600	-72.0000
2126	1159.5000	489.9600	-72.0000
2127	1159.5000	489.9600	0.0000
2142	1014.0000	489.9600	-504.0000
2143	1014.0000	489.9600	-432.0000
2144	1014.0000	489.9600	-360.0000
2145	1014.0000	489.9600	-288.0000
2146	1014.0000	489.9600	-216.0000
2147	1014.0000	489.9600	-144.0000
2148	1014.0000	489.9600	-72.0000
2149	1014.0000	1065.9600	-512.0000
2150	1014.0000	1065.9600	-437.0000
2151	1014.0000	1065.9600	-362.0000
2152	1014.0000	1065.9600	-288.0000
2153	1014.0000	1065.9600	-214.0000
2154	1014.0000	1065.9600	-139.0000
2155	1014.0000	1065.9600	-64.0000
2156	1159.5000	489.9600	-587.0000
2157	1159.5000	489.9600	-504.0000
2158	1159.5000	489.9600	-432.0000
21740	1159.5000	573.0000	-587.0000
3100	1305.0000	459.9600	0.0000
3102	1305.0000	489.9600	0.0000
3103	1305.0000	852.0000	0.0000
3104	1305.0000	852.0000	11.0000
3105	1305.0000	860.0400	11.0000
3106	1305.0000	870.6000	11.0000
3107	1305.0000	1065.9600	11.0000
3108	1305.0000	852.0000	-12.0000
3109	1305.0000	870.6000	-12.0000
3112	1305.0000	489.9600	-576.0000
3113	1305.0000	573.0000	-576.0000
3114	1305.0000	852.0000	-576.0000
3115	1305.0000	852.0000	-587.0000
3116	1305.0000	860.0400	-587.0000
3117	1305.0000	870.6000	-587.0000

3118	1305.0000	1065.9600	-587.0000
3119	1305.0000	852.0000	-564.0000
3120	1305.0000	870.6000	-564.0000
3121	1159.5000	860.0400	-587.0000
3142	1305.0000	489.9600	-504.0000
3143	1305.0000	489.9600	-432.0000
3144	1305.0000	489.9600	-360.0000
3145	1305.0000	489.9600	-288.0000
3146	1305.0000	489.9600	-216.0000
3147	1305.0000	489.9600	-144.0000
3148	1305.0000	489.9600	-72.0000
3149	1305.0000	1065.9600	-512.0000
3150	1305.0000	1065.9600	-437.0000
3151	1305.0000	1065.9600	-362.0000
3152	1305.0000	1065.9600	-288.0000
3153	1305.0000	1065.9600	-214.0000
3154	1305.0000	1065.9600	-139.0000
3155	1305.0000	1065.9600	-64.0000
3156	1437.0000	489.9600	-576.0000
3157	1437.0000	489.9600	-504.0000
3158	1437.0000	489.9600	-432.0000
3159	1437.0000	489.9600	-360.0000
3160	1437.0000	489.9600	-288.0000
3161	1437.0000	489.9600	-216.0000
3162	1437.0000	489.9600	-144.0000
3163	1437.0000	489.9600	-72.0000
3164	1437.0000	489.9600	0.0000
3165	1437.0000	459.9600	0.0000
4100	1578.0000	459.9600	0.0000
4102	1578.0000	489.9600	0.0000
4103	1578.0000	852.0000	0.0000
4104	1578.0000	852.0000	11.0000
4105	1578.0000	860.0400	11.0000
4106	1578.0000	870.6000	11.0000
4107	1578.0000	1065.9600	11.0000
4108	1578.0000	852.0000	-12.0000
4109	1578.0000	870.6000	-12.0000
4112	1578.0000	489.9600	-576.0000
4113	1578.0000	573.0000	-576.0000
4114	1578.0000	852.0000	-576.0000
4115	1578.0000	852.0000	-587.0000
4116	1578.0000	860.0400	-587.0000
4117	1578.0000	870.6000	-587.0000
4118	1578.0000	1065.9600	-587.0000
4119	1578.0000	852.0000	-564.0000
4120	1578.0000	870.6000	-564.0000
4122	1578.0000	971.0400	-587.0000
4149	1578.0000	1065.9600	-512.0000
4150	1578.0000	1065.9600	-437.0000
4151	1578.0000	1065.9600	-362.0000
4152	1578.0000	1065.9600	-288.0000
4153	1578.0000	1065.9600	-214.0000
4154	1578.0000	1065.9600	-139.0000
4155	1578.0000	1065.9600	-64.0000
4156	1717.5000	971.0400	-587.0000
5100	1857.0000	459.9600	0.0000
5102	1857.0000	489.9600	0.0000
5103	1857.0000	852.0000	0.0000
5104	1857.0000	852.0000	11.0000
5105	1857.0000	860.0400	11.0000
5106	1857.0000	870.6000	11.0000
5107	1857.0000	1065.9600	11.0000
5108	1857.0000	852.0000	-12.0000
5109	1857.0000	870.6000	-12.0000
5112	1857.0000	489.9600	-576.0000
5113	1857.0000	573.0000	-576.0000
5114	1857.0000	852.0000	-576.0000
5115	1857.0000	852.0000	-587.0000
5116	1857.0000	860.0400	-587.0000
5117	1857.0000	870.6000	-587.0000
5118	1857.0000	1065.9600	-587.0000
5119	1857.0000	852.0000	-564.0000
5120	1857.0000	870.6000	-564.0000
5122	1857.0000	971.0400	-587.0000
5123	1717.5000	573.0000	-576.0000

5149	1857.0000	1065.9600	-512.0000
5150	1857.0000	1065.9600	-437.0000
5151	1857.0000	1065.9600	-362.0000
5152	1857.0000	1065.9600	-288.0000
5153	1857.0000	1065.9600	-214.0000
5154	1857.0000	1065.9600	-139.0000
5155	1857.0000	1065.9600	-64.0000
5187	1857.0000	489.9600	-504.0000
5188	1857.0000	489.9600	-432.0000
5189	1857.0000	489.9600	-360.0000
5190	1857.0000	489.9600	-288.0000
5191	1857.0000	489.9600	-216.0000
5192	1857.0000	489.9600	-144.0000
5193	1857.0000	489.9600	-72.0000
6103	2097.0000	852.0000	0.0000
6104	2097.0000	852.0000	11.0000
6105	2097.0000	860.0400	11.0000
6106	2097.0000	870.6000	11.0000
6107	2097.0000	1065.9600	11.0000
6108	2097.0000	852.0000	-12.0000
6109	2097.0000	870.6000	-12.0000
6118	2097.0000	1065.9600	-587.0000
6149	2097.0000	1065.9600	-512.0000
6150	2097.0000	1065.9600	-437.0000
6151	2097.0000	1065.9600	-362.0000
6152	2097.0000	1065.9600	-288.0000
6153	2097.0000	1065.9600	-214.0000
6154	2097.0000	1065.9600	-139.0000
6155	2097.0000	1065.9600	-64.0000
7103	2301.0000	852.0000	0.0000
7104	2301.0000	852.0000	11.0000
7105	2301.0000	860.0400	11.0000
7106	2301.0000	870.6000	11.0000
7107	2301.0000	1065.9600	11.0000
7108	2301.0000	852.0000	-12.0000
7109	2301.0000	870.6000	-12.0000
7114	2301.0000	852.0000	-576.0000
7115	2301.0000	852.0000	-587.0000
7116	2301.0000	860.0400	-587.0000
7117	2301.0000	870.6000	-587.0000
7118	2301.0000	1065.9600	-587.0000
7119	2301.0000	852.0000	-564.0000
7120	2301.0000	870.6000	-564.0000
7122	2301.0000	971.0400	-587.0000
7149	2301.0000	1065.9600	-512.0000
7150	2301.0000	1065.9600	-437.0000
7151	2301.0000	1065.9600	-362.0000
7152	2301.0000	1065.9600	-288.0000
7153	2301.0000	1065.9600	-214.0000
7154	2301.0000	1065.9600	-139.0000
7155	2301.0000	1065.9600	-64.0000
8103	2505.0000	852.0000	0.0000
8104	2505.0000	852.0000	11.0000
8105	2505.0000	860.0400	11.0000
8106	2505.0000	870.6000	11.0000
8107	2505.0000	1065.9600	11.0000
8108	2505.0000	852.0000	-12.0000
8109	2505.0000	870.6000	-12.0000
8114	2505.0000	852.0000	-576.0000
8115	2505.0000	852.0000	-587.0000
8116	2505.0000	860.0400	-587.0000
8117	2505.0000	870.6000	-587.0000
8118	2505.0000	1065.9600	-587.0000
8119	2505.0000	852.0000	-564.0000
8120	2505.0000	870.6000	-564.0000
81660	2505.0000	971.0400	-587.0000
8149	2505.0000	1065.9600	-512.0000
8150	2505.0000	1065.9600	-437.0000
8151	2505.0000	1065.9600	-362.0000
8152	2505.0000	1065.9600	-288.0000
8153	2505.0000	1065.9600	-214.0000
8154	2505.0000	1065.9600	-139.0000
8155	2505.0000	1065.9600	-64.0000
8156	432.0000	288.0000	-932.0000
8157	1578.0000	288.0000	-900.0000

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$
$ Added runway girder nodes
$
'CNR1011'     2241.0    894.6     -564.0
'CNR1021'     2187.0    894.6     -564.0
'CNR1031'     2019.0    894.6     -564.0
'CNR1041'     1965.0    894.6     -564.0

'CNR101' 2241.0    870.6     -564.0
'CNR102' 2187.0    870.6     -564.0
'CNR103' 2019.0    870.6     -564.0
'CNR104' 1965.0    870.6     -564.0

'CNR2011'     2139.0    894.6     -564.0
'CNR2021'     2085.0    894.6     -564.0
'CNR2031'     1917.0    894.6     -564.0
'CNR2041'     1863.0    894.6     -564.0

'CNR201' 2139.0    870.6     -564.0
'CNR202' 2085.0    870.6     -564.0
'CNR203' 1917.0    870.6     -564.0
'CNR204' 1863.0    870.6     -564.0

'CNR3011'     2106.0    894.6     -564.0
'CNR3021'     2052.0    894.6     -564.0
'CNR3031'     1884.0    894.6     -564.0
'CNR3041'     1830.0    894.6     -564.0

'CNR301' 2106.0    870.6     -564.0
'CNR302' 2052.0    870.6     -564.0
'CNR303' 1884.0    870.6     -564.0
'CNR304' 1830.0    870.6     -564.0

'CNR4011'     1296.0    894.6     -564.0
'CNR4021'     1242.0    894.6     -564.0
'CNR4031'     1074.0    894.6     -564.0
'CNR4041'     1020.0    894.6     -564.0

'CNR401' 1296.0    870.6     -564.0
'CNR402' 1242.0    870.6     -564.0
'CNR403' 1074.0    870.6     -564.0
'CNR404' 1020.0    870.6     -564.0

'CNR5011'     1263.0    894.6     -564.0
'CNR5021'     1209.0    894.6     -564.0
'CNR5031'     1041.0    894.6     -564.0
'CNR5041'     987.0     894.6     -564.0

'CNR501' 1263.0    870.6     -564.0
'CNR502' 1209.0    870.6     -564.0
'CNR503' 1041.0    870.6     -564.0
'CNR504' 987.0     870.6     -564.0

'CNR6011'     1173.0    894.6     -564.0
'CNR6021'     1119.0    894.6     -564.0
'CNR6031'     951.0     894.6     -564.0
'CNR6041'     897.0     894.6     -564.0

'CNR601' 1173.0    870.6     -564.0
'CNR602' 1119.0    870.6     -564.0
'CNR603' 951.0     870.6     -564.0
'CNR604' 897.0     870.6     -564.0

'CNR7011'     459.0     894.6     -564.0
'CNR7021'     405.0     894.6     -564.0
'CNR7031'     237.0     894.6     -564.0
'CNR7041'     183.0     894.6     -564.0

'CNR701' 459.0     870.6     -564.0
'CNR702' 405.0     870.6     -564.0
'CNR703' 237.0     870.6     -564.0
'CNR704' 183.0     870.6     -564.0

'CNR8011'     372.0     894.6     -564.0
'CNR8021'     318.0     894.6     -564.0
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'CNR8031'     150.0     894.6     -564.0
'CNR8041'     96.0 894.6     -564.0

'CNR801' 372.0     870.6     -564.0
'CNR802' 318.0     870.6     -564.0
'CNR803' 150.0     870.6     -564.0
'CNR804' 96.0 870.6     -564.0

'CNR9011'     303.0     894.6     -564.0
'CNR9021'     249.0     894.6     -564.0
'CNR9031'     81.0 894.6     -564.0
'CNR9041'     27.0 894.6     -564.0

'CNR901' 303.0     870.6     -564.0
'CNR902' 249.0     870.6     -564.0
'CNR903' 81.0 870.6     -564.0
'CNR904' 27.0 870.6     -564.0


'CNR1131'     2241.0     894.6     -12.0
'CNR1141'     2187.0     894.6     -12.0
'CNR1151'     2019.0     894.6     -12.0
'CNR1161'     1965.0     894.6     -12.0

'CNR113' 2241.0     870.6     -12.0
'CNR114' 2187.0     870.6     -12.0
'CNR115' 2019.0     870.6     -12.0
'CNR116' 1965.0     870.6     -12.0


'CNR2131'     2139.0     894.6     -12.0
'CNR2141'     2085.0     894.6     -12.0
'CNR2151'     1917.0     894.6     -12.0
'CNR2161'     1863.0     894.6     -12.0

'CNR213' 2139.0     870.6     -12.0
'CNR214' 2085.0     870.6     -12.0
'CNR215' 1917.0     870.6     -12.0
'CNR216' 1863.0     870.6     -12.0

'CNR3131'     2106.0     894.6     -12.0
'CNR3141'     2052.0     894.6     -12.0
'CNR3151'     1884.0     894.6     -12.0
'CNR3161'     1830.0     894.6     -12.0


'CNR313' 2106.0     870.6     -12.0
'CNR314' 2052.0     870.6     -12.0
'CNR315' 1884.0     870.6     -12.0
'CNR316' 1830.0     870.6     -12.0

'CNR4131'     1296.0     894.6     -12.0
'CNR4141'     1242.0     894.6     -12.0
'CNR4151'     1074.0     894.6     -12.0
'CNR4161'     1020.0     894.6     -12.0

'CNR413' 1296.0     870.6     -12.0
'CNR414' 1242.0     870.6     -12.0
'CNR415' 1074.0     870.6     -12.0
'CNR416' 1020.0     870.6     -12.0

'CNR5131'     1263.0     894.6     -12.0
'CNR5141'     1209.0     894.6     -12.0
'CNR5151'     1041.0     894.6     -12.0
'CNR5161'     987.0     894.6     -12.0


'CNR513' 1263.0     870.6     -12.0
'CNR514' 1209.0     870.6     -12.0
'CNR515' 1041.0     870.6     -12.0
'CNR516' 987.0     870.6     -12.0

'CNR6131'     1173.0     894.6     -12.0
'CNR6141'     1119.0     894.6     -12.0
'CNR6151'     951.0     894.6     -12.0
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'CNR6161'      897.0      894.6      -12.0

'CNR613' 1173.0     870.6      -12.0
'CNR614' 1119.0     870.6      -12.0
'CNR615' 951.0      870.6      -12.0
'CNR616' 897.0      870.6      -12.0

'CNR7131'      459.0      894.6      -12.0
'CNR7141'      405.0      894.6      -12.0
'CNR7151'      237.0      894.6      -12.0
'CNR7161'      183.0      894.6      -12.0

'CNR713' 459.0      870.6      -12.0
'CNR714' 405.0      870.6      -12.0
'CNR715' 237.0      870.6      -12.0
'CNR716' 183.0      870.6      -12.0

'CNR8131'      372.0      894.6      -12.0
'CNR8141'      318.0      894.6      -12.0
'CNR8151'      150.0      894.6      -12.0
'CNR8161'      96.0 894.6      -12.0

'CNR813' 372.0      870.6      -12.0
'CNR814' 318.0      870.6      -12.0
'CNR815' 150.0      870.6      -12.0
'CNR816' 96.0 870.6      -12.0

'CNR9131'      303.0      894.6      -12.0
'CNR9141'      249.0      894.6      -12.0
'CNR9151'      81.0 894.6      -12.0
'CNR9161'      27.0 894.6      -12.0

'CNR913' 303.0      870.6      -12.0
'CNR914' 249.0      870.6      -12.0
'CNR915' 81.0 870.6      -12.0
'CNR916' 27.0 870.6      -12.0



$
$ Added crane nodes
$
'CN1'     1146     946.1     -12
'CN10'     1146     946.1     -91.65
'CN100'     924     946.1     -394.74
'CN101'     924     946.1     -384.78
'CN102'     924     946.1     -374.83
'CN103'     924     946.1     -364.87
'CN104'     924     946.1     -354.91
'CN105'     924     946.1     -344.96
'CN106'     924     946.1     -325.6
'CN107'     924     946.1     -316.2
'CN108'     924     946.1     -306.8
'CN109'     924     946.1     -297.4
'CN11'     1146     946.1     -101.61
'CN110'     924     946.1     -288
'CN111'     924     946.1     -278.6
'CN112'     924     946.1     -269.2
'CN113'     924     946.1     -259.8
'CN114'     924     946.1     -250.4
'CN116'     924     998.9     -332.38
'CN117'     924     955.73     -332.38
'CN118'     924     964.37     -332.38
'CN119'     924     973     -332.38
'CN12'     1146     946.1     -111.57
'CN120'     924     981.63     -332.38
'CN121'     924     990.27     -332.38
'CN123'     1146     998.9     -332.38
'CN124'     1146     955.73     -332.38
'CN125'     1146     964.37     -332.38
'CN126'     1146     973     -332.38
'CN127'     1146     981.63     -332.38
'CN128'     1146     990.27     -332.38
'CN13'     1146     946.1     -121.52
'CN130'     1146     998.9     -238.38
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'CN131' 1146 955.73 -238.38
'CN132' 1146 964.37 -238.38
'CN133' 1146 973 -238.38
'CN134' 1146 981.63 -238.38
'CN135' 1146 990.27 -238.38
'CN137' 924 998.9 -238.38
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7015	139	147
7016	138	146
7017	137	145
7018	136	144
7019	135	143
7020	134	142
7021	133	112
7022	102	1102
7023	148	1148
7024	147	1147
7025	146	1146
7026	145	1145
7027	144	1144
7028	143	1143
7029	142	1142
7030	112	1112
7031	1102	2102
7032	1148	2148
7033	1147	2147
7034	1146	2146
7035	1145	2145
7036	1144	2144
7037	1143	2143
7038	1142	2142
7039	1112	2112
7040	2102	2124
7041	2148	2125
7042	2147	3147
7043	2146	3146
7044	2145	3145
7045	2144	3144
7046	2143	2158
7047	2142	2157
7048	2112	2156
7049	2158	3143
7360	2127	3102
7361	2125	2126
7362	2126	3148
7363	2124	2125
7364	2124	2127
7050	3100	3165
7051	3102	3164
7052	3148	3163
7053	3147	3162
7054	3146	3161
7055	3145	3160
7056	3144	3159
7057	3143	3158
7058	3142	3157
7059	3112	3156
7060	3165	4100
7061	3164	4102
7062	3156	4112
7063	4113	5123
7064	4112	5112
7065	4102	5102
7066	4100	5100
7330	5123	5113

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  8700      6        105
  8701      105      1105
  8702      1105     2105
  8703      2105     3105
  8704      3105     4105
  8705      4105     5105
  8706      5105     6105
  8707      6105     7105
  8708      7105     8105
  8800      17       116
  8801      116      1116
  8802      1116     2116
  8803      2116     3121
  8806        3121   3116
  8804      3116     4116
  8805      4116     5116

$ 8806      5116     7116
  8807      7116     8116
  9000      8        182
  9001      41       181
  9002      40       180
  9003      39       179
  9004      38       178
  9005      37       177
  9006      36       176
  9007      35       175
  9008      19       174
  9081      182      107
  9082      181      155
  9083      180      154
  9084      179      153
  9085      178      152
  9086      177      151
  9087      176      150
  9088      175      149
  9089      174      118
  9090      174      175
  9091      175      176
  9092      176      177
  9093      177      178
  9094      178      179
  9095      179      180
  9096      180      181
  9097      181      182
  9009      107      1107
  9010      155      1155
  9011      154      1154
  9012      153      1153
  9013      152      1152
  9014      151      1151
  9015      150      1150
  9016      149      1149
  9017      118      1118
  9018      1107     2107
  9019      1155     2155
  9020      1154     2154
  9021      1153     2153
  9022      1152     2152
  9023      1151     2151
  9024      1150     2150
  9025      1149     2149
  9026      1118     2118
  9027      2107     3107
  9028      2155     3155
  9029      2154     3154
  9030      2153     3153
  9031      2152     3152
  9032      2151     3151
  9033      2150     3150
  9034      2149     3149
  9035      2118     3118
  9036      3107     4107
  9037      3155     4155
  9038      3154     4154
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9039    3153    4153
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9041    3151    4151
9042    3150    4150
9043    3149    4149
9044    3118    4118
9045    4107    5107
9046    4155    5155
9047    4154    5154
9048    4153    5153
9049    4152    5152
9050    4151    5151
9051    4150    5150
9052    4149    5149
9053    4118    5118
9054    5107    6107
9055    5155    6155
9056    5154    6154
9057    5153    6153
9058    5152    6152
9059    5151    6151
9060    5150    6150
9061    5149    6149
9062    5118    6118
9063    6107    7107
9064    6155    7155
9065    6154    7154
9066    6153    7153
9067    6152    7152
9068    6151    7151
9069    6150    7150
9070    6149    7149
9071    6118    7118
9072    7107    8107
9073    7155    8155
9074    7154    8154
9075    7153    8153
9076    7152    8152
9077    7151    8151
9078    7150    8150
9079    7149    8149
9080    7118    8118
7435    112     1145
7436    1145    2102
7437    102     1145
7438    1145    2112
7439    2112    3145
7441    2145    2158
7442    2102    3145
7443    3145    3164
7301    1107    105
7303    1103    102
7305    1102    101
7307    1118    116
7309    1114    113
7310    112     183
7311    1112    183
7313    5107    4105
7315    5103    4102
7317    5100    4101
7318    4122    4156
7319    4156    5122
7320    4118    4156
7321    4156    5116
7322    4116    4156
7323    4156    5118
7325    5114    4113
7326    4112    5123
7327    5123    5112
7329    5112    4111
7331    7122    81660
7333    8118    7122
7335    81660   7116

$ ROOF HOR. BRACING
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  7336       37         174
  7337       37         179
  7338       39         177
  7339       39         182
  7340       182        153
  7341       153        1107
  7342       1107       2153
  7343       2153       3107
  7344       3107       4153
  7345       4153       5107
  7346       5107       6153
  7347       6153       7107
  7348       7107       8153
  7349       7151       8153
  7350       7153       8151
  7351       7118       8151


  7352       112        8156
  7353       4112       8157

  7354    5122    7122

$--------------
  5555           31653163

$
$ Added Runway Girder
$
'RG1'     81097109
'RG2'     7109'CNR113'
'RG3'     'CNR113' 'CNR114'
'RG4'     'CNR114' 'CNR213'
'RG5'     'CNR213' 'CNR313'
'RG6'     'CNR313' 6109
'RG7'     6109'CNR214'
'RG8'     'CNR214' 'CNR314'
'RG9'     'CNR314' 'CNR115'
'RG10'    'CNR115' 'CNR116'
'RG11'    'CNR116' 'CNR215'
'RG12'    'CNR215' 'CNR315'
'RG13'    'CNR315' 'CNR216'
'RG14'    'CNR216' 5109
'RG15'    5109'CNR316'
'RG16'    'CNR316' 4109
'RG17'    41093109
'RG18'    3109'CNR413'
'RG19'    'CNR413' 'CNR513'
'RG20'    'CNR513' 'CNR414'
'RG21'    'CNR414' 'CNR514'
'RG22'    'CNR514' 'CNR613'
'RG23'    'CNR613' 'CNR614'
'RG24'    'CNR614' 'CNR415'
'RG25'    'CNR415' 'CNR515'
'RG26'    'CNR515' 'CNR416'
'RG27'    'CNR416' 2109
'RG28'    2109'CNR516'
'RG29'    'CNR516' 'CNR615'
'RG30'    'CNR615' 'CNR616'
'RG31'    'CNR616' 1109
'RG32'    1109'CNR713'
'RG33'    'CNR713' 109
'RG34'    109  'CNR714'
'RG35'    'CNR714' 'CNR813'
'RG36'    'CNR813' 'CNR814'
'RG37'    'CNR814' 'CNR913'
'RG38'    'CNR913' 'CNR914'
'RG39'    'CNR914' 'CNR715'
'RG40'    'CNR715' 'CNR716'
'RG41'    'CNR716' 'CNR815'
'RG42'    'CNR815' 'CNR816'
'RG43'    'CNR816' 'CNR915'
'RG44'    'CNR915' 'CNR916'
'RG45'    'CNR916' 10
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'RG50'    81207120
'RG51'    7120'CNR101'
'RG52'    'CNR101' 'CNR102'
'RG53'    'CNR102' 'CNR201'
'RG54'    'CNR201' 'CNR301'
'RG55'    'CNR301' 'CNR202'
'RG56'    'CNR202' 'CNR302'
'RG57'    'CNR302' 'CNR103'
'RG58'    'CNR103' 'CNR104'
'RG59'    'CNR104' 'CNR203'
'RG60'    'CNR203' 'CNR303'
'RG61'    'CNR303' 'CNR204'
'RG62'    'CNR204' 5120
'RG63'    5120'CNR304'
'RG64'    'CNR304' 4120
'RG65'    41203120
'RG66'    3120'CNR401'
'RG67'    'CNR401' 'CNR501'
'RG68'    'CNR501' 'CNR402'
'RG69'    'CNR402' 'CNR502'
'RG70'    'CNR502' 'CNR601'
'RG71'    'CNR601' 'CNR602'
'RG72'    'CNR602' 'CNR403'
'RG73'    'CNR403' 'CNR503'
'RG74'    'CNR503' 'CNR404'
'RG75'    'CNR404' 2120
'RG76'    2120'CNR504'
'RG77'    'CNR504' 'CNR603'
'RG78'    'CNR603' 'CNR604'
'RG79'    'CNR604' 1120
'RG80'    1120'CNR701'
'RG81'    'CNR701' 120
'RG82'    120  'CNR702'
'RG83'    'CNR702' 'CNR801'
'RG84'    'CNR801' 'CNR802'
'RG85'    'CNR802' 'CNR901'
'RG86'    'CNR901' 'CNR902'
'RG87'    'CNR902' 'CNR703'
'RG88'    'CNR703' 'CNR704'
'RG89'    'CNR704' 'CNR803'
'RG90'    'CNR803' 'CNR804'
'RG91'    'CNR804' 'CNR903'
'RG92'    'CNR903' 'CNR904'
'RG93'    'CNR904' 21


$
$ Added crane members
$
'CM1'   'CN1'   'CN3'
'CM2'   'CN3'   'CN4'
'CM3'   'CN4'   'CN5'
'CM4'   'CN5'   'CN6'
'CM5'   'CN6'   'CN7'
'CM6'   'CN7'   'CN8'
'CM7'   'CN8'   'CN9'
'CM8'   'CN9'   'CN10'
'CM9'   'CN10'  'CN11'
'CM10'  'CN11'  'CN12'
'CM11'  'CN12'  'CN13'
'CM12'  'CN13'  'CN14'
'CM13'  'CN14'  'CN15'
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'CM16'  'CN17'  'CN18'
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'CM18'  'CN19'  'CN20'
'CM19'  'CN20'  'CN21'
'CM20'  'CN21'  'CN22'
'CM21'  'CN22'  'CN23'
'CM22'  'CN23'  'CN24'
'CM23'  'CN24'  'CN2'
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'CM24' 'CN25' 'CN27'
'CM25' 'CN27' 'CN28'
'CM26' 'CN28' 'CN29'
'CM27' 'CN29' 'CN30'
'CM28' 'CN30' 'CN31'
'CM29' 'CN31' 'CN32'
'CM30' 'CN32' 'CN33'
'CM31' 'CN33' 'CN34'
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'CM33' 'CN35' 'CN36'
'CM34' 'CN36' 'CN37'
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'CM36' 'CN38' 'CN39'
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'CM59' 'CN62' 'CN63'
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'CM95' 'CN98' 'CN99'
'CM96' 'CN99' 'CN100'
'CM97' 'CN100' 'CN101'
'CM98' 'CN101' 'CN102'

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'CM100' 'CN103' 'CN104'
'CM101' 'CN104' 'CN105'
'CM102' 'CN105' 'CN83'
'CM103' 'CN83'  'CN106'
'CM104' 'CN106' 'CN107'
'CM105' 'CN107' 'CN108'
'CM106' 'CN108' 'CN109'
'CM107' 'CN109' 'CN110'
'CM108' 'CN110' 'CN111'
'CM109' 'CN111' 'CN112'
'CM110' 'CN112' 'CN113'
'CM111' 'CN113' 'CN114'
'CM112' 'CN114' 'CN50'


'CM113' 'CN452' 'CN117'

$------------------
$ CHANGE MEM INCIDENCES
$ PER TROLLEY LCOATION
$ TROLLEY 1 - 'CN91' -> 'CN60'
$ TROLLEY 2 - 'CN91' -> 'CN68'
$ TROLLEY 3 - 'CN91' -> 'CN83'
$ TROLLEY 4 - 'CN91'
'CM480' 'CN83'  'CN452'
$------------------

'CM114' 'CN117' 'CN118'
'CM115' 'CN118' 'CN119'
'CM116' 'CN119' 'CN120'
'CM117' 'CN120' 'CN121'
'CM118' 'CN121' 'CN116'
'CM119' 'CN451'  'CN124'

$------------------
$ CHANGE MEM INCIDENCES
$ PER TROLLEY LCOATION
$ TROLLEY 1 - 'CN34' -> 'CN12'
$ TROLLEY 2 - 'CN34' -> 'CN20'
$ TROLLEY 3 - 'CN34' -> 'CN26'
$ TROLLEY 4 - 'CN34'
'CM479' 'CN26'  'CN451'
$------------------

'CM120' 'CN124' 'CN125'
'CM121' 'CN125' 'CN126'
'CM122' 'CN126' 'CN127'
'CM123' 'CN127' 'CN128'
'CM124' 'CN128' 'CN123'

$------------------
$ CHANGE MEM INCIDENCES
$ PER TROLLEY LCOATION
$ TROLLEY 1 - 'CN43' -> 'CN3'
$ TROLLEY 2 - 'CN43' -> 'CN11'
$ TROLLEY 3 - 'CN43' -> 'CN2'
$ TROLLEY 4 - 'CN43'
'CM125' 'CN2'  'CN131'
$------------------

'CM126' 'CN131' 'CN132'
'CM127' 'CN132' 'CN133'
'CM128' 'CN133' 'CN134'
'CM129' 'CN134' 'CN135'
'CM130' 'CN135' 'CN130'

$------------------
$ CHANGE MEM INCIDENCES
$ PER TROLLEY LCOATION (DONT CHANGE 'CN138'
$ TROLLEY 1 - 'CN100' -> 'CN51'
$ TROLLEY 2 - 'CN100' -> 'CN59'
$ TROLLEY 3 - 'CN100' -> 'CN50'
$ TROLLEY 4 - 'CN100'
'CM131' 'CN50' 'CN138'
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'CM132' 'CN138' 'CN139'
'CM133' 'CN139' 'CN140'
'CM134' 'CN140' 'CN141'
'CM135' 'CN141' 'CN142'
'CM136' 'CN142' 'CN137'
'CM207' 'CN25'  'CN205'
'CM208' 'CN205' 'CN206'
'CM209' 'CN206' 'CN207'
'CM210' 'CN207' 'CN208'
'CM211' 'CN208' 'CN209'
'CM212' 'CN209' 'CN210'
'CM213' 'CN210' 'CN211'
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'CM268' 'CN264' 'CN265'
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'CM270' 'CN266' 'CN267'
'CM271' 'CN267' 'CN268'
'CM272' 'CN268' 'CN49'
$=======================================
$ CHANGE MEM INCIDENCE PER CRANE LOCATION
```

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$ EG. N1 USE CNR1xx1
$     N2 USE CNR2xx1

'CM273' 'CNR6011' 'CN270'
'CM274' 'CNR6021' 'CN272'
'CM275' 'CNR6031' 'CN274'
'CM276' 'CNR6041' 'CN276'
'CM277' 'CNR6131' 'CN278'
'CM278' 'CNR6141' 'CN280'
'CM279' 'CNR6151' 'CN282'
'CM280' 'CNR6161' 'CN284'

$=======================================


'CM281' 'CN270' 'CN285'
'CM282' 'CN285' 'CN286'
'CM283' 'CN286' 'CN249'
'CM284' 'CN274' 'CN287'
'CM285' 'CN287' 'CN288'
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'CM288' 'CN289' 'CN290'
'CM289' 'CN290' 'CN249'
'CM290' 'CN276' 'CN291'
'CM291' 'CN291' 'CN292'
'CM292' 'CN292' 'CN254'
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'CM294' 'CN293' 'CN294'
'CM295' 'CN294' 'CN259'
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'CM301' 'CN298' 'CN259'
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'CM310' 'CN305' 'CN306'
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'CM338' 'CN332' 'CN280'
'CM360' 'CN347' 'CN337'
'CM361' 'CN347' 'CN348'
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'CM365' 'CN351' 'CN352'
'CM366' 'CN334' 'CN353'
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'CM368' 'CN354' 'CN355'
'CM369' 'CN352' 'CN357'
'CM370' 'CN357' 'CN358'
'CM371' 'CN358' 'CN356'
'CM372' 'CN355' 'CN360'
'CM373' 'CN360' 'CN359'
'CM374' 'CN359' 'CN362'
'CM375' 'CN362' 'CN361'
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'CM384' 'CN367' 'CN372'
'CM385' 'CN372' 'CN368'
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'CM389' 'CN375' 'CN377'
'CM390' 'CN377' 'CN376'
'CM391' 'CN376' 'CN379'
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'CM393' 'CN369' 'CN378'
'CM406' 'CN351' 'CN392'
'CM407' 'CN392' 'CN393'
'CM408' 'CN393' 'CN372'
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'CM410' 'CN395' 'CN396'
'CM411' 'CN396' 'CN378'
'CM412' 'CN368' 'CN397'
'CM413' 'CN352' 'CN399'
'CM414' 'CN356' 'CN400'
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'CM416' 'CN401' 'CN397'
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'CM418' 'CN400' 'CN403'
'CM419' 'CN403' 'CN402'
'CM420' 'CN397' 'CN405'
'CM421' 'CN405' 'CN406'
'CM422' 'CN406' 'CN402'
'CM423' 'CN399' 'CN408'
'CM424' 'CN408' 'CN409'
'CM425' 'CN409' 'CN400'
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'CM427' 'CN411' 'CN412'
'CM428' 'CN412' 'CN365'
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'CM439' 'CN423' 'CN424'
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'CM444' 'CN347' 'CN429'
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'CM449' 'CN433' 'CN374'
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'CM451' 'CN435' 'CN434'

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'CM461' 'CN444' 'CN445'
'CM462' 'CN445' 'CN338'
'CM463' 'CN446' 'CN447'
'CM464' 'CN447' 'CN448'
'CM465' 'CN448' 'CN333'
'CM466' 'CN443' 'CN337'
'CM467' 'CN446' 'CN334'
'CM468' 'CN437' 'CN341'
'CM469' 'CN344' 'CN440'
'CM470' 'CN130' 'CN443'
'CM471' 'CN123' 'CN437'
'CM472' 'CN116' 'CN440'
'CM473' 'CN137' 'CN446'

'CM483' 'CN434' 'CN450'

'R1' 'CNR101' 'CNR1011'
'R2' 'CNR102' 'CNR1021'
'R3' 'CNR103' 'CNR1031'
'R4' 'CNR104' 'CNR1041'
'R5' 'CNR113' 'CNR1131'
'R6' 'CNR114' 'CNR1141'
'R7' 'CNR115' 'CNR1151'
'R8' 'CNR116' 'CNR1161'

'R21' 'CNR201' 'CNR2011'
'R22' 'CNR202' 'CNR2021'
'R23' 'CNR203' 'CNR2031'
'R24' 'CNR204' 'CNR2041'
'R25' 'CNR213' 'CNR2131'
'R26' 'CNR214' 'CNR2141'
'R27' 'CNR215' 'CNR2151'
'R28' 'CNR216' 'CNR2161'

'R31' 'CNR301' 'CNR3011'
'R32' 'CNR302' 'CNR3021'
'R33' 'CNR303' 'CNR3031'
'R34' 'CNR304' 'CNR3041'
'R35' 'CNR313' 'CNR3131'
'R36' 'CNR314' 'CNR3141'
'R37' 'CNR315' 'CNR3151'
'R38' 'CNR316' 'CNR3161'

'R41' 'CNR401' 'CNR4011'
'R42' 'CNR402' 'CNR4021'
'R43' 'CNR403' 'CNR4031'
'R44' 'CNR404' 'CNR4041'
'R45' 'CNR413' 'CNR4131'
'R46' 'CNR414' 'CNR4141'
'R47' 'CNR415' 'CNR4151'
'R48' 'CNR416' 'CNR4161'

'R51' 'CNR501' 'CNR5011'
'R52' 'CNR502' 'CNR5021'
'R53' 'CNR503' 'CNR5031'
'R54' 'CNR504' 'CNR5041'
'R55' 'CNR513' 'CNR5131'
'R56' 'CNR514' 'CNR5141'
'R57' 'CNR515' 'CNR5151'
'R58' 'CNR516' 'CNR5161'

'R61' 'CNR601' 'CNR6011'
'R62' 'CNR602' 'CNR6021'
'R63' 'CNR603' 'CNR6031'
'R64' 'CNR604' 'CNR6041'
'R65' 'CNR613' 'CNR6131'
'R66' 'CNR614' 'CNR6141'
'R67' 'CNR615' 'CNR6151'
'R68' 'CNR616' 'CNR6161'

'R71' 'CNR701' 'CNR7011'
'R72' 'CNR702' 'CNR7021'
'R73' 'CNR703' 'CNR7031'
'R74' 'CNR704' 'CNR7041'
'R75' 'CNR713' 'CNR7131'
'R76' 'CNR714' 'CNR7141'
'R77' 'CNR715' 'CNR7151'
'R78' 'CNR716' 'CNR7161'

'R81' 'CNR801' 'CNR8011'
'R82' 'CNR802' 'CNR8021'
'R83' 'CNR803' 'CNR8031'
'R84' 'CNR804' 'CNR8041'
'R85' 'CNR813' 'CNR8131'
'R86' 'CNR814' 'CNR8141'
'R87' 'CNR815' 'CNR8151'
'R88' 'CNR816' 'CNR8161'

'R91' 'CNR901' 'CNR9011'
'R92' 'CNR902' 'CNR9021'
'R93' 'CNR903' 'CNR9031'
'R94' 'CNR904' 'CNR9041'
'R95' 'CNR913' 'CNR9131'
'R96' 'CNR914' 'CNR9141'
'R97' 'CNR915' 'CNR9151'
'R98' 'CNR916' 'CNR9161'

ELEMENT INC

'CM478' 'CN434' 'CN450'
'CM481' 'CN434' 'CN450'
'CM482' 'CN434' 'CN450'

NONLINEAR SPRING PROPERTIES

CURVE 'FY' FORCE SYMMETRY
0.0 0.0 2266759.624568 1.0

CURVE 'FX' FORCE SYMMETRY
0.0 0.0 2766222.961730 1000.0

CURVE 'FZ' FORCE SYMMETRY
0.0 0.0 2766222.961730 1000.0

PRINT ALL
END

ELEMENT PROPS
'CM478' TYPE 'NLS'
'CM481' TYPE 'NLS'
'CM482' TYPE 'NLS'

NONLINEAR SPRING ELEMENT DATA

STIFFNESS
'CM478' Y CURVE 'FY'
'CM481' X CURVE 'FX'
'CM482' Z CURVE 'FZ'

END

$ Rigid link members with small density

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MATERIAL STEEL
CONSTANT
DENSITY 0.0001 MEM -
   4         8         9                        -
   15        19        20        22             -
   102       106       107                      -
   113       117       118       120            -
   1102      1106      1107                     -
   1113      1117      1118      1120           -
   2102      2106      2107                     -
   2113      2117      2118      2120           -
   3102      3106      3107                     -
   3113      3117      3118      3120           -
   4102      4106      4107                     -
   4113      4117      4118                     -
   4120      5102      5106      5107           -
   5113      5117      5118                     -
   5120      6102      6106      6107           -
   71020     71060     71070                    -
   71130     71170     71180                    -
   71200     8102      8106      8107           -
   8113      8117      8118                     -
   8120   5555                                  -
   11        109       1109      2109      3109     -
   4109      5109      6109      71090     8109     -
   22        120       1120      2120      3120     -
   4120      5120      71200     8120           -
'R1' TO 'R8' 'R21' TO 'R28' 'R31' TO 'R38' 'R41' TO 'R48'       -
'R51' TO 'R58' 'R61' TO 'R68' 'R71' TO 'R78' 'R81' TO 'R88'     -
'R91' TO 'R98'
$
$ Added crane members
$
UNITS INCH LBS
$ MATERIAL STEEL
CONSTANT
E 0.3E8 MEMBER -
'CM1' 'CM2' 'CM3' 'CM4' 'CM5' 'CM6' 'CM7' 'CM8' 'CM9' 'CM10' -
'CM11' 'CM12' 'CM13' 'CM14' 'CM15' 'CM16' 'CM17' 'CM18' 'CM19' -
'CM20' 'CM21' 'CM22' 'CM23' 'CM24' 'CM25' 'CM26' 'CM27' 'CM28' -
'CM29' 'CM30' 'CM31' 'CM32' 'CM33' 'CM34' 'CM35' 'CM36' 'CM37' -
'CM38' 'CM39' 'CM40' 'CM41' 'CM42' 'CM43' 'CM44' 'CM45' 'CM46' -
'CM47' 'CM48' 'CM49' 'CM50' 'CM51' 'CM52' 'CM53' 'CM54' 'CM55' -
'CM56' 'CM57' 'CM58' 'CM59' 'CM60' 'CM61' 'CM62' 'CM63' 'CM64' -
'CM65' 'CM66' 'CM67' 'CM68' 'CM69' 'CM70' 'CM71' 'CM72' 'CM73' -
'CM74' 'CM75' 'CM76' 'CM77' 'CM78' 'CM79' 'CM80' 'CM81' 'CM82' -
'CM83' 'CM84' 'CM85' 'CM86' 'CM87' 'CM88' 'CM89' 'CM90' 'CM91' -
'CM92' 'CM93' 'CM94' 'CM95' 'CM96' 'CM97' 'CM98' 'CM99' 'CM100' -
'CM101' 'CM102' 'CM103' 'CM104' 'CM105' 'CM106' 'CM107' 'CM108' -
'CM109' 'CM110' 'CM111' 'CM112' 'CM113' 'CM114' 'CM115' 'CM116' -
'CM117' 'CM118' 'CM119' 'CM120' 'CM121' 'CM122' 'CM123' 'CM124' -
'CM125' 'CM126' 'CM127' 'CM128' 'CM129' 'CM130' 'CM131' 'CM132' -
'CM133' 'CM134' 'CM135' 'CM136' 'CM207' 'CM208' 'CM209' 'CM210' -
'CM211' 'CM212' 'CM213' 'CM214' 'CM215' 'CM216' 'CM217' 'CM218' -
'CM219' 'CM220' 'CM221' 'CM222' 'CM223' 'CM224' 'CM225' 'CM226' -
'CM227' 'CM228' 'CM229' 'CM230' 'CM231' 'CM232' 'CM233' 'CM234' -
'CM235' 'CM236' 'CM237' 'CM238' 'CM239' 'CM240' 'CM241' 'CM242' -
'CM243' 'CM244' 'CM245' 'CM246' 'CM247' 'CM248' 'CM249' 'CM250' -
'CM251' 'CM252' 'CM253' 'CM254' 'CM255' 'CM256' 'CM257' 'CM258' -
'CM259' 'CM260' 'CM261' 'CM262' 'CM263' 'CM264' 'CM265' 'CM266' -
'CM267' 'CM268' 'CM269' 'CM270' 'CM271' 'CM272' 'CM273' 'CM274' -
'CM275' 'CM276' 'CM277' 'CM278' 'CM279' 'CM280' 'CM281' 'CM282' -
'CM283' 'CM284' 'CM285' 'CM286' 'CM287' 'CM288' 'CM289' 'CM290' -
'CM291' 'CM292' 'CM293' 'CM294' 'CM295' 'CM296' 'CM297' 'CM298' -
'CM299' 'CM300' 'CM301' 'CM302' 'CM303' 'CM304' 'CM305' 'CM306' -
'CM307' 'CM308' 'CM309' 'CM310' 'CM311' 'CM312' 'CM313' 'CM314' -
'CM315' 'CM316' 'CM317' 'CM318' 'CM319' 'CM320' 'CM321' 'CM322' -
'CM323' 'CM324' 'CM325' 'CM326' 'CM327' 'CM328' 'CM329' 'CM330' -
'CM331' 'CM332' 'CM333' 'CM334' 'CM335' 'CM336' 'CM337' 'CM338' -
'CM360' 'CM361' 'CM362' 'CM363' 'CM364' 'CM365' 'CM366' 'CM367' -
'CM368' 'CM369' 'CM370' 'CM371' 'CM372' 'CM373' 'CM374' 'CM375' -
'CM376' 'CM377' 'CM378' 'CM379' 'CM380' 'CM384' 'CM385' 'CM386' -
'CM387' 'CM388' 'CM389' 'CM390' 'CM391' 'CM392' 'CM393' 'CM406' -
'CM407' 'CM408' 'CM409' 'CM410' 'CM411' 'CM412' 'CM413' 'CM414' -
'CM415' 'CM416' 'CM417' 'CM418' 'CM419' 'CM420' 'CM421' 'CM422' -
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'CM423' 'CM424' 'CM425' 'CM426' 'CM427' 'CM428' 'CM429' 'CM430' -
'CM431' 'CM432' 'CM433' 'CM434' 'CM435' 'CM436' 'CM437' 'CM438' -
'CM439' 'CM440' 'CM441' 'CM442' 'CM443' 'CM444' 'CM445' 'CM446' -
'CM447' 'CM448' 'CM449' 'CM450' 'CM451' 'CM452' 'CM453' 'CM454' -
'CM455' 'CM456' 'CM457' 'CM458' 'CM459' 'CM460' 'CM461' 'CM462' -
'CM463' 'CM464' 'CM465' 'CM466' 'CM467' 'CM468' 'CM469' 'CM470' -
'CM471' 'CM472' 'CM473'

$ E 13137518 MEM 'CM478'

$'CM479' 'CM480'
$
$ Added crane member material property 2
$
DENSITY 0.45 MEMBER                                  -
'CM47'  'CM48'  'CM49'  'CM50'  'CM51'  'CM52'  'CM53'  'CM54'  -
'CM55'  'CM56'  'CM57'  'CM58'  'CM59'  'CM60'  'CM61'  'CM62'  -
'CM63'  'CM64'  'CM65'  'CM66'  'CM67'  'CM68'  'CM69'  'CM80'  -
'CM81'  'CM82'  'CM83'  'CM84'  'CM85'  'CM86'  'CM87'  'CM88'  -
'CM89'  'CM90'  'CM91'  'CM92'  'CM93'  'CM94'  'CM95'  'CM96'  -
'CM97'  'CM98'  'CM99'  'CM100' 'CM101' 'CM102' 'CM103' 'CM104' -
'CM105' 'CM106' 'CM107' 'CM108' 'CM109' 'CM110' 'CM111' 'CM112'
$
$ Added crane member material property 3
$
DENSITY 0.37 MEMBER                                  -
'CM207' 'CM208' 'CM209' 'CM210' 'CM211' 'CM212' 'CM213' 'CM214' -
'CM215' 'CM216' 'CM217' 'CM218' 'CM219' 'CM220' 'CM221' 'CM222' -
'CM223' 'CM224' 'CM225' 'CM226' 'CM227' 'CM228' 'CM229' 'CM230' -
'CM231' 'CM232' 'CM233' 'CM234' 'CM235' 'CM236' 'CM237' 'CM238' -
'CM239' 'CM240' 'CM241' 'CM242' 'CM243' 'CM244' 'CM245' 'CM246' -
'CM247' 'CM248' 'CM249' 'CM250' 'CM251' 'CM252'
$
$ Added crane member material property 4
$
DENSITY 0.47 MEMBER                                  -
'CM273' 'CM274' 'CM275' 'CM276' 'CM277' 'CM278' 'CM279' 'CM280' -
'CM305' 'CM306' 'CM307' 'CM308' 'CM309' 'CM310' 'CM311' 'CM312' -
'CM313' 'CM314' 'CM315' 'CM316' 'CM317' 'CM318' 'CM319' 'CM320' -
'CM321' 'CM322' 'CM323' 'CM324' 'CM325' 'CM326' 'CM327' 'CM328' -
'CM329' 'CM330' 'CM331' 'CM332' 'CM333' 'CM334' 'CM335' 'CM336' -
'CM337' 'CM338' 'CM281' 'CM282' 'CM283' 'CM284' 'CM285' 'CM286' -
'CM287' 'CM288' 'CM289' 'CM290' 'CM291' 'CM292' 'CM293' 'CM294' -
'CM295' 'CM296' 'CM297' 'CM298' 'CM299' 'CM300' 'CM301' 'CM302' -
'CM303' 'CM304'
$
$ Added crane member material property 5
$
DENSITY 0.0000 MEMBER                                -
'CM113' 'CM119' 'CM125' 'CM114' 'CM115' 'CM116' 'CM117' 'CM118' -
'CM120' 'CM121' 'CM122' 'CM123' 'CM124' 'CM126' 'CM127' 'CM128' -
'CM129' 'CM130' 'CM131' 'CM132' 'CM133' 'CM134' 'CM135' 'CM136' -
'CM253' 'CM254' 'CM255' 'CM256' 'CM257' 'CM258' 'CM259' 'CM260' -
'CM261' 'CM262' 'CM263' 'CM264' 'CM265' 'CM266' 'CM267' 'CM268' -
'CM269' 'CM270' 'CM271' 'CM272' 'CM470' 'CM471' 'CM472' 'CM473' -
'CM483' 'CM479' 'CM480'


$
$ Added crane member material property 6
$
DENSITY 0.47 MEMBER                                  -
'CM1'   'CM2'   'CM3'   'CM4'   'CM5'   'CM6'   'CM7'   'CM8'   -
'CM9'   'CM10'  'CM11'  'CM12'  'CM13'  'CM14'  'CM15'  'CM16'  -
'CM17'  'CM18'  'CM19'  'CM20'  'CM21'  'CM22'  'CM23'  'CM24'  -
'CM25'  'CM26'  'CM27'  'CM28'  'CM29'  'CM30'  'CM31'  'CM32'  -
'CM33'  'CM34'  'CM35'  'CM36'  'CM37'  'CM38'  'CM39'  'CM40'  -
'CM41'  'CM42'  'CM43'  'CM44'  'CM45'  'CM46'  'CM70'  'CM71'  -
'CM72'  'CM73'  'CM74'  'CM75'  'CM76'  'CM77'  'CM78'  'CM79'
$
$ Added crane member material property 7
$
DENSITY 2.41 MEMBER                                  -
'CM454' 'CM455' 'CM456' 'CM457' 'CM458' 'CM459' 'CM460' 'CM461' -
'CM462' 'CM463' 'CM464' 'CM465' 'CM466' 'CM467' 'CM468' 'CM469' -
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'CM360' 'CM361' 'CM362' 'CM363' 'CM364' 'CM365' 'CM366' 'CM367' -
'CM368' 'CM369' 'CM370' 'CM371' 'CM372' 'CM373' 'CM374' 'CM375' -
'CM376' 'CM377' 'CM378' 'CM379' 'CM380' 'CM384' 'CM385' 'CM386' -
'CM387' 'CM388' 'CM389' 'CM390' 'CM391' 'CM392' 'CM393' 'CM450' -
'CM451' 'CM452' 'CM453' 'CM406' 'CM407' 'CM408' 'CM409' 'CM410' -
'CM411' 'CM412' 'CM413' 'CM414' 'CM415' 'CM416' 'CM417' 'CM418' -
'CM419' 'CM420' 'CM421' 'CM422' 'CM426' 'CM427' 'CM428' 'CM429' -
'CM430' 'CM431' 'CM432' 'CM433' 'CM434' 'CM435' 'CM436' 'CM437' -
'CM438' 'CM439' 'CM440' 'CM441' 'CM442' 'CM443' 'CM423' 'CM424' -
'CM425' 'CM444' 'CM445' 'CM446' 'CM447' 'CM448' 'CM449'

$=============================================================================================

UNITS  INCH  LBS   DEG


MEMBER PROPERTIES TABLE 'STEELW' 'W27X84'
7354

$ MEMBER PROPERTIES    TABLE 'STEELW  '  'W33x141              '

MEMBER PROPERTIES    TABLE 'STEELW  '  'W12x72               '
   7353
MEMBER PROPERTIES    TABLE 'STEELW  '  'W14x119              '
   7352
MEMBER PROPERTIES    TABLE 'STEELW  '  'W36x300              '
   1          2          3          12         13       -
   14         100        101        110        111      -
   112        1100       1101       1110       1111     -
   1112       2100       2101       2110       2111     -
   2112       3100       3101       3110       3111     -
   3112       3163       4100       4101       4110     -
   4111       4112       4122       5100       5101     -
   5110       5111       5112       5122       6100     -
   71000      71100      8100       8110       7000     -
   7008       7009       7012       7013       7021



$ W36 + L6
MEMBER PROPERTIES   PRISMATIC   AX  111.3  AY  41.719        -
AZ  55.974  IX  70.062  IY  4560.861  IZ  24519.303      -
YD  36.74  YC  15.254  ZD 28.5  ZC 8.328

   'RG34' TO 'RG45' 'RG51' TO 'RG62' 'RG82' TO 'RG93'

$ W36 + L4
MEMBER PROPERTIES   PRISMATIC   AX  105.18  AY  38.719        -
AZ  53.307  IX  67.364  IY  3565.207  IZ  23828.308      -
YD  36.74  YC  15.844  ZD 28.5  ZC 8.328

   'RG1' TO 'RG33' 'RG50' 'RG63' TO 'RG81'

MEMBER PROPERTIES    TABLE 'STEELW  '  'W14x136              '
   5          6          7          16         17       -
   18         103        104        105        114      -
   115        116        121        1103       1104     -
   1105       1114       1115       1116       1121     -
   2103       2104       2105       2114       2115     -
   2116       2121       3103       3104       3105     -
   3114       3115       3116       3121       4103     -
   4104       4105       4114       4115       4116     -
   4121       5103       5104       5105       5114     -
   5115       5116       5121       6103       6104     -
   6105       71030      71040      71050      71140    -
   71150      71160      71210      8103       8104     -
   8105       8114       8115       8116       81160

MEMBER PROPERTIES    TABLE 'STEELW  '  'W36x230              '
   23         24         25         26         27       -
   28         29         30         130        131      -
   132        133        134        135        136      -
   137        138        139        140        141      -
   142        143        144        145        1138     -
   1139       1140       1141       1142       1143     -
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   1144     1145     2138     2139     2140    -
   2141     2142     2143     2144     2145    -
   3138     3139     3140     3141     3142    -
   3143     3144     3145     7050     7060    -
   7066

MEMBER PROPERTIES   TABLE 'EQDBLANG'  '2L3x3x5/16_3/8       '
   31       32

MEMBER PROPERTIES   TABLE 'STEELW '  'W10x33              '
   33       34

MEMBER PROPERTIES   TABLE 'STEELW '  'W30x116             '
   35       36       37       38       39      -
   40       41       42       146      147     -
   148      149      150      151      152     -
   153      1146     1147     1148     1149    -
   1150     1151     1152     1153     2146    -
   2147     2148     2149     2150     2151    -
   2152     2153     3146     3147     3148    -
   3149     3150     3151     3152     3153    -
   4146     4147     4148     4149     4150    -
   4151     4152     4153     5146     5147    -
   5148     5149     5150     5151     5152    -
   5153     7246     7247     7248     7249    -
   7250     7251     7252     7253     8146    -
   8147     8148     8149     8150     8151    -
   8152     8153

MEMBER PROPERTIES   TABLE 'STEELW '  'W14x87              '
   43       45

MEMBER PROPERTIES   TABLE 'STEELW '  'W14x43              '
   44       2122     2125     8701     8702    -
   8703     8704     8705     8706     8707    -
   8708     8801     8802     8803     8804    -
   8805     8807     8806    2126

MEMBER PROPERTIES   TABLE 'LLDBLANG'  '2L6x4x1/2_3/8       '
   46       48       49       51
MEMBER PROPERTIES   TABLE 'LLDBLANG'  '2L4x3x5/16_3/8       '
   47       50
MEMBER PROPERTIES   TABLE 'EQDBLANG'  '2L6x6x1/2_3/8       '
   52       53       7436     7438     7442
MEMBER PROPERTIES   TABLE 'STEELW '  'W24x100             '
   54       55       56       8121
MEMBER PROPERTIES   TABLE 'STEELW '  'W36x280             '
   122      123      124      125      126     -
   127      128      129
MEMBER PROPERTIES   TABLE 'STEELW '  'W12x40              '
   157      158      1157     3122     7063    -
   7330     9009     9017     9018     9026    -
   9027     9035     9036     9044     9045    -
   9053     9054     9063     9072     9080
MEMBER PROPERTIES   TABLE 'STEELW '  'W14x30              '
   2123     2124     7047
MEMBER PROPERTIES   TABLE 'STEELW '  'W12x27              '
   2157     9001     9002     9003     9004    -
   9005     9006     9007     9082     9083    -
   9084     9085     9086     9087     9088    -
   9010     9011     9012     9013     9014    -
   9015     9016     9019     9020     9021    -
   9022     9023     9024     9025     9028    -
   9029     9030     9031     9032     9033    -
   9034     9037     9038     9039     9040    -
   9041     9042     9043     9046     9047    -
   9048     9049     9050     9051     9052    -
   9055     9056     9057     9058     9059    -
   9060     9061     9064     9065     9066    -
   9067     9068     9069     9070     9073    -
   9074     9075     9076     9077     9078    -
   9079
MEMBER PROPERTIES   TABLE 'STEELW '  'W36x150             '
   3154     3155     3156     3157     3158    -
   3159     3160     3161
```

```
MEMBER PROPERTIES   TABLE 'STEELW '  'W36x160            '
  5138      5139      5140      5141      5142    -
  5143      5144      5145
MEMBER PROPERTIES   TABLE 'STEELW '  'W24x76             '
  6146      6147      6148      6149      6150    -
  6151      6152      6153
MEMBER PROPERTIES   TABLE 'STEELW '  'W18x45             '
  7001      7002      7003      7004      7005    -
  7006      7007      7064      7065
MEMBER PROPERTIES   TABLE 'STEELW '  'W10x15             '
  7010      7011      7014      7015      7016    -
  7017      7018      7019      7020
MEMBER PROPERTIES   TABLE 'STEELW '  'W24x55             '
  7022      7023      7024      7025      7026    -
  7027      7028      7029      7030      7031    -
  7032      7033      7034      7035      7036    -
  7037      7038      7039      7041      7042    -
  7043      7044      7045      7361      7362
MEMBER PROPERTIES   TABLE 'STEELW '  'W24x68             '
  7040      7046      7049      7360      7364
MEMBER PROPERTIES   TABLE 'STEELW '  'W10x21             '
  7048      7318      7319      7331
MEMBER PROPERTIES   TABLE 'CHANNELS'  'C8x11             '
  7363
MEMBER PROPERTIES   TABLE 'STEELW '  'W30x108            '
  7051      7059      7061      7062
MEMBER PROPERTIES   TABLE 'STEELW '  'W14x22             '
  7052      7053      7054      7055      7056    -
  7057      7058
MEMBER PROPERTIES   TABLE 'STEELW '  'W14x61             '
  8700      8800
MEMBER PROPERTIES   TABLE 'STEELW '  'W27x84             '
  9000      9008      9081      9089      9090    -
  9091      9092      9093      9094      9095    -
  9096      9097
MEMBER PROPERTIES   TABLE 'STEELW '  'W27x94             '
  9062      9071
MEMBER PROPERTIES   TABLE 'EQDBLANG'  '2L4x4x3/8_3/8       '
  7435      7437
MEMBER PROPERTIES   TABLE 'EQDBLANG'  '2L6x6x3/4_3/8       '
  7439
MEMBER PROPERTIES   TABLE 'EQDBLANG'  '2L3x3x3/16_3/8       '
  7441
MEMBER PROPERTIES   TABLE 'EQDBLANG'  '2L5x5x1/2_3/8       '
  7443
MEMBER PROPERTIES   TABLE 'ANGLES '  'L4x4x5/16           '
 7307

MEMBER PROPERTIES   TABLE 'ANGLES '  'L4x4x1/2            '
  7301  7313

MEMBER PROPERTIES   TABLE 'ANGLES '  'L5x5x1/2            '
   7305 7317  73297309732573337335

MEMBER PROPERTIES   TABLE 'ANGLES '  'L6x6x3/4            '
  7303  7315

MEMBER PROPERTIES   TABLE 'EQDBLANG'  '2L3.5x3.5x3/8_3/8     '
  7310      7311      7326      7327
MEMBER PROPERTIES   TABLE 'EQDBLANG'  '2L3x3x3/8_3/8       '
  7320      7321      7322      7323
MEMBER PROPERTIES   TABLE 'TEES   '  'WT4X12             '
  7337      7338        -
  7342    7343          7344      7345    -
  7346      7347   7348      7349      7350    -
  7351

MEMBER PROPERTIES   TABLE 'TEES   '  'WT4X12             '
  7340 7341 7336 7339


MEMBER PROPERTIES   PRISMATIC   AX  1000.0000       -
IX  1000000.0000  IY  1000000.0000  IZ  1000000.0000     -
SY  1000000.0000  SZ  1000000.0000
  4         8         9                       -
```

```
   15         19         20                          -
   102        106        107                           -
   113        117        118                           -
   1102       1106       1107                            -
   1113       1117       1118                            -
   2102       2106       2107                            -
   2113       2117       2118                            -
   3102       3106       3107                            -
   3113       3117       3118                            -
   4102       4106       4107                            -
   4113       4117       4118                            -
   5102       5106       5107                            -
   5113       5117       5118                            -
   6102       6106       6107                            -
   71020      71060      71070                             -
   71130      71170      71180                             -
   8102       8106       8107                            -
   8113       8117       8118  5555                      -
   11         109        1109       2109       3109     -
   4109       5109       6109       71090      8109     -
   22         120        1120       2120       3120     -
   4120       5120       71200      8120               -
'R1' TO 'R8' 'R21' TO 'R28' 'R31' TO 'R38' 'R41' TO 'R48'        -
'R51' TO 'R58' 'R61' TO 'R68' 'R71' TO 'R78' 'R81' TO 'R88'      -
'R91' TO 'R98'



$ Added crane section property 1
$
MEMBER PROPERTIES PRISMATIC                              -
AX 108.0   AY 71.65   AZ 13.80                          -
IX 17697   IY 5859.0  IZ 52222.0
'CM1'  'CM2'  'CM3'  'CM4'  'CM5'  'CM6'  'CM7'  'CM8'   -
'CM9'  'CM10' 'CM11' 'CM12' 'CM13' 'CM14' 'CM15' 'CM16'  -
'CM17' 'CM18' 'CM19' 'CM20' 'CM21' 'CM22' 'CM23' 'CM24'  -
'CM25' 'CM26' 'CM27' 'CM28' 'CM29' 'CM30' 'CM31' 'CM32'  -
'CM33' 'CM34' 'CM35' 'CM36' 'CM37' 'CM38' 'CM39' 'CM40'  -
'CM41' 'CM42' 'CM43' 'CM44' 'CM45' 'CM46' 'CM47' 'CM48'  -
'CM49' 'CM50' 'CM51' 'CM52' 'CM53' 'CM54' 'CM55' 'CM56'  -
'CM57' 'CM58' 'CM59' 'CM60' 'CM61' 'CM62' 'CM63' 'CM64'  -
'CM65' 'CM66' 'CM67' 'CM68' 'CM69' 'CM70' 'CM71' 'CM72'  -
'CM73' 'CM74' 'CM75' 'CM76' 'CM77' 'CM78' 'CM79' 'CM80'  -
'CM81' 'CM82' 'CM83' 'CM84' 'CM85' 'CM86' 'CM87' 'CM88'  -
'CM89' 'CM90' 'CM91' 'CM92' 'CM93' 'CM94' 'CM95' 'CM96'  -
'CM97' 'CM98' 'CM99' 'CM100' 'CM101' 'CM102' 'CM103' 'CM104' -
'CM105' 'CM106' 'CM107' 'CM108' 'CM109' 'CM110' 'CM111' 'CM112'

$
$ Added crane section property 2
$
MEMBER PROPERTIES PRISMATIC                              -
AX 50.226  AY 43.039  AZ 43.039                          -
IX 401.29  IY 200.65  IZ 200.65
'CM113' 'CM119' 'CM125' 'CM273' 'CM274' 'CM275' 'CM276' 'CM277' -
'CM278' 'CM279' 'CM280' 'CM479' 'CM480'

$
$ Added crane section property 3 (not used in P&H ANSYS model)
$

$
$ Added crane section property 4
$
MEMBER PROPERTIES PRISMATIC                              -
AX 32.0    AY 16.95   AZ 12.248                          -
IX 534.79  IY 282.67  IZ 410.67
'CM207' 'CM208' 'CM209' 'CM210' 'CM211' 'CM212' 'CM213' 'CM214' -
'CM215' 'CM216' 'CM217' 'CM218' 'CM219' 'CM220' 'CM221' 'CM222' -
'CM223' 'CM224' 'CM225' 'CM226' 'CM227' 'CM228' 'CM229' 'CM230' -
'CM231' 'CM232' 'CM233' 'CM234' 'CM235' 'CM236' 'CM237' 'CM238' -
'CM239' 'CM240' 'CM241' 'CM242' 'CM243' 'CM244' 'CM245' 'CM246' -
'CM247' 'CM248' 'CM249' 'CM250' 'CM251' 'CM252'

$
```

```
$ Added crane section property 5 (not used in P&H ANSYS model)
$

$
$ Added crane section property 6
$
MEMBER PROPERTIES PRISMATIC                              -
AX 21.75   AY 9.7879   AZ 9.7879                         -
IX 304.54  IY 192.58  IZ 192.58
'CM305' 'CM306' 'CM307' 'CM308' 'CM309' 'CM310' 'CM311' 'CM312' -
'CM313' 'CM314' 'CM315' 'CM316' 'CM317' 'CM318' 'CM319' 'CM320' -
'CM321' 'CM322' 'CM323' 'CM324' 'CM325' 'CM326' 'CM327' 'CM328' -
'CM329' 'CM330' 'CM331' 'CM332' 'CM333' 'CM334' 'CM335' 'CM336' -
'CM337' 'CM338'

$
$ Added crane section property 7
$
MEMBER PROPERTIES PRISMATIC                              -
AX 87.8    AY 38.73    AZ 36.679                         -
IX 6940.5  IY 3458.7  IZ 6384.6
'CM281' 'CM282' 'CM283' 'CM284' 'CM285' 'CM286' 'CM287' 'CM288' -
'CM289' 'CM290' 'CM291' 'CM292' 'CM293' 'CM294' 'CM295' 'CM296' -
'CM297' 'CM298' 'CM299' 'CM300' 'CM301' 'CM302' 'CM303' 'CM304'

$
$ Added crane section property 8
$
MEMBER PROPERTIES PRISMATIC                              -
AX 196.0   AY 165.053   AZ 165.053                       -
IX 5479.2  IY 3201.3  IZ 3201.3
'CM114' 'CM115' 'CM116' 'CM117' 'CM118' 'CM120' 'CM121' 'CM122' -
'CM123' 'CM124' 'CM126' 'CM127' 'CM128' 'CM129' 'CM130' 'CM131' -
'CM132' 'CM133' 'CM134' 'CM135' 'CM136' 'CM253' 'CM254' 'CM255' -
'CM256' 'CM257' 'CM258' 'CM259' 'CM260' 'CM261' 'CM262' 'CM263' -
'CM264' 'CM265' 'CM266' 'CM267' 'CM268' 'CM269' 'CM270' 'CM271' -
'CM272' 'CM470' 'CM471' 'CM472' 'CM473'

$
$ Added crane section property 9 (not used in P&H ANSYS model)
$

$
$ Added crane section property 10
$
MEMBER PROPERTIES PRISMATIC                              -
AX 34.25   AY 20.6188   AZ 7.162                         -
IX 1264.9  IY 466.354 IZ 2305.0
'CM454' 'CM455' 'CM456' 'CM457' 'CM458' 'CM459' 'CM460' 'CM461' -
'CM462' 'CM463' 'CM464' 'CM465' 'CM466' 'CM467' 'CM468' 'CM469'

$
$ Added crane section property 11
$
MEMBER PROPERTIES PRISMATIC                              -
AX 41.25   AY 34.737   AZ 34.737                         -
IX 21.388  IY 5.371   IZ 3743.0
'CM360' 'CM361' 'CM362' 'CM363' 'CM364' 'CM365' 'CM366' 'CM367' -
'CM368' 'CM369' 'CM370' 'CM371' 'CM372' 'CM373' 'CM374' 'CM375' -
'CM376'

$
$ Added crane section property 12
$
MEMBER PROPERTIES PRISMATIC                              -
AX 42.625  AY 35.8949  AZ 35.8949                        -
IX 14.184  IY 3.552   IZ 6454.0
'CM377' 'CM378' 'CM379' 'CM380' 'CM384' 'CM385' 'CM386' 'CM387' -
'CM388' 'CM389' 'CM390' 'CM391' 'CM392' 'CM393' 'CM450' 'CM451' -
'CM452' 'CM453'

$
$ Added crane section property 13 (not used in P&H ANSYS model)
$
```

```
$
$ Added crane section property 14
$
MEMBER PROPERTIES PRISMATIC                    -
AX 10.0    AY 8.4211    AZ 8.4211           -
IX 0.83169 IY 0.208   IZ 333.333
'CM406' 'CM407' 'CM408' 'CM409' 'CM410' 'CM411' 'CM412' 'CM413' -
'CM414' 'CM415' 'CM416' 'CM417' 'CM418' 'CM419'

$
$ Added crane section property 15
$
MEMBER PROPERTIES PRISMATIC                    -
AX 3.0     AY 2.526     AZ 2.526           -
IX 0.24485 IY 0.0625  IZ 9.0
'CM420' 'CM421' 'CM422' 'CM426' 'CM427' 'CM428' 'CM429' 'CM430' -
'CM431' 'CM432' 'CM433' 'CM434' 'CM435' 'CM436' 'CM437' 'CM438' -
'CM439' 'CM440' 'CM441' 'CM442' 'CM443'

$
$ Added crane section property 16
$
MEMBER PROPERTIES PRISMATIC                    -
AX 7.5     AY 6.3158     AZ 6.3158           -
IX 0.62282 IY 0.15625 IZ 140.625
'CM423' 'CM424' 'CM425'

$
$ Added crane section property 17
$
MEMBER PROPERTIES PRISMATIC                    -
AX 4.5     AY 3.789     AZ 3.789           -
IX 0.37144  IY 0.09375 IZ 30.375
'CM444' 'CM445' 'CM446' 'CM447' 'CM448' 'CM449'


$$ HOOK IS REPRESENTED BY THREE NONLINEAR SPRINGS
$ THIS IS DUMMY HOOK MEMBER TO GIVE GRAPHICAL REPRESENTATION
$ AS SPRINGS ARE NOT DISPLAYED IN GRAPHICAL VIEWER

MEMBER PROPERTIES PRISMATIC  -
AX 0.01 -
IX 0.001    IY 0.001   IZ 0.001
'CM483'


$=====================================================================================

UNITS  INCH  LBS   DEG


MEMBER ECCENTRICITY
2157 7048 STAT Z -11
7336 TO 7351 STA Y -6.675 END Y -6.675

STATUS SUPPORT                    -
   1       12       101      111      123    -
   1101     1111     1123     2101          -
   2111     2123     3101     3111     3123    -
   4101     4111     5101     5111     6101    -
   7101     7111     8100     8101     8111    -
   2122     1112     2112     3112     5112    -
   8156     8157     112   5112

JOINT RELEASES
5112 FOR Y X MOM X Y Z

JOINT RELEASES
   1       101      1101     2101     3101    -
   4101     5101     7101     8101          -
   12      111      1111     2111          -
   3111     4111     5111     7111     8111    -
     MOM  Z
   123      1123     2123     3123     6101    -
     MOM  X   Z                          $ MM 6101 CHANGED TO PIN CONNECTION
```

```
   8100 2122                                    -
     MOM  X Z
$
$ Conservatively use the stifness from reactor building steel
$
     3112                          -
     FOR  X   Y      MOM  X  Y  Z                  -
     KFZ  0.001
$
$ Shear Wall Stiffness
$
   2112                                  -
     FOR        Y     MOM  X   Y  Z                  -
     KFZ  18105E3  KFX 11978E3

   1112                                    -
     FOR        Y     MOM  X   Y  Z                  -
     KFZ  0.001       KFX 23956E3

   112                                     -
     FOR Z Y   MOM  X   Y  Z                  -
     KFX 11978E3

CONSTANTS
    BETA     90.00000                          -
   43 44 45  7318 7319
    BETA     90.00000                          -
   7352    7353       7066       7060          7050
    BETA     45.00000                          -
   7301       7303                            -
   7305       7307       7309                   -
   7313       7315                            -
   7317       7325       7329                   -
   7333       7335
$
$ Deleted single angle bracing
$
$  7306       7308       7324       7328       7332      -
$  7334       7300       7302       7304       7312      -
$  7314       7316
    BETA     90.00000                          -
   1          2          3          5          6       -
   7          12         13         14         16      -
   17         18         46         49         100     -
   101        103        104        105        110     -
   111        112        114        115        116     -
   1100       1101       1103       1104              -
   1105       1110       1111       1112       1114    -
   1115       1116       1121       2100       2101    -
   2103       2104       2105       2110       2111    -
   2112       2114       2115       2116       2121    -
   3100       3101       3103       3104       3105    -
   3110       3111       3112       3114       3115    -
   3116       3121       3163       4100             -
   4101       4103       4104       4105       4110    -
   4111       4112       4114       4115       4116    -
   4121       4122       5100       5101       5103    -
   5104       5105       5110       5111       5112    -
   5114       5115       5116       5121       5122    -
   6100       6103       6104       6105       71000   -
   71030      71040      71050      71100      71140   -
   71150      71160      71210      8100       8103    -
   8104       8105       8110       8114       8115    -
   8116       81160          2125          2122 2126

    BETA    180.00000                          -
   31         32
    BETA    270.00000                          -
   47         48         50         51         52      -
   53


MEMBER RELEASES

7354STA MOM Y Z END MOM Y Z
```

```
 33 34 7331 STA MOM Y Z
  33 34 7331 END MOM Y Z
  7318     STA MOM Y Z
  7319     END MOM Y Z
  7066     END MOM Y Z
  7066     STA MOM Y
  7060     END MOM Y
  7050     STA MOM Y Z

$
$   Moment connections
  8146 7246 5146 4146 3146 2146 1146 146  STA MOM Y
  8153 7253 5153 4153 3153 2153 1153 153  END MOM Y
$
 35 23      44      46      48      31      -
  49      51      122     130          -
  157          2123               -
         3154              -
  5138    6146                    -
  7000    7008    7040    7041    43      -
  7046    7051    7059    7063    9000    -
  9008    9090    9062    7065    45      -
STA MOM  Y   Z
  42 30     129     137         47      -
  158             50           -
      3161                     -
  5145    6153                    -
  7013    7021    7049    7360    7362    -
  7062    7065    7330    9081    9089    -
  9097    9071    7061    2126     32        -
END MOM  Y   Z

145 1145 2145 3145 END MOM Y  $ MM 6-23

138 1138 2138 3138 STA MOM Y    $ MM 6-23
                          -
         52      53      1157     2157    -
  3122    7001    7002    7003    7004    -
  7005    7006    7007    7010    7011    -
  7014    7015    7016    7017    7018    -
  7019    7020    7022    7023    7024    -
  7025    7026    7027    7028    7029    -
  7030    7031    7032    7033    7034    -
  7035    7036    7037    7038    7039    -
  7042    7043    7044    7045    7047    -
  7048    7363    7052    7053    7054    -
  7055    7056    7057    7058    8700    -
  8701    8702    8703    8704    8705    -
  8706    8707    8708    9001    9002    -
  9003    9004    9005    9006    9007    -
  9082    9083    9084    9085    9086    -
  9087    9088    9009    9010    9011    -
  9012    9013    9014    9015    9016    -
  9017    9018    9019    9020    9021    -
  9022    9023    9024    9025    9026    -
  8800    8801    8802        8804      -
  8805    8807    7064                  -

STA MOM  Y   Z  END MOM  Y   Z
  9027    9028    9029    9030    9031    -
  9032    9033    9034    9035    9036    -
  9037    9038    9039    9040    9041    -
  9042    9043    9044    9045    9046    -
  9047    9048    9049    9050    9051    -
  9052    9053    9054    9055    9056    -
  9057    9058    9059    9060    9061    -
  9063    9064    9065    9066    9067    -
  9068    9069    9070    9072    9073    -
  9074    9075    9076    9077    9078    -
  9079    9080    7435    7436    7437    -
  7438    7439    7441    7442    7443    -
  7301    7303                    -
  7305    7307    7309              -
  7310    7311    7313              -
```

```
   7315       7317       7320       7321              -
   7322       7323       7325       7326              -
   7327       7329       7333                      -
   7335       7336       7337       7338              -
   7339       7340       7341       7342       7343     -
STA MOM  Y   Z  END MOM  Y   Z
   7344       7345       7346       7347       7348     -
   7349       7350       7351       7352       7353     -
STA MOM  Y   Z  END MOM  Y   Z
   8121                                        -
END MOM  Y   Z
   121        1121       2121       3121              -
END MOM  Y   Z
'RG1' 'RG2' 'RG7' 'RG15' 'RG17' 'RG18' 'RG28' 'RG32'           -
'RG50' 'RG63' 'RG65' 'RG66' 'RG76' 'RG80'                  -
STA MOM  Y   Z
'RG1' 'RG6' 'RG14' 'RG16' 'RG17' 'RG27' 'RG31' 'RG45'              -
'RG62' 'RG64' 'RG65' 'RG75' 'RG79' 'RG93'                  -
END MOM  Y   Z
$
$ Added member releases of crane member and crane runway
$
$ The wheels are restrained at the west runway girder since it has
$ longer span and will impact the runway girder more.
$ Note P&H's ANSYS model restrains at the east side.



'CM277'    STA    MOM X Y Z    FOR Y Z
'CM278'    STA    MOM X Y Z    FOR Y Z
'CM279'    STA    MOM X Y Z    FOR Z
'CM280'    STA    MOM X Y Z    FOR Z
'CM273'    STA    MOM X Y Z    FOR Y
'CM274'    STA    MOM X Y Z    FOR Y
'CM275'    STA    MOM X Y Z
'CM276'    STA    MOM X Y Z

'CM131'    STA    MOM X Y Z    FOR Z
'CM125'    STA    MOM X Y Z    FOR Z
'CM113'    STA    MOM X Y Z
'CM119'    STA    MOM X Y Z
$
$ Deleted single angle bracing
$ STA MOM  Y   Z  END MOM  Y   Z
$   7306       7308       7324       7328       7332      -
$   7334       7300       7302       7304       7312      -
$   7314       7316


8806 END MOM Y Z              $ MM

8803 STA MOM Y Z              $ MM


9 107 1107 2107 3107 4107 5107 6107 71070 8107      -
20 118 1118 2118 3118 4118 5118 71180 8118 STA FOR Y Z MOM X Y Z



$=============================================================================================

$=============================================================================================

UNITS  FEET  SECONDS CYCLES

STORE RESPONSE SPECTRUM ACCELERATION LINEAR vs -
       NATURAL FREQUENCY LOGARITHMIC 'HSSE162'
$---------------------------------------------------------------------------------------------
$ The SSE values for accelerations are in g unit.
$ FACTOR = 32.185 ft/sec^2
$---------------------------------------------------------------------------------------------
$ SPECTRAL ACCELERATION INCREASED BY 5%
       DAMPING 0.07 FACTOR 32.185 $ 7.0% Critical Damping
1.050E-04              0.000E+00
```

1.050E-04	8.500E-02
1.313E-02	1.700E-01
7.819E-02	3.400E-01
8.316E-02	5.100E-01
1.209E-01	6.600E-01
1.756E-01	8.500E-01
2.758E-01	1.001E+00
2.769E-01	1.004E+00
2.773E-01	1.005E+00
2.795E-01	1.012E+00
2.802E-01	1.014E+00
2.832E-01	1.022E+00
2.837E-01	1.023E+00
2.837E-01	1.023E+00
2.872E-01	1.032E+00
2.876E-01	1.034E+00
2.906E-01	1.042E+00
2.911E-01	1.043E+00
2.915E-01	1.044E+00
2.941E-01	1.051E+00
2.950E-01	1.054E+00
2.954E-01	1.055E+00
2.976E-01	1.061E+00
2.989E-01	1.065E+00
3.011E-01	1.071E+00
3.028E-01	1.076E+00
3.046E-01	1.081E+00
3.067E-01	1.087E+00
3.080E-01	1.091E+00
3.105E-01	1.097E+00
3.110E-01	1.099E+00
3.115E-01	1.100E+00
3.141E-01	1.109E+00
3.144E-01	1.111E+00
3.149E-01	1.112E+00
3.179E-01	1.121E+00
3.188E-01	1.124E+00
3.214E-01	1.132E+00
3.227E-01	1.137E+00
3.249E-01	1.144E+00
3.253E-01	1.145E+00
3.270E-01	1.151E+00
3.283E-01	1.155E+00
3.292E-01	1.158E+00
3.310E-01	1.164E+00
3.318E-01	1.167E+00
3.331E-01	1.171E+00
3.353E-01	1.179E+00
3.366E-01	1.183E+00
3.388E-01	1.191E+00
3.391E-01	1.192E+00
3.402E-01	1.197E+00
3.417E-01	1.203E+00
3.430E-01	1.208E+00
3.439E-01	1.211E+00
3.452E-01	1.216E+00
3.462E-01	1.222E+00
3.467E-01	1.225E+00
3.475E-01	1.230E+00
3.475E-01	1.239E+00
3.475E-01	1.240E+00
3.475E-01	1.247E+00
3.475E-01	1.255E+00
3.475E-01	1.257E+00
3.475E-01	1.264E+00
3.475E-01	1.273E+00
3.475E-01	1.274E+00
3.475E-01	1.282E+00
3.472E-01	1.291E+00
3.471E-01	1.292E+00
3.469E-01	1.300E+00
3.466E-01	1.309E+00
3.466E-01	1.311E+00
3.463E-01	1.318E+00
3.460E-01	1.328E+00

3.459E-01	1.329E+00
3.457E-01	1.335E+00
3.455E-01	1.345E+00
3.453E-01	1.349E+00
3.452E-01	1.355E+00
3.446E-01	1.365E+00
3.445E-01	1.367E+00
3.440E-01	1.375E+00
3.437E-01	1.385E+00
3.437E-01	1.387E+00
3.434E-01	1.396E+00
3.428E-01	1.406E+00
3.427E-01	1.409E+00
3.423E-01	1.415E+00
3.416E-01	1.428E+00
3.415E-01	1.430E+00
3.411E-01	1.437E+00
3.407E-01	1.451E+00
3.407E-01	1.453E+00
3.405E-01	1.457E+00
3.397E-01	1.474E+00
3.394E-01	1.481E+00
3.385E-01	1.498E+00
3.382E-01	1.502E+00
3.374E-01	1.520E+00
3.373E-01	1.522E+00
3.370E-01	1.527E+00
3.361E-01	1.545E+00
3.359E-01	1.550E+00
3.350E-01	1.571E+00
3.347E-01	1.577E+00
3.337E-01	1.599E+00
3.336E-01	1.601E+00
3.322E-01	1.624E+00
3.318E-01	1.630E+00
3.309E-01	1.653E+00
3.307E-01	1.659E+00
3.291E-01	1.683E+00
3.289E-01	1.686E+00
3.280E-01	1.711E+00
3.278E-01	1.717E+00
3.264E-01	1.740E+00
3.262E-01	1.743E+00
3.260E-01	1.747E+00
3.246E-01	1.774E+00
3.245E-01	1.777E+00
3.243E-01	1.780E+00
3.229E-01	1.805E+00
3.227E-01	1.808E+00
3.225E-01	1.812E+00
3.211E-01	1.841E+00
3.210E-01	1.844E+00
3.208E-01	1.848E+00
3.190E-01	1.874E+00
3.185E-01	1.882E+00
3.171E-01	1.913E+00
3.169E-01	1.917E+00
3.167E-01	1.921E+00
3.158E-01	1.949E+00
3.156E-01	1.958E+00
3.142E-01	1.991E+00
3.140E-01	1.996E+00
3.138E-01	2.000E+00
3.125E-01	2.031E+00
3.121E-01	2.040E+00
3.112E-01	2.076E+00
3.111E-01	2.081E+00
3.109E-01	2.086E+00
3.094E-01	2.124E+00
3.092E-01	2.129E+00
3.083E-01	2.169E+00
3.082E-01	2.174E+00
3.080E-01	2.179E+00
3.070E-01	2.221E+00
3.069E-01	2.227E+00

3.069E-01	2.227E+00
3.058E-01	2.276E+00
3.057E-01	2.281E+00
3.047E-01	2.333E+00
3.046E-01	2.339E+00
3.035E-01	2.388E+00
3.034E-01	2.394E+00
3.034E-01	2.394E+00
3.029E-01	2.451E+00
3.028E-01	2.457E+00
3.023E-01	2.518E+00
3.022E-01	2.525E+00
3.017E-01	2.581E+00
3.017E-01	2.588E+00
3.011E-01	2.655E+00
3.011E-01	2.663E+00
3.006E-01	2.726E+00
3.006E-01	2.734E+00
3.005E-01	2.742E+00
3.005E-01	2.809E+00
3.005E-01	2.826E+00
3.001E-01	2.888E+00
3.000E-01	2.897E+00
2.999E-01	2.915E+00
2.999E-01	2.981E+00
2.999E-01	2.990E+00
2.999E-01	3.010E+00
2.999E-01	3.070E+00
2.999E-01	3.090E+00
2.999E-01	3.111E+00
2.999E-01	3.175E+00
2.999E-01	3.186E+00
2.999E-01	3.220E+00
2.999E-01	3.288E+00
2.999E-01	3.300E+00
2.999E-01	3.336E+00
2.999E-01	3.397E+00
2.999E-01	3.422E+00
2.999E-01	3.461E+00
2.996E-01	3.527E+00
2.995E-01	3.554E+00
2.993E-01	3.581E+00
2.990E-01	3.652E+00
2.989E-01	3.681E+00
2.988E-01	3.726E+00
2.985E-01	3.787E+00
2.984E-01	3.834E+00
2.982E-01	3.882E+00
2.977E-01	3.949E+00
2.973E-01	4.000E+00
2.970E-01	4.035E+00
2.968E-01	4.107E+00
2.966E-01	4.162E+00
2.964E-01	4.219E+00
2.959E-01	4.278E+00
2.952E-01	4.358E+00
2.947E-01	4.421E+00
2.943E-01	4.464E+00
2.935E-01	4.552E+00
2.930E-01	4.620E+00
2.923E-01	4.667E+00
2.910E-01	4.763E+00
2.901E-01	4.838E+00
2.893E-01	4.889E+00
2.879E-01	4.995E+00
2.872E-01	5.049E+00
2.858E-01	5.133E+00
2.845E-01	5.220E+00
2.837E-01	5.280E+00
2.816E-01	5.404E+00
2.806E-01	5.467E+00
2.796E-01	5.533E+00
2.767E-01	5.704E+00
2.756E-01	5.775E+00
2.722E-01	5.961E+00

2.715E-01	6.000E+00
2.715E-01	6.000E+00
2.669E-01	6.243E+00
2.645E-01	6.372E+00
2.622E-01	6.507E+00
2.622E-01	6.507E+00
2.570E-01	6.745E+00
2.518E-01	6.947E+00
2.505E-01	7.000E+00
2.465E-01	7.163E+00
2.445E-01	7.276E+00
2.413E-01	7.452E+00
2.378E-01	7.574E+00
2.361E-01	7.636E+00
2.347E-01	7.700E+00
2.318E-01	7.830E+00
2.319E-01	7.890E+00
2.428E-01	8.160E+00
2.531E-01	8.330E+00
2.655E-01	8.500E+00
2.820E-01	8.670E+00
2.931E-01	8.840E+00
3.280E-01	9.010E+00
5.014E-01	9.180E+00
5.280E-01	9.350E+00
5.573E-01	9.520E+00
5.878E-01	9.690E+00
6.193E-01	9.860E+00
6.528E-01	1.003E+01
6.863E-01	1.020E+01
7.230E-01	1.037E+01
7.623E-01	1.054E+01
8.052E-01	1.071E+01
8.561E-01	1.088E+01
9.032E-01	1.105E+01
9.325E-01	1.122E+01
9.392E-01	1.139E+01
9.441E-01	1.541E+01
9.209E-01	1.564E+01
8.723E-01	1.587E+01
8.461E-01	1.610E+01
7.918E-01	1.633E+01
7.642E-01	1.656E+01
7.529E-01	1.679E+01
7.215E-01	1.702E+01
6.993E-01	1.725E+01
6.761E-01	1.748E+01
6.542E-01	1.771E+01
6.332E-01	1.784E+01
6.233E-01	1.817E+01
5.949E-01	1.840E+01
5.774E-01	1.883E+01
5.611E-01	1.896E+01
5.464E-01	1.909E+01
5.327E-01	1.932E+01
5.214E-01	1.955E+01
5.107E-01	1.978E+01
5.006E-01	2.001E+01
4.919E-01	2.024E+01
4.830E-01	2.047E+01
4.701E-01	2.070E+01
4.674E-01	2.093E+01
4.603E-01	2.116E+01
4.537E-01	2.139E+01
4.473E-01	2.162E+01
4.444E-01	2.185E+01
4.350E-01	2.206E+01
4.292E-01	2.231E+01
4.234E-01	2.254E+01
4.180E-01	2.277E+01
4.127E-01	2.300E+01
4.078E-01	2.323E+01
4.029E-01	2.346E+01
3.983E-01	2.369E+01
3.939E-01	2.392E+01

3.897E-01	2.415E+01
3.881E-01	2.422E+01
3.898E-01	2.431E+01
3.930E-01	2.448E+01
3.967E-01	2.465E+01
4.005E-01	2.482E+01
4.047E-01	2.499E+01
4.092E-01	2.516E+01
4.140E-01	2.533E+01
4.192E-01	2.550E+01
4.246E-01	2.567E+01
4.299E-01	2.584E+01
4.333E-01	2.601E+01
4.368E-01	2.618E+01
4.400E-01	2.635E+01
4.406E-01	2.652E+01
4.409E-01	2.669E+01
4.429E-01	3.611E+01
4.393E-01	3.634E+01
4.335E-01	3.657E+01
4.269E-01	3.680E+01
4.221E-01	3.703E+01
4.160E-01	3.726E+01
4.097E-01	3.749E+01
4.035E-01	3.772E+01
3.997E-01	3.795E+01
3.946E-01	3.818E+01
3.897E-01	3.841E+01
3.865E-01	3.864E+01
3.835E-01	3.887E+01
3.805E-01	3.910E+01
3.777E-01	3.933E+01
3.748E-01	3.956E+01
3.719E-01	3.979E+01
3.691E-01	4.002E+01
3.657E-01	4.025E+01
3.623E-01	4.048E+01
3.589E-01	4.071E+01
3.558E-01	4.094E+01
3.527E-01	4.117E+01
3.496E-01	4.140E+01
3.466E-01	4.163E+01
3.438E-01	4.185E+01
3.411E-01	4.209E+01
3.382E-01	4.232E+01
3.356E-01	4.255E+01
3.331E-01	4.278E+01
3.305E-01	4.301E+01
3.281E-01	4.324E+01
3.258E-01	4.347E+01
3.236E-01	4.370E+01
3.214E-01	4.383E+01
3.192E-01	4.416E+01
3.173E-01	4.439E+01
3.153E-01	4.462E+01
3.133E-01	4.485E+01
3.116E-01	4.508E+01
3.100E-01	4.531E+01
3.084E-01	4.554E+01
3.070E-01	4.577E+01
3.056E-01	4.600E+01
3.043E-01	4.623E+01
3.029E-01	4.646E+01
3.016E-01	4.669E+01
3.005E-01	4.692E+01
2.995E-01	4.715E+01
2.985E-01	4.738E+01
2.974E-01	4.761E+01
2.964E-01	4.784E+01
2.954E-01	4.807E+01
2.944E-01	4.830E+01
2.935E-01	4.853E+01
2.930E-01	4.876E+01
2.924E-01	4.899E+01
2.918E-01	4.922E+01

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2.912E-01           4.945E+01
2.906E-01           4.968E+01
2.897E-01           4.981E+01
2.895E-01           5.014E+01
2.889E-01           5.037E+01
2.875E-01           5.060E+01
2.857E-01           5.083E+01
2.845E-01           5.106E+01
2.830E-01           5.129E+01
2.816E-01           5.152E+01
2.801E-01           5.175E+01
2.787E-01           5.196E+01
2.773E-01           5.221E+01
2.761E-01           5.244E+01
2.747E-01           5.267E+01
2.734E-01           5.290E+01
2.721E-01           5.313E+01
2.709E-01           5.336E+01
2.699E-01           5.358E+01
2.688E-01           5.382E+01
2.677E-01           5.406E+01
2.667E-01           5.426E+01
2.657E-01           5.451E+01
2.648E-01           5.474E+01
2.639E-01           5.497E+01
2.629E-01           5.520E+01
2.620E-01           5.543E+01
2.610E-01           5.566E+01
2.601E-01           5.586E+01
2.591E-01           5.612E+01
2.583E-01           5.635E+01
2.572E-01           5.656E+01
2.554E-01           5.681E+01
2.655E-01           5.704E+01
2.646E-01           5.727E+01
2.637E-01           5.750E+01

END OF RESPONSE SPECTRUM
$
$
STORE RESPONSE SPECTRUM ACCELERATION LINEAR vs -
      NATURAL FREQUENCY LOGARITHMIC 'VSSE162'
$-------------------------------------------------------------------------------------
$ The SSE values for accelerations are in g unit.
$ FACTOR = 32.185 ft/sec^2 x 2/3 = 21.457
$-------------------------------------------------------------------------------------
$
      DAMPING 0.07 FACTOR 21.457 $ 7.0% Critical Damping
1.050E-04           0.000E+00
1.050E-04           8.500E-02
1.313E-02           1.700E-01
7.819E-02           3.400E-01
8.316E-02           5.100E-01
1.209E-01           6.600E-01
1.756E-01           8.500E-01
2.758E-01           1.001E+00
2.769E-01           1.004E+00
2.773E-01           1.005E+00
2.795E-01           1.012E+00
2.802E-01           1.014E+00
2.832E-01           1.022E+00
2.837E-01           1.023E+00
2.837E-01           1.023E+00
2.872E-01           1.032E+00
2.876E-01           1.034E+00
2.906E-01           1.042E+00
2.911E-01           1.043E+00
2.915E-01           1.044E+00
2.941E-01           1.051E+00
2.950E-01           1.054E+00
2.954E-01           1.055E+00
2.976E-01           1.061E+00
2.989E-01           1.065E+00
3.011E-01           1.071E+00
3.028E-01           1.076E+00
```

3.046E-01	1.081E+00
3.067E-01	1.087E+00
3.080E-01	1.091E+00
3.105E-01	1.097E+00
3.110E-01	1.099E+00
3.115E-01	1.100E+00
3.141E-01	1.109E+00
3.144E-01	1.111E+00
3.149E-01	1.112E+00
3.179E-01	1.121E+00
3.188E-01	1.124E+00
3.214E-01	1.132E+00
3.227E-01	1.137E+00
3.249E-01	1.144E+00
3.253E-01	1.145E+00
3.270E-01	1.151E+00
3.283E-01	1.155E+00
3.292E-01	1.158E+00
3.310E-01	1.164E+00
3.318E-01	1.167E+00
3.331E-01	1.171E+00
3.353E-01	1.179E+00
3.366E-01	1.183E+00
3.388E-01	1.191E+00
3.391E-01	1.192E+00
3.402E-01	1.197E+00
3.417E-01	1.203E+00
3.430E-01	1.208E+00
3.439E-01	1.211E+00
3.452E-01	1.216E+00
3.462E-01	1.222E+00
3.467E-01	1.225E+00
3.475E-01	1.230E+00
3.475E-01	1.239E+00
3.475E-01	1.240E+00
3.475E-01	1.247E+00
3.475E-01	1.255E+00
3.475E-01	1.257E+00
3.475E-01	1.264E+00
3.475E-01	1.273E+00
3.475E-01	1.274E+00
3.475E-01	1.282E+00
3.472E-01	1.291E+00
3.471E-01	1.292E+00
3.469E-01	1.300E+00
3.466E-01	1.309E+00
3.466E-01	1.311E+00
3.463E-01	1.318E+00
3.460E-01	1.328E+00
3.459E-01	1.329E+00
3.457E-01	1.335E+00
3.455E-01	1.345E+00
3.453E-01	1.349E+00
3.452E-01	1.355E+00
3.446E-01	1.365E+00
3.445E-01	1.367E+00
3.440E-01	1.375E+00
3.437E-01	1.385E+00
3.437E-01	1.387E+00
3.434E-01	1.396E+00
3.428E-01	1.406E+00
3.427E-01	1.409E+00
3.423E-01	1.415E+00
3.416E-01	1.428E+00
3.415E-01	1.430E+00
3.411E-01	1.437E+00
3.407E-01	1.451E+00
3.407E-01	1.453E+00
3.405E-01	1.457E+00
3.397E-01	1.474E+00
3.394E-01	1.481E+00
3.385E-01	1.498E+00
3.382E-01	1.502E+00
3.374E-01	1.520E+00
3.373E-01	1.522E+00

3.370E-01	1.527E+00
3.361E-01	1.545E+00
3.359E-01	1.550E+00
3.350E-01	1.571E+00
3.347E-01	1.577E+00
3.337E-01	1.599E+00
3.336E-01	1.601E+00
3.322E-01	1.624E+00
3.318E-01	1.630E+00
3.309E-01	1.653E+00
3.307E-01	1.659E+00
3.291E-01	1.683E+00
3.289E-01	1.686E+00
3.280E-01	1.711E+00
3.278E-01	1.717E+00
3.264E-01	1.740E+00
3.262E-01	1.743E+00
3.260E-01	1.747E+00
3.246E-01	1.774E+00
3.245E-01	1.777E+00
3.243E-01	1.780E+00
3.229E-01	1.805E+00
3.227E-01	1.808E+00
3.225E-01	1.812E+00
3.211E-01	1.841E+00
3.210E-01	1.844E+00
3.208E-01	1.848E+00
3.190E-01	1.874E+00
3.185E-01	1.882E+00
3.171E-01	1.913E+00
3.169E-01	1.917E+00
3.167E-01	1.921E+00
3.158E-01	1.949E+00
3.156E-01	1.958E+00
3.142E-01	1.991E+00
3.140E-01	1.996E+00
3.138E-01	2.000E+00
3.125E-01	2.031E+00
3.121E-01	2.040E+00
3.112E-01	2.076E+00
3.111E-01	2.081E+00
3.109E-01	2.086E+00
3.094E-01	2.124E+00
3.092E-01	2.129E+00
3.083E-01	2.169E+00
3.082E-01	2.174E+00
3.080E-01	2.179E+00
3.070E-01	2.221E+00
3.069E-01	2.227E+00
3.069E-01	2.227E+00
3.058E-01	2.276E+00
3.057E-01	2.281E+00
3.047E-01	2.333E+00
3.046E-01	2.339E+00
3.035E-01	2.388E+00
3.034E-01	2.394E+00
3.034E-01	2.394E+00
3.029E-01	2.451E+00
3.028E-01	2.457E+00
3.023E-01	2.518E+00
3.022E-01	2.525E+00
3.017E-01	2.581E+00
3.017E-01	2.588E+00
3.011E-01	2.655E+00
3.011E-01	2.663E+00
3.006E-01	2.726E+00
3.006E-01	2.734E+00
3.005E-01	2.742E+00
3.005E-01	2.809E+00
3.005E-01	2.826E+00
3.001E-01	2.888E+00
3.000E-01	2.897E+00
2.999E-01	2.915E+00
2.999E-01	2.981E+00
2.999E-01	2.990E+00

2.999E-01	3.010E+00
2.999E-01	3.070E+00
2.999E-01	3.090E+00
2.999E-01	3.111E+00
2.999E-01	3.175E+00
2.999E-01	3.186E+00
2.999E-01	3.220E+00
2.999E-01	3.288E+00
2.999E-01	3.300E+00
2.999E-01	3.336E+00
2.999E-01	3.397E+00
2.999E-01	3.422E+00
2.999E-01	3.461E+00
2.996E-01	3.527E+00
2.995E-01	3.554E+00
2.993E-01	3.581E+00
2.990E-01	3.652E+00
2.989E-01	3.681E+00
2.988E-01	3.726E+00
2.985E-01	3.787E+00
2.984E-01	3.834E+00
2.982E-01	3.882E+00
2.977E-01	3.949E+00
2.973E-01	4.000E+00
2.970E-01	4.035E+00
2.968E-01	4.107E+00
2.966E-01	4.162E+00
2.964E-01	4.219E+00
2.959E-01	4.278E+00
2.952E-01	4.358E+00
2.947E-01	4.421E+00
2.943E-01	4.464E+00
2.935E-01	4.552E+00
2.930E-01	4.620E+00
2.923E-01	4.667E+00
2.910E-01	4.763E+00
2.901E-01	4.838E+00
2.893E-01	4.889E+00
2.879E-01	4.995E+00
2.872E-01	5.049E+00
2.858E-01	5.133E+00
2.845E-01	5.220E+00
2.837E-01	5.280E+00
2.816E-01	5.404E+00
2.806E-01	5.467E+00
2.796E-01	5.533E+00
2.767E-01	5.704E+00
2.756E-01	5.775E+00
2.722E-01	5.961E+00
2.715E-01	6.000E+00
2.715E-01	6.000E+00
2.669E-01	6.243E+00
2.645E-01	6.372E+00
2.622E-01	6.507E+00
2.622E-01	6.507E+00
2.570E-01	6.745E+00
2.518E-01	6.947E+00
2.505E-01	7.000E+00
2.465E-01	7.163E+00
2.445E-01	7.276E+00
2.413E-01	7.452E+00
2.378E-01	7.574E+00
2.361E-01	7.636E+00
2.347E-01	7.700E+00
2.318E-01	7.830E+00
2.319E-01	7.890E+00
2.428E-01	8.160E+00
2.531E-01	8.330E+00
2.655E-01	8.500E+00
2.820E-01	8.670E+00
2.931E-01	8.840E+00
3.280E-01	9.010E+00
5.014E-01	9.180E+00
5.280E-01	9.350E+00
5.573E-01	9.520E+00

5.878E-01	9.690E+00
6.193E-01	9.860E+00
6.528E-01	1.003E+01
6.863E-01	1.020E+01
7.230E-01	1.037E+01
7.623E-01	1.054E+01
8.052E-01	1.071E+01
8.561E-01	1.088E+01
9.032E-01	1.105E+01
9.325E-01	1.122E+01
9.392E-01	1.139E+01
9.441E-01	1.541E+01
9.209E-01	1.564E+01
8.723E-01	1.587E+01
8.461E-01	1.610E+01
7.918E-01	1.633E+01
7.642E-01	1.656E+01
7.529E-01	1.679E+01
7.215E-01	1.702E+01
6.993E-01	1.725E+01
6.761E-01	1.748E+01
6.542E-01	1.771E+01
6.332E-01	1.784E+01
6.233E-01	1.817E+01
5.949E-01	1.840E+01
5.774E-01	1.883E+01
5.611E-01	1.896E+01
5.464E-01	1.909E+01
5.327E-01	1.932E+01
5.214E-01	1.955E+01
5.107E-01	1.978E+01
5.006E-01	2.001E+01
4.919E-01	2.024E+01
4.830E-01	2.047E+01
4.701E-01	2.070E+01
4.674E-01	2.093E+01
4.603E-01	2.116E+01
4.537E-01	2.139E+01
4.473E-01	2.162E+01
4.444E-01	2.185E+01
4.350E-01	2.206E+01
4.292E-01	2.231E+01
4.234E-01	2.254E+01
4.180E-01	2.277E+01
4.127E-01	2.300E+01
4.078E-01	2.323E+01
4.029E-01	2.346E+01
3.983E-01	2.369E+01
3.939E-01	2.392E+01
3.897E-01	2.415E+01
3.881E-01	2.422E+01
3.898E-01	2.431E+01
3.930E-01	2.448E+01
3.967E-01	2.465E+01
4.005E-01	2.482E+01
4.047E-01	2.499E+01
4.092E-01	2.516E+01
4.140E-01	2.533E+01
4.192E-01	2.550E+01
4.246E-01	2.567E+01
4.299E-01	2.584E+01
4.333E-01	2.601E+01
4.368E-01	2.618E+01
4.400E-01	2.635E+01
4.406E-01	2.652E+01
4.409E-01	2.669E+01
4.429E-01	3.611E+01
4.393E-01	3.634E+01
4.335E-01	3.657E+01
4.269E-01	3.680E+01
4.221E-01	3.703E+01
4.160E-01	3.726E+01
4.097E-01	3.749E+01
4.035E-01	3.772E+01
3.997E-01	3.795E+01

3.946E-01	3.818E+01
3.897E-01	3.841E+01
3.865E-01	3.864E+01
3.835E-01	3.887E+01
3.805E-01	3.910E+01
3.777E-01	3.933E+01
3.748E-01	3.956E+01
3.719E-01	3.979E+01
3.691E-01	4.002E+01
3.657E-01	4.025E+01
3.623E-01	4.048E+01
3.589E-01	4.071E+01
3.558E-01	4.094E+01
3.527E-01	4.117E+01
3.496E-01	4.140E+01
3.466E-01	4.163E+01
3.438E-01	4.185E+01
3.411E-01	4.209E+01
3.382E-01	4.232E+01
3.356E-01	4.255E+01
3.331E-01	4.278E+01
3.305E-01	4.301E+01
3.281E-01	4.324E+01
3.258E-01	4.347E+01
3.236E-01	4.370E+01
3.214E-01	4.383E+01
3.192E-01	4.416E+01
3.173E-01	4.439E+01
3.153E-01	4.462E+01
3.133E-01	4.485E+01
3.116E-01	4.508E+01
3.100E-01	4.531E+01
3.084E-01	4.554E+01
3.070E-01	4.577E+01
3.056E-01	4.600E+01
3.043E-01	4.623E+01
3.029E-01	4.646E+01
3.016E-01	4.669E+01
3.005E-01	4.692E+01
2.995E-01	4.715E+01
2.985E-01	4.738E+01
2.974E-01	4.761E+01
2.964E-01	4.784E+01
2.954E-01	4.807E+01
2.944E-01	4.830E+01
2.935E-01	4.853E+01
2.930E-01	4.876E+01
2.924E-01	4.899E+01
2.918E-01	4.922E+01
2.912E-01	4.945E+01
2.906E-01	4.968E+01
2.897E-01	4.981E+01
2.895E-01	5.014E+01
2.889E-01	5.037E+01
2.875E-01	5.060E+01
2.857E-01	5.083E+01
2.845E-01	5.106E+01
2.830E-01	5.129E+01
2.816E-01	5.152E+01
2.801E-01	5.175E+01
2.787E-01	5.196E+01
2.773E-01	5.221E+01
2.761E-01	5.244E+01
2.747E-01	5.267E+01
2.734E-01	5.290E+01
2.721E-01	5.313E+01
2.709E-01	5.336E+01
2.699E-01	5.358E+01
2.688E-01	5.382E+01
2.677E-01	5.406E+01
2.667E-01	5.426E+01
2.657E-01	5.451E+01
2.648E-01	5.474E+01
2.639E-01	5.497E+01
2.629E-01	5.520E+01

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2.620E-01           5.543E+01
2.610E-01           5.566E+01
2.601E-01           5.586E+01
2.591E-01           5.612E+01
2.583E-01           5.635E+01
2.572E-01           5.656E+01
2.554E-01           5.681E+01
2.655E-01           5.704E+01
2.646E-01           5.727E+01
2.637E-01           5.750E+01

END OF RESPONSE SPECTRUM
$
$
$=============================================================================================


$ DPENENDING ON CRANE LOCATION PUT '$' SIGN IN FRONT OF MEMBERS AND JOINTS AT CRANE LOCATION
$ R1 CRANE LCOATION 1
$ RX1  x = CRANE LOCATION 2 TO 9
$ CNRX011, CNRX041....  X = CRANE LOCATION 1 TO 9


INACTIVE MEMBERS 'R1' TO 'R8'
INACTIVE MEMBERS 'R21' TO 'R28'
INACTIVE MEMBERS 'R31' TO 'R38'
INACTIVE MEMBERS 'R41' TO 'R48'
INACTIVE MEMBERS 'R51' TO 'R58'
$INACTIVE MEMBERS 'R61' TO 'R68'
INACTIVE MEMBERS 'R71' TO 'R78'
INACTIVE MEMBERS 'R81' TO 'R88'
INACTIVE MEMBERS 'R91' TO 'R98'


INACTIVE JOINTS 'CNR1011' 'CNR1021' 'CNR1031' 'CNR1041' -
            'CNR1131' 'CNR1141' 'CNR1151' 'CNR1161'

INACTIVE JOINTS 'CNR2011' 'CNR2021' 'CNR2031' 'CNR2041' -
            'CNR2131' 'CNR2141' 'CNR2151' 'CNR2161'
INACTIVE JOINTS 'CNR3011' 'CNR3021' 'CNR3031' 'CNR3041' -
            'CNR3131' 'CNR3141' 'CNR3151' 'CNR3161'
INACTIVE JOINTS 'CNR4011' 'CNR4021' 'CNR4031' 'CNR4041' -
            'CNR4131' 'CNR4141' 'CNR4151' 'CNR4161'
INACTIVE JOINTS 'CNR5011' 'CNR5021' 'CNR5031' 'CNR5041' -
            'CNR5131' 'CNR5141' 'CNR5151' 'CNR5161'
$ INACTIVE JOINTS 'CNR6011' 'CNR6021' 'CNR6031' 'CNR6041' -
$             'CNR6131' 'CNR6141' 'CNR6151' 'CNR6161'
INACTIVE JOINTS 'CNR7011' 'CNR7021' 'CNR7031' 'CNR7041' -
            'CNR7131' 'CNR7141' 'CNR7151' 'CNR7161'
INACTIVE JOINTS 'CNR8011' 'CNR8021' 'CNR8031' 'CNR8041' -
            'CNR8131' 'CNR8141' 'CNR8151' 'CNR8161'
INACTIVE JOINTS 'CNR9011' 'CNR9021' 'CNR9031' 'CNR9041' -
            'CNR9131' 'CNR9141' 'CNR9151' 'CNR9161'



$=============================================================================================
$=============================================================================================


UNITS  FT  KIP   DEG   FAH
DEAD LOAD  1 'Dead Load including Crane Members' DIRECTION -Y FACTOR 1.0
$ Concrete floor dead load = 150 pcf x (8/12)ft x 6ft = 0.6 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.6 WB     -0.6       -
     LA    0.000 LB    1.000
    7001       7002       7003       7004              -
    7005       7006       7007                     -
    7014                                      -
    7015       7016       7017       7018       7019     -
    7020       7023       7024                     -
    7025       7026       7027       7028       7029     -
    7032       7033       7034                     -
    7035       7036       7037       7038             -
    7041       7042       7043       7044             -
    7045       7046       7047                     -
```

```
   7052                                    -
   7053       7054       7055       7056       7057     -
   7058
$
$ Concrete floor dead load = 150 pcf x (8/12)ft x 3ft = 0.3 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.3 WB     -0.3       -
     LA     0.000 LB     1.000
   7000 7009 7013 7022 7031 7040 7051                    -
   7008 7012 7021 7030 7039 7048 7059                    -
   7010 7011 7361 7362 7049
$
$ Concrete floor dead load around decontamination pit
$ 150 pcf x (8/12)ft x 1ft = 0.1 kip/ft
$ 150 pcf x (8/12)ft x 2.25ft = 0.225 kip/ft
$ 150 pcf x (8/12)ft x 2ft = 0.2 kip/ft
$ 150 pcf x (8/12)ft x 2.75ft = 0.275 kip/ft
$
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.1 WB     -0.1       -
     LA     0.000 LB     1.000
   3154 TO 3157
$
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.225 WB    -0.225     -
     LA     0.000 LB     1.000
   3158 TO 3161
$
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.2 WB     -0.2       -
     LA     0.000 LB     1.000
   7061 7065 7062 7064
$
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.275 WB    -0.275     -
     LA     0.000 LB     1.000
   5138 TO 5145
$
$ Roof dead load = 20 psf x 6.25ft = 0.125 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.125 WB     -0.125    -
     LA     0.000 LB     1.000
   9001       9002       9003       9004       9005     -
   9006       9007       9082       9083                -
   9084       9085       9086       9087       9088     -
   9010       9011       9012       9013                -
   9014       9015       9016       9019                -
   9020       9021       9022       9023       9024     -
   9025       9028       9029       9030                -
   9031       9032       9033       9034                -
   9037       9038       9039       9040       9041     -
   9042       9043       9046       9047                -
   9048       9049       9050       9051       9052     -
   9055       9056       9057       9058                -
   9059       9060       9061       9064                -
   9065       9066       9067       9068       9069     -
   9070       9073       9074       9075                -
   9076       9077       9078       9079
$
$ Roof dead load = 20 psf x 6.25ft x 0.5 = 0.0625 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.0625 WB     -0.0625  -
     LA     0.000 LB     1.000
   9000       9081       9009       9018       9027     -
   9036       9045       9054       9063       9072     -
   9008       9089       9017       9026       9035     -
   9044       9053       9062       9071       9080
$
$ Adjacent Bldg partial roof selfweight
  JOINT LOADS
   113        FORCE   Y      -1.746
   1113       FORCE   Y      -2.727
   2113       FORCE   Y      -3.011
   3113       FORCE   Y      -2.339
   4113       FORCE   Y      -3.016
   5113       FORCE   Y      -1.476
   5122       FORCE   Y      -3.008
   7122       FORCE   Y      -4.263
   81660      FORCE   Y      -0.860
$
$ Adjacent Bldg partial roof dead load
  JOINT LOADS
```

```
   113        FORCE   Y      -3.6
   1113       FORCE   Y      -7.2
   2113       FORCE   Y      -7.2
   3113       FORCE   Y      -7.0
   4113       FORCE   Y      -6.9
   5113       FORCE   Y      -3.5
   5122       FORCE   Y      -5.5
   7122       FORCE   Y      -8.1
   81660      FORCE   Y      -2.6
$
$ Concrete blocks at hatch
$ 150 pcf x (8/12)ft x 5ft = 0.5 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.5 WB     -0.5       -
     LA     0.000 LB     1.000
   123 TO 128 131 TO 136


$
$SIDING AND GIRTS DEAD LOAD
$SIDING = 1.5 PSF
$GIRTS = 8.5 PSF
$TOTAL = 10 PSF

MEM LOADS
$ WEST FACE OF BUILDING COLUMN LINE 302A

8116 81160     FOR Y GLO UNIF -0.105
71160 71210    FOR Y GLO UNIF -0.27
5116 5121      FOR Y GLO UNIF -0.301
5111 5112      FOR Y GLO UNIF -0.117

4111 4112 4116 4121     FOR Y GLO UNIF -0.23
3111 3112 3116          FOR Y GLO UNIF -0.175

2125 2126      FOR Y GLO UNIF -0.122

2111 2112 2116      FOR Y GLO UNIF -0.182
1111 1112 1116      FOR Y GLO UNIF -0.243
111 112 116    FOR Y GLO UNIF -0.301
13 18          FOR Y GLO UNIF -0.2

3116       FOR Y GLO UNIF -0.235
2116       FOR Y GLO UNIF -0.243

$ EAST FACE OF BUILDING COLUMNS LINE 301

2 7          FOR Y GLO UNIF -0.2
105 101          FOR Y GLO UNIF -0.301
100         FOR Y GLO UNIF -0.144
1100 1101 1105      FOR Y GLO UNIF -0.243
2100 2101 2105      FOR Y GLO UNIF -0.243
3100 3101 3105 3163     FOR Y GLO UNIF -0.235
4100 4101 4105 4122     FOR Y GLO UNIF -0.23
5100 5101 5105      FOR Y GLO UNIF -0.216
6100 6105      FOR Y GLO UNIF -0.185
71000 71050    FOR Y GLO UNIF -0.17
8100 8105      FOR Y GLO UNIF -0.105

$ NORTH FACE
8121           FOR Y GLO UNIF FRA -0.24 0.6 1.0
8116 81160 8105 FOR Y GLO UNIF -0.14

$ SOUTH FACE
100 110 2 7 13 18 FOR Y GLO UNIF -0.14
121 54 55 56 FOR Y GLO UNIF -0.24

LOADING  2 'Crane Component Dead Load'
$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'     FORCE Y     -1.13
'CN6'       FORCE Y     -0.444
'CN7'       FORCE Y     -0.444
'CN285'     FORCE Y     -0.880
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```
'CN270'     FORCE Y     -1.415
'CN278'     FORCE Y     -1.415
'CN3'       FORCE Y     -0.250
'CN27'      FORCE Y     -0.250
'CN51'      FORCE Y     -0.250
'CN84'      FORCE Y     -0.250

LOADING  30 '10% Live Load'
$ 10% 300 psf @ South of Spent Fuel Pools
$ 300 psf x 6 ft x 0.1 = 0.18 kip/ft
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.18 WB     -0.18     -
    LA    0.000 LB    1.000
   7001       7002       7003       7004              -
   7005       7006       7007                        -
   7014                                          -
   7015       7016       7017       7018       7019     -
   7020       7023       7024                        -
   7025       7026       7027       7028       7029     -
   7032       7033       7034                        -
   7035       7036       7037       7038              -
   7041       7042       7043       7044              -
   7045       7046       7047                        -
   7052                                          -
   7053       7054       7055       7056       7057     -
   7058
$
$ 300 psf x 3 ft x 0.1 = 0.09 kip/ft
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.09 WB     -0.09     -
    LA    0.000 LB    1.000
   7000 7009 7013 7022 7031 7040 7051                      -
   7008 7012 7021 7030 7039 7048 7059                      -
   7010 7011 7361 7362 7049
$
$ Floor live load around decontamination pit
$ 300 psf x 1ft x 0.1 = 0.03 kip/ft
$ 300 psf x 2.25ft x 0.1 = 0.0675 kip/ft
$ 300 psf x 2ft x 0.25 = 0.06 kip/ft
$ 300 psf x 2.75ft x 0.25 = 0.083 kip/ft
$
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.03 WB    -0.03     -
    LA    0.000 LB    1.000
   3154 TO 3157
$
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.0675 WB    -0.0675     -
    LA    0.000 LB    1.000
   3158 TO 3161
$
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.06 WB     -0.06      -
    LA    0.000 LB    1.000
   7061 7065 7062 7064
$
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.083 WB    -0.083     -
    LA    0.000 LB    1.000
   5138 TO 5145

LOADING  16 'CASK WEIGHT FOR PENDULUM EFFECT'
 JOINT LOADS
      'CN450'       FORCE Y     -266.0

UNITS  INCH  LBS   DEG   FAH


LOADING  35 'UNIT LOAD IN X DIRECTION'
 JOINT LOADS FOR  X  1950
38  -
8152

 JOINT LOADS FOR  X  3900
152  -
178 -
1152 -
2152  -
3152 -
4152 -
5152 -
```

```
6152 -
7152

  JOINT LOADS FOR  X  11500
27 -
3160 -
5190

  JOINT LOADS FOR  X  23000
145 -
1145 -
2145 -
3145

LOADING  36 'UNIT LOADS IN Y DIRECTION'
  JOINT LOADS FOR  Y  -19500
38   -
8152

  JOINT LOADS FOR  Y  -39000
152  -
178 -
1152 -
2152  -
3152 -
4152 -
5152 -
6152 -
7152

  JOINT LOADS FOR  Y  -115000
27 -
3160 -
5190

  JOINT LOADS FOR  Y  -230000
145 -
1145 -
2145 -
3145

LOADING  37 'UNIT LOAD IN Z DIRECTION'
  JOINT LOADS FOR  Z  1950
38   -
8152

  JOINT LOADS FOR  Z  3900
152  -
178 -
1152 -
2152  -
3152 -
4152 -
5152 -
6152 -
7152

  JOINT LOADS FOR  Z  11500
27 -
3160 -
5190

  JOINT LOADS FOR  Z  23000
145 -
1145 -
2145 -
3145

DEAD LOAD  38 'ACCELERATION Y' DIRECTION -Y FACTOR 1.0

$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'      FORCE Y      -266000
```

```
'CN6'       FORCE Y     -444
'CN7'       FORCE Y     -444
'CN285'     FORCE Y      -880
'CN270'     FORCE Y     -1415
'CN278'     FORCE Y     -1415
'CN3'       FORCE Y     -250
'CN27'      FORCE Y     -250
'CN51'      FORCE Y     -250
'CN84'      FORCE Y     -250

DEAD LOAD  39 'ACCELERATION X' DIRECTION X FACTOR 1.0

$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'     FORCE X     266000
'CN6'       FORCE X     444
'CN7'       FORCE X     444
'CN285'     FORCE X      880
'CN270'     FORCE X      1415
'CN278'     FORCE X      1415
'CN3'       FORCE X     250
'CN27'      FORCE X      250
'CN51'      FORCE X      250
'CN84'      FORCE X      250

DEAD LOAD  40 'ACCELERATION Z' DIRECTION Z FACTOR 1.0

$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'     FORCE Z     266000
'CN6'       FORCE Z     444
'CN7'       FORCE Z     444
'CN285'     FORCE Z      880
'CN270'     FORCE Z      1415
'CN278'     FORCE Z      1415
'CN3'       FORCE Z     250
'CN27'      FORCE Z      250
'CN51'      FORCE Z      250
'CN84'      FORCE Z      250



$=============================================================================================
MAXIMUM NUMBER OF CYCLES 40
CONVERGENCE TOL 0.001
NONLINEAR ANALYSIS
$=============================================================================================

$ Create [M] from 100% Load Case 1 & 2 16 and 10% Load Case 3
$ Automatically calculate masses for all members and additional
$ masses as defined in static Load Case 1 2 16 and 30.
$ Masses are applied in global X, Y, and Z-directions
$
UNITS  FEET  KIP

INERTIA OF JOINTS FROM LOAD 1 2 16 30 ALL DOF
PRINT DYNAMIC JOINT INERTIA
PRINT DYNAMIC MEMBER ADDED MASS

$ CUT OFF MODE SHAPE 300
EIGEN PARAMETERS
  NUMBER OF MODES 300
  SOLVE USING GTLANCZOS
  PRINT MAX
END
DAMPING PERCENT 7.0 300
PRINT DYNAMIC MODAL DAMPING

$ Eigen solution
DYNAMIC ANALYSIS EIGENSOLUTION
LIST DYNAMIC PARTICIPATION FACTORS
```

```
BYPASS
$-------------------------------------------------------------------------------
$ Apply Response Spectrum Loading
$
DYNAMIC PARAMETERS
  USE EXTERNAL FILE SOLVER
END

RESPONSE SPECTRA LOAD 'RSX_SSE'  'HORIZONTAL SSE IN X-DIRECTION'
   SUPPORT ACCELERATIONS
   TRANS X 1.0 FILE 'HSSE162'
END OF RESPONSE SPECTRA LOADING

RESPONSE SPECTRA LOAD 'RSZ_SSE'  'HORIZONTAL SSE IN Z-DIRECTION'
   SUPPORT ACCELERATIONS
   TRANS Z 1.0 FILE 'HSSE162'
END OF RESPONSE SPECTRA LOADING

RESPONSE SPECTRA LOAD 'RSY_SSE'  'VERTICAL SSE IN Y-DIRECTION'
   SUPPORT ACCELERATIONS
   TRANS Y 1.0 FILE 'VSSE162'
END OF RESPONSE SPECTRA LOADING

$-------------------------------------------------------------------------------

UNITS INCH POUND CYCLES SECONDS

LOAD LIST 'RSX_SSE' 'RSY_SSE' 'RSZ_SSE'
EIGENVALUE PARAMETERS
   SOLVE USING GTLANCZOS
   PRINT MAXIMUM
   INITIAL STRESS LOADING OFF
END EIGENVALUE PARAMETERS

DYNAMIC ANALYSIS MODAL

PERFORM RESPONSE SPECTRUM ANALYSIS

LIST RESPONSE SPECTRUM SPECTRUAL ACCELERATIONS
LIST RESPONSE SPECTRUM PARTICIPATION FACTORS

COMPUTE RESPONSE SPECTRUM DISPLACEMENTS ACCELERATIONS MODE COMBINATIONS CQC
COMPUTE RESPONSE SPECTRUM FORCES REACTIONS MODE COMBINATIONS CQC
COMPUTE RESPONSE SPECTRUM STRESSES LOADS MODE COMBINATIONS CQC

LOAD LIST 'RSX_SSE' 'RSY_SSE' 'RSZ_SSE'


COUTPUT '(07)SPECTRA RESULTS.TXT'
UNITS KIP FT
OUTPUT DEC 2
OUTPUT ORDERED
OUTPUT BY MEMBER

LIST DYNAMIC MASS SUMMARY

LIST RESPONSE SPECTRA DISPLACEMENTS MODAL COMBINATION CQC -
JOINTS 'CNR213' 'CNR214' 'CNR215' 'CNR216' 'CNR201' 'CNR202' -
'CNR203' 'CNR203' 'CNR204' 'CN59' 'CN264' 'CN249' 'CN254' 'CN450' 'CN434'

LIST RESPONSE SPECTRA ACCELERATIONS MODAL COMBINATION CQC JOINTS -
JOINTS 'CNR213' 'CNR214' 'CNR215' 'CNR216' 'CNR201' 'CNR202' -
'CNR203' 'CNR203' 'CNR204' 'CN59' 'CN264' 'CN249' 'CN254' 'CN450' 'CN434'

COUTPUT 'N1E3_HU_WL_MHE.GTO'

SAVE 'N1E3_HU_WL_MHE_1.GTS'

$-------------------------------------------------------------------------------

FORM MISSING MASS LOAD 'MMX_SSE' 'MISSING MASS LOAD IN X-DIRECTION' FROM -
   RESPONSE SPECTRA LOAD 'RSX_SSE' CUTOFF FREQUENCY 33.0 DAMPING RATIO 0.07
FORM MISSING MASS LOAD 'MMZ_SSE' 'MISSING MASS LOAD IN Z-DIRECTION' FROM -
   RESPONSE SPECTRA LOAD 'RSZ_SSE' CUTOFF FREQUENCY 33.0 DAMPING RATIO 0.07
```

```
FORM MISSING MASS LOAD 'MMY_SSE' 'MISSING MASS LOAD IN Y-DIRECTION' FROM -
  RESPONSE SPECTRA LOAD 'RSY_SSE' CUTOFF FREQUENCY 33.0 DAMPING RATIO 0.07

STIFFNESS ANALYSIS
LIST REACTION
LIST MAXIMUM JOINT DISPLACEMENT SUMMARY ONLY LOADS ACTIVE

$-------------------------------------------------------------------------------

LOAD LIST 'RSX_SSE' 'RSZ_SSE' 'RSY_SSE'

CREATE PSEUDOSTATIC LOADING 'PSX_SSE' 'PSEUDOSTATIC LOAD IN X-DIRECTION' FROM -
  CQC OF LOADING 'RSX_SSE'
CREATE PSEUDOSTATIC LOADING 'PSZ_SSE' 'PSEUDOSTATIC LOAD IN Z-DIRECTION' FROM -
  CQC OF LOADING 'RSZ_SSE'
CREATE PSEUDOSTATIC LOADING 'PSY_SSE' 'PSEUDOSTATIC LOAD IN Y-DIRECTION' FROM -
  CQC OF LOADING 'RSY_SSE'

LOAD LIST 'PSX_SSE' 'PSZ_SSE' 'PSY_SSE'
LIST REACTION

$-------------------------------------------------------------------------------

LOAD LIST 'PSX_SSE' 'PSZ_SSE' 'PSY_SSE' 'MMX_SSE' 'MMZ_SSE' 'MMY_SSE'
CREATE LOAD COMBINATION 'XRMS_SSE' TYPE RMS SPECS 'PSX_SSE' 1.0 'MMX_SSE' 1.0
CREATE LOAD COMBINATION 'ZRMS_SSE' TYPE RMS SPECS 'PSZ_SSE' 1.0 'MMZ_SSE' 1.0
CREATE LOAD COMBINATION 'YRMS_SSE' TYPE RMS SPECS 'PSY_SSE' 1.0 'MMY_SSE' 1.0

CREATE LOAD COMBINATION 14 TYPE ABSOLUTE SPECS 'XRMS_SSE' 1.0 'YRMS_SSE' 1.0
CREATE LOAD COMBINATION 15 TYPE ABSOLUTE SPECS 'ZRMS_SSE' 1.0 'YRMS_SSE' 1.0
CREATE LOAD COMBINATION 18 TYPE RMS SPECS 'XRMS_SSE' 1.0 'YRMS_SSE' 1.0 'ZRMS_SSE' 1.0


LOAD LIST  14 15 18

LIST MAXIMUM JOINT DISPLACEMENT SUMMARY ONLY LOADS ACTIVE
LIST REACTION


$-------------------------------------------------------------------------------

STIFFNESS ANALYSIS


UNITS  INCH  LBS   DEG   FAH

 BYPASS
```

Attachment 15

GT STRUDL Coupled Building/Crane Model, Crane at S, All Analyses

```
STRUDL 'N1E3_HU_WL_MHE' 'BRIDGE LOCATION 1 TROLLEY POSITION 3 - LOAD UP - MHE'
COUTPUT 'N1E3_HU_WL_MHE.GTO'

$ N1E3_HU_WL_MHE (Model No. 07)
$ CRYSTAL RIVER NUCLEAR PLANT
$ ISFSI AUXILIARY BUILDING CRANE UPGRADES
$ FHCR-5
$=============================================================================================

LARGE PROBLEM SIZE 5
TYPE  SPACE FRAME
UNITS  INCH  LBS   DEG
JOINT COORDINATES GLOBAL
   1              0.0000        0.0000        0.0000
   12             0.0000        0.0000     -576.0000
   101          432.0000      288.0000        0.0000
   111          432.0000      288.0000     -576.0000
   123          432.0000      288.0000     -288.0000
   1101         723.0000      288.0000        0.0000
   1111         723.0000      288.0000     -576.0000
   1123         723.0000      288.0000     -288.0000
   2101        1014.0000      288.0000        0.0000
   2111        1014.0000      288.0000     -576.0000
   2123        1014.0000      288.0000     -288.0000
   3101        1305.0000      288.0000        0.0000
   3111        1305.0000      288.0000     -576.0000
   3123        1305.0000      288.0000     -288.0000
   4101        1578.0000      288.0000        0.0000
   4111        1578.0000      288.0000     -576.0000
   5101        1857.0000      288.0000        0.0000
   5111        1857.0000      288.0000     -576.0000
   6101        2097.0000      516.0000        0.0000
   7101        2301.0000      516.0000        0.0000
   7111        2301.0000      516.0000     -576.0000
   8100        2505.0000      516.0000     -288.0000
   8101        2505.0000      516.0000        0.0000
   8111        2505.0000      516.0000     -576.0000
   2              0.0000      489.9600        0.0000
   3              0.0000      844.0800        0.0000
   4              0.0000      852.0000        0.0000
   5              0.0000      852.0000       11.0000
   6              0.0000      860.0400       11.0000
   7              0.0000      870.6000       11.0000
   8              0.0000     1065.9600       11.0000
   9              0.0000      852.0000      -12.0000
   10             0.0000      870.6000      -12.0000
   13             0.0000      489.9600     -576.0000
   14             0.0000      844.0800     -576.0000
   15             0.0000      852.0000     -576.0000
   16             0.0000      852.0000     -587.0000
   17             0.0000      860.0400     -587.0000
   18             0.0000      870.6000     -587.0000
   19             0.0000     1065.9600     -587.0000
   20             0.0000      852.0000     -564.0000
   21             0.0000      870.6000     -564.0000
   23             0.0000      288.0000     -336.0000
   24             0.0000      489.9600     -504.0000
   25             0.0000      489.9600     -432.0000
   26             0.0000      489.9600     -360.0000
   27             0.0000      489.9600     -288.0000
   28             0.0000      489.9600     -216.0000
   29             0.0000      489.9600     -144.0000
   30             0.0000      489.9600      -72.0000
   31             0.0000      672.0000     -432.0000
   32             0.0000      672.0000     -288.0000
   33             0.0000      672.0000     -144.0000
   34             0.0000      844.0800     -288.0000
   35             0.0000     1065.9600     -512.0000
   36             0.0000     1065.9600     -437.0000
   37             0.0000     1065.9600     -362.0000
```

38	0.0000	1065.9600	-288.0000
39	0.0000	1065.9600	-214.0000
40	0.0000	1065.9600	-139.0000
41	0.0000	1065.9600	-64.0000
102	432.0000	489.9600	0.0000
103	432.0000	852.0000	0.0000
104	432.0000	852.0000	11.0000
105	432.0000	860.0400	11.0000
106	432.0000	870.6000	11.0000
107	432.0000	1065.9600	11.0000
108	432.0000	852.0000	-12.0000
109	432.0000	870.6000	-12.0000
112	432.0000	489.9600	-576.0000
113	432.0000	573.0000	-576.0000
114	432.0000	852.0000	-576.0000
115	432.0000	852.0000	-587.0000
116	432.0000	860.0400	-587.0000
117	432.0000	870.6000	-587.0000
118	432.0000	1065.9600	-587.0000
119	432.0000	852.0000	-564.0000
120	432.0000	870.6000	-564.0000
124	216.0000	489.9600	-576.0000
125	216.0000	489.9600	-504.0000
126	216.0000	489.9600	-432.0000
127	216.0000	489.9600	-360.0000
128	216.0000	489.9600	-288.0000
129	216.0000	489.9600	-216.0000
130	216.0000	489.9600	-144.0000
131	216.0000	489.9600	-72.0000
132	216.0000	489.9600	0.0000
133	336.0000	489.9600	-576.0000
134	336.0000	489.9600	-504.0000
135	336.0000	489.9600	-432.0000
136	336.0000	489.9600	-360.0000
137	336.0000	489.9600	-288.0000
138	336.0000	489.9600	-216.0000
139	336.0000	489.9600	-144.0000
140	336.0000	489.9600	-72.0000
141	336.0000	489.9600	0.0000
142	432.0000	489.9600	-504.0000
143	432.0000	489.9600	-432.0000
144	432.0000	489.9600	-360.0000
145	432.0000	489.9600	-288.0000
146	432.0000	489.9600	-216.0000
147	432.0000	489.9600	-144.0000
148	432.0000	489.9600	-72.0000
149	432.0000	1065.9600	-512.0000
150	432.0000	1065.9600	-437.0000
151	432.0000	1065.9600	-362.0000
152	432.0000	1065.9600	-288.0000
153	432.0000	1065.9600	-214.0000
154	432.0000	1065.9600	-139.0000
155	432.0000	1065.9600	-64.0000
183	577.5000	573.0000	-576.0000
174	216.0000	1065.9600	-587.0000
175	216.0000	1065.9600	-512.0000
176	216.0000	1065.9600	-437.0000
177	216.0000	1065.9600	-362.0000
178	216.0000	1065.9600	-288.0000
179	216.0000	1065.9600	-214.0000
180	216.0000	1065.9600	-139.0000
181	216.0000	1065.9600	-64.0000
182	216.0000	1065.9600	11.0000
1102	723.0000	489.9600	0.0000
1103	723.0000	852.0000	0.0000
1104	723.0000	852.0000	11.0000
1105	723.0000	860.0400	11.0000
1106	723.0000	870.6000	11.0000
1107	723.0000	1065.9600	11.0000
1108	723.0000	852.0000	-12.0000
1109	723.0000	870.6000	-12.0000
1112	723.0000	489.9600	-576.0000
1113	723.0000	573.0000	-576.0000
1114	723.0000	852.0000	-576.0000
1115	723.0000	852.0000	-587.0000

1116	723.0000	860.0400	-587.0000
1117	723.0000	870.6000	-587.0000
1118	723.0000	1065.9600	-587.0000
1119	723.0000	852.0000	-564.0000
1120	723.0000	870.6000	-564.0000
1142	723.0000	489.9600	-504.0000
1143	723.0000	489.9600	-432.0000
1144	723.0000	489.9600	-360.0000
1145	723.0000	489.9600	-288.0000
1146	723.0000	489.9600	-216.0000
1147	723.0000	489.9600	-144.0000
1148	723.0000	489.9600	-72.0000
1149	723.0000	1065.9600	-512.0000
1150	723.0000	1065.9600	-437.0000
1151	723.0000	1065.9600	-362.0000
1152	723.0000	1065.9600	-288.0000
1153	723.0000	1065.9600	-214.0000
1154	723.0000	1065.9600	-139.0000
1155	723.0000	1065.9600	-64.0000
2102	1014.0000	489.9600	0.0000
2103	1014.0000	852.0000	0.0000
2104	1014.0000	852.0000	11.0000
2105	1014.0000	860.0400	11.0000
2106	1014.0000	870.6000	11.0000
2107	1014.0000	1065.9600	11.0000
2108	1014.0000	852.0000	-12.0000
2109	1014.0000	870.6000	-12.0000
2112	1014.0000	489.9600	-576.0000
2113	1014.0000	573.0000	-576.0000
2114	1014.0000	852.0000	-576.0000
2115	1014.0000	852.0000	-587.0000
2116	1014.0000	860.0400	-587.0000
2117	1014.0000	870.6000	-587.0000
2118	1014.0000	1065.9600	-587.0000
2119	1014.0000	852.0000	-564.0000
2120	1014.0000	870.6000	-564.0000
2122	1159.5000	288.0000	-587.0000
2124	1118.5200	489.9600	0.0000
2125	1118.5200	489.9600	-72.0000
2126	1159.5000	489.9600	-72.0000
2127	1159.5000	489.9600	0.0000
2142	1014.0000	489.9600	-504.0000
2143	1014.0000	489.9600	-432.0000
2144	1014.0000	489.9600	-360.0000
2145	1014.0000	489.9600	-288.0000
2146	1014.0000	489.9600	-216.0000
2147	1014.0000	489.9600	-144.0000
2148	1014.0000	489.9600	-72.0000
2149	1014.0000	1065.9600	-512.0000
2150	1014.0000	1065.9600	-437.0000
2151	1014.0000	1065.9600	-362.0000
2152	1014.0000	1065.9600	-288.0000
2153	1014.0000	1065.9600	-214.0000
2154	1014.0000	1065.9600	-139.0000
2155	1014.0000	1065.9600	-64.0000
2156	1159.5000	489.9600	-587.0000
2157	1159.5000	489.9600	-504.0000
2158	1159.5000	489.9600	-432.0000
21740	1159.5000	573.0000	-587.0000
3100	1305.0000	459.9600	0.0000
3102	1305.0000	489.9600	0.0000
3103	1305.0000	852.0000	0.0000
3104	1305.0000	852.0000	11.0000
3105	1305.0000	860.0400	11.0000
3106	1305.0000	870.6000	11.0000
3107	1305.0000	1065.9600	11.0000
3108	1305.0000	852.0000	-12.0000
3109	1305.0000	870.6000	-12.0000
3112	1305.0000	489.9600	-576.0000
3113	1305.0000	573.0000	-576.0000
3114	1305.0000	852.0000	-576.0000
3115	1305.0000	852.0000	-587.0000
3116	1305.0000	860.0400	-587.0000
3117	1305.0000	870.6000	-587.0000
3118	1305.0000	1065.9600	-587.0000

3119	1305.0000	852.0000	-564.0000
3120	1305.0000	870.6000	-564.0000
3121	1159.5000	860.0400	-587.0000
3142	1305.0000	489.9600	-504.0000
3143	1305.0000	489.9600	-432.0000
3144	1305.0000	489.9600	-360.0000
3145	1305.0000	489.9600	-288.0000
3146	1305.0000	489.9600	-216.0000
3147	1305.0000	489.9600	-144.0000
3148	1305.0000	489.9600	-72.0000
3149	1305.0000	1065.9600	-512.0000
3150	1305.0000	1065.9600	-437.0000
3151	1305.0000	1065.9600	-362.0000
3152	1305.0000	1065.9600	-288.0000
3153	1305.0000	1065.9600	-214.0000
3154	1305.0000	1065.9600	-139.0000
3155	1305.0000	1065.9600	-64.0000
3156	1437.0000	489.9600	-576.0000
3157	1437.0000	489.9600	-504.0000
3158	1437.0000	489.9600	-432.0000
3159	1437.0000	489.9600	-360.0000
3160	1437.0000	489.9600	-288.0000
3161	1437.0000	489.9600	-216.0000
3162	1437.0000	489.9600	-144.0000
3163	1437.0000	489.9600	-72.0000
3164	1437.0000	489.9600	0.0000
3165	1437.0000	459.9600	0.0000
4100	1578.0000	459.9600	0.0000
4102	1578.0000	489.9600	0.0000
4103	1578.0000	852.0000	0.0000
4104	1578.0000	852.0000	11.0000
4105	1578.0000	860.0400	11.0000
4106	1578.0000	870.6000	11.0000
4107	1578.0000	1065.9600	11.0000
4108	1578.0000	852.0000	-12.0000
4109	1578.0000	870.6000	-12.0000
4112	1578.0000	489.9600	-576.0000
4113	1578.0000	573.0000	-576.0000
4114	1578.0000	852.0000	-576.0000
4115	1578.0000	852.0000	-587.0000
4116	1578.0000	860.0400	-587.0000
4117	1578.0000	870.6000	-587.0000
4118	1578.0000	1065.9600	-587.0000
4119	1578.0000	852.0000	-564.0000
4120	1578.0000	870.6000	-564.0000
4122	1578.0000	971.0400	-587.0000
4149	1578.0000	1065.9600	-512.0000
4150	1578.0000	1065.9600	-437.0000
4151	1578.0000	1065.9600	-362.0000
4152	1578.0000	1065.9600	-288.0000
4153	1578.0000	1065.9600	-214.0000
4154	1578.0000	1065.9600	-139.0000
4155	1578.0000	1065.9600	-64.0000
4156	1717.5000	971.0400	-587.0000
5100	1857.0000	459.9600	0.0000
5102	1857.0000	489.9600	0.0000
5103	1857.0000	852.0000	0.0000
5104	1857.0000	852.0000	11.0000
5105	1857.0000	860.0400	11.0000
5106	1857.0000	870.6000	11.0000
5107	1857.0000	1065.9600	11.0000
5108	1857.0000	852.0000	-12.0000
5109	1857.0000	870.6000	-12.0000
5112	1857.0000	489.9600	-576.0000
5113	1857.0000	573.0000	-576.0000
5114	1857.0000	852.0000	-576.0000
5115	1857.0000	852.0000	-587.0000
5116	1857.0000	860.0400	-587.0000
5117	1857.0000	870.6000	-587.0000
5118	1857.0000	1065.9600	-587.0000
5119	1857.0000	852.0000	-564.0000
5120	1857.0000	870.6000	-564.0000
5122	1857.0000	971.0400	-587.0000
5123	1717.5000	573.0000	-576.0000
5149	1857.0000	1065.9600	-512.0000

5150	1857.0000	1065.9600	-437.0000
5151	1857.0000	1065.9600	-362.0000
5152	1857.0000	1065.9600	-288.0000
5153	1857.0000	1065.9600	-214.0000
5154	1857.0000	1065.9600	-139.0000
5155	1857.0000	1065.9600	-64.0000
5187	1857.0000	489.9600	-504.0000
5188	1857.0000	489.9600	-432.0000
5189	1857.0000	489.9600	-360.0000
5190	1857.0000	489.9600	-288.0000
5191	1857.0000	489.9600	-216.0000
5192	1857.0000	489.9600	-144.0000
5193	1857.0000	489.9600	-72.0000
6103	2097.0000	852.0000	0.0000
6104	2097.0000	852.0000	11.0000
6105	2097.0000	860.0400	11.0000
6106	2097.0000	870.6000	11.0000
6107	2097.0000	1065.9600	11.0000
6108	2097.0000	852.0000	-12.0000
6109	2097.0000	870.6000	-12.0000
6118	2097.0000	1065.9600	-587.0000
6149	2097.0000	1065.9600	-512.0000
6150	2097.0000	1065.9600	-437.0000
6151	2097.0000	1065.9600	-362.0000
6152	2097.0000	1065.9600	-288.0000
6153	2097.0000	1065.9600	-214.0000
6154	2097.0000	1065.9600	-139.0000
6155	2097.0000	1065.9600	-64.0000
7103	2301.0000	852.0000	0.0000
7104	2301.0000	852.0000	11.0000
7105	2301.0000	860.0400	11.0000
7106	2301.0000	870.6000	11.0000
7107	2301.0000	1065.9600	11.0000
7108	2301.0000	852.0000	-12.0000
7109	2301.0000	870.6000	-12.0000
7114	2301.0000	852.0000	-576.0000
7115	2301.0000	852.0000	-587.0000
7116	2301.0000	860.0400	-587.0000
7117	2301.0000	870.6000	-587.0000
7118	2301.0000	1065.9600	-587.0000
7119	2301.0000	852.0000	-564.0000
7120	2301.0000	870.6000	-564.0000
7122	2301.0000	971.0400	-587.0000
7149	2301.0000	1065.9600	-512.0000
7150	2301.0000	1065.9600	-437.0000
7151	2301.0000	1065.9600	-362.0000
7152	2301.0000	1065.9600	-288.0000
7153	2301.0000	1065.9600	-214.0000
7154	2301.0000	1065.9600	-139.0000
7155	2301.0000	1065.9600	-64.0000
8103	2505.0000	852.0000	0.0000
8104	2505.0000	852.0000	11.0000
8105	2505.0000	860.0400	11.0000
8106	2505.0000	870.6000	11.0000
8107	2505.0000	1065.9600	11.0000
8108	2505.0000	852.0000	-12.0000
8109	2505.0000	870.6000	-12.0000
8114	2505.0000	852.0000	-576.0000
8115	2505.0000	852.0000	-587.0000
8116	2505.0000	860.0400	-587.0000
8117	2505.0000	870.6000	-587.0000
8118	2505.0000	1065.9600	-587.0000
8119	2505.0000	852.0000	-564.0000
8120	2505.0000	870.6000	-564.0000
81660	2505.0000	971.0400	-587.0000
8149	2505.0000	1065.9600	-512.0000
8150	2505.0000	1065.9600	-437.0000
8151	2505.0000	1065.9600	-362.0000
8152	2505.0000	1065.9600	-288.0000
8153	2505.0000	1065.9600	-214.0000
8154	2505.0000	1065.9600	-139.0000
8155	2505.0000	1065.9600	-64.0000
8156	432.0000	288.0000	-932.0000
8157	1578.0000	288.0000	-900.0000

$

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$ Added runway girder nodes
$
'CNR1011'     2241.0    894.6     -564.0
'CNR1021'     2187.0    894.6     -564.0
'CNR1031'     2019.0    894.6     -564.0
'CNR1041'     1965.0    894.6     -564.0

'CNR101' 2241.0    870.6     -564.0
'CNR102' 2187.0    870.6     -564.0
'CNR103' 2019.0    870.6     -564.0
'CNR104' 1965.0    870.6     -564.0

'CNR2011'     2139.0    894.6     -564.0
'CNR2021'     2085.0    894.6     -564.0
'CNR2031'     1917.0    894.6     -564.0
'CNR2041'     1863.0    894.6     -564.0

'CNR201' 2139.0    870.6     -564.0
'CNR202' 2085.0    870.6     -564.0
'CNR203' 1917.0    870.6     -564.0
'CNR204' 1863.0    870.6     -564.0

'CNR3011'     2106.0    894.6     -564.0
'CNR3021'     2052.0    894.6     -564.0
'CNR3031'     1884.0    894.6     -564.0
'CNR3041'     1830.0    894.6     -564.0

'CNR301' 2106.0    870.6     -564.0
'CNR302' 2052.0    870.6     -564.0
'CNR303' 1884.0    870.6     -564.0
'CNR304' 1830.0    870.6     -564.0

'CNR4011'     1296.0    894.6     -564.0
'CNR4021'     1242.0    894.6     -564.0
'CNR4031'     1074.0    894.6     -564.0
'CNR4041'     1020.0    894.6     -564.0

'CNR401' 1296.0    870.6     -564.0
'CNR402' 1242.0    870.6     -564.0
'CNR403' 1074.0    870.6     -564.0
'CNR404' 1020.0    870.6     -564.0

'CNR5011'     1263.0    894.6     -564.0
'CNR5021'     1209.0    894.6     -564.0
'CNR5031'     1041.0    894.6     -564.0
'CNR5041'     987.0     894.6     -564.0

'CNR501' 1263.0    870.6     -564.0
'CNR502' 1209.0    870.6     -564.0
'CNR503' 1041.0    870.6     -564.0
'CNR504' 987.0     870.6     -564.0

'CNR6011'     1173.0    894.6     -564.0
'CNR6021'     1119.0    894.6     -564.0
'CNR6031'     951.0     894.6     -564.0
'CNR6041'     897.0     894.6     -564.0

'CNR601' 1173.0    870.6     -564.0
'CNR602' 1119.0    870.6     -564.0
'CNR603' 951.0     870.6     -564.0
'CNR604' 897.0     870.6     -564.0

'CNR7011'     459.0     894.6     -564.0
'CNR7021'     405.0     894.6     -564.0
'CNR7031'     237.0     894.6     -564.0
'CNR7041'     183.0     894.6     -564.0

'CNR701' 459.0     870.6     -564.0
'CNR702' 405.0     870.6     -564.0
'CNR703' 237.0     870.6     -564.0
'CNR704' 183.0     870.6     -564.0

'CNR8011'     372.0     894.6     -564.0
'CNR8021'     318.0     894.6     -564.0
'CNR8031'     150.0     894.6     -564.0
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'CNR8041' 96.0 894.6 -564.0

'CNR801' 372.0 870.6 -564.0
'CNR802' 318.0 870.6 -564.0
'CNR803' 150.0 870.6 -564.0
'CNR804' 96.0 870.6 -564.0

'CNR9011' 303.0 894.6 -564.0
'CNR9021' 249.0 894.6 -564.0
'CNR9031' 81.0 894.6 -564.0
'CNR9041' 27.0 894.6 -564.0

'CNR901' 303.0 870.6 -564.0
'CNR902' 249.0 870.6 -564.0
'CNR903' 81.0 870.6 -564.0
'CNR904' 27.0 870.6 -564.0

'CNR1131' 2241.0 894.6 -12.0
'CNR1141' 2187.0 894.6 -12.0
'CNR1151' 2019.0 894.6 -12.0
'CNR1161' 1965.0 894.6 -12.0

'CNR113' 2241.0 870.6 -12.0
'CNR114' 2187.0 870.6 -12.0
'CNR115' 2019.0 870.6 -12.0
'CNR116' 1965.0 870.6 -12.0

'CNR2131' 2139.0 894.6 -12.0
'CNR2141' 2085.0 894.6 -12.0
'CNR2151' 1917.0 894.6 -12.0
'CNR2161' 1863.0 894.6 -12.0

'CNR213' 2139.0 870.6 -12.0
'CNR214' 2085.0 870.6 -12.0
'CNR215' 1917.0 870.6 -12.0
'CNR216' 1863.0 870.6 -12.0

'CNR3131' 2106.0 894.6 -12.0
'CNR3141' 2052.0 894.6 -12.0
'CNR3151' 1884.0 894.6 -12.0
'CNR3161' 1830.0 894.6 -12.0

'CNR313' 2106.0 870.6 -12.0
'CNR314' 2052.0 870.6 -12.0
'CNR315' 1884.0 870.6 -12.0
'CNR316' 1830.0 870.6 -12.0

'CNR4131' 1296.0 894.6 -12.0
'CNR4141' 1242.0 894.6 -12.0
'CNR4151' 1074.0 894.6 -12.0
'CNR4161' 1020.0 894.6 -12.0

'CNR413' 1296.0 870.6 -12.0
'CNR414' 1242.0 870.6 -12.0
'CNR415' 1074.0 870.6 -12.0
'CNR416' 1020.0 870.6 -12.0

'CNR5131' 1263.0 894.6 -12.0
'CNR5141' 1209.0 894.6 -12.0
'CNR5151' 1041.0 894.6 -12.0
'CNR5161' 987.0 894.6 -12.0

'CNR513' 1263.0 870.6 -12.0
'CNR514' 1209.0 870.6 -12.0
'CNR515' 1041.0 870.6 -12.0
'CNR516' 987.0 870.6 -12.0

'CNR6131' 1173.0 894.6 -12.0
'CNR6141' 1119.0 894.6 -12.0
'CNR6151' 951.0 894.6 -12.0
'CNR6161' 897.0 894.6 -12.0

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'CNR613' 1173.0     870.6      -12.0
'CNR614' 1119.0     870.6      -12.0
'CNR615' 951.0      870.6      -12.0
'CNR616' 897.0      870.6      -12.0

'CNR7131'      459.0      894.6      -12.0
'CNR7141'      405.0      894.6      -12.0
'CNR7151'      237.0      894.6      -12.0
'CNR7161'      183.0      894.6      -12.0

'CNR713' 459.0      870.6      -12.0
'CNR714' 405.0      870.6      -12.0
'CNR715' 237.0      870.6      -12.0
'CNR716' 183.0      870.6      -12.0

'CNR8131'      372.0      894.6      -12.0
'CNR8141'      318.0      894.6      -12.0
'CNR8151'      150.0      894.6      -12.0
'CNR8161'      96.0 894.6      -12.0

'CNR813' 372.0      870.6      -12.0
'CNR814' 318.0      870.6      -12.0
'CNR815' 150.0      870.6      -12.0
'CNR816' 96.0 870.6      -12.0

'CNR9131'      303.0      894.6      -12.0
'CNR9141'      249.0      894.6      -12.0
'CNR9151'      81.0 894.6      -12.0
'CNR9161'      27.0 894.6      -12.0

'CNR913' 303.0      870.6      -12.0
'CNR914' 249.0      870.6      -12.0
'CNR915' 81.0 870.6      -12.0
'CNR916' 27.0 870.6      -12.0



$
$ Added crane nodes
$
'CN1'     345     946.1     -12
'CN10'     345     946.1     -91.65
'CN100'     123     946.1     -394.74
'CN101'     123     946.1     -384.78
'CN102'     123     946.1     -374.83
'CN103'     123     946.1     -364.87
'CN104'     123     946.1     -354.91
'CN105'     123     946.1     -344.96
'CN106'     123     946.1     -325.6
'CN107'     123     946.1     -316.2
'CN108'     123     946.1     -306.8
'CN109'     123     946.1     -297.4
'CN11'     345     946.1     -101.61
'CN110'     123     946.1     -288
'CN111'     123     946.1     -278.6
'CN112'     123     946.1     -269.2
'CN113'     123     946.1     -259.8
'CN114'     123     946.1     -250.4
'CN116'     123     998.9     -332.38
'CN117'     123     955.73     -332.38
'CN118'     123     964.37     -332.38
'CN119'     123     973     -332.38
'CN12'     345     946.1     -111.57
'CN120'     123     981.63     -332.38
'CN121'     123     990.27     -332.38
'CN123'     345     998.9     -332.38
'CN124'     345     955.73     -332.38
'CN125'     345     964.37     -332.38
'CN126'     345     973     -332.38
'CN127'     345     981.63     -332.38
'CN128'     345     990.27     -332.38
'CN13'     345     946.1     -121.52
'CN130'     345     998.9     -238.38
'CN131'     345     955.73     -238.38
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'CN132'	345	964.37	-238.38
'CN133'	345	973	-238.38
'CN134'	345	981.63	-238.38
'CN135'	345	990.27	-238.38
'CN137'	123	998.9	-238.38
'CN138'	123	955.73	-238.38
'CN139'	123	964.37	-238.38
'CN14'	345	946.1	-131.48
'CN140'	123	973	-238.38
'CN141'	123	981.63	-238.38
'CN142'	123	990.27	-238.38
'CN15'	345	946.1	-141.43
'CN16'	345	946.1	-151.39
'CN17'	345	946.1	-161.35
'CN18'	345	946.1	-171.3
'CN19'	345	946.1	-181.26
'CN2'	345	946.1	-238.38
'CN20'	345	946.1	-191.22
'CN205'	335.35	946.1	-564
'CN206'	325.7	946.1	-564
'CN207'	316.04	946.1	-564
'CN208'	306.39	946.1	-564
'CN209'	296.74	946.1	-564
'CN21'	345	946.1	-201.17
'CN210'	287.09	946.1	-564
'CN211'	277.44	946.1	-564
'CN212'	267.78	946.1	-564
'CN213'	258.13	946.1	-564
'CN214'	248.48	946.1	-564
'CN215'	238.83	946.1	-564
'CN216'	229.17	946.1	-564
'CN217'	219.52	946.1	-564
'CN218'	209.87	946.1	-564
'CN219'	200.22	946.1	-564
'CN22'	345	946.1	-211.13
'CN220'	190.57	946.1	-564
'CN221'	180.91	946.1	-564
'CN222'	171.26	946.1	-564
'CN223'	161.61	946.1	-564
'CN224'	151.96	946.1	-564
'CN225'	142.3	946.1	-564
'CN226'	132.65	946.1	-564
'CN227'	132.65	946.1	-12
'CN228'	142.3	946.1	-12
'CN229'	151.96	946.1	-12
'CN23'	345	946.1	-221.09
'CN230'	161.61	946.1	-12
'CN231'	171.26	946.1	-12
'CN232'	180.91	946.1	-12
'CN233'	190.57	946.1	-12
'CN234'	200.22	946.1	-12
'CN235'	209.87	946.1	-12
'CN236'	219.52	946.1	-12
'CN237'	229.17	946.1	-12
'CN238'	238.83	946.1	-12
'CN239'	248.48	946.1	-12
'CN24'	345	946.1	-231.04
'CN240'	258.13	946.1	-12
'CN241'	267.78	946.1	-12
'CN242'	277.44	946.1	-12
'CN243'	287.09	946.1	-12
'CN244'	296.74	946.1	-12
'CN245'	306.39	946.1	-12
'CN246'	316.04	946.1	-12
'CN247'	325.7	946.1	-12
'CN248'	335.35	946.1	-12
'CN249'	345	904.6	-564
'CN25'	345	946.1	-564
'CN250'	345	912.9	-564
'CN251'	345	921.2	-564
'CN252'	345	929.5	-564
'CN253'	345	937.8	-564
'CN254'	123	904.6	-564
'CN255'	123	912.9	-564
'CN256'	123	921.2	-564

'CN257'	123	929.5	-564
'CN258'	123	937.8	-564
'CN259'	345	904.6	-12
'CN26'	345	946.1	-332.38
'CN260'	345	912.9	-12
'CN261'	345	921.2	-12
'CN262'	345	929.5	-12
'CN263'	345	937.8	-12
'CN264'	123	904.6	-12
'CN265'	123	912.9	-12
'CN266'	123	921.2	-12
'CN267'	123	929.5	-12
'CN268'	123	937.8	-12
'CN27'	345	946.1	-554.04
'CN270'	372	904.6	-564
'CN272'	318	904.6	-564
'CN274'	150	904.6	-564
'CN276'	96	904.6	-564
'CN278'	372	904.6	-12
'CN28'	345	946.1	-544.09
'CN280'	318	904.6	-12
'CN282'	150	904.6	-12
'CN284'	96	904.6	-12
'CN285'	363	904.6	-564
'CN286'	354	904.6	-564
'CN287'	141	904.6	-564
'CN288'	132	904.6	-564
'CN289'	327	904.6	-564
'CN29'	345	946.1	-534.13
'CN290'	336	904.6	-564
'CN291'	105	904.6	-564
'CN292'	114	904.6	-564
'CN293'	363	904.6	-12
'CN294'	354	904.6	-12
'CN295'	141	904.6	-12
'CN296'	132	904.6	-12
'CN297'	327	904.6	-12
'CN298'	336	904.6	-12
'CN299'	105	904.6	-12
'CN3'	345	946.1	-21.96
'CN30'	345	946.1	-524.17
'CN300'	114	904.6	-12
'CN301'	308.12	904.6	-564
'CN302'	298.24	904.6	-564
'CN303'	288.35	904.6	-564
'CN304'	278.47	904.6	-564
'CN305'	268.59	904.6	-564
'CN306'	258.71	904.6	-564
'CN307'	248.82	904.6	-564
'CN308'	238.94	904.6	-564
'CN309'	229.06	904.6	-564
'CN31'	345	946.1	-514.22
'CN310'	219.18	904.6	-564
'CN311'	209.29	904.6	-564
'CN312'	199.41	904.6	-564
'CN313'	189.53	904.6	-564
'CN314'	179.65	904.6	-564
'CN315'	169.77	904.6	-564
'CN316'	159.88	904.6	-564
'CN317'	159.88	904.6	-12
'CN318'	169.77	904.6	-12
'CN319'	179.65	904.6	-12
'CN32'	345	946.1	-504.26
'CN320'	189.53	904.6	-12
'CN321'	199.41	904.6	-12
'CN322'	209.29	904.6	-12
'CN323'	219.18	904.6	-12
'CN324'	229.06	904.6	-12
'CN325'	238.94	904.6	-12
'CN326'	248.82	904.6	-12
'CN327'	258.71	904.6	-12
'CN328'	268.59	904.6	-12
'CN329'	278.47	904.6	-12
'CN33'	345	946.1	-494.3
'CN330'	288.35	904.6	-12

'CN331' 298.24 904.6 -12
'CN332' 308.12 904.6 -12
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  7348       7107       8153
  7349       7151       8153
  7350       7153       8151
  7351       7118       8151


  7352       112        8156
  7353       4112       8157

  7354    5122    7122

$--------------
  5555           31653163

$
$ Added Runway Girder
$
'RG1'     81097109
'RG2'     7109'CNR113'
'RG3'     'CNR113' 'CNR114'
'RG4'     'CNR114' 'CNR213'
'RG5'     'CNR213' 'CNR313'
'RG6'     'CNR313' 6109
'RG7'     6109'CNR214'
'RG8'     'CNR214' 'CNR314'
'RG9'     'CNR314' 'CNR115'
'RG10'    'CNR115' 'CNR116'
'RG11'    'CNR116' 'CNR215'
'RG12'    'CNR215' 'CNR315'
'RG13'    'CNR315' 'CNR216'
'RG14'    'CNR216' 5109
'RG15'    5109'CNR316'
'RG16'    'CNR316' 4109
'RG17'    41093109
'RG18'    3109'CNR413'
'RG19'    'CNR413' 'CNR513'
'RG20'    'CNR513' 'CNR414'
'RG21'    'CNR414' 'CNR514'
'RG22'    'CNR514' 'CNR613'
'RG23'    'CNR613' 'CNR614'
'RG24'    'CNR614' 'CNR415'
'RG25'    'CNR415' 'CNR515'
'RG26'    'CNR515' 'CNR416'
'RG27'    'CNR416' 2109
'RG28'    2109'CNR516'
'RG29'    'CNR516' 'CNR615'
'RG30'    'CNR615' 'CNR616'
'RG31'    'CNR616' 1109
'RG32'    1109'CNR713'
'RG33'    'CNR713' 109
'RG34'    109  'CNR714'
'RG35'    'CNR714' 'CNR813'
'RG36'    'CNR813' 'CNR814'
'RG37'    'CNR814' 'CNR913'
'RG38'    'CNR913' 'CNR914'
'RG39'    'CNR914' 'CNR715'
'RG40'    'CNR715' 'CNR716'
'RG41'    'CNR716' 'CNR815'
'RG42'    'CNR815' 'CNR816'
'RG43'    'CNR816' 'CNR915'
'RG44'    'CNR915' 'CNR916'
'RG45'    'CNR916' 10
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'RG50'    81207120
'RG51'    7120'CNR101'
'RG52'    'CNR101' 'CNR102'
'RG53'    'CNR102' 'CNR201'
'RG54'    'CNR201' 'CNR301'
'RG55'    'CNR301' 'CNR202'
'RG56'    'CNR202' 'CNR302'
'RG57'    'CNR302' 'CNR103'
'RG58'    'CNR103' 'CNR104'
'RG59'    'CNR104' 'CNR203'
'RG60'    'CNR203' 'CNR303'
'RG61'    'CNR303' 'CNR204'
'RG62'    'CNR204' 5120
'RG63'    5120'CNR304'
'RG64'    'CNR304' 4120
'RG65'    41203120
'RG66'    3120'CNR401'
'RG67'    'CNR401' 'CNR501'
'RG68'    'CNR501' 'CNR402'
'RG69'    'CNR402' 'CNR502'
'RG70'    'CNR502' 'CNR601'
'RG71'    'CNR601' 'CNR602'
'RG72'    'CNR602' 'CNR403'
'RG73'    'CNR403' 'CNR503'
'RG74'    'CNR503' 'CNR404'
'RG75'    'CNR404' 2120
'RG76'    2120'CNR504'
'RG77'    'CNR504' 'CNR603'
'RG78'    'CNR603' 'CNR604'
'RG79'    'CNR604' 1120
'RG80'    1120'CNR701'
'RG81'    'CNR701' 120
'RG82'    120  'CNR702'
'RG83'    'CNR702' 'CNR801'
'RG84'    'CNR801' 'CNR802'
'RG85'    'CNR802' 'CNR901'
'RG86'    'CNR901' 'CNR902'
'RG87'    'CNR902' 'CNR703'
'RG88'    'CNR703' 'CNR704'
'RG89'    'CNR704' 'CNR803'
'RG90'    'CNR803' 'CNR804'
'RG91'    'CNR804' 'CNR903'
'RG92'    'CNR903' 'CNR904'
'RG93'    'CNR904' 21


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$ Added crane members
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'CM3'   'CN4'   'CN5'
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'CM5'   'CN6'   'CN7'
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'CM7'   'CN8'   'CN9'
'CM8'   'CN9'   'CN10'
'CM9'   'CN10'  'CN11'
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'CM24'  'CN25'  'CN27'
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'CM108' 'CN110' 'CN111'
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'CM110' 'CN112' 'CN113'
'CM111' 'CN113' 'CN114'
'CM112' 'CN114' 'CN50'


'CM113' 'CN452' 'CN117'

$------------------
$ CHANGE MEM INCIDENCES
$ PER TROLLEY LCOATION
$ TROLLEY 1 - 'CN91' -> 'CN60'
$ TROLLEY 2 - 'CN91' -> 'CN68'
$ TROLLEY 3 - 'CN91' -> 'CN83'
$ TROLLEY 4 - 'CN91'
'CM480' 'CN83'  'CN452'
$------------------

'CM114' 'CN117' 'CN118'
'CM115' 'CN118' 'CN119'
'CM116' 'CN119' 'CN120'
'CM117' 'CN120' 'CN121'
'CM118' 'CN121' 'CN116'
'CM119' 'CN451'  'CN124'

$------------------
$ CHANGE MEM INCIDENCES
$ PER TROLLEY LCOATION
$ TROLLEY 1 - 'CN34' -> 'CN12'
$ TROLLEY 2 - 'CN34' -> 'CN20'
$ TROLLEY 3 - 'CN34' -> 'CN26'
$ TROLLEY 4 - 'CN34'
'CM479' 'CN26'  'CN451'
$------------------

'CM120' 'CN124' 'CN125'
'CM121' 'CN125' 'CN126'
'CM122' 'CN126' 'CN127'
'CM123' 'CN127' 'CN128'
'CM124' 'CN128' 'CN123'

$------------------
$ CHANGE MEM INCIDENCES
$ PER TROLLEY LCOATION
$ TROLLEY 1 - 'CN43' -> 'CN3'
$ TROLLEY 2 - 'CN43' -> 'CN11'
$ TROLLEY 3 - 'CN43' -> 'CN2'
$ TROLLEY 4 - 'CN43'
'CM125' 'CN2'  'CN131'
$------------------

'CM126' 'CN131' 'CN132'
'CM127' 'CN132' 'CN133'
'CM128' 'CN133' 'CN134'
'CM129' 'CN134' 'CN135'
'CM130' 'CN135' 'CN130'

$------------------
$ CHANGE MEM INCIDENCES
$ PER TROLLEY LCOATION (DONT CHANGE 'CN138'
$ TROLLEY 1 - 'CN100' -> 'CN51'
$ TROLLEY 2 - 'CN100' -> 'CN59'
$ TROLLEY 3 - 'CN100' -> 'CN50'
$ TROLLEY 4 - 'CN100'
'CM131' 'CN50' 'CN138'
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'CM132' 'CN138' 'CN139'
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'CM135' 'CN141' 'CN142'
'CM136' 'CN142' 'CN137'
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'CM272' 'CN268' 'CN49'
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$ CHANGE MEM INCIDENCE PER CRANE LOCATION
$ EG. N1 USE CNR1xx1
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$     N2 USE CNR2xx1

'CM273' 'CNR8011' 'CN270'
'CM274' 'CNR8021' 'CN272'
'CM275' 'CNR8031' 'CN274'
'CM276' 'CNR8041' 'CN276'
'CM277' 'CNR8131' 'CN278'
'CM278' 'CNR8141' 'CN280'
'CM279' 'CNR8151' 'CN282'
'CM280' 'CNR8161' 'CN284'

$=======================================


'CM281' 'CN270' 'CN285'
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'CM471' 'CN123' 'CN437'
'CM472' 'CN116' 'CN440'
'CM473' 'CN137' 'CN446'

'CM483' 'CN434' 'CN450'

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'R2' 'CNR102' 'CNR1021'
'R3' 'CNR103' 'CNR1031'
'R4' 'CNR104' 'CNR1041'
'R5' 'CNR113' 'CNR1131'
'R6' 'CNR114' 'CNR1141'
'R7' 'CNR115' 'CNR1151'
'R8' 'CNR116' 'CNR1161'

'R21' 'CNR201' 'CNR2011'
'R22' 'CNR202' 'CNR2021'
'R23' 'CNR203' 'CNR2031'
'R24' 'CNR204' 'CNR2041'
'R25' 'CNR213' 'CNR2131'
'R26' 'CNR214' 'CNR2141'
'R27' 'CNR215' 'CNR2151'
'R28' 'CNR216' 'CNR2161'

'R31' 'CNR301' 'CNR3011'
'R32' 'CNR302' 'CNR3021'
'R33' 'CNR303' 'CNR3031'
'R34' 'CNR304' 'CNR3041'
'R35' 'CNR313' 'CNR3131'
'R36' 'CNR314' 'CNR3141'
'R37' 'CNR315' 'CNR3151'
'R38' 'CNR316' 'CNR3161'

'R41' 'CNR401' 'CNR4011'
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'R45' 'CNR413' 'CNR4131'
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'R47' 'CNR415' 'CNR4151'
'R48' 'CNR416' 'CNR4161'

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'R55' 'CNR513' 'CNR5131'
'R56' 'CNR514' 'CNR5141'
'R57' 'CNR515' 'CNR5151'
'R58' 'CNR516' 'CNR5161'

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'R64' 'CNR604' 'CNR6041'
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'R67' 'CNR615' 'CNR6151'
'R68' 'CNR616' 'CNR6161'

'R71' 'CNR701' 'CNR7011'
'R72' 'CNR702' 'CNR7021'
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'R76' 'CNR714' 'CNR7141'
'R77' 'CNR715' 'CNR7151'
'R78' 'CNR716' 'CNR7161'

'R81' 'CNR801' 'CNR8011'
'R82' 'CNR802' 'CNR8021'
'R83' 'CNR803' 'CNR8031'
'R84' 'CNR804' 'CNR8041'
'R85' 'CNR813' 'CNR8131'
'R86' 'CNR814' 'CNR8141'
'R87' 'CNR815' 'CNR8151'
'R88' 'CNR816' 'CNR8161'

'R91' 'CNR901' 'CNR9011'
'R92' 'CNR902' 'CNR9021'
'R93' 'CNR903' 'CNR9031'
'R94' 'CNR904' 'CNR9041'
'R95' 'CNR913' 'CNR9131'
'R96' 'CNR914' 'CNR9141'
'R97' 'CNR915' 'CNR9151'
'R98' 'CNR916' 'CNR9161'

ELEMENT INC

'CM478' 'CN434' 'CN450'
'CM481' 'CN434' 'CN450'
'CM482' 'CN434' 'CN450'

NONLINEAR SPRING PROPERTIES

CURVE 'FY' FORCE SYMMETRY
0.0 0.0 2266759.624568 1.0

CURVE 'FX' FORCE SYMMETRY
0.0 0.0 2766222.961730 1000.0

CURVE 'FZ' FORCE SYMMETRY
0.0 0.0 2766222.961730 1000.0

PRINT ALL
END

ELEMENT PROPS
'CM478' TYPE 'NLS'
'CM481' TYPE 'NLS'
'CM482' TYPE 'NLS'

NONLINEAR SPRING ELEMENT DATA

STIFFNESS
'CM478' Y CURVE 'FY'
'CM481' X CURVE 'FX'
'CM482' Z CURVE 'FZ'

END

$ Rigid link members with small density
MATERIAL STEEL

```
CONSTANT
DENSITY 0.0001 MEM -
   4         8         9                        -
   15        19        20        22               -
   102       106       107                       -
   113       117       118       120              -
   1102      1106      1107                       -
   1113      1117      1118      1120             -
   2102      2106      2107                       -
   2113      2117      2118      2120             -
   3102      3106      3107                       -
   3113      3117      3118      3120             -
   4102      4106      4107                       -
   4113      4117      4118                       -
   4120      5102      5106      5107             -
   5113      5117      5118                       -
   5120      6102      6106      6107             -
   71020     71060     71070                      -
   71130     71170     71180                      -
   71200     8102      8106      8107             -
   8113      8117      8118                       -
   8120   5555                                    -
   11        109       1109      2109      3109     -
   4109      5109      6109      71090     8109     -
   22        120       1120      2120      3120     -
   4120      5120      71200     8120              -
'R1' TO 'R8' 'R21' TO 'R28' 'R31' TO 'R38' 'R41' TO 'R48'        -
'R51' TO 'R58' 'R61' TO 'R68' 'R71' TO 'R78' 'R81' TO 'R88'      -
'R91' TO 'R98'
$
$ Added crane members
$
UNITS INCH LBS
$ MATERIAL STEEL
CONSTANT
E 0.3E8 MEMBER -
'CM1' 'CM2' 'CM3' 'CM4' 'CM5' 'CM6' 'CM7' 'CM8' 'CM9' 'CM10' -
'CM11' 'CM12' 'CM13' 'CM14' 'CM15' 'CM16' 'CM17' 'CM18' 'CM19' -
'CM20' 'CM21' 'CM22' 'CM23' 'CM24' 'CM25' 'CM26' 'CM27' 'CM28' -
'CM29' 'CM30' 'CM31' 'CM32' 'CM33' 'CM34' 'CM35' 'CM36' 'CM37' -
'CM38' 'CM39' 'CM40' 'CM41' 'CM42' 'CM43' 'CM44' 'CM45' 'CM46' -
'CM47' 'CM48' 'CM49' 'CM50' 'CM51' 'CM52' 'CM53' 'CM54' 'CM55' -
'CM56' 'CM57' 'CM58' 'CM59' 'CM60' 'CM61' 'CM62' 'CM63' 'CM64' -
'CM65' 'CM66' 'CM67' 'CM68' 'CM69' 'CM70' 'CM71' 'CM72' 'CM73' -
'CM74' 'CM75' 'CM76' 'CM77' 'CM78' 'CM79' 'CM80' 'CM81' 'CM82' -
'CM83' 'CM84' 'CM85' 'CM86' 'CM87' 'CM88' 'CM89' 'CM90' 'CM91' -
'CM92' 'CM93' 'CM94' 'CM95' 'CM96' 'CM97' 'CM98' 'CM99' 'CM100' -
'CM101' 'CM102' 'CM103' 'CM104' 'CM105' 'CM106' 'CM107' 'CM108' -
'CM109' 'CM110' 'CM111' 'CM112' 'CM113' 'CM114' 'CM115' 'CM116' -
'CM117' 'CM118' 'CM119' 'CM120' 'CM121' 'CM122' 'CM123' 'CM124' -
'CM125' 'CM126' 'CM127' 'CM128' 'CM129' 'CM130' 'CM131' 'CM132' -
'CM133' 'CM134' 'CM135' 'CM136' 'CM207' 'CM208' 'CM209' 'CM210' -
'CM211' 'CM212' 'CM213' 'CM214' 'CM215' 'CM216' 'CM217' 'CM218' -
'CM219' 'CM220' 'CM221' 'CM222' 'CM223' 'CM224' 'CM225' 'CM226' -
'CM227' 'CM228' 'CM229' 'CM230' 'CM231' 'CM232' 'CM233' 'CM234' -
'CM235' 'CM236' 'CM237' 'CM238' 'CM239' 'CM240' 'CM241' 'CM242' -
'CM243' 'CM244' 'CM245' 'CM246' 'CM247' 'CM248' 'CM249' 'CM250' -
'CM251' 'CM252' 'CM253' 'CM254' 'CM255' 'CM256' 'CM257' 'CM258' -
'CM259' 'CM260' 'CM261' 'CM262' 'CM263' 'CM264' 'CM265' 'CM266' -
'CM267' 'CM268' 'CM269' 'CM270' 'CM271' 'CM272' 'CM273' 'CM274' -
'CM275' 'CM276' 'CM277' 'CM278' 'CM279' 'CM280' 'CM281' 'CM282' -
'CM283' 'CM284' 'CM285' 'CM286' 'CM287' 'CM288' 'CM289' 'CM290' -
'CM291' 'CM292' 'CM293' 'CM294' 'CM295' 'CM296' 'CM297' 'CM298' -
'CM299' 'CM300' 'CM301' 'CM302' 'CM303' 'CM304' 'CM305' 'CM306' -
'CM307' 'CM308' 'CM309' 'CM310' 'CM311' 'CM312' 'CM313' 'CM314' -
'CM315' 'CM316' 'CM317' 'CM318' 'CM319' 'CM320' 'CM321' 'CM322' -
'CM323' 'CM324' 'CM325' 'CM326' 'CM327' 'CM328' 'CM329' 'CM330' -
'CM331' 'CM332' 'CM333' 'CM334' 'CM335' 'CM336' 'CM337' 'CM338' -
'CM360' 'CM361' 'CM362' 'CM363' 'CM364' 'CM365' 'CM366' 'CM367' -
'CM368' 'CM369' 'CM370' 'CM371' 'CM372' 'CM373' 'CM374' 'CM375' -
'CM376' 'CM377' 'CM378' 'CM379' 'CM380' 'CM384' 'CM385' 'CM386' -
'CM387' 'CM388' 'CM389' 'CM390' 'CM391' 'CM392' 'CM393' 'CM406' -
'CM407' 'CM408' 'CM409' 'CM410' 'CM411' 'CM412' 'CM413' 'CM414' -
'CM415' 'CM416' 'CM417' 'CM418' 'CM419' 'CM420' 'CM421' 'CM422' -
'CM423' 'CM424' 'CM425' 'CM426' 'CM427' 'CM428' 'CM429' 'CM430' -
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'CM431' 'CM432' 'CM433' 'CM434' 'CM435' 'CM436' 'CM437' 'CM438' -
'CM439' 'CM440' 'CM441' 'CM442' 'CM443' 'CM444' 'CM445' 'CM446' -
'CM447' 'CM448' 'CM449' 'CM450' 'CM451' 'CM452' 'CM453' 'CM454' -
'CM455' 'CM456' 'CM457' 'CM458' 'CM459' 'CM460' 'CM461' 'CM462' -
'CM463' 'CM464' 'CM465' 'CM466' 'CM467' 'CM468' 'CM469' 'CM470' -
'CM471' 'CM472' 'CM473'

$ E 13137518 MEM 'CM478'

$'CM479' 'CM480'
$
$ Added crane member material property 2
$
DENSITY 0.45 MEMBER                                    -
'CM47'  'CM48'  'CM49'  'CM50'  'CM51'  'CM52'  'CM53'  'CM54'  -
'CM55'  'CM56'  'CM57'  'CM58'  'CM59'  'CM60'  'CM61'  'CM62'  -
'CM63'  'CM64'  'CM65'  'CM66'  'CM67'  'CM68'  'CM69'  'CM80'  -
'CM81'  'CM82'  'CM83'  'CM84'  'CM85'  'CM86'  'CM87'  'CM88'  -
'CM89'  'CM90'  'CM91'  'CM92'  'CM93'  'CM94'  'CM95'  'CM96'  -
'CM97'  'CM98'  'CM99'  'CM100' 'CM101' 'CM102' 'CM103' 'CM104' -
'CM105' 'CM106' 'CM107' 'CM108' 'CM109' 'CM110' 'CM111' 'CM112'
$
$ Added crane member material property 3
$
DENSITY 0.37 MEMBER                                    -
'CM207' 'CM208' 'CM209' 'CM210' 'CM211' 'CM212' 'CM213' 'CM214' -
'CM215' 'CM216' 'CM217' 'CM218' 'CM219' 'CM220' 'CM221' 'CM222' -
'CM223' 'CM224' 'CM225' 'CM226' 'CM227' 'CM228' 'CM229' 'CM230' -
'CM231' 'CM232' 'CM233' 'CM234' 'CM235' 'CM236' 'CM237' 'CM238' -
'CM239' 'CM240' 'CM241' 'CM242' 'CM243' 'CM244' 'CM245' 'CM246' -
'CM247' 'CM248' 'CM249' 'CM250' 'CM251' 'CM252'
$
$ Added crane member material property 4
$
DENSITY 0.47 MEMBER                                    -
'CM273' 'CM274' 'CM275' 'CM276' 'CM277' 'CM278' 'CM279' 'CM280' -
'CM305' 'CM306' 'CM307' 'CM308' 'CM309' 'CM310' 'CM311' 'CM312' -
'CM313' 'CM314' 'CM315' 'CM316' 'CM317' 'CM318' 'CM319' 'CM320' -
'CM321' 'CM322' 'CM323' 'CM324' 'CM325' 'CM326' 'CM327' 'CM328' -
'CM329' 'CM330' 'CM331' 'CM332' 'CM333' 'CM334' 'CM335' 'CM336' -
'CM337' 'CM338' 'CM281' 'CM282' 'CM283' 'CM284' 'CM285' 'CM286' -
'CM287' 'CM288' 'CM289' 'CM290' 'CM291' 'CM292' 'CM293' 'CM294' -
'CM295' 'CM296' 'CM297' 'CM298' 'CM299' 'CM300' 'CM301' 'CM302' -
'CM303' 'CM304'
$
$ Added crane member material property 5
$
DENSITY 0.0000 MEMBER                                  -
'CM113' 'CM119' 'CM125' 'CM114' 'CM115' 'CM116' 'CM117' 'CM118' -
'CM120' 'CM121' 'CM122' 'CM123' 'CM124' 'CM126' 'CM127' 'CM128' -
'CM129' 'CM130' 'CM131' 'CM132' 'CM133' 'CM134' 'CM135' 'CM136' -
'CM253' 'CM254' 'CM255' 'CM256' 'CM257' 'CM258' 'CM259' 'CM260' -
'CM261' 'CM262' 'CM263' 'CM264' 'CM265' 'CM266' 'CM267' 'CM268' -
'CM269' 'CM270' 'CM271' 'CM272' 'CM470' 'CM471' 'CM472' 'CM473' -
'CM483' 'CM479' 'CM480'


$
$ Added crane member material property 6
$
DENSITY 0.47 MEMBER                                    -
'CM1'   'CM2'   'CM3'   'CM4'   'CM5'   'CM6'   'CM7'   'CM8'   -
'CM9'   'CM10'  'CM11'  'CM12'  'CM13'  'CM14'  'CM15'  'CM16'  -
'CM17'  'CM18'  'CM19'  'CM20'  'CM21'  'CM22'  'CM23'  'CM24'  -
'CM25'  'CM26'  'CM27'  'CM28'  'CM29'  'CM30'  'CM31'  'CM32'  -
'CM33'  'CM34'  'CM35'  'CM36'  'CM37'  'CM38'  'CM39'  'CM40'  -
'CM41'  'CM42'  'CM43'  'CM44'  'CM45'  'CM46'  'CM70'  'CM71'  -
'CM72'  'CM73'  'CM74'  'CM75'  'CM76'  'CM77'  'CM78'  'CM79'
$
$ Added crane member material property 7
$
DENSITY 2.41 MEMBER                                    -
'CM454' 'CM455' 'CM456' 'CM457' 'CM458' 'CM459' 'CM460' 'CM461' -
'CM462' 'CM463' 'CM464' 'CM465' 'CM466' 'CM467' 'CM468' 'CM469' -
'CM360' 'CM361' 'CM362' 'CM363' 'CM364' 'CM365' 'CM366' 'CM367' -
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'CM368' 'CM369' 'CM370' 'CM371' 'CM372' 'CM373' 'CM374' 'CM375' -
'CM376' 'CM377' 'CM378' 'CM379' 'CM380' 'CM384' 'CM385' 'CM386' -
'CM387' 'CM388' 'CM389' 'CM390' 'CM391' 'CM392' 'CM393' 'CM450' -
'CM451' 'CM452' 'CM453' 'CM406' 'CM407' 'CM408' 'CM409' 'CM410' -
'CM411' 'CM412' 'CM413' 'CM414' 'CM415' 'CM416' 'CM417' 'CM418' -
'CM419' 'CM420' 'CM421' 'CM422' 'CM426' 'CM427' 'CM428' 'CM429' -
'CM430' 'CM431' 'CM432' 'CM433' 'CM434' 'CM435' 'CM436' 'CM437' -
'CM438' 'CM439' 'CM440' 'CM441' 'CM442' 'CM443' 'CM423' 'CM424' -
'CM425' 'CM444' 'CM445' 'CM446' 'CM447' 'CM448' 'CM449'

$=============================================================================================

UNITS  INCH  LBS   DEG


MEMBER PROPERTIES TABLE 'STEELW' 'W27X84'
7354

$ MEMBER PROPERTIES    TABLE 'STEELW  '  'W33x141               '

MEMBER PROPERTIES    TABLE 'STEELW  '  'W12x72                '
   7353
MEMBER PROPERTIES    TABLE 'STEELW  '  'W14x119               '
   7352
MEMBER PROPERTIES    TABLE 'STEELW  '  'W36x300               '
   1          2          3          12          13       -
   14         100        101        110         111      -
   112        1100       1101       1110        1111     -
   1112       2100       2101       2110        2111     -
   2112       3100       3101       3110        3111     -
   3112       3163       4100       4101        4110     -
   4111       4112       4122       5100        5101     -
   5110       5111       5112       5122        6100     -
   71000      71100      8100       8110        7000     -
   7008       7009       7012       7013        7021



$ W36 + L6
MEMBER PROPERTIES   PRISMATIC   AX  111.3  AY  41.719        -
AZ  55.974  IX  70.062  IY  4560.861  IZ  24519.303      -
YD  36.74  YC  15.254  ZD 28.5  ZC 8.328

   'RG34' TO 'RG45' 'RG51' TO 'RG62' 'RG82' TO 'RG93'

$ W36 + L4
MEMBER PROPERTIES   PRISMATIC   AX  105.18  AY  38.719        -
AZ  53.307  IX  67.364  IY  3565.207  IZ  23828.308      -
YD  36.74  YC  15.844  ZD 28.5  ZC 8.328

   'RG1' TO 'RG33' 'RG50' 'RG63' TO 'RG81'

MEMBER PROPERTIES    TABLE 'STEELW  '  'W14x136               '
   5          6          7          16          17       -
   18         103        104        105         114      -
   115        116        121        1103        1104     -
   1105       1114       1115       1116        1121     -
   2103       2104       2105       2114        2115     -
   2116       2121       3103       3104        3105     -
   3114       3115       3116       3121        4103     -
   4104       4105       4114       4115        4116     -
   4121       5103       5104       5105        5114     -
   5115       5116       5121       6103        6104     -
   6105       71030      71040      71050       71140    -
   71150      71160      71210      8103        8104     -
   8105       8114       8115       8116        81160

MEMBER PROPERTIES    TABLE 'STEELW  '  'W36x230               '
   23         24         25         26          27       -
   28         29         30         130         131      -
   132        133        134        135         136      -
   137        138        139        140         141      -
   142        143        144        145         1138     -
   1139       1140       1141       1142        1143     -
   1144       1145       2138       2139        2140     -
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  2141     2142     2143     2144     2145    -
  3138     3139     3140     3141     3142    -
  3143     3144     3145     7050     7060    -
  7066

MEMBER PROPERTIES   TABLE 'EQDBLANG'  '2L3x3x5/16_3/8       '
  31       32

MEMBER PROPERTIES   TABLE 'STEELW '  'W10x33              '
  33       34

MEMBER PROPERTIES   TABLE 'STEELW '  'W30x116             '
  35       36       37       38       39      -
  40       41       42       146      147     -
  148      149      150      151      152     -
  153      1146     1147     1148     1149    -
  1150     1151     1152     1153     2146    -
  2147     2148     2149     2150     2151    -
  2152     2153     3146     3147     3148    -
  3149     3150     3151     3152     3153    -
  4146     4147     4148     4149     4150    -
  4151     4152     4153     5146     5147    -
  5148     5149     5150     5151     5152    -
  5153     7246     7247     7248     7249    -
  7250     7251     7252     7253     8146    -
  8147     8148     8149     8150     8151    -
  8152     8153

MEMBER PROPERTIES   TABLE 'STEELW '  'W14x87              '
  43       45

MEMBER PROPERTIES   TABLE 'STEELW '  'W14x43              '
  44       2122     2125     8701     8702    -
  8703     8704     8705     8706     8707    -
  8708     8801     8802     8803     8804    -
  8805     8807     8806    2126

MEMBER PROPERTIES   TABLE 'LLDBLANG'  '2L6x4x1/2_3/8        '
  46       48       49       51
MEMBER PROPERTIES   TABLE 'LLDBLANG'  '2L4x3x5/16_3/8       '
  47       50
MEMBER PROPERTIES   TABLE 'EQDBLANG'  '2L6x6x1/2_3/8        '
  52       53       7436     7438     7442
MEMBER PROPERTIES   TABLE 'STEELW '  'W24x100             '
  54       55       56       8121
MEMBER PROPERTIES   TABLE 'STEELW '  'W36x280             '
  122      123      124      125      126     -
  127      128      129
MEMBER PROPERTIES   TABLE 'STEELW '  'W12x40              '
  157      158      1157     3122     7063    -
  7330     9009     9017     9018     9026    -
  9027     9035     9036     9044     9045    -
  9053     9054     9063     9072     9080
MEMBER PROPERTIES   TABLE 'STEELW '  'W14x30              '
  2123     2124     7047
MEMBER PROPERTIES   TABLE 'STEELW '  'W12x27              '
  2157     9001     9002     9003     9004    -
  9005     9006     9007     9082     9083    -
  9084     9085     9086     9087     9088    -
  9010     9011     9012     9013     9014    -
  9015     9016     9019     9020     9021    -
  9022     9023     9024     9025     9028    -
  9029     9030     9031     9032     9033    -
  9034     9037     9038     9039     9040    -
  9041     9042     9043     9046     9047    -
  9048     9049     9050     9051     9052    -
  9055     9056     9057     9058     9059    -
  9060     9061     9064     9065     9066    -
  9067     9068     9069     9070     9073    -
  9074     9075     9076     9077     9078    -
  9079
MEMBER PROPERTIES   TABLE 'STEELW '  'W36x150             '
  3154     3155     3156     3157     3158    -
  3159     3160     3161
MEMBER PROPERTIES   TABLE 'STEELW '  'W36x160             '
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   5138       5139       5140       5141       5142     -
   5143       5144       5145
MEMBER PROPERTIES    TABLE 'STEELW '  'W24x76             '
   6146       6147       6148       6149       6150     -
   6151       6152       6153
MEMBER PROPERTIES    TABLE 'STEELW '  'W18x45             '
   7001       7002       7003       7004       7005     -
   7006       7007       7064       7065
MEMBER PROPERTIES    TABLE 'STEELW '  'W10x15             '
   7010       7011       7014       7015       7016     -
   7017       7018       7019       7020
MEMBER PROPERTIES    TABLE 'STEELW '  'W24x55             '
   7022       7023       7024       7025       7026     -
   7027       7028       7029       7030       7031     -
   7032       7033       7034       7035       7036     -
   7037       7038       7039       7041       7042     -
   7043       7044       7045       7361       7362
MEMBER PROPERTIES    TABLE 'STEELW '  'W24x68             '
   7040       7046       7049       7360       7364
MEMBER PROPERTIES    TABLE 'STEELW '  'W10x21             '
   7048       7318       7319       7331
MEMBER PROPERTIES    TABLE 'CHANNELS'  'C8x11              '
   7363
MEMBER PROPERTIES    TABLE 'STEELW '  'W30x108            '
   7051       7059       7061       7062
MEMBER PROPERTIES    TABLE 'STEELW '  'W14x22             '
   7052       7053       7054       7055       7056     -
   7057       7058
MEMBER PROPERTIES    TABLE 'STEELW '  'W14x61             '
   8700       8800
MEMBER PROPERTIES    TABLE 'STEELW '  'W27x84             '
   9000       9008       9081       9089       9090     -
   9091       9092       9093       9094       9095     -
   9096       9097
MEMBER PROPERTIES    TABLE 'STEELW '  'W27x94             '
   9062       9071
MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L4x4x3/8_3/8       '
   7435       7437
MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L6x6x3/4_3/8       '
   7439
MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L3x3x3/16_3/8      '
   7441
MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L5x5x1/2_3/8       '
   7443
MEMBER PROPERTIES    TABLE 'ANGLES '  'L4x4x5/16          '
  7307

MEMBER PROPERTIES    TABLE 'ANGLES '  'L4x4x1/2           '
   7301  7313

MEMBER PROPERTIES    TABLE 'ANGLES '  'L5x5x1/2           '
    7305 7317  73297309732573337335

MEMBER PROPERTIES    TABLE 'ANGLES '  'L6x6x3/4           '
   7303  7315

MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L3.5x3.5x3/8_3/8    '
   7310       7311       7326       7327
MEMBER PROPERTIES    TABLE 'EQDBLANG'  '2L3x3x3/8_3/8       '
   7320       7321       7322       7323
MEMBER PROPERTIES    TABLE 'TEES   '  'WT4X12             '
   7337       7338         -
   7342     7343           7344       7345     -
   7346       7347   7348       7349       7350     -
   7351

MEMBER PROPERTIES    TABLE 'TEES   '  'WT4X12             '
   7340 7341 7336 7339


MEMBER PROPERTIES   PRISMATIC   AX  1000.0000        -
IX  1000000.0000  IY  1000000.0000  IZ  1000000.0000     -
SY  1000000.0000  SZ  1000000.0000
   4          8          9                          -
   15         19         20                           -
```

```
   102        106        107                        -
   113        117        118                        -
   1102       1106       1107                         -
   1113       1117       1118                         -
   2102       2106       2107                         -
   2113       2117       2118                         -
   3102       3106       3107                         -
   3113       3117       3118                         -
   4102       4106       4107                         -
   4113       4117       4118                         -
   5102       5106       5107                         -
   5113       5117       5118                         -
   6102       6106       6107                         -
   71020      71060      71070                          -
   71130      71170      71180                          -
   8102       8106       8107                         -
   8113       8117       8118  5555                 -
   11         109        1109       2109       3109     -
   4109       5109       6109       71090      8109     -
   22         120        1120       2120       3120     -
   4120       5120       71200      8120               -
'R1' TO 'R8' 'R21' TO 'R28' 'R31' TO 'R38' 'R41' TO 'R48'        -
'R51' TO 'R58' 'R61' TO 'R68' 'R71' TO 'R78' 'R81' TO 'R88'      -
'R91' TO 'R98'



$ Added crane section property 1
$
MEMBER PROPERTIES PRISMATIC                              -
AX 108.0   AY 71.65   AZ 13.80                          -
IX 17697   IY 5859.0  IZ 52222.0
'CM1'  'CM2'  'CM3'  'CM4'  'CM5'  'CM6'  'CM7'  'CM8'  -
'CM9'  'CM10' 'CM11' 'CM12' 'CM13' 'CM14' 'CM15' 'CM16' -
'CM17' 'CM18' 'CM19' 'CM20' 'CM21' 'CM22' 'CM23' 'CM24' -
'CM25' 'CM26' 'CM27' 'CM28' 'CM29' 'CM30' 'CM31' 'CM32' -
'CM33' 'CM34' 'CM35' 'CM36' 'CM37' 'CM38' 'CM39' 'CM40' -
'CM41' 'CM42' 'CM43' 'CM44' 'CM45' 'CM46' 'CM47' 'CM48' -
'CM49' 'CM50' 'CM51' 'CM52' 'CM53' 'CM54' 'CM55' 'CM56' -
'CM57' 'CM58' 'CM59' 'CM60' 'CM61' 'CM62' 'CM63' 'CM64' -
'CM65' 'CM66' 'CM67' 'CM68' 'CM69' 'CM70' 'CM71' 'CM72' -
'CM73' 'CM74' 'CM75' 'CM76' 'CM77' 'CM78' 'CM79' 'CM80' -
'CM81' 'CM82' 'CM83' 'CM84' 'CM85' 'CM86' 'CM87' 'CM88' -
'CM89' 'CM90' 'CM91' 'CM92' 'CM93' 'CM94' 'CM95' 'CM96' -
'CM97' 'CM98' 'CM99' 'CM100' 'CM101' 'CM102' 'CM103' 'CM104' -
'CM105' 'CM106' 'CM107' 'CM108' 'CM109' 'CM110' 'CM111' 'CM112'

$
$ Added crane section property 2
$
MEMBER PROPERTIES PRISMATIC                              -
AX 50.226  AY 43.039  AZ 43.039                          -
IX 401.29  IY 200.65  IZ 200.65
'CM113' 'CM119' 'CM125' 'CM273' 'CM274' 'CM275' 'CM276' 'CM277' -
'CM278' 'CM279' 'CM280' 'CM479' 'CM480'

$
$ Added crane section property 3 (not used in P&H ANSYS model)
$

$
$ Added crane section property 4
$
MEMBER PROPERTIES PRISMATIC                              -
AX 32.0    AY 16.95   AZ 12.248                         -
IX 534.79  IY 282.67  IZ 410.67
'CM207' 'CM208' 'CM209' 'CM210' 'CM211' 'CM212' 'CM213' 'CM214' -
'CM215' 'CM216' 'CM217' 'CM218' 'CM219' 'CM220' 'CM221' 'CM222' -
'CM223' 'CM224' 'CM225' 'CM226' 'CM227' 'CM228' 'CM229' 'CM230' -
'CM231' 'CM232' 'CM233' 'CM234' 'CM235' 'CM236' 'CM237' 'CM238' -
'CM239' 'CM240' 'CM241' 'CM242' 'CM243' 'CM244' 'CM245' 'CM246' -
'CM247' 'CM248' 'CM249' 'CM250' 'CM251' 'CM252'

$
$ Added crane section property 5 (not used in P&H ANSYS model)
```

```
$
$
$ Added crane section property 6
$
MEMBER PROPERTIES PRISMATIC                              -
AX 21.75   AY 9.7879   AZ 9.7879                         -
IX 304.54  IY 192.58  IZ 192.58
'CM305' 'CM306' 'CM307' 'CM308' 'CM309' 'CM310' 'CM311' 'CM312' -
'CM313' 'CM314' 'CM315' 'CM316' 'CM317' 'CM318' 'CM319' 'CM320' -
'CM321' 'CM322' 'CM323' 'CM324' 'CM325' 'CM326' 'CM327' 'CM328' -
'CM329' 'CM330' 'CM331' 'CM332' 'CM333' 'CM334' 'CM335' 'CM336' -
'CM337' 'CM338'

$
$ Added crane section property 7
$
MEMBER PROPERTIES PRISMATIC                              -
AX 87.8    AY 38.73    AZ 36.679                         -
IX 6940.5  IY 3458.7  IZ 6384.6
'CM281' 'CM282' 'CM283' 'CM284' 'CM285' 'CM286' 'CM287' 'CM288' -
'CM289' 'CM290' 'CM291' 'CM292' 'CM293' 'CM294' 'CM295' 'CM296' -
'CM297' 'CM298' 'CM299' 'CM300' 'CM301' 'CM302' 'CM303' 'CM304'

$
$ Added crane section property 8
$
MEMBER PROPERTIES PRISMATIC                              -
AX 196.0   AY 165.053   AZ 165.053                       -
IX 5479.2  IY 3201.3  IZ 3201.3
'CM114' 'CM115' 'CM116' 'CM117' 'CM118' 'CM120' 'CM121' 'CM122' -
'CM123' 'CM124' 'CM126' 'CM127' 'CM128' 'CM129' 'CM130' 'CM131' -
'CM132' 'CM133' 'CM134' 'CM135' 'CM136' 'CM253' 'CM254' 'CM255' -
'CM256' 'CM257' 'CM258' 'CM259' 'CM260' 'CM261' 'CM262' 'CM263' -
'CM264' 'CM265' 'CM266' 'CM267' 'CM268' 'CM269' 'CM270' 'CM271' -
'CM272' 'CM470' 'CM471' 'CM472' 'CM473'

$
$ Added crane section property 9 (not used in P&H ANSYS model)
$

$
$ Added crane section property 10
$
MEMBER PROPERTIES PRISMATIC                              -
AX 34.25   AY 20.6188   AZ 7.162                         -
IX 1264.9  IY 466.354 IZ 2305.0
'CM454' 'CM455' 'CM456' 'CM457' 'CM458' 'CM459' 'CM460' 'CM461' -
'CM462' 'CM463' 'CM464' 'CM465' 'CM466' 'CM467' 'CM468' 'CM469'

$
$ Added crane section property 11
$
MEMBER PROPERTIES PRISMATIC                              -
AX 41.25   AY 34.737   AZ 34.737                         -
IX 21.388  IY 5.371   IZ 3743.0
'CM360' 'CM361' 'CM362' 'CM363' 'CM364' 'CM365' 'CM366' 'CM367' -
'CM368' 'CM369' 'CM370' 'CM371' 'CM372' 'CM373' 'CM374' 'CM375' -
'CM376'

$
$ Added crane section property 12
$
MEMBER PROPERTIES PRISMATIC                              -
AX 42.625  AY 35.8949  AZ 35.8949                        -
IX 14.184  IY 3.552   IZ 6454.0
'CM377' 'CM378' 'CM379' 'CM380' 'CM384' 'CM385' 'CM386' 'CM387' -
'CM388' 'CM389' 'CM390' 'CM391' 'CM392' 'CM393' 'CM450' 'CM451' -
'CM452' 'CM453'

$
$ Added crane section property 13 (not used in P&H ANSYS model)
$

$
```

```
$ Added crane section property 14
$
MEMBER PROPERTIES PRISMATIC                              -
AX 10.0    AY 8.4211    AZ 8.4211                    -
IX 0.83169 IY 0.208   IZ 333.333
'CM406' 'CM407' 'CM408' 'CM409' 'CM410' 'CM411' 'CM412' 'CM413' -
'CM414' 'CM415' 'CM416' 'CM417' 'CM418' 'CM419'

$
$ Added crane section property 15
$
MEMBER PROPERTIES PRISMATIC                              -
AX 3.0     AY 2.526     AZ 2.526                     -
IX 0.24485 IY 0.0625  IZ 9.0
'CM420' 'CM421' 'CM422' 'CM426' 'CM427' 'CM428' 'CM429' 'CM430' -
'CM431' 'CM432' 'CM433' 'CM434' 'CM435' 'CM436' 'CM437' 'CM438' -
'CM439' 'CM440' 'CM441' 'CM442' 'CM443'

$
$ Added crane section property 16
$
MEMBER PROPERTIES PRISMATIC                              -
AX 7.5     AY 6.3158     AZ 6.3158                     -
IX 0.62282 IY 0.15625 IZ 140.625
'CM423' 'CM424' 'CM425'

$
$ Added crane section property 17
$
MEMBER PROPERTIES PRISMATIC                              -
AX 4.5     AY 3.789     AZ 3.789                      -
IX 0.37144  IY 0.09375 IZ 30.375
'CM444' 'CM445' 'CM446' 'CM447' 'CM448' 'CM449'


$$ HOOK IS REPRESENTED BY THREE NONLINEAR SPRINGS
$ THIS IS DUMMY HOOK MEMBER TO GIVE GRAPHICAL REPRESENTATION
$ AS SPRINGS ARE NOT DISPLAYED IN GRAPHICAL VIEWER

MEMBER PROPERTIES PRISMATIC  -
AX 0.01 -
IX 0.001    IY 0.001   IZ 0.001
'CM483'


$===============================================================================

UNITS  INCH  LBS   DEG


MEMBER ECCENTRICITY
2157 7048 STAT Z -11
7336 TO 7351 STA Y -6.675 END Y -6.675

STATUS SUPPORT                                    -
   1         12         101        111        123      -
   1101       1111       1123       2101              -
   2111       2123       3101       3111       3123     -
   4101       4111       5101       5111       6101     -
   7101       7111       8100       8101       8111     -
   2122       1112       2112       3112       5112     -
   8156       8157       112    5112

JOINT RELEASES
5112 FOR Y X MOM X Y Z

JOINT RELEASES
   1         101        1101       2101       3101     -
   4101       5101       7101       8101              -
   12         111        1111       2111              -
   3111       4111       5111       7111       8111     -
     MOM  Z
   123        1123       2123       3123        6101     -
     MOM  X   Z                                          $ MM 6101 CHANGED TO PIN CONNECTION
   8100 2122                                    -
```

```
     MOM  X Z
$
$ Conservatively use the stifness from reactor building steel
$
     3112                          -
     FOR  X   Y      MOM  X  Y  Z                    -
     KFZ  0.001
$
$ Shear Wall Stiffness
$
   2112                                  -
     FOR        Y     MOM  X   Y  Z                    -
     KFZ  18105E3  KFX 11978E3

   1112                                    -
     FOR        Y     MOM  X   Y  Z                    -
     KFZ  0.001       KFX 23956E3

   112                                     -
     FOR Z Y   MOM  X   Y  Z                   -
     KFX 11978E3

CONSTANTS
    BETA     90.00000                            -
   43 44 45  7318 7319
    BETA     90.00000                            -
   7352     7353        7066        7060           7050
    BETA     45.00000                            -
   7301        7303                              -
   7305        7307        7309                    -
   7313        7315                              -
   7317        7325        7329                    -
   7333        7335
$
$ Deleted single angle bracing
$
$  7306        7308        7324        7328        7332      -
$  7334        7300        7302        7304        7312      -
$  7314        7316
    BETA     90.00000                            -
   1           2           3          5          6       -
   7           12          13         14         16      -
   17          18          46         49         100     -
   101         103         104        105        110     -
   111         112         114        115        116     -
   1100        1101        1103       1104               -
   1105        1110        1111       1112       1114    -
   1115        1116        1121       2100       2101    -
   2103        2104        2105       2110       2111    -
   2112        2114        2115       2116       2121    -
   3100        3101        3103       3104       3105    -
   3110        3111        3112       3114       3115    -
   3116        3121        3163       4100              -
   4101        4103        4104       4105       4110    -
   4111        4112        4114       4115       4116    -
   4121        4122        5100       5101       5103    -
   5104        5105        5110       5111       5112    -
   5114        5115        5116       5121       5122    -
   6100        6103        6104       6105       71000   -
   71030       71040       71050      71100      71140   -
   71150       71160       71210      8100       8103    -
   8104        8105        8110       8114       8115    -
   8116        81160          2125          2122 2126

    BETA    180.00000                            -
   31          32
    BETA    270.00000                            -
   47          48          50         51         52      -
   53


MEMBER RELEASES

7354STA MOM Y Z END MOM Y Z
```

```
 33 34 7331 STA MOM Y Z
  33 34 7331 END MOM Y Z
  7318      STA MOM Y Z
  7319      END MOM Y Z
  7066      END MOM Y Z
  7066      STA MOM Y
  7060      END MOM Y
  7050      STA MOM Y Z

$
$   Moment connections
  8146 7246 5146 4146 3146 2146 1146 146  STA MOM Y
  8153 7253 5153 4153 3153 2153 1153 153  END MOM Y
$
 35 23      44      46      48      31      -
  49      51      122     130           -
  157          2123                  -
          3154                  -
  5138    6146                          -
  7000    7008    7040    7041    43      -
  7046    7051    7059    7063    9000    -
  9008    9090    9062    7065    45      -
STA MOM  Y   Z
  42 30      129      137          47      -
  158            50              -
      3161                      -
  5145    6153                          -
  7013    7021    7049    7360    7362    -
  7062    7065    7330    9081    9089    -
  9097    9071    7061    2126     32          -
END MOM  Y   Z

145 1145 2145 3145 END MOM Y  $ MM 6-23

138 1138 2138 3138 STA MOM Y    $ MM 6-23
                              -
       52      53       1157      2157    -
  3122    7001    7002    7003    7004    -
  7005    7006    7007    7010    7011    -
  7014    7015    7016    7017    7018    -
  7019    7020    7022    7023    7024    -
  7025    7026    7027    7028    7029    -
  7030    7031    7032    7033    7034    -
  7035    7036    7037    7038    7039    -
  7042    7043    7044    7045    7047    -
  7048    7363    7052    7053    7054    -
  7055    7056    7057    7058    8700    -
  8701    8702    8703    8704    8705    -
  8706    8707    8708    9001    9002    -
  9003    9004    9005    9006    9007    -
  9082    9083    9084    9085    9086    -
  9087    9088    9009    9010    9011    -
  9012    9013    9014    9015    9016    -
  9017    9018    9019    9020    9021    -
  9022    9023    9024    9025    9026    -
  8800    8801    8802        8804    -
  8805    8807    7064                -

STA MOM  Y   Z  END MOM  Y   Z
  9027    9028    9029    9030    9031    -
  9032    9033    9034    9035    9036    -
  9037    9038    9039    9040    9041    -
  9042    9043    9044    9045    9046    -
  9047    9048    9049    9050    9051    -
  9052    9053    9054    9055    9056    -
  9057    9058    9059    9060    9061    -
  9063    9064    9065    9066    9067    -
  9068    9069    9070    9072    9073    -
  9074    9075    9076    9077    9078    -
  9079    9080    7435    7436    7437    -
  7438    7439    7441    7442    7443    -
  7301    7303                        -
  7305    7307    7309                  -
  7310    7311    7313                  -
  7315    7317    7320    7321            -
```

```
   7322       7323       7325       7326              -
   7327       7329       7333                    -
   7335       7336       7337       7338            -
   7339       7340       7341       7342       7343     -
STA MOM  Y   Z  END MOM  Y   Z
   7344       7345       7346       7347       7348     -
   7349       7350       7351       7352       7353     -
STA MOM  Y   Z  END MOM  Y   Z
   8121                                      -
END MOM  Y   Z
   121        1121       2121       3121              -
END MOM  Y   Z
'RG1' 'RG2' 'RG7' 'RG15' 'RG17' 'RG18' 'RG28' 'RG32'            -
'RG50' 'RG63' 'RG65' 'RG66' 'RG76' 'RG80'                                                    -
STA MOM  Y   Z
'RG1' 'RG6' 'RG14' 'RG16' 'RG17' 'RG27' 'RG31' 'RG45'                                                -
'RG62' 'RG64' 'RG65' 'RG75' 'RG79' 'RG93'                                                    -
END MOM  Y   Z
$
$ Added member releases of crane member and crane runway
$
$ The wheels are restrained at the west runway girder since it has
$ longer span and will impact the runway girder more.
$ Note P&H's ANSYS model restrains at the east side.



'CM277'   STA   MOM X Y Z   FOR Y Z
'CM278'   STA   MOM X Y Z   FOR Y Z
'CM279'   STA   MOM X Y Z   FOR Z
'CM280'   STA   MOM X Y Z   FOR Z
'CM273'   STA   MOM X Y Z   FOR Y
'CM274'   STA   MOM X Y Z   FOR Y
'CM275'   STA   MOM X Y Z
'CM276'   STA   MOM X Y Z

'CM131'   STA   MOM X Y Z   FOR Z
'CM125'   STA   MOM X Y Z   FOR Z
'CM113'   STA   MOM X Y Z
'CM119'   STA   MOM X Y Z
$
$ Deleted single angle bracing
$ STA MOM  Y   Z  END MOM  Y   Z
$   7306       7308       7324       7328       7332     -
$   7334       7300       7302       7304       7312     -
$   7314       7316


8806 END MOM Y Z            $ MM

8803 STA MOM Y Z            $ MM


9 107 1107 2107 3107 4107 5107 6107 71070 8107     -
20 118 1118 2118 3118 4118 5118 71180 8118 STA FOR Y Z MOM X Y Z



$=============================================================================================

$=============================================================================================

UNITS  FEET  SECONDS CYCLES

STORE RESPONSE SPECTRUM ACCELERATION LINEAR vs -
      NATURAL FREQUENCY LOGARITHMIC 'HSSE162'
$---------------------------------------------------------------------------------------
$ The SSE values for accelerations are in g unit.
$ FACTOR = 32.185 ft/sec^2
$---------------------------------------------------------------------------------------
$ SPECTRAL ACCELERATION INCREASED BY 5%
      DAMPING 0.07 FACTOR 32.185 $ 7.0% Critical Damping
1.050E-04            0.000E+00
1.050E-04            8.500E-02
```

1.313E-02	1.700E-01
7.819E-02	3.400E-01
8.316E-02	5.100E-01
1.209E-01	6.600E-01
1.756E-01	8.500E-01
2.758E-01	1.001E+00
2.769E-01	1.004E+00
2.773E-01	1.005E+00
2.795E-01	1.012E+00
2.802E-01	1.014E+00
2.832E-01	1.022E+00
2.837E-01	1.023E+00
2.837E-01	1.023E+00
2.872E-01	1.032E+00
2.876E-01	1.034E+00
2.906E-01	1.042E+00
2.911E-01	1.043E+00
2.915E-01	1.044E+00
2.941E-01	1.051E+00
2.950E-01	1.054E+00
2.954E-01	1.055E+00
2.976E-01	1.061E+00
2.989E-01	1.065E+00
3.011E-01	1.071E+00
3.028E-01	1.076E+00
3.046E-01	1.081E+00
3.067E-01	1.087E+00
3.080E-01	1.091E+00
3.105E-01	1.097E+00
3.110E-01	1.099E+00
3.115E-01	1.100E+00
3.141E-01	1.109E+00
3.144E-01	1.111E+00
3.149E-01	1.112E+00
3.179E-01	1.121E+00
3.188E-01	1.124E+00
3.214E-01	1.132E+00
3.227E-01	1.137E+00
3.249E-01	1.144E+00
3.253E-01	1.145E+00
3.270E-01	1.151E+00
3.283E-01	1.155E+00
3.292E-01	1.158E+00
3.310E-01	1.164E+00
3.318E-01	1.167E+00
3.331E-01	1.171E+00
3.353E-01	1.179E+00
3.366E-01	1.183E+00
3.388E-01	1.191E+00
3.391E-01	1.192E+00
3.402E-01	1.197E+00
3.417E-01	1.203E+00
3.430E-01	1.208E+00
3.439E-01	1.211E+00
3.452E-01	1.216E+00
3.462E-01	1.222E+00
3.467E-01	1.225E+00
3.475E-01	1.230E+00
3.475E-01	1.239E+00
3.475E-01	1.240E+00
3.475E-01	1.247E+00
3.475E-01	1.255E+00
3.475E-01	1.257E+00
3.475E-01	1.264E+00
3.475E-01	1.273E+00
3.475E-01	1.274E+00
3.475E-01	1.282E+00
3.472E-01	1.291E+00
3.471E-01	1.292E+00
3.469E-01	1.300E+00
3.466E-01	1.309E+00
3.466E-01	1.311E+00
3.463E-01	1.318E+00
3.460E-01	1.328E+00
3.459E-01	1.329E+00

3.457E-01	1.335E+00
3.455E-01	1.345E+00
3.453E-01	1.349E+00
3.452E-01	1.355E+00
3.446E-01	1.365E+00
3.445E-01	1.367E+00
3.440E-01	1.375E+00
3.437E-01	1.385E+00
3.437E-01	1.387E+00
3.434E-01	1.396E+00
3.428E-01	1.406E+00
3.427E-01	1.409E+00
3.423E-01	1.415E+00
3.416E-01	1.428E+00
3.415E-01	1.430E+00
3.411E-01	1.437E+00
3.407E-01	1.451E+00
3.407E-01	1.453E+00
3.405E-01	1.457E+00
3.397E-01	1.474E+00
3.394E-01	1.481E+00
3.385E-01	1.498E+00
3.382E-01	1.502E+00
3.374E-01	1.520E+00
3.373E-01	1.522E+00
3.370E-01	1.527E+00
3.361E-01	1.545E+00
3.359E-01	1.550E+00
3.350E-01	1.571E+00
3.347E-01	1.577E+00
3.337E-01	1.599E+00
3.336E-01	1.601E+00
3.322E-01	1.624E+00
3.318E-01	1.630E+00
3.309E-01	1.653E+00
3.307E-01	1.659E+00
3.291E-01	1.683E+00
3.289E-01	1.686E+00
3.280E-01	1.711E+00
3.278E-01	1.717E+00
3.264E-01	1.740E+00
3.262E-01	1.743E+00
3.260E-01	1.747E+00
3.246E-01	1.774E+00
3.245E-01	1.777E+00
3.243E-01	1.780E+00
3.229E-01	1.805E+00
3.227E-01	1.808E+00
3.225E-01	1.812E+00
3.211E-01	1.841E+00
3.210E-01	1.844E+00
3.208E-01	1.848E+00
3.190E-01	1.874E+00
3.185E-01	1.882E+00
3.171E-01	1.913E+00
3.169E-01	1.917E+00
3.167E-01	1.921E+00
3.158E-01	1.949E+00
3.156E-01	1.958E+00
3.142E-01	1.991E+00
3.140E-01	1.996E+00
3.138E-01	2.000E+00
3.125E-01	2.031E+00
3.121E-01	2.040E+00
3.112E-01	2.076E+00
3.111E-01	2.081E+00
3.109E-01	2.086E+00
3.094E-01	2.124E+00
3.092E-01	2.129E+00
3.083E-01	2.169E+00
3.082E-01	2.174E+00
3.080E-01	2.179E+00
3.070E-01	2.221E+00
3.069E-01	2.227E+00
3.069E-01	2.227E+00

3.058E-01	2.276E+00
3.057E-01	2.281E+00
3.047E-01	2.333E+00
3.046E-01	2.339E+00
3.035E-01	2.388E+00
3.034E-01	2.394E+00
3.034E-01	2.394E+00
3.029E-01	2.451E+00
3.028E-01	2.457E+00
3.023E-01	2.518E+00
3.022E-01	2.525E+00
3.017E-01	2.581E+00
3.017E-01	2.588E+00
3.011E-01	2.655E+00
3.011E-01	2.663E+00
3.006E-01	2.726E+00
3.006E-01	2.734E+00
3.005E-01	2.742E+00
3.005E-01	2.809E+00
3.005E-01	2.826E+00
3.001E-01	2.888E+00
3.000E-01	2.897E+00
2.999E-01	2.915E+00
2.999E-01	2.981E+00
2.999E-01	2.990E+00
2.999E-01	3.010E+00
2.999E-01	3.070E+00
2.999E-01	3.090E+00
2.999E-01	3.111E+00
2.999E-01	3.175E+00
2.999E-01	3.186E+00
2.999E-01	3.220E+00
2.999E-01	3.288E+00
2.999E-01	3.300E+00
2.999E-01	3.336E+00
2.999E-01	3.397E+00
2.999E-01	3.422E+00
2.999E-01	3.461E+00
2.996E-01	3.527E+00
2.995E-01	3.554E+00
2.993E-01	3.581E+00
2.990E-01	3.652E+00
2.989E-01	3.681E+00
2.988E-01	3.726E+00
2.985E-01	3.787E+00
2.984E-01	3.834E+00
2.982E-01	3.882E+00
2.977E-01	3.949E+00
2.973E-01	4.000E+00
2.970E-01	4.035E+00
2.968E-01	4.107E+00
2.966E-01	4.162E+00
2.964E-01	4.219E+00
2.959E-01	4.278E+00
2.952E-01	4.358E+00
2.947E-01	4.421E+00
2.943E-01	4.464E+00
2.935E-01	4.552E+00
2.930E-01	4.620E+00
2.923E-01	4.667E+00
2.910E-01	4.763E+00
2.901E-01	4.838E+00
2.893E-01	4.889E+00
2.879E-01	4.995E+00
2.872E-01	5.049E+00
2.858E-01	5.133E+00
2.845E-01	5.220E+00
2.837E-01	5.280E+00
2.816E-01	5.404E+00
2.806E-01	5.467E+00
2.796E-01	5.533E+00
2.767E-01	5.704E+00
2.756E-01	5.775E+00
2.722E-01	5.961E+00
2.715E-01	6.000E+00

2.715E-01	6.000E+00
2.669E-01	6.243E+00
2.645E-01	6.372E+00
2.622E-01	6.507E+00
2.622E-01	6.507E+00
2.570E-01	6.745E+00
2.518E-01	6.947E+00
2.505E-01	7.000E+00
2.465E-01	7.163E+00
2.445E-01	7.276E+00
2.413E-01	7.452E+00
2.378E-01	7.574E+00
2.361E-01	7.636E+00
2.347E-01	7.700E+00
2.318E-01	7.830E+00
2.319E-01	7.890E+00
2.428E-01	8.160E+00
2.531E-01	8.330E+00
2.655E-01	8.500E+00
2.820E-01	8.670E+00
2.931E-01	8.840E+00
3.280E-01	9.010E+00
5.014E-01	9.180E+00
5.280E-01	9.350E+00
5.573E-01	9.520E+00
5.878E-01	9.690E+00
6.193E-01	9.860E+00
6.528E-01	1.003E+01
6.863E-01	1.020E+01
7.230E-01	1.037E+01
7.623E-01	1.054E+01
8.052E-01	1.071E+01
8.561E-01	1.088E+01
9.032E-01	1.105E+01
9.325E-01	1.122E+01
9.392E-01	1.139E+01
9.441E-01	1.541E+01
9.209E-01	1.564E+01
8.723E-01	1.587E+01
8.461E-01	1.610E+01
7.918E-01	1.633E+01
7.642E-01	1.656E+01
7.529E-01	1.679E+01
7.215E-01	1.702E+01
6.993E-01	1.725E+01
6.761E-01	1.748E+01
6.542E-01	1.771E+01
6.332E-01	1.784E+01
6.233E-01	1.817E+01
5.949E-01	1.840E+01
5.774E-01	1.883E+01
5.611E-01	1.896E+01
5.464E-01	1.909E+01
5.327E-01	1.932E+01
5.214E-01	1.955E+01
5.107E-01	1.978E+01
5.006E-01	2.001E+01
4.919E-01	2.024E+01
4.830E-01	2.047E+01
4.701E-01	2.070E+01
4.674E-01	2.093E+01
4.603E-01	2.116E+01
4.537E-01	2.139E+01
4.473E-01	2.162E+01
4.444E-01	2.185E+01
4.350E-01	2.206E+01
4.292E-01	2.231E+01
4.234E-01	2.254E+01
4.180E-01	2.277E+01
4.127E-01	2.300E+01
4.078E-01	2.323E+01
4.029E-01	2.346E+01
3.983E-01	2.369E+01
3.939E-01	2.392E+01
3.897E-01	2.415E+01

3.881E-01	2.422E+01
3.898E-01	2.431E+01
3.930E-01	2.448E+01
3.967E-01	2.465E+01
4.005E-01	2.482E+01
4.047E-01	2.499E+01
4.092E-01	2.516E+01
4.140E-01	2.533E+01
4.192E-01	2.550E+01
4.246E-01	2.567E+01
4.299E-01	2.584E+01
4.333E-01	2.601E+01
4.368E-01	2.618E+01
4.400E-01	2.635E+01
4.406E-01	2.652E+01
4.409E-01	2.669E+01
4.429E-01	3.611E+01
4.393E-01	3.634E+01
4.335E-01	3.657E+01
4.269E-01	3.680E+01
4.221E-01	3.703E+01
4.160E-01	3.726E+01
4.097E-01	3.749E+01
4.035E-01	3.772E+01
3.997E-01	3.795E+01
3.946E-01	3.818E+01
3.897E-01	3.841E+01
3.865E-01	3.864E+01
3.835E-01	3.887E+01
3.805E-01	3.910E+01
3.777E-01	3.933E+01
3.748E-01	3.956E+01
3.719E-01	3.979E+01
3.691E-01	4.002E+01
3.657E-01	4.025E+01
3.623E-01	4.048E+01
3.589E-01	4.071E+01
3.558E-01	4.094E+01
3.527E-01	4.117E+01
3.496E-01	4.140E+01
3.466E-01	4.163E+01
3.438E-01	4.185E+01
3.411E-01	4.209E+01
3.382E-01	4.232E+01
3.356E-01	4.255E+01
3.331E-01	4.278E+01
3.305E-01	4.301E+01
3.281E-01	4.324E+01
3.258E-01	4.347E+01
3.236E-01	4.370E+01
3.214E-01	4.383E+01
3.192E-01	4.416E+01
3.173E-01	4.439E+01
3.153E-01	4.462E+01
3.133E-01	4.485E+01
3.116E-01	4.508E+01
3.100E-01	4.531E+01
3.084E-01	4.554E+01
3.070E-01	4.577E+01
3.056E-01	4.600E+01
3.043E-01	4.623E+01
3.029E-01	4.646E+01
3.016E-01	4.669E+01
3.005E-01	4.692E+01
2.995E-01	4.715E+01
2.985E-01	4.738E+01
2.974E-01	4.761E+01
2.964E-01	4.784E+01
2.954E-01	4.807E+01
2.944E-01	4.830E+01
2.935E-01	4.853E+01
2.930E-01	4.876E+01
2.924E-01	4.899E+01
2.918E-01	4.922E+01
2.912E-01	4.945E+01

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2.906E-01           4.968E+01
2.897E-01           4.981E+01
2.895E-01           5.014E+01
2.889E-01           5.037E+01
2.875E-01           5.060E+01
2.857E-01           5.083E+01
2.845E-01           5.106E+01
2.830E-01           5.129E+01
2.816E-01           5.152E+01
2.801E-01           5.175E+01
2.787E-01           5.196E+01
2.773E-01           5.221E+01
2.761E-01           5.244E+01
2.747E-01           5.267E+01
2.734E-01           5.290E+01
2.721E-01           5.313E+01
2.709E-01           5.336E+01
2.699E-01           5.358E+01
2.688E-01           5.382E+01
2.677E-01           5.406E+01
2.667E-01           5.426E+01
2.657E-01           5.451E+01
2.648E-01           5.474E+01
2.639E-01           5.497E+01
2.629E-01           5.520E+01
2.620E-01           5.543E+01
2.610E-01           5.566E+01
2.601E-01           5.586E+01
2.591E-01           5.612E+01
2.583E-01           5.635E+01
2.572E-01           5.656E+01
2.554E-01           5.681E+01
2.655E-01           5.704E+01
2.646E-01           5.727E+01
2.637E-01           5.750E+01

END OF RESPONSE SPECTRUM
$
$
STORE RESPONSE SPECTRUM ACCELERATION LINEAR vs -
      NATURAL FREQUENCY LOGARITHMIC 'VSSE162'
$-------------------------------------------------------------------------------
$ The SSE values for accelerations are in g unit.
$ FACTOR = 32.185 ft/sec^2 x 2/3 = 21.457
$-------------------------------------------------------------------------------
$
      DAMPING 0.07 FACTOR 21.457 $ 7.0% Critical Damping
1.050E-04           0.000E+00
1.050E-04           8.500E-02
1.313E-02           1.700E-01
7.819E-02           3.400E-01
8.316E-02           5.100E-01
1.209E-01           6.600E-01
1.756E-01           8.500E-01
2.758E-01           1.001E+00
2.769E-01           1.004E+00
2.773E-01           1.005E+00
2.795E-01           1.012E+00
2.802E-01           1.014E+00
2.832E-01           1.022E+00
2.837E-01           1.023E+00
2.837E-01           1.023E+00
2.872E-01           1.032E+00
2.876E-01           1.034E+00
2.906E-01           1.042E+00
2.911E-01           1.043E+00
2.915E-01           1.044E+00
2.941E-01           1.051E+00
2.950E-01           1.054E+00
2.954E-01           1.055E+00
2.976E-01           1.061E+00
2.989E-01           1.065E+00
3.011E-01           1.071E+00
3.028E-01           1.076E+00
3.046E-01           1.081E+00
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3.067E-01	1.087E+00
3.080E-01	1.091E+00
3.105E-01	1.097E+00
3.110E-01	1.099E+00
3.115E-01	1.100E+00
3.141E-01	1.109E+00
3.144E-01	1.111E+00
3.149E-01	1.112E+00
3.179E-01	1.121E+00
3.188E-01	1.124E+00
3.214E-01	1.132E+00
3.227E-01	1.137E+00
3.249E-01	1.144E+00
3.253E-01	1.145E+00
3.270E-01	1.151E+00
3.283E-01	1.155E+00
3.292E-01	1.158E+00
3.310E-01	1.164E+00
3.318E-01	1.167E+00
3.331E-01	1.171E+00
3.353E-01	1.179E+00
3.366E-01	1.183E+00
3.388E-01	1.191E+00
3.391E-01	1.192E+00
3.402E-01	1.197E+00
3.417E-01	1.203E+00
3.430E-01	1.208E+00
3.439E-01	1.211E+00
3.452E-01	1.216E+00
3.462E-01	1.222E+00
3.467E-01	1.225E+00
3.475E-01	1.230E+00
3.475E-01	1.239E+00
3.475E-01	1.240E+00
3.475E-01	1.247E+00
3.475E-01	1.255E+00
3.475E-01	1.257E+00
3.475E-01	1.264E+00
3.475E-01	1.273E+00
3.475E-01	1.274E+00
3.475E-01	1.282E+00
3.472E-01	1.291E+00
3.471E-01	1.292E+00
3.469E-01	1.300E+00
3.466E-01	1.309E+00
3.466E-01	1.311E+00
3.463E-01	1.318E+00
3.460E-01	1.328E+00
3.459E-01	1.329E+00
3.457E-01	1.335E+00
3.455E-01	1.345E+00
3.453E-01	1.349E+00
3.452E-01	1.355E+00
3.446E-01	1.365E+00
3.445E-01	1.367E+00
3.440E-01	1.375E+00
3.437E-01	1.385E+00
3.437E-01	1.387E+00
3.434E-01	1.396E+00
3.428E-01	1.406E+00
3.427E-01	1.409E+00
3.423E-01	1.415E+00
3.416E-01	1.428E+00
3.415E-01	1.430E+00
3.411E-01	1.437E+00
3.407E-01	1.451E+00
3.407E-01	1.453E+00
3.405E-01	1.457E+00
3.397E-01	1.474E+00
3.394E-01	1.481E+00
3.385E-01	1.498E+00
3.382E-01	1.502E+00
3.374E-01	1.520E+00
3.373E-01	1.522E+00
3.370E-01	1.527E+00

3.361E-01	1.545E+00
3.359E-01	1.550E+00
3.350E-01	1.571E+00
3.347E-01	1.577E+00
3.337E-01	1.599E+00
3.336E-01	1.601E+00
3.322E-01	1.624E+00
3.318E-01	1.630E+00
3.309E-01	1.653E+00
3.307E-01	1.659E+00
3.291E-01	1.683E+00
3.289E-01	1.686E+00
3.280E-01	1.711E+00
3.278E-01	1.717E+00
3.264E-01	1.740E+00
3.262E-01	1.743E+00
3.260E-01	1.747E+00
3.246E-01	1.774E+00
3.245E-01	1.777E+00
3.243E-01	1.780E+00
3.229E-01	1.805E+00
3.227E-01	1.808E+00
3.225E-01	1.812E+00
3.211E-01	1.841E+00
3.210E-01	1.844E+00
3.208E-01	1.848E+00
3.190E-01	1.874E+00
3.185E-01	1.882E+00
3.171E-01	1.913E+00
3.169E-01	1.917E+00
3.167E-01	1.921E+00
3.158E-01	1.949E+00
3.156E-01	1.958E+00
3.142E-01	1.991E+00
3.140E-01	1.996E+00
3.138E-01	2.000E+00
3.125E-01	2.031E+00
3.121E-01	2.040E+00
3.112E-01	2.076E+00
3.111E-01	2.081E+00
3.109E-01	2.086E+00
3.094E-01	2.124E+00
3.092E-01	2.129E+00
3.083E-01	2.169E+00
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3.080E-01	2.179E+00
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3.069E-01	2.227E+00
3.069E-01	2.227E+00
3.058E-01	2.276E+00
3.057E-01	2.281E+00
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3.046E-01	2.339E+00
3.035E-01	2.388E+00
3.034E-01	2.394E+00
3.034E-01	2.394E+00
3.029E-01	2.451E+00
3.028E-01	2.457E+00
3.023E-01	2.518E+00
3.022E-01	2.525E+00
3.017E-01	2.581E+00
3.017E-01	2.588E+00
3.011E-01	2.655E+00
3.011E-01	2.663E+00
3.006E-01	2.726E+00
3.006E-01	2.734E+00
3.005E-01	2.742E+00
3.005E-01	2.809E+00
3.005E-01	2.826E+00
3.001E-01	2.888E+00
3.000E-01	2.897E+00
2.999E-01	2.915E+00
2.999E-01	2.981E+00
2.999E-01	2.990E+00
2.999E-01	3.010E+00

2.999E-01	3.070E+00
2.999E-01	3.090E+00
2.999E-01	3.111E+00
2.999E-01	3.175E+00
2.999E-01	3.186E+00
2.999E-01	3.220E+00
2.999E-01	3.288E+00
2.999E-01	3.300E+00
2.999E-01	3.336E+00
2.999E-01	3.397E+00
2.999E-01	3.422E+00
2.999E-01	3.461E+00
2.996E-01	3.527E+00
2.995E-01	3.554E+00
2.993E-01	3.581E+00
2.990E-01	3.652E+00
2.989E-01	3.681E+00
2.988E-01	3.726E+00
2.985E-01	3.787E+00
2.984E-01	3.834E+00
2.982E-01	3.882E+00
2.977E-01	3.949E+00
2.973E-01	4.000E+00
2.970E-01	4.035E+00
2.968E-01	4.107E+00
2.966E-01	4.162E+00
2.964E-01	4.219E+00
2.959E-01	4.278E+00
2.952E-01	4.358E+00
2.947E-01	4.421E+00
2.943E-01	4.464E+00
2.935E-01	4.552E+00
2.930E-01	4.620E+00
2.923E-01	4.667E+00
2.910E-01	4.763E+00
2.901E-01	4.838E+00
2.893E-01	4.889E+00
2.879E-01	4.995E+00
2.872E-01	5.049E+00
2.858E-01	5.133E+00
2.845E-01	5.220E+00
2.837E-01	5.280E+00
2.816E-01	5.404E+00
2.806E-01	5.467E+00
2.796E-01	5.533E+00
2.767E-01	5.704E+00
2.756E-01	5.775E+00
2.722E-01	5.961E+00
2.715E-01	6.000E+00
2.715E-01	6.000E+00
2.669E-01	6.243E+00
2.645E-01	6.372E+00
2.622E-01	6.507E+00
2.622E-01	6.507E+00
2.570E-01	6.745E+00
2.518E-01	6.947E+00
2.505E-01	7.000E+00
2.465E-01	7.163E+00
2.445E-01	7.276E+00
2.413E-01	7.452E+00
2.378E-01	7.574E+00
2.361E-01	7.636E+00
2.347E-01	7.700E+00
2.318E-01	7.830E+00
2.319E-01	7.890E+00
2.428E-01	8.160E+00
2.531E-01	8.330E+00
2.655E-01	8.500E+00
2.820E-01	8.670E+00
2.931E-01	8.840E+00
3.280E-01	9.010E+00
5.014E-01	9.180E+00
5.280E-01	9.350E+00
5.573E-01	9.520E+00
5.878E-01	9.690E+00

6.193E-01	9.860E+00
6.528E-01	1.003E+01
6.863E-01	1.020E+01
7.230E-01	1.037E+01
7.623E-01	1.054E+01
8.052E-01	1.071E+01
8.561E-01	1.088E+01
9.032E-01	1.105E+01
9.325E-01	1.122E+01
9.392E-01	1.139E+01
9.441E-01	1.541E+01
9.209E-01	1.564E+01
8.723E-01	1.587E+01
8.461E-01	1.610E+01
7.918E-01	1.633E+01
7.642E-01	1.656E+01
7.529E-01	1.679E+01
7.215E-01	1.702E+01
6.993E-01	1.725E+01
6.761E-01	1.748E+01
6.542E-01	1.771E+01
6.332E-01	1.784E+01
6.233E-01	1.817E+01
5.949E-01	1.840E+01
5.774E-01	1.883E+01
5.611E-01	1.896E+01
5.464E-01	1.909E+01
5.327E-01	1.932E+01
5.214E-01	1.955E+01
5.107E-01	1.978E+01
5.006E-01	2.001E+01
4.919E-01	2.024E+01
4.830E-01	2.047E+01
4.701E-01	2.070E+01
4.674E-01	2.093E+01
4.603E-01	2.116E+01
4.537E-01	2.139E+01
4.473E-01	2.162E+01
4.444E-01	2.185E+01
4.350E-01	2.206E+01
4.292E-01	2.231E+01
4.234E-01	2.254E+01
4.180E-01	2.277E+01
4.127E-01	2.300E+01
4.078E-01	2.323E+01
4.029E-01	2.346E+01
3.983E-01	2.369E+01
3.939E-01	2.392E+01
3.897E-01	2.415E+01
3.881E-01	2.422E+01
3.898E-01	2.431E+01
3.930E-01	2.448E+01
3.967E-01	2.465E+01
4.005E-01	2.482E+01
4.047E-01	2.499E+01
4.092E-01	2.516E+01
4.140E-01	2.533E+01
4.192E-01	2.550E+01
4.246E-01	2.567E+01
4.299E-01	2.584E+01
4.333E-01	2.601E+01
4.368E-01	2.618E+01
4.400E-01	2.635E+01
4.406E-01	2.652E+01
4.409E-01	2.669E+01
4.429E-01	3.611E+01
4.393E-01	3.634E+01
4.335E-01	3.657E+01
4.269E-01	3.680E+01
4.221E-01	3.703E+01
4.160E-01	3.726E+01
4.097E-01	3.749E+01
4.035E-01	3.772E+01
3.997E-01	3.795E+01
3.946E-01	3.818E+01

3.897E-01	3.841E+01
3.865E-01	3.864E+01
3.835E-01	3.887E+01
3.805E-01	3.910E+01
3.777E-01	3.933E+01
3.748E-01	3.956E+01
3.719E-01	3.979E+01
3.691E-01	4.002E+01
3.657E-01	4.025E+01
3.623E-01	4.048E+01
3.589E-01	4.071E+01
3.558E-01	4.094E+01
3.527E-01	4.117E+01
3.496E-01	4.140E+01
3.466E-01	4.163E+01
3.438E-01	4.185E+01
3.411E-01	4.209E+01
3.382E-01	4.232E+01
3.356E-01	4.255E+01
3.331E-01	4.278E+01
3.305E-01	4.301E+01
3.281E-01	4.324E+01
3.258E-01	4.347E+01
3.236E-01	4.370E+01
3.214E-01	4.383E+01
3.192E-01	4.416E+01
3.173E-01	4.439E+01
3.153E-01	4.462E+01
3.133E-01	4.485E+01
3.116E-01	4.508E+01
3.100E-01	4.531E+01
3.084E-01	4.554E+01
3.070E-01	4.577E+01
3.056E-01	4.600E+01
3.043E-01	4.623E+01
3.029E-01	4.646E+01
3.016E-01	4.669E+01
3.005E-01	4.692E+01
2.995E-01	4.715E+01
2.985E-01	4.738E+01
2.974E-01	4.761E+01
2.964E-01	4.784E+01
2.954E-01	4.807E+01
2.944E-01	4.830E+01
2.935E-01	4.853E+01
2.930E-01	4.876E+01
2.924E-01	4.899E+01
2.918E-01	4.922E+01
2.912E-01	4.945E+01
2.906E-01	4.968E+01
2.897E-01	4.981E+01
2.895E-01	5.014E+01
2.889E-01	5.037E+01
2.875E-01	5.060E+01
2.857E-01	5.083E+01
2.845E-01	5.106E+01
2.830E-01	5.129E+01
2.816E-01	5.152E+01
2.801E-01	5.175E+01
2.787E-01	5.196E+01
2.773E-01	5.221E+01
2.761E-01	5.244E+01
2.747E-01	5.267E+01
2.734E-01	5.290E+01
2.721E-01	5.313E+01
2.709E-01	5.336E+01
2.699E-01	5.358E+01
2.688E-01	5.382E+01
2.677E-01	5.406E+01
2.667E-01	5.426E+01
2.657E-01	5.451E+01
2.648E-01	5.474E+01
2.639E-01	5.497E+01
2.629E-01	5.520E+01
2.620E-01	5.543E+01

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2.610E-01           5.566E+01
2.601E-01           5.586E+01
2.591E-01           5.612E+01
2.583E-01           5.635E+01
2.572E-01           5.656E+01
2.554E-01           5.681E+01
2.655E-01           5.704E+01
2.646E-01           5.727E+01
2.637E-01           5.750E+01

END OF RESPONSE SPECTRUM
$
$
$=============================================================================

$ DPENENDING ON CRANE LOCATION PUT '$' SIGN IN FRONT OF MEMBERS AND JOINTS AT CRANE LOCATION
$ R1 CRANE LCOATION 1
$ RX1  x = CRANE LOCATION 2 TO 9
$ CNRX011, CNRX041....  X = CRANE LOCATION 1 TO 9


INACTIVE MEMBERS 'R1' TO 'R8'
INACTIVE MEMBERS 'R21' TO 'R28'
INACTIVE MEMBERS 'R31' TO 'R38'
INACTIVE MEMBERS 'R41' TO 'R48'
INACTIVE MEMBERS 'R51' TO 'R58'
INACTIVE MEMBERS 'R61' TO 'R68'
INACTIVE MEMBERS 'R71' TO 'R78'
$ INACTIVE MEMBERS 'R81' TO 'R88'
INACTIVE MEMBERS 'R91' TO 'R98'


INACTIVE JOINTS 'CNR1011' 'CNR1021' 'CNR1031' 'CNR1041' -
            'CNR1131' 'CNR1141' 'CNR1151' 'CNR1161'

INACTIVE JOINTS 'CNR2011' 'CNR2021' 'CNR2031' 'CNR2041' -
            'CNR2131' 'CNR2141' 'CNR2151' 'CNR2161'
INACTIVE JOINTS 'CNR3011' 'CNR3021' 'CNR3031' 'CNR3041' -
            'CNR3131' 'CNR3141' 'CNR3151' 'CNR3161'
INACTIVE JOINTS 'CNR4011' 'CNR4021' 'CNR4031' 'CNR4041' -
            'CNR4131' 'CNR4141' 'CNR4151' 'CNR4161'
INACTIVE JOINTS 'CNR5011' 'CNR5021' 'CNR5031' 'CNR5041' -
            'CNR5131' 'CNR5141' 'CNR5151' 'CNR5161'
INACTIVE JOINTS 'CNR6011' 'CNR6021' 'CNR6031' 'CNR6041' -
            'CNR6131' 'CNR6141' 'CNR6151' 'CNR6161'
INACTIVE JOINTS 'CNR7011' 'CNR7021' 'CNR7031' 'CNR7041' -
            'CNR7131' 'CNR7141' 'CNR7151' 'CNR7161'
$ INACTIVE JOINTS 'CNR8011' 'CNR8021' 'CNR8031' 'CNR8041' -
$             'CNR8131' 'CNR8141' 'CNR8151' 'CNR8161'
INACTIVE JOINTS 'CNR9011' 'CNR9021' 'CNR9031' 'CNR9041' -
            'CNR9131' 'CNR9141' 'CNR9151' 'CNR9161'



$=============================================================================
$=============================================================================


UNITS  FT  KIP   DEG   FAH
DEAD LOAD  1 'Dead Load including Crane Members' DIRECTION -Y FACTOR 1.0
$ Concrete floor dead load = 150 pcf x (8/12)ft x 6ft = 0.6 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.6 WB     -0.6       -
     LA    0.000 LB    1.000
   7001       7002       7003       7004              -
   7005       7006       7007                   -
   7014                                  -
   7015       7016       7017       7018       7019     -
   7020       7023       7024                   -
   7025       7026       7027       7028       7029     -
   7032       7033       7034                   -
   7035       7036       7037       7038              -
   7041       7042       7043       7044              -
   7045       7046       7047                   -
   7052                                  -
```

```
   7053       7054       7055       7056       7057     -
   7058
$
$ Concrete floor dead load = 150 pcf x (8/12)ft x 3ft = 0.3 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.3 WB     -0.3       -
     LA     0.000 LB     1.000
   7000 7009 7013 7022 7031 7040 7051                      -
   7008 7012 7021 7030 7039 7048 7059                      -
   7010 7011 7361 7362 7049
$
$ Concrete floor dead load around decontamination pit
$ 150 pcf x (8/12)ft x 1ft = 0.1 kip/ft
$ 150 pcf x (8/12)ft x 2.25ft = 0.225 kip/ft
$ 150 pcf x (8/12)ft x 2ft = 0.2 kip/ft
$ 150 pcf x (8/12)ft x 2.75ft = 0.275 kip/ft
$
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.1 WB     -0.1       -
     LA     0.000 LB     1.000
   3154 TO 3157
$
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.225 WB    -0.225     -
     LA     0.000 LB     1.000
   3158 TO 3161
$
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.2 WB     -0.2       -
     LA     0.000 LB     1.000
   7061 7065 7062 7064
$
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.275 WB    -0.275     -
     LA     0.000 LB     1.000
   5138 TO 5145
$
$ Roof dead load = 20 psf x 6.25ft = 0.125 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.125 WB     -0.125    -
     LA     0.000 LB     1.000
   9001       9002       9003       9004       9005     -
   9006       9007       9082       9083               -
   9084       9085       9086       9087       9088     -
   9010       9011       9012       9013               -
   9014       9015       9016       9019               -
   9020       9021       9022       9023       9024     -
   9025       9028       9029       9030               -
   9031       9032       9033       9034               -
   9037       9038       9039       9040       9041     -
   9042       9043       9046       9047               -
   9048       9049       9050       9051       9052     -
   9055       9056       9057       9058               -
   9059       9060       9061       9064               -
   9065       9066       9067       9068       9069     -
   9070       9073       9074       9075               -
   9076       9077       9078       9079
$
$ Roof dead load = 20 psf x 6.25ft x 0.5 = 0.0625 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.0625 WB     -0.0625  -
     LA     0.000 LB     1.000
   9000       9081       9009       9018       9027     -
   9036       9045       9054       9063       9072     -
   9008       9089       9017       9026       9035     -
   9044       9053       9062       9071       9080
$
$ Adjacent Bldg partial roof selfweight
  JOINT LOADS
    113        FORCE   Y      -1.746
    1113       FORCE   Y      -2.727
    2113       FORCE   Y      -3.011
    3113       FORCE   Y      -2.339
    4113       FORCE   Y      -3.016
    5113       FORCE   Y      -1.476
    5122       FORCE   Y      -3.008
    7122       FORCE   Y      -4.263
    81660      FORCE   Y      -0.860
$
$ Adjacent Bldg partial roof dead load
  JOINT LOADS
    113        FORCE   Y      -3.6
```

```
   1113       FORCE   Y      -7.2
   2113       FORCE   Y      -7.2
   3113       FORCE   Y      -7.0
   4113       FORCE   Y      -6.9
   5113       FORCE   Y      -3.5
   5122       FORCE   Y      -5.5
   7122       FORCE   Y      -8.1
   81660      FORCE   Y      -2.6
$
$ Concrete blocks at hatch
$ 150 pcf x (8/12)ft x 5ft = 0.5 kip/ft
  MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.5 WB      -0.5       -
      LA     0.000 LB     1.000
   123 TO 128 131 TO 136


$
$SIDING AND GIRTS DEAD LOAD
$SIDING = 1.5 PSF
$GIRTS = 8.5 PSF
$TOTAL = 10 PSF

MEM LOADS
$ WEST FACE OF BUILDING COLUMN LINE 302A

8116 81160     FOR Y GLO UNIF -0.105
71160 71210    FOR Y GLO UNIF -0.27
5116 5121      FOR Y GLO UNIF -0.301
5111 5112      FOR Y GLO UNIF -0.117

4111 4112 4116 4121     FOR Y GLO UNIF -0.23
3111 3112 3116          FOR Y GLO UNIF -0.175

2125 2126      FOR Y GLO UNIF -0.122

2111 2112 2116      FOR Y GLO UNIF -0.182
1111 1112 1116      FOR Y GLO UNIF -0.243
111 112 116    FOR Y GLO UNIF -0.301
13 18          FOR Y GLO UNIF -0.2

3116       FOR Y GLO UNIF -0.235
2116       FOR Y GLO UNIF -0.243

$ EAST FACE OF BUILDING COLUMNS LINE 301

2 7          FOR Y GLO UNIF -0.2
105 101          FOR Y GLO UNIF -0.301
100         FOR Y GLO UNIF -0.144
1100 1101 1105      FOR Y GLO UNIF -0.243
2100 2101 2105      FOR Y GLO UNIF -0.243
3100 3101 3105 3163     FOR Y GLO UNIF -0.235
4100 4101 4105 4122     FOR Y GLO UNIF -0.23
5100 5101 5105      FOR Y GLO UNIF -0.216
6100 6105      FOR Y GLO UNIF -0.185
71000 71050    FOR Y GLO UNIF -0.17
8100 8105      FOR Y GLO UNIF -0.105

$ NORTH FACE
8121           FOR Y GLO UNIF FRA -0.24 0.6 1.0
8116 81160 8105 FOR Y GLO UNIF -0.14

$ SOUTH FACE
100 110 2 7 13 18 FOR Y GLO UNIF -0.14
121 54 55 56 FOR Y GLO UNIF -0.24

LOADING  2 'Crane Component Dead Load'
$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'     FORCE Y     -1.13
'CN6'       FORCE Y     -0.444
'CN7'       FORCE Y     -0.444
'CN285'     FORCE Y     -0.880
'CN270'     FORCE Y     -1.415
```

```
'CN278'     FORCE Y     -1.415
'CN3'       FORCE Y     -0.250
'CN27'      FORCE Y     -0.250
'CN51'      FORCE Y     -0.250
'CN84'      FORCE Y     -0.250

LOADING  30 '10% Live Load'
$ 10% 300 psf @ South of Spent Fuel Pools
$ 300 psf x 6 ft x 0.1 = 0.18 kip/ft
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.18 WB     -0.18     -
     LA    0.000 LB    1.000
   7001       7002       7003       7004              -
   7005       7006       7007                        -
   7014                                          -
   7015       7016       7017       7018       7019     -
   7020       7023       7024                        -
   7025       7026       7027       7028       7029     -
   7032       7033       7034                        -
   7035       7036       7037       7038              -
   7041       7042       7043       7044              -
   7045       7046       7047                        -
   7052                                          -
   7053       7054       7055       7056       7057     -
   7058
$
$ 300 psf x 3 ft x 0.1 = 0.09 kip/ft
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.09 WB     -0.09     -
     LA    0.000 LB    1.000
   7000 7009 7013 7022 7031 7040 7051                    -
   7008 7012 7021 7030 7039 7048 7059                    -
   7010 7011 7361 7362 7049
$
$ Floor live load around decontamination pit
$ 300 psf x 1ft x 0.1 = 0.03 kip/ft
$ 300 psf x 2.25ft x 0.1 = 0.0675 kip/ft
$ 300 psf x 2ft x 0.25 = 0.06 kip/ft
$ 300 psf x 2.75ft x 0.25 = 0.083 kip/ft
$
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.03 WB    -0.03     -
     LA    0.000 LB    1.000
   3154 TO 3157
$
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.0675 WB    -0.0675     -
     LA    0.000 LB    1.000
   3158 TO 3161
$
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.06 WB     -0.06      -
     LA    0.000 LB    1.000
   7061 7065 7062 7064
$
 MEMB LOADS  FOR Y GLO LIN FRA  WA     -0.083 WB    -0.083     -
     LA    0.000 LB    1.000
   5138 TO 5145

LOADING  16 'CASK WEIGHT FOR PENDULUM EFFECT'
 JOINT LOADS
      'CN450'       FORCE Y     -266.0

UNITS  INCH  LBS   DEG   FAH


LOADING  35 'UNIT LOAD IN X DIRECTION'
 JOINT LOADS FOR  X  1950
38   -
8152

 JOINT LOADS FOR  X  3900
152  -
178 -
1152 -
2152  -
3152 -
4152 -
5152 -
6152 -
```

```
 7152

  JOINT LOADS FOR  X  11500
 27 -
 3160 -
 5190

  JOINT LOADS FOR  X  23000
 145 -
 1145 -
 2145 -
 3145

LOADING  36 'UNIT LOADS IN Y DIRECTION'
  JOINT LOADS FOR  Y  -19500
 38   -
 8152

  JOINT LOADS FOR  Y  -39000
 152  -
 178 -
 1152 -
 2152  -
 3152 -
 4152 -
 5152 -
 6152 -
 7152

  JOINT LOADS FOR  Y  -115000
 27 -
 3160 -
 5190

  JOINT LOADS FOR  Y  -230000
 145 -
 1145 -
 2145 -
 3145

LOADING  37 'UNIT LOAD IN Z DIRECTION'
  JOINT LOADS FOR  Z  1950
 38   -
 8152

  JOINT LOADS FOR  Z  3900
 152  -
 178 -
 1152 -
 2152  -
 3152 -
 4152 -
 5152 -
 6152 -
 7152

  JOINT LOADS FOR  Z  11500
 27 -
 3160 -
 5190

  JOINT LOADS FOR  Z  23000
 145 -
 1145 -
 2145 -
 3145

DEAD LOAD  38 'ACCELERATION Y' DIRECTION -Y FACTOR 1.0

$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'      FORCE Y      -266000
'CN6'        FORCE Y      -444
```

```
'CN7'       FORCE Y     -444
'CN285'     FORCE Y     -880
'CN270'     FORCE Y     -1415
'CN278'     FORCE Y     -1415
'CN3'       FORCE Y     -250
'CN27'      FORCE Y     -250
'CN51'      FORCE Y     -250
'CN84'      FORCE Y     -250

DEAD LOAD  39 'ACCELERATION X' DIRECTION X FACTOR 1.0

$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'     FORCE X     266000
'CN6'       FORCE X     444
'CN7'       FORCE X     444
'CN285'     FORCE X     880
'CN270'     FORCE X     1415
'CN278'     FORCE X     1415
'CN3'       FORCE X     250
'CN27'      FORCE X     250
'CN51'      FORCE X     250
'CN84'      FORCE X     250

DEAD LOAD  40 'ACCELERATION Z' DIRECTION Z FACTOR 1.0

$
$ Hook dead load = 1.13 kip from DWG QR88896 SHT 1
$
JOINT LOADS
'CN450'     FORCE Z     266000
'CN6'       FORCE Z     444
'CN7'       FORCE Z     444
'CN285'     FORCE Z     880
'CN270'     FORCE Z     1415
'CN278'     FORCE Z     1415
'CN3'       FORCE Z     250
'CN27'      FORCE Z     250
'CN51'      FORCE Z     250
'CN84'      FORCE Z     250

$============================================================================================
MAXIMUM NUMBER OF CYCLES 40
CONVERGENCE TOL 0.001
NONLINEAR ANALYSIS
$============================================================================================

$ Create [M] from 100% Load Case 1 & 2 16 and 10% Load Case 3
$ Automatically calculate masses for all members and additional
$ masses as defined in static Load Case 1 2 16 and 30.
$ Masses are applied in global X, Y, and Z-directions
$
UNITS  FEET  KIP

INERTIA OF JOINTS FROM LOAD 1 2 16 30 ALL DOF
PRINT DYNAMIC JOINT INERTIA
PRINT DYNAMIC MEMBER ADDED MASS

$ CUT OFF MODE SHAPE 300
EIGEN PARAMETERS
  NUMBER OF MODES 300
  SOLVE USING GTLANCZOS
  PRINT MAX
END
DAMPING PERCENT 7.0 300
PRINT DYNAMIC MODAL DAMPING

$ Eigen solution
DYNAMIC ANALYSIS EIGENSOLUTION
LIST DYNAMIC PARTICIPATION FACTORS

BYPASS
$--------------------------------------------------------------------------------------
```

```
$ Apply Response Spectrum Loading
$
DYNAMIC PARAMETERS
 USE EXTERNAL FILE SOLVER
END

RESPONSE SPECTRA LOAD 'RSX_SSE'  'HORIZONTAL SSE IN X-DIRECTION'
  SUPPORT ACCELERATIONS
  TRANS X 1.0 FILE 'HSSE162'
END OF RESPONSE SPECTRA LOADING

RESPONSE SPECTRA LOAD 'RSZ_SSE'  'HORIZONTAL SSE IN Z-DIRECTION'
  SUPPORT ACCELERATIONS
  TRANS Z 1.0 FILE 'HSSE162'
END OF RESPONSE SPECTRA LOADING

RESPONSE SPECTRA LOAD 'RSY_SSE'  'VERTICAL SSE IN Y-DIRECTION'
  SUPPORT ACCELERATIONS
  TRANS Y 1.0 FILE 'VSSE162'
END OF RESPONSE SPECTRA LOADING

$-------------------------------------------------------------------------------

UNITS INCH POUND CYCLES SECONDS

LOAD LIST 'RSX_SSE' 'RSY_SSE' 'RSZ_SSE'
EIGENVALUE PARAMETERS
  SOLVE USING GTLANCZOS
  PRINT MAXIMUM
  INITIAL STRESS LOADING OFF
END EIGENVALUE PARAMETERS

DYNAMIC ANALYSIS MODAL

PERFORM RESPONSE SPECTRUM ANALYSIS

LIST RESPONSE SPECTRUM SPECTRUAL ACCELERATIONS
LIST RESPONSE SPECTRUM PARTICIPATION FACTORS

COMPUTE RESPONSE SPECTRUM DISPLACEMENTS ACCELERATIONS MODE COMBINATIONS CQC
COMPUTE RESPONSE SPECTRUM FORCES REACTIONS MODE COMBINATIONS CQC
COMPUTE RESPONSE SPECTRUM STRESSES LOADS MODE COMBINATIONS CQC

LOAD LIST 'RSX_SSE' 'RSY_SSE' 'RSZ_SSE'


COUTPUT '(07)SPECTRA RESULTS.TXT'
UNITS KIP FT
OUTPUT DEC 2
OUTPUT ORDERED
OUTPUT BY MEMBER

LIST DYNAMIC MASS SUMMARY

LIST RESPONSE SPECTRA DISPLACEMENTS MODAL COMBINATION CQC -
JOINTS 'CNR213' 'CNR214' 'CNR215' 'CNR216' 'CNR201' 'CNR202' -
'CNR203' 'CNR203' 'CNR204' 'CN59' 'CN264' 'CN249' 'CN254' 'CN450' 'CN434'

LIST RESPONSE SPECTRA ACCELERATIONS MODAL COMBINATION CQC JOINTS -
JOINTS 'CNR213' 'CNR214' 'CNR215' 'CNR216' 'CNR201' 'CNR202' -
'CNR203' 'CNR203' 'CNR204' 'CN59' 'CN264' 'CN249' 'CN254' 'CN450' 'CN434'

COUTPUT 'N1E3_HU_WL_MHE.GTO'

SAVE 'N1E3_HU_WL_MHE_1.GTS'

$-------------------------------------------------------------------------------

FORM MISSING MASS LOAD 'MMX_SSE' 'MISSING MASS LOAD IN X-DIRECTION' FROM -
  RESPONSE SPECTRA LOAD 'RSX_SSE' CUTOFF FREQUENCY 33.0 DAMPING RATIO 0.07
FORM MISSING MASS LOAD 'MMZ_SSE' 'MISSING MASS LOAD IN Z-DIRECTION' FROM -
  RESPONSE SPECTRA LOAD 'RSZ_SSE' CUTOFF FREQUENCY 33.0 DAMPING RATIO 0.07
FORM MISSING MASS LOAD 'MMY_SSE' 'MISSING MASS LOAD IN Y-DIRECTION' FROM -
  RESPONSE SPECTRA LOAD 'RSY_SSE' CUTOFF FREQUENCY 33.0 DAMPING RATIO 0.07
```

```
STIFFNESS ANALYSIS
LIST REACTION
LIST MAXIMUM JOINT DISPLACEMENT SUMMARY ONLY LOADS ACTIVE

$-------------------------------------------------------------------------------

LOAD LIST 'RSX_SSE' 'RSZ_SSE' 'RSY_SSE'

CREATE PSEUDOSTATIC LOADING 'PSX_SSE' 'PSEUDOSTATIC LOAD IN X-DIRECTION' FROM -
  CQC OF LOADING 'RSX_SSE'
CREATE PSEUDOSTATIC LOADING 'PSZ_SSE' 'PSEUDOSTATIC LOAD IN Z-DIRECTION' FROM -
   CQC OF LOADING 'RSZ_SSE'
CREATE PSEUDOSTATIC LOADING 'PSY_SSE' 'PSEUDOSTATIC LOAD IN Y-DIRECTION' FROM -
   CQC OF LOADING 'RSY_SSE'

LOAD LIST 'PSX_SSE' 'PSZ_SSE' 'PSY_SSE'
LIST REACTION

$-------------------------------------------------------------------------------

LOAD LIST 'PSX_SSE' 'PSZ_SSE' 'PSY_SSE' 'MMX_SSE' 'MMZ_SSE' 'MMY_SSE'
CREATE LOAD COMBINATION 'XRMS_SSE' TYPE RMS SPECS 'PSX_SSE' 1.0 'MMX_SSE' 1.0
CREATE LOAD COMBINATION 'ZRMS_SSE' TYPE RMS SPECS 'PSZ_SSE' 1.0 'MMZ_SSE' 1.0
CREATE LOAD COMBINATION 'YRMS_SSE' TYPE RMS SPECS 'PSY_SSE' 1.0 'MMY_SSE' 1.0

CREATE LOAD COMBINATION 14 TYPE ABSOLUTE SPECS 'XRMS_SSE' 1.0 'YRMS_SSE' 1.0
CREATE LOAD COMBINATION 15 TYPE ABSOLUTE SPECS 'ZRMS_SSE' 1.0 'YRMS_SSE' 1.0
CREATE LOAD COMBINATION 18 TYPE RMS SPECS 'XRMS_SSE' 1.0 'YRMS_SSE' 1.0 'ZRMS_SSE' 1.0



LOAD LIST  14 15 18

LIST MAXIMUM JOINT DISPLACEMENT SUMMARY ONLY LOADS ACTIVE
LIST REACTION



$-------------------------------------------------------------------------------

STIFFNESS ANALYSIS


UNITS  INCH  LBS   DEG   FAH

 BYPASS
```

Attachment 16

ANSYS Stand-Alone Crane Model Output, “Hook Up”, Static Loads

REACTIONS FROM 1g IN X DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 2 SUBSTEP= 1
TIME= 2.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
10101		-82592.	-0.14019E+06			
10102		34467.	0.16426E+06			
10103	0.11498E+06	-0.11118E+06	-0.16429E+06			
10104	0.11376E+06	0.15931E+06	0.14021E+06			
10113		-79085.				
10114		21124.				
10115	94357.	-85298.				
10116	96778.	0.14326E+06				

TOTAL VALUES

VALUE	0.41987E+06	0.18189E-05	-0.74506E-08	0.0000	0.0000	0.0000

REACTIONS FROM 1g IN Y DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 1 SUBSTEP= 1
TIME= 1.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
10101		53489.	8449.9			
10102		52238.	-8437.1			
10103	-9975.6	51770.	-8455.3			
10104	9971.0	51141.	8442.5			
10113		53454.				
10114		53495.				
10115	-10079.	52805.				
10116	10084.	51484.				

TOTAL VALUES

VALUE	0.40236E-08	0.41987E+06	-0.33178E-08	0.0000	0.0000	0.0000

REACTIONS FROM 1g IN Z DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 3 SUBSTEP= 1
TIME= 3.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
10101		-19913.	-0.10914E+06			
10102		-19214.	-0.10415E+06			
10103	3972.5	-19069.	-0.10186E+06			
10104	-3776.2	-19505.	-0.10473E+06			
10113		19559.				
10114		19569.				
10115	-3947.1	19423.				
10116	3750.8	19151.				

TOTAL VALUES

VALUE	-0.22401E-08	-0.26701E-05	-0.41987E+06	0.0000	0.0000	0.0000

REACTIONS FROM UNIT FORCE IN X DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 4 SUBSTEP= 1
TIME= 4.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
10101		-2217.2	-3741.1			
10102		803.89	4367.2			
10103	2784.1	-2669.8	-4374.7			
10104	2805.6	4083.1	3748.6			
10113		-2072.5				
10114		396.23				
10115	2142.2	-1876.0				
10116	2268.1	3552.2				

TOTAL VALUES
VALUE 10000. 0.56675E-07-0.22055E-09 0.0000 0.0000 0.0000

REACTIONS FROM UNIT FORCE IN Y DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 5 SUBSTEP= 1
TIME= 5.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
10101		12848.	2639.5			
10102		12393.	-2639.8			
10103	-2532.8	12374.	-2640.6			
10104	2533.0	12860.	2640.9			
10113		12478.				
10114		12288.				
10115	-2474.5	12270.				
10116	2474.3	12489.				

TOTAL VALUES
VALUE 0.63301E-09 0.10000E+06 0.31141E-08 0.0000 0.0000 0.0000

REACTIONS FROM UNIT FORCE IN Z DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 6 SUBSTEP= 1
TIME= 6.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
10101		541.82	2605.6			
10102		517.84	2417.5			
10103	-110.37	518.88	2401.3			
10104	100.40	528.34	2575.6			
10113		-529.38				
10114		-530.29				
10115	109.48	-531.34				
10116	-99.504	-515.89				

TOTAL VALUES
VALUE 0.83702E-10 0.63705E-07 10000. 0.0000 0.0000 0.0000

DISPLACEMENTS FROM 1g IN X DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 2 SUBSTEP= 1
TIME= 2.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
11434	-3.2951	0.44778E-03	0.59272E-02	3.2952
11437	-3.3999	0.24045	-0.80186E-01	3.4093
11440	-3.4001	-0.24044	0.80035E-01	3.4096
11443	-2.6922	0.24778	-0.80355E-01	2.7048
11446	-2.6919	-0.24776	0.80348E-01	2.7044
11450	-99.455	0.44778E-03	0.59272E-02	99.455

MAXIMUM ABSOLUTE VALUES

NODE	11450	11338	10113	11450
VALUE	-99.455	0.25919	-0.39496	99.455

DISPLACEMENTS FROM 1g IN Y DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 1 SUBSTEP= 1
TIME= 1.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
11434	0.80242E-03	-0.80552	0.49716E-01	0.80705
11437	-0.43705E-01	-0.42037	0.42536E-01	0.42477
11440	0.45213E-01	-0.41868	0.42079E-01	0.42321
11443	0.26644E-02	-0.42166	0.42558E-01	0.42381
11446	-0.11373E-02	-0.41992	0.42119E-01	0.42203
11450	0.80242E-03	-0.92287	0.49716E-01	0.92421

MAXIMUM ABSOLUTE VALUES

NODE	11076	11450	10113	11450
VALUE	0.10589	-0.92287	0.24346	0.92421

DISPLACEMENTS FROM 1g IN Z DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 3 SUBSTEP= 1
TIME= 3.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
11434	-0.42110E-02	-0.48840E-01	53.504	53.504
11437	-0.12635	-0.11802	0.75316	0.77275
11440	0.10651	-0.11454	0.74395	0.76022
11443	-0.10523E-01	-0.14033	0.74946	0.76256
11446	0.23676E-01	-0.13671	0.74021	0.75310
11450	-0.42110E-02	-0.48840E-01	149.66	149.66

MAXIMUM ABSOLUTE VALUES

NODE	11427	11337	11450	11450
VALUE	-3.0649	-0.19046	149.66	149.66

DISPLACEMENTS FROM UNIT FORCE IN X DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 4 SUBSTEP= 1
TIME= 4.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
11434	-0.93450E-01	0.52888E-05	0.21084E-03	0.93450E-01
11437	-0.98009E-01	0.69958E-02	-0.21979E-02	0.98283E-01
11440	-0.98042E-01	-0.69949E-02	0.21928E-02	0.98316E-01
11443	-0.71941E-01	0.71949E-02	-0.22036E-02	0.72333E-01
11446	-0.71932E-01	-0.71938E-02	0.22035E-02	0.72324E-01
11450	-3.7085	0.52888E-05	0.21084E-03	3.7085

MAXIMUM ABSOLUTE VALUES

NODE	11450	11338	10116	11450
VALUE	-3.7085	0.75787E-02	0.10750E-01	3.7085

DISPLACEMENTS FROM UNIT FORCE IN Y DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 5 SUBSTEP= 1
TIME= 5.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
11434	0.52888E-04	-0.24582	0.75740E-02	0.24594
11437	-0.16617E-01	-0.11200	0.48779E-02	0.11333
11440	0.16693E-01	-0.11195	0.48783E-02	0.11329
11443	0.86684E-03	-0.11157	0.48867E-02	0.11168
11446	-0.79773E-03	-0.11152	0.48935E-02	0.11163
11450	0.52888E-04	-0.28994	0.75740E-02	0.29004

MAXIMUM ABSOLUTE VALUES

NODE	11075	11450	10113	11450
VALUE	0.32162E-01	-0.28994	0.64684E-01	0.29004

DISPLACEMENTS FROM UNIT FORCE IN Z DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 6 SUBSTEP= 1
TIME= 6.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
11434	0.21084E-03	0.75740E-03	-1.8101	1.8101
11437	0.42214E-02	0.26908E-02	-0.21092E-01	0.21678E-01
11440	-0.34158E-02	0.26690E-02	-0.20880E-01	0.21325E-01
11443	0.40063E-03	0.34154E-02	-0.20990E-01	0.21270E-01
11446	-0.71411E-03	0.33823E-02	-0.20776E-01	0.21062E-01
11450	0.21084E-03	0.75740E-03	-5.4251	5.4251

MAXIMUM ABSOLUTE VALUES

NODE	11427	11337	11450	11450
VALUE	0.10368	0.48984E-02	-5.4251	5.4251

Attachment 17

ANSYS Stand-Alone Crane Model Output, “Hook Up”, Modal Analysis

S O L U T I O N O P T I O N S

PROBLEM DIMENSIONALITY. 3-D
DEGREES OF FREEDOM. . . . . UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE . . . . . .MODAL
EXTRACTION METHOD. . . . . .BLOCK LANCZOS
LUMPED MASS MATRICES. . . . . .ON
EQUATION SOLVER OPTION. . . . . .SPARSE
NUMBER OF MODES TO EXTRACT. 40
GLOBALLY ASSEMBLED MATRIX . . . . . .SYMMETRIC
NUMBER OF MODES TO EXPAND 40
ELEMENT RESULTS CALCULATION . . . . . .OFF

L O A D S T E P O P T I O N S

LOAD STEP NUMBER. 1
PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
DATABASE OUTPUT CONTROLS. . . . . .ALL DATA WRITTEN

**** CENTER OF MASS, MASS, AND MASS MOMENTS OF INERTIA ****

CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

TOTAL MASS = 1087.5

CENTER OF MASS	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTER OF MASS
XC = 2104.7	IXX = 0.1005E+10	IXX = 0.1022E+08
YC = 912.64	IYY = 0.4919E+10	IYY = 0.1232E+08
ZC = -286.29	IZZ = 0.5728E+10	IZZ = 0.5005E+07
	IXY = -0.2089E+10	IXY = 0.4080E+05
	IYZ = 0.2838E+09	IYZ = -0.3462E+06
	IZX = 0.6553E+09	IZX = 0.2660E+05

AN AVERAGE OF THE X-, Y-, AND Z-DIRECTION MASS TERMS ARE USED FOR MASS21 ELEMENTS.

*** MASS SUMMARY BY ELEMENT TYPE ***

TYPE	MASS
21	384.059
100	14.4894
1004	688.961

Range of element maximum matrix coefficients in global coordinates
Maximum= 1.68599692E+11 at element 12077.
Minimum= 2766.22296 at element 12479.

*** ELEMENT MATRIX FORMULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
21	367	BEAM44	0.050	0.000136
100	9	MASS21	0.000	0.000000
1001	1	COMBIN14	0.000	0.000000
1002	1	COMBIN14	0.000	0.000000
1003	1	COMBIN14	0.000	0.000000
1004	1	MASS21	0.000	0.000000

Time at end of element matrix formulation CP= 126.762275.

BLOCK LANCZOS CALCULATION OF UP TO 40 EIGENVECTORS.
NUMBER OF EQUATIONS = 2083
MAXIMUM WAVEFRONT = 24
MAXIMUM MODES STORED = 40
MINIMUM EIGENVALUE = 0.0000
MAXIMUM EIGENVALUE = 0.10000E+09
EST. OF MEMORY NEEDED = 1.5446 (MB)
MEMORY AVAILABLE FOR EIGENSOLVER = 238.94 (MB)

```
MEMORY TO PERFORM EIGENEXTRACTION:
 MIN. TO COMPLETE VALUE INPUT          =       46029    0.35117     (MB)
 MIN. FOR PART IN-CORE AND OUT-OF-CORE  =       76104    0.58063     (MB)
 MIN. FOR IN-CORE                       =      111391    0.84985     (MB)
 RECOM. FOR PART IN-CORE AND OUT-OF-CORE =      216009    1.6480      (MB)
 RECOM. FOR IN-CORE                     =      251296    1.9172      (MB)

 LANCZOS CYCLE NUMBER =   1

   new shift:  9.5796D-04     modes still needed:       40

 FREQUENCIES AT CURRENT LANCZOS CYCLE
   1  0.32438926E+02    2  0.29687731E+02    3  0.29382353E+02
   4  0.29025818E+02    5  0.24926833E+02    6  0.24480593E+02
   7  0.24090944E+02    8  0.24019356E+02    9  0.23930987E+02
  10  0.23911457E+02   11  0.23870473E+02   12  0.23862879E+02
  13  0.23857318E+02   14  0.23819788E+02   15  0.23815533E+02
  16  0.23510510E+02   17  0.22726179E+02   18  0.22265490E+02
  19  0.20197675E+02   20  0.19777021E+02   21  0.17969081E+02
  22  0.15734744E+02   23  0.15667326E+02   24  0.14883326E+02
  25  0.14466982E+02   26  0.13166405E+02   27  0.11990101E+02
  28  0.11492398E+02   29  0.10585683E+02   30  0.10299087E+02
  31  0.10281716E+02   32  0.10279661E+02   33  0.10277073E+02
  34  0.10270414E+02   35  0.10267951E+02   36  0.10263628E+02
  37  0.10262480E+02   38  0.10239747E+02   39  0.10215469E+02
  40  0.97217883E+01   41  0.88270257E+01   42  0.79649319E+01
  43  0.40752083E+01   44  0.37054046E+01   45  0.33813603E+01
  46  0.18612964E+01   47  0.31483867E+00   48  0.25913314E+00

   number of steps      :    14
   eigenvalues found    :    48
   total no. eigenvalues:    48

 LANCZOS CYCLE NUMBER =   2

   new shift:  2.2693D+04     modes still needed:       0
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 11.0     *****
ANSYS Mechanical U
00245050         VERSION=INTEL NT      16:54:17  DEC 20, 2010 CP=    128.475

Auxzilary Building Modifications


*** FREQUENCIES FROM BLOCK LANCZOS          ITERATION ***

 MODE    FREQUENCY (HERTZ)


   1    0.2591331444638
   2    0.3148386678527
   3     1.861296365896
   4     3.381360323923
   5     3.705404559626
   6     4.075208267428
   7     7.964931885095
   8     8.827025724666
   9     9.721788278095
  10     10.21546899968
  11     10.23974676135
  12     10.26247984233
  13     10.26362798657
  14     10.26795067445
  15     10.27041447550
  16     10.27707340339
  17     10.27966058955
  18     10.28171642217
  19     10.29908717082
  20     10.58568275588
  21     11.49239825806
  22     11.99010051648
  23     13.16640507127
  24     14.46698198773
  25     14.88332565434
```

```
 26    15.66732597834
 27    15.73474357505
 28    17.96908102128
 29    19.77702077645
 30    20.19767498915
 31    22.26548952728
 32    22.72617911119
 33    23.51050993954
 34    23.81553311148
 35    23.81978801527
 36    23.85731830362
 37    23.86287881891
 38    23.87047346505
 39    23.91145681668
 40    23.93098702078

Block Lanczos        CP Time (sec) =         1.702
Block Lanczos    ELAPSED Time (sec) =         2.119

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 11.0     *****
ANSYS Mechanical U
00245050         VERSION=INTEL NT      16:54:18  DEC 20, 2010 CP=    128.635

Auxzilary Building Modifications



        ***** PARTICIPATION FACTOR CALCULATION *****  X  DIRECTION
                                                          CUMULATIVE
MODE      FREQUENCY       PERIOD   PARTIC.FACTOR       RATIO      EFFECTIVE MASS      MASS FRACTION

  1    0.259133        3.8590      -0.32862E-02      0.000124      0.107989E-04      0.107949E-07
  2    0.314839        3.1762        26.463          1.000000        700.276           0.700012
  3     1.86130       0.53726       0.74477E-03      0.000028      0.554675E-06      0.700012
  4     3.38136       0.29574      -0.74142E-01      0.002802      0.549698E-02      0.700018
  5     3.70540       0.26988        16.586          0.626784        275.109           0.975023
  6     4.07521       0.24539        1.2929          0.048858        1.67160           0.976694
  7     7.96493       0.12555      -0.29008E-01      0.001096      0.841490E-03      0.976695
  8     8.82703       0.11329      -0.85574          0.032338      0.732292          0.977427
  9     9.72179       0.10286      -0.68980          0.026067      0.475823          0.977903
 10     10.2155      0.97891E-01   0.46339E-01       0.001751      0.214733E-02      0.977905
 11     10.2397      0.97659E-01   0.11253           0.004252      0.126631E-01      0.977918
 12     10.2625      0.97442E-01  -0.22653E-01       0.000856      0.513146E-03      0.977918
 13     10.2636      0.97431E-01   0.82994E-01       0.003136      0.688807E-02      0.977925
 14     10.2680      0.97390E-01   0.25918           0.009794      0.671757E-01      0.977992
 15     10.2704      0.97367E-01  -0.25365E-01       0.000959      0.643387E-03      0.977993
 16     10.2771      0.97304E-01  -0.24007E-01       0.000907      0.576334E-03      0.977994
 17     10.2797      0.97279E-01   0.10865           0.004106      0.118046E-01      0.978005
 18     10.2817      0.97260E-01   0.19865           0.007507      0.394611E-01      0.978045
 19     10.2991      0.97096E-01    1.9723           0.074532        3.89005           0.981933
 20     10.5857      0.94467E-01   -2.0727           0.078324        4.29591           0.986228
 21     11.4924      0.87014E-01   0.53067E-02       0.000201      0.281609E-04      0.986228
 22     11.9901      0.83402E-01  -0.95329           0.036024        0.908760          0.987136
 23     13.1664      0.75951E-01  -0.99460E-01       0.003758      0.989229E-02      0.987146
 24     14.4670      0.69123E-01  -0.54127E-02       0.000205      0.292969E-04      0.987146
 25     14.8833      0.67189E-01   0.58107E-01       0.002196      0.337641E-02      0.987149
 26     15.6673      0.63827E-01   -1.1147           0.042125        1.24263           0.988392
 27     15.7347      0.63554E-01   0.12862           0.004861      0.165438E-01      0.988408
 28     17.9691      0.55651E-01    3.3750           0.127536        11.3903           0.999794
 29     19.7770      0.50564E-01  -0.23445           0.008860      0.549657E-01      0.999849
 30     20.1977      0.49511E-01   0.12056E-02       0.000046      0.145340E-05      0.999849
 31     22.2655      0.44913E-01   0.99351E-01       0.003754      0.987057E-02      0.999859
 32     22.7262      0.44002E-01   0.25545           0.009653      0.652570E-01      0.999924
 33     23.5105      0.42534E-01  -0.14491           0.005476      0.209982E-01      0.999945
 34     23.8155      0.41989E-01   0.11462E-01       0.000433      0.131378E-03      0.999945
 35     23.8198      0.41982E-01   0.48430E-01       0.001830      0.234547E-02      0.999948
 36     23.8573      0.41916E-01  -0.42261E-02       0.000160      0.178596E-04      0.999948
 37     23.8629      0.41906E-01   0.22324E-01       0.000844      0.498372E-03      0.999948
 38     23.8705      0.41893E-01   0.62256E-01       0.002353      0.387584E-02      0.999952
 39     23.9115      0.41821E-01   0.12559           0.004746      0.157728E-01      0.999968
 40     23.9310      0.41787E-01  -0.17946           0.006782      0.322061E-01       1.00000
                                SUM OF EFFECTIVE MASSES=    1000.38
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***** PARTICIPATION FACTOR CALCULATION ***** Y DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	RATIO	CUMULATIVE EFFECTIVE MASS	CUMULATIVE MASS FRACTION
1	0.259133	3.8590	-0.93079E-02	0.000309	0.866370E-04	0.880688E-07
2	0.314839	3.1762	-0.22326E-03	0.000007	0.498467E-07	0.881195E-07
3	1.86130	0.53726	-0.18219	0.006056	0.331945E-01	0.338312E-04
4	3.38136	0.29574	30.085	1.000000	905.091	0.920082
5	3.70540	0.26988	0.12563	0.004176	0.157837E-01	0.920099
6	4.07521	0.24539	0.97155E-03	0.000032	0.943914E-06	0.920099
7	7.96493	0.12555	-0.57308	0.019049	0.328423	0.920432
8	8.82703	0.11329	0.42801E-03	0.000014	0.183190E-06	0.920432
9	9.72179	0.10286	0.81598E-02	0.000271	0.665822E-04	0.920432
10	10.2155	0.97891E-01	0.31918E-02	0.000106	0.101875E-04	0.920432
11	10.2397	0.97659E-01	0.14292E-01	0.000475	0.204260E-03	0.920433
12	10.2625	0.97442E-01	-0.74522E-02	0.000248	0.555356E-04	0.920433
13	10.2636	0.97431E-01	0.44042E-02	0.000146	0.193968E-04	0.920433
14	10.2680	0.97390E-01	0.17507E-01	0.000582	0.306489E-03	0.920433
15	10.2704	0.97367E-01	-0.18933E-02	0.000063	0.358465E-05	0.920433
16	10.2771	0.97304E-01	-0.85943E-03	0.000029	0.738616E-06	0.920433
17	10.2797	0.97279E-01	0.10821E-01	0.000360	0.117085E-03	0.920433
18	10.2817	0.97260E-01	0.16751E-01	0.000557	0.280612E-03	0.920433
19	10.2991	0.97096E-01	0.14902	0.004953	0.222071E-01	0.920456
20	10.5857	0.94467E-01	-0.95693E-01	0.003181	0.915719E-02	0.920465
21	11.4924	0.87014E-01	-4.9398	0.164196	24.4016	0.945270
22	11.9901	0.83402E-01	0.52798	0.017550	0.278766	0.945554
23	13.1664	0.75951E-01	0.23780E-01	0.000790	0.565502E-03	0.945554
24	14.4670	0.69123E-01	0.31073	0.010329	0.965551E-01	0.945652
25	14.8833	0.67189E-01	6.7747	0.225188	45.8967	0.992307
26	15.6673	0.63827E-01	-0.22304	0.007414	0.497483E-01	0.992358
27	15.7347	0.63554E-01	0.91096E-01	0.003028	0.829843E-02	0.992366
28	17.9691	0.55651E-01	0.38551E-01	0.001281	0.148620E-02	0.992368
29	19.7770	0.50564E-01	2.6318	0.087481	6.92660	0.999409
30	20.1977	0.49511E-01	0.58851E-01	0.001956	0.346346E-02	0.999413
31	22.2655	0.44913E-01	0.46982E-01	0.001562	0.220733E-02	0.999415
32	22.7262	0.44002E-01	-0.29838	0.009918	0.890329E-01	0.999505
33	23.5105	0.42534E-01	-0.37440	0.012445	0.140175	0.999648
34	23.8155	0.41989E-01	0.35567E-01	0.001182	0.126504E-02	0.999649
35	23.8198	0.41982E-01	0.16140	0.005365	0.260499E-01	0.999676
36	23.8573	0.41916E-01	-0.55585E-02	0.000185	0.308965E-04	0.999676
37	23.8629	0.41906E-01	0.41086E-01	0.001366	0.168803E-02	0.999677
38	23.8705	0.41893E-01	0.21036	0.006992	0.442529E-01	0.999722
39	23.9115	0.41821E-01	0.39199	0.013030	0.153657	0.999879
40	23.9310	0.41787E-01	-0.34568	0.011490	0.119496	1.00000

SUM OF EFFECTIVE MASSES= 983.742

***** PARTICIPATION FACTOR CALCULATION ***** Z DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	RATIO	CUMULATIVE EFFECTIVE MASS	CUMULATIVE MASS FRACTION
1	0.259133	3.8590	27.115	1.000000	735.246	0.695009
2	0.314839	3.1762	0.38110E-02	0.000141	0.145240E-04	0.695009
3	1.86130	0.53726	7.9317	0.292517	62.9124	0.754478
4	3.38136	0.29574	-0.95478	0.035212	0.911603	0.755340
5	3.70540	0.26988	0.38227E-01	0.001410	0.146129E-02	0.755341
6	4.07521	0.24539	0.34629E-01	0.001277	0.119914E-02	0.755342
7	7.96493	0.12555	8.4788	0.312693	71.8900	0.823298
8	8.82703	0.11329	-0.33467E-01	0.001234	0.112004E-02	0.823299
9	9.72179	0.10286	-0.78768E-01	0.002905	0.620442E-02	0.823305
10	10.2155	0.97891E-01	-0.68155E-02	0.000251	0.464510E-04	0.823305
11	10.2397	0.97659E-01	-0.41337E-01	0.001524	0.170871E-02	0.823307
12	10.2625	0.97442E-01	0.15274E-01	0.000563	0.233298E-03	0.823307
13	10.2636	0.97431E-01	-0.18057E-01	0.000666	0.326039E-03	0.823307
14	10.2680	0.97390E-01	-0.60621E-01	0.002236	0.367495E-02	0.823311
15	10.2704	0.97367E-01	0.94301E-02	0.000348	0.889265E-04	0.823311
16	10.2771	0.97304E-01	0.51899E-02	0.000191	0.269351E-04	0.823311
17	10.2797	0.97279E-01	-0.23689E-01	0.000874	0.561177E-03	0.823311
18	10.2817	0.97260E-01	-0.33639E-01	0.001241	0.113159E-02	0.823312
19	10.2991	0.97096E-01	-0.40847	0.015064	0.166844	0.823470
20	10.5857	0.94467E-01	0.21708	0.008006	0.471248E-01	0.823515

21	11.4924	0.87014E-01	8.0116	0.295463	64.1856	0.884188
22	11.9901	0.83402E-01	-0.65150	0.024027	0.424455	0.884589
23	13.1664	0.75951E-01	3.5989	0.132725	12.9521	0.896832
24	14.4670	0.69123E-01	0.20739	0.007649	0.430121E-01	0.896873
25	14.8833	0.67189E-01	6.1572	0.227075	37.9115	0.932710
26	15.6673	0.63827E-01	-0.47183	0.017401	0.222626	0.932920
27	15.7347	0.63554E-01	0.14205	0.005239	0.201781E-01	0.932939
28	17.9691	0.55651E-01	0.33762	0.012451	0.113987	0.933047
29	19.7770	0.50564E-01	8.0475	0.296788	64.7626	0.994265
30	20.1977	0.49511E-01	0.17925	0.006611	0.321322E-01	0.994296
31	22.2655	0.44913E-01	-1.6941	0.062476	2.86985	0.997008
32	22.7262	0.44002E-01	-0.38067	0.014039	0.144912	0.997145
33	23.5105	0.42534E-01	-0.94473	0.034841	0.892512	0.997989
34	23.8155	0.41989E-01	0.47063E-01	0.001736	0.221489E-02	0.997991
35	23.8198	0.41982E-01	0.36983	0.013639	0.136774	0.998120
36	23.8573	0.41916E-01	-0.36529E-01	0.001347	0.133436E-02	0.998122
37	23.8629	0.41906E-01	0.12826	0.004730	0.164506E-01	0.998137
38	23.8705	0.41893E-01	0.47789	0.017624	0.228376	0.998353
39	23.9115	0.41821E-01	0.88524	0.032647	0.783649	0.999094
40	23.9310	0.41787E-01	-0.97911	0.036109	0.958661	1.00000

SUM OF EFFECTIVE MASSES= 1057.89

***** PARTICIPATION FACTOR CALCULATION *****ROTX DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.259133	3.8590	24272.	1.000000	0.589134E+09	0.616372
2	0.314839	3.1762	3.3476	0.000138	11.2062	0.616372
3	1.86130	0.53726	8021.6	0.330485	0.643454E+08	0.683693
4	3.38136	0.29574	7787.9	0.320858	0.606512E+08	0.747148
5	3.70540	0.26988	70.524	0.002906	4973.69	0.747153
6	4.07521	0.24539	36.142	0.001489	1306.25	0.747155
7	7.96493	0.12555	8106.0	0.333965	0.657079E+08	0.815901
8	8.82703	0.11329	-32.141	0.001324	1033.03	0.815902
9	9.72179	0.10286	-88.518	0.003647	7835.40	0.815910
10	10.2155	0.97891E-01	-4.4682	0.000184	19.9645	0.815910
11	10.2397	0.97659E-01	-33.869	0.001395	1147.09	0.815911
12	10.2625	0.97442E-01	12.362	0.000509	152.820	0.815911
13	10.2636	0.97431E-01	-15.383	0.000634	236.622	0.815912
14	10.2680	0.97390E-01	-50.886	0.002096	2589.36	0.815914
15	10.2704	0.97367E-01	8.1995	0.000338	67.2315	0.815914
16	10.2771	0.97304E-01	4.6140	0.000190	21.2886	0.815914
17	10.2797	0.97279E-01	-19.007	0.000783	361.263	0.815915
18	10.2817	0.97260E-01	-26.370	0.001086	695.384	0.815915
19	10.2991	0.97096E-01	-335.48	0.013822	112548.	0.816033
20	10.5857	0.94467E-01	180.69	0.007444	32647.1	0.816067
21	11.4924	0.87014E-01	6344.3	0.261383	0.402504E+08	0.858179
22	11.9901	0.83402E-01	-485.45	0.020001	235666.	0.858425
23	13.1664	0.75951E-01	3239.3	0.133458	0.104930E+08	0.869403
24	14.4670	0.69123E-01	284.11	0.011705	80716.8	0.869488
25	14.8833	0.67189E-01	7719.3	0.318032	0.595875E+08	0.931830
26	15.6673	0.63827E-01	-468.86	0.019317	219825.	0.932060
27	15.7347	0.63554E-01	153.19	0.006311	23467.5	0.932085
28	17.9691	0.55651E-01	288.67	0.011893	83331.9	0.932172
29	19.7770	0.50564E-01	7758.1	0.319631	0.601884E+08	0.995143
30	20.1977	0.49511E-01	175.27	0.007221	30719.8	0.995175
31	22.2655	0.44913E-01	-1242.5	0.051188	0.154368E+07	0.996790
32	22.7262	0.44002E-01	-400.32	0.016493	160252.	0.996958
33	23.5105	0.42534E-01	-915.66	0.037725	838439.	0.997835
34	23.8155	0.41989E-01	58.670	0.002417	3442.21	0.997839
35	23.8198	0.41982E-01	371.53	0.015307	138038.	0.997983
36	23.8573	0.41916E-01	-31.518	0.001299	993.381	0.997984
37	23.8629	0.41906E-01	119.58	0.004927	14298.6	0.997999
38	23.8705	0.41893E-01	481.89	0.019854	232218.	0.998242
39	23.9115	0.41821E-01	895.98	0.036914	802788.	0.999082
40	23.9310	0.41787E-01	-936.64	0.038589	877289.	1.00000

SUM OF EFFECTIVE MASSES= 0.955809E+09

***** PARTICIPATION FACTOR CALCULATION *****ROTY DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION

1	0.259133	3.8590	-57023.	1.000000	0.325163E+10	0.681953
2	0.314839	3.1762	-7695.8	0.134959	0.592250E+08	0.694374
3	1.86130	0.53726	-16685.	0.292593	0.278375E+09	0.752756
4	3.38136	0.29574	2035.4	0.035695	0.414304E+07	0.753625
5	3.70540	0.26988	-4677.7	0.082032	0.218811E+08	0.758214
6	4.07521	0.24539	134.39	0.002357	18061.2	0.758218
7	7.96493	0.12555	-17852.	0.313060	0.318681E+09	0.825054
8	8.82703	0.11329	445.44	0.007812	198414.	0.825096
9	9.72179	0.10286	-79.841	0.001400	6374.55	0.825097
10	10.2155	0.97891E-01	63.138	0.001107	3986.37	0.825098
11	10.2397	0.97659E-01	174.18	0.003055	30338.9	0.825104
12	10.2625	0.97442E-01	-52.509	0.000921	2757.15	0.825105
13	10.2636	0.97431E-01	58.530	0.001026	3425.71	0.825105
14	10.2680	0.97390E-01	206.47	0.003621	42630.5	0.825114
15	10.2704	0.97367E-01	-32.139	0.000564	1032.94	0.825115
16	10.2771	0.97304E-01	-11.630	0.000204	135.266	0.825115
17	10.2797	0.97279E-01	66.876	0.001173	4472.37	0.825116
18	10.2817	0.97260E-01	112.43	0.001972	12640.0	0.825118
19	10.2991	0.97096E-01	1316.8	0.023092	0.173387E+07	0.825482
20	10.5857	0.94467E-01	66.357	0.001164	4403.21	0.825483
21	11.4924	0.87014E-01	-16792.	0.294476	0.281969E+09	0.884619
22	11.9901	0.83402E-01	2294.6	0.040240	0.526523E+07	0.885723
23	13.1664	0.75951E-01	-7548.0	0.132367	0.569719E+08	0.897672
24	14.4670	0.69123E-01	-427.79	0.007502	183007.	0.897710
25	14.8833	0.67189E-01	-12989.	0.227787	0.168716E+09	0.933095
26	15.6673	0.63827E-01	2213.7	0.038821	0.490044E+07	0.934122
27	15.7347	0.63554E-01	-437.13	0.007666	191081.	0.934162
28	17.9691	0.55651E-01	-2131.7	0.037384	0.454429E+07	0.935115
29	19.7770	0.50564E-01	-16908.	0.296519	0.285895E+09	0.995075
30	20.1977	0.49511E-01	-232.37	0.004075	53997.7	0.995087
31	22.2655	0.44913E-01	3654.8	0.064094	0.133577E+08	0.997888
32	22.7262	0.44002E-01	831.68	0.014585	691695.	0.998033
33	23.5105	0.42534E-01	1583.9	0.027776	0.250860E+07	0.998559
34	23.8155	0.41989E-01	-88.292	0.001548	7795.40	0.998561
35	23.8198	0.41982E-01	-690.59	0.012111	476911.	0.998661
36	23.8573	0.41916E-01	69.556	0.001220	4838.03	0.998662
37	23.8629	0.41906E-01	-218.03	0.003824	47536.2	0.998672
38	23.8705	0.41893E-01	-896.57	0.015723	803834.	0.998840
39	23.9115	0.41821E-01	-1642.9	0.028811	0.269907E+07	0.999406
40	23.9310	0.41787E-01	1682.3	0.029501	0.282999E+07	1.00000

SUM OF EFFECTIVE MASSES= 0.476811E+10

***** PARTICIPATION FACTOR CALCULATION *****ROTZ DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.259133	3.8590	-16.644	0.000263	277.036	0.533709E-07
2	0.314839	3.1762	-23617.	0.372842	0.557771E+09	0.107454
3	1.86130	0.53726	-383.99	0.006062	147448.	0.107483
4	3.38136	0.29574	63344.	1.000000	0.401242E+10	0.880473
5	3.70540	0.26988	-15975.	0.252198	0.255204E+09	0.929638
6	4.07521	0.24539	-1241.0	0.019591	0.154007E+07	0.929934
7	7.96493	0.12555	-1187.9	0.018754	0.141120E+07	0.930206
8	8.82703	0.11329	782.45	0.012352	612230.	0.930324
9	9.72179	0.10286	200.51	0.003165	40204.8	0.930332
10	10.2155	0.97891E-01	11.227	0.000177	126.054	0.930332
11	10.2397	0.97659E-01	18.837	0.000297	354.814	0.930332
12	10.2625	0.97442E-01	-14.458	0.000228	209.023	0.930332
13	10.2636	0.97431E-01	-28.697	0.000453	823.542	0.930332
14	10.2680	0.97390E-01	-71.294	0.001126	5082.79	0.930333
15	10.2704	0.97367E-01	3.9329	0.000062	15.4679	0.930333
16	10.2771	0.97304E-01	12.415	0.000196	154.134	0.930333
17	10.2797	0.97279E-01	-33.337	0.000526	1111.36	0.930333
18	10.2817	0.97260E-01	-59.943	0.000946	3593.21	0.930334
19	10.2991	0.97096E-01	-597.88	0.009439	357464.	0.930403
20	10.5857	0.94467E-01	1350.8	0.021325	0.182463E+07	0.930754
21	11.4924	0.87014E-01	-10457.	0.165091	0.109358E+09	0.951822
22	11.9901	0.83402E-01	1033.8	0.016321	0.106880E+07	0.952028
23	13.1664	0.75951E-01	176.61	0.002788	31190.5	0.952034
24	14.4670	0.69123E-01	654.26	0.010329	428051.	0.952117
25	14.8833	0.67189E-01	14196.	0.224116	0.201536E+09	0.990942
26	15.6673	0.63827E-01	181.06	0.002858	32782.7	0.990949

27	15.7347	0.63554E-01	114.74	0.001811	13164.5	0.990951
28	17.9691	0.55651E-01	-3240.1	0.051151	0.104982E+08	0.992974
29	19.7770	0.50564E-01	5802.8	0.091609	0.336729E+08	0.999461
30	20.1977	0.49511E-01	98.669	0.001558	9735.61	0.999463
31	22.2655	0.44913E-01	-15.973	0.000252	255.150	0.999463
32	22.7262	0.44002E-01	-1209.2	0.019090	0.146225E+07	0.999744
33	23.5105	0.42534E-01	-673.41	0.010631	453486.	0.999832
34	23.8155	0.41989E-01	51.869	0.000819	2690.38	0.999832
35	23.8198	0.41982E-01	277.85	0.004386	77199.1	0.999847
36	23.8573	0.41916E-01	-4.7459	0.000075	22.5238	0.999847
37	23.8629	0.41906E-01	60.734	0.000959	3688.68	0.999848
38	23.8705	0.41893E-01	358.08	0.005653	128221.	0.999873
39	23.9115	0.41821E-01	646.31	0.010203	417723.	0.999953
40	23.9310	0.41787E-01	-493.53	0.007791	243573.	1.00000

SUM OF EFFECTIVE MASSES= 0.519078E+10

Attachment 18

ANSYS Stand-Alone Crane Model Output, “Hook Down”, Static Loads

REACTIONS FROM 1g IN X DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 2 SUBSTEP= 1
TIME= 2.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
10101		-82592.	-0.14019E+06			
10102		34467.	0.16426E+06			
10103	0.11498E+06	-0.11118E+06	-0.16429E+06			
10104	0.11376E+06	0.15931E+06	0.14021E+06			
10113		-79085.				
10114		21124.				
10115	94357.	-85298.				
10116	96778.	0.14326E+06				

TOTAL VALUES

VALUE	0.41987E+06	0.18188E-05	-0.72177E-08	0.0000	0.0000	0.0000

REACTIONS FROM 1g IN Y DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 1 SUBSTEP= 1
TIME= 1.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
10101		53489.	8449.9			
10102		52238.	-8437.1			
10103	-9975.6	51770.	-8455.3			
10104	9971.0	51141.	8442.5			
10113		53454.				
10114		53495.				
10115	-10079.	52805.				
10116	10084.	51484.				

TOTAL VALUES

VALUE	0.40109E-08	0.41987E+06	-0.33178E-08	0.0000	0.0000	0.0000

REACTIONS FROM 1g IN Z DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 3 SUBSTEP= 1
TIME= 3.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
10101		-19913.	-0.10914E+06			
10102		-19214.	-0.10415E+06			
10103	3972.5	-19069.	-0.10186E+06			
10104	-3776.2	-19505.	-0.10473E+06			
10113		19559.				
10114		19569.				
10115	-3947.1	19423.				
10116	3750.8	19151.				

TOTAL VALUES

VALUE	-0.22756E-08	-0.26700E-05	-0.41987E+06	0.0000	0.0000	0.0000

REACTIONS FROM UNIT FORCE IN X DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 4 SUBSTEP= 1
TIME= 4.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
10101		-2217.2	-3741.1			
10102		803.89	4367.2			
10103	2784.1	-2669.8	-4374.7			
10104	2805.6	4083.1	3748.6			
10113		-2072.5				
10114		396.23				
10115	2142.2	-1876.0				
10116	2268.1	3552.2				

TOTAL VALUES
VALUE 10000. 0.56677E-07-0.22374E-09 0.0000 0.0000 0.0000

REACTIONS FROM UNIT FORCE IN Y DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 5 SUBSTEP= 1
TIME= 5.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
10101		12848.	2639.5			
10102		12393.	-2639.8			
10103	-2532.8	12374.	-2640.6			
10104	2533.0	12860.	2640.9			
10113		12478.				
10114		12288.				
10115	-2474.5	12270.				
10116	2474.3	12489.				

TOTAL VALUES
VALUE 0.62846E-09 0.10000E+06 0.31141E-08 0.0000 0.0000 0.0000

REACTIONS FROM UNIT FORCE IN Z DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 6 SUBSTEP= 1
TIME= 6.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
10101		541.82	2605.6			
10102		517.84	2417.5			
10103	-110.37	518.88	2401.3			
10104	100.40	528.34	2575.6			
10113		-529.38				
10114		-530.29				
10115	109.48	-531.34				
10116	-99.504	-515.89				

TOTAL VALUES
VALUE 0.85350E-10 0.63704E-07 10000. 0.0000 0.0000 0.0000

DISPLACEMENTS FROM 1g IN X DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 2 SUBSTEP= 1
TIME= 2.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
11434	-3.2951	0.44778E-03	0.59272E-02	3.2952
11437	-3.3999	0.24045	-0.80186E-01	3.4093
11440	-3.4001	-0.24044	0.80035E-01	3.4096
11443	-2.6922	0.24778	-0.80355E-01	2.7048
11446	-2.6919	-0.24776	0.80348E-01	2.7044
11450	-1059.5	0.44778E-03	0.59272E-02	1059.5

MAXIMUM ABSOLUTE VALUES

NODE	11450	11338	10113	11450
VALUE	-1059.5	0.25919	-0.39496	1059.5

DISPLACEMENTS FROM 1g IN Y DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 1 SUBSTEP= 1
TIME= 1.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
11434	0.80242E-03	-0.80552	0.49716E-01	0.80705
11437	-0.43705E-01	-0.42037	0.42536E-01	0.42477
11440	0.45213E-01	-0.41868	0.42079E-01	0.42321
11443	0.26644E-02	-0.42166	0.42558E-01	0.42381
11446	-0.11373E-02	-0.41992	0.42119E-01	0.42203
11450	0.80242E-03	-2.0944	0.49716E-01	2.0950

MAXIMUM ABSOLUTE VALUES

NODE	11076	11450	10113	11450
VALUE	0.10589	-2.0944	0.24346	2.0950

DISPLACEMENTS FROM 1g IN Z DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 3 SUBSTEP= 1
TIME= 3.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
11434	-0.42110E-02	-0.48840E-01	53.504	53.504
11437	-0.12635	-0.11802	0.75316	0.77275
11440	0.10651	-0.11454	0.74395	0.76022
11443	-0.10523E-01	-0.14033	0.74946	0.76256
11446	0.23676E-01	-0.13671	0.74021	0.75310
11450	-0.42110E-02	-0.48840E-01	1109.7	1109.7

MAXIMUM ABSOLUTE VALUES

NODE	11427	11337	11450	11450
VALUE	-3.0649	-0.19046	1109.7	1109.7

DISPLACEMENTS FROM UNIT FORCE IN X DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 4 SUBSTEP= 1
TIME= 4.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
11434	-0.93450E-01	0.52888E-05	0.21084E-03	0.93450E-01
11437	-0.98009E-01	0.69958E-02	-0.21979E-02	0.98283E-01
11440	-0.98042E-01	-0.69949E-02	0.21928E-02	0.98316E-01
11443	-0.71941E-01	0.71949E-02	-0.22036E-02	0.72333E-01
11446	-0.71932E-01	-0.71938E-02	0.22035E-02	0.72324E-01
11450	-39.799	0.52888E-05	0.21084E-03	39.799

MAXIMUM ABSOLUTE VALUES

NODE	11450	11338	10116	11450
VALUE	-39.799	0.75787E-02	0.10750E-01	39.799

DISPLACEMENTS FROM UNIT FORCE IN Y DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 5 SUBSTEP= 1
TIME= 5.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
11434	0.52888E-04	-0.24582	0.75740E-02	0.24594
11437	-0.16617E-01	-0.11200	0.48779E-02	0.11333
11440	0.16693E-01	-0.11195	0.48783E-02	0.11329
11443	0.86684E-03	-0.11157	0.48867E-02	0.11168
11446	-0.79773E-03	-0.11152	0.48935E-02	0.11163
11450	0.52888E-04	-0.73036	0.75740E-02	0.73040

MAXIMUM ABSOLUTE VALUES

NODE	11075	11450	10113	11450
VALUE	0.32162E-01	-0.73036	0.64684E-01	0.73040

DISPLACEMENTS FROM UNIT FORCE IN Z DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 6 SUBSTEP= 1
TIME= 6.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
11434	0.21084E-03	0.75740E-03	-1.8101	1.8101
11437	0.42214E-02	0.26908E-02	-0.21092E-01	0.21678E-01
11440	-0.34158E-02	0.26690E-02	-0.20880E-01	0.21325E-01
11443	0.40063E-03	0.34154E-02	-0.20990E-01	0.21270E-01
11446	-0.71411E-03	0.33823E-02	-0.20776E-01	0.21062E-01
11450	0.21084E-03	0.75740E-03	-41.515	41.515

MAXIMUM ABSOLUTE VALUES

NODE	11427	11337	11450	11450
VALUE	0.10368	0.48984E-02	-41.515	41.515

Attachment 19

ANSYS Stand-Alone Crane Model Output, “Hook Down”, Modal Analysis

S O L U T I O N O P T I O N S

PROBLEM DIMENSIONALITY. 3-D
DEGREES OF FREEDOM. . . . . UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE . . . . . .MODAL
EXTRACTION METHOD. . . . . .BLOCK LANCZOS
LUMPED MASS MATRICES. . . . . .ON
EQUATION SOLVER OPTION. . . . . .SPARSE
NUMBER OF MODES TO EXTRACT. 40
GLOBALLY ASSEMBLED MATRIX . . . . . .SYMMETRIC
NUMBER OF MODES TO EXPAND 40
ELEMENT RESULTS CALCULATION . . . . . .OFF

L O A D S T E P O P T I O N S

LOAD STEP NUMBER. 1
PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
DATABASE OUTPUT CONTROLS. . . . . .ALL DATA WRITTEN

**** CENTER OF MASS, MASS, AND MASS MOMENTS OF INERTIA ****

CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

TOTAL MASS = 1087.5

CENTER OF MASS	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTER OF MASS
XC = 2104.7	IXX = 0.4601E+09	IXX = 0.2073E+09
YC = 387.83	IYY = 0.4919E+10	IYY = 0.1232E+08
ZC = -286.29	IZZ = 0.5183E+10	IZZ = 0.2021E+09
	IXY = -0.8886E+09	IXY = -0.9016E+06
	IYZ = 0.1179E+09	IYZ = -0.2820E+07
	IZX = 0.6553E+09	IZX = 0.2660E+05

AN AVERAGE OF THE X-, Y-, AND Z-DIRECTION MASS TERMS ARE USED FOR MASS21 ELEMENTS.

*** MASS SUMMARY BY ELEMENT TYPE ***

TYPE	MASS
21	384.059
100	14.4894
1004	688.961

Range of element maximum matrix coefficients in global coordinates
Maximum= 1.68599692E+11 at element 12077.
Minimum= 251.855779 at element 12479.

*** WARNING *** CP = 419.994 TIME= 11:34:36
Coefficient ratio exceeds 1.0e8 - Check results.

*** ELEMENT MATRIX FORMULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
21	367	BEAM44	0.050	0.000136
100	9	MASS21	0.000	0.000000
1001	1	COMBIN14	0.000	0.000000
1002	1	COMBIN14	0.000	0.000000
1003	1	COMBIN14	0.000	0.000000
1004	1	MASS21	0.000	0.000000

Time at end of element matrix formulation CP= 419.993922.

BLOCK LANCZOS CALCULATION OF UP TO 40 EIGENVECTORS.
NUMBER OF EQUATIONS = 2083
MAXIMUM WAVEFRONT = 24
MAXIMUM MODES STORED = 40
MINIMUM EIGENVALUE = 0.0000

```
 MAXIMUM EIGENVALUE       = 0.10000E+09
 EST. OF MEMORY NEEDED          =  1.5446     (MB)
 MEMORY AVAILABLE FOR EIGENSOLVER =  238.94     (MB)

MEMORY TO PERFORM EIGENEXTRACTION:
 MIN. TO COMPLETE VALUE INPUT          =       46029    0.35117     (MB)
 MIN. FOR PART IN-CORE AND OUT-OF-CORE  =       76104    0.58063     (MB)
 MIN. FOR IN-CORE                      =      111391    0.84985     (MB)
 RECOM. FOR PART IN-CORE AND OUT-OF-CORE =      216009     1.6480     (MB)
 RECOM. FOR IN-CORE                    =      251296     1.9172     (MB)

 LANCZOS CYCLE NUMBER =   1

   new shift:  8.7435D-05     modes still needed:       40

 FREQUENCIES AT CURRENT LANCZOS CYCLE
   1  0.31329745E+02    2  0.29381390E+02    3  0.29070197E+02
   4  0.27095448E+02    5  0.24925554E+02    6  0.24342102E+02
   7  0.24076503E+02    8  0.24018489E+02    9  0.23929158E+02
  10  0.23854859E+02   11  0.23510131E+02   12  0.22725363E+02
  13  0.21861939E+02   14  0.20197623E+02   15  0.19756052E+02
  16  0.17967315E+02   17  0.15731283E+02   18  0.15666872E+02
  19  0.14466661E+02   20  0.13738922E+02   21  0.13016485E+02
  22  0.11982821E+02   23  0.10585872E+02   24  0.10295941E+02
  25  0.10281693E+02   26  0.10279656E+02   27  0.10277073E+02
  28  0.10270413E+02   29  0.10267874E+02   30  0.10263621E+02
  31  0.10262481E+02   32  0.10239711E+02   33  0.10215442E+02
  34  0.97178427E+01   35  0.95652774E+01   36  0.88253995E+01
  37  0.78682287E+01   38  0.40745986E+01   39  0.36681029E+01
  40  0.22248589E+01   41  0.15673570E+01   42  0.96114291E-01
  43  0.94098924E-01

   number of steps      :    14
   eigenvalues found    :    43
   total no. eigenvalues:    43

 LANCZOS CYCLE NUMBER =   2

   new shift:  3.1173D+04     modes still needed:       0

 FREQUENCIES AT CURRENT LANCZOS CYCLE
   1  0.94098924E-01    2  0.96114291E-01    3  0.15673570E+01
   4  0.22248589E+01    5  0.36681029E+01    6  0.40745986E+01
   7  0.78682287E+01    8  0.88253995E+01    9  0.95652774E+01
  10  0.97178427E+01   11  0.10215442E+02   12  0.10239711E+02
  13  0.10262481E+02   14  0.10263621E+02   15  0.10267874E+02
  16  0.10270413E+02   17  0.10277073E+02   18  0.10279656E+02
  19  0.10281693E+02   20  0.10295941E+02   21  0.10585872E+02
  22  0.11982821E+02   23  0.13016485E+02   24  0.13738922E+02
  25  0.14466661E+02   26  0.15666872E+02   27  0.15731283E+02
  28  0.17967315E+02   29  0.19756052E+02   30  0.20197623E+02
  31  0.21861939E+02   32  0.22725363E+02   33  0.23510131E+02
  34  0.23854859E+02   35  0.23929158E+02   36  0.24018489E+02
  37  0.24076503E+02   38  0.24342102E+02   39  0.24925554E+02
  40  0.27095448E+02   41  0.29070197E+02   42  0.29381390E+02
  43  0.31329745E+02   44  0.23906844E+02   45  0.23869526E+02
  46  0.23862619E+02   47  0.23819438E+02   48  0.23814821E+02

   number of steps      :     6
   eigenvalues found    :     5
   total no. eigenvalues:    48
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 11.0     *****
ANSYS Mechanical U
00245050         VERSION=INTEL NT      11:34:38  DEC 23, 2010 CP=    421.967

Auxzilary Building Modifications


*** FREQUENCIES FROM BLOCK LANCZOS          ITERATION ***

 MODE    FREQUENCY (HERTZ)
```

1	0.9409892385650E-01
2	0.9611429069662E-01
3	1.567357025050
4	2.224858850067
5	3.668102935390
6	4.074598628186
7	7.868228701342
8	8.825399508162
9	9.565277409869
10	9.717842653268
11	10.21544203766
12	10.23971090443
13	10.26248056597
14	10.26362112019
15	10.26787378016
16	10.27041282215
17	10.27707325022
18	10.27965557475
19	10.28169302596
20	10.29594087498
21	10.58587156500
22	11.98282056787
23	13.01648494200
24	13.73892181190
25	14.46666061668
26	15.66687181562
27	15.73128324074
28	17.96731492927
29	19.75605172341
30	20.19762341092
31	21.86193867876
32	22.72536346184
33	23.51013106343
34	23.81482120145
35	23.81943776893
36	23.85485910680
37	23.86261929256
38	23.86952570313
39	23.90684393216
40	23.92915752218

Block Lanczos CP Time (sec) = 1.893
Block Lanczos ELAPSED Time (sec) = 2.012

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 11.0 *****
ANSYS Mechanical U
00245050 VERSION=INTEL NT 11:34:38 DEC 23, 2010 CP= 422.077

Auxzilary Building Modifications

***** PARTICIPATION FACTOR CALCULATION ***** X DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	RATIO	EFFECTIVE MASS	CUMULATIVE MASS FRACTION
1	0.940989E-01	10.627	-0.32337E-02	0.000123	0.104568E-04	0.104529E-07
2	0.961143E-01	10.404	26.268	1.000000	690.014	0.689757
3	1.56736	0.63802	-0.17533E-05	0.000000	0.307415E-11	0.689757
4	2.22486	0.44947	-0.73868E-02	0.000281	0.545649E-04	0.689757
5	3.66810	0.27262	16.905	0.643552	285.776	0.975426
6	4.07460	0.24542	1.1213	0.042685	1.25724	0.976683
7	7.86823	0.12709	-0.32880E-01	0.001252	0.108106E-02	0.976684
8	8.82540	0.11331	-0.84683	0.032238	0.717118	0.977401
9	9.56528	0.10454	0.12112	0.004611	0.146701E-01	0.977415
10	9.71784	0.10290	-0.65916	0.025093	0.434489	0.977850
11	10.2154	0.97891E-01	0.52262E-01	0.001990	0.273129E-02	0.977853
12	10.2397	0.97659E-01	0.12587	0.004792	0.158425E-01	0.977868
13	10.2625	0.97442E-01	-0.26049E-01	0.000992	0.678555E-03	0.977869
14	10.2636	0.97431E-01	0.93597E-01	0.003563	0.876036E-02	0.977878
15	10.2679	0.97391E-01	0.29400	0.011192	0.864383E-01	0.977964
16	10.2704	0.97367E-01	-0.29632E-01	0.001128	0.878052E-03	0.977965

17	10.2771	0.97304E-01	-0.25846E-01	0.000984	0.668020E-03	0.977966
18	10.2797	0.97280E-01	0.12419	0.004728	0.154231E-01	0.977981
19	10.2817	0.97260E-01	0.23286	0.008865	0.542226E-01	0.978035
20	10.2959	0.97126E-01	1.9720	0.075074	3.88898	0.981923
21	10.5859	0.94466E-01	-2.0759	0.079027	4.30936	0.986231
22	11.9828	0.83453E-01	-0.94852	0.036109	0.899692	0.987130
23	13.0165	0.76826E-01	-0.34465E-01	0.001312	0.118784E-02	0.987131
24	13.7389	0.72786E-01	0.12473	0.004748	0.155581E-01	0.987147
25	14.4667	0.69124E-01	-0.96851E-02	0.000369	0.938007E-04	0.987147
26	15.6669	0.63829E-01	-1.1166	0.042507	1.24677	0.988393
27	15.7313	0.63568E-01	0.12226	0.004654	0.149473E-01	0.988408
28	17.9673	0.55657E-01	3.3752	0.128490	11.3920	0.999796
29	19.7561	0.50617E-01	-0.23664	0.009009	0.559969E-01	0.999852
30	20.1976	0.49511E-01	0.11435E-02	0.000044	0.130751E-05	0.999852
31	21.8619	0.45742E-01	0.78197E-01	0.002977	0.611475E-02	0.999858
32	22.7254	0.44004E-01	0.25778	0.009813	0.664488E-01	0.999924
33	23.5101	0.42535E-01	-0.14649	0.005577	0.214600E-01	0.999946
34	23.8148	0.41991E-01	0.15289E-01	0.000582	0.233760E-03	0.999946
35	23.8194	0.41983E-01	0.45949E-01	0.001749	0.211132E-02	0.999948
36	23.8549	0.41920E-01	-0.62766E-02	0.000239	0.393963E-04	0.999948
37	23.8626	0.41907E-01	0.19699E-01	0.000750	0.388063E-03	0.999949
38	23.8695	0.41894E-01	0.61606E-01	0.002345	0.379530E-02	0.999952
39	23.9068	0.41829E-01	0.90127E-01	0.003431	0.812295E-02	0.999960
40	23.9292	0.41790E-01	0.19897	0.007574	0.395876E-01	1.00000

SUM OF EFFECTIVE MASSES= 1000.37

***** PARTICIPATION FACTOR CALCULATION ***** Y DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	RATIO	CUMULATIVE EFFECTIVE MASS	MASS FRACTION
1	0.940989E-01	10.627	-0.11902E-02	0.000042	0.141658E-05	0.144001E-08
2	0.961143E-01	10.404	-0.20453E-04	0.000001	0.418324E-09	0.144044E-08
3	1.56736	0.63802	-0.19230	0.006829	0.369806E-01	0.375937E-04
4	2.22486	0.44947	28.160	1.000000	793.012	0.806166
5	3.66810	0.27262	-0.41889E-02	0.000149	0.175466E-04	0.806166
6	4.07460	0.24542	0.20892E-03	0.000007	0.436465E-07	0.806166
7	7.86823	0.12709	-3.2778	0.116396	10.7438	0.817087
8	8.82540	0.11331	0.48663E-01	0.001728	0.236807E-02	0.817090
9	9.56528	0.10454	11.900	0.422563	141.600	0.961031
10	9.71784	0.10290	0.31484	0.011180	0.991241E-01	0.961132
11	10.2154	0.97891E-01	-0.17210E-01	0.000611	0.296171E-03	0.961132
12	10.2397	0.97659E-01	-0.64212E-01	0.002280	0.412315E-02	0.961137
13	10.2625	0.97442E-01	0.25267E-01	0.000897	0.638418E-03	0.961137
14	10.2636	0.97431E-01	-0.21763E-01	0.000773	0.473611E-03	0.961138
15	10.2679	0.97391E-01	-0.77572E-01	0.002755	0.601748E-02	0.961144
16	10.2704	0.97367E-01	0.95438E-02	0.000339	0.910834E-04	0.961144
17	10.2771	0.97304E-01	0.48831E-02	0.000173	0.238451E-04	0.961144
18	10.2797	0.97280E-01	-0.28822E-01	0.001024	0.830725E-03	0.961145
19	10.2817	0.97260E-01	-0.62363E-01	0.002215	0.388915E-02	0.961149
20	10.2959	0.97126E-01	-0.47517	0.016874	0.225787	0.961378
21	10.5859	0.94466E-01	0.73719E-01	0.002618	0.543453E-02	0.961384
22	11.9828	0.83453E-01	0.25047	0.008894	0.627365E-01	0.961448
23	13.0165	0.76826E-01	1.4156	0.050268	2.00382	0.963485
24	13.7389	0.72786E-01	5.2531	0.186541	27.5949	0.991536
25	14.4667	0.69124E-01	-0.10976	0.003898	0.120467E-01	0.991548
26	15.6669	0.63829E-01	-0.16875	0.005993	0.284778E-01	0.991577
27	15.7313	0.63568E-01	0.58307E-01	0.002071	0.339965E-02	0.991581
28	17.9673	0.55657E-01	0.63430E-01	0.002252	0.402331E-02	0.991585
29	19.7561	0.50617E-01	2.7536	0.097781	7.58212	0.999292
30	20.1976	0.49511E-01	0.55654E-01	0.001976	0.309739E-02	0.999295
31	21.8619	0.45742E-01	-0.35630	0.012652	0.126948	0.999424
32	22.7254	0.44004E-01	-0.28999	0.010298	0.840915E-01	0.999510
33	23.5101	0.42535E-01	-0.38131	0.013540	0.145394	0.999658
34	23.8148	0.41991E-01	0.51391E-01	0.001825	0.264107E-02	0.999660
35	23.8194	0.41983E-01	0.15544	0.005520	0.241606E-01	0.999685
36	23.8549	0.41920E-01	-0.82671E-02	0.000294	0.683453E-04	0.999685
37	23.8626	0.41907E-01	0.30959E-01	0.001099	0.958465E-03	0.999686
38	23.8695	0.41894E-01	0.21309	0.007567	0.454072E-01	0.999732
39	23.9068	0.41829E-01	0.31434	0.011162	0.988074E-01	0.999833
40	23.9292	0.41790E-01	0.40584	0.014412	0.164704	1.00000

SUM OF EFFECTIVE MASSES= 983.729

***** PARTICIPATION FACTOR CALCULATION ***** Z DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	RATIO	EFFECTIVE MASS	CUMULATIVE MASS FRACTION
1	0.940989E-01	10.627	26.374	1.000000	695.581	0.657663
2	0.961143E-01	10.404	0.32782E-02	0.000124	0.107463E-04	0.657663
3	1.56736	0.63802	10.106	0.383190	102.135	0.754230
4	2.22486	0.44947	-0.33261	0.012611	0.110627	0.754335
5	3.66810	0.27262	0.44090E-01	0.001672	0.194393E-02	0.754337
6	4.07460	0.24542	0.31826E-01	0.001207	0.101290E-02	0.754338
7	7.86823	0.12709	8.8338	0.334946	78.0363	0.828120
8	8.82540	0.11331	-0.39568E-01	0.001500	0.156566E-02	0.828122
9	9.56528	0.10454	-3.3015	0.125179	10.8997	0.838427
10	9.71784	0.10290	-0.17230	0.006533	0.296865E-01	0.838455
11	10.2154	0.97891E-01	0.68299E-02	0.000259	0.466471E-04	0.838455
12	10.2397	0.97659E-01	-0.57993E-02	0.000220	0.336317E-04	0.838455
13	10.2625	0.97442E-01	-0.11873E-02	0.000045	0.140963E-05	0.838455
14	10.2636	0.97431E-01	-0.62815E-02	0.000238	0.394568E-04	0.838455
15	10.2679	0.97391E-01	-0.18271E-01	0.000693	0.333833E-03	0.838456
16	10.2704	0.97367E-01	0.39324E-02	0.000149	0.154636E-04	0.838456
17	10.2771	0.97304E-01	0.22800E-02	0.000086	0.519856E-05	0.838456
18	10.2797	0.97280E-01	-0.60879E-02	0.000231	0.370629E-04	0.838456
19	10.2817	0.97260E-01	0.10847E-02	0.000041	0.117665E-05	0.838456
20	10.2959	0.97126E-01	-0.85145E-01	0.003228	0.724961E-02	0.838463
21	10.5859	0.94466E-01	0.10691	0.004054	0.114308E-01	0.838473
22	11.9828	0.83453E-01	0.42115	0.015968	0.177368	0.838641
23	13.0165	0.76826E-01	7.5053	0.284574	56.3298	0.891900
24	13.7389	0.72786E-01	6.4805	0.245715	41.9963	0.931607
25	14.4667	0.69124E-01	-0.19530	0.007405	0.381434E-01	0.931643
26	15.6669	0.63829E-01	-0.43121	0.016350	0.185938	0.931819
27	15.7313	0.63568E-01	0.13645	0.005174	0.186180E-01	0.931837
28	17.9673	0.55657E-01	0.35738	0.013550	0.127718	0.931957
29	19.7561	0.50617E-01	8.1285	0.308203	66.0727	0.994428
30	20.1976	0.49511E-01	0.17095	0.006482	0.292238E-01	0.994456
31	21.8619	0.45742E-01	-1.6244	0.061590	2.63861	0.996951
32	22.7254	0.44004E-01	-0.41842	0.015865	0.175075	0.997116
33	23.5101	0.42535E-01	-0.92856	0.035208	0.862232	0.997931
34	23.8148	0.41991E-01	0.12229	0.004637	0.149559E-01	0.997945
35	23.8194	0.41983E-01	0.38360	0.014545	0.147147	0.998085
36	23.8549	0.41920E-01	-0.26849E-01	0.001018	0.720847E-03	0.998085
37	23.8626	0.41907E-01	0.85234E-01	0.003232	0.726491E-02	0.998092
38	23.8695	0.41894E-01	0.52609	0.019947	0.276766	0.998354
39	23.9068	0.41829E-01	0.77301	0.029310	0.597546	0.998919
40	23.9292	0.41790E-01	1.0694	0.040546	1.14353	1.00000

SUM OF EFFECTIVE MASSES= 1057.66

***** PARTICIPATION FACTOR CALCULATION *****ROTX DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	RATIO	EFFECTIVE MASS	CUMULATIVE MASS FRACTION
1	0.940989E-01	10.627	1788.3	0.174875	0.319811E+07	0.778478E-02
2	0.961143E-01	10.404	0.24771	0.000024	0.613580E-01	0.778478E-02
3	1.56736	0.63802	10226.	1.000000	0.104578E+09	0.262346
4	2.22486	0.44947	7850.9	0.767715	0.616367E+08	0.412381
5	3.66810	0.27262	38.681	0.003782	1496.22	0.412385
6	4.07460	0.24542	33.151	0.003242	1098.99	0.412388
7	7.86823	0.12709	7680.0	0.751005	0.589828E+08	0.555963
8	8.82540	0.11331	-24.315	0.002378	591.237	0.555964
9	9.56528	0.10454	176.38	0.017247	31109.0	0.556040
10	9.71784	0.10290	-92.110	0.009007	8484.18	0.556060
11	10.2154	0.97891E-01	3.0223	0.000296	9.13416	0.556060
12	10.2397	0.97659E-01	-21.501	0.002103	462.301	0.556062
13	10.2625	0.97442E-01	5.6310	0.000551	31.7078	0.556062
14	10.2636	0.97431E-01	-11.273	0.001102	127.079	0.556062
15	10.2679	0.97391E-01	-36.412	0.003561	1325.85	0.556065
16	10.2704	0.97367E-01	6.0709	0.000594	36.8554	0.556065
17	10.2771	0.97304E-01	3.4024	0.000333	11.5760	0.556065
18	10.2797	0.97280E-01	-13.018	0.001273	169.469	0.556066
19	10.2817	0.97260E-01	-14.775	0.001445	218.307	0.556066
20	10.2959	0.97126E-01	-198.66	0.019426	39465.7	0.556162
21	10.5859	0.94466E-01	121.79	0.011910	14833.5	0.556198
22	11.9828	0.83453E-01	468.64	0.045826	219620.	0.556733

23	13.0165	0.76826E-01	7411.1	0.724705	0.549240E+08	0.690428
24	13.7389	0.72786E-01	7766.0	0.759410	0.603104E+08	0.837235
25	14.4667	0.69124E-01	-217.42	0.021261	47271.5	0.837350
26	15.6669	0.63829E-01	-415.84	0.040664	172925.	0.837771
27	15.7313	0.63568E-01	139.39	0.013630	19429.2	0.837818
28	17.9673	0.55657E-01	312.96	0.030603	97941.3	0.838056
29	19.7561	0.50617E-01	7859.3	0.768538	0.617689E+08	0.988413
30	20.1976	0.49511E-01	167.31	0.016361	27994.1	0.988481
31	21.8619	0.45742E-01	-1268.2	0.124011	0.160828E+07	0.992396
32	22.7254	0.44004E-01	-427.88	0.041841	183084.	0.992842
33	23.5101	0.42535E-01	-903.66	0.088366	816604.	0.994829
34	23.8148	0.41991E-01	130.83	0.012793	17115.4	0.994871
35	23.8194	0.41983E-01	382.10	0.037364	145998.	0.995226
36	23.8549	0.41920E-01	-22.657	0.002216	513.354	0.995228
37	23.8626	0.41907E-01	78.150	0.007642	6107.44	0.995243
38	23.8695	0.41894E-01	527.09	0.051542	277819.	0.995919
39	23.9068	0.41829E-01	781.78	0.076448	611179.	0.997407
40	23.9292	0.41790E-01	1032.2	0.100935	0.106542E+07	1.00000

SUM OF EFFECTIVE MASSES= 0.410816E+09

***** PARTICIPATION FACTOR CALCULATION *****ROTY DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.940989E-01	10.627	-55463.	1.000000	0.307618E+10	0.645320
2	0.961143E-01	10.404	-7640.8	0.137763	0.583817E+08	0.657567
3	1.56736	0.63802	-21257.	0.383261	0.451858E+09	0.752358
4	2.22486	0.44947	704.22	0.012697	495924.	0.752462
5	3.66810	0.27262	-4776.9	0.086127	0.228186E+08	0.757248
6	4.07460	0.24542	187.22	0.003376	35050.5	0.757256
7	7.86823	0.12709	-18601.	0.335370	0.345988E+09	0.829837
8	8.82540	0.11331	457.17	0.008243	209006.	0.829881
9	9.56528	0.10454	6978.5	0.125822	0.486995E+08	0.840097
10	9.71784	0.10290	119.06	0.002147	14174.3	0.840100
11	10.2154	0.97891E-01	35.683	0.000643	1273.30	0.840100
12	10.2397	0.97659E-01	102.22	0.001843	10449.2	0.840102
13	10.2625	0.97442E-01	-18.634	0.000336	347.209	0.840102
14	10.2636	0.97431E-01	36.104	0.000651	1303.47	0.840103
15	10.2679	0.97391E-01	124.86	0.002251	15590.8	0.840106
16	10.2704	0.97367E-01	-21.393	0.000386	457.656	0.840106
17	10.2771	0.97304E-01	-5.9041	0.000106	34.8584	0.840106
18	10.2797	0.97280E-01	33.251	0.000600	1105.63	0.840106
19	10.2817	0.97260E-01	46.991	0.000847	2208.15	0.840107
20	10.2959	0.97126E-01	633.49	0.011422	401308.	0.840191
21	10.5859	0.94466E-01	297.59	0.005366	88560.5	0.840210
22	11.9828	0.83453E-01	36.729	0.000662	1349.01	0.840210
23	13.0165	0.76826E-01	-15812.	0.285084	0.250011E+09	0.892657
24	13.7389	0.72786E-01	-13706.	0.247123	0.187862E+09	0.932067
25	14.4667	0.69124E-01	421.86	0.007606	177970.	0.932104
26	15.6669	0.63829E-01	2129.6	0.038396	0.453501E+07	0.933055
27	15.7313	0.63568E-01	-418.43	0.007544	175083.	0.933092
28	17.9673	0.55657E-01	-2173.4	0.039187	0.472387E+07	0.934083
29	19.7561	0.50617E-01	-17078.	0.307913	0.291654E+09	0.995266
30	20.1976	0.49511E-01	-214.77	0.003872	46124.1	0.995276
31	21.8619	0.45742E-01	3482.3	0.062786	0.121266E+08	0.997820
32	22.7254	0.44004E-01	913.71	0.016474	834868.	0.997995
33	23.5101	0.42535E-01	1547.3	0.027898	0.239424E+07	0.998497
34	23.8148	0.41991E-01	-240.18	0.004331	57688.8	0.998509
35	23.8194	0.41983E-01	-723.33	0.013042	523202.	0.998619
36	23.8549	0.41920E-01	44.273	0.000798	1960.09	0.998619
37	23.8626	0.41907E-01	-131.60	0.002373	17319.0	0.998623
38	23.8695	0.41894E-01	-1000.2	0.018034	0.100048E+07	0.998833
39	23.9068	0.41829E-01	-1478.6	0.026659	0.218628E+07	0.999292
40	23.9292	0.41790E-01	-1837.8	0.033135	0.337734E+07	1.00000

SUM OF EFFECTIVE MASSES= 0.476691E+10

***** PARTICIPATION FACTOR CALCULATION *****ROTZ DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.940989E-01	10.627	-2.2901	0.000039	5.24446	0.112888E-08

2	0.961143E-01	10.404	-1682.2	0.028402	0.282994E+07	0.609149E-03
3	1.56736	0.63802	-404.49	0.006829	163611.	0.644367E-03
4	2.22486	0.44947	59230.	1.000000	0.350817E+10	0.755782
5	3.66810	0.27262	-16559.	0.279579	0.274214E+09	0.814807
6	4.07460	0.24542	-1074.5	0.018142	0.115465E+07	0.815055
7	7.86823	0.12709	-6874.5	0.116065	0.472587E+08	0.825228
8	8.82540	0.11331	875.66	0.014784	766783.	0.825393
9	9.56528	0.10454	24977.	0.421700	0.623860E+09	0.959680
10	9.71784	0.10290	825.55	0.013938	681531.	0.959826
11	10.2154	0.97891E-01	-34.630	0.000585	1199.22	0.959827
12	10.2397	0.97659E-01	-152.97	0.002583	23401.3	0.959832
13	10.2625	0.97442E-01	56.054	0.000946	3142.08	0.959832
14	10.2636	0.97431E-01	-88.846	0.001500	7893.69	0.959834
15	10.2679	0.97391E-01	-288.23	0.004866	83076.3	0.959852
16	10.2704	0.97367E-01	30.131	0.000509	907.903	0.959852
17	10.2771	0.97304E-01	25.387	0.000429	644.509	0.959852
18	10.2797	0.97280E-01	-124.20	0.002097	15425.6	0.959856
19	10.2817	0.97260E-01	-242.70	0.004098	58904.9	0.959868
20	10.2959	0.97126E-01	-1915.7	0.032343	0.366974E+07	0.960658
21	10.5859	0.94466E-01	1709.2	0.028857	0.292135E+07	0.961287
22	11.9828	0.83453E-01	443.54	0.007488	196725.	0.961329
23	13.0165	0.76826E-01	3067.3	0.051787	0.940858E+07	0.963355
24	13.7389	0.72786E-01	10944.	0.184765	0.119762E+09	0.989133
25	14.4667	0.69124E-01	-226.27	0.003820	51199.3	0.989144
26	15.6669	0.63829E-01	296.83	0.005011	88106.7	0.989163
27	15.7313	0.63568E-01	49.591	0.000837	2459.25	0.989164
28	17.9673	0.55657E-01	-3188.2	0.053828	0.101647E+08	0.991352
29	19.7561	0.50617E-01	6060.6	0.102324	0.367314E+08	0.999258
30	20.1976	0.49511E-01	91.939	0.001552	8452.72	0.999260
31	21.8619	0.45742E-01	-834.43	0.014088	696273.	0.999410
32	22.7254	0.44004E-01	-1194.2	0.020163	0.142620E+07	0.999717
33	23.5101	0.42535E-01	-686.27	0.011587	470971.	0.999819
34	23.8148	0.41991E-01	79.397	0.001340	6303.94	0.999820
35	23.8194	0.41983E-01	268.81	0.004538	72259.0	0.999835
36	23.8549	0.41920E-01	-8.5608	0.000145	73.2869	0.999835
37	23.8626	0.41907E-01	43.694	0.000738	1909.19	0.999836
38	23.8695	0.41894E-01	363.27	0.006133	131966.	0.999864
39	23.9068	0.41829E-01	527.42	0.008905	278171.	0.999924
40	23.9292	0.41790E-01	593.72	0.010024	352502.	1.00000

SUM OF EFFECTIVE MASSES= 0.464573E+10

Attachment 20

GT STRUDL Stand-Alone Crane Model Output, “Hook Up”, All Analyses

```
{ 1245} >
{ 1246} > EIGEN PARAMETERS
{ 1247} >   NUMBER OF MODES 40
{ 1248} >   SOLVE USING GTLANCZOS
{ 1249} >   PRINT MAX
{ 1250} > END
{ 1251} >
{ 1252} > $ Eigen solution
{ 1253} >
{ 1254} > DYNAMIC ANALYSIS EIGENSOLUTION


BANDWIDTH INFORMATION BEFORE RENUMBERING.


THE MAXIMUM BANDWIDTH IS    315 AND OCCURS AT JOINT CN451
THE AVERAGE BANDWIDTH IS                  14.626
THE STANDARD DEVIATION OF THE BANDWIDTH IS     39.675
                              ----------
                                54.301
                              ==========



BANDWIDTH INFORMATION AFTER  RENUMBERING.


THE MAXIMUM BANDWIDTH IS      8 AND OCCURS AT JOINT CN12
THE AVERAGE BANDWIDTH IS                   4.117
THE STANDARD DEVIATION OF THE BANDWIDTH IS      1.942
                              ----------
                                 6.059
                              ==========
TIME FOR CONSISTENCY CHECKS FOR    373 MEMBERS      0.02 SECONDS
TIME FOR BANDWIDTH REDUCTION                  0.02 SECONDS
TIME TO GENERATE    373 ELEMENT STIF. MATRICES      0.02 SECONDS
TIME TO PROCESS     12 MEMBER RELEASES            0.00 SECONDS
TIME TO ASSEMBLE THE STIFFNESS MATRIX             0.04 SECONDS
TIME TO PROCESS    350 JOINTS                   0.01 SECONDS
TIME TO GENERATE REDUCED STIFFNESS MATRIX          0.04 SECONDS


****************************
* GT/LANCZOS SOLUTION DATA *
****************************

NUMBER OF DYNAMIC DEGREES-OF-FREEDOM =  2052
NUMBER OF MODES REQUESTED          =   40
EIGENVALUE TOLERANCE              =  1.00000E-06
NUMBER OF TERMS IN SKYLINE         =    54561
AVERAGE COLUMN HEIGHT OF SKYLINE     =    27
RANK OF MASS MATRIX =    900
IN-CORE EQUATION SOLVER USED
NUMBER OF LANCZOS VECTORS COMPUTED =     81

***********************************
* END OF GT/LANCZOS SOLUTION DATA *
***********************************


TIME TO SOLVE EIGENPROBLEM                    2.11 SECONDS
TIME TO TRANSFORM EIGENVECTORS TO JOINTS           0.34 SECONDS

************************
* EIGEN-SOLUTION CHECKS *
************************

**** STRUDL MESSAGE - STURM SEQUENCE CHECK WAS SUCCESSFUL - THERE ARE NO MISSING MODES
```

MODE	EIGENVALUE ((RAD/SEC)**2)	FREQUENCY (RAD/SEC)	FREQUENCY (CYC/SEC)	PERIOD (SEC/CYC)	ESTIMATED ACCURACY
1	2.640315D+00	1.624905D+00	2.586116D-01	3.866803D+00	6.102393D-12
2	3.898826D+00	1.974544D+00	3.142585D-01	3.182094D+00	1.074072D-11
3	1.365867D+02	1.168703D+01	1.860049D+00	5.376204D-01	2.667046D-11
4	4.504253D+02	2.122322D+01	3.377781D+00	2.960523D-01	4.497763D-12
5	5.420841D+02	2.328270D+01	3.705557D+00	2.698650D-01	1.050303D-10
6	6.580583D+02	2.565265D+01	4.082745D+00	2.449332D-01	1.314909D-11
7	2.570793D+03	5.070299D+01	8.069631D+00	1.239214D-01	7.245758D-12
8	3.071513D+03	5.542124D+01	8.820564D+00	1.133714D-01	9.631569D-12
9	3.745991D+03	6.120450D+01	9.740998D+00	1.026589D-01	2.471835D-11
10	4.098265D+03	6.401769D+01	1.018873D+01	9.814764D-02	1.711627D-11
11	4.114609D+03	6.414522D+01	1.020903D+01	9.795251D-02	1.086707D-11
12	4.137238D+03	6.432137D+01	1.023706D+01	9.768427D-02	9.340984D-12
13	4.156047D+03	6.446741D+01	1.026031D+01	9.746297D-02	1.064994D-11
14	4.157119D+03	6.447572D+01	1.026163D+01	9.745041D-02	7.690863D-12
15	4.161550D+03	6.451008D+01	1.026710D+01	9.739851D-02	9.900471D-12
16	4.162575D+03	6.451802D+01	1.026836D+01	9.738652D-02	7.344923D-12
17	4.167942D+03	6.455960D+01	1.027498D+01	9.732380D-02	2.734142D-11
18	4.170197D+03	6.457706D+01	1.027776D+01	9.729748D-02	1.394387D-11
19	4.172018D+03	6.459116D+01	1.028000D+01	9.727625D-02	1.497969D-11
20	4.454117D+03	6.673917D+01	1.062187D+01	9.414539D-02	1.802578D-11
21	5.648947D+03	7.515948D+01	1.196200D+01	8.359805D-02	5.061328D-12
22	5.844214D+03	7.644746D+01	1.216699D+01	8.218959D-02	1.314573D-11
23	6.650189D+03	8.154869D+01	1.297888D+01	7.704827D-02	9.251720D-12
24	8.091017D+03	8.995008D+01	1.431600D+01	6.985191D-02	8.101234D-12
25	8.256649D+03	9.086611D+01	1.446179D+01	6.914774D-02	7.998960D-12
26	9.763371D+03	9.880977D+01	1.572606D+01	6.358871D-02	7.467548D-12
27	9.969887D+03	9.984932D+01	1.589151D+01	6.292667D-02	1.225144D-11
28	1.293801D+04	1.137454D+02	1.810314D+01	5.523904D-02	1.365026D-11
29	1.560756D+04	1.249302D+02	1.988326D+01	5.029356D-02	5.685931D-12
30	1.607273D+04	1.267783D+02	2.017739D+01	4.956042D-02	5.759580D-12
31	1.961337D+04	1.400478D+02	2.228929D+01	4.486459D-02	1.608900D-11
32	2.001747D+04	1.414831D+02	2.251774D+01	4.440944D-02	7.790558D-12
33	2.180080D+04	1.476509D+02	2.349938D+01	4.255432D-02	9.329025D-10
34	2.236781D+04	1.495587D+02	2.380301D+01	4.201149D-02	4.667787D-03
35	2.238000D+04	1.495995D+02	2.380950D+01	4.200005D-02	2.027524D-03
36	2.243222D+04	1.497739D+02	2.383725D+01	4.195114D-02	1.627782D-02
37	2.245398D+04	1.498465D+02	2.384882D+01	4.193080D-02	3.850132D-04
38	2.246663D+04	1.498887D+02	2.385553D+01	4.191900D-02	1.579319D-02
39	2.250343D+04	1.500114D+02	2.387506D+01	4.188471D-02	1.516142D-03
40	2.257954D+04	1.502649D+02	2.391540D+01	4.181406D-02	1.881625D-04

ORTHOGONALITY CHECK

WITH RESPECT TO MASS

OFF DIAGONALS: MAXIMUM = 0.1568E-03
MINIMUM = 0.9995E-19
MEAN = 0.4082E-06

DIAGONALS: MAXIMUM = 0.1000E+01
MINIMUM = 0.1000E+01
MEAN = 0.1000E+01

WITH RESPECT TO STIFFNESS

OFF DIAGONALS: MAXIMUM = 0.5174E-08
MINIMUM = 0.5910E-14
MEAN = 0.1361E-09

DIAGONALS: MAXIMUM = 0.2258E+05
MINIMUM = 0.2640E+01
MEAN = 0.9365E+04

****
* END OF EIGEN-SOLUTION CHECKS *
****

TIME TO CHECK EIGENSOLUTION 0.66 SECONDS
{ 1255} >
{ 1256} > LIST DYNAMIC PARTICIPATION FACTORS

****
RESULTS OF LATEST ANALYSES
****

PROBLEM - NONE TITLE - NONE GIVEN

ACTIVE UNITS INCH KIP RAD DEGF SEC

NORMALIZED PARTICIPATION FACTORS

% OF X DIRECTION MASS PARTICIPATING

MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT
1	0.8815995E-06	2	64.61242	3	0.9458435E-07	4	0.4657989E-03	5	25.19515	6	0.2591975
7	0.8641100E-04	8	0.6735098E-01	9	0.2514244	10	0.1135966	11	0.1832886E-01	12	0.1811914E-01
13	0.2372436E-03	14	0.6745084E-04	15	0.1832025E-02	16	0.7455985E-04	17	0.3514562E-05	18	0.1048005E-05
19	0.3485104E-04	20	0.3633017	21	0.6709117E-02	22	0.1265697	23	0.3450642E-03	24	0.9280784E-03
25	0.4457143E-04	26	0.3439460E-03	27	0.2149578	28	0.9619579	29	0.4420597E-02	30	0.7832900E-05
31	0.1343087E-01	32	0.3472067E-04	33	0.1398695E-02	34	0.6111129E-03	35	0.5627219E-03	36	0.1494804E-03
37	0.4174979E-02	38	0.1037931E-04	39	0.1888286E-02	40	0.5485246E-03				

TOTAL PERCENTAGE OF X DIRECTION MASS PARTICIPATING: 92.241

% OF Y DIRECTION MASS PARTICIPATING

MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT
1	0.1313528E-03	2	0.4747509E-08	3	0.5830265E-01	4	82.96312	5	0.1255029E-02	6	0.9940430E-04
7	0.1919327	8	0.2134506E-05	9	0.1485057E-02	10	0.4721494E-03	11	0.5997478E-04	12	0.4059145E-04
13	0.7671889E-07	14	0.1038681E-05	15	0.1244296E-04	16	0.7302481E-06	17	0.1197701E-06	18	0.3776281E-06
19	0.5702148E-06	20	0.1032286E-03	21	2.288804	22	0.2223905	23	0.2496069	24	3.914358
25	0.6355027E-01	26	0.9671693E-04	27	0.3307913E-02	28	0.6314386E-06	29	0.6744939	30	0.4035236E-03
31	0.6131837E-02	32	0.1022657E-01	33	0.1437372E-01	34	0.6957508E-02	35	0.8433292E-02	36	0.1871595E-02
37	0.5271910E-01	38	0.5520618E-04	39	0.2047819E-01	40	0.3049618E-02				

TOTAL PERCENTAGE OF Y DIRECTION MASS PARTICIPATING: 90.758

% OF Z DIRECTION MASS PARTICIPATING

MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT
1	67.83259	2	0.1203595E-05	3	5.793582	4	0.1695598	5	0.1123004E-03	6	0.9750041E-04
7	5.707044	8	0.7868809E-04	9	0.4268684E-03	10	0.6270434E-02	11	0.1056489E-02	12	0.6282543E-03
13	0.9368644E-07	14	0.2777155E-05	15	0.5982674E-04	16	0.5369714E-06	17	0.1326057E-06	18	0.5778258E-06
19	0.9379809E-05	20	0.2654266E-02	21	6.043482	22	0.3704301	23	1.996612	24	3.176779
25	0.6360707E-01	26	0.2202136E-03	27	0.1581336E-01	28	0.2694949E-02	29	5.468712	30	0.3394747E-02

31 0.2588854E-01 32 0.4339077 33 0.6974138E-01 34 0.3053730E-01 35 0.3980169E-01 36 0.9949867E-02
37 0.2541873 38 0.4578155E-03 39 0.1039073 40 0.2346127E-01

TOTAL PERCENTAGE OF Z DIRECTION MASS PARTICIPATING: 97.648

{ 1257} >
{ 1258} > LIST DYNAMIC EIGENVALUES

****
RESULTS OF LATEST ANALYSES
****

PROBLEM - NONE TITLE - NONE GIVEN

ACTIVE UNITS INCH KIP RAD DEGF SEC

EIGENVALUES

MODE	EIGENVALUE ((RAD/SEC)**2)	FREQUENCY (RAD/SEC)	FREQUENCY (CYC/SEC)	PERIOD (SEC/CYC)	STATUS
1	2.640315D+00	1.624905D+00	2.586116D-01	3.866803D+00	ACTIVE
2	3.898826D+00	1.974544D+00	3.142585D-01	3.182094D+00	ACTIVE
3	1.365867D+02	1.168703D+01	1.860049D+00	5.376204D-01	ACTIVE
4	4.504253D+02	2.122322D+01	3.377781D+00	2.960523D-01	ACTIVE
5	5.420841D+02	2.328270D+01	3.705557D+00	2.698650D-01	ACTIVE
6	6.580583D+02	2.565265D+01	4.082745D+00	2.449332D-01	ACTIVE
7	2.570793D+03	5.070299D+01	8.069631D+00	1.239214D-01	ACTIVE
8	3.071513D+03	5.542124D+01	8.820564D+00	1.133714D-01	ACTIVE
9	3.745991D+03	6.120450D+01	9.740998D+00	1.026589D-01	ACTIVE
10	4.098265D+03	6.401769D+01	1.018873D+01	9.814764D-02	ACTIVE
11	4.114609D+03	6.414522D+01	1.020903D+01	9.795251D-02	ACTIVE
12	4.137238D+03	6.432137D+01	1.023706D+01	9.768427D-02	ACTIVE
13	4.156047D+03	6.446741D+01	1.026031D+01	9.746297D-02	ACTIVE
14	4.157119D+03	6.447572D+01	1.026163D+01	9.745041D-02	ACTIVE
15	4.161550D+03	6.451008D+01	1.026710D+01	9.739851D-02	ACTIVE
16	4.162575D+03	6.451802D+01	1.026836D+01	9.738652D-02	ACTIVE
17	4.167942D+03	6.455960D+01	1.027498D+01	9.732380D-02	ACTIVE
18	4.170197D+03	6.457706D+01	1.027776D+01	9.729748D-02	ACTIVE
19	4.172018D+03	6.459116D+01	1.028000D+01	9.727625D-02	ACTIVE
20	4.454117D+03	6.673917D+01	1.062187D+01	9.414539D-02	ACTIVE
21	5.648947D+03	7.515948D+01	1.196200D+01	8.359805D-02	ACTIVE
22	5.844214D+03	7.644746D+01	1.216699D+01	8.218959D-02	ACTIVE
23	6.650189D+03	8.154869D+01	1.297888D+01	7.704827D-02	ACTIVE
24	8.091017D+03	8.995008D+01	1.431600D+01	6.985191D-02	ACTIVE
25	8.256649D+03	9.086611D+01	1.446179D+01	6.914774D-02	ACTIVE
26	9.763371D+03	9.880977D+01	1.572606D+01	6.358871D-02	ACTIVE
27	9.969887D+03	9.984932D+01	1.589151D+01	6.292667D-02	ACTIVE
28	1.293801D+04	1.137454D+02	1.810314D+01	5.523904D-02	ACTIVE
29	1.560756D+04	1.249302D+02	1.988326D+01	5.029356D-02	ACTIVE
30	1.607273D+04	1.267783D+02	2.017739D+01	4.956042D-02	ACTIVE
31	1.961337D+04	1.400478D+02	2.228929D+01	4.486459D-02	ACTIVE
32	2.001747D+04	1.414831D+02	2.251774D+01	4.440944D-02	ACTIVE
33	2.180080D+04	1.476509D+02	2.349938D+01	4.255432D-02	ACTIVE
34	2.236781D+04	1.495587D+02	2.380301D+01	4.201149D-02	ACTIVE
35	2.238000D+04	1.495995D+02	2.380950D+01	4.200005D-02	ACTIVE
36	2.243222D+04	1.497739D+02	2.383725D+01	4.195114D-02	ACTIVE
37	2.245398D+04	1.498465D+02	2.384882D+01	4.193080D-02	ACTIVE
38	2.246663D+04	1.498887D+02	2.385553D+01	4.191900D-02	ACTIVE
39	2.250343D+04	1.500114D+02	2.387506D+01	4.188471D-02	ACTIVE
40	2.257954D+04	1.502649D+02	2.391540D+01	4.181406D-02	ACTIVE

{ 1259} >
{ 1260} > LIST DYNAMIC MASS SUMMARY

****
RESULTS OF LATEST ANALYSES

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PROBLEM - NONE TITLE - NONE GIVEN

ACTIVE UNITS INCH KIP RAD DEGF SEC

GLOBAL AXIS	CENTER OF MASS COORDINATE	TOTAL MASS	TOTAL WEIGHT	Mass Moment of Inertia about X Axis	Y Axis	Z Axis
X	1.651266	1.088298	420.1793	0.0000000E+00	8592.797	1447.867
Y	-9.406134	1.088298	420.1793	8592.797	0.0000000E+00	3532.891
Z	-274.2927	1.088298	420.1793	1447.867	3532.891	0.0000000E+00

{ 1261} >
{ 1262} > $ SAVE 'HOOK_UP'
{ 1263} >
{ 1264} > $ bypass
{ 1264} >

{ 1261} > LOAD LIST 38 TO 43
{ 1262} > LIST DISPLACEMENTS JOINTS EXISTING 'CN434' 'CN437' 'CN440' 'CN443' 'CN446' -
{ 1263} >_'CN450'

****
RESULTS OF LATEST ANALYSES
****

PROBLEM - NONE TITLE - NONE GIVEN

ACTIVE UNITS INCH KIP RAD DEGF SEC

--- LOADING - 38 ACCELERATION Y ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		DISPLACEMENT X DISP.	Y DISP.	Z DISP.	ROTATION X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		DISPLACEMENT X DISP.	Y DISP.	Z DISP.	ROTATION X ROT.	Y ROT.	Z ROT.
CN434	GLOBAL	0.0008008	-0.8027297	0.2016857	-0.0050117	-0.0000021	-0.0000078
CN437	GLOBAL	-0.0438702	-0.4202572	0.1945228	0.0012201	0.0010696	0.0024042
CN440	GLOBAL	0.0453656	-0.4185697	0.1941188	0.0012200	-0.0010672	-0.0024193
CN443	GLOBAL	0.0026678	-0.4215397	0.1945458	-0.0011148	-0.0001064	0.0015327
CN446	GLOBAL	-0.0011352	-0.4198042	0.1941588	-0.0011155	0.0001013	-0.0015481
CN450	GLOBAL	0.0008005	-0.9185339	0.2018620	0.0025031	-0.0000021	0.0000039

--- LOADING - 39 ACCELERATION X ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		DISPLACEMENT X DISP.	DISPLACEMENT Y DISP.	DISPLACEMENT Z DISP.	ROTATION X ROT.	ROTATION Y ROT.	ROTATION Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		DISPLACEMENT X DISP.	DISPLACEMENT Y DISP.	DISPLACEMENT Z DISP.	ROTATION X ROT.	ROTATION Y ROT.	ROTATION Z ROT.
CN434	GLOBAL	-3.2739613	0.0001601	0.0056243	-0.0000095	-0.0019984	0.0019040
CN437	GLOBAL	-3.3594990	0.2420778	-0.1196511	-0.0004964	0.0012774	0.0186663
CN440	GLOBAL	-3.3598356	-0.2423163	0.1197652	0.0004972	0.0012829	0.0187267
CN443	GLOBAL	-2.6952453	0.2494574	-0.1199472	0.0001729	0.0123049	0.0068469
CN446	GLOBAL	-2.6949027	-0.2496895	0.1202065	-0.0001738	0.0122789	0.0068959
CN450	GLOBAL	-99.3987198	0.0001109	0.0056247	0.0000048	-0.0019984	-1.5004022

--- LOADING - 40 ACCELERATION Z ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		DISPLACEMENT X DISP.	DISPLACEMENT Y DISP.	DISPLACEMENT Z DISP.	ROTATION X ROT.	ROTATION Y ROT.	ROTATION Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		DISPLACEMENT X DISP.	DISPLACEMENT Y DISP.	DISPLACEMENT Z DISP.	ROTATION X ROT.	ROTATION Y ROT.	ROTATION Z ROT.
CN434	GLOBAL	0.0038971	0.2244651	-53.5181770	0.0024473	0.0003277	0.0000205
CN437	GLOBAL	0.1237615	0.1185057	-0.7456262	-0.0057155	-0.0023586	-0.0012874
CN440	GLOBAL	-0.1053327	0.1149858	-0.7374302	-0.0056838	0.0021347	0.0010118
CN443	GLOBAL	0.0103432	0.1408809	-0.7575086	0.0017834	-0.0039138	0.0001960
CN446	GLOBAL	-0.0236178	0.1372119	-0.7491266	0.0017793	0.0033728	-0.0000919
CN450	GLOBAL	0.0038978	0.2244160	-149.6430817	1.4982289	0.0003277	-0.0000102

--- LOADING - 41 HOOK FORCE X ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		DISPLACEMENT X DISP.	DISPLACEMENT Y DISP.	DISPLACEMENT Z DISP.	ROTATION X ROT.	ROTATION Y ROT.	ROTATION Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		DISPLACEMENT X DISP.	DISPLACEMENT Y DISP.	DISPLACEMENT Z DISP.	ROTATION X ROT.	ROTATION Y ROT.	ROTATION Z ROT.
CN434	GLOBAL	-0.0927407	0.0000049	0.0001991	0.0000000	-0.0000934	0.0000547
CN437	GLOBAL	-0.0966927	0.0070398	-0.0035099	-0.0000157	0.0000683	0.0005984
CN440	GLOBAL	-0.0967285	-0.0070389	0.0035095	0.0000157	0.0000690	0.0005993
CN443	GLOBAL	-0.0720042	0.0072401	-0.0035202	0.0000067	0.0004436	0.0001898
CN446	GLOBAL	-0.0719950	-0.0072391	0.0035247	-0.0000067	0.0004427	0.0001901

CN450 GLOBAL -3.7064540 0.0000049 0.0001991 0.0000000 -0.0000934 -0.0563977

--- LOADING - 42 HOOK FORCE Y ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT /----------DISPLACEMENT----------//----------ROTATION----------/
X DISP. Y DISP. Z DISP. X ROT. Y ROT. Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT /----------DISPLACEMENT----------//----------ROTATION----------/
X DISP. Y DISP. Z DISP. X ROT. Y ROT. Z ROT.

CN434 GLOBAL 0.0000489 -0.2446979 0.0592483 -0.0019202 0.0000002 -0.0000002
CN437 GLOBAL -0.0166821 -0.1118903 0.0565732 0.0003999 0.0004005 0.0007967
CN440 GLOBAL 0.0167495 -0.1118447 0.0565656 0.0003998 -0.0003999 -0.0007971
CN443 GLOBAL 0.0008627 -0.1114660 0.0565820 -0.0003951 -0.0000429 0.0004483
CN446 GLOBAL -0.0008016 -0.1114205 0.0565809 -0.0003949 0.0000407 -0.0004488
CN450 GLOBAL 0.0000489 -0.2882148 0.0593158 0.0009591 0.0000002 0.0000001

--- LOADING - 43 HOOK FORCE Z ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT /----------DISPLACEMENT----------//----------ROTATION----------/
X DISP. Y DISP. Z DISP. X ROT. Y ROT. Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT /----------DISPLACEMENT----------//----------ROTATION----------/
X DISP. Y DISP. Z DISP. X ROT. Y ROT. Z ROT.

CN434 GLOBAL 0.0001991 0.0059316 -1.8104182 0.0000772 0.0000012 0.0000003
CN437 GLOBAL 0.0041325 0.0027079 -0.0208774 -0.0001690 -0.0000774 -0.0000429
CN440 GLOBAL -0.0033788 0.0026849 -0.0206989 -0.0001677 0.0000699 0.0000326
CN443 GLOBAL 0.0003957 0.0034340 -0.0212344 0.0000518 -0.0001286 0.0000057
CN446 GLOBAL -0.0007118 0.0033993 -0.0210492 0.0000517 0.0001103 -0.0000029
CN450 GLOBAL 0.0001991 0.0059316 -5.4241362 0.0563318 0.0000012 -0.0000001

{ 1264} > UNITS POUNDS
{ 1265} > LIST REACTIONS JOINTS EXISTING

****
RESULTS OF LATEST ANALYSES
****

PROBLEM - NONE TITLE - NONE GIVEN

ACTIVE UNITS INCH LB RAD DEGF SEC

--- LOADING - 38 ACCELERATION Y ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------//----------MOMENT----------/					
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
CN269	GLOBAL	0.0000000	53549.4101562	8663.5107422	0.0000000	0.0000000	0.0000000
CN271	GLOBAL	0.0000000	52236.2460938	-8650.6777344	0.0000000	0.0000000	0.0000000
CN273	GLOBAL	-9588.8115234	51771.1953125	-8668.6982422	0.0000000	0.0000000	0.0000000
CN275	GLOBAL	9584.1582031	51197.1523438	8655.8652344	0.0000000	0.0000000	0.0000000
CN277	GLOBAL	0.0000000	53515.4453125	0.0000000	0.0000000	0.0000000	0.0000000
CN279	GLOBAL	0.0000000	53495.9257812	0.0000000	0.0000000	0.0000000	0.0000000
CN281	GLOBAL	-9689.3828125	52809.7578125	0.0000000	0.0000000	0.0000000	0.0000000
CN283	GLOBAL	9694.0361328	51541.2851562	0.0000000	0.0000000	0.0000000	0.0000000

--- LOADING - 39 ACCELERATION X ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------//----------MOMENT----------/					
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
CN269	GLOBAL	0.0000000	-84030.5000000	-140791.8593750	0.0000000	0.0000000	0.0000000
CN271	GLOBAL	0.0000000	35320.0351562	164429.1250000	0.0000000	0.0000000	0.0000000
CN273	GLOBAL	115184.5703125	-110469.0390625	-164440.9531250	0.0000000	0.0000000	0.0000000
CN275	GLOBAL	113865.9218750	159236.5312500	140803.7031250	0.0000000	0.0000000	0.0000000
CN277	GLOBAL	0.0000000	-80289.6953125	0.0000000	0.0000000	0.0000000	0.0000000
CN279	GLOBAL	0.0000000	21710.2265625	0.0000000	0.0000000	0.0000000	0.0000000
CN281	GLOBAL	94353.9609375	-84438.0937500	0.0000000	0.0000000	0.0000000	0.0000000
CN283	GLOBAL	96598.9609375	143073.5156250	0.0000000	0.0000000	0.0000000	0.0000000

--- LOADING - 40 ACCELERATION Z ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------//----------MOMENT----------/					
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
CN269	GLOBAL	0.0000000	20097.9980469	109232.0000000	0.0000000	0.0000000	0.0000000
CN271	GLOBAL	0.0000000	19367.9257812	104123.4921875	0.0000000	0.0000000	0.0000000
CN273	GLOBAL	-3850.3020020	19234.1250000	101829.4687500	0.0000000	0.0000000	0.0000000
CN275	GLOBAL	3654.6132812	19676.3261719	104818.4531250	0.0000000	0.0000000	0.0000000
CN277	GLOBAL	0.0000000	-19686.3359375	0.0000000	0.0000000	0.0000000	0.0000000
CN279	GLOBAL	0.0000000	-19729.0273438	0.0000000	0.0000000	0.0000000	0.0000000
CN281	GLOBAL	3825.0261230	-19564.8574219	0.0000000	0.0000000	0.0000000	0.0000000
CN283	GLOBAL	-3629.3374023	-19283.1523438	0.0000000	0.0000000	0.0000000	0.0000000

--- LOADING - 41 HOOK FORCE X ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------//----------MOMENT----------/					
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
CN269	GLOBAL	0.0000000	-2258.0207520	-3756.8432617	0.0000000	0.0000000	0.0000000
CN271	GLOBAL	0.0000000	828.7138672	4370.3549805	0.0000000	0.0000000	0.0000000
CN273	GLOBAL	2789.7165527	-2656.9523926	-4377.3964844	0.0000000	0.0000000	0.0000000

CN275	GLOBAL	2806.7495117	4086.2592773	3763.8847656	0.0000000	0.0000000	0.0000000
CN277	GLOBAL	0.0000000	-2106.1157227	0.0000000	0.0000000	0.0000000	0.0000000
CN279	GLOBAL	0.0000000	413.4016418	0.0000000	0.0000000	0.0000000	0.0000000
CN281	GLOBAL	2142.1799316	-1859.6363525	0.0000000	0.0000000	0.0000000	0.0000000
CN283	GLOBAL	2261.3540039	3552.3503418	0.0000000	0.0000000	0.0000000	0.0000000

--- LOADING - 42 HOOK FORCE Y ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		FORCE			MOMENT		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
CN269	GLOBAL	0.0000000	12854.4384766	2710.0742188	0.0000000	0.0000000	0.0000000
CN271	GLOBAL	0.0000000	12386.2792969	-2710.3698730	0.0000000	0.0000000	0.0000000
CN273	GLOBAL	-2432.4101562	12368.4550781	-2711.0495605	0.0000000	0.0000000	0.0000000
CN275	GLOBAL	2432.6245117	12865.4316406	2711.3454590	0.0000000	0.0000000	0.0000000
CN277	GLOBAL	0.0000000	12484.4853516	0.0000000	0.0000000	0.0000000	0.0000000
CN279	GLOBAL	0.0000000	12281.6445312	0.0000000	0.0000000	0.0000000	0.0000000
CN281	GLOBAL	-2376.9152832	12264.4746094	0.0000000	0.0000000	0.0000000	0.0000000
CN283	GLOBAL	2376.7009277	12494.7919922	0.0000000	0.0000000	0.0000000	0.0000000

--- LOADING - 43 HOOK FORCE Z ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		FORCE			MOMENT		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
CN269	GLOBAL	0.0000000	546.7434082	2607.2919922	0.0000000	0.0000000	0.0000000
CN271	GLOBAL	0.0000000	521.7026978	2415.9118652	0.0000000	0.0000000	0.0000000
CN273	GLOBAL	-107.0185852	523.1466675	2399.6557617	0.0000000	0.0000000	0.0000000
CN275	GLOBAL	97.0069275	532.7713623	2577.1403809	0.0000000	0.0000000	0.0000000
CN277	GLOBAL	0.0000000	-533.3601685	0.0000000	0.0000000	0.0000000	0.0000000
CN279	GLOBAL	0.0000000	-535.2908325	0.0000000	0.0000000	0.0000000	0.0000000
CN281	GLOBAL	106.3112183	-535.6876831	0.0000000	0.0000000	0.0000000	0.0000000
CN283	GLOBAL	-96.2995605	-520.0254517	0.0000000	0.0000000	0.0000000	0.0000000

{ 1266} > SAVE -
{ 1267} >_'J:\Matt Working files\versions\crane alone\1_ener 44 vs gt up\HOOK_UP1.gts'

Attachment 21

GT STRUDL Stand-Alone Crane Model Output, “Hook Down”, All Analyses

```
{ 1249} >
{ 1250} > EIGEN PARAMETERS
{ 1251} >   NUMBER OF MODES 40
{ 1252} >   SOLVE USING GTLANCZOS
{ 1253} >   PRINT MAX
{ 1254} > END
{ 1255} >
{ 1256} > $ Eigen solution
{ 1257} >
{ 1258} > DYNAMIC ANALYSIS EIGENSOLUTION


BANDWIDTH INFORMATION BEFORE RENUMBERING.


THE MAXIMUM BANDWIDTH IS    315 AND OCCURS AT JOINT CN451
THE AVERAGE BANDWIDTH IS                 14.626
THE STANDARD DEVIATION OF THE BANDWIDTH IS     39.675
                              ----------
                                54.301
                              ==========


BANDWIDTH INFORMATION AFTER  RENUMBERING.


THE MAXIMUM BANDWIDTH IS      8 AND OCCURS AT JOINT CN12
THE AVERAGE BANDWIDTH IS                  4.117
THE STANDARD DEVIATION OF THE BANDWIDTH IS      1.942
                              ----------
                                 6.059
                              ==========
TIME FOR CONSISTENCY CHECKS FOR    373 MEMBERS      0.04 SECONDS
TIME FOR BANDWIDTH REDUCTION                0.01 SECONDS
TIME TO GENERATE    373 ELEMENT STIF. MATRICES      0.02 SECONDS
TIME TO PROCESS     12 MEMBER RELEASES            0.00 SECONDS
TIME TO ASSEMBLE THE STIFFNESS MATRIX             0.04 SECONDS
TIME TO PROCESS    350 JOINTS                 0.01 SECONDS
TIME TO GENERATE REDUCED STIFFNESS MATRIX          0.05 SECONDS


****************************
* GT/LANCZOS SOLUTION DATA *
****************************

NUMBER OF DYNAMIC DEGREES-OF-FREEDOM =  2052
NUMBER OF MODES REQUESTED          =   40
EIGENVALUE TOLERANCE               =  1.00000E-06
NUMBER OF TERMS IN SKYLINE         =    54561
AVERAGE COLUMN HEIGHT OF SKYLINE     =   27
RANK OF MASS MATRIX =    900
IN-CORE EQUATION SOLVER USED
NUMBER OF LANCZOS VECTORS COMPUTED =     81

**********************************
* END OF GT/LANCZOS SOLUTION DATA *
**********************************


TIME TO SOLVE EIGENPROBLEM                  2.24 SECONDS
TIME TO TRANSFORM EIGENVECTORS TO JOINTS           0.38 SECONDS

************************
* EIGEN-SOLUTION CHECKS *
************************

**** STRUDL MESSAGE - STURM SEQUENCE CHECK WAS SUCCESSFUL - THERE ARE NO MISSING MODES
```

MODE	EIGENVALUE ((RAD/SEC)**2)	FREQUENCY (RAD/SEC)	FREQUENCY (CYC/SEC)	PERIOD (SEC/CYC)	ESTIMATED ACCURACY
1	3.480858D-01	5.899879D-01	9.389949D-02	1.064968D+01	9.439571D-12
2	3.631647D-01	6.026315D-01	9.591178D-02	1.042625D+01	1.168993D-11
3	9.683532D+01	9.840494D+00	1.566163D+00	6.385031D-01	1.189301D-10
4	1.966500D+02	1.402319D+01	2.231861D+00	4.480566D-01	8.700228D-12
5	5.313358D+02	2.305072D+01	3.668636D+00	2.725809D-01	1.236524D-10
6	6.578176D+02	2.564795D+01	4.081999D+00	2.449780D-01	2.868482D-11
7	2.455803D+03	4.955606D+01	7.887091D+00	1.267895D-01	2.120312D-11
8	3.070455D+03	5.541169D+01	8.819044D+00	1.133910D-01	2.261253D-11
9	3.624625D+03	6.020486D+01	9.581900D+00	1.043634D-01	2.403387D-11
10	3.746067D+03	6.120512D+01	9.741098D+00	1.026578D-01	2.448034D-11
11	4.093214D+03	6.397823D+01	1.018245D+01	9.820818D-02	2.334188D-11
12	4.114101D+03	6.414126D+01	1.020840D+01	9.795856D-02	6.232996D-11
13	4.136841D+03	6.431828D+01	1.023657D+01	9.768896D-02	6.650653D-11
14	4.156045D+03	6.446740D+01	1.026030D+01	9.746299D-02	1.102328D-10
15	4.157116D+03	6.447570D+01	1.026163D+01	9.745044D-02	3.877253D-11
16	4.161505D+03	6.450973D+01	1.026704D+01	9.739904D-02	5.527708D-11
17	4.162574D+03	6.451802D+01	1.026836D+01	9.738653D-02	3.096972D-11
18	4.167942D+03	6.455960D+01	1.027498D+01	9.732380D-02	1.848237D-10
19	4.170196D+03	6.457705D+01	1.027776D+01	9.729749D-02	1.676350D-11
20	4.172013D+03	6.459112D+01	1.028000D+01	9.727630D-02	1.185580D-10
21	4.453980D+03	6.673814D+01	1.062170D+01	9.414684D-02	4.148888D-11
22	5.827347D+03	7.633706D+01	1.214942D+01	8.230845D-02	2.810151D-11
23	6.590552D+03	8.118221D+01	1.292055D+01	7.739609D-02	1.855367D-11
24	7.872958D+03	8.872969D+01	1.412177D+01	7.081266D-02	1.244912D-11
25	8.253105D+03	9.084660D+01	1.445869D+01	6.916258D-02	5.600345D-11
26	9.759372D+03	9.878953D+01	1.572284D+01	6.360173D-02	7.888273D-11
27	9.967834D+03	9.983904D+01	1.588988D+01	6.293315D-02	3.035563D-11
28	1.293531D+04	1.137335D+02	1.810125D+01	5.524480D-02	4.655161D-11
29	1.533138D+04	1.238200D+02	1.970656D+01	5.074453D-02	5.956795D-11
30	1.607257D+04	1.267776D+02	2.017729D+01	4.956067D-02	2.239089D-11
31	1.951610D+04	1.397000D+02	2.223395D+01	4.497626D-02	9.082071D-11
32	1.988828D+04	1.410258D+02	2.244496D+01	4.455344D-02	9.921744D-11
33	2.156446D+04	1.468484D+02	2.337165D+01	4.278688D-02	1.741024D-09
34	2.197508D+04	1.482399D+02	2.359312D+01	4.238524D-02	2.584304D-06
35	2.237104D+04	1.495695D+02	2.380473D+01	4.200846D-02	1.192586D-02
36	2.239006D+04	1.496331D+02	2.381485D+01	4.199061D-02	1.298871D-02
37	2.243071D+04	1.497688D+02	2.383645D+01	4.195255D-02	4.324179D-04
38	2.246541D+04	1.498847D+02	2.385488D+01	4.192014D-02	9.886198D-02
39	2.248921D+04	1.499640D+02	2.386751D+01	4.189795D-02	2.649671D-02
40	2.257076D+04	1.502357D+02	2.391075D+01	4.182219D-02	5.762657D-03

ORTHOGONALITY CHECK

WITH RESPECT TO MASS

OFF DIAGONALS: MAXIMUM = 0.3092E-03
MINIMUM = 0.1138E-17
MEAN = 0.6411E-06

DIAGONALS: MAXIMUM = 0.1000E+01
MINIMUM = 0.1000E+01
MEAN = 0.1000E+01

WITH RESPECT TO STIFFNESS

OFF DIAGONALS: MAXIMUM = 0.2657E-08
MINIMUM = 0.1063E-15
MEAN = 0.1112E-09

DIAGONALS: MAXIMUM = 0.2257E+05

MINIMUM = 0.3481E+00
MEAN = 0.9265E+04

****
* END OF EIGEN-SOLUTION CHECKS *
****

TIME TO CHECK EIGENSOLUTION 0.67 SECONDS
{ 1259} >
{ 1260} > LIST DYNAMIC PARTICIPATION FACTORS

****
RESULTS OF LATEST ANALYSES
****

PROBLEM - NONE TITLE - NONE GIVEN

ACTIVE UNITS INCH KIP RAD DEGF SEC

NORMALIZED PARTICIPATION FACTORS

% OF X DIRECTION MASS PARTICIPATING

MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT
1	0.8583690E-06	2	63.67175	3	0.5602953E-08	4	0.5036860E-05	5	26.18898	6	0.2053667
7	0.1180834E-03	8	0.6606600E-01	9	0.3510124E-02	10	0.2430374	11	0.1301297	12	0.1227303E-01
13	0.1506279E-01	14	0.2156564E-03	15	0.5655754E-04	16	0.1595759E-02	17	0.6524411E-04	18	0.3844086E-05
19	0.1929416E-05	20	0.2497109E-04	21	0.3630498	22	0.1326679	23	0.2654207E-04	24	0.1699364E-02
25	0.1993860E-04	26	0.2659002E-03	27	0.2156332	28	0.9610728	29	0.5297483E-02	30	0.1039611E-04
31	0.1091929E-01	32	0.1259237E-02	33	0.5998720E-02	34	0.1135129E-02	35	0.1146302E-04	36	0.2004662E-05
37	0.7599561E-07	38	0.3603642E-07	39	0.6381393E-06	40	0.1017769E-05				

TOTAL PERCENTAGE OF X DIRECTION MASS PARTICIPATING: 92.237

% OF Y DIRECTION MASS PARTICIPATING

MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT
1	0.2140133E-05	2	0.3981979E-10	3	0.8171967E-01	4	73.08860	5	0.2092879E-05	6	0.2250822E-05
7	0.7382904	8	0.1852849E-03	9	12.91089	10	0.7495253E-01	11	0.1414831E-01	12	0.1264258E-02
13	0.6993727E-03	14	0.4444740E-05	15	0.6663029E-05	16	0.1113992E-03	17	0.2791269E-05	18	0.3452798E-09
19	0.7916470E-08	20	0.2536604E-06	21	0.3783248E-03	22	0.7290643E-02	23	0.1512210	24	3.111563
25	0.6654331E-02	26	0.2337416E-03	27	0.1622147E-02	28	0.4597653E-05	29	0.6106498	30	0.1542205E-03
31	0.1233718E-01	32	0.8744573E-02	33	0.9798457E-01	34	0.4178630E-01	35	0.1508432E-05	36	0.2258198E-03
37	0.8168616E-05	38	0.2615125E-04	39	0.1167302E-03	40	0.2672743E-04				

TOTAL PERCENTAGE OF Y DIRECTION MASS PARTICIPATING: 90.962

% OF Z DIRECTION MASS PARTICIPATING

MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT
1	64.18408	2	0.8836680E-06	3	9.398542	4	0.8583730E-02	5	0.1685231E-03	6	0.9291885E-04
7	6.913875	8	0.9819395E-04	9	1.007224	10	0.6225563E-02	11	0.3222625E-03	12	0.6778702E-04
13	0.4302296E-04	14	0.1974976E-05	15	0.1585998E-07	16	0.1009367E-06	17	0.2523958E-06	18	0.2194709E-06
19	0.2900632E-06	20	0.1168477E-04	21	0.1105796E-02	22	0.2780863E-01	23	4.225254	24	4.863612
25	0.1399734E-01	26	0.7628657E-03	27	0.1928987E-01	28	0.4967993E-02	29	6.298335	30	0.1587085E-02
31	0.1804844	32	0.4619756	33	0.5003646	34	0.2156539	35	0.1158758E-03	36	0.1692272E-02

37 0.2103720E-04 38 0.3892129E-04 39 0.1114053E-02 40 0.1554704E-02

TOTAL PERCENTAGE OF Z DIRECTION MASS PARTICIPATING: 98.339

{ 1261} >
{ 1262} > LIST DYNAMIC EIGENVALUES

****
RESULTS OF LATEST ANALYSES
****

PROBLEM - NONE TITLE - NONE GIVEN

ACTIVE UNITS INCH KIP RAD DEGF SEC

EIGENVALUES

MODE	EIGENVALUE ((RAD/SEC)**2)	FREQUENCY (RAD/SEC)	FREQUENCY (CYC/SEC)	PERIOD (SEC/CYC)	STATUS
1	3.480858D-01	5.899879D-01	9.389949D-02	1.064968D+01	ACTIVE
2	3.631647D-01	6.026315D-01	9.591178D-02	1.042625D+01	ACTIVE
3	9.683532D+01	9.840494D+00	1.566163D+00	6.385031D-01	ACTIVE
4	1.966500D+02	1.402319D+01	2.231861D+00	4.480566D-01	ACTIVE
5	5.313358D+02	2.305072D+01	3.668636D+00	2.725809D-01	ACTIVE
6	6.578176D+02	2.564795D+01	4.081999D+00	2.449780D-01	ACTIVE
7	2.455803D+03	4.955606D+01	7.887091D+00	1.267895D-01	ACTIVE
8	3.070455D+03	5.541169D+01	8.819044D+00	1.133910D-01	ACTIVE
9	3.624625D+03	6.020486D+01	9.581900D+00	1.043634D-01	ACTIVE
10	3.746067D+03	6.120512D+01	9.741098D+00	1.026578D-01	ACTIVE
11	4.093214D+03	6.397823D+01	1.018245D+01	9.820818D-02	ACTIVE
12	4.114101D+03	6.414126D+01	1.020840D+01	9.795856D-02	ACTIVE
13	4.136841D+03	6.431828D+01	1.023657D+01	9.768896D-02	ACTIVE
14	4.156045D+03	6.446740D+01	1.026030D+01	9.746299D-02	ACTIVE
15	4.157116D+03	6.447570D+01	1.026163D+01	9.745044D-02	ACTIVE
16	4.161505D+03	6.450973D+01	1.026704D+01	9.739904D-02	ACTIVE
17	4.162574D+03	6.451802D+01	1.026836D+01	9.738653D-02	ACTIVE
18	4.167942D+03	6.455960D+01	1.027498D+01	9.732380D-02	ACTIVE
19	4.170196D+03	6.457705D+01	1.027776D+01	9.729749D-02	ACTIVE
20	4.172013D+03	6.459112D+01	1.028000D+01	9.727630D-02	ACTIVE
21	4.453980D+03	6.673814D+01	1.062170D+01	9.414684D-02	ACTIVE
22	5.827347D+03	7.633706D+01	1.214942D+01	8.230845D-02	ACTIVE
23	6.590552D+03	8.118221D+01	1.292055D+01	7.739609D-02	ACTIVE
24	7.872958D+03	8.872969D+01	1.412177D+01	7.081266D-02	ACTIVE
25	8.253105D+03	9.084660D+01	1.445869D+01	6.916258D-02	ACTIVE
26	9.759372D+03	9.878953D+01	1.572284D+01	6.360173D-02	ACTIVE
27	9.967834D+03	9.983904D+01	1.588988D+01	6.293315D-02	ACTIVE
28	1.293531D+04	1.137335D+02	1.810125D+01	5.524480D-02	ACTIVE
29	1.533138D+04	1.238200D+02	1.970656D+01	5.074453D-02	ACTIVE
30	1.607257D+04	1.267776D+02	2.017729D+01	4.956067D-02	ACTIVE
31	1.951610D+04	1.397000D+02	2.223395D+01	4.497626D-02	ACTIVE
32	1.988828D+04	1.410258D+02	2.244496D+01	4.455344D-02	ACTIVE
33	2.156446D+04	1.468484D+02	2.337165D+01	4.278688D-02	ACTIVE
34	2.197508D+04	1.482399D+02	2.359312D+01	4.238524D-02	ACTIVE
35	2.237104D+04	1.495695D+02	2.380473D+01	4.200846D-02	ACTIVE
36	2.239006D+04	1.496331D+02	2.381485D+01	4.199061D-02	ACTIVE
37	2.243071D+04	1.497688D+02	2.383645D+01	4.195255D-02	ACTIVE
38	2.246541D+04	1.498847D+02	2.385488D+01	4.192014D-02	ACTIVE
39	2.248921D+04	1.499640D+02	2.386751D+01	4.189795D-02	ACTIVE
40	2.257076D+04	1.502357D+02	2.391075D+01	4.182219D-02	ACTIVE

{ 1263} >
{ 1264} > LIST DYNAMIC MASS SUMMARY

****
RESULTS OF LATEST ANALYSES
****

PROBLEM - NONE TITLE - NONE GIVEN

ACTIVE UNITS INCH KIP RAD DEGF SEC

GLOBAL AXIS	CENTER OF MASS COORDINATE	TOTAL MASS	TOTAL WEIGHT	Mass Moment of Inertia about X Axis	Y Axis	Z Axis
X	1.651266	1.088298	420.1793	0.0000000E+00	8592.797	261318.1
Y	-619.4487	1.088298	420.1793	8592.797	0.0000000E+00	3532.891
Z	-274.2927	1.088298	420.1793	261318.1	3532.891	0.0000000E+00

{ 1265} >
{ 1266} > $ SAVE 'HOOK_UP'
{ 1267} >
{ 1268} > $ bypass
{ 1268} >

{ 1269} > UNITS POUNDS
{ 1270} > LOAD LIST 38 TO 43
{ 1271} > LIST REACTIONS JOINTS EXISTING

****
RESULTS OF LATEST ANALYSES
****

PROBLEM - NONE TITLE - NONE GIVEN

ACTIVE UNITS INCH LB RAD DEGF SEC

--- LOADING - 38 ACCELERATION Y ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		FORCE X FORCE	FORCE Y FORCE	FORCE Z FORCE	MOMENT X MOMENT	MOMENT Y MOMENT	MOMENT Z MOMENT
CN269	GLOBAL	0.0000000	53549.4296875	8663.4960938	0.0000000	0.0000000	0.0000000
CN271	GLOBAL	0.0000000	52236.2656250	-8650.6630859	0.0000000	0.0000000	0.0000000
CN273	GLOBAL	-9588.8154297	51771.2148438	-8668.6826172	0.0000000	0.0000000	0.0000000
CN275	GLOBAL	9584.1611328	51197.1679688	8655.8505859	0.0000000	0.0000000	0.0000000
CN277	GLOBAL	0.0000000	53515.4218750	0.0000000	0.0000000	0.0000000	0.0000000
CN279	GLOBAL	0.0000000	53495.9062500	0.0000000	0.0000000	0.0000000	0.0000000
CN281	GLOBAL	-9689.3789062	52809.7421875	0.0000000	0.0000000	0.0000000	0.0000000
CN283	GLOBAL	9694.0322266	51541.2617188	0.0000000	0.0000000	0.0000000	0.0000000

--- LOADING - 39 ACCELERATION X ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		FORCE X FORCE	FORCE Y FORCE	FORCE Z FORCE	MOMENT X MOMENT	MOMENT Y MOMENT	MOMENT Z MOMENT

CN269	GLOBAL	0.0000000	-84040.3437500	-140792.4375000	0.0000000	0.0000000	0.0000000
CN271	GLOBAL	0.0000000	35310.3671875	164428.2343750	0.0000000	0.0000000	0.0000000
CN273	GLOBAL	115183.0156250	-110459.5781250	-164440.0781250	0.0000000	0.0000000	0.0000000
CN275	GLOBAL	113868.0312500	159246.5937500	140804.2812500	0.0000000	0.0000000	0.0000000
CN277	GLOBAL	0.0000000	-80298.9687500	0.0000000	0.0000000	0.0000000	0.0000000
CN279	GLOBAL	0.0000000	21700.6132812	0.0000000	0.0000000	0.0000000	0.0000000
CN281	GLOBAL	94351.8828125	-84428.3281250	0.0000000	0.0000000	0.0000000	0.0000000
CN283	GLOBAL	96600.4765625	143082.6406250	0.0000000	0.0000000	0.0000000	0.0000000

--- LOADING - 40 ACCELERATION Z ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------/			/----------MOMENT----------/		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
CN269	GLOBAL	0.0000000	20101.7382812	109229.0156250	0.0000000	0.0000000	0.0000000
CN271	GLOBAL	0.0000000	19371.8671875	104126.4843750	0.0000000	0.0000000	0.0000000
CN273	GLOBAL	-3851.0280762	19238.0625000	101832.4531250	0.0000000	0.0000000	0.0000000
CN275	GLOBAL	3655.3400879	19680.0722656	104815.4687500	0.0000000	0.0000000	0.0000000
CN277	GLOBAL	0.0000000	-19690.6367188	0.0000000	0.0000000	0.0000000	0.0000000
CN279	GLOBAL	0.0000000	-19732.4121094	0.0000000	0.0000000	0.0000000	0.0000000
CN281	GLOBAL	3825.7993164	-19568.2363281	0.0000000	0.0000000	0.0000000	0.0000000
CN283	GLOBAL	-3630.1113281	-19287.4550781	0.0000000	0.0000000	0.0000000	0.0000000

--- LOADING - 41 HOOK FORCE X ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------/			/----------MOMENT----------/		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
CN269	GLOBAL	0.0000000	-2258.3908691	-3756.8649902	0.0000000	0.0000000	0.0000000
CN271	GLOBAL	0.0000000	828.3505859	4370.3217773	0.0000000	0.0000000	0.0000000
CN273	GLOBAL	2789.6579590	-2656.5966797	-4377.3632812	0.0000000	0.0000000	0.0000000
CN275	GLOBAL	2806.8291016	4086.6369629	3763.9062500	0.0000000	0.0000000	0.0000000
CN277	GLOBAL	0.0000000	-2106.4641113	0.0000000	0.0000000	0.0000000	0.0000000
CN279	GLOBAL	0.0000000	413.0404358	0.0000000	0.0000000	0.0000000	0.0000000
CN281	GLOBAL	2142.1015625	-1859.2692871	0.0000000	0.0000000	0.0000000	0.0000000
CN283	GLOBAL	2261.4113770	3552.6931152	0.0000000	0.0000000	0.0000000	0.0000000

--- LOADING - 42 HOOK FORCE Y ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------/			/----------MOMENT----------/		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
CN269	GLOBAL	0.0000000	12854.4453125	2710.0683594	0.0000000	0.0000000	0.0000000
CN271	GLOBAL	0.0000000	12386.2871094	-2710.3640137	0.0000000	0.0000000	0.0000000
CN273	GLOBAL	-2432.4116211	12368.4628906	-2711.0439453	0.0000000	0.0000000	0.0000000
CN275	GLOBAL	2432.6259766	12865.4394531	2711.3395996	0.0000000	0.0000000	0.0000000
CN277	GLOBAL	0.0000000	12484.4765625	0.0000000	0.0000000	0.0000000	0.0000000
CN279	GLOBAL	0.0000000	12281.6376953	0.0000000	0.0000000	0.0000000	0.0000000
CN281	GLOBAL	-2376.9138184	12264.4677734	0.0000000	0.0000000	0.0000000	0.0000000
CN283	GLOBAL	2376.6994629	12494.7832031	0.0000000	0.0000000	0.0000000	0.0000000

--- LOADING - 43 HOOK FORCE Z ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------//			----------MOMENT----------/		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
CN269	GLOBAL	0.0000000	546.8840942	2607.1796875	0.0000000	0.0000000	0.0000000
CN271	GLOBAL	0.0000000	521.8510132	2416.0241699	0.0000000	0.0000000	0.0000000
CN273	GLOBAL	-107.0458908	523.2947388	2399.7680664	0.0000000	0.0000000	0.0000000
CN275	GLOBAL	97.0342560	532.9122314	2577.0280762	0.0000000	0.0000000	0.0000000
CN277	GLOBAL	0.0000000	-533.5218506	0.0000000	0.0000000	0.0000000	0.0000000
CN279	GLOBAL	0.0000000	-535.4180908	0.0000000	0.0000000	0.0000000	0.0000000
CN281	GLOBAL	106.3402939	-535.8147583	0.0000000	0.0000000	0.0000000	0.0000000
CN283	GLOBAL	-96.3286591	-520.1873169	0.0000000	0.0000000	0.0000000	0.0000000

--- LOADING - 38 ACCELERATION Y ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
CN434	GLOBAL	0.0008008	-0.8027305	0.2016860	-0.0050146	-0.0000021	-0.0000078
CN437	GLOBAL	-0.0438704	-0.4202573	0.1945230	0.0012201	0.0010696	0.0024042
CN440	GLOBAL	0.0453659	-0.4185697	0.1941190	0.0012200	-0.0010672	-0.0024193
CN443	GLOBAL	0.0026678	-0.4215397	0.1945460	-0.0011148	-0.0001064	0.0015327
CN446	GLOBAL	-0.0011353	-0.4198042	0.1941590	-0.0011155	0.0001013	-0.0015481
CN450	GLOBAL	0.0008007	-2.0746419	0.2017020	0.0025073	-0.0000021	0.0000039

--- LOADING - 39 ACCELERATION X ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
CN434	GLOBAL	-3.2740078	0.0001601	0.0056241	-0.0000095	-0.0019979	0.0019058
CN437	GLOBAL	-3.3595412	0.2421615	-0.1196925	-0.0004967	0.0012773	0.0186669
CN440	GLOBAL	-3.3598778	-0.2423999	0.1198066	0.0004975	0.0012828	0.0187273
CN443	GLOBAL	-2.6952965	0.2495407	-0.1199887	0.0001732	0.0123048	0.0068476
CN446	GLOBAL	-2.6949542	-0.2497728	0.1202479	-0.0001741	0.0122788	0.0068966
CN450	GLOBAL	-1059.4307861	-0.0003800	0.0056241	0.0000048	-0.0019979	-1.5015736

--- LOADING - 40 ACCELERATION Z ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		DISPLACEMENT			ROTATION		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		DISPLACEMENT			ROTATION		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
CN434	GLOBAL	0.0038971	0.2243022	-53.5181313	0.0018594	0.0003277	0.0000205
CN437	GLOBAL	0.1237155	0.1184988	-0.7455872	-0.0057149	-0.0023575	-0.0012873
CN440	GLOBAL	-0.1052869	0.1149789	-0.7373911	-0.0056832	0.0021336	0.0010117
CN443	GLOBAL	0.0103478	0.1408877	-0.7574695	0.0017824	-0.0039139	0.0001947
CN446	GLOBAL	-0.0236225	0.1372187	-0.7490875	0.0017783	0.0033730	-0.0000907
CN450	GLOBAL	0.0038972	0.2237621	-1109.6749268	1.4996910	0.0003277	-0.0000102

--- LOADING - 41 HOOK FORCE X ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		DISPLACEMENT			ROTATION		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		DISPLACEMENT			ROTATION		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
CN434	GLOBAL	-0.0927424	0.0000049	0.0001991	0.0000000	-0.0000934	0.0000548
CN437	GLOBAL	-0.0966943	0.0070429	-0.0035115	-0.0000158	0.0000683	0.0005985
CN440	GLOBAL	-0.0967301	-0.0070421	0.0035111	0.0000157	0.0000690	0.0005993
CN443	GLOBAL	-0.0720061	0.0072432	-0.0035217	0.0000067	0.0004436	0.0001899
CN446	GLOBAL	-0.0719969	-0.0072422	0.0035263	-0.0000067	0.0004427	0.0001901
CN450	GLOBAL	-39.7978859	0.0000049	0.0001991	0.0000000	-0.0000934	-0.0564417

--- LOADING - 42 HOOK FORCE Y ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		DISPLACEMENT			ROTATION		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		DISPLACEMENT			ROTATION		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
CN434	GLOBAL	0.0000489	-0.2446983	0.0592484	-0.0019213	0.0000002	-0.0000002
CN437	GLOBAL	-0.0166822	-0.1118903	0.0565733	0.0003999	0.0004006	0.0007967

CN440	GLOBAL	0.0167496	-0.1118447	0.0565656	0.0003998	-0.0003999	-0.0007971
CN443	GLOBAL	0.0008628	-0.1114660	0.0565821	-0.0003951	-0.0000429	0.0004483
CN446	GLOBAL	-0.0008016	-0.1114205	0.0565810	-0.0003949	0.0000407	-0.0004488
CN450	GLOBAL	0.0000489	-0.7226574	0.0592545	0.0009607	0.0000002	0.0000001

--- LOADING - 43 HOOK FORCE Z ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
CN434	GLOBAL	0.0001991	0.0059255	-1.8104166	0.0000551	0.0000012	0.0000003
CN437	GLOBAL	0.0041308	0.0027077	-0.0208760	-0.0001690	-0.0000773	-0.0000429
CN440	GLOBAL	-0.0033770	0.0026846	-0.0206975	-0.0001676	0.0000698	0.0000326
CN443	GLOBAL	0.0003959	0.0034343	-0.0212329	0.0000518	-0.0001286	0.0000056
CN446	GLOBAL	-0.0007120	0.0033996	-0.0210477	0.0000516	0.0001103	-0.0000029
CN450	GLOBAL	0.0001991	0.0059255	-41.5155602	0.0563868	0.0000012	-0.0000001

Attachment 22

ANSYS Coupled Building/Crane Model Output, Crane at K, Static Loads

REACTIONS FROM 1g IN X DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 2 SUBSTEP= 1
TIME= 2.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
1	-2105.7	-13215.	174.72	86000.	-2980.7	
12	-4262.4	-513.97	3508.8	0.11956E+06	3362.4	
101	-0.17462E+06	-0.40374E+06	-27074.	-0.35667E+07	-13835.	
111	2974.8	-0.20396E+06	-16010.	-0.25084E+07	34664.	
123	-1144.3	-5913.2	0.0000	-549.95		
1101	-3431.6	0.42040E+06	-19314.	-0.31808E+07	-0.27907E+06	
1111	3740.1	0.27314E+06	-28009.	-0.35828E+07	0.25635E+06	
1123	-1144.3	5277.5	0.0000	-573.80		
2101	7230.1	-1541.7	2738.2	0.49019E+06	2285.4	
2111	2334.5	711.29	-1030.9	15131.	16600.	
2122	-77.220	94.856	-69.055	3319.8		
2123	-1144.3	778.33	0.56843E-13	-630.42		
3101	6159.4	-17994.	71499.	0.92963E+07	5047.8	
3111	-3296.3	13812.	62687.	0.86015E+07	6612.3	
3123	-1144.3	-862.43	0.18190E-11	-686.18		
4101	-0.16105E+06	-0.42329E+06	37777.	0.53315E+07	2416.1	
4111	-0.19803E+06	-0.42544E+06	367.64	0.49046E+06	12290.	
5101	5541.5	0.35337E+06	2311.3	34769.	-0.26055E+06	
5111	-3892.7	0.36272E+06	8483.8	0.44155E+06	0.19407E+06	
5112			-21253.			
6101	-7558.7	25315.	-550.75	29199.		
7101	-7473.5	48611.	-2533.7	-0.61373E+06	29490.	
7111	-11879.	50795.	2640.8	-49809.	6824.7	
8100	-2298.1	749.57	0.0000	-58.695		
8101	-7528.3	-1072.9	2044.3	0.89729E+06	29519.	
8111	-9712.8	11610.	1842.5	0.89756E+06	3039.9	
8156	-2567.7	-71475.	-0.12599E+06	-0.19012E+06	0.11157E+06	
8157	-2175.6	1633.7	2620.8	-0.33305E+06	0.20845E+06	
30112	-0.24416E+06	0.0000	0.0000	0.0000	0.0000	0.0000
31112	-0.21324E+06	0.0000	-0.73615E-04	0.0000	0.0000	0.0000
32112	-0.22818E+06	0.0000	43142.	0.0000	0.0000	0.0000
33112	0.0000	0.0000	0.18495E-03	0.0000	0.0000	0.0000

TOTAL VALUES
VALUE -0.12641E+07-0.14406E-05 0.12786E-05 0.13200E+08-0.44700E+06 0.32002E+06

REACTIONS FROM 1g IN Y DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 1 SUBSTEP= 1
TIME= 1.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
1	5.7289	64427.	-561.29	-0.16189E+06	-22.940	
12	5.0801	66254.	498.34	-0.13698E+06	-39.280	
101	-247.67	60702.	7.0937	-67435.	-95.680	
111	-4.1647	62492.	-1380.4	-0.13050E+06	45.385	
123	0.0000	11091.	0.35527E-14		-9.3233	
1101	-8.0111	39526.	159.63	-16012.	-554.88	
1111	-4.1873	38916.	-707.30	-48344.	102.73	
1123	-0.35527E-14	14844.	-0.35527E-14		-9.4005	
2101	13.255	40638.	474.08	14448.	-4.2662	
2111	-3.4064	40118.	-486.63	-24431.	-267.02	
2122	-0.43804E-01	3353.5	-11.092		-0.22280	
2123	0.17764E-14	13112.	-0.88818E-15		-9.5075	
3101	31.812	43887.	687.49	49872.	15.750	
3111	6.2281	39337.	-185.29	25757.	-425.80	

3123	0.0000	12866.	0.10658E-13	-9.5352	
4101	342.03	43570.	-822.80	-0.30709E+06	-27.479
4111	1169.0	42304.	-1762.4	-80909.	-554.35
5101	27.299	84744.	1223.3	22810.	655.73
5111	-13.925	0.11629E+06	-1666.9	-86757.	-2096.0
5112			889.24		
6101	-5.7335	0.12787E+06	-2274.2	78.974	
7101	-11.500	85408.	-2465.9	-0.32509E+06	74.055
7111	-623.62	0.19400E+06	5149.7	0.32341E+06	1337.4
8100	0.28422E-13	9608.0	0.0000	-3.1469	
8101	-6.8831	16339.	-96.059	-40735.	80.578
8111	-98.799	-13078.	-1094.3	-61221.	612.30
8156	0.46475E-01	2722.3	1221.8	17.750	-7.2624
8157	-1.2072	2793.2	2641.7	-397.84	233.06
30112	464.90	0.0000	0.0000	0.0000	0.0000 0.0000
31112	-805.70	0.0000	-0.39948E-06	0.0000	0.0000 0.0000
32112	-230.57	0.0000	562.16	0.0000	0.0000 0.0000
33112	0.0000	0.0000	0.12264E-05	0.0000	0.0000 0.0000

TOTAL VALUES
VALUE -0.30708E-05 0.12641E+07 0.20044E-08-0.10511E+07 -1506.0 225.80

REACTIONS FROM 1g IN Z DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 3 SUBSTEP= 1
TIME= 3.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
1	258.68	0.15398E+06	-15301.	-0.37462E+07	-210.29	
12	-248.77	-0.15432E+06	-0.13218E+06	-0.41540E+07	-722.28	
101	-2117.2	-9082.8	-299.12	-0.27645E+07	-1383.8	
111	-475.56	94203.	7151.5	-0.18572E+07	-3583.2	
123	-0.11369E-12	-329.08	-1144.3	-72.241		
1101	-2.6397	50977.	-3554.9	-0.38065E+07	-23178.	
1111	-495.28	-55579.	-4343.3	-0.38427E+07	-23377.	
1123	0.14211E-13	-424.04	-1144.3	-70.889		
2101	955.76	19979.	21402.	-0.49282E+06	78.426	
2111	-459.76	-16407.	36872.	0.14434E+07	-4298.7	
2122	-23.350	-983.61	932.00	-123.64		
2123	0.0000	-3079.6	-1144.3	-67.215		
3101	1076.9	22018.	-13428.	-0.47031E+07	309.13	
3111	-24.893	-20699.	-11913.	-0.45882E+07	-5028.5	
3123	0.35527E-14	208.10	-1144.3	-61.937		
4101	2411.9	-19913.	1478.1	-0.11159E+08	64.989	
4111	13866.	0.11315E+06	78671.	0.75804E+06	-6551.8	
5101	665.19	48314.	0.14133E+06	0.45608E+07	-22670.	
5111	47.740	-70165.	0.28607E+06	0.14935E+08	-25576.	
5112		-0.65711E+06				
6101	-135.51	41405.	-10001.	2694.8		
7101	155.28	26893.	-60193.	-0.23858E+08	3006.3	
7111	1099.5	-91863.	-0.22396E+06	-0.68150E+08	-33634.	
8100	0.11369E-11	4151.3	-2298.1	-222.04		
8101	-99.777	14561.	-54980.	-0.21368E+08	2684.2	
8111	1474.9	13785.	-42763.	-0.18518E+08	-33699.	
8156	-0.68674E-01	-79426.	-0.14204E+06	-184.94	-269.04	
8157	54.702	-81349.	-0.13165E+06	17616.	-11219.	
30112	-396.27	0.0000	0.0000	0.0000	0.0000	0.0000
31112	8258.0	0.0000	-0.12690E-03	0.0000	0.0000	0.0000
32112	-25845.	0.0000	-0.32745E+06	0.0000	0.0000	0.0000
33112	0.0000	0.0000	-0.13908E-03	0.0000	0.0000	0.0000

TOTAL VALUES
VALUE 0.11511E-05-0.18815E-05-0.12641E+07-0.15131E+09-0.15826E+06 -11489.

REACTIONS FROM UNIT FORCE IN X DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 4 SUBSTEP= 1
TIME= 4.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
1	131.12	-5131.1	141.19	59265.	-387.11	
12	111.24	4630.1	2443.9	67998.	128.84	
101	-24629.	-41373.	-2127.7	-0.39097E+06	-1282.6	
111	146.71	-1761.6	-2162.5	-0.39664E+06	1489.2	
123	0.0000	-325.50	0.0000	-63.873		
1101	-466.86	43590.	-3880.4	-0.55505E+06	-18093.	
1111	207.12	10244.	-3999.3	-0.56303E+06	9106.8	
1123	0.22737E-12	684.93	0.0000	-64.993		
2101	151.92	-294.03	535.51	94303.	-708.65	
2111	8.3039	116.88	-286.73	-9015.7	1153.1	
2122	7.4579	16.405	24.670	17.296		
2123	0.0000	167.26	0.0000	-67.699		
3101	394.13	-3116.4	12310.	0.16294E+07	-752.30	
3111	-175.46	2255.3	11361.	0.15548E+07	725.76	
3123	0.0000	-100.67	0.0000	-70.597		
4101	-24432.	-40512.	2596.2	0.37610E+06	310.35	
4111	-10600.	-19450.	-151.89	19189.	1031.2	
5101	543.66	41384.	918.71	21078.	-17884.	
5111	-213.69	18993.	1758.0	91496.	6626.8	
5112		-4589.8				
6101	-219.87	250.16	-5.2903	-1313.1		
7101	-187.28	103.78	-619.57	-0.28068E+06	-1230.3	
7111	-282.81	-4479.2	-125.85	-0.19141E+06	551.65	
8100	0.13642E-11	221.53	0.0000	1.7761		
8101	-218.90	-270.56	384.79	0.16858E+06	-1245.7	
8111	-153.67	4461.4	-26.412	87000.	357.72	
8156	-3.3693	-10558.	-18611.	-1134.6	794.76	
8157	-38.580	253.66	406.94	-12477.	7829.0	
30112	-23399.	0.0000	0.0000	0.0000	0.0000	0.0000
31112	-17012.	0.0000	-0.12294E-04	0.0000	0.0000	0.0000
32112	-65170.	0.0000	3705.1	0.0000	0.0000	0.0000
33112	0.0000	0.0000	0.33378E-04	0.0000	0.0000	0.0000

TOTAL VALUES

VALUE	-0.16550E+06	0.27527E-07	0.66054E-06	0.17824E+07	-35275.	8623.7

REACTIONS FROM UNIT FORCE IN Y DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 5 SUBSTEP= 1
TIME= 5.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
1	-2.5055	76604.	-775.37	-0.18617E+06	103.82	
12	4.0324	76872.	664.27	-11075.	-125.34	
101	-5833.0	32949.	1405.4	-79909.	222.24	
111	-1.9058	37849.	-4233.1	-0.29840E+06	-83.207	
123	-0.56843E-13	0.21451E+06	0.14211E-13	-109.46		
1101	-111.62	32406.	2200.5	-35865.	-608.82	
1111	2.7714	27677.	-4896.8	-0.32938E+06	161.42	
1123	0.14211E-13	0.21371E+06	0.0000	-109.44		
2101	-102.62	27539.	3848.2	0.19619E+06	280.70	
2111	29.962	27314.	-3192.4	-0.13569E+06	-134.77	
2122	0.42660E-01	275.94	-109.44	10.905		
2123	0.0000	0.21401E+06	0.71054E-14	-109.28		
3101	401.78	58026.	5218.7	0.71090E+06	552.00	
3111	-6.9446	56038.	5255.7	0.97028E+06	-145.44	
3123	-0.35527E-14	0.21516E+06	0.22737E-12	-108.12		
4101	-5839.4	43825.	-25718.	-0.44256E+07	-1140.0	

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 4111  394.68     39954.    -6883.7    -0.12783E+06 -133.89
 5101  255.22     81156.     9830.5     0.32562E+06  497.07
 5111 -13.266     84500.    -8944.3    -0.46552E+06 -404.87
 5112                      -2114.9
 6101 -30.348     19085.     405.94              152.61
 7101 -25.881     19676.    -6074.2    -0.20913E+07  162.18
 7111 -27.287     30283.     4544.8     0.17119E+07  675.31
 8100  0.42633E-13 19193.   -0.11102E-15          -6.6582
 8101 -29.916     212.81    -26.173    -5060.9      159.51
 8111 -46.220     76.196     869.05     0.23748E+06  689.88
 8156 -0.13355    -1076.5    -1897.5             -50.483      21.789
 8157 -2.8871     7180.4     11519.             -936.30      581.69
30112 -927.43     0.0000     0.0000     0.0000     0.0000     0.0000
31112  1025.9     0.0000    -0.25814E-05  0.0000     0.0000     0.0000
32112  10887.     0.0000     19104.     0.0000     0.0000     0.0000
33112  0.0000     0.0000     0.24137E-04  0.0000     0.0000     0.0000

TOTAL VALUES
VALUE  -0.26116E-06 0.16550E+07 0.10845E-05-0.40394E+07 -538.48      603.48
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REACTIONS FROM UNIT FORCE IN Z DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 6 SUBSTEP= 1
TIME= 6.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

```
 NODE      FX         FY         FZ         MX         MY         MZ
   1  0.89373     20154.    -1326.3    -0.44903E+06  95.032
  12   3.5574    -20182.    -16728.    -0.50382E+06  93.735
 101   2182.7     5093.5    -2481.2    -0.60744E+06  126.32
 111 -0.79015     10547.    -1278.4    -0.45142E+06  178.59
 123   0.0000    -100.15    0.85265E-13             10.268
1101   37.483     853.61    -3978.5    -0.89723E+06  596.39
1111   2.4978    -2645.8    -3990.4    -0.89765E+06  507.14
1123 -0.21316E-13 -30.441     0.0000                 10.274
2101   29.002     3086.0     627.72    -0.32177E+06  107.69
2111  -4.5657    -2336.0     3910.4     92480.       135.66
2122  0.60265    -135.45     86.286               -4.3949
2123 -0.14211E-13 -682.03    -0.11369E-12             10.269
3101  -23.004     4060.8    -7615.2    -0.13500E+07  77.606
3111  -3.0655    -4012.4    -6820.3    -0.12873E+07  102.55
3123 -0.14211E-13  72.778    -0.22737E-12             10.274
4101   2164.9     2902.9    -4144.9    -0.13141E+07 -325.48
4111  -218.27     3537.6     5718.8     89031.       97.016
5101  -16.078    -791.01     6474.8     0.15321E+06  509.00
5111  -3.7728    -675.82     8042.8     0.41860E+06  310.61
5112                       -31407.
6101   16.844     54.770     0.97089              211.72
7101   36.164     808.29    -2157.3    -0.94861E+06  227.30
7111  -7.0977    -1129.7    -2534.7    -0.10469E+07 -146.49
8100  0.14211E-13  60.726     0.0000                 8.3098
8101   19.986     742.98    -2045.7    -0.89996E+06  204.19
8111   3.7832    -471.58    -1909.8    -0.86504E+06 -158.21
8156 -0.18266    -13688.    -24129.             -58.808      47.853
8157 -0.77068    -5092.9    -8170.5             -248.19      158.07
30112 -1268.5     0.0000     0.0000     0.0000     0.0000     0.0000
31112 -644.81     0.0000    -0.23902E-04  0.0000     0.0000     0.0000
32112 -2307.5     0.0000    -69644.     0.0000     0.0000     0.0000
33112  0.0000     0.0000    -0.32298E-04  0.0000     0.0000     0.0000

TOTAL VALUES
VALUE  -0.36739E-08 0.66088E-07-0.16550E+06-0.11087E+08  2688.4      205.92
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DISPLACEMENTS FROM 1 g IN X DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 2 SUBSTEP= 1
TIME= 2.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
2	0.83481	0.25285E-02	-0.11941E-01	0.83490
19	4.1028	0.10607E-02	-0.26100E-01	4.1029
27	0.78045	0.16315E-02	-0.12331E-01	0.78055
38	5.5808	0.16937E-02	-0.27214E-01	5.5809
102	0.83083	0.21812E-01	0.74710E-01	0.83447
118	4.0936	0.28543E-01	0.23402	4.1004
128	0.77942	0.10311E-01	0.27021E-01	0.77996
146	0.51239	0.14466E-01	0.68456E-01	0.51715
152	5.5767	0.39841E-01	0.23413	5.5817
1102	0.72121	-0.33156E-01	0.75366E-01	0.72590
1118	4.0740	-0.50263E-01	0.23183	4.0809
1146	0.51070	0.46174E-02	0.77321E-01	0.51654
1153	5.5398	-0.11852	0.23266	5.5460
2102	0.71868	0.12159E-03	-0.12044E-01	0.71878
2118	4.0639	-0.22253E-02	-0.94296E-01	4.0650
2146	0.51076	-0.21608E-02	-0.84298E-02	0.51084
2152	5.5732	0.35728E-02	-0.94553E-01	5.5740
3102	0.77010	0.13515E-02	-0.19003	0.79320
3118	4.0423	-0.62174E-02	-0.44029	4.0662
3153	5.5413	-0.16158E-03	-0.43983	5.5588
4102	0.79937	0.25150E-01	-0.11372	0.80781
4118	4.0132	0.38820E-01	-0.17660	4.0173
4152	5.5699	0.92237E-01	-0.17730	5.5735
5102	0.74305	-0.26639E-01	0.25757E-02	0.74353
5118	4.0065	-0.50378E-01	0.16461	4.0102
5153	5.5422	-0.81802E-01	0.16500	5.5452
6118	4.0096	-0.24678E-01	0.15726	4.0127
6152	5.5660	-0.15796E-01	0.15727	5.5683
7118	4.0113	-0.28097E-02	0.11925	4.0131
7152	5.5646	0.34006E-02	0.11530	5.5658
8118	4.0048	-0.68785E-02	-0.15418	4.0077
8152	5.5646	-0.48186E-03	-0.15308	5.5667

MAXIMUM ABSOLUTE VALUES

NODE	38	1153	3118	152
VALUE	5.5808	-0.11852	-0.44029	5.5817

DISPLACEMENTS FROM 1g IN Y DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 1 SUBSTEP= 1
TIME= 1.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
2	0.34609E-02	-0.11155E-01	0.15038E-01	0.19041E-01
19	0.13116E-02	-0.16530E-01	0.17277E-01	0.23947E-01
27	0.20082E-02	-0.32050E-01	0.14651E-01	0.35297E-01
38	0.97309E-02	-0.30165E-01	0.15960E-01	0.35487E-01
102	0.34500E-02	-0.45851E-02	0.23488E-02	0.62002E-02
118	0.13091E-02	-0.12072E-01	0.73862E-02	0.14213E-01
128	0.20081E-02	-0.14480	0.84206E-02	0.14506
146	0.24194E-02	-0.31325E-02	0.22299E-02	0.45430E-02
152	0.97329E-02	-0.14355	0.70424E-02	0.14405
1102	0.31078E-02	-0.29181E-02	0.84250E-03	0.43455E-02
1118	0.13531E-02	-0.85323E-02	0.20017E-03	0.86412E-02
1146	0.24065E-02	-0.41582E-02	0.71323E-03	0.48570E-02
1153	0.11889E-01	-0.13492	-0.15197E-03	0.13545
2102	0.29098E-02	-0.30059E-02	0.35427E-03	0.41985E-02
2118	0.12262E-02	-0.86696E-02	0.31132E-02	0.92929E-02
2146	0.23653E-02	-0.39053E-02	0.20841E-03	0.45705E-02
2152	0.97397E-02	-0.15073	0.27871E-02	0.15107

3102 0.30386E-02-0.32380E-02-0.59028E-03 0.44795E-02
3118 0.11042E-02-0.84163E-02 0.18332E-02 0.86841E-02
3153 0.11931E-01-0.13158 0.14629E-02 0.13213
4102 0.30056E-02-0.31501E-02 0.91408E-02 0.10125E-01
4118 0.10097E-02-0.94358E-02 0.32271E-02 0.10023E-01
4152 0.97303E-02-0.15411 0.29674E-02 0.15445
5102 0.30721E-02-0.64528E-02 0.13979E-02 0.72822E-02
5118 -0.20099E-03-0.24366E-01-0.23356E-03 0.24368E-01
5153 0.11941E-01-0.12000 -0.12740E-02 0.12060
6118 -0.12063E-02-0.14175 -0.75882E-02 0.14196
6152 0.97055E-02-0.46118 -0.76004E-02 0.46134
7118 -0.20619E-02-0.23757E-01 0.10826E-01 0.26189E-01
7152 0.96944E-02-0.10123 0.96048E-02 0.10214
8118 -0.44925E-02 0.67029E-03 0.11748E-02 0.46917E-02
8152 0.96881E-02-0.46992E-02 0.12829E-02 0.10844E-01

MAXIMUM ABSOLUTE VALUES
NODE 5153 6152 19 6152
VALUE 0.11941E-01-0.46118 0.17277E-01 0.46134

DISPLACEMENTS FROM 1g IN Z DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 3 SUBSTEP= 1
TIME= 3.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE UX UY UZ USUM
2 0.23598E-01-0.29462E-01 0.36811 0.37004
19 -0.47881 0.12141E-01 0.61521 0.77967
27 0.16978E-01-0.79163E-02 0.38337 0.38383
38 0.44906 -0.77472E-02 0.61914 0.76489
102 0.23377E-01 0.53839E-03 0.97264E-01 0.10004
118 -0.48014 0.25290E-01 1.4145 1.4940
128 0.16973E-01-0.82511E-02 1.0681 1.0682
146 0.17431E-01 0.32571E-01 0.90999E-01 0.98211E-01
152 0.44833 -0.56942E-02 1.4134 1.4828
1102 0.15178E-01-0.40205E-02 0.12707 0.12803
1118 -0.48489 0.55472E-01 1.9473 2.0075
1146 0.16937E-01 0.38203E-01 0.12333 0.13021
1153 0.56529 0.13581E-01 1.9486 2.0289
2102 0.85758E-02-0.15757E-02 0.57269E-01 0.57929E-01
2118 -0.50404 0.47121E-01 1.8374 1.9059
2146 0.15521E-01 0.29894E-01 0.43642E-01 0.55129E-01
2152 0.44627 -0.13258E-01 1.8390 1.8924
3102 0.63622E-02-0.17257E-02 0.13987 0.14002
3118 -0.52275 0.42070E-01 1.7593 1.8358
3153 0.57423 0.18575E-01 1.7595 1.8509
4102 0.71888E-02 0.16208E-02 0.39415 0.39422
4118 -0.54015 0.79762E-01 3.8219 3.8607
4152 0.44357 -0.11676 3.8272 3.8546
5102 0.37261E-02-0.38200E-02 0.97195E-01 0.97341E-01
5118 -0.54979 0.20290 6.2160 6.2435
5153 0.57287 0.72894 6.1992 6.2681
6118 -0.55114 0.20684 5.1553 5.1888
6152 0.43781 0.66928E-01 5.1535 5.1725
7118 -0.55234 0.20215 4.2441 4.2846
7152 0.43586 1.2487 4.2217 4.4240
8118 -0.54739 0.78349E-01 3.3980 3.4427
8152 0.43484 -0.26687E-02 3.4101 3.4377

MAXIMUM ABSOLUTE VALUES
NODE 3153 7152 5118 5153
VALUE 0.57423 1.2487 6.2160 6.2681

DISPLACEMENTS FROM UNIT FORCE IN X DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 4 SUBSTEP= 1
TIME= 4.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
2	0.10345	0.98177E-03	-0.75634E-02	0.10373
19	0.16508	-0.94236E-03	-0.17865E-01	0.16605
27	0.27198	0.13882E-03	-0.78545E-02	0.27209
38	0.87225	0.16375E-03	-0.18530E-01	0.87245
102	0.10401	0.18941E-02	0.97055E-02	0.10448
118	0.16391	0.26282E-02	0.94845E-01	0.18939
128	0.26902	0.66206E-03	0.96059E-03	0.26902
146	0.11571	0.24800E-02	0.97565E-02	0.11614
152	0.87472	0.15237E-02	0.95165E-01	0.87988
1102	0.97678E-01	-0.34379E-02	0.12232E-01	0.98501E-01
1118	0.16083	-0.19482E-02	0.33794E-01	0.16435
1146	0.11367	0.84158E-03	0.12697E-01	0.11438
1153	0.79364	-0.67667E-02	0.33706E-01	0.79438
2102	0.10685	0.23190E-04	-0.23014E-02	0.10688
2118	0.16003	-0.41775E-03	-0.17443E-01	0.16098
2146	0.11364	-0.40287E-03	-0.15109E-02	0.11365
2152	0.87596	0.74061E-03	-0.17492E-01	0.87613
3102	0.10599	0.23352E-03	-0.33918E-01	0.11129
3118	0.15867	-0.10393E-02	-0.76750E-01	0.17626
3153	0.79570	0.27130E-04	-0.76654E-01	0.79938
4102	0.10683	0.19886E-02	-0.81450E-02	0.10716
4118	0.15700	0.20110E-02	-0.16922E-01	0.15793
4152	0.87590	0.76925E-02	-0.16986E-01	0.87610
5102	0.10350	-0.30832E-02	0.86220E-03	0.10355
5118	0.15767	-0.20485E-02	0.50271E-01	0.16550
5153	0.79696	-0.60670E-02	0.50367E-01	0.79857
6118	0.15889	0.18743E-03	0.54714E-01	0.16805
6152	0.87471	-0.47685E-03	0.54716E-01	0.87642
7118	0.15989	0.19795E-02	0.53887E-01	0.16874
7152	0.87254	0.14143E-02	0.52101E-01	0.87409
8118	0.15786	-0.17674E-02	-0.29393E-01	0.16058
8152	0.87063	-0.14241E-03	-0.28837E-01	0.87110

MAXIMUM ABSOLUTE VALUES

NODE	2152	4152	152	152
VALUE	0.87596	0.76925E-02	0.95165E-01	0.87988

DISPLACEMENTS FROM UNIT FORCE IN Y DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 5 SUBSTEP= 1
TIME= 5.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
2	0.23856E-01	-0.14657E-01	0.13134E-01	0.30927E-01
19	0.71425E-02	-0.26638E-01	0.19997E-01	0.34066E-01
27	0.17312E-01	-0.15209	0.97075E-02	0.15338
38	0.28626E-01	-0.11474	0.10892E-01	0.11875
102	0.23711E-01	-0.29144E-02	0.53020E-02	0.24470E-01
118	0.71478E-02	-0.18743E-01	0.80279E-02	0.21606E-01
128	0.17311E-01	-0.87890E-02	0.68552E-02	0.20589E-01
146	0.19252E-01	-0.29923E-01	0.43281E-02	0.35843E-01
152	0.28558E-01	-0.82387	0.63755E-02	0.82439
1102	0.23751E-01	-0.25558E-02	0.52100E-02	0.24450E-01
1118	0.72086E-02	-0.14979E-01	0.90517E-02	0.18928E-01
1146	0.18835E-01	-0.29589E-01	0.43777E-02	0.35347E-01
1153	0.33204E-01	-0.74731	0.72059E-02	0.74808
2102	0.26805E-01	-0.21720E-02	0.14171E-03	0.26893E-01
2118	0.75393E-02	-0.14603E-01	0.85312E-02	0.18517E-01
2146	0.17784E-01	-0.30132E-01	-0.31714E-03	0.34990E-01
2152	0.28394E-01	-0.82500	0.69926E-02	0.82551
3102	0.32680E-01	-0.44841E-02	-0.17636E-01	0.37405E-01
3118	0.78662E-02	-0.16495E-01	-0.48225E-02	0.18900E-01

```
  3153  0.33091E-01-0.74304    -0.65199E-02 0.74381
  4102  0.33428E-01-0.36995E-02 0.10519     0.11044
  4118  0.81808E-02-0.14978E-01 0.46397E-01 0.49436E-01
  4152  0.28192E-01-0.87731     0.45154E-01 0.87892
  5102  0.30740E-01-0.63550E-02 0.64163E-02 0.32039E-01
  5118  0.83647E-02-0.20850E-01 0.57044E-01 0.61308E-01
  5153  0.32765E-01-0.76146     0.55651E-01 0.76419
  6118  0.79909E-02-0.40262     0.71795E-02 0.40276
  6152  0.27942E-01 -3.1072     0.71556E-02  3.1073
  7118  0.76739E-02-0.15296E-01 0.12920E-01 0.21443E-01
  7152  0.27857E-01-0.80278     0.10995E-01 0.80334
  8118  0.69972E-02-0.64083E-03-0.42275E-02 0.82001E-02
  8152  0.27809E-01-0.12338E-01-0.40561E-02 0.30692E-01

 MAXIMUM ABSOLUTE VALUES
 NODE       4102       6152       4102       6152
 VALUE   0.33428E-01 -3.1072     0.10519     3.1073
```

DISPLACEMENTS FROM UNIT FORCE IN Z DIRECTION

```
 PRINT U    NODAL SOLUTION PER NODE

 ***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

 LOAD STEP=     6  SUBSTEP=     1
  TIME=    6.0000      LOAD CASE=   0

 THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

   NODE      UX          UY          UZ          USUM
     2 -0.87444E-02-0.38562E-02 0.49090E-01 0.50012E-01
    19  0.75690E-02 0.16054E-02 0.78762E-01 0.79141E-01
    27 -0.46615E-02-0.10429E-02 0.51895E-01 0.52114E-01
    38  0.94251E-02-0.10213E-02 0.79669E-01 0.80231E-01
   102 -0.87468E-02-0.28365E-03 0.16569E-01 0.18739E-01
   118  0.72533E-02 0.34524E-02 0.18824     0.18842
   128 -0.46627E-02-0.11473E-02 0.32998E-01 0.33346E-01
   146 -0.59936E-02 0.38427E-02 0.16621E-01 0.18082E-01
   152  0.91987E-02-0.11288E-02 0.18863     0.18886
  1102 -0.81716E-02-0.67324E-04 0.23909E-01 0.25267E-01
  1118  0.63655E-02 0.56399E-02 0.25827     0.25841
  1146 -0.61202E-02 0.54087E-02 0.24144E-01 0.25488E-01
  1153  0.15521E-03 0.47342E-02 0.25869     0.25874
  2102 -0.89667E-02-0.24339E-03 0.12279E-01 0.15206E-01
  2118  0.57131E-02 0.63952E-02 0.26183     0.26197
  2146 -0.65010E-02 0.40187E-02 0.10390E-01 0.12899E-01
  2152  0.86276E-02-0.30271E-02 0.26258     0.26274
  3102 -0.91229E-02-0.31911E-03 0.32755E-01 0.34004E-01
  3118  0.50335E-02 0.60816E-02 0.27724     0.27735
  3153  0.13525E-03 0.46033E-02 0.27762     0.27766
  4102 -0.91186E-02-0.12212E-03 0.37853E-01 0.38936E-01
  4118  0.43665E-02 0.63451E-02 0.28748     0.28758
  4152  0.80744E-02-0.11584E-01 0.28818     0.28853
  5102 -0.86562E-02 0.46498E-04 0.63492E-02 0.10735E-01
  5118  0.38764E-02 0.70533E-02 0.29820     0.29831
  5153  0.95132E-04 0.14165E-02 0.29904     0.29905
  6118  0.37480E-02 0.64386E-02 0.23747     0.23759
  6152  0.76911E-02 0.49559E-02 0.23748     0.23766
  7118  0.36327E-02 0.43117E-02 0.16102     0.16112
  7152  0.75907E-02 0.21149E-02 0.16176     0.16195
  8118  0.35679E-02 0.37194E-02 0.15327     0.15336
  8152  0.75424E-02-0.39038E-04 0.15386     0.15404

 MAXIMUM ABSOLUTE VALUES
 NODE         38       4152       5153       5153
 VALUE   0.94251E-02-0.11584E-01 0.29904     0.29905
```

Attachment 23

ANSYS Coupled Building/Crane Model Output, Crane at P, Static Loads

REACTIONS FROM 1g IN X DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 2 SUBSTEP= 1
TIME= 2.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
1	-2081.9	-12714.	165.23	82057.	-3003.7	
12	-4253.8	-583.75	3360.0	0.11516E+06	3354.4	
101	-0.17639E+06	-0.40907E+06	-27191.	-0.36135E+07	-13958.	
111	2965.2	-0.20385E+06	-15951.	-0.25379E+07	34679.	
123	-1144.3	-5962.0	0.22737E-12		-554.80	
1101	-3484.2	0.37002E+06	-19715.	-0.32744E+07	-0.28232E+06	
1111	3731.8	0.22052E+06	-26986.	-0.36220E+07	0.25706E+06	
1123	-1144.3	4649.8	-0.45475E-12		-578.60	
2101	7291.7	17055.	2884.0	0.49954E+06	2111.3	
2111	2326.0	20157.	-1281.7	4345.9	16312.	
2122	-77.771	230.20	-79.707		3317.5	
2123	-1144.3	1119.7	0.0000		-635.01	
3101	6182.6	19011.	72306.	0.94495E+07	4022.0	
3111	-3283.2	47632.	62122.	0.86974E+07	6943.4	
3123	-1144.3	-589.56	0.90949E-12		-690.56	
4101	-0.16117E+06	-0.42158E+06	37712.	0.55297E+07	2435.9	
4111	-0.19612E+06	-0.41952E+06	-1228.0	0.45506E+06	13139.	
5101	5563.5	0.42452E+06	-322.49	-76522.	-0.26176E+06	
5111	-3877.2	0.41573E+06	2020.4	0.10515E+06	0.19292E+06	
5112		-8302.6				
6101	-7554.8	-0.39148	0.66747		24473.	
7101	-7469.6	923.33	-2062.4	-0.91978E+06	24780.	
7111	-11638.	-20004.	-848.41	-0.72243E+06	6641.5	
8100	-2298.1	481.90	-0.28422E-13		-67.836	
8101	-7525.2	-874.40	1607.3	0.70469E+06	24817.	
8111	-9524.8	22383.	527.56	0.48084E+06	2981.1	
8156	-2567.9	-72669.	-0.12810E+06		-0.19017E+06	0.11160E+06
8157	-2171.3	2988.9	4795.0		-0.33163E+06	0.20759E+06
30112	-0.24517E+06	0.0000	0.0000	0.0000	0.0000	0.0000
31112	-0.21365E+06	0.0000	-0.76816E-04	0.0000	0.0000	0.0000
32112	-0.22733E+06	0.0000	44564.	0.0000	0.0000	0.0000
33112	0.0000	0.0000	0.18929E-03	0.0000	0.0000	0.0000

TOTAL VALUES
VALUE -0.12641E+07 -0.16991E-05 0.17339E-05 0.11357E+08 -0.46538E+06 0.31919E+06

REACTIONS FROM 1g IN Y DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 1 SUBSTEP= 1
TIME= 1.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
1	3.3514	64164.	-556.98	-0.15994E+06	-19.651	
12	3.0813	66239.	574.38	-0.13471E+06	-13.673	
101	209.13	62662.	-9.9836	-67642.	-66.086	
111	1.4864	63290.	-1370.6	-0.13020E+06	65.632	
123	-0.71054E-14	11142.	0.71054E-14		-8.0656	
1101	15.954	68409.	257.67	-21284.	275.96	
1111	1.5263	68019.	-947.85	-63952.	-220.72	
1123	0.35527E-14	15419.	-0.71054E-14		-8.1247	
2101	6.4709	0.17399E+06	1017.4	17685.	1.4910	
2111	4.8207	0.16945E+06	-1251.6	-63573.	-36.911	
2122	0.23564	3736.9	6.0303		0.20111	
2123	0.35527E-14	15869.	0.0000		-8.2215	
3101	32.763	90925.	853.90	48767.	11.448	
3111	-3.1207	85034.	-567.51	7307.5	-55.533	

```
 3123  0.17764E-14  13786.     0.35527E-14           -8.2452
 4101  -160.83      42035.     -826.65    -0.30993E+06 -32.281
 4111   96.273      37872.     -1696.0     -73055.     -52.641
 5101   19.958      40029.      1517.1      46294.     -180.15
 5111  -21.246      43608.     -1751.1     -91137.     -122.46
 5112                      -58.508
 6101  -6.6301      23074.      11.203              2.4716
 7101  -6.1382      23499.     -1037.4    -0.34730E+06  4.1734
 7111  -49.569      35978.      947.04     0.29336E+06  208.47
 8100 -0.28422E-13  9584.4    -0.33307E-15           -1.3438
 8101  -6.6093      16319.     -62.050     -26352.      4.1750
 8111  -18.399      14483.      85.269      56262.      162.89
 8156  0.62474E-01  2752.3      1274.6              24.572     -8.5079
 8157  -1.3626      2772.9      2609.2             -441.75      274.75
30112   576.00       0.0000      0.0000      0.0000      0.0000      0.0000
31112  -589.80       0.0000    -0.50646E-06  0.0000      0.0000      0.0000
32112  -107.40       0.0000      982.42      0.0000      0.0000      0.0000
33112   0.0000       0.0000     0.12764E-05  0.0000      0.0000      0.0000

 TOTAL VALUES
 VALUE  -0.14746E-05 0.12641E+07 0.56553E-07-0.10194E+07 -514.37      266.24
```

REACTIONS FROM 1g IN Z DIRECTION

```
 PRINT REACTION SOLUTIONS PER NODE

 ***** POST1 TOTAL REACTION SOLUTION LISTING *****

 LOAD STEP=     3  SUBSTEP=     1
  TIME=    3.0000      LOAD CASE=   0

 THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

   NODE      FX          FY          FZ          MX          MY          MZ
     1  -2.4714     0.14281E+06 -14891.    -0.35660E+07  2444.4
    12   76.248    -0.14335E+06-0.12443E+06-0.39520E+07  3247.5
   101   25011.      62876.      11343.    -0.35694E+07  3589.3
   111   3.4685      83737.      25016.    -0.20654E+07  5280.3
   123   0.0000      497.10     -1144.3               150.32
  1101   631.01      33576.      4491.8    -0.77254E+07  8761.4
  1111   49.448     -68492.      31516.    -0.65446E+07  9999.1
  1123   0.0000      12477.     -1144.3               152.80
  2101   269.33      81063.      68161.    -0.61188E+06  2585.9
  2111  -6.1773    -0.13301E+06 0.24471E+06 0.11185E+08  4002.1
  2122   7.8111     -4627.8      3723.7               -86.523
  2123 -0.22737E-12  49735.     -1144.3               154.63
  3101  -212.35      78465.     -20580.    -0.12006E+08  2479.8
  3111  -79.038     -92051.      24026.    -0.98966E+07  3080.8
  3123   0.0000      19419.     -1144.3               157.02
  4101   22437.      21602.     -24721.    -0.15029E+08 -2114.6
  4111  -3173.6      75439.      82434.     0.85722E+06  2502.6
  5101  -81.258     -7174.2      52303.     0.14623E+07  6453.2
  5111  -72.619     -6878.1      69501.     0.36637E+07  4606.4
  5112                      -0.21684E+06
  6101   201.68      218.01     -9045.4               3001.1
  7101   303.88      3744.3     -26734.    -0.86016E+07  3056.5
  7111  -55.659     -12613.     -32475.    -0.10116E+08 -1669.1
  8100 -0.85265E-13  710.13     -2298.1               70.675
  8101   218.95      4565.1     -25085.    -0.82110E+07  2921.4
  8111   123.70      3828.0     -23564.    -0.78025E+07 -1850.2
  8156  -2.8633    -0.12188E+06-0.21687E+06           -834.92      903.31
  8157  -11.453     -84680.    -0.13700E+06           -3674.9      2370.9
 30112  -19803.      0.0000      0.0000      0.0000      0.0000      0.0000
 31112  -7821.0      0.0000    -0.28515E-03  0.0000      0.0000      0.0000
 32112  -18012.      0.0000    -0.10023E+07  0.0000      0.0000      0.0000
 33112   0.0000      0.0000    -0.38777E-03  0.0000      0.0000      0.0000

 TOTAL VALUES
 VALUE  -0.78326E-06-0.97801E-06-0.12641E+07-0.82530E+08  58467.      3274.2
```

REACTIONS FROM UNIT FORCE IN X DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 4 SUBSTEP= 1
TIME= 4.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
1	132.57	-5134.5	141.26	59328.	-388.91	
12	109.50	4633.7	2447.2	68068.	127.39	
101	-24730.	-41552.	-2143.6	-0.39473E+06	-1288.6	
111	143.99	-1575.3	-2165.9	-0.39925E+06	1475.2	
123	0.0000	-323.52	0.28422E-13		-64.391	
1101	-468.16	43750.	-3895.2	-0.56201E+06	-18234.	
1111	204.34	10006.	-3957.9	-0.56754E+06	8981.0	
1123	0.0000	710.87	-0.56843E-13		-65.503	
2101	155.71	-135.17	543.26	94989.	-702.99	
2111	6.0798	196.18	-267.02	-7925.0	1149.2	
2122	7.3301	17.718	23.827		16.786	
2123	0.22737E-12	177.15	0.14211E-13		-68.189	
3101	398.44	-3243.6	12374.	0.16417E+07	-743.32	
3111	-175.31	2291.7	11344.	0.15635E+07	727.39	
3123	0.0000	-138.01	0.22737E-12		-71.067	
4101	-24527.	-40745.	2599.0	0.39305E+06	311.95	
4111	-10512.	-19320.	-275.97	16973.	1030.6	
5101	546.93	41636.	701.35	13586.	-18003.	
5111	-213.04	18888.	1182.0	61520.	6526.8	
5112		-3435.1				
6101	-221.81	-0.53394E-01	0.15727		-1284.3	
7101	-189.34	316.03	-675.54	-0.30390E+06	-1201.4	
7111	-277.68	-4668.0	-325.68	-0.25719E+06	550.72	
8100	-0.36380E-11	198.23	-0.71054E-14		0.99503	
8101	-220.96	-252.00	345.36	0.15125E+06	-1216.7	
8111	-149.94	4543.6	-133.02	53009.	359.37	
8156	-3.3695	-10639.	-18754.	-1135.4	793.57	
8157	-38.252	362.28	581.21	-12370.	7762.4	
30112	-23399.	0.0000	0.0000	0.0000	0.0000	0.0000
31112	-16938.	0.0000	-0.12525E-04	0.0000	0.0000	0.0000
32112	-65140.	0.0000	3745.9	0.0000	0.0000	0.0000
33112	0.0000	0.0000	0.33708E-04	0.0000	0.0000	0.0000

TOTAL VALUES

VALUE	-0.16550E+06	0.30483E-08	0.76130E-06	0.16244E+07	-35580.	8556.0

REACTIONS FROM UNIT FORCE IN Y DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 5 SUBSTEP= 1
TIME= 5.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
1	-1.6357	76605.	-775.44	-0.18619E+06	101.92	
12	2.9720	76872.	663.89	-11093.	-127.72	
101	-5871.9	32854.	1395.7	-81052.	217.18	
111	-3.4685	37934.	-4240.4	-0.29930E+06	-93.878	
123	-0.28422E-13	0.21451E+06	0.14211E-13		-109.68	
1101	-112.01	32470.	2193.7	-37263.	-690.06	
1111	1.1241	27567.	-4894.5	-0.33038E+06	83.926	
1123	-0.14211E-13	0.21371E+06	-0.28422E-13		-109.66	
2101	-99.961	27611.	3850.3	0.19632E+06	282.30	
2111	28.506	27382.	-3205.0	-0.13632E+06	-138.36	
2122	-0.31990E-01	276.08	-109.41		10.626	
2123	0.0000	0.21400E+06	0.53291E-14		-109.48	
3101	404.02	57988.	5236.6	0.71319E+06	555.15	
3111	-6.8679	56006.	5275.3	0.97257E+06	-145.46	
3123	-0.88818E-15	0.21516E+06	0.11369E-12		-108.32	
4101	-5878.2	43704.	-25720.	-0.44211E+07	-1140.0	

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 4111  445.65     40049.    -6919.9    -0.12854E+06 -134.99
 5101  257.05     81044.     9748.8     0.32287E+06  423.21
 5111 -12.902     84438.    -9159.8    -0.47674E+06 -463.42
 5112                       -1677.6
 6101 -31.460     19505.     396.79                  166.70
 7101 -27.094     19483.    -6090.3    -0.21007E+07  176.32
 7111 -24.185     30181.     4478.8     0.16894E+07  677.94
 8100 -0.11369E-12  19181.   -0.66613E-15             -7.0816
 8101 -31.081     219.88    -39.636    -10979.       173.79
 8111 -44.250     125.52     821.83     0.22311E+06  694.37
 8156 -0.13096    -1091.8    -1924.5                 -50.054      20.402
 8157 -2.6958     7211.9     11570.                  -874.38      542.92
30112 -909.49     0.0000     0.0000     0.0000       0.0000       0.0000
31112  1065.6     0.0000    -0.26203E-05  0.0000     0.0000       0.0000
32112  10852.     0.0000     19125.     0.0000       0.0000       0.0000
33112  0.0000     0.0000     0.24181E-04  0.0000     0.0000       0.0000

TOTAL VALUES
VALUE   0.86176E-07 0.16550E+07 0.11054E-05-0.41022E+07 -739.07      563.32
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REACTIONS FROM UNIT FORCE IN Z DIRECTION

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 PRINT REACTION SOLUTIONS PER NODE

 ***** POST1 TOTAL REACTION SOLUTION LISTING *****

 LOAD STEP=     6  SUBSTEP=     1
  TIME=    6.0000      LOAD CASE=   0

 THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

   NODE      FX         FY         FZ         MX         MY         MZ
     1 -0.76266     20149.    -1326.0    -0.44895E+06  98.981
    12  5.5096     -20178.    -16725.    -0.50374E+06  98.861
   101  2250.5      5273.2    -2462.6    -0.60558E+06  136.62
   111  2.0909      10389.    -1262.9    -0.44989E+06  199.75
   123  0.0000     -100.40     0.0000                   10.662
  1101  38.087      668.86    -3967.5    -0.89552E+06  750.16
  1111  5.5516     -2488.1    -3985.8    -0.89622E+06  653.81
  1123 -0.14211E-13 -33.836    -0.22737E-12             10.661
  2101  23.821      3089.0     624.59    -0.32198E+06  105.56
  2111 -1.8371     -2370.1     3932.0     93553.       144.94
  2122  0.74298    -135.40     86.063                  -3.8697
  2123 -0.28422E-13 -672.21    -0.56843E-13             10.634
  3101 -27.088      4059.2    -7645.9    -0.13532E+07  72.785
  3111 -3.1989     -3991.0    -6863.0    -0.12909E+07  105.99
  3123 -0.42633E-13  66.140     0.0000                  10.620
  4101  2228.8      3115.2    -4139.4    -0.13213E+07 -325.45
  4111 -312.55      3352.5     5779.0     90241.       103.05
  5101 -19.578     -950.93     6621.1     0.15826E+06  642.91
  5111 -4.4392     -498.62     8423.9     0.43843E+06  423.86
  5112                       -32174.
  6101  18.859      43.242     1.2224                  186.96
  7101  38.282      775.50    -2119.7    -0.93183E+06  202.38
  7111 -11.809     -1053.5    -2402.4    -0.10024E+07 -140.95
  8100 -0.71054E-14  75.859     0.56843E-13             9.1339
  8101  22.088      732.23    -2023.6    -0.89025E+06  179.10
  8111 -0.20920E-01 -502.59     -1842.4    -0.84427E+06 -154.61
  8156 -0.18815     -13669.     -24095.                 -59.804      50.648
  8157 -1.1278      -5145.2     -8254.3                 -363.71      230.51
 30112 -1306.6      0.0000      0.0000     0.0000       0.0000       0.0000
 31112 -717.61      0.0000     -0.23861E-04  0.0000     0.0000       0.0000
 32112 -2227.5      0.0000     -69678.     0.0000       0.0000       0.0000
 33112  0.0000      0.0000     -0.32347E-04  0.0000     0.0000       0.0000

 TOTAL VALUES
 VALUE  -0.13460E-07 0.51612E-07-0.16550E+06-0.10976E+08  3109.0      281.16
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DISPLACEMENTS FROM 1g IN X DIRECTION

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 PRINT U    NODAL SOLUTION PER NODE
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***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 2 SUBSTEP= 1
TIME= 2.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
2	0.84018	0.24327E-02	-0.11441E-01	0.84026
19	4.0902	0.10605E-02	-0.24999E-01	4.0903
27	0.78191	0.15619E-02	-0.11817E-01	0.78200
38	5.5988	0.16235E-02	-0.26093E-01	5.5989
102	0.83619	0.22130E-01	0.76120E-01	0.83994
118	4.0809	0.28945E-01	0.25153	4.0888
128	0.78088	0.10360E-01	0.27913E-01	0.78144
146	0.51505	0.14944E-01	0.69759E-01	0.51997
152	5.5946	0.39990E-01	0.25165	5.6004
1102	0.72555	-0.29183E-01	0.77885E-01	0.73030
1118	4.0612	-0.38219E-01	0.28082	4.0710
1146	0.51337	0.62089E-02	0.79985E-01	0.51960
1153	5.5636	-0.11589	0.28182	5.5720
2102	0.72323	-0.13451E-02	-0.12105E-01	0.72333
2118	4.0500	-0.61172E-02	-0.94774E-01	4.0511
2146	0.51345	-0.24533E-02	-0.84984E-02	0.51353
2152	5.5910	0.47227E-02	-0.95115E-01	5.5919
3102	0.77432	-0.15676E-02	-0.19386	0.79822
3118	4.0272	-0.14386E-01	-0.49104	4.0571
3153	5.5649	-0.56218E-02	-0.49057	5.5865
4102	0.80337	0.25010E-01	-0.12074	0.81277
4118	3.9971	0.36139E-01	-0.25284	4.0053
4152	5.5877	0.93549E-01	-0.25370	5.5942
5102	0.74720	-0.32250E-01	0.16976E-02	0.74790
5118	3.9895	-0.64668E-01	0.50197E-01	3.9903
5153	5.5661	-0.95291E-01	0.50701E-01	5.5671
6118	3.9921	-0.25659E-01	0.13439	3.9944
6152	5.5839	-0.14215E-01	0.13441	5.5855
7118	3.9934	0.73293E-02	0.17038	3.9971
7152	5.5824	0.47345E-02	0.16656	5.5849
8118	3.9855	-0.76987E-02	-0.12138	3.9874
8152	5.5824	-0.30979E-03	-0.12040	5.5837

MAXIMUM ABSOLUTE VALUES

NODE	38	1153	3118	152
VALUE	5.5988	-0.11589	-0.49104	5.6004

DISPLACEMENTS FROM 1g IN Y DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 1 SUBSTEP= 1
TIME= 1.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
2	0.28832E-02	-0.11104E-01	0.14778E-01	0.18708E-01
19	0.49850E-02	-0.16510E-01	0.16776E-01	0.24060E-01
27	0.19132E-02	-0.32007E-01	0.14384E-01	0.35143E-01
38	0.78842E-02	-0.30122E-01	0.15459E-01	0.34763E-01
102	0.28734E-02	-0.47138E-02	0.23253E-02	0.59903E-02
118	0.49896E-02	-0.12177E-01	0.75449E-02	0.15169E-01
128	0.19131E-02	-0.14484	0.82830E-02	0.14508
146	0.21853E-02	-0.31788E-02	0.22181E-02	0.44497E-02
152	0.78798E-02	-0.14318	0.71933E-02	0.14358
1102	0.28935E-02	-0.51961E-02	0.12019E-02	0.60677E-02
1118	0.50505E-02	-0.14243E-01	0.10810E-02	0.15151E-01
1146	0.21597E-02	-0.45323E-02	0.98337E-03	0.51160E-02
1153	0.88794E-02	-0.13158	0.49156E-03	0.13188
2102	0.27428E-02	-0.13523E-01	0.12218E-02	0.13853E-01
2118	0.49693E-02	-0.33948E-01	0.34754E-02	0.34485E-01
2146	0.20866E-02	-0.58311E-02	0.74323E-03	0.62377E-02
2152	0.78731E-02	-0.13200	0.22369E-02	0.13225

3102 0.29051E-02-0.69479E-02-0.25062E-03 0.75350E-02
3118 0.48848E-02-0.17419E-01 0.87505E-03 0.18112E-01
3153 0.89034E-02-0.12692 0.14254E-03 0.12723
4102 0.29243E-02-0.30536E-02 0.92329E-02 0.10155E-01
4118 0.48057E-02-0.85565E-02 0.42254E-02 0.10685E-01
4152 0.78547E-02-0.15328 0.39552E-02 0.15353
5102 0.27845E-02-0.29225E-02 0.11135E-02 0.41874E-02
5118 0.46032E-02-0.10371E-01 0.33086E-02 0.11820E-01
5153 0.88767E-02-0.13050 0.30214E-02 0.13084
6118 0.44646E-02-0.12578 -0.31387E-03 0.12586
6152 0.78251E-02-0.44565 -0.31668E-03 0.44572
7118 0.43466E-02-0.70429E-02 0.22736E-02 0.85828E-02
7152 0.78140E-02-0.12347 0.19304E-02 0.12373
8118 0.40502E-02-0.22585E-02-0.10996E-02 0.47659E-02
8152 0.78076E-02-0.46840E-02-0.10847E-02 0.91692E-02

MAXIMUM ABSOLUTE VALUES
NODE 3153 6152 19 6152
VALUE 0.89034E-02-0.44565 0.16776E-01 0.44572

DISPLACEMENTS FROM 1g IN Z DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 3 SUBSTEP= 1
TIME= 3.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE UX UY UZ USUM
2 -0.10245 -0.27325E-01 0.34450 0.36045
19 0.80217E-01 0.10739E-01 0.56704 0.57279
27 -0.41667E-01-0.73016E-02 0.35884 0.36132
38 0.57627E-01-0.71475E-02 0.57086 0.57381
102 -0.10251 -0.36071E-02 0.14614 0.17854
118 0.78769E-01 0.62913E-01 2.7940 2.7958
128 -0.41674E-01-0.86557E-02 1.0779 1.0787
146 -0.71221E-01 0.53116E-01 0.13633 0.16272
152 0.54202E-01 0.10916E-01 2.7950 2.7955
1102 -0.92262E-01-0.26481E-02 0.27733 0.29229
1118 0.74708E-01 0.14318 5.3005 5.3030
1146 -0.73331E-01 0.93007E-01 0.26975 0.29461
1153 0.52439E-02 0.32770 5.3004 5.3105
2102 -0.98505E-01-0.63934E-02 0.14570 0.17599
2118 0.72143E-01 0.23951 6.1594 6.1645
2146 -0.78802E-01 0.91057E-01 0.11313 0.16522
2152 0.42296E-01 1.3342 6.1275 6.2712
3102 -0.93824E-01-0.61722E-02 0.37886 0.39035
3118 0.69341E-01 0.17112 6.1264 6.1292
3153 -0.25301E-01 0.45164 6.1217 6.1384
4102 -0.92068E-01-0.61734E-03 0.47908 0.48784
4118 0.66521E-01 0.85834E-01 4.0043 4.0058
4152 0.30173E-01-0.14535 4.0101 4.0128
5102 -0.88126E-01 0.40253E-03 0.44307E-01 0.98638E-01
5118 0.62950E-01 0.55003E-01 2.1275 2.1291
5153 -0.39054E-01 0.21825E-01 2.1291 2.1296
6118 0.61123E-01 0.48629E-01 1.6686 1.6704
6152 0.24966E-01 0.25279E-01 1.6669 1.6673
7118 0.59543E-01 0.35069E-01 1.1551 1.1572
7152 0.23863E-01 0.41684E-01 1.1561 1.1571
8118 0.56315E-01 0.27227E-01 1.1541 1.1558
8152 0.23363E-01-0.45651E-03 1.1567 1.1570

MAXIMUM ABSOLUTE VALUES
NODE 102 2152 2118 2152
VALUE -0.10251 1.3342 6.1594 6.2712

DISPLACEMENTS FROM UNIT FORCE IN X DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 4 SUBSTEP= 1
TIME= 4.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
2	0.10389	0.98243E-03	-0.75737E-02	0.10417
19	0.16317	-0.94205E-03	-0.17873E-01	0.16415
27	0.27216	0.13908E-03	-0.78652E-02	0.27227
38	0.87329	0.16402E-03	-0.18536E-01	0.87349
102	0.10445	0.19024E-02	0.98073E-02	0.10492
118	0.16200	0.26388E-02	0.95904E-01	0.18828
128	0.26920	0.66066E-03	0.10018E-02	0.26920
146	0.11597	0.25074E-02	0.98518E-02	0.11641
152	0.87576	0.15645E-02	0.96224E-01	0.88103
1102	0.98088E-01	-0.34505E-02	0.12446E-01	0.98934E-01
1118	0.15892	-0.18028E-02	0.37249E-01	0.16324
1146	0.11393	0.90169E-03	0.12910E-01	0.11467
1153	0.79518	-0.62159E-02	0.37146E-01	0.79607
2102	0.10730	0.10660E-04	-0.23111E-02	0.10732
2118	0.15814	-0.42050E-03	-0.17254E-01	0.15908
2146	0.11390	-0.40376E-03	-0.15180E-02	0.11391
2152	0.87699	0.92082E-03	-0.17308E-01	0.87716
3102	0.10645	0.24351E-03	-0.34230E-01	0.11182
3118	0.15679	-0.11517E-02	-0.79996E-01	0.17603
3153	0.79722	-0.71674E-03	-0.79874E-01	0.80121
4102	0.10730	0.20021E-02	-0.87295E-02	0.10767
4118	0.15515	0.18540E-02	-0.23046E-01	0.15687
4152	0.87693	0.78874E-02	-0.23126E-01	0.87727
5102	0.10394	-0.31023E-02	0.73099E-03	0.10399
5118	0.15583	-0.23947E-02	0.40089E-01	0.16092
5153	0.79850	-0.80894E-02	0.40241E-01	0.79956
6118	0.15705	0.15121E-03	0.52516E-01	0.16560
6152	0.87573	-0.45489E-03	0.52518E-01	0.87731
7118	0.15805	0.22070E-02	0.58383E-01	0.16850
7152	0.87357	0.27102E-02	0.56569E-01	0.87540
8118	0.15601	-0.16821E-02	-0.26450E-01	0.15825
8152	0.87165	-0.12743E-03	-0.25902E-01	0.87204

MAXIMUM ABSOLUTE VALUES

NODE	2152	5153	152	152
VALUE	0.87699	-0.80894E-02	0.96224E-01	0.88103

DISPLACEMENTS FROM UNIT FORCE IN Y DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 5 SUBSTEP= 1
TIME= 5.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
2	0.24045E-01	-0.14657E-01	0.13135E-01	0.31073E-01
19	0.60148E-02	-0.26637E-01	0.20006E-01	0.33852E-01
27	0.17370E-01	-0.15209	0.97086E-02	0.15338
38	0.29147E-01	-0.11474	0.10901E-01	0.11888
102	0.23899E-01	-0.29092E-02	0.53241E-02	0.24657E-01
118	0.60206E-02	-0.18751E-01	0.79733E-02	0.21247E-01
128	0.17370E-01	-0.87894E-02	0.68659E-02	0.20642E-01
146	0.19350E-01	-0.29919E-01	0.43487E-02	0.35896E-01
152	0.29077E-01	-0.82386	0.63203E-02	0.82440
1102	0.23915E-01	-0.25609E-02	0.52461E-02	0.24617E-01
1118	0.60813E-02	-0.14949E-01	0.93744E-02	0.18664E-01
1146	0.18933E-01	-0.29583E-01	0.44143E-02	0.35399E-01
1153	0.34007E-01	-0.74723	0.75252E-02	0.74804
2102	0.26971E-01	-0.21777E-02	0.14100E-03	0.27059E-01
2118	0.64227E-02	-0.14623E-01	0.85561E-02	0.18118E-01
2146	0.17882E-01	-0.30134E-01	-0.31803E-03	0.35042E-01
2152	0.28910E-01	-0.82512	0.70216E-02	0.82566
3102	0.32862E-01	-0.44811E-02	-0.17682E-01	0.37586E-01
3118	0.67628E-02	-0.16487E-01	-0.48709E-02	0.18474E-01

```
  3153  0.33883E-01-0.74302    -0.65691E-02 0.74382
  4102  0.33620E-01-0.36920E-02 0.10503     0.11034
  4118  0.70919E-02-0.15028E-01 0.44633E-01 0.47626E-01
  4152  0.28704E-01-0.87725     0.43385E-01 0.87879
  5102  0.30913E-01-0.63458E-02 0.63649E-02 0.32193E-01
  5118  0.72827E-02-0.20978E-01 0.53217E-01 0.57664E-01
  5153  0.33558E-01-0.76222     0.51845E-01 0.76472
  6118  0.69103E-02-0.40263     0.63614E-02 0.40274
  6152  0.28454E-01 -3.1072     0.63375E-02  3.1074
  7118  0.65945E-02-0.15209E-01 0.14686E-01 0.22147E-01
  7152  0.28368E-01-0.80240     0.12752E-01 0.80300
  8118  0.59171E-02-0.60975E-03-0.32248E-02 0.67664E-02
  8152  0.28319E-01-0.12331E-01-0.30584E-02 0.31038E-01

 MAXIMUM ABSOLUTE VALUES
 NODE       1153       6152       4102       6152
 VALUE   0.34007E-01 -3.1072     0.10503     3.1074
```

DISPLACEMENTS FROM UNIT FORCE IN Z DIRECTION

```
 PRINT U    NODAL SOLUTION PER NODE

 ***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

 LOAD STEP=     6  SUBSTEP=     1
  TIME=    6.0000      LOAD CASE=   0

 THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

   NODE      UX          UY          UZ          USUM
     2 -0.90857E-02-0.38553E-02 0.49083E-01 0.50065E-01
    19  0.97238E-02 0.16042E-02 0.78735E-01 0.79349E-01
    27 -0.47614E-02-0.10427E-02 0.51887E-01 0.52115E-01
    38  0.84224E-02-0.10211E-02 0.79640E-01 0.80091E-01
   102 -0.90874E-02-0.29378E-03 0.16539E-01 0.18873E-01
   118  0.94072E-02 0.34746E-02 0.18855     0.18882
   128 -0.47626E-02-0.11466E-02 0.32980E-01 0.33342E-01
   146 -0.61657E-02 0.38391E-02 0.16592E-01 0.18113E-01
   152  0.81971E-02-0.11319E-02 0.18895     0.18913
  1102 -0.84631E-02-0.52752E-04 0.23869E-01 0.25325E-01
  1118  0.85197E-02 0.56083E-02 0.25816     0.25837
  1146 -0.62926E-02 0.54066E-02 0.24103E-01 0.25491E-01
  1153 -0.13982E-02 0.46878E-02 0.25860     0.25864
  2102 -0.92561E-02-0.24363E-03 0.12280E-01 0.15380E-01
  2118  0.78550E-02 0.64130E-02 0.26177     0.26197
  2146 -0.66727E-02 0.40192E-02 0.10392E-01 0.12987E-01
  2152  0.76319E-02-0.27847E-02 0.26252     0.26264
  3102 -0.94468E-02-0.31895E-03 0.32810E-01 0.34145E-01
  3118  0.71581E-02 0.60584E-02 0.27685     0.27700
  3153 -0.13999E-02 0.44571E-02 0.27724     0.27728
  4102 -0.94599E-02-0.13549E-03 0.38113E-01 0.39270E-01
  4118  0.64713E-02 0.64317E-02 0.29040     0.29054
  4152  0.70862E-02-0.11670E-01 0.29111     0.29143
  5102 -0.89667E-02 0.58606E-04 0.64375E-02 0.11038E-01
  5118  0.59734E-02 0.72660E-02 0.30501     0.30515
  5153 -0.14408E-02 0.27491E-02 0.30582     0.30584
  6118  0.58442E-02 0.64561E-02 0.23884     0.23900
  6152  0.67055E-02 0.49518E-02 0.23886     0.23900
  7118  0.57283E-02 0.41614E-02 0.15781     0.15797
  7152  0.66065E-02 0.12738E-02 0.15857     0.15871
  8118  0.56681E-02 0.36681E-02 0.15162     0.15177
  8152  0.65593E-02-0.48766E-04 0.15222     0.15236

 MAXIMUM ABSOLUTE VALUES
 NODE         19       4152       5153       5153
 VALUE   0.97238E-02-0.11670E-01 0.30582     0.30584
```

Attachment 24

ANSYS Coupled Building/Crane Model Output, Crane at S, Static Loads

REACTIONS FROM 1g IN X DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 2 SUBSTEP= 1
TIME= 2.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
1	-2078.8	-72220.	-43.099	43954.	-2596.1	
12	-4217.3	-69752.	-995.25	0.17067E+06	2835.2	
101	-0.17463E+06	-0.33648E+06	-27115.	-0.35534E+07	-14374.	
111	2981.5	-0.14196E+06	-19658.	-0.26724E+07	35254.	
123	-1144.3	-5749.3	0.11369E-12		-549.43	
1101	-3441.1	0.41814E+06	-19531.	-0.31047E+07	-0.28181E+06	
1111	3759.1	0.27053E+06	-28566.	-0.35220E+07	0.25891E+06	
1123	-1144.3	5053.4	0.0000		-573.31	
2101	7256.4	-1776.2	2471.5	0.49138E+06	366.64	
2111	2350.0	914.32	-1435.5	-1209.5	17561.	
2122	-76.288	98.204	-70.481		3323.1	
2123	-1144.3	808.06	0.0000		-629.87	
3101	6133.1	-17916.	71709.	0.93074E+07	2279.3	
3111	-3284.0	13703.	62898.	0.86129E+07	8026.7	
3123	-1144.3	-864.07	0.0000		-685.59	
4101	-0.16017E+06	-0.41932E+06	37327.	0.54088E+07	2398.4	
4111	-0.19666E+06	-0.41920E+06	-713.97	0.46205E+06	14119.	
5101	5530.3	0.42231E+06	-453.86	-81369.	-0.26211E+06	
5111	-3881.7	0.41576E+06	1796.1	93481.	0.19435E+06	
5112		-7797.7				
6101	-7537.0	-0.38965	0.65649		21775.	
7101	-7452.3	906.56	-2017.8	-0.90006E+06	22089.	
7111	-11646.	-21905.	-701.57	-0.68733E+06	6747.9	
8100	-2298.1	465.67	-0.56843E-13		-63.623	
8101	-7507.1	-848.86	1544.0	0.67691E+06	22131.	
8111	-9499.2	24340.	314.58	0.42601E+06	3055.0	
8156	-2567.8	-67567.	-0.11910E+06		-0.19012E+06	0.11162E+06
8157	-2173.3	2518.8	4040.9		-0.33226E+06	0.20802E+06
30112	-0.24469E+06	0.0000	0.0000	0.0000	0.0000	0.0000
31112	-0.21475E+06	0.0000	-0.70504E-04	0.0000	0.0000	0.0000
32112	-0.22903E+06	0.0000	46099.	0.0000	0.0000	0.0000
33112	0.0000	0.0000	0.18496E-03	0.0000	0.0000	0.0000

TOTAL VALUES

VALUE	-0.12641E+07	-0.17003E-05	0.61252E-06	0.11171E+08	-0.47057E+06	0.31964E+06

REACTIONS FROM 1g IN Y DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 1 SUBSTEP= 1
TIME= 1.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
1	-9.3920	0.14782E+06	-560.05	-0.23528E+06	-248.44	
12	-12.617	0.14886E+06	649.69	-0.35169E+06	157.11	
101	-390.86	0.20586E+06	-333.73	-0.22398E+06	-1137.0	
111	-75.249	0.19990E+06	-3936.6	-0.38012E+06	1551.0	
123	-0.71054E-14	13774.	0.14211E-13		-10.823	
1101	-55.084	22500.	-367.98	-67332.	-576.83	
1111	-49.551	23230.	-704.04	-79205.	219.65	
1123	0.71054E-14	14685.	-0.14211E-13		-10.873	
2101	-42.569	40670.	478.69	10830.	-216.28	
2111	-48.070	40094.	-445.96	-23481.	66.081	
2122	-1.4471	3352.8	-9.7953		-4.9970	
2123	0.0000	13105.	0.0000		-10.798	
3101	8.1104	43874.	692.66	50925.	-137.00	
3111	-1.6231	39340.	-180.99	26744.	-4.6159	

```
 3123  0.71054E-14  12866.    -0.71054E-14           -10.631
 4101  -234.14      44860.     -822.48    -0.31499E+06 -29.295
 4111   1139.9      41601.     -1690.0     -78283.     -106.39
 5101  -4.5154      37210.      1501.6      45217.      1143.3
 5111  -14.418      39938.     -1763.9     -91807.     -1474.1
 5112                      -30.744
 6101  -5.5022      23074.      11.182              -252.92
 7101  -5.3692      23497.     -1034.0    -0.34569E+06 -250.87
 7111   6.1636      36414.      934.79     0.29350E+06  76.838
 8100   0.0000      9579.7    -0.44409E-15           -1.2047
 8101  -5.5321      16320.     -60.684     -25742.     -250.11
 8111   18.926      14020.      106.01      59732.      62.753
 8156  0.14939      4967.2      5179.0              100.84      53.831
 8157   2.6878      2740.1      2556.6              868.54     -546.57
30112   1179.6      0.0000      0.0000      0.0000      0.0000      0.0000
31112  -1428.7      0.0000    -0.14744E-05  0.0000      0.0000      0.0000
32112   29.079      0.0000     -169.27      0.0000      0.0000      0.0000
33112   0.0000      0.0000     0.12528E-05  0.0000      0.0000      0.0000

 TOTAL VALUES
 VALUE  -0.33369E-05 0.12641E+07 0.95767E-07-0.17306E+07 -487.03     -492.74
```

REACTIONS FROM 1g IN Z DIRECTION

```
 PRINT REACTION SOLUTIONS PER NODE

 ***** POST1 TOTAL REACTION SOLUTION LISTING *****

 LOAD STEP=     3  SUBSTEP=     1
  TIME=    3.0000      LOAD CASE=   0

 THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

   NODE      FX          FY          FZ          MX          MY          MZ
     1  -4.4379     0.52434E+06 -26162.    -0.86758E+07  188.38
    12  -35.494    -0.52249E+06-0.34717E+06-0.98766E+07 -7905.1
   101  -4161.7      91113.     -1713.0    -0.68328E+07  182.28
   111  -15.971      74498.      0.13690E+06 0.94391E+06 -12538.
   123   0.0000      54057.     -1144.3               -13.033
  1101  -281.07      27056.      377.63     -0.62481E+07  3297.1
  1111  -15.349     -20873.     -3225.0     -0.64073E+07 -9597.5
  1123  0.42633E-13 -1628.5     -1144.3               -12.546
  2101  -154.12      28540.      32240.     -0.41562E+06  465.88
  2111  -11.161     -23851.      52269.      0.21018E+07 -10173.
  2122 -0.53577     -1220.1      1052.3               -45.538
  2123   0.0000     -4075.3     -1144.3               -12.759
  3101   358.74      22207.     -10900.     -0.44337E+07  687.06
  3111  -45.417     -21200.     -9184.7     -0.43011E+07 -9046.7
  3123   0.0000      206.31     -1144.3               -11.879
  4101  -1357.6      7514.8     -10412.     -0.80435E+07 -352.98
  4111  -2488.3      28979.      45037.      0.30946E+06 -7887.5
  5101   54.390      2327.8      59045.      0.17340E+07  3004.7
  5111  -40.145      11775.      77183.      0.40635E+07 -3906.2
  5112                      -0.23457E+06
  6101   11.837      217.97     -9045.3               684.23
  7101   139.29      3849.2     -27103.     -0.87714E+07  811.24
  7111  -256.16      9190.9     -34634.     -0.10625E+08 -2327.9
  8100 -0.90949E-12  1094.1     -2298.1                61.764
  8101   32.902      4391.5     -24861.     -0.81129E+07  671.34
  8111  -376.79     -18625.     -21263.     -0.73057E+07 -2284.6
  8156 -0.22903     -0.22607E+06-0.40053E+06           -515.73     -719.12
  8157  -9.8521     -51322.     -83481.               -3296.2      1822.7
 30112  -1509.9      0.0000      0.0000      0.0000      0.0000      0.0000
 31112   41.764      0.0000     -0.21776E-03  0.0000      0.0000      0.0000
 32112   10125.      0.0000     -0.41713E+06  0.0000      0.0000      0.0000
 33112   0.0000      0.0000     -0.13405E-03  0.0000      0.0000      0.0000

 TOTAL VALUES
 VALUE  -0.61425E-06-0.16207E-05-0.12641E+07-0.80897E+08 -59874.      1103.6
```

DISPLACEMENTS FROM 1g IN X DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 4 SUBSTEP= 1
TIME= 4.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
1	130.02	-4301.5	117.19	47828.	-392.87	
12	112.50	3734.8	1929.6	54585.	129.06	
101	-24558.	-41296.	-2076.2	-0.37828E+06	-1290.1	
111	148.53	-1889.7	-2450.7	-0.40163E+06	1502.1	
123	-0.90949E-12	-465.92	0.14211E-13		-63.362	
1101	-465.50	43366.	-3889.0	-0.54461E+06	-18010.	
1111	209.06	10378.	-4035.7	-0.55380E+06	9195.0	
1123	0.22737E-12	670.39	-0.11369E-12		-64.485	
2101	149.44	-321.05	502.48	94192.	-718.82	
2111	9.8761	140.53	-334.33	-10985.	1157.2	
2122	7.5402	16.791	24.294	17.659		
2123	0.22737E-12	170.44	0.71054E-14		-67.202	
3101	390.26	-3099.7	12302.	0.16265E+07	-763.71	
3111	-175.50	2238.2	11356.	0.15523E+07	727.55	
3123	0.45475E-12	-100.49	0.22737E-12		-70.113	
4101	-24371.	-40409.	2548.1	0.38124E+06	308.06	
4111	-10649.	-19595.	-235.29	17921.	1034.9	
5101	541.27	41303.	693.88	13349.	-17811.	
5111	-214.00	19188.	1170.3	60908.	6688.7	
5112		-3407.2				
6101	-218.49	-0.53168E-01	0.15513		-1330.9	
7101	-186.08	309.99	-661.76	-0.29786E+06	-1248.5	
7111	-284.57	-4623.2	-323.31	-0.25372E+06	568.70	
8100	0.0000	199.44	-0.53291E-14		2.1600	
8101	-217.63	-246.35	330.23	0.14461E+06	-1263.9	
8111	-155.76	4501.3	-138.07	48622.	374.68	
8156	-3.3705	-10195.	-17971.	-1134.5	796.03	
8157	-38.773	326.72	524.14	-12539.	7868.0	
30112	-23407.	0.0000	0.0000	0.0000	0.0000	0.0000
31112	-17065.	0.0000	-0.11908E-04	0.0000	0.0000	0.0000
32112	-65190.	0.0000	4023.9	0.0000	0.0000	0.0000
33112	0.0000	0.0000	0.33299E-04	0.0000	0.0000	0.0000

TOTAL VALUES

VALUE	-0.16550E+06	0.17750E-07	0.57077E-06	0.16012E+07	-35063.	8664.0

DISPLACEMENTS FROM 1g IN Y DIRECTION

PRINT REACTION SOLUTIONS PER NODE

***** POST1 TOTAL REACTION SOLUTION LISTING *****

LOAD STEP= 5 SUBSTEP= 1
TIME= 5.0000 LOAD CASE= 0

THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	FX	FY	FZ	MX	MY	MZ
1	0.68595	76012.	-760.10	-0.17878E+06	101.23	
12	0.21343	77428.	996.21	-2338.3	-133.97	
101	-5986.9	32750.	1344.0	-91137.	208.12	
111	-7.5172	38230.	-4068.8	-0.29761E+06	-121.61	
123	-0.85265E-13	0.21460E+06	0.14211E-13		-110.41	
1101	-113.49	32767.	2194.2	-44926.	-896.12	
1111	-3.1163	27335.	-4887.1	-0.33775E+06	-119.99	
1123	0.28422E-13	0.21372E+06	0.0000		-110.38	
2101	-93.347	27559.	3875.9	0.19674E+06	289.84	
2111	24.823	27297.	-3156.8	-0.13414E+06	-151.25	
2122	-0.22556	275.55	-108.82	9.8462		
2123	0.71054E-14	0.21401E+06	0.0000		-110.17	
3101	410.50	58009.	5279.7	0.71923E+06	566.36	
3111	-6.7104	56052.	5309.2	0.97802E+06	-150.76	
3123	-0.88818E-15	0.21516E+06	0.11369E-12		-108.98	
4101	-5981.3	43431.	-25693.	-0.44170E+07	-1138.3	

```
 4111  571.49     40325.     -6926.2    -0.12892E+06 -143.90
 5101  262.01     81318.      9750.7     0.32289E+06  245.64
 5111 -12.037     84161.     -9154.0    -0.47643E+06 -616.47
 5112                       -1691.2
 6101 -34.322     19505.      396.79              200.75
 7101 -29.931     19489.     -6102.3    -0.21059E+07  210.80
 7111 -17.946     30152.      4476.7     0.16865E+07  661.50
 8100 -0.56843E-13  19180.    -0.88818E-15           -8.1401
 8101 -33.957     214.84     -25.883     -4941.0      208.42
 8111 -39.160     153.07      827.29     0.22726E+06  680.51
 8156 -0.12441    -1344.4     -2369.9              -48.996      16.831
 8157  -2.2172     7217.0      11578.              -719.60      445.83
30112  -863.99     0.0000      0.0000      0.0000      0.0000      0.0000
31112   1170.2     0.0000    -0.28889E-05  0.0000      0.0000      0.0000
32112   10786.     0.0000      18915.      0.0000      0.0000      0.0000
33112   0.0000     0.0000     0.24308E-04  0.0000      0.0000      0.0000

 TOTAL VALUES
 VALUE  -0.81636E-06 0.16550E+07 0.12255E-05-0.40893E+07 -1306.0      462.66
```

DISPLACEMENTS FROM 1g IN Z DIRECTION

```
 PRINT REACTION SOLUTIONS PER NODE

  ***** POST1 TOTAL REACTION SOLUTION LISTING *****

 LOAD STEP=     6  SUBSTEP=     1
  TIME=    6.0000      LOAD CASE=   0

 THE FOLLOWING X,Y,Z SOLUTIONS ARE IN THE GLOBAL COORDINATE SYSTEM

   NODE      FX         FY         FZ         MX         MY         MZ
     1  -1.2093     20231.     -1329.5    -0.45054E+06  98.783
    12   6.0384    -20262.     -16797.    -0.50562E+06  99.559
   101   2276.4     5350.5     -2452.7    -0.60342E+06  137.23
   111   2.8859     10293.     -1299.7    -0.45020E+06  204.25
   123   0.0000    -119.70     0.56843E-13             10.821
  1101   38.391     603.57     -3970.3    -0.89387E+06  789.53
  1111   6.3768    -2448.4     -3985.9    -0.89445E+06  692.06
  1123 -0.21316E-13 -32.896     0.11369E-12             10.818
  2101   22.617     3080.7      617.90    -0.32215E+06  103.69
  2111  -1.1414    -2331.0      3899.6      91973.      146.76
  2122  0.78060    -135.28      85.940               -3.7054
  2123 -0.14211E-13 -681.77    -0.56843E-13             10.786
  3101  -28.409     4068.4     -7659.7    -0.13555E+07  70.143
  3111  -3.2304    -4017.6     -6860.2    -0.12924E+07  106.42
  3123   0.0000     73.285    -0.22737E-12             10.766
  4101   2251.9     3172.2     -4147.1    -0.13228E+07 -326.01
  4111  -336.78     3301.0      5782.9      90359.      104.21
  5101  -20.544    -1007.8      6620.4     0.15824E+06  677.56
  5111  -4.6064    -445.07      8422.4     0.43835E+06  452.88
  5112                        -32170.
  6101   19.414     43.242      1.2220              180.15
  7101   38.831     774.45     -2117.3    -0.93079E+06  195.49
  7111  -13.021    -1046.6     -2402.0    -0.10018E+07 -137.77
  8100 -0.21316E-13  76.101     0.42633E-13             9.3414
  8101   22.646     733.23     -2026.3    -0.89144E+06  172.18
  8111  -1.0288    -509.06     -1843.4    -0.84507E+06 -151.92
  8156 -0.18910    -13615.     -23999.              -59.926      51.224
  8157  -1.2200    -5148.6     -8259.8              -393.52      249.20
 30112  -1313.2     0.0000      0.0000      0.0000      0.0000      0.0000
 31112  -738.38     0.0000    -0.23799E-04  0.0000      0.0000      0.0000
 32112  -2223.3     0.0000     -69610.      0.0000      0.0000      0.0000
 33112   0.0000     0.0000    -0.32403E-04  0.0000      0.0000      0.0000

 TOTAL VALUES
 VALUE  -0.69369E-07 0.35874E-07-0.16550E+06-0.10981E+08  3210.6      300.42
```

DISPLACEMENTS FROM 1g IN X DIRECTION

```
 PRINT U    NODAL SOLUTION PER NODE
```

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 2 SUBSTEP= 1
TIME= 2.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
2	0.83642	0.13818E-01	-0.10342E-01	0.83660
19	4.1083	0.21178E-01	-0.11681E-01	4.1083
27	0.77955	0.17188E-01	-0.95744E-02	0.77980
38	5.5845	0.17448E-01	-0.13257E-01	5.5846
102	0.83244	0.16497E-01	0.74175E-01	0.83590
118	4.0989	0.13054E-01	0.18242	4.1030
128	0.77852	0.13611E-01	0.28039E-01	0.77914
146	0.51212	0.12774E-01	0.67784E-01	0.51675
152	5.5806	0.20841E-01	0.18283	5.5836
1102	0.72178	-0.32979E-01	0.72339E-01	0.72615
1118	4.0794	-0.50842E-01	0.16971	4.0833
1146	0.51045	0.35484E-02	0.74397E-01	0.51585
1153	5.5479	-0.12305	0.17056	5.5519
2102	0.71835	0.14009E-03	-0.12566E-01	0.71846
2118	4.0674	-0.27860E-02	-0.11703	4.0691
2146	0.51051	-0.24576E-02	-0.88174E-02	0.51060
2152	5.5775	0.38208E-02	-0.11735	5.5788
3102	0.76952	0.13450E-02	-0.19004	0.79264
3118	4.0438	-0.59658E-02	-0.43025	4.0667
3153	5.5499	-0.23640E-04	-0.42975	5.5665
4102	0.79852	0.24883E-01	-0.11727	0.80747
4118	4.0130	0.36546E-01	-0.22661	4.0195
4152	5.5745	0.92026E-01	-0.22740	5.5799
5102	0.74271	-0.32084E-01	0.16280E-02	0.74340
5118	4.0047	-0.64673E-01	0.44680E-01	4.0055
5153	5.5511	-0.95266E-01	0.45178E-01	5.5521
6118	4.0070	-0.25534E-01	0.12985	4.0092
6152	5.5709	-0.14107E-01	0.12986	5.5724
7118	4.0082	0.75659E-02	0.16684	4.0116
7152	5.5695	0.47022E-02	0.16306	5.5719
8118	3.9997	-0.80690E-02	-0.11661	4.0014
8152	5.5696	-0.29936E-03	-0.11564	5.5708

MAXIMUM ABSOLUTE VALUES

NODE	38	1153	3118	38
VALUE	5.5845	-0.12305	-0.43025	5.5846

DISPLACEMENTS FROM 1g IN Y DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 1 SUBSTEP= 1
TIME= 1.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
2	0.47729E-02	-0.27111E-01	0.30042E-01	0.40747E-01
19	-0.31941E-01	-0.41289E-01	0.32099E-01	0.61281E-01
27	0.15723E-02	-0.52704E-01	0.28754E-01	0.60058E-01
38	-0.26491E-01	-0.51063E-01	0.31040E-01	0.65365E-01
102	0.47715E-02	-0.16056E-01	0.71572E-02	0.18215E-01
118	-0.31971E-01	-0.39243E-01	0.20697E-01	0.54686E-01
128	0.15726E-02	-0.15826	0.17683E-01	0.15925
146	0.25709E-02	-0.45810E-02	0.67497E-02	0.85530E-02
152	-0.26468E-01	-0.12937	0.19487E-01	0.13348
1102	0.37011E-02	-0.15754E-02	0.16691E-02	0.43550E-02
1118	-0.31100E-01	-0.54408E-02	0.41006E-02	0.31837E-01
1146	0.25708E-02	-0.38229E-02	0.16576E-02	0.48960E-02
1153	-0.25507E-01	-0.13375	0.38142E-02	0.13622
2102	0.30628E-02	-0.30084E-02	0.48791E-03	0.43208E-02
2118	-0.29363E-01	-0.86032E-02	0.58517E-02	0.31152E-01
2146	0.25370E-02	-0.38627E-02	0.30726E-03	0.46316E-02
2152	-0.26408E-01	-0.15078	0.55335E-02	0.15318

```
  3102  0.26956E-02-0.32371E-02-0.61717E-03 0.42575E-02
  3118 -0.27621E-01-0.84226E-02 0.15532E-02 0.28918E-01
  3153 -0.25412E-01-0.13158     0.11821E-02 0.13402
  4102  0.24587E-02-0.32778E-02 0.94150E-02 0.10268E-01
  4118 -0.25963E-01-0.91557E-02 0.64751E-02 0.28281E-01
  4152 -0.26355E-01-0.15431     0.62190E-02 0.15667
  5102  0.25144E-02-0.26999E-02 0.11223E-02 0.38563E-02
  5118 -0.25202E-01-0.95958E-02 0.28299E-02 0.27115E-01
  5153 -0.25382E-01-0.12919     0.25282E-02 0.13169
  6118 -0.25228E-01-0.12548    -0.79513E-03 0.12799
  6152 -0.26330E-01-0.44549    -0.79801E-03 0.44627
  7118 -0.25247E-01-0.71375E-02 0.19203E-02 0.26306E-01
  7152 -0.26325E-01-0.12356     0.15918E-02 0.12634
  8118 -0.25262E-01-0.21376E-02-0.12056E-02 0.25381E-01
  8152 -0.26323E-01-0.46810E-02-0.11970E-02 0.26763E-01

 MAXIMUM ABSOLUTE VALUES
 NODE        118        6152         19        6152
 VALUE  -0.31971E-01-0.44549     0.32099E-01 0.44627
```

DISPLACEMENTS FROM 1g IN Z DIRECTION

```
 PRINT U    NODAL SOLUTION PER NODE

  ***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

 LOAD STEP=     3  SUBSTEP=     1
  TIME=    3.0000      LOAD CASE=   0

 THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

   NODE      UX          UY          UZ          USUM
     2  0.18556E-01-0.10033      1.0255      1.0305
    19  0.34142E-01 0.85733E-01  1.9985      2.0006
    27  0.20888E-01-0.24435E-01  1.0648      1.0653
    38  0.42985    -0.24086E-01  2.0073      2.0530
   102  0.18520E-01-0.74096E-02 0.23565     0.23650
   118  0.32030E-01 0.17360      4.3839      4.3874
   128  0.20807E-01-0.21451E-01  1.4775      1.4778
   146  0.11040E-01 0.83252E-01 0.22883     0.24375
   152  0.41984      1.2583      4.3484      4.5462
  1102  0.17042E-01-0.21339E-02 0.21874     0.21941
  1118  0.26006E-01 0.83761E-01  3.7734      3.7744
  1146  0.10201E-01 0.69882E-01 0.21267     0.22409
  1153  0.32614     0.17010E-01  3.7808      3.7949
  2102  0.18195E-01-0.22509E-02 0.74137E-01 0.76370E-01
  2118  0.26664E-01 0.67898E-01  2.6794      2.6804
  2146  0.80102E-02 0.40645E-01 0.56049E-01 0.69697E-01
  2152  0.40211    -0.22274E-01  2.6834      2.7135
  3102  0.94618E-02-0.17446E-02 0.13501     0.13535
  3118  0.26961E-01 0.43160E-01  1.7980      1.7987
  3153  0.30786     0.19167E-01  1.7984      1.8246
  4102  0.66784E-02-0.67058E-03 0.26316     0.26325
  4118  0.26989E-01 0.49989E-01  2.1143      2.1151
  4152  0.38898    -0.69039E-01  2.1153      2.1519
  5102  0.62203E-02-0.17312E-03 0.47216E-01 0.47624E-01
  5118  0.28546E-01 0.55313E-01  2.3773      2.3781
  5153  0.30159     0.25121E-01  2.3798      2.3989
  6118  0.30377E-01 0.47412E-01  1.8034      1.8043
  6152  0.38052     0.23320E-01  1.8017      1.8416
  7118  0.31874E-01 0.32453E-01  1.1894      1.1903
  7152  0.37819     0.46977E-01  1.1893      1.2489
  8118  0.35730E-01 0.32249E-01  1.1368      1.1378
  8152  0.37700    -0.70336E-03  1.1400      1.2007

 MAXIMUM ABSOLUTE VALUES
 NODE        38         152         118         152
 VALUE   0.42985      1.2583      4.3839      4.5462
```

DISPLACEMENTS FROM UNIT FORCE IN X DIRECTION

```
 PRINT U    NODAL SOLUTION PER NODE

  ***** POST1 NODAL DEGREE OF FREEDOM LISTING *****
```

LOAD STEP= 4 SUBSTEP= 1
TIME= 4.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
2	0.10313	0.82305E-03	-0.59998E-02	0.10330
19	0.16636	-0.74517E-03	-0.14764E-01	0.16702
27	0.27181	0.10148E-03	-0.62363E-02	0.27188
38	0.87003	0.12765E-03	-0.15463E-01	0.87017
102	0.10369	0.18920E-02	0.93589E-02	0.10413
118	0.16520	0.23135E-02	0.89368E-01	0.18784
128	0.26885	0.63965E-03	0.15960E-02	0.26885
146	0.11549	0.23705E-02	0.94098E-02	0.11590
152	0.87253	-0.17905E-02	0.89783E-01	0.87714
1102	0.97384E-01	-0.34202E-02	0.11855E-01	0.98162E-01
1118	0.16213	-0.21401E-02	0.26689E-01	0.16433
1146	0.11345	0.72070E-03	0.12328E-01	0.11412
1153	0.79130	-0.71128E-02	0.26596E-01	0.79178
2102	0.10653	0.25321E-04	-0.23570E-02	0.10656
2118	0.16135	-0.48305E-03	-0.20090E-01	0.16260
2146	0.11342	-0.43693E-03	-0.15524E-02	0.11343
2152	0.87382	0.76882E-03	-0.20146E-01	0.87406
3102	0.10569	0.23220E-03	-0.33836E-01	0.11098
3118	0.16000	-0.10097E-02	-0.75487E-01	0.17692
3153	0.79343	0.42136E-04	-0.75387E-01	0.79700
4102	0.10653	0.19836E-02	-0.84151E-02	0.10688
4118	0.15835	0.19189E-02	-0.21102E-01	0.15976
4152	0.87381	0.77785E-02	-0.21176E-01	0.87411
5102	0.10323	-0.30773E-02	0.72588E-03	0.10327
5118	0.15902	-0.24460E-02	0.39730E-01	0.16392
5153	0.79475	-0.80819E-02	0.39882E-01	0.79579
6118	0.16023	0.11185E-03	0.51777E-01	0.16839
6152	0.87266	-0.46716E-03	0.51780E-01	0.87420
7118	0.16122	0.21777E-02	0.57343E-01	0.17113
7152	0.87051	0.27520E-02	0.55537E-01	0.87228
8118	0.15920	-0.16468E-02	-0.25314E-01	0.16121
8152	0.86860	-0.12821E-03	-0.24764E-01	0.86895

MAXIMUM ABSOLUTE VALUES

NODE	2152	5153	152	152
VALUE	0.87382	-0.80819E-02	0.89783E-01	0.87714

DISPLACEMENTS FROM UNIT FORCE IN Y DIRECTION

PRINT U NODAL SOLUTION PER NODE

***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

LOAD STEP= 5 SUBSTEP= 1
TIME= 5.0000 LOAD CASE= 0

THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

NODE	UX	UY	UZ	USUM
2	0.24602E-01	-0.14544E-01	0.12116E-01	0.31042E-01
19	0.30372E-02	-0.26758E-01	0.17999E-01	0.32391E-01
27	0.17584E-01	-0.15205	0.86540E-02	0.15331
38	0.31560E-01	-0.11470	0.89176E-02	0.11930
102	0.24455E-01	-0.29078E-02	0.55803E-02	0.25251E-01
118	0.30415E-02	-0.18581E-01	0.11195E-01	0.21905E-01
128	0.17584E-01	-0.87754E-02	0.64655E-02	0.20688E-01
146	0.19667E-01	-0.29847E-01	0.46029E-02	0.36039E-01
152	0.31471E-01	-0.82169	0.94783E-02	0.82235
1102	0.24402E-01	-0.25843E-02	0.55125E-02	0.25150E-01
1118	0.30946E-02	-0.14807E-01	0.13981E-01	0.20598E-01
1146	0.19251E-01	-0.29505E-01	0.46756E-02	0.35539E-01
1153	0.37037E-01	-0.74713	0.12139E-01	0.74814
2102	0.27468E-01	-0.21735E-02	0.17295E-03	0.27554E-01
2118	0.34409E-02	-0.14555E-01	0.10463E-01	0.18253E-01
2146	0.18200E-01	-0.30108E-01	-0.29363E-03	0.35183E-01
2152	0.31261E-01	-0.82501	0.89299E-02	0.82565
3102	0.33381E-01	-0.44828E-02	-0.17812E-01	0.38101E-01
3118	0.37918E-02	-0.16506E-01	-0.54502E-02	0.17792E-01

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  3153  0.36851E-01-0.74305    -0.71479E-02 0.74399
  4102  0.34154E-01-0.36759E-02 0.10494     0.11042
  4118  0.41350E-02-0.15055E-01 0.44410E-01 0.47075E-01
  4152  0.31016E-01-0.87722     0.43162E-01 0.87883
  5102  0.31403E-01-0.63666E-02 0.63673E-02 0.32669E-01
  5118  0.43375E-02-0.20934E-01 0.53358E-01 0.57481E-01
  5153  0.36487E-01-0.76223     0.51985E-01 0.76487
  6118  0.39725E-02-0.40260     0.69212E-02 0.40268
  6152  0.30736E-01 -3.1072     0.68973E-02  3.1074
  7118  0.36627E-02-0.15186E-01 0.15587E-01 0.22068E-01
  7152  0.30641E-01-0.80244     0.13648E-01 0.80314
  8118  0.29769E-02-0.63917E-03-0.42573E-02 0.52340E-02
  8152  0.30587E-01-0.12330E-01-0.40931E-02 0.33232E-01

 MAXIMUM ABSOLUTE VALUES
 NODE       1153       6152       4102       6152
 VALUE   0.37037E-01 -3.1072     0.10494     3.1074
```

DISPLACEMENTS FROM UNIT FORCE IN Z DIRECTION

```
 PRINT U    NODAL SOLUTION PER NODE

 ***** POST1 NODAL DEGREE OF FREEDOM LISTING *****

 LOAD STEP=     6  SUBSTEP=     1
  TIME=    6.0000      LOAD CASE=   0

 THE FOLLOWING DEGREE OF FREEDOM RESULTS ARE IN THE GLOBAL COORDINATE SYSTEM

   NODE      UX          UY          UZ          USUM
     2 -0.92056E-02-0.38709E-02 0.49297E-01 0.50298E-01
    19  0.10294E-01 0.16188E-02 0.79150E-01 0.79833E-01
    27 -0.48124E-02-0.10488E-02 0.52108E-01 0.52340E-01
    38  0.79163E-02-0.10270E-02 0.80050E-01 0.80447E-01
   102 -0.92070E-02-0.29839E-03 0.16482E-01 0.18881E-01
   118  0.99780E-02 0.34429E-02 0.18776     0.18805
   128 -0.48136E-02-0.11495E-02 0.33063E-01 0.33431E-01
   146 -0.62380E-02 0.38210E-02 0.16536E-01 0.18082E-01
   152  0.76952E-02-0.15853E-02 0.18816     0.18833
  1102 -0.85706E-02-0.47603E-04 0.23807E-01 0.25303E-01
  1118  0.90922E-02 0.55772E-02 0.25696     0.25718
  1146 -0.63650E-02 0.53873E-02 0.24043E-01 0.25448E-01
  1153 -0.20222E-02 0.46991E-02 0.25739     0.25744
  2102 -0.93686E-02-0.24297E-03 0.12274E-01 0.15443E-01
  2118  0.84270E-02 0.63813E-02 0.26127     0.26148
  2146 -0.67454E-02 0.40122E-02 0.10387E-01 0.13018E-01
  2152  0.71393E-02-0.30223E-02 0.26202     0.26213
  3102 -0.95611E-02-0.31967E-03 0.32863E-01 0.34227E-01
  3118  0.77286E-02 0.60797E-02 0.27727     0.27744
  3153 -0.20111E-02 0.46009E-02 0.27765     0.27770
  4102 -0.95766E-02-0.13879E-03 0.38150E-01 0.39334E-01
  4118  0.70397E-02 0.64399E-02 0.29058     0.29073
  4152  0.66012E-02-0.11683E-01 0.29129     0.29160
  5102 -0.90742E-02 0.62910E-04 0.64368E-02 0.11126E-01
  5118  0.65397E-02 0.72572E-02 0.30497     0.30512
  5153 -0.20452E-02 0.27506E-02 0.30578     0.30580
  6118  0.64091E-02 0.64494E-02 0.23873     0.23890
  6152  0.62265E-02 0.49497E-02 0.23874     0.23887
  7118  0.62920E-02 0.41566E-02 0.15763     0.15781
  7152  0.61295E-02 0.12818E-02 0.15839     0.15851
  8118  0.62337E-02 0.36741E-02 0.15183     0.15200
  8152  0.60833E-02-0.48922E-04 0.15242     0.15254

 MAXIMUM ABSOLUTE VALUES
 NODE         19       4152       5153       5153
 VALUE   0.10294E-01-0.11683E-01 0.30578     0.30580
```

Attachment 25

ANSYS Coupled Building/Crane Model Output, Crane at K, Modal Analysis

S O L U T I O N O P T I O N S

PROBLEM DIMENSIONALITY. 3-D
DEGREES OF FREEDOM. . . . . UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE . . . . . .MODAL
EXTRACTION METHOD. . . . . .BLOCK LANCZOS
LUMPED MASS MATRICES. . . . . .ON
EQUATION SOLVER OPTION. . . . . .SPARSE
NUMBER OF MODES TO EXTRACT. 300
MODAL EXTRACTION RANGE. . . . . 0.0000 TO 34.000
GLOBALLY ASSEMBLED MATRIX . . . . . .SYMMETRIC
NUMBER OF MODES TO EXPAND 300
ELEMENT RESULTS CALCULATION . . . . . .OFF

L O A D S T E P O P T I O N S

LOAD STEP NUMBER. 1
INERTIA LOADS X Y Z
ACEL 0.0000 386.09 0.0000
PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
DATABASE OUTPUT CONTROLS. . . . . .ALL DATA WRITTEN

Element Formation Element= 1000 Cum. Iter.= 1 CP= 230.612
Load Step= 1 Mode= 1.

**** CENTER OF MASS, MASS, AND MASS MOMENTS OF INERTIA ****

CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

TOTAL MASS = 6592.3

CENTER OF MASS	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTER OF MASS
XC = 1184.8	IXX = 0.4597E+10	IXX = 0.6661E+09
YC = 715.06	IYY = 0.1382E+11	IYY = 0.4002E+10
ZC = -291.51	IZZ = 0.1672E+11	IZZ = 0.4092E+10
	IXY = -0.6145E+10	IXY = -0.5596E+09
	IYZ = 0.1380E+10	IYZ = 0.5384E+07
	IZX = 0.2267E+10	IZX = -0.9608E+07

AN AVERAGE OF THE X-, Y-, AND Z-DIRECTION MASS TERMS ARE USED FOR MASS21 ELEMENTS.

*** MASS SUMMARY BY ELEMENT TYPE ***

TYPE	MASS
1	2099.52
2	306.103
3	29.3637
7	279.425
8	36.3681
9	2548.37
16	13.8597
21	384.057
100	206.274
1004	688.961

Range of element maximum matrix coefficients in global coordinates
Maximum= 4.642966189E+12 at element 90509.
Minimum= 1.E-03 at element 90006.

*** ELEMENT MATRIX FORMULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	405	BEAM44	0.060	0.000148
2	43	BEAM44	0.000	0.000000
3	12	BEAM44	0.010	0.000835
7	43	BEAM44	0.000	0.000000
8	13	BEAM44	0.000	0.000000
9	207	BEAM44	0.010	0.000048

```
  12      2  COMBIN14     0.000   0.000000
  13      1  COMBIN14     0.000   0.000000
  14      2  COMBIN14     0.000   0.000000
  15      1  COMBIN14     0.000   0.000000
  16      1  BEAM44       0.000   0.000000
  21    367  BEAM44       0.030   0.000082
 100     18  MASS21       0.000   0.000000
 300     57  COMBIN14     0.000   0.000000
1001      1  COMBIN14     0.000   0.000000
1002      1  COMBIN14     0.000   0.000000
1003      1  COMBIN14     0.000   0.000000
1004      1  MASS21       0.000   0.000000
Time at end of element matrix formulation CP= 230.631632.

 BLOCK LANCZOS CALCULATION OF UP TO  300 EIGENVECTORS.
 NUMBER OF EQUATIONS      =       5924
 MAXIMUM WAVEFRONT        =       120
 MAXIMUM MODES STORED     =       300
 MINIMUM EIGENVALUE       = 0.0000
 MAXIMUM EIGENVALUE       = 34.000
 EST. OF MEMORY NEEDED          = 4.1783     (MB)
 MEMORY AVAILABLE FOR EIGENSOLVER =  225.57     (MB)

MEMORY TO PERFORM EIGENEXTRACTION:
 MIN. TO COMPLETE VALUE INPUT          =      162338     1.2385     (MB)
 MIN. FOR PART IN-CORE AND OUT-OF-CORE  =      241216     1.8403     (MB)
 MIN. FOR IN-CORE                      =      394372     3.0088     (MB)
 RECOM. FOR PART IN-CORE AND OUT-OF-CORE =      515556     3.9334     (MB)
 RECOM. FOR IN-CORE                    =      668712     5.1019     (MB)

 LANCZOS CYCLE NUMBER =   1

   new shift:  3.3237D-04     modes still needed:      259

 FREQUENCIES AT CURRENT LANCZOS CYCLE
   1  0.21956110E+02    2  0.21321464E+02    3  0.20925724E+02
   4  0.20849284E+02    5  0.20530444E+02    6  0.20455449E+02
   7  0.20434453E+02    8  0.20214476E+02    9  0.20160242E+02
  10  0.20079300E+02   11  0.20021155E+02   12  0.19905870E+02
  13  0.19685106E+02   14  0.19610680E+02   15  0.19463060E+02
  16  0.19289824E+02   17  0.19267017E+02   18  0.19208889E+02
  19  0.19198673E+02   20  0.18862885E+02   21  0.18591133E+02
  22  0.18568337E+02   23  0.18438143E+02   24  0.18173165E+02
  25  0.18116598E+02   26  0.17986116E+02   27  0.17916288E+02
  28  0.17838806E+02   29  0.17721168E+02   30  0.17624006E+02
  31  0.17411724E+02   32  0.17327891E+02   33  0.16801533E+02
  34  0.16707999E+02   35  0.16539213E+02   36  0.16387717E+02
  37  0.16327541E+02   38  0.16095537E+02   39  0.15953951E+02
  40  0.15844045E+02   41  0.15733690E+02   42  0.15709149E+02
  43  0.15695388E+02   44  0.15442299E+02   45  0.15430053E+02
  46  0.15146316E+02   47  0.15066935E+02   48  0.14962967E+02
  49  0.14872459E+02   50  0.14743792E+02   51  0.14535736E+02
  52  0.14467576E+02   53  0.14352871E+02   54  0.14284998E+02
  55  0.14151741E+02   56  0.13982940E+02   57  0.13827998E+02
  58  0.13577129E+02   59  0.13113771E+02   60  0.13090466E+02
  61  0.12930863E+02   62  0.12720856E+02   63  0.12559568E+02
  64  0.12369903E+02   65  0.12163248E+02   66  0.11993646E+02
  67  0.11941431E+02   68  0.11929978E+02   69  0.11882324E+02
  70  0.11696816E+02   71  0.11647891E+02   72  0.11638425E+02
  73  0.11618186E+02   74  0.11167786E+02   75  0.11021076E+02
  76  0.10931228E+02   77  0.10843001E+02   78  0.10798772E+02
  79  0.10597556E+02   80  0.10499309E+02   81  0.10484860E+02
  82  0.10442992E+02   83  0.10385164E+02   84  0.10365849E+02
  85  0.10284302E+02   86  0.10282127E+02   87  0.10279494E+02
  88  0.10272859E+02   89  0.10271356E+02   90  0.10266210E+02
  91  0.10265848E+02   92  0.10264708E+02   93  0.10244526E+02
  94  0.10225547E+02   95  0.10215212E+02   96  0.10047136E+02
  97  0.10037021E+02   98  0.99269731E+01   99  0.99164635E+01
 100  0.98993660E+01  101  0.98890272E+01  102  0.98439842E+01
 103  0.97294978E+01  104  0.96325067E+01  105  0.94185681E+01
 106  0.92274027E+01  107  0.91846108E+01  108  0.91385331E+01
 109  0.90833778E+01  110  0.90789626E+01  111  0.90414297E+01
 112  0.89739671E+01  113  0.88857933E+01  114  0.88168902E+01
 115  0.87755236E+01  116  0.87485371E+01  117  0.85737602E+01
 118  0.83552039E+01  119  0.82986016E+01  120  0.80544484E+01
```

121	0.80199567E+01	122	0.79328517E+01	123	0.78876196E+01
124	0.78669967E+01	125	0.77859826E+01	126	0.77393764E+01
127	0.76529705E+01	128	0.74358238E+01	129	0.73945124E+01
130	0.72394061E+01	131	0.72176268E+01	132	0.67470242E+01
133	0.63112588E+01	134	0.62838494E+01	135	0.61721223E+01
136	0.57911400E+01	137	0.57314665E+01	138	0.56452973E+01
139	0.55727370E+01	140	0.51565654E+01	141	0.50568997E+01
142	0.49960689E+01	143	0.49919974E+01	144	0.49302223E+01
145	0.48893494E+01	146	0.48637560E+01	147	0.47966366E+01
148	0.47834213E+01	149	0.47410343E+01	150	0.46956917E+01
151	0.45359639E+01	152	0.45334836E+01	153	0.43772003E+01
154	0.43092276E+01	155	0.40996460E+01	156	0.38167368E+01
157	0.37691872E+01	158	0.34420032E+01	159	0.33720190E+01
160	0.33661526E+01	161	0.32192030E+01	162	0.31727219E+01
163	0.29808057E+01	164	0.27991370E+01	165	0.26909757E+01
166	0.26454247E+01	167	0.25747620E+01	168	0.25462543E+01
169	0.25450302E+01	170	0.24597410E+01	171	0.23805754E+01
172	0.22131931E+01	173	0.20846174E+01	174	0.19511449E+01
175	0.18649098E+01	176	0.17755662E+01	177	0.17555601E+01
178	0.17131439E+01	179	0.13066702E+01	180	0.12216738E+01
181	0.11816474E+01	182	0.31198823E+00	183	0.24848217E+00

number of steps : 44
eigenvalues found : 183
total no. eigenvalues: 183

LANCZOS CYCLE NUMBER = 2

new shift: 4.4844D+04 modes still needed: 76

FREQUENCIES AT CURRENT LANCZOS CYCLE

1	0.24848217E+00	2	0.31198823E+00	3	0.11816474E+01
4	0.12216738E+01	5	0.13066702E+01	6	0.17131439E+01
7	0.17555601E+01	8	0.17755662E+01	9	0.18649098E+01
10	0.19511449E+01	11	0.20846174E+01	12	0.22131931E+01
13	0.23805754E+01	14	0.24597410E+01	15	0.25450302E+01
16	0.25462543E+01	17	0.25747620E+01	18	0.26454247E+01
19	0.26909757E+01	20	0.27991370E+01	21	0.29808057E+01
22	0.31727219E+01	23	0.32192030E+01	24	0.33661526E+01
25	0.33720190E+01	26	0.34420032E+01	27	0.37691872E+01
28	0.38167368E+01	29	0.40996460E+01	30	0.43092276E+01
31	0.43772003E+01	32	0.45334836E+01	33	0.45359639E+01
34	0.46956917E+01	35	0.47410343E+01	36	0.47834213E+01
37	0.47966366E+01	38	0.48637560E+01	39	0.48893494E+01
40	0.49302223E+01	41	0.49919974E+01	42	0.49960689E+01
43	0.50568997E+01	44	0.51565654E+01	45	0.55727370E+01
46	0.56452973E+01	47	0.57314665E+01	48	0.57911400E+01
49	0.61721223E+01	50	0.62838494E+01	51	0.63112588E+01
52	0.67470242E+01	53	0.72176268E+01	54	0.72394061E+01
55	0.73945124E+01	56	0.74358238E+01	57	0.76529705E+01
58	0.77393764E+01	59	0.77859826E+01	60	0.78669967E+01
61	0.78876196E+01	62	0.79328517E+01	63	0.80199567E+01
64	0.80544484E+01	65	0.82986016E+01	66	0.83552039E+01
67	0.85737602E+01	68	0.87485371E+01	69	0.87755236E+01
70	0.88168902E+01	71	0.88857933E+01	72	0.89739671E+01
73	0.90414297E+01	74	0.90789626E+01	75	0.90833778E+01
76	0.91385331E+01	77	0.91846108E+01	78	0.92274027E+01
79	0.94185681E+01	80	0.96325067E+01	81	0.97294978E+01
82	0.98439842E+01	83	0.98890272E+01	84	0.98993660E+01
85	0.99164635E+01	86	0.99269731E+01	87	0.10037021E+02
88	0.10047136E+02	89	0.10215212E+02	90	0.10225547E+02
91	0.10244526E+02	92	0.10264708E+02	93	0.10265848E+02
94	0.10266210E+02	95	0.10271356E+02	96	0.10272859E+02
97	0.10279494E+02	98	0.10282127E+02	99	0.10284302E+02
100	0.10365849E+02	101	0.10385164E+02	102	0.10442992E+02
103	0.10484860E+02	104	0.10499309E+02	105	0.10597556E+02
106	0.10798772E+02	107	0.10843001E+02	108	0.10931228E+02
109	0.11021076E+02	110	0.11167786E+02	111	0.11618186E+02
112	0.11638425E+02	113	0.11647891E+02	114	0.11696816E+02
115	0.11882324E+02	116	0.11929978E+02	117	0.11941431E+02
118	0.11993646E+02	119	0.12163248E+02	120	0.12369903E+02
121	0.12559568E+02	122	0.12720856E+02	123	0.12930863E+02
124	0.13090466E+02	125	0.13113771E+02	126	0.13577129E+02
127	0.13827998E+02	128	0.13982940E+02	129	0.14151741E+02
130	0.14284998E+02	131	0.14352871E+02	132	0.14467576E+02

133	0.14535736E+02	134	0.14743792E+02	135	0.14872459E+02
136	0.14962967E+02	137	0.15066935E+02	138	0.15146316E+02
139	0.15430053E+02	140	0.15442299E+02	141	0.15695388E+02
142	0.15709149E+02	143	0.15733690E+02	144	0.15844045E+02
145	0.15953951E+02	146	0.16095537E+02	147	0.16327541E+02
148	0.16387717E+02	149	0.16539213E+02	150	0.16707999E+02
151	0.16801533E+02	152	0.17327891E+02	153	0.17411724E+02
154	0.17624006E+02	155	0.17721168E+02	156	0.17838806E+02
157	0.17916288E+02	158	0.17986116E+02	159	0.18116598E+02
160	0.18173165E+02	161	0.18438143E+02	162	0.18568337E+02
163	0.18591133E+02	164	0.18862885E+02	165	0.19198673E+02
166	0.19208889E+02	167	0.19267017E+02	168	0.19289824E+02
169	0.19463060E+02	170	0.19610680E+02	171	0.19685106E+02
172	0.19905870E+02	173	0.20021155E+02	174	0.20079300E+02
175	0.20160242E+02	176	0.20214476E+02	177	0.20434453E+02
178	0.20455449E+02	179	0.20530444E+02	180	0.20849284E+02
181	0.20925724E+02	182	0.21321464E+02	183	0.21956110E+02
184	0.33476954E+02	185	0.33386397E+02	186	0.33294820E+02
187	0.32975666E+02	188	0.32924877E+02	189	0.32884356E+02
190	0.32857408E+02	191	0.32692420E+02	192	0.32614599E+02
193	0.32577219E+02	194	0.32529994E+02	195	0.32432741E+02
196	0.32335965E+02	197	0.32217527E+02	198	0.32098218E+02
199	0.32024944E+02	200	0.31891973E+02	201	0.31650270E+02
202	0.31494137E+02	203	0.31272019E+02	204	0.31219387E+02
205	0.31139962E+02	206	0.30656966E+02	207	0.30434494E+02
208	0.29730715E+02	209	0.29513063E+02	210	0.29426162E+02
211	0.29323116E+02	212	0.29311854E+02	213	0.29187032E+02
214	0.28957343E+02	215	0.28783593E+02	216	0.28508335E+02
217	0.28200382E+02	218	0.28007706E+02	219	0.27975524E+02
220	0.27847896E+02	221	0.27734163E+02	222	0.27416785E+02
223	0.26978765E+02	224	0.26913143E+02	225	0.26802650E+02
226	0.26274120E+02	227	0.26191289E+02	228	0.25880994E+02
229	0.25806569E+02	230	0.25681370E+02	231	0.25663239E+02
232	0.25599917E+02	233	0.25220990E+02	234	0.24800338E+02
235	0.24753601E+02	236	0.24683890E+02	237	0.24420758E+02
238	0.24415971E+02	239	0.24180444E+02	240	0.24017679E+02
241	0.23953829E+02	242	0.23925443E+02	243	0.23910804E+02
244	0.23876855E+02	245	0.23865261E+02	246	0.23859607E+02
247	0.23825546E+02	248	0.23817424E+02	249	0.23533399E+02
250	0.23099289E+02	251	0.22962580E+02	252	0.22793981E+02
253	0.22691115E+02	254	0.22480955E+02	255	0.22470451E+02
256	0.22125717E+02	257	0.21629753E+02	258	0.21621937E+02
259	0.21078328E+02				

number of steps : 27
eigenvalues found : 76
total no. eigenvalues: 259

*** NOTE *** CP = 246.404 TIME= 09:07:54
Fewer modes than the requested number of modes (300) were computed.
The range specified (FREQB= 0, FREQE= 34) contains only 259 modes.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 11.0 *****
ANSYS Mechanical U
00245050 VERSION=INTEL NT 09:07:54 SEP 28, 2010 CP= 246.404

Auxzilary Building Modifications

*** FREQUENCIES FROM BLOCK LANCZOS ITERATION ***

MODE FREQUENCY (HERTZ)

FREQUENCY RANGE REQUESTED= 0.00000 34.0000

1	0.2484821743675
2	0.3119882291075
3	1.181647442322
4	1.221673831809
5	1.306670207454
6	1.713143852140
7	1.755560126842
8	1.775566241581

9	1.864909760773
10	1.951144850429
11	2.084617352129
12	2.213193081036
13	2.380575356527
14	2.459740985555
15	2.545030174651
16	2.546254324078
17	2.574762012657
18	2.645424660827
19	2.690975747040
20	2.799137034597
21	2.980805676340
22	3.172721854841
23	3.219202986055
24	3.366152639640
25	3.372018955513
26	3.442003206466
27	3.769187202992
28	3.816736830562
29	4.099646003982
30	4.309227574442
31	4.377200324134
32	4.533483565371
33	4.535963903813
34	4.695691715915
35	4.741034321176
36	4.783421281829
37	4.796636582251
38	4.863755973924
39	4.889349443337
40	4.930222260904
41	4.991997350388
42	4.996068937317
43	5.056899677590
44	5.156565428827
45	5.572736993941
46	5.645297344784
47	5.731466485073
48	5.791140036617
49	6.172122340841
50	6.283849406291
51	6.311258797870
52	6.747024229248
53	7.217626765441
54	7.239406141613
55	7.394512419067
56	7.435823776009
57	7.652970480667
58	7.739376371717
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62	7.932851670944
63	8.019956708520
64	8.054448447591
65	8.298601626171
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68	8.748537107776
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70	8.816890243792
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82	9.843984207681
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220	26.97876542641
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252 32.69241974700
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254 32.88435634668
255 32.92487673929
256 32.97566589059
257 33.29481965192
258 33.38639710270
259 33.47695374665

Block Lanczos CP Time (sec) = 17.375
Block Lanczos ELAPSED Time (sec) = 20.950

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 11.0 *****
ANSYS Mechanical U
00245050 VERSION=INTEL NT 09:07:58 SEP 28, 2010 CP= 249.168

Auxzilary Building Modifications

***** PARTICIPATION FACTOR CALCULATION ***** X DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.248482	4.0244	0.10882	0.002922	0.118426E-01	0.191647E-05
2	0.311988	3.2052	28.026	0.752404	785.461	0.127113
3	1.18165	0.84628	33.722	0.905321	1137.17	0.311141
4	1.22167	0.81855	-37.249	1.000000	1387.47	0.535674
5	1.30667	0.76530	3.1237	0.083861	9.75758	0.537253
6	1.71314	0.58372	-2.4206	0.064984	5.85907	0.538201
7	1.75556	0.56962	6.0158	0.161505	36.1904	0.544058
8	1.77557	0.56320	-9.9513	0.267159	99.0289	0.560083
9	1.86491	0.53622	-4.8298	0.129664	23.3270	0.563858
10	1.95114	0.51252	-1.0014	0.026885	1.00288	0.564021
11	2.08462	0.47970	-1.5698	0.042143	2.46422	0.564420
12	2.21319	0.45184	0.66155E-01	0.001776	0.437653E-02	0.564420
13	2.38058	0.42007	-0.80274	0.021551	0.644397	0.564525
14	2.45974	0.40655	-16.998	0.456350	288.947	0.611285
15	2.54503	0.39292	3.8814	0.104203	15.0654	0.613723
16	2.54625	0.39273	0.34650E-01	0.000930	0.120065E-02	0.613723
17	2.57476	0.38839	-1.3745	0.036900	1.88922	0.614029
18	2.64542	0.37801	20.922	0.561690	437.739	0.684868
19	2.69098	0.37161	-3.9821	0.106906	15.8573	0.687434
20	2.79914	0.35725	-20.400	0.547678	416.172	0.754783
21	2.98081	0.33548	0.49257E-01	0.001322	0.242627E-02	0.754783
22	3.17272	0.31519	-0.20861E-01	0.000560	0.435183E-03	0.754783
23	3.21920	0.31064	0.11704	0.003142	0.136994E-01	0.754785
24	3.36615	0.29708	-2.1084	0.056605	4.44555	0.755505
25	3.37202	0.29656	2.8533	0.076601	8.14125	0.756822
26	3.44200	0.29053	0.99902	0.026820	0.998043	0.756984
27	3.76919	0.26531	1.5460	0.041504	2.39002	0.757371
28	3.81674	0.26200	-8.8877	0.238604	78.9913	0.770154
29	4.09965	0.24392	15.078	0.404802	227.356	0.806947
30	4.30923	0.23206	0.26689	0.007165	0.712312E-01	0.806958

31	4.37720	0.22846	-0.41709	0.011197	0.173962	0.806986
32	4.53348	0.22058	-13.685	0.367386	187.270	0.837292
33	4.53596	0.22046	2.0001	0.053697	4.00053	0.837939
34	4.69569	0.21296	0.55282	0.014841	0.305612	0.837989
35	4.74103	0.21092	-0.41359	0.011104	0.171058	0.838017
36	4.78342	0.20906	0.86839	0.023313	0.754096	0.838139
37	4.79664	0.20848	-0.79020E-01	0.002121	0.624412E-02	0.838140
38	4.86376	0.20560	-0.33829E-01	0.000908	0.114439E-02	0.838140
39	4.88935	0.20453	14.036	0.376819	197.010	0.870022
40	4.93022	0.20283	1.6599	0.044562	2.75520	0.870468
41	4.99200	0.20032	-4.9386	0.132584	24.3897	0.874415
42	4.99607	0.20016	17.872	0.479811	319.421	0.926106
43	5.05690	0.19775	-8.6626	0.232561	75.0409	0.938250
44	5.15657	0.19393	5.0640	0.135950	25.6438	0.942400
45	5.57274	0.17945	-0.40307	0.010821	0.162462	0.942426
46	5.64530	0.17714	0.78984E-01	0.002120	0.623853E-02	0.942427
47	5.73147	0.17448	0.65009E-01	0.001745	0.422619E-02	0.942428
48	5.79114	0.17268	-0.47787	0.012829	0.228357	0.942465
49	6.17212	0.16202	6.3881	0.171499	40.8079	0.949069
50	6.28385	0.15914	-0.47458	0.012741	0.225224	0.949105
51	6.31126	0.15845	0.83801	0.022498	0.702263	0.949219
52	6.74702	0.14821	-0.24694	0.006630	0.609815E-01	0.949229
53	7.21763	0.13855	3.1015	0.083263	9.61900	0.950786
54	7.23941	0.13813	-3.8235	0.102648	14.6192	0.953151
55	7.39451	0.13524	0.62323E-01	0.001673	0.388421E-02	0.953152
56	7.43582	0.13448	1.0532	0.028276	1.10933	0.953332
57	7.65297	0.13067	0.63042	0.016925	0.397428	0.953396
58	7.73938	0.12921	0.73297	0.019678	0.537241	0.953483
59	7.78598	0.12844	-1.7234	0.046267	2.97012	0.953963
60	7.86700	0.12711	3.1922	0.085701	10.1904	0.955613
61	7.88762	0.12678	-4.8291	0.129645	23.3203	0.959386
62	7.93285	0.12606	1.0653	0.028600	1.13487	0.959570
63	8.01996	0.12469	-0.70127E-02	0.000188	0.491777E-04	0.959570
64	8.05445	0.12415	-0.15763	0.004232	0.248472E-01	0.959574
65	8.29860	0.12050	-0.16943	0.004549	0.287076E-01	0.959579
66	8.35520	0.11969	0.50629	0.013592	0.256330	0.959620
67	8.57376	0.11663	-0.11682	0.003136	0.136464E-01	0.959623
68	8.74854	0.11430	-0.27746	0.007449	0.769867E-01	0.959635
69	8.77552	0.11395	0.12453E-01	0.000334	0.155090E-03	0.959635
70	8.81689	0.11342	-0.29843E-01	0.000801	0.890610E-03	0.959635
71	8.88579	0.11254	0.59662	0.016017	0.355961	0.959693
72	8.97397	0.11143	0.16986	0.004560	0.288532E-01	0.959697
73	9.04143	0.11060	-0.44422	0.011926	0.197334	0.959729
74	9.07896	0.11014	-0.31986	0.008587	0.102308	0.959746
75	9.08338	0.11009	0.24246E-01	0.000651	0.587852E-03	0.959746
76	9.13853	0.10943	0.44470E-01	0.001194	0.197757E-02	0.959746
77	9.18461	0.10888	-0.63524E-01	0.001705	0.403527E-02	0.959747
78	9.22740	0.10837	-0.31404	0.008431	0.986184E-01	0.959763
79	9.41857	0.10617	-0.27136	0.007285	0.736364E-01	0.959775
80	9.63251	0.10382	-0.76601	0.020565	0.586770	0.959870
81	9.72950	0.10278	0.81448E-01	0.002187	0.663374E-02	0.959871
82	9.84398	0.10158	0.15289	0.004105	0.233747E-01	0.959875
83	9.88903	0.10112	-0.14247	0.003825	0.202970E-01	0.959878
84	9.89937	0.10102	-0.17739	0.004762	0.314656E-01	0.959883
85	9.91646	0.10084	0.75104E-01	0.002016	0.564055E-02	0.959884
86	9.92697	0.10074	0.48010E-01	0.001289	0.230501E-02	0.959884
87	10.0370	0.99631E-01	1.0538	0.028292	1.11056	0.960064
88	10.0471	0.99531E-01	0.26132	0.007016	0.682877E-01	0.960075
89	10.2152	0.97893E-01	0.14095	0.003784	0.198676E-01	0.960078
90	10.2255	0.97794E-01	0.12718	0.003414	0.161735E-01	0.960081
91	10.2445	0.97613E-01	-0.24977E-01	0.000671	0.623875E-03	0.960081
92	10.2647	0.97421E-01	0.74312E-01	0.001995	0.552223E-02	0.960082
93	10.2658	0.97410E-01	-0.16552	0.004444	0.273972E-01	0.960086
94	10.2662	0.97407E-01	0.11575	0.003108	0.133987E-01	0.960089
95	10.2714	0.97358E-01	0.87586E-01	0.002351	0.767123E-02	0.960090
96	10.2729	0.97344E-01	-0.23200E-01	0.000623	0.538262E-03	0.960090
97	10.2795	0.97281E-01	0.78741E-02	0.000211	0.620015E-04	0.960090
98	10.2821	0.97256E-01	-0.11309E-01	0.000304	0.127904E-03	0.960090
99	10.2843	0.97236E-01	0.18778E-02	0.000050	0.352610E-05	0.960090
100	10.3658	0.96471E-01	0.72666	0.019508	0.528039	0.960175
101	10.3852	0.96291E-01	2.3027	0.061819	5.30239	0.961033
102	10.4430	0.95758E-01	0.15843	0.004253	0.251011E-01	0.961037
103	10.4849	0.95376E-01	-1.2937	0.034732	1.67369	0.961308
104	10.4993	0.95244E-01	0.44490	0.011944	0.197935	0.961340
105	10.5976	0.94361E-01	3.9408	0.105796	15.5295	0.963854

106	10.7988	0.92603E-01	-0.32396	0.008697	0.104949	0.963870
107	10.8430	0.92225E-01	0.61711	0.016567	0.380824	0.963932
108	10.9312	0.91481E-01	-0.12363	0.003319	0.152849E-01	0.963935
109	11.0211	0.90735E-01	-0.21096E-01	0.000566	0.445037E-03	0.963935
110	11.1678	0.89543E-01	0.98672	0.026490	0.973617	0.964092
111	11.6182	0.86072E-01	-0.51045	0.013704	0.260556	0.964134
112	11.6384	0.85922E-01	0.64228E-01	0.001724	0.412521E-02	0.964135
113	11.6479	0.85852E-01	-0.33620E-01	0.000903	0.113030E-02	0.964135
114	11.6968	0.85493E-01	-0.34766	0.009333	0.120866	0.964155
115	11.8823	0.84159E-01	-0.28851	0.007745	0.832371E-01	0.964168
116	11.9300	0.83822E-01	2.6045	0.069923	6.78354	0.965266
117	11.9414	0.83742E-01	0.46756	0.012552	0.218610	0.965301
118	11.9936	0.83377E-01	0.91276	0.024505	0.833136	0.965436
119	12.1632	0.82215E-01	-0.71533	0.019204	0.511695	0.965519
120	12.3699	0.80841E-01	0.69120	0.018556	0.477753	0.965596
121	12.5596	0.79621E-01	-0.35793E-01	0.000961	0.128116E-02	0.965597
122	12.7209	0.78611E-01	0.76497E-01	0.002054	0.585174E-02	0.965598
123	12.9309	0.77334E-01	-0.28319	0.007603	0.801947E-01	0.965611
124	13.0905	0.76391E-01	-0.11742	0.003152	0.137867E-01	0.965613
125	13.1138	0.76256E-01	2.8253	0.075849	7.98216	0.966904
126	13.5771	0.73653E-01	-0.65030	0.017458	0.422885	0.966973
127	13.8280	0.72317E-01	0.73072E-01	0.001962	0.533952E-02	0.966974
128	13.9829	0.71516E-01	-0.27409	0.007358	0.751233E-01	0.966986
129	14.1517	0.70663E-01	-0.34545	0.009274	0.119336	0.967005
130	14.2850	0.70004E-01	0.46242	0.012414	0.213835	0.967040
131	14.3529	0.69672E-01	1.1825	0.031746	1.39833	0.967266
132	14.4676	0.69120E-01	0.38483E-02	0.000103	0.148096E-04	0.967266
133	14.5357	0.68796E-01	2.2906	0.061495	5.24695	0.968115
134	14.7438	0.67825E-01	-2.6728	0.071756	7.14392	0.969271
135	14.8725	0.67238E-01	9.4566	0.253878	89.4277	0.983743
136	14.9630	0.66832E-01	2.1170	0.056833	4.48151	0.984469
137	15.0669	0.66370E-01	-1.3142	0.035282	1.72710	0.984748
138	15.1463	0.66023E-01	-2.3633	0.063445	5.58499	0.985652
139	15.4301	0.64809E-01	-0.74105	0.019895	0.549159	0.985741
140	15.4423	0.64757E-01	0.36948E-01	0.000992	0.136519E-02	0.985741
141	15.6954	0.63713E-01	0.30618E-01	0.000822	0.937454E-03	0.985741
142	15.7091	0.63657E-01	0.55334E-01	0.001486	0.306185E-02	0.985742
143	15.7337	0.63558E-01	0.22163E-02	0.000060	0.491199E-05	0.985742
144	15.8440	0.63115E-01	-0.87446	0.023476	0.764687	0.985865
145	15.9540	0.62680E-01	1.6620	0.044619	2.76221	0.986312
146	16.0955	0.62129E-01	0.37412	0.010044	0.139965	0.986335
147	16.3275	0.61246E-01	0.19689	0.005286	0.387666E-01	0.986341
148	16.3877	0.61021E-01	0.35390	0.009501	0.125245	0.986362
149	16.5392	0.60462E-01	0.56814	0.015253	0.322781	0.986414
150	16.7080	0.59852E-01	-0.15733	0.004224	0.247522E-01	0.986418
151	16.8015	0.59518E-01	0.99222	0.026638	0.984510	0.986577
152	17.3279	0.57710E-01	-4.2415	0.113871	17.9907	0.989489
153	17.4117	0.57433E-01	0.70163E-02	0.000188	0.492279E-04	0.989489
154	17.6240	0.56741E-01	-0.77474	0.020799	0.600228	0.989586
155	17.7212	0.56430E-01	0.70615	0.018958	0.498650	0.989666
156	17.8388	0.56058E-01	0.13173E-02	0.000035	0.173536E-05	0.989666
157	17.9163	0.55815E-01	0.57130	0.015337	0.326380	0.989719
158	17.9861	0.55598E-01	-0.17836	0.004788	0.318121E-01	0.989724
159	18.1166	0.55198E-01	0.29256	0.007854	0.855912E-01	0.989738
160	18.1732	0.55026E-01	0.72072	0.019349	0.519432	0.989822
161	18.4381	0.54235E-01	0.31994	0.008589	0.102362	0.989839
162	18.5683	0.53855E-01	0.24570	0.006596	0.603672E-01	0.989849
163	18.5911	0.53789E-01	-0.70282	0.018868	0.493953	0.989929
164	18.8629	0.53014E-01	0.52084	0.013983	0.271275	0.989973
165	19.1987	0.52087E-01	0.21240	0.005702	0.451147E-01	0.989980
166	19.2089	0.52059E-01	0.14812	0.003976	0.219386E-01	0.989983
167	19.2670	0.51902E-01	-0.18802E-01	0.000505	0.353508E-03	0.989983
168	19.2898	0.51841E-01	0.91783E-01	0.002464	0.842417E-02	0.989985
169	19.4631	0.51379E-01	-2.1367	0.057363	4.56541	0.990724
170	19.6107	0.50993E-01	-0.95898	0.025745	0.919645	0.990872
171	19.6851	0.50800E-01	-1.2094	0.032468	1.46264	0.991109
172	19.9059	0.50236E-01	-0.15621E-01	0.000419	0.244019E-03	0.991109
173	20.0212	0.49947E-01	0.25736E-01	0.000691	0.662348E-03	0.991109
174	20.0793	0.49803E-01	0.14668E-01	0.000394	0.215152E-03	0.991109
175	20.1602	0.49603E-01	-0.30954E-01	0.000831	0.958161E-03	0.991109
176	20.2145	0.49469E-01	0.19676E-01	0.000528	0.387134E-03	0.991110
177	20.4345	0.48937E-01	0.78197	0.020993	0.611471	0.991208
178	20.4554	0.48887E-01	-0.38670	0.010382	0.149535	0.991233
179	20.5304	0.48708E-01	-0.11414	0.003064	0.130273E-01	0.991235
180	20.8493	0.47963E-01	-0.15309E-01	0.000411	0.234373E-03	0.991235

181	20.9257	0.47788E-01	-0.24530E-01	0.000659	0.601697E-03	0.991235
182	21.0783	0.47442E-01	-0.53818E-01	0.001445	0.289634E-02	0.991235
183	21.3215	0.46901E-01	-0.10055	0.002699	0.101098E-01	0.991237
184	21.6219	0.46249E-01	-0.47347	0.012711	0.224176	0.991273
185	21.6298	0.46233E-01	-0.26545	0.007126	0.704613E-01	0.991285
186	21.9561	0.45545E-01	-0.27106	0.007277	0.734726E-01	0.991297
187	22.1257	0.45196E-01	0.38841E-03	0.000010	0.150864E-06	0.991297
188	22.4705	0.44503E-01	0.14628	0.003927	0.213981E-01	0.991300
189	22.4810	0.44482E-01	-1.1404	0.030616	1.30054	0.991511
190	22.6911	0.44070E-01	-0.17744	0.004764	0.314850E-01	0.991516
191	22.7940	0.43871E-01	0.31601	0.008484	0.998616E-01	0.991532
192	22.9626	0.43549E-01	-0.37171	0.009979	0.138170	0.991554
193	23.0993	0.43291E-01	-0.17443	0.004683	0.304270E-01	0.991559
194	23.5334	0.42493E-01	0.52722E-01	0.001415	0.277957E-02	0.991560
195	23.8174	0.41986E-01	-0.23649E-02	0.000063	0.559258E-05	0.991560
196	23.8255	0.41972E-01	0.28880E-02	0.000078	0.834051E-05	0.991560
197	23.8596	0.41912E-01	-0.27005E-02	0.000072	0.729281E-05	0.991560
198	23.8653	0.41902E-01	-0.77524E-02	0.000208	0.601001E-04	0.991560
199	23.8769	0.41882E-01	0.74799E-02	0.000201	0.559486E-04	0.991560
200	23.9108	0.41822E-01	-0.56631E-01	0.001520	0.320702E-02	0.991560
201	23.9254	0.41797E-01	-0.92076E-02	0.000247	0.847796E-04	0.991560
202	23.9538	0.41747E-01	2.2735	0.061036	5.16878	0.992397
203	24.0177	0.41636E-01	-0.99416E-02	0.000267	0.988347E-04	0.992397
204	24.1804	0.41356E-01	-0.66111E-01	0.001775	0.437062E-02	0.992397
205	24.4160	0.40957E-01	0.81915E-01	0.002199	0.671014E-02	0.992398
206	24.4208	0.40949E-01	-0.93310E-01	0.002505	0.870680E-02	0.992400
207	24.6839	0.40512E-01	-0.94336E-01	0.002533	0.889928E-02	0.992401
208	24.7536	0.40398E-01	0.24626	0.006611	0.606451E-01	0.992411
209	24.8003	0.40322E-01	0.22877	0.006142	0.523338E-01	0.992419
210	25.2210	0.39650E-01	2.9220	0.078447	8.53833	0.993801
211	25.5999	0.39063E-01	-0.31665	0.008501	0.100270	0.993817
212	25.6632	0.38966E-01	-0.11445	0.003073	0.130981E-01	0.993820
213	25.6814	0.38939E-01	0.14773E-01	0.000397	0.218237E-03	0.993820
214	25.8066	0.38750E-01	0.19789	0.005313	0.391605E-01	0.993826
215	25.8810	0.38638E-01	-0.30714	0.008246	0.943322E-01	0.993841
216	26.1913	0.38181E-01	0.18132	0.004868	0.328754E-01	0.993847
217	26.2741	0.38060E-01	-0.97042E-02	0.000261	0.941706E-04	0.993847
218	26.8026	0.37310E-01	-0.10876E-01	0.000292	0.118280E-03	0.993847
219	26.9131	0.37157E-01	0.14796	0.003972	0.218928E-01	0.993850
220	26.9788	0.37066E-01	-0.66829	0.017941	0.446606	0.993922
221	27.4168	0.36474E-01	0.13717	0.003683	0.188157E-01	0.993925
222	27.7342	0.36057E-01	0.20417E-01	0.000548	0.416874E-03	0.993925
223	27.8479	0.35909E-01	0.27504E-01	0.000738	0.756477E-03	0.993926
224	27.9755	0.35746E-01	0.35559E-02	0.000095	0.126446E-04	0.993926
225	28.0077	0.35704E-01	-0.87023E-02	0.000234	0.757300E-04	0.993926
226	28.2004	0.35461E-01	0.99116E-02	0.000266	0.982390E-04	0.993926
227	28.5083	0.35077E-01	0.82842E-03	0.000022	0.686276E-06	0.993926
228	28.7836	0.34742E-01	-0.55251E-02	0.000148	0.305269E-04	0.993926
229	28.9573	0.34534E-01	0.66803E-02	0.000179	0.446263E-04	0.993926
230	29.1870	0.34262E-01	0.20922E-01	0.000562	0.437725E-03	0.993926
231	29.3119	0.34116E-01	0.18978	0.005095	0.360161E-01	0.993932
232	29.3231	0.34103E-01	-0.19807	0.005317	0.392314E-01	0.993938
233	29.4262	0.33983E-01	-0.54179E-02	0.000145	0.293535E-04	0.993938
234	29.5131	0.33883E-01	-0.61887E-01	0.001661	0.382998E-02	0.993939
235	29.7307	0.33635E-01	0.18537E-01	0.000498	0.343622E-03	0.993939
236	30.4345	0.32857E-01	-0.72595E-01	0.001949	0.527008E-02	0.993939
237	30.6570	0.32619E-01	3.8628	0.103702	14.9209	0.996354
238	31.1400	0.32113E-01	-2.5591	0.068702	6.54877	0.997414
239	31.2194	0.32031E-01	-0.31571E-01	0.000848	0.996743E-03	0.997414
240	31.2720	0.31977E-01	-0.50820	0.013644	0.258270	0.997456
241	31.4941	0.31752E-01	1.4272	0.038316	2.03697	0.997785
242	31.6503	0.31595E-01	1.9915	0.053465	3.96612	0.998427
243	31.8920	0.31356E-01	-1.5332	0.041161	2.35068	0.998808
244	32.0249	0.31226E-01	-0.26650	0.007155	0.710209E-01	0.998819
245	32.0982	0.31154E-01	-1.5688	0.042116	2.46106	0.999217
246	32.2175	0.31039E-01	-0.13108E-01	0.000352	0.171813E-03	0.999218
247	32.3360	0.30925E-01	0.45808E-01	0.001230	0.209841E-02	0.999218
248	32.4327	0.30833E-01	-0.68241	0.018321	0.465690	0.999293
249	32.5300	0.30741E-01	0.97495	0.026174	0.950526	0.999447
250	32.5772	0.30696E-01	-0.21129	0.005673	0.446450E-01	0.999454
251	32.6146	0.30661E-01	-0.90500	0.024296	0.819029	0.999587
252	32.6924	0.30588E-01	-0.85955	0.023076	0.738825	0.999706
253	32.8574	0.30435E-01	1.0052	0.026986	1.01041	0.999870
254	32.8844	0.30410E-01	-0.61790	0.016588	0.381800	0.999932
255	32.9249	0.30372E-01	-0.44852	0.012041	0.201169	0.999964

256	32.9757	0.30325E-01	-0.32485	0.008721	0.105529	0.999981
257	33.2948	0.30035E-01	-0.33718	0.009052	0.113689	1.00000
258	33.3864	0.29952E-01	-0.12839E-01	0.000345	0.164833E-03	1.00000
259	33.4770	0.29871E-01	0.41588E-01	0.001116	0.172957E-02	1.00000

SUM OF EFFECTIVE MASSES= 6179.35

***** PARTICIPATION FACTOR CALCULATION ***** Y DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.248482	4.0244	-0.82080E-04	0.000003	0.673707E-08	0.129055E-11
2	0.311988	3.2052	-0.32957E-02	0.000107	0.108617E-04	0.208196E-08
3	1.18165	0.84628	-0.17497	0.005692	0.306157E-01	0.586683E-05
4	1.22167	0.81855	0.80976E-02	0.000263	0.655716E-04	0.587939E-05
5	1.30667	0.76530	-0.99145E-03	0.000032	0.982970E-06	0.587958E-05
6	1.71314	0.58372	0.57878E-01	0.001883	0.334987E-02	0.652128E-05
7	1.75556	0.56962	-0.15169	0.004935	0.230085E-01	0.109288E-04
8	1.77557	0.56320	-0.38636E-01	0.001257	0.149274E-02	0.112147E-04
9	1.86491	0.53622	-0.56762E-01	0.001847	0.322189E-02	0.118319E-04
10	1.95114	0.51252	0.32136E-01	0.001045	0.103269E-02	0.120298E-04
11	2.08462	0.47970	-0.97681E-02	0.000318	0.954152E-04	0.120480E-04
12	2.21319	0.45184	0.66855	0.021749	0.446958	0.976674E-04
13	2.38058	0.42007	0.29350E-01	0.000955	0.861419E-03	0.978324E-04
14	2.45974	0.40655	0.32051	0.010427	0.102730	0.117511E-03
15	2.54503	0.39292	0.46783E-01	0.001522	0.218867E-02	0.117931E-03
16	2.54625	0.39273	0.17433E-01	0.000567	0.303917E-03	0.117989E-03
17	2.57476	0.38839	-0.81543	0.026527	0.664927	0.245362E-03
18	2.64542	0.37801	-0.11641	0.003787	0.135520E-01	0.247958E-03
19	2.69098	0.37161	0.29019	0.009440	0.842076E-01	0.264089E-03
20	2.79914	0.35725	0.10639	0.003461	0.113180E-01	0.266257E-03
21	2.98081	0.33548	8.3919	0.273003	70.4239	0.137567E-01
22	3.17272	0.31519	8.3744	0.272433	70.1300	0.271908E-01
23	3.21920	0.31064	30.739	1.000000	944.897	0.208195
24	3.36615	0.29708	0.41913	0.013635	0.175671	0.208229
25	3.37202	0.29656	0.11930	0.003881	0.142317E-01	0.208232
26	3.44200	0.29053	-1.6677	0.054255	2.78137	0.208765
27	3.76919	0.26531	-0.62288	0.020263	0.387976	0.208839
28	3.81674	0.26200	-0.20701	0.006734	0.428527E-01	0.208847
29	4.09965	0.24392	-2.3395	0.076109	5.47343	0.209896
30	4.30923	0.23206	19.226	0.625456	369.639	0.280704
31	4.37720	0.22846	-3.1904	0.103790	10.1787	0.282654
32	4.53348	0.22058	1.3688	0.044531	1.87372	0.283012
33	4.53596	0.22046	9.9852	0.324837	99.7048	0.302112
34	4.69569	0.21296	8.1820	0.266176	66.9455	0.314936
35	4.74103	0.21092	12.160	0.395578	147.859	0.343260
36	4.78342	0.20906	6.2077	0.201947	38.5353	0.350642
37	4.79664	0.20848	1.4811	0.048182	2.19355	0.351062
38	4.86376	0.20560	3.8867	0.126443	15.1068	0.353956
39	4.88935	0.20453	1.4012	0.045585	1.96348	0.354332
40	4.93022	0.20283	-1.5167	0.049342	2.30048	0.354773
41	4.99200	0.20032	0.93531	0.030427	0.874814	0.354940
42	4.99607	0.20016	2.3548	0.076607	5.54524	0.356003
43	5.05690	0.19775	2.5507	0.082979	6.50608	0.357249
44	5.15657	0.19393	0.20071	0.006530	0.402864E-01	0.357257
45	5.57274	0.17945	1.0224	0.033261	1.04533	0.357457
46	5.64530	0.17714	6.5381	0.212697	42.7472	0.365645
47	5.73147	0.17448	6.2810	0.204333	39.4515	0.373203
48	5.79114	0.17268	-0.56833	0.018489	0.323004	0.373265
49	6.17212	0.16202	-0.29592	0.009627	0.875712E-01	0.373281
50	6.28385	0.15914	0.39289	0.012781	0.154365	0.373311
51	6.31126	0.15845	-1.6542	0.053814	2.73641	0.373835
52	6.74702	0.14821	-0.12018	0.003910	0.144433E-01	0.373838
53	7.21763	0.13855	2.6477	0.086133	7.01011	0.375181
54	7.23941	0.13813	0.13369	0.004349	0.178731E-01	0.375184
55	7.39451	0.13524	7.4318	0.241770	55.2318	0.385764
56	7.43582	0.13448	-0.92875	0.030214	0.862579	0.385930
57	7.65297	0.13067	6.1300	0.199419	37.5766	0.393128
58	7.73938	0.12921	-2.3599	0.076770	5.56893	0.394195
59	7.78598	0.12844	-2.5774	0.083847	6.64295	0.395467
60	7.86700	0.12711	0.10594	0.003446	0.112237E-01	0.395469
61	7.88762	0.12678	2.0270	0.065942	4.10873	0.396256
62	7.93285	0.12606	-3.2623	0.106128	10.6424	0.398295
63	8.01996	0.12469	0.31886	0.010373	0.101672	0.398315

64	8.05445	0.12415	-9.8726	0.321174	97.4686	0.416986
65	8.29860	0.12050	2.7775	0.090356	7.71439	0.418463
66	8.35520	0.11969	2.9636	0.096410	8.78276	0.420146
67	8.57376	0.11663	1.9814	0.064458	3.92585	0.420898
68	8.74854	0.11430	0.85153	0.027702	0.725109	0.421037
69	8.77552	0.11395	-1.1094	0.036090	1.23075	0.421273
70	8.81689	0.11342	0.17460	0.005680	0.304839E-01	0.421278
71	8.88579	0.11254	-0.21373	0.006953	0.456813E-01	0.421287
72	8.97397	0.11143	-0.29022	0.009442	0.842300E-01	0.421303
73	9.04143	0.11060	0.60509	0.019685	0.366130	0.421373
74	9.07896	0.11014	-0.88117E-01	0.002867	0.776466E-02	0.421375
75	9.08338	0.11009	1.8794	0.061139	3.53204	0.422051
76	9.13853	0.10943	4.2058	0.136823	17.6890	0.425440
77	9.18461	0.10888	-4.7857	0.155686	22.9027	0.429827
78	9.22740	0.10837	1.4910	0.048505	2.22308	0.430253
79	9.41857	0.10617	0.68694	0.022347	0.471892	0.430343
80	9.63251	0.10382	0.57615	0.018743	0.331944	0.430407
81	9.72950	0.10278	-0.37765	0.012286	0.142623	0.430434
82	9.84398	0.10158	5.7584	0.187330	33.1589	0.436786
83	9.88903	0.10112	1.4673	0.047734	2.15298	0.437199
84	9.89937	0.10102	-1.1074	0.036025	1.22631	0.437434
85	9.91646	0.10084	1.6286	0.052982	2.65238	0.437942
86	9.92697	0.10074	0.94075	0.030604	0.885016	0.438111
87	10.0370	0.99631E-01	0.58148E-01	0.001892	0.338115E-02	0.438112
88	10.0471	0.99531E-01	-1.2215	0.039738	1.49211	0.438398
89	10.2152	0.97893E-01	-0.10173	0.003310	0.103497E-01	0.438400
90	10.2255	0.97794E-01	-0.24791	0.008065	0.614602E-01	0.438412
91	10.2445	0.97613E-01	-0.18605	0.006052	0.346129E-01	0.438418
92	10.2647	0.97421E-01	0.19052E-01	0.000620	0.362960E-03	0.438418
93	10.2658	0.97410E-01	-0.83715E-01	0.002723	0.700826E-02	0.438420
94	10.2662	0.97407E-01	0.70690E-01	0.002300	0.499704E-02	0.438421
95	10.2714	0.97358E-01	0.10603	0.003449	0.112421E-01	0.438423
96	10.2729	0.97344E-01	-0.24588E-01	0.000800	0.604562E-03	0.438423
97	10.2795	0.97281E-01	0.65702E-02	0.000214	0.431673E-04	0.438423
98	10.2821	0.97256E-01	-0.13309E-02	0.000043	0.177127E-05	0.438423
99	10.2843	0.97236E-01	0.19318E-01	0.000628	0.373203E-03	0.438423
100	10.3658	0.96471E-01	1.5038	0.048922	2.26150	0.438856
101	10.3852	0.96291E-01	-1.2802	0.041646	1.63880	0.439170
102	10.4430	0.95758E-01	0.25115	0.008170	0.630765E-01	0.439182
103	10.4849	0.95376E-01	0.10593	0.003446	0.112205E-01	0.439184
104	10.4993	0.95244E-01	-1.7154	0.055804	2.94253	0.439748
105	10.5976	0.94361E-01	-0.55808	0.018155	0.311456	0.439808
106	10.7988	0.92603E-01	0.10192E-01	0.000332	0.103875E-03	0.439808
107	10.8430	0.92225E-01	2.1025	0.068399	4.42069	0.440654
108	10.9312	0.91481E-01	0.18003	0.005857	0.324107E-01	0.440661
109	11.0211	0.90735E-01	-0.23339E-01	0.000759	0.544716E-03	0.440661
110	11.1678	0.89543E-01	-0.20269	0.006594	0.410832E-01	0.440669
111	11.6182	0.86072E-01	1.3086	0.042570	1.71234	0.440997
112	11.6384	0.85922E-01	15.055	0.489751	226.639	0.484412
113	11.6479	0.85852E-01	1.4431	0.046945	2.08243	0.484811
114	11.6968	0.85493E-01	0.17825E-02	0.000058	0.317718E-05	0.484811
115	11.8823	0.84159E-01	1.8264	0.059415	3.33567	0.485450
116	11.9300	0.83822E-01	4.4291	0.144087	19.6170	0.489207
117	11.9414	0.83742E-01	-10.166	0.330712	103.344	0.509004
118	11.9936	0.83377E-01	-8.7408	0.284355	76.4024	0.523640
119	12.1632	0.82215E-01	-0.72960	0.023735	0.532317	0.523742
120	12.3699	0.80841E-01	-0.45622	0.014842	0.208137	0.523781
121	12.5596	0.79621E-01	5.2720	0.171508	27.7940	0.529106
122	12.7209	0.78611E-01	-0.46455	0.015113	0.215811	0.529147
123	12.9309	0.77334E-01	-1.2043	0.039179	1.45040	0.529425
124	13.0905	0.76391E-01	-0.56618	0.018419	0.320564	0.529486
125	13.1138	0.76256E-01	0.93421	0.030391	0.872746	0.529653
126	13.5771	0.73653E-01	-0.38983	0.012682	0.151967	0.529683
127	13.8280	0.72317E-01	-0.58909E-01	0.001916	0.347025E-02	0.529683
128	13.9829	0.71516E-01	-0.85195E-01	0.002772	0.725824E-02	0.529685
129	14.1517	0.70663E-01	-1.2163	0.039568	1.47939	0.529968
130	14.2850	0.70004E-01	-0.35815E-01	0.001165	0.128270E-02	0.529968
131	14.3529	0.69672E-01	0.31792	0.010343	0.101075	0.529988
132	14.4676	0.69120E-01	0.22466E-01	0.000731	0.504734E-03	0.529988
133	14.5357	0.68796E-01	-0.53152	0.017291	0.282512	0.530042
134	14.7438	0.67825E-01	-0.20777	0.006759	0.431680E-01	0.530050
135	14.8725	0.67238E-01	-0.63279E-01	0.002059	0.400420E-02	0.530051
136	14.9630	0.66832E-01	-0.11764	0.003827	0.138383E-01	0.530053
137	15.0669	0.66370E-01	0.97784	0.031811	0.956174	0.530237
138	15.1463	0.66023E-01	-0.59502	0.019357	0.354049	0.530304

139	15.4301	0.64809E-01	6.0028	0.195281	36.0335	0.537207
140	15.4423	0.64757E-01	-4.2666	0.138799	18.2037	0.540694
141	15.6954	0.63713E-01	-0.57448E-01	0.001869	0.330025E-02	0.540695
142	15.7091	0.63657E-01	3.1367	0.102041	9.83859	0.542579
143	15.7337	0.63558E-01	0.14504E-01	0.000472	0.210354E-03	0.542580
144	15.8440	0.63115E-01	-0.98534	0.032055	0.970890	0.542765
145	15.9540	0.62680E-01	0.68150	0.022170	0.464444	0.542854
146	16.0955	0.62129E-01	0.12705	0.004133	0.161421E-01	0.542858
147	16.3275	0.61246E-01	1.5678	0.051005	2.45815	0.543328
148	16.3877	0.61021E-01	-1.2336	0.040132	1.52180	0.543620
149	16.5392	0.60462E-01	-1.0512	0.034198	1.10505	0.543832
150	16.7080	0.59852E-01	3.8871	0.126454	15.1094	0.546726
151	16.8015	0.59518E-01	0.50453	0.016413	0.254546	0.546775
152	17.3279	0.57710E-01	1.1994	0.039018	1.43853	0.547050
153	17.4117	0.57433E-01	-0.82990	0.026998	0.688734	0.547182
154	17.6240	0.56741E-01	0.49161	0.015993	0.241676	0.547229
155	17.7212	0.56430E-01	0.38958	0.012674	0.151774	0.547258
156	17.8388	0.56058E-01	4.7901	0.155832	22.9454	0.551653
157	17.9163	0.55815E-01	18.189	0.591725	330.845	0.615030
158	17.9861	0.55598E-01	8.5975	0.279693	73.9177	0.629189
159	18.1166	0.55198E-01	4.2865	0.139447	18.3739	0.632709
160	18.1732	0.55026E-01	5.7485	0.187010	33.0458	0.639039
161	18.4381	0.54235E-01	1.8365	0.059746	3.37285	0.639686
162	18.5683	0.53855E-01	0.32406	0.010542	0.105013	0.639706
163	18.5911	0.53789E-01	0.43509	0.014154	0.189300	0.639742
164	18.8629	0.53014E-01	-0.28848	0.009385	0.832183E-01	0.639758
165	19.1987	0.52087E-01	9.7474	0.317099	95.0108	0.657958
166	19.2089	0.52059E-01	-14.847	0.482984	220.419	0.700182
167	19.2670	0.51902E-01	0.68793	0.022380	0.473249	0.700272
168	19.2898	0.51841E-01	-0.10445	0.003398	0.109096E-01	0.700274
169	19.4631	0.51379E-01	3.5912	0.116828	12.8966	0.702745
170	19.6107	0.50993E-01	-3.4478	0.112162	11.8872	0.705022
171	19.6851	0.50800E-01	-0.91689	0.029828	0.840694	0.705183
172	19.9059	0.50236E-01	0.19828	0.006451	0.393168E-01	0.705191
173	20.0212	0.49947E-01	0.61890E-02	0.000201	0.383037E-04	0.705191
174	20.0793	0.49803E-01	3.1719	0.103188	10.0611	0.707118
175	20.1602	0.49603E-01	0.78589E-01	0.002557	0.617616E-02	0.707119
176	20.2145	0.49469E-01	-0.31917	0.010383	0.101870	0.707139
177	20.4345	0.48937E-01	2.9867	0.097164	8.92067	0.708847
178	20.4554	0.48887E-01	6.0579	0.197076	36.6987	0.715877
179	20.5304	0.48708E-01	0.79996E-01	0.002602	0.639936E-02	0.715879
180	20.8493	0.47963E-01	-0.85593E-01	0.002785	0.732621E-02	0.715880
181	20.9257	0.47788E-01	-0.60286	0.019612	0.363444	0.715950
182	21.0783	0.47442E-01	-0.67277	0.021886	0.452623	0.716036
183	21.3215	0.46901E-01	2.1915	0.071292	4.80254	0.716956
184	21.6219	0.46249E-01	-6.7468	0.219487	45.5198	0.725676
185	21.6298	0.46233E-01	16.673	0.542418	278.006	0.778931
186	21.9561	0.45545E-01	-3.7197	0.121009	13.8363	0.781581
187	22.1257	0.45196E-01	-0.42596	0.013857	0.181445	0.781616
188	22.4705	0.44503E-01	0.91281	0.029695	0.833216	0.781776
189	22.4810	0.44482E-01	2.5674	0.083523	6.59162	0.783038
190	22.6911	0.44070E-01	-0.28968	0.009424	0.839164E-01	0.783055
191	22.7940	0.43871E-01	1.0126	0.032942	1.02539	0.783251
192	22.9626	0.43549E-01	1.4134	0.045981	1.99773	0.783634
193	23.0993	0.43291E-01	0.74886	0.024362	0.560798	0.783741
194	23.5334	0.42493E-01	-0.33210E-01	0.001080	0.110288E-02	0.783741
195	23.8174	0.41986E-01	-0.31134E-01	0.001013	0.969323E-03	0.783741
196	23.8255	0.41972E-01	-0.49311E-01	0.001604	0.243153E-02	0.783742
197	23.8596	0.41912E-01	0.13067E-01	0.000425	0.170753E-03	0.783742
198	23.8653	0.41902E-01	0.26063E-01	0.000848	0.679288E-03	0.783742
199	23.8769	0.41882E-01	-0.51011E-01	0.001659	0.260214E-02	0.783743
200	23.9108	0.41822E-01	0.59739E-01	0.001943	0.356871E-02	0.783743
201	23.9254	0.41797E-01	-0.11539	0.003754	0.133157E-01	0.783746
202	23.9538	0.41747E-01	-0.53648	0.017453	0.287809	0.783801
203	24.0177	0.41636E-01	-0.99700E-02	0.000324	0.994013E-04	0.783801
204	24.1804	0.41356E-01	-0.14845	0.004829	0.220369E-01	0.783805
205	24.4160	0.40957E-01	-4.3837	0.142611	19.2171	0.787486
206	24.4208	0.40949E-01	11.787	0.383452	138.933	0.814100
207	24.6839	0.40512E-01	2.2085	0.071848	4.87767	0.815035
208	24.7536	0.40398E-01	-0.68704	0.022351	0.472024	0.815125
209	24.8003	0.40322E-01	-1.6647	0.054155	2.77121	0.815656
210	25.2210	0.39650E-01	2.8007	0.091113	7.84414	0.817159
211	25.5999	0.39063E-01	11.016	0.358382	121.360	0.840407
212	25.6632	0.38966E-01	3.9092	0.127172	15.2816	0.843334
213	25.6814	0.38939E-01	-0.10809	0.003516	0.116840E-01	0.843336

214	25.8066	0.38750E-01	-2.6332	0.085662	6.93371	0.844664
215	25.8810	0.38638E-01	-2.3643	0.076915	5.58987	0.845735
216	26.1913	0.38181E-01	-0.29747	0.009677	0.884883E-01	0.845752
217	26.2741	0.38060E-01	-0.55862	0.018173	0.312051	0.845812
218	26.8026	0.37310E-01	-0.25665E-02	0.000083	0.658710E-05	0.845812
219	26.9131	0.37157E-01	0.22931	0.007460	0.525818E-01	0.845822
220	26.9788	0.37066E-01	-0.44569	0.014499	0.198639	0.845860
221	27.4168	0.36474E-01	-1.7645	0.057403	3.11353	0.846456
222	27.7342	0.36057E-01	0.44030	0.014324	0.193866	0.846494
223	27.8479	0.35909E-01	-0.25027E-01	0.000814	0.626341E-03	0.846494
224	27.9755	0.35746E-01	0.39521E-01	0.001286	0.156190E-02	0.846494
225	28.0077	0.35704E-01	0.21643	0.007041	0.468399E-01	0.846503
226	28.2004	0.35461E-01	1.1750	0.038226	1.38071	0.846767
227	28.5083	0.35077E-01	7.5990	0.247209	57.7447	0.857829
228	28.7836	0.34742E-01	1.7744	0.057723	3.14835	0.858432
229	28.9573	0.34534E-01	0.44467	0.014466	0.197731	0.858470
230	29.1870	0.34262E-01	-1.1403	0.037095	1.30020	0.858719
231	29.3119	0.34116E-01	2.2258	0.072409	4.95421	0.859668
232	29.3231	0.34103E-01	-1.8390	0.059825	3.38186	0.860316
233	29.4262	0.33983E-01	-0.84200	0.027392	0.708969	0.860452
234	29.5131	0.33883E-01	-0.35712E-01	0.001162	0.127536E-02	0.860452
235	29.7307	0.33635E-01	0.19554	0.006361	0.382354E-01	0.860459
236	30.4345	0.32857E-01	-0.63755	0.020741	0.406465	0.860537
237	30.6570	0.32619E-01	1.9048	0.061968	3.62842	0.861232
238	31.1400	0.32113E-01	-6.7867	0.220784	46.0594	0.870055
239	31.2194	0.32031E-01	4.3470	0.141417	18.8967	0.873675
240	31.2720	0.31977E-01	17.164	0.558379	294.606	0.930110
241	31.4941	0.31752E-01	-0.52991	0.017239	0.280808	0.930164
242	31.6503	0.31595E-01	4.1170	0.133932	16.9494	0.933411
243	31.8920	0.31356E-01	8.9730	0.291909	80.5154	0.948834
244	32.0249	0.31226E-01	1.7913	0.058275	3.20880	0.949449
245	32.0982	0.31154E-01	0.51108	0.016626	0.261205	0.949499
246	32.2175	0.31039E-01	0.77855	0.025328	0.606145	0.949615
247	32.3360	0.30925E-01	1.2374	0.040256	1.53124	0.949908
248	32.4327	0.30833E-01	10.844	0.352775	117.592	0.972434
249	32.5300	0.30741E-01	3.4056	0.110791	11.5983	0.974656
250	32.5772	0.30696E-01	2.0843	0.067807	4.34450	0.975488
251	32.6146	0.30661E-01	5.6529	0.183900	31.9557	0.981610
252	32.6924	0.30588E-01	-5.4132	0.176101	29.3028	0.987223
253	32.8574	0.30435E-01	4.4740	0.145546	20.0163	0.991057
254	32.8844	0.30410E-01	2.6784	0.087134	7.17391	0.992432
255	32.9249	0.30372E-01	2.8264	0.091947	7.98841	0.993962
256	32.9757	0.30325E-01	2.1773	0.070832	4.74070	0.994870
257	33.2948	0.30035E-01	-0.73355	0.023864	0.538096	0.994973
258	33.3864	0.29952E-01	-2.4710	0.080385	6.10569	0.996143
259	33.4770	0.29871E-01	4.4873	0.145980	20.1358	1.00000

SUM OF EFFECTIVE MASSES= 5220.29

***** PARTICIPATION FACTOR CALCULATION ***** Z DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.248482	4.0244	28.521	0.869949	813.456	0.130390
2	0.311988	3.2052	-0.45530E-01	0.001389	0.207300E-02	0.130390
3	1.18165	0.84628	18.064	0.550995	326.318	0.182696
4	1.22167	0.81855	17.974	0.548232	323.054	0.234478
5	1.30667	0.76530	0.67990	0.020738	0.462265	0.234552
6	1.71314	0.58372	32.785	1.000000	1074.85	0.406840
7	1.75556	0.56962	28.034	0.855083	785.892	0.532811
8	1.77557	0.56320	2.2229	0.067804	4.94146	0.533603
9	1.86491	0.53622	8.3477	0.254619	69.6833	0.544773
10	1.95114	0.51252	-10.557	0.322018	111.457	0.562639
11	2.08462	0.47970	4.2574	0.129857	18.1251	0.565544
12	2.21319	0.45184	-2.3478	0.071612	5.51215	0.566427
13	2.38058	0.42007	5.0851	0.155104	25.8578	0.570572
14	2.45974	0.40655	4.0016	0.122055	16.0126	0.573139
15	2.54503	0.39292	0.33717	0.010284	0.113685	0.573157
16	2.54625	0.39273	0.61135	0.018647	0.373747	0.573217
17	2.57476	0.38839	-7.4913	0.228500	56.1199	0.582212
18	2.64542	0.37801	2.4935	0.076057	6.21771	0.583209
19	2.69098	0.37161	-15.874	0.484180	251.976	0.623598
20	2.79914	0.35725	2.2075	0.067332	4.87294	0.624380
21	2.98081	0.33548	-0.40657	0.012401	0.165296	0.624406

22	3.17272	0.31519	0.24303E-01	0.000741	0.590655E-03	0.624406
23	3.21920	0.31064	-0.12422	0.003789	0.154305E-01	0.624409
24	3.36615	0.29708	1.3433	0.040974	1.80450	0.624698
25	3.37202	0.29656	0.31667	0.009659	0.100279	0.624714
26	3.44200	0.29053	-1.2146	0.037048	1.47528	0.624950
27	3.76919	0.26531	12.000	0.366030	144.006	0.648033
28	3.81674	0.26200	3.7085	0.113115	13.7528	0.650238
29	4.09965	0.24392	0.78068	0.023812	0.609456	0.650335
30	4.30923	0.23206	0.53031E-01	0.001618	0.281232E-02	0.650336
31	4.37720	0.22846	-4.7504	0.144896	22.5663	0.653953
32	4.53348	0.22058	0.73189	0.022324	0.535659	0.654039
33	4.53596	0.22046	-0.89197	0.027207	0.795606	0.654166
34	4.69569	0.21296	1.3967	0.042602	1.95077	0.654479
35	4.74103	0.21092	0.37608	0.011471	0.141438	0.654502
36	4.78342	0.20906	-0.78808	0.024038	0.621069	0.654601
37	4.79664	0.20848	0.98871	0.030158	0.977554	0.654758
38	4.86376	0.20560	-0.15785	0.004815	0.249157E-01	0.654762
39	4.88935	0.20453	-4.1609	0.126915	17.3129	0.657537
40	4.93022	0.20283	-2.3657	0.072160	5.59675	0.658434
41	4.99200	0.20032	-1.0713	0.032678	1.14778	0.658618
42	4.99607	0.20016	2.1850	0.066647	4.77425	0.659383
43	5.05690	0.19775	-2.7732	0.084589	7.69078	0.660616
44	5.15657	0.19393	0.33554E-02	0.000102	0.112585E-04	0.660616
45	5.57274	0.17945	3.9322	0.119938	15.4618	0.663095
46	5.64530	0.17714	-0.10516	0.003208	0.110593E-01	0.663096
47	5.73147	0.17448	1.1191	0.034134	1.25230	0.663297
48	5.79114	0.17268	2.5817	0.078746	6.66513	0.664365
49	6.17212	0.16202	0.48593	0.014822	0.236132	0.664403
50	6.28385	0.15914	-1.1931	0.036390	1.42337	0.664631
51	6.31126	0.15845	4.7057	0.143532	22.1435	0.668181
52	6.74702	0.14821	-1.1756	0.035859	1.38209	0.668402
53	7.21763	0.13855	19.310	0.588989	372.873	0.728171
54	7.23941	0.13813	13.998	0.426966	195.944	0.759579
55	7.39451	0.13524	0.12050	0.003676	0.145211E-01	0.759581
56	7.43582	0.13448	-3.1690	0.096661	10.0426	0.761191
57	7.65297	0.13067	-2.3628	0.072070	5.58286	0.762085
58	7.73938	0.12921	-1.3184	0.040214	1.73817	0.762364
59	7.78598	0.12844	3.8633	0.117839	14.9254	0.764757
60	7.86700	0.12711	-1.8838	0.057459	3.54863	0.765325
61	7.88762	0.12678	2.3810	0.072626	5.66937	0.766234
62	7.93285	0.12606	5.4878	0.167389	30.1162	0.771061
63	8.01996	0.12469	0.25377	0.007740	0.643996E-01	0.771072
64	8.05445	0.12415	3.3869	0.103306	11.4709	0.772910
65	8.29860	0.12050	0.98814	0.030140	0.976412	0.773067
66	8.35520	0.11969	-0.62228	0.018981	0.387227	0.773129
67	8.57376	0.11663	-0.34519	0.010529	0.119159	0.773148
68	8.74854	0.11430	-1.7527	0.053461	3.07194	0.773641
69	8.77552	0.11395	0.62085	0.018937	0.385452	0.773702
70	8.81689	0.11342	-0.13999	0.004270	0.195981E-01	0.773705
71	8.88579	0.11254	-0.33209	0.010129	0.110282	0.773723
72	8.97397	0.11143	-1.2223	0.037282	1.49401	0.773963
73	9.04143	0.11060	9.0921	0.277325	82.6656	0.787213
74	9.07896	0.11014	-3.3107	0.100982	10.9607	0.788970
75	9.08338	0.11009	-0.64512	0.019677	0.416176	0.789037
76	9.13853	0.10943	2.7222	0.083033	7.41045	0.790225
77	9.18461	0.10888	3.0156	0.091982	9.09395	0.791682
78	9.22740	0.10837	-3.1726	0.096771	10.0655	0.793296
79	9.41857	0.10617	-4.8767	0.148750	23.7826	0.797108
80	9.63251	0.10382	-7.2949	0.222507	53.2149	0.805638
81	9.72950	0.10278	2.8179	0.085950	7.94029	0.806910
82	9.84398	0.10158	0.94496	0.028823	0.892954	0.807053
83	9.88903	0.10112	2.6927	0.082131	7.25042	0.808216
84	9.89937	0.10102	-1.4305	0.043634	2.04639	0.808544
85	9.91646	0.10084	-0.25443	0.007760	0.647324E-01	0.808554
86	9.92697	0.10074	3.5010	0.106787	12.2570	0.810519
87	10.0370	0.99631E-01	3.0706	0.093660	9.42868	0.812030
88	10.0471	0.99531E-01	-0.70017E-02	0.000214	0.490237E-04	0.812030
89	10.2152	0.97893E-01	3.5892	0.109477	12.8823	0.814095
90	10.2255	0.97794E-01	5.9390	0.181152	35.2723	0.819749
91	10.2445	0.97613E-01	2.2995	0.070140	5.28787	0.820596
92	10.2647	0.97421E-01	-1.6939	0.051666	2.86920	0.821056
93	10.2658	0.97410E-01	3.3464	0.102071	11.1983	0.822851
94	10.2662	0.97407E-01	-2.4506	0.074747	6.00526	0.823814
95	10.2714	0.97358E-01	-1.8307	0.055840	3.35150	0.824351
96	10.2729	0.97344E-01	0.40296	0.012291	0.162377	0.824377

97	10.2795	0.97281E-01	-0.73562E-01	0.002244	0.541133E-02	0.824378
98	10.2821	0.97256E-01	0.80487E-01	0.002455	0.647812E-02	0.824379
99	10.2843	0.97236E-01	-0.16137	0.004922	0.260413E-01	0.824383
100	10.3658	0.96471E-01	-7.7443	0.236216	59.9743	0.833997
101	10.3852	0.96291E-01	-7.8631	0.239839	61.8281	0.843907
102	10.4430	0.95758E-01	-1.4339	0.043735	2.05593	0.844237
103	10.4849	0.95376E-01	2.1533	0.065681	4.63691	0.844980
104	10.4993	0.95244E-01	10.927	0.333300	119.403	0.864119
105	10.5976	0.94361E-01	14.892	0.454228	221.766	0.899666
106	10.7988	0.92603E-01	-1.0036	0.030611	1.00718	0.899827
107	10.8430	0.92225E-01	-1.0263	0.031303	1.05321	0.899996
108	10.9312	0.91481E-01	-1.6718	0.050995	2.79508	0.900444
109	11.0211	0.90735E-01	0.44265E-02	0.000135	0.195935E-04	0.900444
110	11.1678	0.89543E-01	0.82738	0.025237	0.684563	0.900554
111	11.6182	0.86072E-01	0.88067	0.026862	0.775582	0.900678
112	11.6384	0.85922E-01	0.74694	0.022783	0.557919	0.900768
113	11.6479	0.85852E-01	0.35539	0.010840	0.126301	0.900788
114	11.6968	0.85493E-01	0.44037E-01	0.001343	0.193928E-02	0.900788
115	11.8823	0.84159E-01	2.9625	0.090361	8.77629	0.902195
116	11.9300	0.83822E-01	0.63618	0.019405	0.404727	0.902260
117	11.9414	0.83742E-01	-0.54579	0.016648	0.297885	0.902308
118	11.9936	0.83377E-01	0.78089	0.023819	0.609791	0.902405
119	12.1632	0.82215E-01	0.37876	0.011553	0.143459	0.902428
120	12.3699	0.80841E-01	0.15594	0.004756	0.243168E-01	0.902432
121	12.5596	0.79621E-01	-0.47147E-01	0.001438	0.222286E-02	0.902433
122	12.7209	0.78611E-01	-0.14052E-01	0.000429	0.197471E-03	0.902433
123	12.9309	0.77334E-01	0.21038	0.006417	0.442585E-01	0.902440
124	13.0905	0.76391E-01	-0.91191	0.027815	0.831582	0.902573
125	13.1138	0.76256E-01	-4.8476	0.147860	23.4988	0.906340
126	13.5771	0.73653E-01	8.8859	0.271038	78.9599	0.918996
127	13.8280	0.72317E-01	-0.11027	0.003363	0.121591E-01	0.918998
128	13.9829	0.71516E-01	1.7499	0.053374	3.06199	0.919489
129	14.1517	0.70663E-01	0.33840E-01	0.001032	0.114512E-02	0.919489
130	14.2850	0.70004E-01	0.96732E-01	0.002951	0.935704E-02	0.919491
131	14.3529	0.69672E-01	-2.1162	0.064547	4.47809	0.920209
132	14.4676	0.69120E-01	-0.43222E-02	0.000132	0.186810E-04	0.920209
133	14.5357	0.68796E-01	-2.5769	0.078599	6.64025	0.921273
134	14.7438	0.67825E-01	2.4799	0.075641	6.14984	0.922259
135	14.8725	0.67238E-01	1.0534	0.032131	1.10968	0.922437
136	14.9630	0.66832E-01	0.75290	0.022965	0.566863	0.922527
137	15.0669	0.66370E-01	-0.86006	0.026233	0.739702	0.922646
138	15.1463	0.66023E-01	-4.5934	0.140107	21.0993	0.926028
139	15.4301	0.64809E-01	0.17472	0.005329	0.305258E-01	0.926033
140	15.4423	0.64757E-01	-0.86283	0.026318	0.744477	0.926152
141	15.6954	0.63713E-01	0.30260E-01	0.000923	0.915638E-03	0.926152
142	15.7091	0.63657E-01	0.13598	0.004148	0.184919E-01	0.926155
143	15.7337	0.63558E-01	-0.69337E-03	0.000021	0.480759E-06	0.926155
144	15.8440	0.63115E-01	-1.3327	0.040650	1.77607	0.926440
145	15.9540	0.62680E-01	4.3696	0.133282	19.0936	0.929501
146	16.0955	0.62129E-01	-0.15530	0.004737	0.241172E-01	0.929504
147	16.3275	0.61246E-01	0.41081	0.012531	0.168769	0.929531
148	16.3877	0.61021E-01	0.17027	0.005194	0.289929E-01	0.929536
149	16.5392	0.60462E-01	-0.23694	0.007227	0.561414E-01	0.929545
150	16.7080	0.59852E-01	1.4162	0.043196	2.00560	0.929867
151	16.8015	0.59518E-01	-0.36397	0.011102	0.132475	0.929888
152	17.3279	0.57710E-01	0.37005	0.011287	0.136938	0.929910
153	17.4117	0.57433E-01	-4.4160	0.134698	19.5014	0.933036
154	17.6240	0.56741E-01	-1.6959	0.051729	2.87612	0.933497
155	17.7212	0.56430E-01	1.2581	0.038374	1.58276	0.933750
156	17.8388	0.56058E-01	-0.33638	0.010260	0.113149	0.933769
157	17.9163	0.55815E-01	0.25568	0.007799	0.653707E-01	0.933779
158	17.9861	0.55598E-01	0.57053	0.017402	0.325508	0.933831
159	18.1166	0.55198E-01	-2.0598	0.062827	4.24267	0.934511
160	18.1732	0.55026E-01	1.3348	0.040713	1.78163	0.934797
161	18.4381	0.54235E-01	-0.42942	0.013098	0.184404	0.934826
162	18.5683	0.53855E-01	-0.48025	0.014649	0.230644	0.934863
163	18.5911	0.53789E-01	2.7870	0.085008	7.76730	0.936108
164	18.8629	0.53014E-01	0.94051	0.028687	0.884563	0.936250
165	19.1987	0.52087E-01	0.28450	0.008678	0.809395E-01	0.936263
166	19.2089	0.52059E-01	1.2559	0.038308	1.57733	0.936516
167	19.2670	0.51902E-01	5.1031	0.155654	26.0416	0.940690
168	19.2898	0.51841E-01	1.3714	0.041829	1.88061	0.940992
169	19.4631	0.51379E-01	1.5321	0.046732	2.34734	0.941368
170	19.6107	0.50993E-01	0.79899	0.024371	0.638390	0.941470
171	19.6851	0.50800E-01	-2.2256	0.067885	4.95336	0.942264

172	19.9059	0.50236E-01	-0.68870E-03	0.000021	0.474308E-06	0.942264
173	20.0212	0.49947E-01	-0.11484	0.003503	0.131892E-01	0.942266
174	20.0793	0.49803E-01	-0.71193	0.021715	0.506840	0.942348
175	20.1602	0.49603E-01	0.63718	0.019435	0.405997	0.942413
176	20.2145	0.49469E-01	-0.67199E-01	0.002050	0.451577E-02	0.942413
177	20.4345	0.48937E-01	-0.89483	0.027294	0.800716	0.942542
178	20.4554	0.48887E-01	-2.7907	0.085123	7.78821	0.943790
179	20.5304	0.48708E-01	0.20746	0.006328	0.430385E-01	0.943797
180	20.8493	0.47963E-01	0.13984	0.004265	0.195560E-01	0.943800
181	20.9257	0.47788E-01	-5.0035	0.152615	25.0347	0.947813
182	21.0783	0.47442E-01	-0.62987	0.019212	0.396737	0.947877
183	21.3215	0.46901E-01	-8.4500	0.257742	71.4029	0.959322
184	21.6219	0.46249E-01	9.4110	0.287052	88.5664	0.973518
185	21.6298	0.46233E-01	4.2272	0.128937	17.8691	0.976382
186	21.9561	0.45545E-01	-5.3801	0.164104	28.9456	0.981022
187	22.1257	0.45196E-01	-0.67543	0.020602	0.456212	0.981095
188	22.4705	0.44503E-01	0.13285	0.004052	0.176493E-01	0.981098
189	22.4810	0.44482E-01	-3.3861	0.103284	11.4660	0.982936
190	22.6911	0.44070E-01	-0.22001	0.006711	0.484064E-01	0.982944
191	22.7940	0.43871E-01	0.57512	0.017542	0.330766	0.982997
192	22.9626	0.43549E-01	0.30772	0.009386	0.946945E-01	0.983012
193	23.0993	0.43291E-01	0.46539E-01	0.001420	0.216588E-02	0.983012
194	23.5334	0.42493E-01	-0.40348E-01	0.001231	0.162793E-02	0.983013
195	23.8174	0.41986E-01	-0.22737E-02	0.000069	0.516981E-05	0.983013
196	23.8255	0.41972E-01	-0.34576E-02	0.000105	0.119549E-04	0.983013
197	23.8596	0.41912E-01	0.26043E-02	0.000079	0.678234E-05	0.983013
198	23.8653	0.41902E-01	0.43728E-02	0.000133	0.191210E-04	0.983013
199	23.8769	0.41882E-01	-0.46444E-02	0.000142	0.215702E-04	0.983013
200	23.9108	0.41822E-01	0.10011E-01	0.000305	0.100223E-03	0.983013
201	23.9254	0.41797E-01	-0.12142E-01	0.000370	0.147431E-03	0.983013
202	23.9538	0.41747E-01	-0.12148	0.003705	0.147564E-01	0.983015
203	24.0177	0.41636E-01	-0.12140E-01	0.000370	0.147392E-03	0.983015
204	24.1804	0.41356E-01	-0.92865E-01	0.002833	0.862386E-02	0.983016
205	24.4160	0.40957E-01	-0.39377	0.012011	0.155057	0.983041
206	24.4208	0.40949E-01	0.84887	0.025892	0.720585	0.983157
207	24.6839	0.40512E-01	-0.41086	0.012532	0.168808	0.983184
208	24.7536	0.40398E-01	-0.81888	0.024977	0.670561	0.983291
209	24.8003	0.40322E-01	-0.16055	0.004897	0.257749E-01	0.983295
210	25.2210	0.39650E-01	-0.25582	0.007803	0.654453E-01	0.983306
211	25.5999	0.39063E-01	0.41501	0.012659	0.172231	0.983333
212	25.6632	0.38966E-01	1.2349	0.037668	1.52504	0.983578
213	25.6814	0.38939E-01	-0.92526	0.028222	0.856100	0.983715
214	25.8066	0.38750E-01	-0.15377	0.004690	0.236463E-01	0.983719
215	25.8810	0.38638E-01	1.3296	0.040555	1.76782	0.984002
216	26.1913	0.38181E-01	0.23197	0.007075	0.538078E-01	0.984011
217	26.2741	0.38060E-01	1.1112	0.033893	1.23475	0.984209
218	26.8026	0.37310E-01	-0.17153	0.005232	0.294217E-01	0.984214
219	26.9131	0.37157E-01	0.30015E-01	0.000916	0.900878E-03	0.984214
220	26.9788	0.37066E-01	-0.81027	0.024715	0.656538	0.984319
221	27.4168	0.36474E-01	-0.12887	0.003931	0.166082E-01	0.984322
222	27.7342	0.36057E-01	-0.26175	0.007984	0.685132E-01	0.984333
223	27.8479	0.35909E-01	0.79599E-02	0.000243	0.633599E-04	0.984333
224	27.9755	0.35746E-01	0.14760E-01	0.000450	0.217871E-03	0.984333
225	28.0077	0.35704E-01	-0.23225	0.007084	0.539389E-01	0.984341
226	28.2004	0.35461E-01	0.91507	0.027911	0.837354	0.984475
227	28.5083	0.35077E-01	-0.32714E-01	0.000998	0.107019E-02	0.984476
228	28.7836	0.34742E-01	-0.43050E-01	0.001313	0.185327E-02	0.984476
229	28.9573	0.34534E-01	-0.11300	0.003447	0.127691E-01	0.984478
230	29.1870	0.34262E-01	0.17770	0.005420	0.315781E-01	0.984483
231	29.3119	0.34116E-01	-0.68485	0.020889	0.469016	0.984558
232	29.3231	0.34103E-01	0.54024	0.016478	0.291864	0.984605
233	29.4262	0.33983E-01	0.76654E-01	0.002338	0.587583E-02	0.984606
234	29.5131	0.33883E-01	0.62037E-01	0.001892	0.384855E-02	0.984607
235	29.7307	0.33635E-01	-0.12961E-01	0.000395	0.167979E-03	0.984607
236	30.4345	0.32857E-01	0.32426E-01	0.000989	0.105142E-02	0.984607
237	30.6570	0.32619E-01	0.93666E-01	0.002857	0.877331E-02	0.984608
238	31.1400	0.32113E-01	0.30182	0.009206	0.910975E-01	0.984623
239	31.2194	0.32031E-01	-0.81441	0.024841	0.663265	0.984729
240	31.2720	0.31977E-01	-0.25865	0.007889	0.668987E-01	0.984740
241	31.4941	0.31752E-01	-0.41774	0.012742	0.174508	0.984768
242	31.6503	0.31595E-01	0.99528	0.030358	0.990578	0.984927
243	31.8920	0.31356E-01	2.4031	0.073299	5.77491	0.985852
244	32.0249	0.31226E-01	-0.19253	0.005872	0.370665E-01	0.985858
245	32.0982	0.31154E-01	-0.86185	0.026288	0.742787	0.985977
246	32.2175	0.31039E-01	-0.13957	0.004257	0.194785E-01	0.985980

247	32.3360	0.30925E-01	-1.1752	0.035846	1.38109	0.986202
248	32.4327	0.30833E-01	0.43152	0.013162	0.186210	0.986232
249	32.5300	0.30741E-01	-1.2309	0.037546	1.51523	0.986474
250	32.5772	0.30696E-01	-8.0010	0.244046	64.0161	0.996736
251	32.6146	0.30661E-01	0.21997	0.006709	0.483859E-01	0.996743
252	32.6924	0.30588E-01	-0.37692	0.011497	0.142071	0.996766
253	32.8574	0.30435E-01	-0.45150	0.013772	0.203856	0.996799
254	32.8844	0.30410E-01	-0.59307	0.018090	0.351732	0.996855
255	32.9249	0.30372E-01	0.94960E-01	0.002896	0.901732E-02	0.996857
256	32.9757	0.30325E-01	0.86422E-01	0.002636	0.746868E-02	0.996858
257	33.2948	0.30035E-01	-0.87601E-01	0.002672	0.767385E-02	0.996859
258	33.3864	0.29952E-01	4.1560	0.126767	17.2727	0.999628
259	33.4770	0.29871E-01	1.5239	0.046482	2.32226	1.00000

SUM OF EFFECTIVE MASSES= 6238.66

***** PARTICIPATION FACTOR CALCULATION *****ROTX DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.248482	4.0244	26297.	0.858862	0.691531E+09	0.160103
2	0.311988	3.2052	-41.216	0.001346	1698.72	0.160103
3	1.18165	0.84628	17745.	0.579554	0.314886E+09	0.233005
4	1.22167	0.81855	17609.	0.575122	0.310088E+09	0.304797
5	1.30667	0.76530	661.74	0.021613	437906.	0.304898
6	1.71314	0.58372	30618.	1.000000	0.937486E+09	0.521944
7	1.75556	0.56962	18007.	0.588095	0.324235E+09	0.597011
8	1.77557	0.56320	-3240.5	0.105835	0.105009E+08	0.599442
9	1.86491	0.53622	8553.6	0.279361	0.731638E+08	0.616381
10	1.95114	0.51252	-11018.	0.359859	0.121403E+09	0.644488
11	2.08462	0.47970	3627.9	0.118488	0.131617E+08	0.647535
12	2.21319	0.45184	-1568.1	0.051213	0.245883E+07	0.648105
13	2.38058	0.42007	2326.4	0.075981	0.541221E+07	0.649358
14	2.45974	0.40655	4205.6	0.137356	0.176872E+08	0.653452
15	2.54503	0.39292	367.81	0.012013	135288.	0.653484
16	2.54625	0.39273	633.73	0.020698	401616.	0.653577
17	2.57476	0.38839	-8174.0	0.266965	0.668150E+08	0.669046
18	2.64542	0.37801	2412.3	0.078786	0.581926E+07	0.670393
19	2.69098	0.37161	-15127.	0.494062	0.228838E+09	0.723374
20	2.79914	0.35725	2123.4	0.069350	0.450874E+07	0.724417
21	2.98081	0.33548	2152.0	0.070285	0.463122E+07	0.725490
22	3.17272	0.31519	2459.0	0.080313	0.604689E+07	0.726890
23	3.21920	0.31064	8752.4	0.285856	0.766053E+08	0.744625
24	3.36615	0.29708	699.74	0.022854	489639.	0.744739
25	3.37202	0.29656	137.82	0.004501	18995.4	0.744743
26	3.44200	0.29053	-1165.7	0.038073	0.135897E+07	0.745058
27	3.76919	0.26531	8512.8	0.278028	0.724673E+08	0.761835
28	3.81674	0.26200	2463.2	0.080447	0.606715E+07	0.763240
29	4.09965	0.24392	384.38	0.012554	147749.	0.763274
30	4.30923	0.23206	5702.3	0.186238	0.325164E+08	0.770802
31	4.37720	0.22846	-3652.8	0.119301	0.133430E+08	0.773891
32	4.53348	0.22058	880.82	0.028768	775851.	0.774071
33	4.53596	0.22046	2706.7	0.088400	0.732609E+07	0.775767
34	4.69569	0.21296	2814.1	0.091908	0.791909E+07	0.777601
35	4.74103	0.21092	3783.2	0.123559	0.143124E+08	0.780914
36	4.78342	0.20906	1645.9	0.053756	0.270909E+07	0.781541
37	4.79664	0.20848	957.86	0.031284	917504.	0.781754
38	4.86376	0.20560	986.80	0.032229	973772.	0.781979
39	4.88935	0.20453	-1654.5	0.054038	0.273752E+07	0.782613
40	4.93022	0.20283	-1887.7	0.061653	0.356341E+07	0.783438
41	4.99200	0.20032	-159.65	0.005214	25487.5	0.783444
42	4.99607	0.20016	1576.2	0.051479	0.248445E+07	0.784019
43	5.05690	0.19775	-965.52	0.031534	932224.	0.784235
44	5.15657	0.19393	44.491	0.001453	1979.43	0.784235
45	5.57274	0.17945	1861.5	0.060796	0.346507E+07	0.785038
46	5.64530	0.17714	1845.1	0.060262	0.340449E+07	0.785826
47	5.73147	0.17448	2018.9	0.065937	0.407595E+07	0.786769
48	5.79114	0.17268	1076.5	0.035159	0.115885E+07	0.787038
49	6.17212	0.16202	33.357	0.001089	1112.72	0.787038
50	6.28385	0.15914	-208.86	0.006821	43622.9	0.787048
51	6.31126	0.15845	1513.1	0.049418	0.228948E+07	0.787578
52	6.74702	0.14821	-761.76	0.024879	580272.	0.787713
53	7.21763	0.13855	10005.	0.326761	0.100098E+09	0.810887
54	7.23941	0.13813	6699.5	0.218806	0.448833E+08	0.821278

55	7.39451	0.13524	2215.9	0.072372	0.491033E+07	0.822415
56	7.43582	0.13448	-1905.1	0.062221	0.362948E+07	0.823256
57	7.65297	0.13067	687.10	0.022441	472110.	0.823365
58	7.73938	0.12921	-1188.1	0.038803	0.141157E+07	0.823692
59	7.78598	0.12844	1122.2	0.036653	0.125944E+07	0.823983
60	7.86700	0.12711	-711.99	0.023254	506927.	0.824101
61	7.88762	0.12678	1829.1	0.059739	0.334569E+07	0.824875
62	7.93285	0.12606	2430.1	0.079366	0.590516E+07	0.826242
63	8.01996	0.12469	-1754.3	0.057297	0.307767E+07	0.826955
64	8.05445	0.12415	-1227.0	0.040075	0.150560E+07	0.827304
65	8.29860	0.12050	1553.6	0.050742	0.241377E+07	0.827862
66	8.35520	0.11969	670.65	0.021903	449770.	0.827966
67	8.57376	0.11663	78.078	0.002550	6096.25	0.827968
68	8.74854	0.11430	-432.21	0.014116	186809.	0.828011
69	8.77552	0.11395	353.15	0.011534	124717.	0.828040
70	8.81689	0.11342	-33.853	0.001106	1146.01	0.828040
71	8.88579	0.11254	-137.52	0.004491	18911.8	0.828045
72	8.97397	0.11143	-812.08	0.026523	659477.	0.828197
73	9.04143	0.11060	5250.3	0.171474	0.275653E+08	0.834579
74	9.07896	0.11014	-1482.2	0.048409	0.219691E+07	0.835088
75	9.08338	0.11009	1406.6	0.045941	0.197862E+07	0.835546
76	9.13853	0.10943	2758.0	0.090078	0.760676E+07	0.837307
77	9.18461	0.10888	-1496.8	0.048885	0.224032E+07	0.837826
78	9.22740	0.10837	-165.61	0.005409	27425.4	0.837832
79	9.41857	0.10617	-2339.4	0.076405	0.547278E+07	0.839099
80	9.63251	0.10382	-3229.8	0.105487	0.104318E+08	0.841514
81	9.72950	0.10278	1347.2	0.043999	0.181492E+07	0.841935
82	9.84398	0.10158	706.78	0.023083	499535.	0.842050
83	9.88903	0.10112	277.26	0.009055	76874.3	0.842068
84	9.89937	0.10102	-856.61	0.027977	733773.	0.842238
85	9.91646	0.10084	4860.1	0.158731	0.236205E+08	0.847706
86	9.92697	0.10074	547.78	0.017891	300065.	0.847776
87	10.0370	0.99631E-01	1389.9	0.045395	0.193190E+07	0.848223
88	10.0471	0.99531E-01	-774.73	0.025303	600205.	0.848362
89	10.2152	0.97893E-01	1445.6	0.047213	0.208968E+07	0.848846
90	10.2255	0.97794E-01	2314.0	0.075577	0.535477E+07	0.850086
91	10.2445	0.97613E-01	807.49	0.026373	652044.	0.850237
92	10.2647	0.97421E-01	-736.19	0.024044	541975.	0.850362
93	10.2658	0.97410E-01	1411.3	0.046092	0.199166E+07	0.850823
94	10.2662	0.97407E-01	-1021.6	0.033364	0.104359E+07	0.851065
95	10.2714	0.97358E-01	-703.33	0.022971	494668.	0.851179
96	10.2729	0.97344E-01	152.95	0.004995	23393.6	0.851185
97	10.2795	0.97281E-01	-26.305	0.000859	691.961	0.851185
98	10.2821	0.97256E-01	30.366	0.000992	922.091	0.851185
99	10.2843	0.97236E-01	-55.369	0.001808	3065.70	0.851186
100	10.3658	0.96471E-01	-1894.9	0.061887	0.359060E+07	0.852017
101	10.3852	0.96291E-01	-4614.9	0.150723	0.212974E+08	0.856948
102	10.4430	0.95758E-01	-304.37	0.009941	92640.7	0.856969
103	10.4849	0.95376E-01	1282.9	0.041898	0.164573E+07	0.857350
104	10.4993	0.95244E-01	2201.8	0.071910	0.484774E+07	0.858473
105	10.5976	0.94361E-01	7216.6	0.235694	0.520787E+08	0.870530
106	10.7988	0.92603E-01	-518.17	0.016924	268503.	0.870592
107	10.8430	0.92225E-01	759.33	0.024800	576580.	0.870726
108	10.9312	0.91481E-01	-363.55	0.011873	132166.	0.870756
109	11.0211	0.90735E-01	-21.917	0.000716	480.357	0.870756
110	11.1678	0.89543E-01	394.01	0.012868	155246.	0.870792
111	11.6182	0.86072E-01	819.67	0.026770	671858.	0.870948
112	11.6384	0.85922E-01	4429.1	0.144655	0.196169E+08	0.875490
113	11.6479	0.85852E-01	572.71	0.018705	327997.	0.875565
114	11.6968	0.85493E-01	125.93	0.004113	15859.1	0.875569
115	11.8823	0.84159E-01	2743.7	0.089609	0.752788E+07	0.877312
116	11.9300	0.83822E-01	1716.4	0.056059	0.294617E+07	0.877994
117	11.9414	0.83742E-01	-2975.4	0.097178	0.885329E+07	0.880044
118	11.9936	0.83377E-01	-1882.7	0.061490	0.354460E+07	0.880864
119	12.1632	0.82215E-01	106.88	0.003491	11423.1	0.880867
120	12.3699	0.80841E-01	6.2037	0.000203	38.4860	0.880867
121	12.5596	0.79621E-01	1871.9	0.061135	0.350382E+07	0.881678
122	12.7209	0.78611E-01	-172.55	0.005635	29772.8	0.881685
123	12.9309	0.77334E-01	2256.2	0.073686	0.509024E+07	0.882864
124	13.0905	0.76391E-01	-835.46	0.027286	697993.	0.883025
125	13.1138	0.76256E-01	-1889.7	0.061719	0.357105E+07	0.883852
126	13.5771	0.73653E-01	4491.8	0.146704	0.201766E+08	0.888523
127	13.8280	0.72317E-01	-80.312	0.002623	6449.98	0.888525
128	13.9829	0.71516E-01	554.18	0.018099	307111.	0.888596
129	14.1517	0.70663E-01	-430.73	0.014068	185527.	0.888639

130	14.2850	0.70004E-01	38.278	0.001250	1465.20	0.888639
131	14.3529	0.69672E-01	-645.05	0.021068	416095.	0.888736
132	14.4676	0.69120E-01	19.463	0.000636	378.795	0.888736
133	14.5357	0.68796E-01	-1363.1	0.044519	0.185807E+07	0.889166
134	14.7438	0.67825E-01	324.23	0.010589	105124.	0.889190
135	14.8725	0.67238E-01	167.67	0.005476	28113.8	0.889197
136	14.9630	0.66832E-01	419.84	0.013712	176270.	0.889237
137	15.0669	0.66370E-01	925.50	0.030227	856545.	0.889436
138	15.1463	0.66023E-01	-1578.5	0.051553	0.249159E+07	0.890013
139	15.4301	0.64809E-01	1800.0	0.058789	0.324010E+07	0.890763
140	15.4423	0.64757E-01	-1442.7	0.047120	0.208146E+07	0.891245
141	15.6954	0.63713E-01	-713.09	0.023290	508500.	0.891362
142	15.7091	0.63657E-01	1166.3	0.038093	0.136033E+07	0.891677
143	15.7337	0.63558E-01	-22.836	0.000746	521.506	0.891677
144	15.8440	0.63115E-01	20.958	0.000684	439.230	0.891678
145	15.9540	0.62680E-01	5295.0	0.172934	0.280366E+08	0.898169
146	16.0955	0.62129E-01	-111.28	0.003634	12382.5	0.898171
147	16.3275	0.61246E-01	1473.7	0.048132	0.217183E+07	0.898674
148	16.3877	0.61021E-01	-1893.5	0.061843	0.358547E+07	0.899504
149	16.5392	0.60462E-01	-797.06	0.026032	635310.	0.899651
150	16.7080	0.59852E-01	-1133.7	0.037025	0.128517E+07	0.899949
151	16.8015	0.59518E-01	435.36	0.014219	189535.	0.899993
152	17.3279	0.57710E-01	554.65	0.018115	307635.	0.900064
153	17.4117	0.57433E-01	-686.76	0.022430	471637.	0.900173
154	17.6240	0.56741E-01	-865.15	0.028256	748493.	0.900347
155	17.7212	0.56430E-01	471.81	0.015409	222601.	0.900398
156	17.8388	0.56058E-01	2510.1	0.081980	0.630061E+07	0.901857
157	17.9163	0.55815E-01	5473.7	0.178770	0.299609E+08	0.908793
158	17.9861	0.55598E-01	2476.8	0.080891	0.613431E+07	0.910214
159	18.1166	0.55198E-01	-1819.5	0.059424	0.331041E+07	0.910980
160	18.1732	0.55026E-01	2257.9	0.073744	0.509821E+07	0.912160
161	18.4381	0.54235E-01	2127.7	0.069490	0.452705E+07	0.913208
162	18.5683	0.53855E-01	628.27	0.020519	394727.	0.913300
163	18.5911	0.53789E-01	4037.4	0.131861	0.163004E+08	0.917074
164	18.8629	0.53014E-01	371.17	0.012122	137767.	0.917106
165	19.1987	0.52087E-01	3174.4	0.103677	0.100770E+08	0.919439
166	19.2089	0.52059E-01	-3951.3	0.129049	0.156126E+08	0.923053
167	19.2670	0.51902E-01	3026.5	0.098846	0.915974E+07	0.925174
168	19.2898	0.51841E-01	3851.1	0.125777	0.148309E+08	0.928608
169	19.4631	0.51379E-01	3635.6	0.118739	0.132176E+08	0.931668
170	19.6107	0.50993E-01	-2451.6	0.080070	0.601043E+07	0.933059
171	19.6851	0.50800E-01	-3456.3	0.112882	0.119458E+08	0.935825
172	19.9059	0.50236E-01	221.09	0.007221	48881.3	0.935836
173	20.0212	0.49947E-01	-272.98	0.008916	74519.4	0.935853
174	20.0793	0.49803E-01	-525.47	0.017162	276122.	0.935917
175	20.1602	0.49603E-01	-135.78	0.004434	18435.0	0.935922
176	20.2145	0.49469E-01	-319.74	0.010443	102234.	0.935945
177	20.4345	0.48937E-01	-461.15	0.015061	212657.	0.935995
178	20.4554	0.48887E-01	-863.80	0.028212	746158.	0.936167
179	20.5304	0.48708E-01	330.66	0.010799	109334.	0.936193
180	20.8493	0.47963E-01	365.48	0.011937	133577.	0.936224
181	20.9257	0.47788E-01	-2161.5	0.070594	0.467195E+07	0.937305
182	21.0783	0.47442E-01	133.29	0.004353	17765.5	0.937309
183	21.3215	0.46901E-01	-3647.2	0.119119	0.133024E+08	0.940389
184	21.6219	0.46249E-01	2915.8	0.095230	0.850188E+07	0.942357
185	21.6298	0.46233E-01	6853.6	0.223841	0.469725E+08	0.953232
186	21.9561	0.45545E-01	-3956.0	0.129205	0.156503E+08	0.956856
187	22.1257	0.45196E-01	-1243.1	0.040599	0.154522E+07	0.957214
188	22.4705	0.44503E-01	312.77	0.010215	97823.4	0.957236
189	22.4810	0.44482E-01	-791.38	0.025847	626289.	0.957381
190	22.6911	0.44070E-01	-267.97	0.008752	71808.0	0.957398
191	22.7940	0.43871E-01	607.72	0.019848	369327.	0.957483
192	22.9626	0.43549E-01	738.61	0.024123	545549.	0.957610
193	23.0993	0.43291E-01	1203.0	0.039289	0.144714E+07	0.957945
194	23.5334	0.42493E-01	-69.876	0.002282	4882.64	0.957946
195	23.8174	0.41986E-01	-20.147	0.000658	405.915	0.957946
196	23.8255	0.41972E-01	-25.557	0.000835	653.145	0.957946
197	23.8596	0.41912E-01	11.300	0.000369	127.697	0.957946
198	23.8653	0.41902E-01	12.686	0.000414	160.942	0.957946
199	23.8769	0.41882E-01	-23.932	0.000782	572.718	0.957946
200	23.9108	0.41822E-01	-34.716	0.001134	1205.22	0.957947
201	23.9254	0.41797E-01	-96.597	0.003155	9331.04	0.957949
202	23.9538	0.41747E-01	-201.03	0.006566	40412.7	0.957958
203	24.0177	0.41636E-01	-36.760	0.001201	1351.32	0.957958
204	24.1804	0.41356E-01	-268.41	0.008766	72044.9	0.957975

205	24.4160	0.40957E-01	-1886.3	0.061608	0.355823E+07	0.958799
206	24.4208	0.40949E-01	4442.4	0.145088	0.197346E+08	0.963368
207	24.6839	0.40512E-01	280.85	0.009173	78876.2	0.963386
208	24.7536	0.40398E-01	-860.75	0.028112	740892.	0.963558
209	24.8003	0.40322E-01	-606.52	0.019809	367862.	0.963643
210	25.2210	0.39650E-01	895.47	0.029246	801861.	0.963828
211	25.5999	0.39063E-01	3483.4	0.113769	0.121343E+08	0.966638
212	25.6632	0.38966E-01	1970.7	0.064362	0.388347E+07	0.967537
213	25.6814	0.38939E-01	323.33	0.010560	104540.	0.967561
214	25.8066	0.38750E-01	-1139.8	0.037225	0.129907E+07	0.967862
215	25.8810	0.38638E-01	-279.95	0.009143	78372.2	0.967880
216	26.1913	0.38181E-01	-2955.0	0.096510	0.873190E+07	0.969902
217	26.2741	0.38060E-01	1351.8	0.044151	0.182742E+07	0.970325
218	26.8026	0.37310E-01	-91.563	0.002990	8383.83	0.970327
219	26.9131	0.37157E-01	-24.968	0.000815	623.379	0.970327
220	26.9788	0.37066E-01	-640.84	0.020930	410671.	0.970422
221	27.4168	0.36474E-01	-670.65	0.021903	449765.	0.970526
222	27.7342	0.36057E-01	713.15	0.023292	508584.	0.970644
223	27.8479	0.35909E-01	133.99	0.004376	17954.5	0.970648
224	27.9755	0.35746E-01	-41.659	0.001361	1735.47	0.970648
225	28.0077	0.35704E-01	-1574.3	0.051416	0.247833E+07	0.971222
226	28.2004	0.35461E-01	1821.1	0.059478	0.331649E+07	0.971990
227	28.5083	0.35077E-01	2029.9	0.066296	0.412046E+07	0.972944
228	28.7836	0.34742E-01	-339.35	0.011083	115160.	0.972971
229	28.9573	0.34534E-01	-180.35	0.005890	32526.0	0.972978
230	29.1870	0.34262E-01	-91.484	0.002988	8369.23	0.972980
231	29.3119	0.34116E-01	1425.7	0.046564	0.203270E+07	0.973451
232	29.3231	0.34103E-01	-26.890	0.000878	723.058	0.973451
233	29.4262	0.33983E-01	72.221	0.002359	5215.86	0.973452
234	29.5131	0.33883E-01	480.93	0.015707	231298.	0.973506
235	29.7307	0.33635E-01	89.916	0.002937	8084.86	0.973507
236	30.4345	0.32857E-01	-294.88	0.009631	86955.4	0.973528
237	30.6570	0.32619E-01	636.72	0.020795	405416.	0.973621
238	31.1400	0.32113E-01	-2400.4	0.078397	0.576194E+07	0.974955
239	31.2194	0.32031E-01	1421.4	0.046423	0.202034E+07	0.975423
240	31.2720	0.31977E-01	5818.9	0.190045	0.338594E+08	0.983262
241	31.4941	0.31752E-01	-145.22	0.004743	21089.9	0.983267
242	31.6503	0.31595E-01	2500.5	0.081665	0.625227E+07	0.984715
243	31.8920	0.31356E-01	5098.1	0.166503	0.259902E+08	0.990732
244	32.0249	0.31226E-01	319.61	0.010438	102150.	0.990756
245	32.0982	0.31154E-01	-871.17	0.028453	758941.	0.990931
246	32.2175	0.31039E-01	102.46	0.003346	10498.6	0.990934
247	32.3360	0.30925E-01	567.33	0.018529	321862.	0.991008
248	32.4327	0.30833E-01	3443.6	0.112469	0.118584E+08	0.993754
249	32.5300	0.30741E-01	303.09	0.009899	91862.5	0.993775
250	32.5772	0.30696E-01	-3544.8	0.115773	0.125656E+08	0.996684
251	32.6146	0.30661E-01	1443.4	0.047140	0.208326E+07	0.997166
252	32.6924	0.30588E-01	-1917.1	0.062614	0.367545E+07	0.998017
253	32.8574	0.30435E-01	1296.2	0.042333	0.168008E+07	0.998406
254	32.8844	0.30410E-01	1348.1	0.044028	0.181729E+07	0.998827
255	32.9249	0.30372E-01	587.02	0.019172	344588.	0.998907
256	32.9757	0.30325E-01	361.47	0.011806	130661.	0.998937
257	33.2948	0.30035E-01	334.94	0.010939	112182.	0.998963
258	33.3864	0.29952E-01	2112.2	0.068985	0.446147E+07	0.999996
259	33.4770	0.29871E-01	132.26	0.004320	17492.5	1.00000

SUM OF EFFECTIVE MASSES= 0.431929E+10

***** PARTICIPATION FACTOR CALCULATION *****ROTY DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.248482	4.0244	-59963.	1.000000	0.359551E+10	0.278233
2	0.311988	3.2052	-7946.5	0.132524	0.631466E+08	0.283119
3	1.18165	0.84628	-44725.	0.745875	0.200029E+10	0.437908
4	1.22167	0.81855	-27672.	0.461486	0.765734E+09	0.497163
5	1.30667	0.76530	-2584.0	0.043093	0.667684E+07	0.497680
6	1.71314	0.58372	-42614.	0.710681	0.181597E+10	0.638206
7	1.75556	0.56962	-15328.	0.255632	0.234958E+09	0.656388
8	1.77557	0.56320	17797.	0.296804	0.316737E+09	0.680898
9	1.86491	0.53622	9626.6	0.160544	0.926721E+08	0.688070
10	1.95114	0.51252	13590.	0.226643	0.184691E+09	0.702362
11	2.08462	0.47970	-11282.	0.188154	0.127288E+09	0.712212
12	2.21319	0.45184	6703.4	0.111793	0.449357E+08	0.715689

13	2.38058	0.42007	-5605.4	0.093482	0.314205E+08	0.718120
14	2.45974	0.40655	-1899.1	0.031671	0.360639E+07	0.718399
15	2.54503	0.39292	-3246.8	0.054146	0.105414E+08	0.719215
16	2.54625	0.39273	-704.12	0.011743	495781.	0.719253
17	2.57476	0.38839	27511.	0.458806	0.756864E+09	0.777822
18	2.64542	0.37801	-8414.0	0.140321	0.707958E+08	0.783301
19	2.69098	0.37161	2920.9	0.048713	0.853186E+07	0.783961
20	2.79914	0.35725	6114.1	0.101965	0.373819E+08	0.786854
21	2.98081	0.33548	803.18	0.013395	645097.	0.786903
22	3.17272	0.31519	16.193	0.000270	262.220	0.786903
23	3.21920	0.31064	-148.04	0.002469	21915.1	0.786905
24	3.36615	0.29708	-1461.8	0.024378	0.213675E+07	0.787071
25	3.37202	0.29656	-1499.9	0.025014	0.224972E+07	0.787245
26	3.44200	0.29053	-2029.2	0.033841	0.411752E+07	0.787563
27	3.76919	0.26531	-2033.4	0.033911	0.413459E+07	0.787883
28	3.81674	0.26200	1505.6	0.025109	0.226681E+07	0.788059
29	4.09965	0.24392	3239.1	0.054019	0.104920E+08	0.788871
30	4.30923	0.23206	290.22	0.004840	84228.6	0.788877
31	4.37720	0.22846	6181.4	0.103088	0.382099E+08	0.791834
32	4.53348	0.22058	5131.8	0.085583	0.263353E+08	0.793872
33	4.53596	0.22046	1528.9	0.025498	0.233757E+07	0.794053
34	4.69569	0.21296	-726.49	0.012116	527783.	0.794093
35	4.74103	0.21092	143.70	0.002396	20649.0	0.794095
36	4.78342	0.20906	-249.18	0.004156	62089.5	0.794100
37	4.79664	0.20848	37.460	0.000625	1403.28	0.794100
38	4.86376	0.20560	-404.56	0.006747	163673.	0.794113
39	4.88935	0.20453	-6233.8	0.103962	0.388605E+08	0.797120
40	4.93022	0.20283	-877.15	0.014628	769388.	0.797179
41	4.99200	0.20032	1318.9	0.021996	0.173954E+07	0.797314
42	4.99607	0.20016	-3908.2	0.065177	0.152737E+08	0.798496
43	5.05690	0.19775	1879.9	0.031352	0.353417E+07	0.798769
44	5.15657	0.19393	-1908.6	0.031831	0.364292E+07	0.799051
45	5.57274	0.17945	-4422.0	0.073746	0.195541E+08	0.800564
46	5.64530	0.17714	52.766	0.000880	2784.28	0.800565
47	5.73147	0.17448	-1189.5	0.019837	0.141491E+07	0.800674
48	5.79114	0.17268	-1353.3	0.022570	0.183150E+07	0.800816
49	6.17212	0.16202	-4767.9	0.079514	0.227326E+08	0.802575
50	6.28385	0.15914	-689.80	0.011504	475819.	0.802612
51	6.31126	0.15845	-3529.4	0.058860	0.124568E+08	0.803576
52	6.74702	0.14821	1244.0	0.020746	0.154752E+07	0.803696
53	7.21763	0.13855	-23456.	0.391177	0.550181E+09	0.846270
54	7.23941	0.13813	-5431.8	0.090587	0.295048E+08	0.848554
55	7.39451	0.13524	-113.94	0.001900	12981.9	0.848555
56	7.43582	0.13448	2859.4	0.047686	0.817611E+07	0.849187
57	7.65297	0.13067	2174.5	0.036265	0.472865E+07	0.849553
58	7.73938	0.12921	2237.4	0.037314	0.500614E+07	0.849941
59	7.78598	0.12844	-2675.8	0.044625	0.716016E+07	0.850495
60	7.86700	0.12711	-436.46	0.007279	190500.	0.850509
61	7.88762	0.12678	-1034.3	0.017249	0.106972E+07	0.850592
62	7.93285	0.12606	-11157.	0.186069	0.124482E+09	0.860225
63	8.01996	0.12469	131.55	0.002194	17306.4	0.860226
64	8.05445	0.12415	-3530.0	0.058871	0.124611E+08	0.861191
65	8.29860	0.12050	-1655.7	0.027612	0.274131E+07	0.861403
66	8.35520	0.11969	-555.71	0.009268	308819.	0.861427
67	8.57376	0.11663	2457.9	0.040990	0.604118E+07	0.861894
68	8.74854	0.11430	1536.1	0.025618	0.235966E+07	0.862077
69	8.77552	0.11395	-914.29	0.015248	835919.	0.862141
70	8.81689	0.11342	268.12	0.004471	71888.3	0.862147
71	8.88579	0.11254	-865.02	0.014426	748261.	0.862205
72	8.97397	0.11143	-3776.2	0.062977	0.142600E+08	0.863308
73	9.04143	0.11060	-6335.8	0.105663	0.401423E+08	0.866415
74	9.07896	0.11014	2736.1	0.045631	0.748648E+07	0.866994
75	9.08338	0.11009	346.49	0.005779	120058.	0.867003
76	9.13853	0.10943	-3045.7	0.050793	0.927604E+07	0.867721
77	9.18461	0.10888	-3489.4	0.058193	0.121759E+08	0.868663
78	9.22740	0.10837	2675.7	0.044622	0.715915E+07	0.869217
79	9.41857	0.10617	10518.	0.175402	0.110619E+09	0.877777
80	9.63251	0.10382	7310.9	0.121924	0.534488E+08	0.881914
81	9.72950	0.10278	-2741.1	0.045713	0.751359E+07	0.882495
82	9.84398	0.10158	-736.73	0.012286	542769.	0.882537
83	9.88903	0.10112	-2141.1	0.035707	0.458435E+07	0.882892
84	9.89937	0.10102	1542.3	0.025721	0.237862E+07	0.883076
85	9.91646	0.10084	-1771.3	0.029541	0.313766E+07	0.883319
86	9.92697	0.10074	-4480.3	0.074719	0.200734E+08	0.884872
87	10.0370	0.99631E-01	-3672.8	0.061252	0.134898E+08	0.885916

88	10.0471	0.99531E-01	2147.5	0.035814	0.461177E+07	0.886273
89	10.2152	0.97893E-01	-2463.8	0.041090	0.607049E+07	0.886742
90	10.2255	0.97794E-01	-3730.5	0.062215	0.139169E+08	0.887819
91	10.2445	0.97613E-01	-1054.7	0.017590	0.111243E+07	0.887905
92	10.2647	0.97421E-01	1631.7	0.027213	0.266259E+07	0.888111
93	10.2658	0.97410E-01	-3012.8	0.050245	0.907704E+07	0.888814
94	10.2662	0.97407E-01	2145.8	0.035786	0.460460E+07	0.889170
95	10.2714	0.97358E-01	1316.0	0.021948	0.173195E+07	0.889304
96	10.2729	0.97344E-01	-280.42	0.004677	78637.1	0.889310
97	10.2795	0.97281E-01	45.270	0.000755	2049.38	0.889310
98	10.2821	0.97256E-01	-47.400	0.000790	2246.71	0.889311
99	10.2843	0.97236E-01	97.913	0.001633	9586.92	0.889311
100	10.3658	0.96471E-01	3318.3	0.055339	0.110108E+08	0.890163
101	10.3852	0.96291E-01	6143.1	0.102449	0.377376E+08	0.893084
102	10.4430	0.95758E-01	768.92	0.012823	591235.	0.893129
103	10.4849	0.95376E-01	-2849.2	0.047516	0.811786E+07	0.893758
104	10.4993	0.95244E-01	-7116.9	0.118688	0.506496E+08	0.897677
105	10.5976	0.94361E-01	-19137.	0.319153	0.366233E+09	0.926017
106	10.7988	0.92603E-01	1395.1	0.023266	0.194631E+07	0.926168
107	10.8430	0.92225E-01	761.74	0.012704	580241.	0.926213
108	10.9312	0.91481E-01	2195.9	0.036622	0.482208E+07	0.926586
109	11.0211	0.90735E-01	26.313	0.000439	692.383	0.926586
110	11.1678	0.89543E-01	-1513.6	0.025242	0.229090E+07	0.926763
111	11.6182	0.86072E-01	159.63	0.002662	25482.4	0.926765
112	11.6384	0.85922E-01	-72.717	0.001213	5287.78	0.926766
113	11.6479	0.85852E-01	-469.59	0.007831	220514.	0.926783
114	11.6968	0.85493E-01	-57.776	0.000964	3338.11	0.926783
115	11.8823	0.84159E-01	-7112.0	0.118607	0.505806E+08	0.930697
116	11.9300	0.83822E-01	-2215.0	0.036940	0.490625E+07	0.931077
117	11.9414	0.83742E-01	-420.40	0.007011	176737.	0.931091
118	11.9936	0.83377E-01	-2303.2	0.038411	0.530482E+07	0.931501
119	12.1632	0.82215E-01	-2.9477	0.000049	8.68883	0.931501
120	12.3699	0.80841E-01	-770.19	0.012844	593186.	0.931547
121	12.5596	0.79621E-01	131.76	0.002197	17360.3	0.931548
122	12.7209	0.78611E-01	-91.763	0.001530	8420.38	0.931549
123	12.9309	0.77334E-01	268.54	0.004478	72111.5	0.931555
124	13.0905	0.76391E-01	2243.5	0.037415	0.503320E+07	0.931944
125	13.1138	0.76256E-01	-540.09	0.009007	291700.	0.931967
126	13.5771	0.73653E-01	-3530.2	0.058873	0.124620E+08	0.932931
127	13.8280	0.72317E-01	99.695	0.001663	9939.18	0.932932
128	13.9829	0.71516E-01	-87.742	0.001463	7698.64	0.932932
129	14.1517	0.70663E-01	153.18	0.002555	23463.8	0.932934
130	14.2850	0.70004E-01	-201.25	0.003356	40502.4	0.932937
131	14.3529	0.69672E-01	514.20	0.008575	264400.	0.932958
132	14.4676	0.69120E-01	-0.87141	0.000015	0.759363	0.932958
133	14.5357	0.68796E-01	1181.1	0.019698	0.139509E+07	0.933066
134	14.7438	0.67825E-01	863.05	0.014393	744857.	0.933123
135	14.8725	0.67238E-01	-5993.4	0.099952	0.359207E+08	0.935903
136	14.9630	0.66832E-01	-1208.5	0.020154	0.146043E+07	0.936016
137	15.0669	0.66370E-01	320.85	0.005351	102943.	0.936024
138	15.1463	0.66023E-01	3882.9	0.064756	0.150771E+08	0.937191
139	15.4301	0.64809E-01	571.08	0.009524	326135.	0.937216
140	15.4423	0.64757E-01	428.92	0.007153	183975.	0.937230
141	15.6954	0.63713E-01	-181.38	0.003025	32897.0	0.937233
142	15.7091	0.63657E-01	-171.80	0.002865	29514.9	0.937235
143	15.7337	0.63558E-01	3.2380	0.000054	10.4849	0.937235
144	15.8440	0.63115E-01	1989.5	0.033179	0.395808E+07	0.937541
145	15.9540	0.62680E-01	-4577.3	0.076336	0.209516E+08	0.939163
146	16.0955	0.62129E-01	71.321	0.001189	5086.66	0.939163
147	16.3275	0.61246E-01	-1048.7	0.017490	0.109981E+07	0.939248
148	16.3877	0.61021E-01	-635.19	0.010593	403464.	0.939279
149	16.5392	0.60462E-01	95.680	0.001596	9154.65	0.939280
150	16.7080	0.59852E-01	-1482.4	0.024723	0.219761E+07	0.939450
151	16.8015	0.59518E-01	-309.12	0.005155	95555.5	0.939458
152	17.3279	0.57710E-01	1448.1	0.024149	0.209686E+07	0.939620
153	17.4117	0.57433E-01	6731.8	0.112266	0.453167E+08	0.943127
154	17.6240	0.56741E-01	2822.4	0.047070	0.796607E+07	0.943743
155	17.7212	0.56430E-01	-2343.3	0.039079	0.549104E+07	0.944168
156	17.8388	0.56058E-01	313.71	0.005232	98413.9	0.944176
157	17.9163	0.55815E-01	-499.06	0.008323	249064.	0.944195
158	17.9861	0.55598E-01	-582.54	0.009715	339357.	0.944221
159	18.1166	0.55198E-01	2011.1	0.033540	0.404463E+07	0.944534
160	18.1732	0.55026E-01	-2150.4	0.035862	0.462414E+07	0.944892
161	18.4381	0.54235E-01	660.51	0.011015	436271.	0.944926
162	18.5683	0.53855E-01	671.81	0.011204	451330.	0.944961

163	18.5911	0.53789E-01	-645.00	0.010757	416019.	0.944993
164	18.8629	0.53014E-01	-1226.4	0.020452	0.150395E+07	0.945109
165	19.1987	0.52087E-01	-238.54	0.003978	56899.1	0.945114
166	19.2089	0.52059E-01	-1276.1	0.021281	0.162834E+07	0.945240
167	19.2670	0.51902E-01	-8204.0	0.136819	0.673058E+08	0.950448
168	19.2898	0.51841E-01	-1243.1	0.020732	0.154540E+07	0.950567
169	19.4631	0.51379E-01	121.77	0.002031	14828.1	0.950569
170	19.6107	0.50993E-01	946.14	0.015779	895172.	0.950638
171	19.6851	0.50800E-01	1851.7	0.030882	0.342893E+07	0.950903
172	19.9059	0.50236E-01	22.722	0.000379	516.292	0.950903
173	20.0212	0.49947E-01	35.842	0.000598	1284.63	0.950903
174	20.0793	0.49803E-01	783.30	0.013063	613562.	0.950951
175	20.1602	0.49603E-01	-234.26	0.003907	54876.4	0.950955
176	20.2145	0.49469E-01	64.690	0.001079	4184.86	0.950955
177	20.4345	0.48937E-01	632.20	0.010543	399671.	0.950986
178	20.4554	0.48887E-01	3159.7	0.052694	0.998339E+07	0.951759
179	20.5304	0.48708E-01	-7.8410	0.000131	61.4819	0.951759
180	20.8493	0.47963E-01	102.02	0.001701	10407.5	0.951760
181	20.9257	0.47788E-01	5510.6	0.091901	0.303667E+08	0.954110
182	21.0783	0.47442E-01	1773.3	0.029574	0.314468E+07	0.954353
183	21.3215	0.46901E-01	9327.9	0.155562	0.870092E+08	0.961086
184	21.6219	0.46249E-01	-9866.7	0.164547	0.973509E+08	0.968619
185	21.6298	0.46233E-01	-4069.9	0.067873	0.165637E+08	0.969901
186	21.9561	0.45545E-01	4067.4	0.067833	0.165439E+08	0.971181
187	22.1257	0.45196E-01	1226.4	0.020452	0.150395E+07	0.971298
188	22.4705	0.44503E-01	-207.74	0.003464	43155.9	0.971301
189	22.4810	0.44482E-01	4870.5	0.081226	0.237217E+08	0.973137
190	22.6911	0.44070E-01	576.03	0.009607	331814.	0.973162
191	22.7940	0.43871E-01	-1285.9	0.021445	0.165357E+07	0.973290
192	22.9626	0.43549E-01	-385.98	0.006437	148977.	0.973302
193	23.0993	0.43291E-01	-165.31	0.002757	27329.0	0.973304
194	23.5334	0.42493E-01	48.541	0.000810	2356.20	0.973304
195	23.8174	0.41986E-01	5.4320	0.000091	29.5068	0.973304
196	23.8255	0.41972E-01	5.5124	0.000092	30.3865	0.973304
197	23.8596	0.41912E-01	-3.7931	0.000063	14.3876	0.973304
198	23.8653	0.41902E-01	-4.5287	0.000076	20.5088	0.973304
199	23.8769	0.41882E-01	5.5780	0.000093	31.1145	0.973304
200	23.9108	0.41822E-01	4.0102	0.000067	16.0815	0.973304
201	23.9254	0.41797E-01	25.971	0.000433	674.494	0.973304
202	23.9538	0.41747E-01	-1115.0	0.018595	0.124322E+07	0.973400
203	24.0177	0.41636E-01	25.166	0.000420	633.314	0.973400
204	24.1804	0.41356E-01	187.03	0.003119	34978.6	0.973403
205	24.4160	0.40957E-01	589.18	0.009826	347138.	0.973430
206	24.4208	0.40949E-01	-1238.4	0.020654	0.153373E+07	0.973549
207	24.6839	0.40512E-01	877.14	0.014628	769368.	0.973608
208	24.7536	0.40398E-01	1200.1	0.020013	0.144014E+07	0.973720
209	24.8003	0.40322E-01	27.546	0.000459	758.781	0.973720
210	25.2210	0.39650E-01	-1492.0	0.024883	0.222617E+07	0.973892
211	25.5999	0.39063E-01	355.37	0.005927	126288.	0.973902
212	25.6632	0.38966E-01	-1168.5	0.019487	0.136531E+07	0.974007
213	25.6814	0.38939E-01	2069.5	0.034514	0.428293E+07	0.974339
214	25.8066	0.38750E-01	166.17	0.002771	27613.4	0.974341
215	25.8810	0.38638E-01	-1336.2	0.022284	0.178547E+07	0.974479
216	26.1913	0.38181E-01	-255.38	0.004259	65221.0	0.974484
217	26.2741	0.38060E-01	-2218.6	0.037001	0.492239E+07	0.974865
218	26.8026	0.37310E-01	320.12	0.005339	102476.	0.974873
219	26.9131	0.37157E-01	-28.714	0.000479	824.509	0.974873
220	26.9788	0.37066E-01	1343.5	0.022406	0.180502E+07	0.975013
221	27.4168	0.36474E-01	-29.154	0.000486	849.972	0.975013
222	27.7342	0.36057E-01	427.80	0.007134	183011.	0.975027
223	27.8479	0.35909E-01	-23.405	0.000390	547.773	0.975027
224	27.9755	0.35746E-01	-16.139	0.000269	260.468	0.975027
225	28.0077	0.35704E-01	425.22	0.007091	180815.	0.975041
226	28.2004	0.35461E-01	-1694.6	0.028261	0.287168E+07	0.975263
227	28.5083	0.35077E-01	108.33	0.001807	11735.5	0.975264
228	28.7836	0.34742E-01	76.366	0.001274	5831.73	0.975265
229	28.9573	0.34534E-01	205.52	0.003428	42239.5	0.975268
230	29.1870	0.34262E-01	-259.17	0.004322	67168.5	0.975273
231	29.3119	0.34116E-01	264.61	0.004413	70019.2	0.975279
232	29.3231	0.34103E-01	-384.91	0.006419	148156.	0.975290
233	29.4262	0.33983E-01	-149.82	0.002498	22444.8	0.975292
234	29.5131	0.33883E-01	-55.387	0.000924	3067.76	0.975292
235	29.7307	0.33635E-01	21.510	0.000359	462.659	0.975292
236	30.4345	0.32857E-01	-40.359	0.000673	1628.85	0.975292
237	30.6570	0.32619E-01	-2455.4	0.040949	0.602908E+07	0.975759

238	31.1400	0.32113E-01	1054.5	0.017585	0.111187E+07	0.975845
239	31.2194	0.32031E-01	1055.7	0.017606	0.111451E+07	0.975931
240	31.2720	0.31977E-01	416.52	0.006946	173492.	0.975944
241	31.4941	0.31752E-01	-82.503	0.001376	6806.81	0.975945
242	31.6503	0.31595E-01	-2285.9	0.038122	0.522535E+07	0.976349
243	31.8920	0.31356E-01	-1513.5	0.025240	0.229059E+07	0.976527
244	32.0249	0.31226E-01	322.81	0.005384	104208.	0.976535
245	32.0982	0.31154E-01	1718.7	0.028663	0.295393E+07	0.976763
246	32.2175	0.31039E-01	275.10	0.004588	75681.2	0.976769
247	32.3360	0.30925E-01	2228.3	0.037161	0.496527E+07	0.977153
248	32.4327	0.30833E-01	-52.009	0.000867	2704.90	0.977154
249	32.5300	0.30741E-01	1157.8	0.019308	0.134046E+07	0.977257
250	32.5772	0.30696E-01	14965.	0.249575	0.223955E+09	0.994588
251	32.6146	0.30661E-01	-222.88	0.003717	49674.5	0.994592
252	32.6924	0.30588E-01	1200.6	0.020022	0.144141E+07	0.994703
253	32.8574	0.30435E-01	69.739	0.001163	4863.49	0.994703
254	32.8844	0.30410E-01	830.21	0.013845	689245.	0.994757
255	32.9249	0.30372E-01	3.8622	0.000064	14.9165	0.994757
256	32.9757	0.30325E-01	-33.726	0.000562	1137.45	0.994757
257	33.2948	0.30035E-01	9.6048	0.000160	92.2515	0.994757
258	33.3864	0.29952E-01	-7726.8	0.128860	0.597035E+08	0.999377
259	33.4770	0.29871E-01	-2837.5	0.047322	0.805153E+07	1.00000

SUM OF EFFECTIVE MASSES= 0.129227E+11

***** PARTICIPATION FACTOR CALCULATION *****ROTZ DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	RATIO	CUMULATIVE EFFECTIVE MASS	MASS FRACTION
1	0.248482	4.0244	-100.20	0.001554	10039.9	0.739859E-06
2	0.311988	3.2052	-25714.	0.398793	0.661223E+09	0.487274E-01
3	1.18165	0.84628	-32123.	0.498179	0.103186E+10	0.124767
4	1.22167	0.81855	34996.	0.542743	0.122473E+10	0.215020
5	1.30667	0.76530	577.12	0.008950	333063.	0.215045
6	1.71314	0.58372	1692.6	0.026250	0.286482E+07	0.215256
7	1.75556	0.56962	-5934.4	0.092035	0.352172E+08	0.217851
8	1.77557	0.56320	10367.	0.160775	0.107471E+09	0.225771
9	1.86491	0.53622	4979.9	0.077231	0.247992E+08	0.227598
10	1.95114	0.51252	-297.82	0.004619	88696.8	0.227605
11	2.08462	0.47970	1169.4	0.018135	0.136742E+07	0.227705
12	2.21319	0.45184	1694.1	0.026273	0.287003E+07	0.227917
13	2.38058	0.42007	486.44	0.007544	236623.	0.227934
14	2.45974	0.40655	12062.	0.187063	0.145489E+09	0.238656
15	2.54503	0.39292	-1492.9	0.023152	0.222861E+07	0.238820
16	2.54625	0.39273	176.20	0.002733	31046.9	0.238822
17	2.57476	0.38839	-273.24	0.004238	74657.4	0.238828
18	2.64542	0.37801	-9604.0	0.148946	0.922376E+08	0.245625
19	2.69098	0.37161	1651.4	0.025612	0.272728E+07	0.245826
20	2.79914	0.35725	9279.1	0.143906	0.861014E+08	0.252171
21	2.98081	0.33548	17543.	0.272075	0.307773E+09	0.274851
22	3.17272	0.31519	1888.3	0.029285	0.356572E+07	0.275114
23	3.21920	0.31064	64480.	1.000000	0.415769E+10	0.581502
24	3.36615	0.29708	1007.8	0.015630	0.101566E+07	0.581576
25	3.37202	0.29656	-702.06	0.010888	492889.	0.581613
26	3.44200	0.29053	-4362.7	0.067660	0.190336E+08	0.583015
27	3.76919	0.26531	-964.14	0.014952	929558.	0.583084
28	3.81674	0.26200	4787.0	0.074240	0.229154E+08	0.584773
29	4.09965	0.24392	-9053.9	0.140413	0.819725E+08	0.590813
30	4.30923	0.23206	4383.2	0.067978	0.192127E+08	0.592229
31	4.37720	0.22846	-3551.6	0.055080	0.126135E+08	0.593159
32	4.53348	0.22058	8300.5	0.128730	0.688988E+08	0.598236
33	4.53596	0.22046	14572.	0.225989	0.212338E+09	0.613884
34	4.69569	0.21296	10627.	0.164807	0.112928E+09	0.622205
35	4.74103	0.21092	10797.	0.167452	0.116583E+09	0.630797
36	4.78342	0.20906	11384.	0.176545	0.129587E+09	0.640346
37	4.79664	0.20848	-1679.3	0.026043	0.281988E+07	0.640554
38	4.86376	0.20560	4840.7	0.075073	0.234324E+08	0.642281
39	4.88935	0.20453	-4978.8	0.077215	0.247885E+08	0.644107
40	4.93022	0.20283	-4382.8	0.067971	0.192089E+08	0.645523
41	4.99200	0.20032	1145.4	0.017764	0.131205E+07	0.645620
42	4.99607	0.20016	-4562.2	0.070754	0.208140E+08	0.647153
43	5.05690	0.19775	8685.9	0.134707	0.754454E+08	0.652713
44	5.15657	0.19393	-1800.9	0.027930	0.324325E+07	0.652952
45	5.57274	0.17945	1012.4	0.015701	0.102500E+07	0.653028

46	5.64530	0.17714	2716.5	0.042129	0.737941E+07	0.653571
47	5.73147	0.17448	14416.	0.223574	0.207824E+09	0.668886
48	5.79114	0.17268	-448.09	0.006949	200789.	0.668901
49	6.17212	0.16202	-3009.0	0.046666	0.905413E+07	0.669568
50	6.28385	0.15914	655.78	0.010170	430051.	0.669600
51	6.31126	0.15845	-2848.4	0.044175	0.811337E+07	0.670198
52	6.74702	0.14821	1423.6	0.022078	0.202655E+07	0.670347
53	7.21763	0.13855	2191.9	0.033994	0.480454E+07	0.670701
54	7.23941	0.13813	1421.9	0.022051	0.202174E+07	0.670850
55	7.39451	0.13524	13787.	0.213824	0.190093E+09	0.684859
56	7.43582	0.13448	-3321.8	0.051516	0.110341E+08	0.685672
57	7.65297	0.13067	4606.1	0.071435	0.212163E+08	0.687235
58	7.73938	0.12921	617.44	0.009576	381228.	0.687263
59	7.78598	0.12844	-3621.3	0.056162	0.131140E+08	0.688230
60	7.86700	0.12711	-2619.0	0.040616	0.685892E+07	0.688735
61	7.88762	0.12678	4627.7	0.071769	0.214153E+08	0.690313
62	7.93285	0.12606	-6458.4	0.100160	0.417103E+08	0.693387
63	8.01996	0.12469	284.20	0.004408	80768.3	0.693393
64	8.05445	0.12415	-10379.	0.160961	0.107719E+09	0.701331
65	8.29860	0.12050	6731.4	0.104395	0.453122E+08	0.704670
66	8.35520	0.11969	2828.7	0.043869	0.800129E+07	0.705260
67	8.57376	0.11663	4675.0	0.072503	0.218557E+08	0.706870
68	8.74854	0.11430	883.53	0.013702	780631.	0.706928
69	8.77552	0.11395	-2116.5	0.032824	0.447956E+07	0.707258
70	8.81689	0.11342	207.56	0.003219	43081.8	0.707261
71	8.88579	0.11254	-179.47	0.002783	32211.1	0.707264
72	8.97397	0.11143	-994.21	0.015419	988449.	0.707336
73	9.04143	0.11060	695.05	0.010779	483097.	0.707372
74	9.07896	0.11014	-573.09	0.008888	328430.	0.707396
75	9.08338	0.11009	3585.3	0.055604	0.128547E+08	0.708343
76	9.13853	0.10943	4550.3	0.070569	0.207054E+08	0.709869
77	9.18461	0.10888	-5685.3	0.088171	0.323222E+08	0.712251
78	9.22740	0.10837	1539.6	0.023877	0.237032E+07	0.712426
79	9.41857	0.10617	1514.5	0.023489	0.229385E+07	0.712595
80	9.63251	0.10382	1680.7	0.026066	0.282489E+07	0.712803
81	9.72950	0.10278	-997.93	0.015477	995868.	0.712876
82	9.84398	0.10158	6397.2	0.099213	0.409247E+08	0.715892
83	9.88903	0.10112	3347.6	0.051917	0.112067E+08	0.716718
84	9.89937	0.10102	-2713.0	0.042075	0.736030E+07	0.717260
85	9.91646	0.10084	2565.6	0.039790	0.658253E+07	0.717746
86	9.92697	0.10074	2784.6	0.043185	0.775384E+07	0.718317
87	10.0370	0.99631E-01	908.60	0.014091	825554.	0.718378
88	10.0471	0.99531E-01	-2867.0	0.044463	0.821956E+07	0.718984
89	10.2152	0.97893E-01	-323.90	0.005023	104911.	0.718991
90	10.2255	0.97794E-01	-629.43	0.009762	396184.	0.719020
91	10.2445	0.97613E-01	-342.41	0.005310	117245.	0.719029
92	10.2647	0.97421E-01	96.388	0.001495	9290.61	0.719030
93	10.2658	0.97410E-01	-253.60	0.003933	64311.2	0.719035
94	10.2662	0.97407E-01	191.77	0.002974	36777.6	0.719037
95	10.2714	0.97358E-01	191.75	0.002974	36769.6	0.719040
96	10.2729	0.97344E-01	-43.528	0.000675	1894.65	0.719040
97	10.2795	0.97281E-01	11.616	0.000180	134.927	0.719040
98	10.2821	0.97256E-01	-1.1162	0.000017	1.24589	0.719040
99	10.2843	0.97236E-01	28.144	0.000436	792.095	0.719040
100	10.3658	0.96471E-01	1182.4	0.018337	0.139803E+07	0.719143
101	10.3852	0.96291E-01	-1954.0	0.030303	0.381800E+07	0.719425
102	10.4430	0.95758E-01	16.191	0.000251	262.163	0.719425
103	10.4849	0.95376E-01	44.971	0.000697	2022.36	0.719425
104	10.4993	0.95244E-01	338.08	0.005243	114300.	0.719433
105	10.5976	0.94361E-01	-3526.6	0.054694	0.124372E+08	0.720350
106	10.7988	0.92603E-01	241.86	0.003751	58496.5	0.720354
107	10.8430	0.92225E-01	1722.4	0.026712	0.296662E+07	0.720573
108	10.9312	0.91481E-01	-427.53	0.006630	182782.	0.720586
109	11.0211	0.90735E-01	-2.4866	0.000039	6.18333	0.720586
110	11.1678	0.89543E-01	-1666.4	0.025844	0.277700E+07	0.720791
111	11.6182	0.86072E-01	429.23	0.006657	184242.	0.720804
112	11.6384	0.85922E-01	709.03	0.010996	502729.	0.720841
113	11.6479	0.85852E-01	63.877	0.000991	4080.33	0.720842
114	11.6968	0.85493E-01	959.54	0.014881	920709.	0.720909
115	11.8823	0.84159E-01	3587.8	0.055642	0.128723E+08	0.721858
116	11.9300	0.83822E-01	4833.3	0.074957	0.233603E+08	0.723579
117	11.9414	0.83742E-01	1687.2	0.026166	0.284661E+07	0.723789
118	11.9936	0.83377E-01	-18427.	0.285772	0.339540E+09	0.748811
119	12.1632	0.82215E-01	-645.45	0.010010	416604.	0.748841
120	12.3699	0.80841E-01	-1062.4	0.016476	0.112867E+07	0.748924

121	12.5596	0.79621E-01	11134.	0.172667	0.123957E+09	0.758059
122	12.7209	0.78611E-01	-1000.3	0.015513	0.100062E+07	0.758133
123	12.9309	0.77334E-01	-1527.0	0.023682	0.233176E+07	0.758305
124	13.0905	0.76391E-01	-1281.4	0.019873	0.164203E+07	0.758426
125	13.1138	0.76256E-01	-909.87	0.014111	827867.	0.758487
126	13.5771	0.73653E-01	613.61	0.009516	376516.	0.758514
127	13.8280	0.72317E-01	-97.111	0.001506	9430.47	0.758515
128	13.9829	0.71516E-01	337.23	0.005230	113727.	0.758524
129	14.1517	0.70663E-01	-292.97	0.004544	85832.4	0.758530
130	14.2850	0.70004E-01	-236.77	0.003672	56061.7	0.758534
131	14.3529	0.69672E-01	-571.21	0.008859	326282.	0.758558
132	14.4676	0.69120E-01	44.940	0.000697	2019.58	0.758558
133	14.5357	0.68796E-01	-1611.9	0.024998	0.259817E+07	0.758750
134	14.7438	0.67825E-01	1229.7	0.019072	0.151227E+07	0.758861
135	14.8725	0.67238E-01	-5636.5	0.087414	0.317700E+08	0.761202
136	14.9630	0.66832E-01	-3006.6	0.046628	0.903959E+07	0.761868
137	15.0669	0.66370E-01	1109.5	0.017208	0.123109E+07	0.761959
138	15.1463	0.66023E-01	-77.446	0.001201	5997.88	0.761960
139	15.4301	0.64809E-01	1828.3	0.028355	0.334270E+07	0.762206
140	15.4423	0.64757E-01	-2003.9	0.031079	0.401581E+07	0.762502
141	15.6954	0.63713E-01	436.82	0.006774	190810.	0.762516
142	15.7091	0.63657E-01	6288.3	0.097522	0.395421E+08	0.765430
143	15.7337	0.63558E-01	24.296	0.000377	590.306	0.765430
144	15.8440	0.63115E-01	-384.22	0.005959	147625.	0.765441
145	15.9540	0.62680E-01	-318.54	0.004940	101469.	0.765448
146	16.0955	0.62129E-01	-4.3154	0.000067	18.6229	0.765448
147	16.3275	0.61246E-01	3279.2	0.050856	0.107531E+08	0.766241
148	16.3877	0.61021E-01	-2701.7	0.041899	0.729892E+07	0.766779
149	16.5392	0.60462E-01	-1675.8	0.025989	0.280831E+07	0.766985
150	16.7080	0.59852E-01	4010.0	0.062189	0.160799E+08	0.768170
151	16.8015	0.59518E-01	-86.288	0.001338	7445.58	0.768171
152	17.3279	0.57710E-01	3603.5	0.055886	0.129854E+08	0.769128
153	17.4117	0.57433E-01	-1058.8	0.016420	0.112103E+07	0.769210
154	17.6240	0.56741E-01	576.95	0.008948	332868.	0.769235
155	17.7212	0.56430E-01	-443.75	0.006882	196912.	0.769250
156	17.8388	0.56058E-01	4449.8	0.069010	0.198004E+08	0.770709
157	17.9163	0.55815E-01	12837.	0.199081	0.164782E+09	0.782852
158	17.9861	0.55598E-01	6023.9	0.093423	0.362877E+08	0.785526
159	18.1166	0.55198E-01	4073.5	0.063174	0.165932E+08	0.786749
160	18.1732	0.55026E-01	8248.0	0.127915	0.680289E+08	0.791762
161	18.4381	0.54235E-01	3397.4	0.052689	0.115423E+08	0.792612
162	18.5683	0.53855E-01	511.27	0.007929	261392.	0.792632
163	18.5911	0.53789E-01	566.71	0.008789	321158.	0.792655
164	18.8629	0.53014E-01	-1112.9	0.017259	0.123844E+07	0.792747
165	19.1987	0.52087E-01	8906.9	0.138133	0.793320E+08	0.798593
166	19.2089	0.52059E-01	-15783.	0.244779	0.249116E+09	0.816950
167	19.2670	0.51902E-01	629.39	0.009761	396135.	0.816980
168	19.2898	0.51841E-01	-194.63	0.003018	37879.4	0.816982
169	19.4631	0.51379E-01	6017.3	0.093320	0.362079E+08	0.819651
170	19.6107	0.50993E-01	-7778.5	0.120633	0.605044E+08	0.824109
171	19.6851	0.50800E-01	-3091.9	0.047950	0.955956E+07	0.824814
172	19.9059	0.50236E-01	821.65	0.012743	675112.	0.824864
173	20.0212	0.49947E-01	10.659	0.000165	113.614	0.824864
174	20.0793	0.49803E-01	3931.5	0.060973	0.154570E+08	0.826003
175	20.1602	0.49603E-01	4.4076	0.000068	19.4271	0.826003
176	20.2145	0.49469E-01	-620.89	0.009629	385500.	0.826031
177	20.4345	0.48937E-01	3586.0	0.055613	0.128591E+08	0.826979
178	20.4554	0.48887E-01	8058.4	0.124975	0.649381E+08	0.831764
179	20.5304	0.48708E-01	43.764	0.000679	1915.31	0.831764
180	20.8493	0.47963E-01	-195.13	0.003026	38074.6	0.831767
181	20.9257	0.47788E-01	-1355.7	0.021025	0.183783E+07	0.831902
182	21.0783	0.47442E-01	-1400.8	0.021725	0.196232E+07	0.832047
183	21.3215	0.46901E-01	2747.7	0.042613	0.754972E+07	0.832603
184	21.6219	0.46249E-01	-3325.6	0.051576	0.110596E+08	0.833418
185	21.6298	0.46233E-01	7216.1	0.111913	0.520727E+08	0.837256
186	21.9561	0.45545E-01	-5141.0	0.079730	0.264302E+08	0.839203
187	22.1257	0.45196E-01	-1091.5	0.016928	0.119135E+07	0.839291
188	22.4705	0.44503E-01	2052.0	0.031823	0.421052E+07	0.839601
189	22.4810	0.44482E-01	3902.4	0.060521	0.152288E+08	0.840724
190	22.6911	0.44070E-01	-68.477	0.001062	4689.11	0.840724
191	22.7940	0.43871E-01	985.98	0.015291	972153.	0.840796
192	22.9626	0.43549E-01	2317.4	0.035939	0.537012E+07	0.841191
193	23.0993	0.43291E-01	1047.9	0.016252	0.109815E+07	0.841272
194	23.5334	0.42493E-01	101.15	0.001569	10231.7	0.841273
195	23.8174	0.41986E-01	-76.572	0.001188	5863.27	0.841274

196	23.8255	0.41972E-01	-95.875	0.001487	9192.10	0.841274
197	23.8596	0.41912E-01	17.813	0.000276	317.309	0.841274
198	23.8653	0.41902E-01	24.717	0.000383	610.951	0.841274
199	23.8769	0.41882E-01	-79.865	0.001239	6378.40	0.841275
200	23.9108	0.41822E-01	-186.10	0.002886	34632.6	0.841277
201	23.9254	0.41797E-01	-323.35	0.005015	104552.	0.841285
202	23.9538	0.41747E-01	-1719.9	0.026674	0.295813E+07	0.841503
203	24.0177	0.41636E-01	-46.628	0.000723	2174.13	0.841503
204	24.1804	0.41356E-01	-97.263	0.001508	9460.07	0.841504
205	24.4160	0.40957E-01	-6082.0	0.094323	0.369904E+08	0.844230
206	24.4208	0.40949E-01	15395.	0.238753	0.237002E+09	0.861695
207	24.6839	0.40512E-01	1077.2	0.016706	0.116036E+07	0.861780
208	24.7536	0.40398E-01	972.70	0.015085	946154.	0.861850
209	24.8003	0.40322E-01	-34.692	0.000538	1203.55	0.861850
210	25.2210	0.39650E-01	861.91	0.013367	742887.	0.861905
211	25.5999	0.39063E-01	1890.0	0.029311	0.357199E+07	0.862168
212	25.6632	0.38966E-01	3727.3	0.057806	0.138931E+08	0.863192
213	25.6814	0.38939E-01	1837.2	0.028493	0.337532E+07	0.863441
214	25.8066	0.38750E-01	-3061.8	0.047485	0.937468E+07	0.864132
215	25.8810	0.38638E-01	-2240.4	0.034745	0.501924E+07	0.864501
216	26.1913	0.38181E-01	-201.65	0.003127	40662.5	0.864504
217	26.2741	0.38060E-01	-1169.1	0.018131	0.136679E+07	0.864605
218	26.8026	0.37310E-01	293.39	0.004550	86080.1	0.864611
219	26.9131	0.37157E-01	690.80	0.010713	477211.	0.864647
220	26.9788	0.37066E-01	-298.32	0.004627	88997.1	0.864653
221	27.4168	0.36474E-01	-1428.5	0.022154	0.204065E+07	0.864804
222	27.7342	0.36057E-01	1356.1	0.021032	0.183907E+07	0.864939
223	27.8479	0.35909E-01	-5.2480	0.000081	27.5412	0.864939
224	27.9755	0.35746E-01	65.463	0.001015	4285.41	0.864939
225	28.0077	0.35704E-01	875.84	0.013583	767089.	0.864996
226	28.2004	0.35461E-01	1760.4	0.027302	0.309917E+07	0.865224
227	28.5083	0.35077E-01	19066.	0.295693	0.363525E+09	0.892013
228	28.7836	0.34742E-01	3758.8	0.058293	0.141282E+08	0.893054
229	28.9573	0.34534E-01	963.01	0.014935	927382.	0.893123
230	29.1870	0.34262E-01	-2934.8	0.045514	0.861290E+07	0.893757
231	29.3119	0.34116E-01	1518.6	0.023552	0.230622E+07	0.893927
232	29.3231	0.34103E-01	-901.38	0.013979	812489.	0.893987
233	29.4262	0.33983E-01	-1771.2	0.027468	0.313700E+07	0.894218
234	29.5131	0.33883E-01	1200.9	0.018625	0.144219E+07	0.894325
235	29.7307	0.33635E-01	626.39	0.009714	392365.	0.894354
236	30.4345	0.32857E-01	-1942.5	0.030126	0.377335E+07	0.894632
237	30.6570	0.32619E-01	-313.83	0.004867	98488.6	0.894639
238	31.1400	0.32113E-01	-5905.6	0.091588	0.348762E+08	0.897209
239	31.2194	0.32031E-01	-970.83	0.015056	942510.	0.897278
240	31.2720	0.31977E-01	23503.	0.364500	0.552391E+09	0.937985
241	31.4941	0.31752E-01	-1184.2	0.018366	0.140236E+07	0.938088
242	31.6503	0.31595E-01	1622.8	0.025168	0.263359E+07	0.938282
243	31.8920	0.31356E-01	10816.	0.167736	0.116978E+09	0.946903
244	32.0249	0.31226E-01	3158.7	0.048988	0.997767E+07	0.947638
245	32.0982	0.31154E-01	1045.5	0.016214	0.109302E+07	0.947719
246	32.2175	0.31039E-01	1339.3	0.020770	0.179364E+07	0.947851
247	32.3360	0.30925E-01	1392.0	0.021589	0.193780E+07	0.947994
248	32.4327	0.30833E-01	13819.	0.214314	0.190965E+09	0.962066
249	32.5300	0.30741E-01	10094.	0.156540	0.101883E+09	0.969574
250	32.5772	0.30696E-01	3220.6	0.049947	0.103723E+08	0.970338
251	32.6146	0.30661E-01	4538.4	0.070385	0.205972E+08	0.971856
252	32.6924	0.30588E-01	-11929.	0.185010	0.142313E+09	0.982344
253	32.8574	0.30435E-01	843.79	0.013086	711976.	0.982396
254	32.8844	0.30410E-01	5102.5	0.079133	0.260354E+08	0.984315
255	32.9249	0.30372E-01	4676.0	0.072518	0.218648E+08	0.985926
256	32.9757	0.30325E-01	5745.8	0.089110	0.330147E+08	0.988359
257	33.2948	0.30035E-01	721.87	0.011195	521098.	0.988397
258	33.3864	0.29952E-01	-5470.2	0.084835	0.299229E+08	0.990602
259	33.4770	0.29871E-01	11293.	0.175136	0.127528E+09	1.00000

SUM OF EFFECTIVE MASSES= 0.135700E+11

Attachment 26

ANSYS Coupled Building/Crane Model Output, Crane at P, Modal Analysis

S O L U T I O N O P T I O N S

PROBLEM DIMENSIONALITY. 3-D
DEGREES OF FREEDOM. . . . . UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE . . . . . .MODAL
EXTRACTION METHOD. . . . . .BLOCK LANCZOS
LUMPED MASS MATRICES. . . . . .ON
EQUATION SOLVER OPTION. . . . . .SPARSE
NUMBER OF MODES TO EXTRACT. 300
MODAL EXTRACTION RANGE. . . . . 0.0000 TO 34.000
GLOBALLY ASSEMBLED MATRIX . . . . . .SYMMETRIC
NUMBER OF MODES TO EXPAND 300
ELEMENT RESULTS CALCULATION . . . . . .OFF

L O A D S T E P O P T I O N S

LOAD STEP NUMBER. 1
INERTIA LOADS X Y Z
ACEL 0.0000 386.09 0.0000
PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
DATABASE OUTPUT CONTROLS. . . . . .ALL DATA WRITTEN

Element Formation Element= 1000 Cum. Iter.= 1 CP= 370.823
Load Step= 1 Mode= 1.

**** CENTER OF MASS, MASS, AND MASS MOMENTS OF INERTIA ****

CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

TOTAL MASS = 6592.3

CENTER OF MASS	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTER OF MASS
XC = 875.96	IXX = 0.4597E+10	IXX = 0.6661E+09
YC = 715.06	IYY = 0.9051E+10	IYY = 0.3433E+10
ZC = -291.51	IZZ = 0.1195E+11	IZZ = 0.3523E+10
	IXY = -0.4238E+10	IXY = -0.1086E+09
	IYZ = 0.1380E+10	IYZ = 0.5384E+07
	IZX = 0.1689E+10	IZX = 0.5327E+07

AN AVERAGE OF THE X-, Y-, AND Z-DIRECTION MASS TERMS ARE USED FOR MASS21 ELEMENTS.

*** MASS SUMMARY BY ELEMENT TYPE ***

TYPE	MASS
1	2099.52
2	306.103
3	29.3637
7	279.425
8	36.3681
9	2548.37
16	13.8597
21	384.057
100	206.274
1004	688.961

Range of element maximum matrix coefficients in global coordinates
Maximum= 4.642966189E+12 at element 90509.
Minimum= 1.E-03 at element 90006.

*** ELEMENT MATRIX FORMULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	405	BEAM44	0.040	0.000099
2	43	BEAM44	0.000	0.000000
3	12	BEAM44	0.000	0.000000
7	43	BEAM44	0.000	0.000000
8	13	BEAM44	0.000	0.000000
9	207	BEAM44	0.020	0.000097
12	2	COMBIN14	0.000	0.000000

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  13      1  COMBIN14      0.000   0.000000
  14      2  COMBIN14      0.000   0.000000
  15      1  COMBIN14      0.000   0.000000
  16      1  BEAM44        0.000   0.000000
  21    367  BEAM44        0.050   0.000136
 100     18  MASS21        0.000   0.000000
 300     57  COMBIN14      0.000   0.000000
1001      1  COMBIN14      0.000   0.000000
1002      1  COMBIN14      0.000   0.000000
1003      1  COMBIN14      0.000   0.000000
1004      1  MASS21        0.000   0.000000
Time at end of element matrix formulation CP= 370.843246.

 BLOCK LANCZOS CALCULATION OF UP TO  300 EIGENVECTORS.
 NUMBER OF EQUATIONS      =       5924
 MAXIMUM WAVEFRONT        =       120
 MAXIMUM MODES STORED     =       300
 MINIMUM EIGENVALUE       =  0.0000
 MAXIMUM EIGENVALUE       =  34.000
 EST. OF MEMORY NEEDED          =  4.1783     (MB)
 MEMORY AVAILABLE FOR EIGENSOLVER =  229.04     (MB)

MEMORY TO PERFORM EIGENEXTRACTION:
 MIN. TO COMPLETE VALUE INPUT          =      162327     1.2385     (MB)
 MIN. FOR PART IN-CORE AND OUT-OF-CORE  =      240030     1.8313     (MB)
 MIN. FOR IN-CORE                      =      396107     3.0221     (MB)
 RECOM. FOR PART IN-CORE AND OUT-OF-CORE =      514370     3.9243     (MB)
 RECOM. FOR IN-CORE                    =      670447     5.1151     (MB)

 LANCZOS CYCLE NUMBER =   1

   new shift:  3.3236D-04     modes still needed:     258

 FREQUENCIES AT CURRENT LANCZOS CYCLE
   1  0.16803936E+02    2  0.16708002E+02    3  0.16536241E+02
   4  0.16269057E+02    5  0.16203159E+02    6  0.16042527E+02
   7  0.15954311E+02    8  0.15841985E+02    9  0.15733662E+02
  10  0.15703501E+02   11  0.15694800E+02   12  0.15438642E+02
  13  0.15429820E+02   14  0.15230901E+02   15  0.15116548E+02
  16  0.15009656E+02   17  0.14871641E+02   18  0.14730984E+02
  19  0.14538648E+02   20  0.14467574E+02   21  0.14288946E+02
  22  0.14250011E+02   23  0.14156830E+02   24  0.13968443E+02
  25  0.13826180E+02   26  0.13604643E+02   27  0.13125745E+02
  28  0.12994965E+02   29  0.12930875E+02   30  0.12715634E+02
  31  0.12543584E+02   32  0.12370117E+02   33  0.12175072E+02
  34  0.12028677E+02   35  0.11974654E+02   36  0.11880600E+02
  37  0.11836767E+02   38  0.11705315E+02   39  0.11648854E+02
  40  0.11621946E+02   41  0.11554734E+02   42  0.11188813E+02
  43  0.11021131E+02   44  0.10960678E+02   45  0.10897074E+02
  46  0.10798779E+02   47  0.10597939E+02   48  0.10528810E+02
  49  0.10464385E+02   50  0.10443295E+02   51  0.10389068E+02
  52  0.10361786E+02   53  0.10284301E+02   54  0.10282127E+02
  55  0.10279493E+02   56  0.10272848E+02   57  0.10271102E+02
  58  0.10266195E+02   59  0.10266025E+02   60  0.10264809E+02
  61  0.10243634E+02   62  0.10220519E+02   63  0.10210720E+02
  64  0.10065077E+02   65  0.10040031E+02   66  0.99389555E+01
  67  0.99151434E+01   68  0.98959348E+01   69  0.98673957E+01
  70  0.98441545E+01   71  0.97144522E+01   72  0.95843461E+01
  73  0.93843415E+01   74  0.92254446E+01   75  0.91733564E+01
  76  0.91354187E+01   77  0.90864961E+01   78  0.90753082E+01
  79  0.90444475E+01   80  0.89649183E+01   81  0.88758695E+01
  82  0.88147188E+01   83  0.87868999E+01   84  0.87480760E+01
  85  0.85486727E+01   86  0.83655148E+01   87  0.83103127E+01
  88  0.81862865E+01   89  0.80460380E+01   90  0.80192261E+01
  91  0.78949302E+01   92  0.78559422E+01   93  0.78111893E+01
  94  0.77671133E+01   95  0.75624826E+01   96  0.73947310E+01
  97  0.72547662E+01   98  0.72393389E+01   99  0.71863610E+01
 100  0.67498900E+01  101  0.63125741E+01  102  0.62848331E+01
 103  0.61722644E+01  104  0.57911191E+01  105  0.56453831E+01
 106  0.56254847E+01  107  0.55229542E+01  108  0.52990563E+01
 109  0.51562338E+01  110  0.50257723E+01  111  0.49898905E+01
 112  0.49624215E+01  113  0.48663353E+01  114  0.48572098E+01
 115  0.48098493E+01  116  0.47457099E+01  117  0.47025594E+01
 118  0.46933569E+01  119  0.45342392E+01  120  0.45317417E+01
 121  0.43785255E+01  122  0.43100147E+01  123  0.41143937E+01
```

124 0.39152681E+01 125 0.38074891E+01 126 0.34305889E+01
127 0.33720493E+01 128 0.33662041E+01 129 0.31949365E+01
130 0.31697759E+01 131 0.29808507E+01 132 0.27998814E+01
133 0.27250331E+01 134 0.26453525E+01 135 0.25463256E+01
136 0.25451591E+01 137 0.24917970E+01 138 0.24598289E+01
139 0.23805507E+01 140 0.22068279E+01 141 0.20767302E+01
142 0.19580327E+01 143 0.18555458E+01 144 0.17674176E+01
145 0.17579096E+01 146 0.16467245E+01 147 0.13065833E+01
148 0.12634557E+01 149 0.12012840E+01 150 0.31198192E+00
151 0.24929844E+00

number of steps : 38
eigenvalues found : 151
total no. eigenvalues: 151

LANCZOS CYCLE NUMBER = 2

new shift: 4.4881D+04 modes still needed: 107

FREQUENCIES AT CURRENT LANCZOS CYCLE
1 0.24929844E+00 2 0.31198192E+00 3 0.12012840E+01
4 0.12634557E+01 5 0.13065833E+01 6 0.16467245E+01
7 0.17579096E+01 8 0.17674176E+01 9 0.18555458E+01
10 0.19580327E+01 11 0.20767302E+01 12 0.22068279E+01
13 0.23805507E+01 14 0.24598289E+01 15 0.24917970E+01
16 0.25451591E+01 17 0.25463256E+01 18 0.26453525E+01
19 0.27250331E+01 20 0.27998814E+01 21 0.29808507E+01
22 0.31697759E+01 23 0.31949365E+01 24 0.33662041E+01
25 0.33720493E+01 26 0.34305889E+01 27 0.38074891E+01
28 0.39152681E+01 29 0.41143937E+01 30 0.43100147E+01
31 0.43785255E+01 32 0.45317417E+01 33 0.45342392E+01
34 0.46933569E+01 35 0.47025594E+01 36 0.47457099E+01
37 0.48098493E+01 38 0.48572098E+01 39 0.48663353E+01
40 0.49624215E+01 41 0.49898905E+01 42 0.50257723E+01
43 0.51562338E+01 44 0.52990563E+01 45 0.55229542E+01
46 0.56254847E+01 47 0.56453831E+01 48 0.57911191E+01
49 0.61722644E+01 50 0.62848331E+01 51 0.63125741E+01
52 0.67498900E+01 53 0.71863610E+01 54 0.72393389E+01
55 0.72547662E+01 56 0.73947310E+01 57 0.75624826E+01
58 0.77671133E+01 59 0.78111893E+01 60 0.78559422E+01
61 0.78949302E+01 62 0.80192261E+01 63 0.80460380E+01
64 0.81862865E+01 65 0.83103127E+01 66 0.83655148E+01
67 0.85486727E+01 68 0.87480760E+01 69 0.87868999E+01
70 0.88147188E+01 71 0.88758695E+01 72 0.89649183E+01
73 0.90444475E+01 74 0.90753082E+01 75 0.90864961E+01
76 0.91354187E+01 77 0.91733564E+01 78 0.92254446E+01
79 0.93843415E+01 80 0.95843461E+01 81 0.97144522E+01
82 0.98441545E+01 83 0.98673957E+01 84 0.98959348E+01
85 0.99151434E+01 86 0.99389555E+01 87 0.10040031E+02
88 0.10065077E+02 89 0.10210720E+02 90 0.10220519E+02
91 0.10243634E+02 92 0.10264809E+02 93 0.10266025E+02
94 0.10266195E+02 95 0.10271102E+02 96 0.10272848E+02
97 0.10279493E+02 98 0.10282127E+02 99 0.10284301E+02
100 0.10361786E+02 101 0.10389068E+02 102 0.10443295E+02
103 0.10464385E+02 104 0.10528810E+02 105 0.10597939E+02
106 0.10798779E+02 107 0.10897074E+02 108 0.10960678E+02
109 0.11021131E+02 110 0.11188813E+02 111 0.11554734E+02
112 0.11621946E+02 113 0.11648854E+02 114 0.11705315E+02
115 0.11836767E+02 116 0.11880600E+02 117 0.11974654E+02
118 0.12028677E+02 119 0.12175072E+02 120 0.12370117E+02
121 0.12543584E+02 122 0.12715634E+02 123 0.12930875E+02
124 0.12994965E+02 125 0.13125745E+02 126 0.13604643E+02
127 0.13826180E+02 128 0.13968443E+02 129 0.14156830E+02
130 0.14250011E+02 131 0.14288946E+02 132 0.14467574E+02
133 0.14538648E+02 134 0.14730984E+02 135 0.14871641E+02
136 0.15009656E+02 137 0.15116548E+02 138 0.15230901E+02
139 0.15429820E+02 140 0.15438642E+02 141 0.15694800E+02
142 0.15703501E+02 143 0.15733662E+02 144 0.15841985E+02
145 0.15954311E+02 146 0.16042527E+02 147 0.16203159E+02
148 0.16269057E+02 149 0.16536241E+02 150 0.16708002E+02
151 0.16803936E+02 152 0.33484183E+02 153 0.33229812E+02
154 0.32987562E+02 155 0.32901910E+02 156 0.32876023E+02
157 0.32764667E+02 158 0.32711908E+02 159 0.32590511E+02
160 0.32531125E+02 161 0.32338030E+02 162 0.32245037E+02
163 0.32220642E+02 164 0.32065662E+02 165 0.32000196E+02

166	0.31920965E+02	167	0.31865775E+02	168	0.31643998E+02
169	0.31490301E+02	170	0.31243215E+02	171	0.31141268E+02
172	0.30821287E+02	173	0.30650615E+02	174	0.30326199E+02
175	0.29747934E+02	176	0.29721414E+02	177	0.29523164E+02
178	0.29404496E+02	179	0.29358258E+02	180	0.29313205E+02
181	0.28988868E+02	182	0.28818293E+02	183	0.28507893E+02
184	0.28200087E+02	185	0.28004316E+02	186	0.27975261E+02
187	0.27811663E+02	188	0.27691142E+02	189	0.27124037E+02
190	0.26979491E+02	191	0.26889471E+02	192	0.26791517E+02
193	0.26454546E+02	194	0.25986681E+02	195	0.25858349E+02
196	0.25799258E+02	197	0.25662986E+02	198	0.25639253E+02
199	0.25204770E+02	200	0.24836823E+02	201	0.24701997E+02
202	0.24642857E+02	203	0.24600900E+02	204	0.24419795E+02
205	0.24410449E+02	206	0.24030299E+02	207	0.24010396E+02
208	0.23953571E+02	209	0.23923993E+02	210	0.23876946E+02
211	0.23865493E+02	212	0.23859603E+02	213	0.23825532E+02
214	0.23817479E+02	215	0.23586546E+02	216	0.23546016E+02
217	0.23118769E+02	218	0.22794006E+02	219	0.22722895E+02
220	0.22690905E+02	221	0.22474564E+02	222	0.22286752E+02
223	0.21955203E+02	224	0.21801322E+02	225	0.21601740E+02
226	0.21591626E+02	227	0.21305944E+02	228	0.20928494E+02
229	0.20904772E+02	230	0.20833744E+02	231	0.20631989E+02
232	0.20454368E+02	233	0.20431686E+02	234	0.20208696E+02
235	0.20175592E+02	236	0.20079299E+02	237	0.20022079E+02
238	0.20004283E+02	239	0.19902252E+02	240	0.19671029E+02
241	0.19493600E+02	242	0.19267645E+02	243	0.19211761E+02
244	0.19201264E+02	245	0.18941042E+02	246	0.18862974E+02
247	0.18541449E+02	248	0.18498729E+02	249	0.18338913E+02
250	0.18173897E+02	251	0.18118773E+02	252	0.17987062E+02
253	0.17916265E+02	254	0.17839031E+02	255	0.17719869E+02
256	0.17667904E+02	257	0.17418452E+02	258	0.17329184E+02

number of steps : 35
eigenvalues found : 107
total no. eigenvalues: 258

*** NOTE *** CP = 386.045 TIME= 09:26:12
Fewer modes than the requested number of modes (300) were computed.
The range specified (FREQB= 0, FREQE= 34) contains only 258 modes.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 11.0 *****
ANSYS Mechanical U
00245050 VERSION=INTEL NT 09:26:12 SEP 28, 2010 CP= 386.045

Auxzilary Building Modifications

*** FREQUENCIES FROM BLOCK LANCZOS ITERATION ***

MODE FREQUENCY (HERTZ)

FREQUENCY RANGE REQUESTED= 0.00000 34.0000

1	0.2492984361861
2	0.3119819247963
3	1.201284007702
4	1.263455685913
5	1.306583327591
6	1.646724457766
7	1.757909646562
8	1.767417594400
9	1.855545829575
10	1.958032740099
11	2.076730182505
12	2.206827866214
13	2.380550724221
14	2.459828948117
15	2.491797012822
16	2.545159097368
17	2.546325644306
18	2.645352504534
19	2.725033141589
20	2.799881398991

21	2.980850694344
22	3.169775857255
23	3.194936493352
24	3.366204093925
25	3.372049268238
26	3.430588944172
27	3.807489096310
28	3.915268114951
29	4.114393664070
30	4.310014747571
31	4.378525453885
32	4.531741719382
33	4.534239218648
34	4.693356869716
35	4.702559423024
36	4.745709937849
37	4.809849333017
38	4.857209822417
39	4.866335300278
40	4.962421518081
41	4.989890522648
42	5.025772256609
43	5.156233757072
44	5.299056343896
45	5.522954217745
46	5.625484736419
47	5.645383052262
48	5.791119053279
49	6.172264376871
50	6.284833096054
51	6.312574119678
52	6.749890008418
53	7.186360996461
54	7.239338924495
55	7.254766172656
56	7.394730982603
57	7.562482554416
58	7.767113327962
59	7.811189266675
60	7.855942186205
61	7.894930163773
62	8.019226063608
63	8.046038009057
64	8.186286461096
65	8.310312742860
66	8.365514798605
67	8.548672678966
68	8.748075962990
69	8.786899893746
70	8.814718798637
71	8.875869540403
72	8.964918333921
73	9.044447469495
74	9.075308234520
75	9.086496125767
76	9.135418696249
77	9.173356378358
78	9.225444561660
79	9.384341534712
80	9.584346142680
81	9.714452195589
82	9.844154529960
83	9.867395706781
84	9.895934824570
85	9.915143419978
86	9.938955490668
87	10.04003109672
88	10.06507717827
89	10.21072029572
90	10.22051947369
91	10.24363387653
92	10.26480862947
93	10.26602531200
94	10.26619529598
95	10.27110208557

96	10.27284810322
97	10.27949327697
98	10.28212664194
99	10.28430141367
100	10.36178560023
101	10.38906838537
102	10.44329506161
103	10.46438472704
104	10.52880960933
105	10.59793869069
106	10.79877915645
107	10.89707360250
108	10.96067827313
109	11.02113053371
110	11.18881293168
111	11.55473434229
112	11.62194640475
113	11.64885351101
114	11.70531538048
115	11.83676701129
116	11.88060041335
117	11.97465361304
118	12.02867662159
119	12.17507183069
120	12.37011707752
121	12.54358437058
122	12.71563355838
123	12.93087458329
124	12.99496489782
125	13.12574481031
126	13.60464284879
127	13.82617993784
128	13.96844277337
129	14.15683029575
130	14.25001098523
131	14.28894649861
132	14.46757410894
133	14.53864757765
134	14.73098365450
135	14.87164068974
136	15.00965622860
137	15.11654794238
138	15.23090111958
139	15.42981971333
140	15.43864208333
141	15.69479956697
142	15.70350069404
143	15.73366152610
144	15.84198466129
145	15.95431099339
146	16.04252708075
147	16.20315923003
148	16.26905675498
149	16.53624145372
150	16.70800230000
151	16.80393558187
152	17.32918358160
153	17.41845170619
154	17.66790399584
155	17.71986866797
156	17.83903091128
157	17.91626465021
158	17.98706196744
159	18.11877346498
160	18.17389673885
161	18.33891286702
162	18.49872934799
163	18.54144902035
164	18.86297412550
165	18.94104166275
166	19.20126373719
167	19.21176131346
168	19.26764536938
169	19.49359964232
170	19.67102889315

171	19.90225247482
172	20.00428303437
173	20.02207938378
174	20.07929925960
175	20.17559226744
176	20.20869618033
177	20.43168593803
178	20.45436798442
179	20.63198892124
180	20.83374421433
181	20.90477236349
182	20.92849352668
183	21.30594417810
184	21.59162606510
185	21.60173985714
186	21.80132153181
187	21.95520255176
188	22.28675218419
189	22.47456413149
190	22.69090506043
191	22.72289538006
192	22.79400591653
193	23.11876862555
194	23.54601616332
195	23.58654621476
196	23.81747851906
197	23.82553192685
198	23.85960323490
199	23.86549344028
200	23.87694629511
201	23.92399325384
202	23.95357094834
203	24.01039578140
204	24.03029880156
205	24.41044852067
206	24.41979490015
207	24.60090035521
208	24.64285653899
209	24.70199749885
210	24.83682317772
211	25.20476960547
212	25.63925349812
213	25.66298607841
214	25.79925815910
215	25.85834867809
216	25.98668142229
217	26.45454638513
218	26.79151661084
219	26.88947091549
220	26.97949082043
221	27.12403690138
222	27.69114155402
223	27.81166306284
224	27.97526112190
225	28.00431626950
226	28.20008705926
227	28.50789337624
228	28.81829348966
229	28.98886817713
230	29.31320528280
231	29.35825788359
232	29.40449609558
233	29.52316414936
234	29.72141357223
235	29.74793422610
236	30.32619903067
237	30.65061524740
238	30.82128683564
239	31.14126801565
240	31.24321499668
241	31.49030136277
242	31.64399772533
243	31.86577530672
244	31.92096500802
245	32.00019599578

246 32.06566200842
247 32.22064244758
248 32.24503697679
249 32.33802972256
250 32.53112462955
251 32.59051143058
252 32.71190796626
253 32.76466676022
254 32.87602326550
255 32.90190978885
256 32.98756241802
257 33.22981238008
258 33.48418273682

Block Lanczos CP Time (sec) = 16.814
Block Lanczos ELAPSED Time (sec) = 19.793

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 11.0 *****
ANSYS Mechanical U
00245050 VERSION=INTEL NT 09:26:16 SEP 28, 2010 CP= 388.769

Auxzilary Building Modifications

***** PARTICIPATION FACTOR CALCULATION ***** X DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.249298	4.0113	0.10148	0.002043	0.102985E-01	0.166659E-05
2	0.311982	3.2053	28.030	0.564232	785.676	0.127147
3	1.20128	0.83244	49.678	1.000000	2467.90	0.526526
4	1.26346	0.79148	-6.6507	0.133876	44.2318	0.533684
5	1.30658	0.76535	3.4414	0.069274	11.8431	0.535600
6	1.64672	0.60727	-3.5857	0.072179	12.8574	0.537681
7	1.75791	0.56886	-10.464	0.210632	109.491	0.555400
8	1.76742	0.56580	-4.5312	0.091212	20.5320	0.558722
9	1.85555	0.53892	-5.8491	0.117740	34.2119	0.564259
10	1.95803	0.51072	-0.36023	0.007251	0.129763	0.564280
11	2.07673	0.48153	-1.0218	0.020568	1.04401	0.564449
12	2.20683	0.45314	1.6554	0.033323	2.74046	0.564892
13	2.38055	0.42007	-0.79446	0.015992	0.631166	0.564994
14	2.45983	0.40653	13.683	0.275443	187.237	0.595295
15	2.49180	0.40132	-10.605	0.213480	112.472	0.613496
16	2.54516	0.39290	3.5718	0.071898	12.7576	0.615561
17	2.54633	0.39272	-0.41432E-03	0.000008	0.171659E-06	0.615561
18	2.64535	0.37802	20.699	0.416663	428.448	0.684896
19	2.72503	0.36697	-4.7859	0.096338	22.9046	0.688602
20	2.79988	0.35716	-20.225	0.407121	409.049	0.754798
21	2.98085	0.33547	0.44241E-01	0.000891	0.195729E-02	0.754799
22	3.16978	0.31548	-0.17958	0.003615	0.322488E-01	0.754804
23	3.19494	0.31300	0.35663	0.007179	0.127184	0.754825
24	3.36620	0.29707	-2.1407	0.043092	4.58273	0.755566
25	3.37205	0.29656	2.8219	0.056804	7.96328	0.756855
26	3.43059	0.29150	0.92792	0.018679	0.861037	0.756994
27	3.80749	0.26264	-7.6151	0.153289	57.9894	0.766379
28	3.91527	0.25541	-7.2308	0.145554	52.2849	0.774840
29	4.11439	0.24305	14.025	0.282322	196.706	0.806672
30	4.31001	0.23202	0.46854	0.009432	0.219531	0.806708
31	4.37853	0.22839	-0.32657	0.006574	0.106651	0.806725
32	4.53174	0.22067	-13.699	0.275765	187.675	0.837097
33	4.53424	0.22054	-2.5504	0.051338	6.50435	0.838149
34	4.69336	0.21307	0.22992	0.004628	0.528620E-01	0.838158
35	4.70256	0.21265	0.77451	0.015591	0.599873	0.838255
36	4.74571	0.21072	-0.48622	0.009787	0.236407	0.838293
37	4.80985	0.20791	-0.22392	0.004507	0.501416E-01	0.838301
38	4.85721	0.20588	8.8647	0.178443	78.5829	0.851018
39	4.86634	0.20549	-4.5648	0.091888	20.8374	0.854390
40	4.96242	0.20151	-12.508	0.251787	156.457	0.879709
41	4.98989	0.20041	15.324	0.308476	234.839	0.917713
42	5.02577	0.19897	11.271	0.226880	127.034	0.938271
43	5.15623	0.19394	4.8662	0.097956	23.6804	0.942103

44	5.29906	0.18871	-1.4155	0.028494	2.00369	0.942428
45	5.52295	0.18106	0.34226	0.006890	0.117140	0.942447
46	5.62548	0.17776	-0.19689	0.003963	0.387645E-01	0.942453
47	5.64538	0.17714	0.74682E-01	0.001503	0.557741E-02	0.942454
48	5.79112	0.17268	-0.47691	0.009600	0.227442	0.942491
49	6.17226	0.16202	6.3727	0.128279	40.6108	0.949063
50	6.28483	0.15911	-0.45323	0.009123	0.205416	0.949096
51	6.31257	0.15841	0.87812	0.017676	0.771093	0.949221
52	6.74989	0.14815	-0.28594	0.005756	0.817623E-01	0.949234
53	7.18636	0.13915	2.9668	0.059721	8.80217	0.950658
54	7.23934	0.13813	-0.73903	0.014876	0.546161	0.950747
55	7.25477	0.13784	-3.7809	0.076108	14.2952	0.953060
56	7.39473	0.13523	0.11861	0.002388	0.140689E-01	0.953062
57	7.56248	0.13223	1.5752	0.031708	2.48119	0.953464
58	7.76711	0.12875	-0.79573	0.016018	0.633180	0.953566
59	7.81119	0.12802	2.0229	0.040721	4.09224	0.954229
60	7.85594	0.12729	-2.9792	0.059970	8.87569	0.955665
61	7.89493	0.12666	-4.9117	0.098871	24.1248	0.959569
62	8.01923	0.12470	-0.19428E-01	0.000391	0.377430E-03	0.959569
63	8.04604	0.12428	-0.20600	0.004147	0.424356E-01	0.959576
64	8.18629	0.12216	-0.31161	0.006273	0.971013E-01	0.959592
65	8.31031	0.12033	0.23486	0.004728	0.551608E-01	0.959601
66	8.36551	0.11954	-0.40147	0.008081	0.161179	0.959627
67	8.54867	0.11698	-0.12600	0.002536	0.158756E-01	0.959629
68	8.74808	0.11431	-0.25713	0.005176	0.661153E-01	0.959640
69	8.78690	0.11381	-0.14563	0.002931	0.212069E-01	0.959643
70	8.81472	0.11345	-0.14279	0.002874	0.203891E-01	0.959647
71	8.87587	0.11267	0.53908	0.010851	0.290606	0.959694
72	8.96492	0.11155	0.96521E-01	0.001943	0.931634E-02	0.959695
73	9.04445	0.11057	-0.52552	0.010578	0.276167	0.959740
74	9.07531	0.11019	0.11546	0.002324	0.133307E-01	0.959742
75	9.08650	0.11005	0.24993	0.005031	0.624664E-01	0.959752
76	9.13542	0.10946	-0.81548E-01	0.001642	0.665005E-02	0.959753
77	9.17336	0.10901	-0.64372E-01	0.001296	0.414378E-02	0.959754
78	9.22544	0.10840	-0.31431	0.006327	0.987878E-01	0.959770
79	9.38434	0.10656	-0.37544	0.007557	0.140953	0.959793
80	9.58435	0.10434	-0.55676	0.011207	0.309978	0.959843
81	9.71445	0.10294	-0.17489	0.003520	0.305858E-01	0.959848
82	9.84415	0.10158	0.15721	0.003165	0.247154E-01	0.959852
83	9.86740	0.10134	0.34679	0.006981	0.120265	0.959871
84	9.89593	0.10105	-0.15051	0.003030	0.226543E-01	0.959875
85	9.91514	0.10086	-0.44989E-01	0.000906	0.202405E-02	0.959875
86	9.93896	0.10061	0.23127	0.004655	0.534879E-01	0.959884
87	10.0400	0.99601E-01	0.23076	0.004645	0.532506E-01	0.959893
88	10.0651	0.99353E-01	1.2477	0.025115	1.55668	0.960144
89	10.2107	0.97936E-01	0.65735E-01	0.001323	0.432112E-02	0.960145
90	10.2205	0.97842E-01	0.32139E-01	0.000647	0.103290E-02	0.960145
91	10.2436	0.97622E-01	-0.83831E-01	0.001687	0.702756E-02	0.960146
92	10.2648	0.97420E-01	0.64015E-01	0.001289	0.409791E-02	0.960147
93	10.2660	0.97409E-01	-0.18155	0.003655	0.329613E-01	0.960152
94	10.2662	0.97407E-01	0.22293	0.004487	0.496967E-01	0.960160
95	10.2711	0.97361E-01	0.87442E-01	0.001760	0.764609E-02	0.960162
96	10.2728	0.97344E-01	-0.22428E-01	0.000451	0.503009E-03	0.960162
97	10.2795	0.97281E-01	0.90865E-02	0.000183	0.825645E-04	0.960162
98	10.2821	0.97256E-01	-0.13977E-01	0.000281	0.195365E-03	0.960162
99	10.2843	0.97236E-01	-0.54629E-03	0.000011	0.298436E-06	0.960162
100	10.3618	0.96508E-01	0.28948	0.005827	0.837991E-01	0.960175
101	10.3891	0.96255E-01	2.3229	0.046759	5.39595	0.961049
102	10.4433	0.95755E-01	0.78936E-01	0.001589	0.623089E-02	0.961050
103	10.4644	0.95562E-01	-1.2005	0.024165	1.44117	0.961283
104	10.5288	0.94977E-01	1.0384	0.020902	1.07825	0.961457
105	10.5979	0.94358E-01	3.8813	0.078130	15.0648	0.963895
106	10.7988	0.92603E-01	-0.30902	0.006220	0.954936E-01	0.963911
107	10.8971	0.91768E-01	-0.23522	0.004735	0.553273E-01	0.963920
108	10.9607	0.91235E-01	-0.76601E-01	0.001542	0.586774E-02	0.963921
109	11.0211	0.90735E-01	-0.15883E-01	0.000320	0.252255E-03	0.963921
110	11.1888	0.89375E-01	0.96333	0.019392	0.928013	0.964071
111	11.5547	0.86545E-01	0.45661E-01	0.000919	0.208491E-02	0.964071
112	11.6219	0.86044E-01	-0.53814	0.010833	0.289597	0.964118
113	11.6489	0.85845E-01	-0.37419E-01	0.000753	0.140017E-02	0.964118
114	11.7053	0.85431E-01	-0.53831	0.010836	0.289779	0.964165
115	11.8368	0.84483E-01	-0.64066E-01	0.001290	0.410445E-02	0.964166
116	11.8806	0.84171E-01	-0.30604	0.006161	0.936623E-01	0.964181
117	11.9747	0.83510E-01	2.7947	0.056256	7.81014	0.965445
118	12.0287	0.83135E-01	0.60009	0.012080	0.360107	0.965503

119	12.1751	0.82135E-01	-0.41085	0.008270	0.168798	0.965530
120	12.3701	0.80840E-01	0.67484	0.013584	0.455409	0.965604
121	12.5436	0.79722E-01	-0.12790	0.002575	0.163575E-01	0.965607
122	12.7156	0.78643E-01	0.31678E-01	0.000638	0.100350E-02	0.965607
123	12.9309	0.77334E-01	-0.27367	0.005509	0.748979E-01	0.965619
124	12.9950	0.76953E-01	-0.16732	0.003368	0.279969E-01	0.965624
125	13.1257	0.76186E-01	2.7765	0.055889	7.70878	0.966871
126	13.6046	0.73504E-01	-0.68791	0.013847	0.473226	0.966948
127	13.8262	0.72327E-01	0.77810E-01	0.001566	0.605436E-02	0.966949
128	13.9684	0.71590E-01	-0.27212	0.005478	0.740486E-01	0.966961
129	14.1568	0.70637E-01	-0.29572	0.005953	0.874493E-01	0.966975
130	14.2500	0.70175E-01	1.6133	0.032476	2.60281	0.967396
131	14.2889	0.69984E-01	-0.15688E-01	0.000316	0.246120E-03	0.967396
132	14.4676	0.69120E-01	0.12887E-01	0.000259	0.166079E-03	0.967396
133	14.5386	0.68782E-01	2.1371	0.043019	4.56722	0.968135
134	14.7310	0.67884E-01	-1.0978	0.022099	1.20523	0.968330
135	14.8716	0.67242E-01	10.087	0.203041	101.741	0.984795
136	15.0097	0.66624E-01	0.13146	0.002646	0.172820E-01	0.984798
137	15.1165	0.66153E-01	1.1055	0.022253	1.22215	0.984996
138	15.2309	0.65656E-01	1.9467	0.039186	3.78958	0.985609
139	15.4298	0.64810E-01	-0.53194	0.010708	0.282959	0.985655
140	15.4386	0.64773E-01	-0.42609	0.008577	0.181550	0.985684
141	15.6948	0.63715E-01	0.33037E-01	0.000665	0.109145E-02	0.985684
142	15.7035	0.63680E-01	0.71704E-01	0.001443	0.514148E-02	0.985685
143	15.7337	0.63558E-01	0.10468E-01	0.000211	0.109579E-03	0.985685
144	15.8420	0.63123E-01	-0.82692	0.016646	0.683796	0.985796
145	15.9543	0.62679E-01	1.6895	0.034009	2.85439	0.986258
146	16.0425	0.62334E-01	-0.26761	0.005387	0.716140E-01	0.986269
147	16.2032	0.61716E-01	0.50965	0.010259	0.259744	0.986311
148	16.2691	0.61466E-01	-0.53736	0.010817	0.288754	0.986358
149	16.5362	0.60473E-01	0.54343	0.010939	0.295316	0.986406
150	16.7080	0.59852E-01	-0.15695	0.003159	0.246332E-01	0.986410
151	16.8039	0.59510E-01	0.98432	0.019814	0.968893	0.986566
152	17.3292	0.57706E-01	-4.2788	0.086130	18.3078	0.989529
153	17.4185	0.57410E-01	-0.15027	0.003025	0.225805E-01	0.989533
154	17.6679	0.56600E-01	-0.85171	0.017145	0.725407	0.989650
155	17.7199	0.56434E-01	0.45060	0.009070	0.203042	0.989683
156	17.8390	0.56057E-01	0.13418E-02	0.000027	0.180043E-05	0.989683
157	17.9163	0.55815E-01	0.57639	0.011603	0.332229	0.989737
158	17.9871	0.55596E-01	-0.17569	0.003537	0.308686E-01	0.989742
159	18.1188	0.55191E-01	0.27844	0.005605	0.775284E-01	0.989754
160	18.1739	0.55024E-01	0.72194	0.014532	0.521192	0.989839
161	18.3389	0.54529E-01	-0.73461	0.014787	0.539649	0.989926
162	18.4987	0.54058E-01	0.30983	0.006237	0.959931E-01	0.989942
163	18.5414	0.53933E-01	0.26041	0.005242	0.678156E-01	0.989953
164	18.8630	0.53014E-01	0.51951	0.010457	0.269887	0.989996
165	18.9410	0.52795E-01	-0.93146E-01	0.001875	0.867624E-02	0.989998
166	19.2013	0.52080E-01	0.13302	0.002678	0.176939E-01	0.990001
167	19.2118	0.52051E-01	0.14893	0.002998	0.221796E-01	0.990004
168	19.2676	0.51900E-01	-0.14251E-01	0.000287	0.203089E-03	0.990004
169	19.4936	0.51299E-01	-2.4192	0.048699	5.85276	0.990951
170	19.6710	0.50836E-01	-0.79231	0.015949	0.627752	0.991053
171	19.9023	0.50246E-01	-0.14553	0.002929	0.211782E-01	0.991056
172	20.0043	0.49989E-01	-0.46855	0.009432	0.219540	0.991092
173	20.0221	0.49945E-01	0.14999	0.003019	0.224976E-01	0.991096
174	20.0793	0.49803E-01	0.13776E-01	0.000277	0.189782E-03	0.991096
175	20.1756	0.49565E-01	0.63279E-01	0.001274	0.400425E-02	0.991096
176	20.2087	0.49484E-01	-0.83168E-02	0.000167	0.691697E-04	0.991096
177	20.4317	0.48944E-01	0.83843	0.016877	0.702959	0.991210
178	20.4544	0.48889E-01	-0.33899	0.006824	0.114917	0.991229
179	20.6320	0.48468E-01	-0.17918	0.003607	0.321071E-01	0.991234
180	20.8337	0.47999E-01	0.14512E-01	0.000292	0.210603E-03	0.991234
181	20.9048	0.47836E-01	-0.75196E-01	0.001514	0.565449E-02	0.991235
182	20.9285	0.47782E-01	-0.89755E-02	0.000181	0.805593E-04	0.991235
183	21.3059	0.46935E-01	-0.16949	0.003412	0.287269E-01	0.991239
184	21.5916	0.46314E-01	-0.55467	0.011165	0.307656	0.991289
185	21.6017	0.46293E-01	-0.15448	0.003110	0.238636E-01	0.991293
186	21.8013	0.45869E-01	0.38130E-01	0.000768	0.145388E-02	0.991293
187	21.9552	0.45547E-01	-0.27506	0.005537	0.756605E-01	0.991305
188	22.2868	0.44870E-01	-0.49590E-01	0.000998	0.245918E-02	0.991306
189	22.4746	0.44495E-01	-1.1599	0.023348	1.34529	0.991524
190	22.6909	0.44071E-01	-0.16506	0.003323	0.272461E-01	0.991528
191	22.7229	0.44008E-01	-0.94426E-02	0.000190	0.891625E-04	0.991528
192	22.7940	0.43871E-01	0.30524	0.006144	0.931702E-01	0.991543
193	23.1188	0.43255E-01	0.40308E-01	0.000811	0.162475E-02	0.991543

194	23.5460	0.42470E-01	-0.63410E-01	0.001276	0.402078E-02	0.991544
195	23.5865	0.42397E-01	-0.23987	0.004828	0.575377E-01	0.991553
196	23.8175	0.41986E-01	0.20630E-02	0.000042	0.425586E-05	0.991553
197	23.8255	0.41972E-01	0.10879E-03	0.000002	0.118352E-07	0.991553
198	23.8596	0.41912E-01	0.20773E-02	0.000042	0.431508E-05	0.991553
199	23.8655	0.41902E-01	-0.87092E-03	0.000018	0.758494E-06	0.991553
200	23.8769	0.41881E-01	-0.12191E-02	0.000025	0.148611E-05	0.991553
201	23.9240	0.41799E-01	0.23436E-02	0.000047	0.549255E-05	0.991553
202	23.9536	0.41747E-01	2.2689	0.045672	5.14793	0.992386
203	24.0104	0.41649E-01	0.59053E-01	0.001189	0.348729E-02	0.992387
204	24.0303	0.41614E-01	0.88056E-01	0.001773	0.775380E-02	0.992388
205	24.4104	0.40966E-01	0.12105E-01	0.000244	0.146538E-03	0.992388
206	24.4198	0.40950E-01	-0.12684	0.002553	0.160891E-01	0.992391
207	24.6009	0.40649E-01	0.16341	0.003289	0.267043E-01	0.992395
208	24.6429	0.40580E-01	-0.54837E-01	0.001104	0.300712E-02	0.992396
209	24.7020	0.40483E-01	0.20443	0.004115	0.417903E-01	0.992402
210	24.8368	0.40263E-01	0.14357	0.002890	0.206116E-01	0.992406
211	25.2048	0.39675E-01	2.9181	0.058740	8.51522	0.993784
212	25.6393	0.39003E-01	-0.26912	0.005417	0.724244E-01	0.993795
213	25.6630	0.38967E-01	-0.10019	0.002017	0.100386E-01	0.993797
214	25.7993	0.38761E-01	0.31378	0.006316	0.984601E-01	0.993813
215	25.8583	0.38672E-01	-0.35459	0.007138	0.125737	0.993833
216	25.9867	0.38481E-01	0.54599E-01	0.001099	0.298109E-02	0.993834
217	26.4545	0.37801E-01	0.16802	0.003382	0.282308E-01	0.993838
218	26.7915	0.37325E-01	-0.40194E-01	0.000809	0.161557E-02	0.993839
219	26.8895	0.37189E-01	-0.57505E-02	0.000116	0.330685E-04	0.993839
220	26.9795	0.37065E-01	0.67803	0.013648	0.459722	0.993913
221	27.1240	0.36868E-01	0.31682E-01	0.000638	0.100377E-02	0.993913
222	27.6911	0.36113E-01	-0.92440E-02	0.000186	0.854507E-04	0.993913
223	27.8117	0.35956E-01	0.55601E-02	0.000112	0.309143E-04	0.993913
224	27.9753	0.35746E-01	-0.14302E-02	0.000029	0.204561E-05	0.993913
225	28.0043	0.35709E-01	-0.67589E-02	0.000136	0.456833E-04	0.993913
226	28.2001	0.35461E-01	0.96820E-02	0.000195	0.937418E-04	0.993913
227	28.5079	0.35078E-01	0.40859E-03	0.000008	0.166942E-06	0.993913
228	28.8183	0.34700E-01	-0.14172E-01	0.000285	0.200857E-03	0.993913
229	28.9889	0.34496E-01	0.21642E-01	0.000436	0.468370E-03	0.993913
230	29.3132	0.34114E-01	0.28553	0.005748	0.815274E-01	0.993927
231	29.3583	0.34062E-01	0.80643E-01	0.001623	0.650330E-02	0.993928
232	29.4045	0.34008E-01	-0.36135E-01	0.000727	0.130577E-02	0.993928
233	29.5232	0.33872E-01	-0.10554	0.002125	0.111392E-01	0.993930
234	29.7214	0.33646E-01	0.30699E-01	0.000618	0.942457E-03	0.993930
235	29.7479	0.33616E-01	0.11458	0.002307	0.131296E-01	0.993932
236	30.3262	0.32975E-01	-0.20924	0.004212	0.437803E-01	0.993939
237	30.6506	0.32626E-01	3.7673	0.075834	14.1923	0.996236
238	30.8213	0.32445E-01	0.86398	0.017392	0.746456	0.996357
239	31.1413	0.32112E-01	-2.6163	0.052665	6.84504	0.997464
240	31.2432	0.32007E-01	-0.34592	0.006963	0.119659	0.997484
241	31.4903	0.31756E-01	1.4429	0.029044	2.08185	0.997821
242	31.6440	0.31602E-01	1.9227	0.038704	3.69693	0.998419
243	31.8658	0.31382E-01	-1.0969	0.022079	1.20311	0.998614
244	31.9210	0.31327E-01	-1.1395	0.022939	1.29857	0.998824
245	32.0002	0.31250E-01	-0.72717	0.014638	0.528783	0.998909
246	32.0657	0.31186E-01	-0.75666	0.015231	0.572531	0.999002
247	32.2206	0.31036E-01	-0.33024	0.006648	0.109058	0.999020
248	32.2450	0.31013E-01	1.4783	0.029758	2.18543	0.999373
249	32.3380	0.30923E-01	0.12299	0.002476	0.151254E-01	0.999376
250	32.5311	0.30740E-01	0.67162	0.013519	0.451068	0.999449
251	32.5905	0.30684E-01	-0.32731	0.006589	0.107132	0.999466
252	32.7119	0.30570E-01	0.65736	0.013232	0.432117	0.999536
253	32.7647	0.30521E-01	-1.3391	0.026956	1.79318	0.999826
254	32.8760	0.30417E-01	0.19953	0.004017	0.398133E-01	0.999833
255	32.9019	0.30393E-01	-0.91068	0.018332	0.829340	0.999967
256	32.9876	0.30314E-01	-0.28720	0.005781	0.824834E-01	0.999980
257	33.2298	0.30093E-01	-0.35033	0.007052	0.122729	1.00000
258	33.4842	0.29865E-01	-0.98570E-02	0.000198	0.971603E-04	1.00000

SUM OF EFFECTIVE MASSES= 6179.36

***** PARTICIPATION FACTOR CALCULATION ***** Y DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.249298	4.0113	-0.10854E-01	0.000406	0.117811E-03	0.227365E-07
2	0.311982	3.2053	0.47768E-02	0.000179	0.228174E-04	0.271401E-07

3	1.20128	0.83244	0.17410E-01	0.000652	0.303094E-03	0.856348E-07
4	1.26346	0.79148	-0.35813	0.013410	0.128259	0.248385E-04
5	1.30658	0.76535	-0.18267E-01	0.000684	0.333676E-03	0.249029E-04
6	1.64672	0.60727	0.26572	0.009950	0.706087E-01	0.385298E-04
7	1.75791	0.56886	-0.32581E-01	0.001220	0.106150E-02	0.387347E-04
8	1.76742	0.56580	-0.20529	0.007687	0.421442E-01	0.468682E-04
9	1.85555	0.53892	-0.34335	0.012857	0.117889	0.696198E-04
10	1.95803	0.51072	-0.10179	0.003811	0.103606E-01	0.716194E-04
11	2.07673	0.48153	0.55945E-01	0.002095	0.312982E-02	0.722234E-04
12	2.20683	0.45314	0.86059	0.032225	0.740618	0.215157E-03
13	2.38055	0.42007	0.25530E-01	0.000956	0.651780E-03	0.215282E-03
14	2.45983	0.40653	-0.22603	0.008464	0.510880E-01	0.225142E-03
15	2.49180	0.40132	-0.34490	0.012915	0.118958	0.248100E-03
16	2.54516	0.39290	-0.44246E-01	0.001657	0.195767E-02	0.248478E-03
17	2.54633	0.39272	-0.25465E-01	0.000954	0.648445E-03	0.248603E-03
18	2.64535	0.37802	-0.17872	0.006692	0.319424E-01	0.254767E-03
19	2.72503	0.36697	-0.21258E-01	0.000796	0.451887E-03	0.254855E-03
20	2.79988	0.35716	0.34522	0.012927	0.119176	0.277855E-03
21	2.98085	0.33547	7.8969	0.295699	62.3615	0.123131E-01
22	3.16978	0.31548	18.821	0.704746	354.227	0.806761E-01
23	3.19494	0.31300	-26.706	1.000000	713.208	0.218320
24	3.36620	0.29707	0.43486	0.016283	0.189106	0.218356
25	3.37205	0.29656	0.23549	0.008818	0.554575E-01	0.218367
26	3.43059	0.29150	-1.8558	0.069489	3.44389	0.219031
27	3.80749	0.26264	0.74294	0.027819	0.551957	0.219138
28	3.91527	0.25541	-1.5474	0.057941	2.39437	0.219600
29	4.11439	0.24305	-3.2050	0.120012	10.2723	0.221582
30	4.31001	0.23202	18.634	0.697736	347.215	0.288592
31	4.37853	0.22839	-3.1165	0.116696	9.71250	0.290467
32	4.53174	0.22067	-2.2904	0.085763	5.24580	0.291479
33	4.53424	0.22054	10.240	0.383427	104.853	0.311715
34	4.69336	0.21307	4.2447	0.158941	18.0173	0.315192
35	4.70256	0.21265	9.3611	0.350524	87.6296	0.332104
36	4.74571	0.21072	11.629	0.435454	135.238	0.358204
37	4.80985	0.20791	1.9678	0.073685	3.87231	0.358951
38	4.85721	0.20588	2.5343	0.094897	6.42276	0.360191
39	4.86634	0.20549	3.3525	0.125535	11.2394	0.362360
40	4.96242	0.20151	-0.38763	0.014515	0.150259	0.362389
41	4.98989	0.20041	1.4454	0.054122	2.08914	0.362792
42	5.02577	0.19897	0.71713	0.026853	0.514273	0.362891
43	5.15623	0.19394	0.48695	0.018234	0.237119	0.362937
44	5.29906	0.18871	4.3093	0.161360	18.5697	0.366521
45	5.52295	0.18106	2.7754	0.103923	7.70268	0.368007
46	5.62548	0.17776	4.7074	0.176267	22.1594	0.372284
47	5.64538	0.17714	6.4811	0.242684	42.0046	0.380390
48	5.79112	0.17268	-0.49963	0.018708	0.249627	0.380439
49	6.17226	0.16202	-0.41169	0.015416	0.169489	0.380471
50	6.28483	0.15911	0.40823	0.015286	0.166653	0.380503
51	6.31257	0.15841	-1.9383	0.072578	3.75683	0.381228
52	6.74989	0.14815	-0.37295E-01	0.001397	0.139095E-02	0.381229
53	7.18636	0.13915	-1.4517	0.054358	2.10741	0.381635
54	7.23934	0.13813	-4.8001	0.179738	23.0407	0.386082
55	7.25477	0.13784	-1.0832	0.040561	1.17335	0.386309
56	7.39473	0.13523	7.2941	0.273125	53.2035	0.396576
57	7.56248	0.13223	3.6210	0.135590	13.1120	0.399107
58	7.76711	0.12875	-3.8731	0.145029	15.0013	0.402002
59	7.81119	0.12802	-0.71855	0.026906	0.516320	0.402102
60	7.85594	0.12729	-0.78804	0.029508	0.621014	0.402222
61	7.89493	0.12666	2.8656	0.107302	8.21172	0.403806
62	8.01923	0.12470	-0.80534	0.030156	0.648570	0.403931
63	8.04604	0.12428	-10.622	0.397727	112.820	0.425705
64	8.18629	0.12216	0.29772	0.011148	0.886368E-01	0.425722
65	8.31031	0.12033	4.2139	0.157790	17.7572	0.429149
66	8.36551	0.11954	-0.44299	0.016588	0.196241	0.429187
67	8.54867	0.11698	1.5764	0.059027	2.48491	0.429666
68	8.74808	0.11431	1.1252	0.042131	1.26599	0.429911
69	8.78690	0.11381	-1.0515	0.039374	1.10571	0.430124
70	8.81472	0.11345	0.19259	0.007212	0.370921E-01	0.430131
71	8.87587	0.11267	-0.22378	0.008379	0.500782E-01	0.430141
72	8.96492	0.11155	0.15119	0.005661	0.228596E-01	0.430145
73	9.04445	0.11057	1.4991	0.056135	2.24738	0.430579
74	9.07531	0.11019	-0.45982	0.017218	0.211432	0.430620
75	9.08650	0.11005	1.2788	0.047884	1.63533	0.430935
76	9.13542	0.10946	-3.3394	0.125044	11.1517	0.433088
77	9.17336	0.10901	-5.3780	0.201379	28.9231	0.438670

78	9.22544	0.10840	1.4295	0.053528	2.04352	0.439064
79	9.38434	0.10656	1.2096	0.045293	1.46309	0.439346
80	9.58435	0.10434	0.80934	0.030306	0.655033	0.439473
81	9.71445	0.10294	-0.37264	0.013954	0.138863	0.439500
82	9.84415	0.10158	5.7914	0.216856	33.5398	0.445972
83	9.86740	0.10134	1.5096	0.056528	2.27900	0.446412
84	9.89593	0.10105	0.48171	0.018038	0.232045	0.446457
85	9.91514	0.10086	1.2404	0.046447	1.53864	0.446754
86	9.93896	0.10061	-0.85267	0.031928	0.727046	0.446894
87	10.0400	0.99601E-01	-0.80930	0.030304	0.654961	0.447021
88	10.0651	0.99353E-01	0.21074E-01	0.000789	0.444130E-03	0.447021
89	10.2107	0.97936E-01	-0.63132	0.023640	0.398565	0.447098
90	10.2205	0.97842E-01	0.39673	0.014856	0.157397	0.447128
91	10.2436	0.97622E-01	-0.21260	0.007961	0.451998E-01	0.447137
92	10.2648	0.97420E-01	0.48407E-01	0.001813	0.234323E-02	0.447137
93	10.2660	0.97409E-01	-0.16703	0.006254	0.278994E-01	0.447143
94	10.2662	0.97407E-01	0.21821	0.008171	0.476160E-01	0.447152
95	10.2711	0.97361E-01	0.12389	0.004639	0.153479E-01	0.447155
96	10.2728	0.97344E-01	-0.25863E-01	0.000968	0.668913E-03	0.447155
97	10.2795	0.97281E-01	0.87870E-02	0.000329	0.772121E-04	0.447155
98	10.2821	0.97256E-01	-0.26287E-02	0.000098	0.691011E-05	0.447155
99	10.2843	0.97236E-01	0.19591E-01	0.000734	0.383788E-03	0.447155
100	10.3618	0.96508E-01	1.7018	0.063723	2.89610	0.447714
101	10.3891	0.96255E-01	-0.86915	0.032545	0.755420	0.447860
102	10.4433	0.95755E-01	0.24175	0.009052	0.584445E-01	0.447871
103	10.4644	0.95562E-01	-0.48195E-01	0.001805	0.232271E-02	0.447871
104	10.5288	0.94977E-01	-2.6306	0.098502	6.92007	0.449207
105	10.5979	0.94358E-01	-0.12213	0.004573	0.149158E-01	0.449210
106	10.7988	0.92603E-01	0.10110E-01	0.000379	0.102211E-03	0.449210
107	10.8971	0.91768E-01	-3.2031	0.119940	10.2600	0.451190
108	10.9607	0.91235E-01	1.1949	0.044741	1.42769	0.451466
109	11.0211	0.90735E-01	-0.78151E-01	0.002926	0.610763E-02	0.451467
110	11.1888	0.89375E-01	-0.54708E-01	0.002049	0.299302E-02	0.451467
111	11.5547	0.86545E-01	19.045	0.713126	362.701	0.521466
112	11.6219	0.86044E-01	0.41426	0.015512	0.171612	0.521499
113	11.6489	0.85845E-01	1.2779	0.047851	1.63306	0.521814
114	11.7053	0.85431E-01	0.15838	0.005931	0.250846E-01	0.521819
115	11.8368	0.84483E-01	-5.2158	0.195306	27.2050	0.527069
116	11.8806	0.84171E-01	-0.24912E-01	0.000933	0.620601E-03	0.527069
117	11.9747	0.83510E-01	-1.8503	0.069282	3.42343	0.527730
118	12.0287	0.83135E-01	7.2955	0.273179	53.2242	0.538002
119	12.1751	0.82135E-01	0.37233	0.013942	0.138629	0.538029
120	12.3701	0.80840E-01	-0.52453	0.019641	0.275128	0.538082
121	12.5436	0.79722E-01	-2.3352	0.087441	5.45319	0.539134
122	12.7156	0.78643E-01	-0.80789	0.030251	0.652684	0.539260
123	12.9309	0.77334E-01	-1.1426	0.042785	1.30557	0.539512
124	12.9950	0.76953E-01	0.57101	0.021382	0.326057	0.539575
125	13.1257	0.76186E-01	0.52188	0.019542	0.272363	0.539628
126	13.6046	0.73504E-01	0.10347	0.003874	0.107052E-01	0.539630
127	13.8262	0.72327E-01	-0.41411E-02	0.000155	0.171488E-04	0.539630
128	13.9684	0.71590E-01	0.39079E-01	0.001463	0.152719E-02	0.539630
129	14.1568	0.70637E-01	-0.74325	0.027831	0.552427	0.539737
130	14.2500	0.70175E-01	0.52397	0.019620	0.274543	0.539790
131	14.2889	0.69984E-01	-0.16019	0.005998	0.256615E-01	0.539794
132	14.4676	0.69120E-01	0.19449E-01	0.000728	0.378269E-03	0.539795
133	14.5386	0.68782E-01	-0.50430	0.018883	0.254319	0.539844
134	14.7310	0.67884E-01	-0.20857	0.007810	0.435035E-01	0.539852
135	14.8716	0.67242E-01	-0.19779	0.007406	0.391214E-01	0.539860
136	15.0097	0.66624E-01	0.32464E-01	0.001216	0.105392E-02	0.539860
137	15.1165	0.66153E-01	1.0091	0.037787	1.01835	0.540056
138	15.2309	0.65656E-01	-0.43733	0.016376	0.191257	0.540093
139	15.4298	0.64810E-01	2.6513	0.099279	7.02954	0.541450
140	15.4386	0.64773E-01	6.6673	0.249655	44.4526	0.550029
141	15.6948	0.63715E-01	0.34882	0.013061	0.121673	0.550052
142	15.7035	0.63680E-01	3.2490	0.121657	10.5558	0.552089
143	15.7337	0.63558E-01	-0.31593E-01	0.001183	0.998091E-03	0.552090
144	15.8420	0.63123E-01	-1.0218	0.038260	1.04401	0.552291
145	15.9543	0.62679E-01	0.63496	0.023776	0.403170	0.552369
146	16.0425	0.62334E-01	0.21676	0.008116	0.469843E-01	0.552378
147	16.2032	0.61716E-01	0.25353	0.009493	0.642753E-01	0.552390
148	16.2691	0.61466E-01	1.4987	0.056120	2.24620	0.552824
149	16.5362	0.60473E-01	-0.90810	0.034004	0.824644	0.552983
150	16.7080	0.59852E-01	3.8888	0.145617	15.1230	0.555902
151	16.8039	0.59510E-01	0.51669	0.019347	0.266966	0.555953
152	17.3292	0.57706E-01	1.2216	0.045743	1.49236	0.556241

153	17.4185	0.57410E-01	-0.86359	0.032337	0.745787	0.556385	
154	17.6679	0.56600E-01	0.37100	0.013892	0.137637	0.556412	
155	17.7199	0.56434E-01	-0.99675E-01	0.003732	0.993515E-02	0.556414	
156	17.8390	0.56057E-01	4.8248	0.180664	23.2788	0.560906	
157	17.9163	0.55815E-01	18.248	0.683285	332.981	0.625169	
158	17.9871	0.55596E-01	8.4366	0.315906	71.1758	0.638905	
159	18.1188	0.55191E-01	4.2850	0.160450	18.3610	0.642449	
160	18.1739	0.55024E-01	5.9462	0.222653	35.3569	0.649272	
161	18.3389	0.54529E-01	1.2380	0.046357	1.53269	0.649568	
162	18.4987	0.54058E-01	1.3763	0.051535	1.89417	0.649934	
163	18.5414	0.53933E-01	-0.62071	0.023242	0.385279	0.650008	
164	18.8630	0.53014E-01	-0.22442	0.008403	0.503640E-01	0.650018	
165	18.9410	0.52795E-01	-1.0110	0.037856	1.02208	0.650215	
166	19.2013	0.52080E-01	13.562	0.507815	183.920	0.685710	
167	19.2118	0.52051E-01	-11.388	0.426420	129.685	0.710738	
168	19.2676	0.51900E-01	0.77162	0.028893	0.595395	0.710853	
169	19.4936	0.51299E-01	1.9490	0.072982	3.79877	0.711586	
170	19.6710	0.50836E-01	1.1411	0.042728	1.30211	0.711838	
171	19.9023	0.50246E-01	-0.56213	0.021049	0.315987	0.711899	
172	20.0043	0.49989E-01	-2.4724	0.092580	6.11289	0.713078	
173	20.0221	0.49945E-01	0.65076	0.024367	0.423485	0.713160	
174	20.0793	0.49803E-01	3.1656	0.118534	10.0208	0.715094	
175	20.1756	0.49565E-01	1.1268	0.042193	1.26966	0.715339	
176	20.2087	0.49484E-01	-0.20620	0.007721	0.425196E-01	0.715347	
177	20.4317	0.48944E-01	2.9009	0.108625	8.41541	0.716971	
178	20.4544	0.48889E-01	6.0327	0.225892	36.3930	0.723995	
179	20.6320	0.48468E-01	-2.4501	0.091743	6.00291	0.725154	
180	20.8337	0.47999E-01	-0.72524E-01	0.002716	0.525967E-02	0.725155	
181	20.9048	0.47836E-01	-1.7582	0.065837	3.09137	0.725751	
182	20.9285	0.47782E-01	-0.12815	0.004799	0.164236E-01	0.725754	
183	21.3059	0.46935E-01	1.5783	0.059099	2.49100	0.726235	
184	21.5916	0.46314E-01	4.8946	0.183279	23.9574	0.730859	
185	21.6017	0.46293E-01	-16.523	0.618707	273.015	0.783548	
186	21.8013	0.45869E-01	-5.0988	0.190922	25.9973	0.788566	
187	21.9552	0.45547E-01	-3.8830	0.145397	15.0775	0.791475	
188	22.2868	0.44870E-01	0.90534	0.033900	0.819640	0.791634	
189	22.4746	0.44495E-01	1.9914	0.074570	3.96587	0.792399	
190	22.6909	0.44071E-01	-0.44606	0.016703	0.198972	0.792437	
191	22.7229	0.44008E-01	0.94928E-01	0.003555	0.901125E-02	0.792439	
192	22.7940	0.43871E-01	1.2126	0.045406	1.47043	0.792723	
193	23.1188	0.43255E-01	0.45813	0.017155	0.209887	0.792763	
194	23.5460	0.42470E-01	-0.59340E-01	0.002222	0.352129E-02	0.792764	
195	23.5865	0.42397E-01	-2.4120	0.090316	5.81757	0.793887	
196	23.8175	0.41986E-01	-0.10167	0.003807	0.103371E-01	0.793889	
197	23.8255	0.41972E-01	-0.25803E-01	0.000966	0.665812E-03	0.793889	
198	23.8596	0.41912E-01	-0.28891E-01	0.001082	0.834679E-03	0.793889	
199	23.8655	0.41902E-01	0.11332E-01	0.000424	0.128419E-03	0.793889	
200	23.8769	0.41881E-01	0.27220E-02	0.000102	0.740920E-05	0.793889	
201	23.9240	0.41799E-01	0.45685E-01	0.001711	0.208716E-02	0.793890	
202	23.9536	0.41747E-01	-0.60135	0.022517	0.361619	0.793959	
203	24.0104	0.41649E-01	0.71764	0.026872	0.515011	0.794059	
204	24.0303	0.41614E-01	1.4368	0.053801	2.06442	0.794457	
205	24.4104	0.40966E-01	0.25806	0.009663	0.665942E-01	0.794470	
206	24.4198	0.40950E-01	12.696	0.475413	161.198	0.825580	
207	24.6009	0.40649E-01	5.9945	0.224463	35.9341	0.832515	
208	24.6429	0.40580E-01	-0.49624	0.018582	0.246256	0.832562	
209	24.7020	0.40483E-01	-4.1516	0.155455	17.2356	0.835889	
210	24.8368	0.40263E-01	-5.0419	0.188795	25.4212	0.840795	
211	25.2048	0.39675E-01	0.64721	0.024235	0.418881	0.840876	
212	25.6393	0.39003E-01	-1.8861	0.070625	3.55738	0.841562	
213	25.6630	0.38967E-01	3.1425	0.117672	9.87558	0.843468	
214	25.7993	0.38761E-01	-0.63173	0.023655	0.399085	0.843545	
215	25.8583	0.38672E-01	-5.0749	0.190028	25.7543	0.848516	
216	25.9867	0.38481E-01	4.4340	0.166031	19.6606	0.852310	
217	26.4545	0.37801E-01	7.5858	0.284049	57.5445	0.863415	
218	26.7915	0.37325E-01	-1.1467	0.042939	1.31498	0.863669	
219	26.8895	0.37189E-01	-1.8356	0.068734	3.36942	0.864320	
220	26.9795	0.37065E-01	-0.15851	0.005936	0.251267E-01	0.864324	
221	27.1240	0.36868E-01	2.0295	0.075996	4.11905	0.865119	
222	27.6911	0.36113E-01	0.74745	0.027988	0.558688	0.865227	
223	27.8117	0.35956E-01	0.27304E-01	0.001022	0.745523E-03	0.865227	
224	27.9753	0.35746E-01	0.55252E-01	0.002069	0.305282E-02	0.865228	
225	28.0043	0.35709E-01	0.59760	0.022377	0.357127	0.865297	
226	28.2001	0.35461E-01	1.0028	0.037551	1.00570	0.865491	
227	28.5079	0.35078E-01	7.7366	0.289694	59.8543	0.877042	

228	28.8183	0.34700E-01	1.0830	0.040554	1.17299	0.877269
229	28.9889	0.34496E-01	-0.33286	0.012464	0.110796	0.877290
230	29.3132	0.34114E-01	2.5206	0.094385	6.35361	0.878516
231	29.3583	0.34062E-01	-1.6206	0.060683	2.62636	0.879023
232	29.4045	0.34008E-01	-0.62406	0.023368	0.389450	0.879098
233	29.5232	0.33872E-01	1.6198	0.060654	2.62385	0.879605
234	29.7214	0.33646E-01	-0.11789	0.004414	0.138982E-01	0.879607
235	29.7479	0.33616E-01	2.0935	0.078390	4.38267	0.880453
236	30.3262	0.32975E-01	-0.53099	0.019883	0.281953	0.880508
237	30.6506	0.32626E-01	1.8962	0.071002	3.59545	0.881201
238	30.8213	0.32445E-01	-3.2424	0.121412	10.5133	0.883230
239	31.1413	0.32112E-01	-5.4343	0.203485	29.5313	0.888930
240	31.2432	0.32007E-01	13.834	0.518027	191.391	0.925867
241	31.4903	0.31756E-01	-2.1835	0.081760	4.76758	0.926787
242	31.6440	0.31602E-01	2.2495	0.084233	5.06038	0.927763
243	31.8658	0.31382E-01	6.7700	0.253503	45.8333	0.936609
244	31.9210	0.31327E-01	1.3387	0.050127	1.79205	0.936955
245	32.0002	0.31250E-01	-7.4528	0.279067	55.5436	0.947674
246	32.0657	0.31186E-01	-7.4738	0.279855	55.8577	0.958454
247	32.2206	0.31036E-01	2.7850	0.104283	7.75613	0.959951
248	32.2450	0.31013E-01	-11.178	0.418554	124.945	0.984065
249	32.3380	0.30923E-01	-0.10433	0.003907	0.108856E-01	0.984067
250	32.5311	0.30740E-01	3.6875	0.138079	13.5979	0.986691
251	32.5905	0.30684E-01	3.9780	0.148956	15.8245	0.989745
252	32.7119	0.30570E-01	-2.8982	0.108521	8.39932	0.991366
253	32.7647	0.30521E-01	-2.6641	0.099755	7.09724	0.992736
254	32.8760	0.30417E-01	4.2116	0.157702	17.7374	0.996159
255	32.9019	0.30393E-01	1.6273	0.060932	2.64797	0.996670
256	32.9876	0.30314E-01	-1.7835	0.066785	3.18104	0.997284
257	33.2298	0.30093E-01	0.73834	0.027647	0.545153	0.997389
258	33.4842	0.29865E-01	3.6782	0.137730	13.5292	1.00000

SUM OF EFFECTIVE MASSES= 5181.56

***** PARTICIPATION FACTOR CALCULATION ***** Z DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	RATIO	EFFECTIVE MASS	CUMULATIVE MASS FRACTION
1	0.249298	4.0113	28.395	0.857151	806.298	0.129298
2	0.311982	3.2053	-0.53722E-01	0.001622	0.288600E-02	0.129299
3	1.20128	0.83244	3.2161	0.097081	10.3430	0.130957
4	1.26346	0.79148	24.687	0.745207	609.445	0.228688
5	1.30658	0.76535	0.72283E-01	0.002182	0.522488E-02	0.228689
6	1.64672	0.60727	33.128	1.000000	1097.44	0.404674
7	1.75791	0.56886	-21.439	0.647172	459.642	0.478383
8	1.76742	0.56580	17.039	0.514351	290.335	0.524941
9	1.85555	0.53892	9.4368	0.284861	89.0526	0.539221
10	1.95803	0.51072	11.710	0.353479	137.122	0.561210
11	2.07673	0.48153	5.9052	0.178255	34.8708	0.566802
12	2.20683	0.45314	-1.5667	0.047294	2.45463	0.567196
13	2.38055	0.42007	5.2111	0.157305	27.1559	0.571551
14	2.45983	0.40653	-8.3999	0.253561	70.5578	0.582865
15	2.49180	0.40132	-9.7812	0.295258	95.6718	0.598207
16	2.54516	0.39290	-0.33938	0.010245	0.115176	0.598226
17	2.54633	0.39272	0.93315E-01	0.002817	0.870768E-02	0.598227
18	2.64535	0.37802	1.6565	0.050002	2.74384	0.598667
19	2.72503	0.36697	-12.610	0.380646	159.009	0.624166
20	2.79988	0.35716	2.5049	0.075615	6.27471	0.625172
21	2.98085	0.33547	-0.35176	0.010618	0.123734	0.625192
22	3.16978	0.31548	-0.29758E-01	0.000898	0.885513E-03	0.625192
23	3.19494	0.31300	0.57232E-01	0.001728	0.327548E-02	0.625193
24	3.36620	0.29707	1.3861	0.041840	1.92115	0.625501
25	3.37205	0.29656	0.37509	0.011323	0.140692	0.625523
26	3.43059	0.29150	-1.0430	0.031484	1.08781	0.625698
27	3.80749	0.26264	-4.8019	0.144952	23.0582	0.629395
28	3.91527	0.25541	10.948	0.330468	119.850	0.648614
29	4.11439	0.24305	2.6966	0.081400	7.27164	0.649781
30	4.31001	0.23202	0.82325E-01	0.002485	0.677733E-02	0.649782
31	4.37853	0.22839	-5.2944	0.159818	28.0305	0.654277
32	4.53174	0.22067	0.96653	0.029176	0.934187	0.654426
33	4.53424	0.22054	-0.54451	0.016437	0.296496	0.654474
34	4.69336	0.21307	1.0301	0.031095	1.06113	0.654644
35	4.70256	0.21265	0.93873	0.028337	0.881208	0.654785
36	4.74571	0.21072	0.77661	0.023443	0.603126	0.654882

37	4.80985	0.20791	2.0520	0.061941	4.21051	0.655557
38	4.85721	0.20588	-2.6491	0.079967	7.01774	0.656683
39	4.86634	0.20549	1.7110	0.051648	2.92744	0.657152
40	4.96242	0.20151	1.2602	0.038040	1.58803	0.657407
41	4.98989	0.20041	0.59975	0.018104	0.359702	0.657464
42	5.02577	0.19897	3.7664	0.113692	14.1854	0.659739
43	5.15623	0.19394	-0.13449	0.004060	0.180864E-01	0.659742
44	5.29906	0.18871	-1.8592	0.056123	3.45669	0.660296
45	5.52295	0.18106	-2.2389	0.067585	5.01278	0.661100
46	5.62548	0.17776	3.6783	0.111034	13.5300	0.663270
47	5.64538	0.17714	-0.40527E-01	0.001223	0.164246E-02	0.663270
48	5.79112	0.17268	2.6084	0.078737	6.80363	0.664361
49	6.17226	0.16202	0.55022	0.016609	0.302738	0.664410
50	6.28483	0.15911	-1.0700	0.032299	1.14489	0.664593
51	6.31257	0.15841	5.0096	0.151222	25.0965	0.668618
52	6.74989	0.14815	-0.91921	0.027747	0.844939	0.668753
53	7.18636	0.13915	10.290	0.310608	105.878	0.685732
54	7.23934	0.13813	-19.074	0.575768	363.811	0.744073
55	7.25477	0.13784	9.8426	0.297113	96.8776	0.759608
56	7.39473	0.13523	-0.99509E-01	0.003004	0.990199E-02	0.759610
57	7.56248	0.13223	-4.7450	0.143235	22.5153	0.763220
58	7.76711	0.12875	2.5464	0.076866	6.48405	0.764260
59	7.81119	0.12802	-2.4042	0.072574	5.78026	0.765187
60	7.85594	0.12729	5.1897	0.156658	26.9329	0.769506
61	7.89493	0.12666	-1.0024	0.030259	1.00481	0.769667
62	8.01923	0.12470	0.85124	0.025696	0.724612	0.769783
63	8.04604	0.12428	4.3557	0.131483	18.9724	0.772826
64	8.18629	0.12216	3.3161	0.100100	10.9963	0.774589
65	8.31031	0.12033	-0.33878	0.010227	0.114774	0.774607
66	8.36551	0.11954	-0.48120	0.014526	0.231550	0.774645
67	8.54867	0.11698	0.71130E-01	0.002147	0.505952E-02	0.774645
68	8.74808	0.11431	-1.7719	0.053486	3.13956	0.775149
69	8.78690	0.11381	1.2997	0.039233	1.68924	0.775420
70	8.81472	0.11345	-0.13484	0.004070	0.181831E-01	0.775423
71	8.87587	0.11267	-0.12944	0.003907	0.167548E-01	0.775425
72	8.96492	0.11155	-1.0563	0.031885	1.11572	0.775604
73	9.04445	0.11057	7.0810	0.213750	50.1408	0.783645
74	9.07531	0.11019	6.0469	0.182533	36.5646	0.789508
75	9.08650	0.11005	-0.19915	0.006012	0.396620E-01	0.789515
76	9.13542	0.10946	-2.3001	0.069431	5.29044	0.790363
77	9.17336	0.10901	1.5680	0.047331	2.45849	0.790757
78	9.22544	0.10840	-2.6688	0.080561	7.12249	0.791900
79	9.38434	0.10656	-6.9207	0.208911	47.8963	0.799580
80	9.58435	0.10434	-5.4131	0.163401	29.3016	0.804279
81	9.71445	0.10294	0.29923	0.009033	0.895401E-01	0.804293
82	9.84415	0.10158	1.0800	0.032602	1.16643	0.804480
83	9.86740	0.10134	4.8298	0.145794	23.3270	0.808221
84	9.89593	0.10105	3.1494	0.095069	9.91879	0.809812
85	9.91514	0.10086	1.1781	0.035562	1.38789	0.810034
86	9.93896	0.10061	2.6693	0.080576	7.12510	0.811177
87	10.0400	0.99601E-01	-0.58463	0.017648	0.341795	0.811232
88	10.0651	0.99353E-01	4.2080	0.127025	17.7075	0.814071
89	10.2107	0.97936E-01	5.8600	0.176891	34.3394	0.819578
90	10.2205	0.97842E-01	-3.4834	0.105151	12.1341	0.821524
91	10.2436	0.97622E-01	1.3997	0.042251	1.95907	0.821838
92	10.2648	0.97420E-01	-1.0725	0.032376	1.15034	0.822022
93	10.2660	0.97409E-01	2.5282	0.076316	6.39161	0.823047
94	10.2662	0.97407E-01	-3.1705	0.095705	10.0520	0.824659
95	10.2711	0.97361E-01	-1.1536	0.034823	1.33079	0.824873
96	10.2728	0.97344E-01	0.23932	0.007224	0.572764E-01	0.824882
97	10.2795	0.97281E-01	-0.56362E-01	0.001701	0.317666E-02	0.824882
98	10.2821	0.97256E-01	0.68346E-01	0.002063	0.467114E-02	0.824883
99	10.2843	0.97236E-01	-0.90341E-01	0.002727	0.816144E-02	0.824884
100	10.3618	0.96508E-01	-4.1856	0.126349	17.5196	0.827694
101	10.3891	0.96255E-01	-10.534	0.317968	110.955	0.845487
102	10.4433	0.95755E-01	-0.48452	0.014626	0.234759	0.845524
103	10.4644	0.95562E-01	3.8730	0.116913	15.0005	0.847930
104	10.5288	0.94977E-01	11.352	0.342683	128.874	0.868596
105	10.5979	0.94358E-01	14.025	0.423364	196.702	0.900139
106	10.7988	0.92603E-01	-1.0263	0.030979	1.05319	0.900308
107	10.8971	0.91768E-01	0.67557E-01	0.002039	0.456391E-02	0.900309
108	10.9607	0.91235E-01	-1.9111	0.057688	3.65218	0.900895
109	11.0211	0.90735E-01	0.41457E-01	0.001251	0.171868E-02	0.900895
110	11.1888	0.89375E-01	0.66656	0.020121	0.444301	0.900966
111	11.5547	0.86545E-01	0.92919	0.028049	0.863391	0.901105

112	11.6219	0.86044E-01	0.77456	0.023381	0.599949	0.901201
113	11.6489	0.85845E-01	0.36855	0.011125	0.135828	0.901222
114	11.7053	0.85431E-01	0.28194E-01	0.000851	0.794897E-03	0.901223
115	11.8368	0.84483E-01	-0.21753	0.006566	0.473179E-01	0.901230
116	11.8806	0.84171E-01	2.9751	0.089806	8.85094	0.902650
117	11.9747	0.83510E-01	0.53784	0.016235	0.289275	0.902696
118	12.0287	0.83135E-01	0.76849	0.023198	0.590577	0.902791
119	12.1751	0.82135E-01	0.41704	0.012589	0.173924	0.902819
120	12.3701	0.80840E-01	0.16073	0.004852	0.258327E-01	0.902823
121	12.5436	0.79722E-01	0.17210	0.005195	0.296188E-01	0.902827
122	12.7156	0.78643E-01	-0.12344	0.003726	0.152373E-01	0.902830
123	12.9309	0.77334E-01	0.15981	0.004824	0.255397E-01	0.902834
124	12.9950	0.76953E-01	-0.99504	0.030037	0.990110	0.902993
125	13.1257	0.76186E-01	-4.5083	0.136089	20.3248	0.906252
126	13.6046	0.73504E-01	8.9979	0.271613	80.9624	0.919235
127	13.8262	0.72327E-01	0.92838E-01	0.002802	0.861887E-02	0.919237
128	13.9684	0.71590E-01	1.9433	0.058661	3.77637	0.919842
129	14.1568	0.70637E-01	1.4924	0.045051	2.22731	0.920199
130	14.2500	0.70175E-01	-2.9879	0.090193	8.92739	0.921631
131	14.2889	0.69984E-01	0.92374	0.027884	0.853289	0.921768
132	14.4676	0.69120E-01	-0.10410E-01	0.000314	0.108360E-03	0.921768
133	14.5386	0.68782E-01	-2.1850	0.065956	4.77403	0.922533
134	14.7310	0.67884E-01	1.2652	0.038191	1.60071	0.922790
135	14.8716	0.67242E-01	0.93187	0.028130	0.868374	0.922929
136	15.0097	0.66624E-01	0.13166	0.003974	0.173335E-01	0.922932
137	15.1165	0.66153E-01	2.4525	0.074031	6.01464	0.923897
138	15.2309	0.65656E-01	3.9228	0.118415	15.3885	0.926364
139	15.4298	0.64810E-01	-0.21072	0.006361	0.444028E-01	0.926371
140	15.4386	0.64773E-01	0.93392	0.028191	0.872200	0.926511
141	15.6948	0.63715E-01	0.66943E-01	0.002021	0.448140E-02	0.926512
142	15.7035	0.63680E-01	0.15511	0.004682	0.240605E-01	0.926516
143	15.7337	0.63558E-01	-0.16298E-01	0.000492	0.265632E-03	0.926516
144	15.8420	0.63123E-01	-1.3762	0.041544	1.89404	0.926820
145	15.9543	0.62679E-01	4.3485	0.131265	18.9093	0.929852
146	16.0425	0.62334E-01	0.39138	0.011814	0.153180	0.929876
147	16.2032	0.61716E-01	0.25723	0.007765	0.661649E-01	0.929887
148	16.2691	0.61466E-01	0.82116	0.024788	0.674300	0.929995
149	16.5362	0.60473E-01	-0.11224	0.003388	0.125968E-01	0.929997
150	16.7080	0.59852E-01	1.4177	0.042794	2.00979	0.930320
151	16.8039	0.59510E-01	-0.36433	0.010998	0.132740	0.930341
152	17.3292	0.57706E-01	0.45724	0.013802	0.209071	0.930374
153	17.4185	0.57410E-01	-4.5021	0.135900	20.2685	0.933625
154	17.6679	0.56600E-01	-1.9391	0.058535	3.76016	0.934228
155	17.7199	0.56434E-01	-0.68176E-03	0.000021	0.464796E-06	0.934228
156	17.8390	0.56057E-01	-0.34753	0.010491	0.120774	0.934247
157	17.9163	0.55815E-01	0.25596	0.007727	0.655176E-01	0.934257
158	17.9871	0.55596E-01	0.57422	0.017334	0.329728	0.934310
159	18.1188	0.55191E-01	-2.0866	0.062988	4.35405	0.935009
160	18.1739	0.55024E-01	1.3511	0.040786	1.82559	0.935301
161	18.3389	0.54529E-01	2.6118	0.078841	6.82154	0.936395
162	18.4987	0.54058E-01	-0.58144	0.017552	0.338075	0.936449
163	18.5414	0.53933E-01	-0.63825	0.019266	0.407366	0.936515
164	18.8630	0.53014E-01	0.91941	0.027753	0.845308	0.936650
165	18.9410	0.52795E-01	0.66369	0.020034	0.440485	0.936721
166	19.2013	0.52080E-01	-0.64224E-01	0.001939	0.412470E-02	0.936722
167	19.2118	0.52051E-01	1.2686	0.038296	1.60946	0.936980
168	19.2676	0.51900E-01	5.2684	0.159032	27.7555	0.941431
169	19.4936	0.51299E-01	1.0594	0.031981	1.12241	0.941611
170	19.6710	0.50836E-01	-2.4669	0.074466	6.08555	0.942586
171	19.9023	0.50246E-01	0.56402E-01	0.001703	0.318115E-02	0.942587
172	20.0043	0.49989E-01	0.74752	0.022565	0.558793	0.942677
173	20.0221	0.49945E-01	-0.33614	0.010147	0.112988	0.942695
174	20.0793	0.49803E-01	-0.71371	0.021544	0.509383	0.942776
175	20.1756	0.49565E-01	0.45827	0.013834	0.210013	0.942810
176	20.2087	0.49484E-01	-0.29498E-01	0.000890	0.870119E-03	0.942810
177	20.4317	0.48944E-01	-0.62850	0.018972	0.395018	0.942874
178	20.4544	0.48889E-01	-2.8776	0.086865	8.28082	0.944201
179	20.6320	0.48468E-01	0.30598	0.009236	0.936248E-01	0.944216
180	20.8337	0.47999E-01	0.37573	0.011342	0.141175	0.944239
181	20.9048	0.47836E-01	-2.0699	0.062484	4.28469	0.944926
182	20.9285	0.47782E-01	-4.5761	0.138135	20.9405	0.948284
183	21.3059	0.46935E-01	-7.7566	0.234144	60.1654	0.957932
184	21.5916	0.46314E-01	10.180	0.307296	103.632	0.974551
185	21.6017	0.46293E-01	3.4534	0.104245	11.9260	0.976463
186	21.8013	0.45869E-01	-0.72991	0.022033	0.532770	0.976549

187	21.9552	0.45547E-01	-5.4944	0.165855	30.1883	0.981390
188	22.2868	0.44870E-01	-0.85740E-01	0.002588	0.735132E-02	0.981391
189	22.4746	0.44495E-01	-3.4982	0.105597	12.2371	0.983353
190	22.6909	0.44071E-01	-0.20985	0.006335	0.440363E-01	0.983360
191	22.7229	0.44008E-01	0.15081	0.004552	0.227436E-01	0.983364
192	22.7940	0.43871E-01	0.59363	0.017920	0.352402	0.983420
193	23.1188	0.43255E-01	-0.18782E-01	0.000567	0.352777E-03	0.983420
194	23.5460	0.42470E-01	0.40852E-01	0.001233	0.166892E-02	0.983421
195	23.5865	0.42397E-01	0.78812E-01	0.002379	0.621130E-02	0.983422
196	23.8175	0.41986E-01	-0.28750E-02	0.000087	0.826570E-05	0.983422
197	23.8255	0.41972E-01	0.96671E-03	0.000029	0.934527E-06	0.983422
198	23.8596	0.41912E-01	-0.15341E-02	0.000046	0.235344E-05	0.983422
199	23.8655	0.41902E-01	0.85572E-03	0.000026	0.732249E-06	0.983422
200	23.8769	0.41881E-01	0.18375E-02	0.000055	0.337646E-05	0.983422
201	23.9240	0.41799E-01	-0.17517E-02	0.000053	0.306831E-05	0.983422
202	23.9536	0.41747E-01	-0.11799	0.003562	0.139211E-01	0.983424
203	24.0104	0.41649E-01	0.20629E-01	0.000623	0.425556E-03	0.983424
204	24.0303	0.41614E-01	0.46253E-01	0.001396	0.213936E-02	0.983424
205	24.4104	0.40966E-01	0.22793E-01	0.000688	0.519503E-03	0.983424
206	24.4198	0.40950E-01	0.95256	0.028754	0.907363	0.983570
207	24.6009	0.40649E-01	-0.32183	0.009715	0.103574	0.983587
208	24.6429	0.40580E-01	-0.27392	0.008269	0.750332E-01	0.983599
209	24.7020	0.40483E-01	-0.88770	0.026796	0.788009	0.983725
210	24.8368	0.40263E-01	-0.20816	0.006284	0.433306E-01	0.983732
211	25.2048	0.39675E-01	-0.39364	0.011883	0.154955	0.983757
212	25.6393	0.39003E-01	-0.97453	0.029417	0.949705	0.983909
213	25.6630	0.38967E-01	1.1877	0.035853	1.41067	0.984135
214	25.7993	0.38761E-01	-0.32828	0.009910	0.107767	0.984153
215	25.8583	0.38672E-01	1.0215	0.030834	1.04339	0.984320
216	25.9867	0.38481E-01	1.3325	0.040222	1.77548	0.984605
217	26.4545	0.37801E-01	-0.41764	0.012607	0.174421	0.984633
218	26.7915	0.37325E-01	-0.17567	0.005303	0.308607E-01	0.984638
219	26.8895	0.37189E-01	-0.94865E-01	0.002864	0.899937E-02	0.984639
220	26.9795	0.37065E-01	0.81016	0.024456	0.656358	0.984744
221	27.1240	0.36868E-01	0.52759E-01	0.001593	0.278350E-02	0.984745
222	27.6911	0.36113E-01	0.30323	0.009153	0.919503E-01	0.984759
223	27.8117	0.35956E-01	0.20224E-01	0.000610	0.409017E-03	0.984759
224	27.9753	0.35746E-01	0.20311E-01	0.000613	0.412553E-03	0.984760
225	28.0043	0.35709E-01	-0.87739E-01	0.002649	0.769821E-02	0.984761
226	28.2001	0.35461E-01	0.91909	0.027744	0.844723	0.984896
227	28.5079	0.35078E-01	-0.32665E-01	0.000986	0.106698E-02	0.984896
228	28.8183	0.34700E-01	0.38224E-01	0.001154	0.146111E-02	0.984897
229	28.9889	0.34496E-01	-0.44873E-01	0.001355	0.201359E-02	0.984897
230	29.3132	0.34114E-01	-0.88584	0.026740	0.784720	0.985023
231	29.3583	0.34062E-01	0.67847E-01	0.002048	0.460316E-02	0.985024
232	29.4045	0.34008E-01	-0.17355E-01	0.000524	0.301191E-03	0.985024
233	29.5232	0.33872E-01	0.85773E-02	0.000259	0.735696E-04	0.985024
234	29.7214	0.33646E-01	-0.34936E-01	0.001055	0.122052E-02	0.985024
235	29.7479	0.33616E-01	0.99329E-01	0.002998	0.986617E-02	0.985025
236	30.3262	0.32975E-01	0.88774E-01	0.002680	0.788091E-02	0.985027
237	30.6506	0.32626E-01	0.75697E-01	0.002285	0.572998E-02	0.985028
238	30.8213	0.32445E-01	0.38729E-01	0.001169	0.149991E-02	0.985028
239	31.1413	0.32112E-01	0.34838	0.010516	0.121369	0.985047
240	31.2432	0.32007E-01	-0.79649	0.024043	0.634394	0.985149
241	31.4903	0.31756E-01	-0.43566	0.013151	0.189802	0.985179
242	31.6440	0.31602E-01	0.94699	0.028586	0.896787	0.985323
243	31.8658	0.31382E-01	1.6182	0.048848	2.61864	0.985743
244	31.9210	0.31327E-01	1.4820	0.044736	2.19630	0.986095
245	32.0002	0.31250E-01	-1.3162	0.039730	1.73225	0.986373
246	32.0657	0.31186E-01	-1.1146	0.033646	1.24236	0.986572
247	32.2206	0.31036E-01	0.11784	0.003557	0.138854E-01	0.986575
248	32.2450	0.31013E-01	-0.97679	0.029486	0.954112	0.986728
249	32.3380	0.30923E-01	-0.97640	0.029474	0.953351	0.986880
250	32.5311	0.30740E-01	0.47587	0.014365	0.226449	0.986917
251	32.5905	0.30684E-01	-0.74546	0.022503	0.555712	0.987006
252	32.7119	0.30570E-01	8.2377	0.248664	67.8591	0.997888
253	32.7647	0.30521E-01	3.2947	0.099456	10.8553	0.999629
254	32.8760	0.30417E-01	-0.21791	0.006578	0.474864E-01	0.999636
255	32.9019	0.30393E-01	0.35954	0.010853	0.129268	0.999657
256	32.9876	0.30314E-01	-0.26818	0.008095	0.719183E-01	0.999668
257	33.2298	0.30093E-01	-0.13716E-01	0.000414	0.188130E-03	0.999668
258	33.4842	0.29865E-01	1.4378	0.043403	2.06736	1.00000

SUM OF EFFECTIVE MASSES= 6235.96

***** PARTICIPATION FACTOR CALCULATION *****ROTX DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.249298	4.0113	26128.	0.814637	0.682680E+09	0.158054
2	0.311982	3.2053	-46.890	0.001462	2198.64	0.158055
3	1.20128	0.83244	3101.6	0.096704	0.961999E+07	0.160282
4	1.26346	0.79148	23026.	0.717903	0.530176E+09	0.283029
5	1.30658	0.76535	51.296	0.001599	2631.26	0.283030
6	1.64672	0.60727	32073.	1.000000	0.102870E+10	0.521195
7	1.75791	0.56886	-16156.	0.503707	0.261002E+09	0.581622
8	1.76742	0.56580	6869.2	0.214170	0.471853E+08	0.592547
9	1.85555	0.53892	8485.8	0.264576	0.720094E+08	0.609218
10	1.95803	0.51072	11761.	0.366696	0.138325E+09	0.641244
11	2.07673	0.48153	5403.0	0.168458	0.291927E+08	0.648002
12	2.20683	0.45314	-934.94	0.029150	874122.	0.648205
13	2.38055	0.42007	2450.3	0.076397	0.600406E+07	0.649595
14	2.45983	0.40653	-8697.1	0.271164	0.756402E+08	0.667107
15	2.49180	0.40132	-9965.7	0.310715	0.993147E+08	0.690100
16	2.54516	0.39290	-356.83	0.011125	127326.	0.690130
17	2.54633	0.39272	97.454	0.003038	9497.26	0.690132
18	2.64535	0.37802	1564.5	0.048777	0.244752E+07	0.690699
19	2.72503	0.36697	-12088.	0.376896	0.146128E+09	0.724530
20	2.79988	0.35716	2476.1	0.077200	0.613088E+07	0.725950
21	2.98085	0.33547	2063.4	0.064332	0.425742E+07	0.726936
22	3.16978	0.31548	5410.9	0.168703	0.292775E+08	0.733714
23	3.19494	0.31300	-7608.8	0.237232	0.578943E+08	0.747118
24	3.36620	0.29707	724.07	0.022575	524275.	0.747239
25	3.37205	0.29656	206.66	0.006443	42708.4	0.747249
26	3.43059	0.29150	-1344.5	0.041919	0.180762E+07	0.747667
27	3.80749	0.26264	-3357.7	0.104687	0.112740E+08	0.750278
28	3.91527	0.25541	7126.3	0.222186	0.507835E+08	0.762035
29	4.11439	0.24305	1416.3	0.044157	0.200579E+07	0.762499
30	4.31001	0.23202	5562.6	0.173432	0.309420E+08	0.769663
31	4.37853	0.22839	-3974.2	0.123911	0.157946E+08	0.773320
32	4.53174	0.22067	-165.70	0.005166	27456.3	0.773326
33	4.53424	0.22054	3001.5	0.093582	0.900898E+07	0.775412
34	4.69336	0.21307	1394.8	0.043488	0.194548E+07	0.775862
35	4.70256	0.21265	3292.3	0.102648	0.108391E+08	0.778372
36	4.74571	0.21072	3862.6	0.120429	0.149195E+08	0.781826
37	4.80985	0.20791	1679.7	0.052369	0.282124E+07	0.782479
38	4.85721	0.20588	-672.13	0.020956	451760.	0.782584
39	4.86634	0.20549	1818.5	0.056697	0.330679E+07	0.783349
40	4.96242	0.20151	353.09	0.011009	124671.	0.783378
41	4.98989	0.20041	382.63	0.011930	146406.	0.783412
42	5.02577	0.19897	2346.8	0.073170	0.550744E+07	0.784687
43	5.15623	0.19394	62.516	0.001949	3908.28	0.784688
44	5.29906	0.18871	370.98	0.011566	137623.	0.784720
45	5.52295	0.18106	-164.56	0.005131	27080.5	0.784726
46	5.62548	0.17776	2676.1	0.083437	0.716152E+07	0.786384
47	5.64538	0.17714	1852.8	0.057767	0.343281E+07	0.787179
48	5.79112	0.17268	1105.2	0.034460	0.122155E+07	0.787462
49	6.17226	0.16202	36.538	0.001139	1335.02	0.787462
50	6.28483	0.15911	-157.57	0.004913	24829.3	0.787468
51	6.31257	0.15841	1570.4	0.048964	0.246629E+07	0.788039
52	6.74989	0.14815	-646.83	0.020167	418395.	0.788136
53	7.18636	0.13915	4651.8	0.145037	0.216395E+08	0.793146
54	7.23934	0.13813	-10410.	0.324579	0.108375E+09	0.818237
55	7.25477	0.13784	4401.4	0.137230	0.193726E+08	0.822722
56	7.39473	0.13523	2060.6	0.064248	0.424623E+07	0.823705
57	7.56248	0.13223	-1413.7	0.044076	0.199845E+07	0.824168
58	7.76711	0.12875	-24.296	0.000758	590.311	0.824168
59	7.81119	0.12802	-1277.8	0.039841	0.163287E+07	0.824546
60	7.85594	0.12729	2864.5	0.089311	0.820533E+07	0.826446
61	7.89493	0.12666	-155.36	0.004844	24135.8	0.826451
62	8.01923	0.12470	-1800.1	0.056124	0.324033E+07	0.827202
63	8.04604	0.12428	-743.03	0.023167	552098.	0.827329
64	8.18629	0.12216	1952.0	0.060860	0.381022E+07	0.828212
65	8.31031	0.12033	1313.8	0.040963	0.172613E+07	0.828611
66	8.36551	0.11954	-309.54	0.009651	95815.1	0.828633
67	8.54867	0.11698	177.09	0.005522	31362.6	0.828641
68	8.74808	0.11431	-506.50	0.015792	256537.	0.828700
69	8.78690	0.11381	778.55	0.024274	606145.	0.828840
70	8.81472	0.11345	-38.329	0.001195	1469.09	0.828841

71	8.87587	0.11267	-75.220	0.002345	5658.04	0.828842
72	8.96492	0.11155	-445.99	0.013905	198907.	0.828888
73	9.04445	0.11057	4637.6	0.144595	0.215077E+08	0.833868
74	9.07531	0.11019	2536.5	0.079084	0.643378E+07	0.835357
75	9.08650	0.11005	1073.0	0.033453	0.115122E+07	0.835624
76	9.13542	0.10946	-1910.2	0.059558	0.364900E+07	0.836468
77	9.17336	0.10901	-2553.7	0.079621	0.652142E+07	0.837978
78	9.22544	0.10840	31.475	0.000981	990.668	0.837979
79	9.38434	0.10656	-3031.9	0.094530	0.919235E+07	0.840107
80	9.58435	0.10434	-2318.5	0.072288	0.537555E+07	0.841351
81	9.71445	0.10294	43.003	0.001341	1849.27	0.841352
82	9.84415	0.10158	783.49	0.024428	613857.	0.841494
83	9.86740	0.10134	3327.4	0.103742	0.110714E+08	0.844057
84	9.89593	0.10105	-1594.9	0.049728	0.254380E+07	0.844646
85	9.91514	0.10086	3651.7	0.113854	0.133348E+08	0.847733
86	9.93896	0.10061	-1550.0	0.048326	0.240246E+07	0.848290
87	10.0400	0.99601E-01	-792.42	0.024707	627936.	0.848435
88	10.0651	0.99353E-01	2194.2	0.068413	0.481463E+07	0.849550
89	10.2107	0.97936E-01	2029.1	0.063265	0.411735E+07	0.850503
90	10.2205	0.97842E-01	-1174.0	0.036604	0.137830E+07	0.850822
91	10.2436	0.97622E-01	411.65	0.012835	169453.	0.850861
92	10.2648	0.97420E-01	-440.33	0.013729	193889.	0.850906
93	10.2660	0.97409E-01	992.74	0.030952	985524.	0.851134
94	10.2662	0.97407E-01	-1231.4	0.038393	0.151632E+07	0.851485
95	10.2711	0.97361E-01	-393.61	0.012272	154931.	0.851521
96	10.2728	0.97344E-01	81.006	0.002526	6561.92	0.851523
97	10.2795	0.97281E-01	-17.480	0.000545	305.567	0.851523
98	10.2821	0.97256E-01	23.146	0.000722	535.725	0.851523
99	10.2843	0.97236E-01	-24.587	0.000767	604.497	0.851523
100	10.3618	0.96508E-01	-186.08	0.005802	34626.0	0.851531
101	10.3891	0.96255E-01	-5235.5	0.163236	0.274107E+08	0.857877
102	10.4433	0.95755E-01	40.703	0.001269	1656.73	0.857878
103	10.4644	0.95562E-01	1782.4	0.055572	0.317685E+07	0.858613
104	10.5288	0.94977E-01	2048.0	0.063853	0.419419E+07	0.859584
105	10.5979	0.94358E-01	7167.6	0.223476	0.513746E+08	0.871478
106	10.7988	0.92603E-01	-514.38	0.016038	264585.	0.871540
107	10.8971	0.91768E-01	-937.71	0.029236	879294.	0.871743
108	10.9607	0.91235E-01	87.347	0.002723	7629.44	0.871745
109	11.0211	0.90735E-01	-34.604	0.001079	1197.43	0.871745
110	11.1888	0.89375E-01	406.12	0.012662	164932.	0.871783
111	11.5547	0.86545E-01	5431.6	0.169350	0.295025E+08	0.878614
112	11.6219	0.86044E-01	505.18	0.015751	255204.	0.878673
113	11.6489	0.85845E-01	526.54	0.016417	277248.	0.878737
114	11.7053	0.85431E-01	117.22	0.003655	13739.4	0.878740
115	11.8368	0.84483E-01	-1340.1	0.041784	0.179598E+07	0.879156
116	11.8806	0.84171E-01	2281.2	0.071125	0.520396E+07	0.880361
117	11.9747	0.83510E-01	-94.363	0.002942	8904.41	0.880363
118	12.0287	0.83135E-01	2582.2	0.080508	0.666753E+07	0.881907
119	12.1751	0.82135E-01	415.15	0.012944	172352.	0.881947
120	12.3701	0.80840E-01	-1.6161	0.000050	2.61166	0.881947
121	12.5436	0.79722E-01	-832.22	0.025947	692588.	0.882107
122	12.7156	0.78643E-01	-308.60	0.009622	95235.6	0.882129
123	12.9309	0.77334E-01	2245.9	0.070023	0.504397E+07	0.883297
124	12.9950	0.76953E-01	-600.29	0.018716	360346.	0.883380
125	13.1257	0.76186E-01	-1849.5	0.057663	0.342050E+07	0.884172
126	13.6046	0.73504E-01	4708.1	0.146790	0.221658E+08	0.889304
127	13.8262	0.72327E-01	33.949	0.001058	1152.54	0.889304
128	13.9684	0.71590E-01	696.15	0.021705	484631.	0.889416
129	14.1568	0.70637E-01	323.55	0.010088	104683.	0.889441
130	14.2500	0.70175E-01	-724.79	0.022598	525325.	0.889562
131	14.2889	0.69984E-01	269.76	0.008411	72770.0	0.889579
132	14.4676	0.69120E-01	18.692	0.000583	349.405	0.889579
133	14.5386	0.68782E-01	-1242.4	0.038736	0.154353E+07	0.889937
134	14.7310	0.67884E-01	94.183	0.002936	8870.48	0.889939
135	14.8716	0.67242E-01	291.84	0.009099	85168.9	0.889958
136	15.0097	0.66624E-01	422.60	0.013176	178595.	0.890000
137	15.1165	0.66153E-01	1677.6	0.052304	0.281426E+07	0.890651
138	15.2309	0.65656E-01	237.17	0.007395	56250.7	0.890664
139	15.4298	0.64810E-01	781.86	0.024377	611297.	0.890806
140	15.4386	0.64773E-01	2238.5	0.069792	0.501074E+07	0.891966
141	15.6948	0.63715E-01	-545.13	0.016996	297165.	0.892035
142	15.7035	0.63680E-01	1123.0	0.035014	0.126118E+07	0.892327
143	15.7337	0.63558E-01	-54.036	0.001685	2919.94	0.892327
144	15.8420	0.63123E-01	-229.37	0.007151	52608.8	0.892340
145	15.9543	0.62679E-01	5170.0	0.161193	0.267289E+08	0.898528

146	16.0425	0.62334E-01	361.65	0.011276	130794.	0.898558
147	16.2032	0.61716E-01	-819.24	0.025543	671162.	0.898714
148	16.2691	0.61466E-01	3217.9	0.100328	0.103546E+08	0.901111
149	16.5362	0.60473E-01	-497.21	0.015502	247219.	0.901168
150	16.7080	0.59852E-01	-1130.8	0.035258	0.127882E+07	0.901464
151	16.8039	0.59510E-01	462.84	0.014431	214218.	0.901514
152	17.3292	0.57706E-01	606.62	0.018913	367984.	0.901599
153	17.4185	0.57410E-01	-720.35	0.022459	518902.	0.901719
154	17.6679	0.56600E-01	-1108.5	0.034561	0.122878E+07	0.902004
155	17.7199	0.56434E-01	-913.44	0.028480	834377.	0.902197
156	17.8390	0.56057E-01	2486.5	0.077524	0.618251E+07	0.903628
157	17.9163	0.55815E-01	5455.6	0.170097	0.297634E+08	0.910519
158	17.9871	0.55596E-01	2413.9	0.075263	0.582708E+07	0.911868
159	18.1188	0.55191E-01	-1829.2	0.057032	0.334601E+07	0.912643
160	18.1739	0.55024E-01	2444.8	0.076224	0.597690E+07	0.914026
161	18.3389	0.54529E-01	5776.8	0.180111	0.333712E+08	0.921753
162	18.4987	0.54058E-01	1811.3	0.056475	0.328097E+07	0.922512
163	18.5414	0.53933E-01	-1109.2	0.034583	0.123030E+07	0.922797
164	18.8630	0.53014E-01	458.05	0.014281	209809.	0.922846
165	18.9410	0.52795E-01	-2218.2	0.069159	0.492023E+07	0.923985
166	19.2013	0.52080E-01	4125.9	0.128640	0.170233E+08	0.927926
167	19.2118	0.52051E-01	-2921.9	0.091101	0.853757E+07	0.929903
168	19.2676	0.51900E-01	3621.1	0.112902	0.131126E+08	0.932938
169	19.4936	0.51299E-01	1096.8	0.034196	0.120291E+07	0.933217
170	19.6710	0.50836E-01	-2279.3	0.071066	0.519539E+07	0.934420
171	19.9023	0.50246E-01	-162.58	0.005069	26431.1	0.934426
172	20.0043	0.49989E-01	-447.47	0.013952	200233.	0.934472
173	20.0221	0.49945E-01	-158.97	0.004957	25272.2	0.934478
174	20.0793	0.49803E-01	-533.11	0.016622	284206.	0.934544
175	20.1756	0.49565E-01	218.96	0.006827	47944.4	0.934555
176	20.2087	0.49484E-01	6.8869	0.000215	47.4293	0.934555
177	20.4317	0.48944E-01	-26.703	0.000833	713.028	0.934555
178	20.4544	0.48889E-01	-1113.3	0.034711	0.123942E+07	0.934842
179	20.6320	0.48468E-01	-851.77	0.026557	725509.	0.935010
180	20.8337	0.47999E-01	958.94	0.029898	919562.	0.935223
181	20.9048	0.47836E-01	-2511.3	0.078298	0.630657E+07	0.936683
182	20.9285	0.47782E-01	-1339.5	0.041763	0.179422E+07	0.937099
183	21.3059	0.46935E-01	-3665.7	0.114290	0.134370E+08	0.940209
184	21.5916	0.46314E-01	6080.7	0.189588	0.369752E+08	0.948770
185	21.6017	0.46293E-01	-2529.9	0.078880	0.640063E+07	0.950252
186	21.8013	0.45869E-01	-2475.1	0.077170	0.612612E+07	0.951670
187	21.9552	0.45547E-01	-4036.9	0.125866	0.162969E+08	0.955443
188	22.2868	0.44870E-01	447.84	0.013963	200562.	0.955490
189	22.4746	0.44495E-01	-1219.3	0.038016	0.148668E+07	0.955834
190	22.6909	0.44071E-01	-373.44	0.011643	139461.	0.955866
191	22.7229	0.44008E-01	-276.15	0.008610	76261.5	0.955884
192	22.7940	0.43871E-01	679.01	0.021171	461060.	0.955991
193	23.1188	0.43255E-01	457.63	0.014268	209429.	0.956039
194	23.5460	0.42470E-01	-160.64	0.005008	25804.2	0.956045
195	23.5865	0.42397E-01	-1030.8	0.032139	0.106258E+07	0.956291
196	23.8175	0.41986E-01	-25.314	0.000789	640.821	0.956291
197	23.8255	0.41972E-01	-17.563	0.000548	308.473	0.956291
198	23.8596	0.41912E-01	4.5166	0.000141	20.3996	0.956291
199	23.8655	0.41902E-01	-5.2669	0.000164	27.7403	0.956291
200	23.8769	0.41881E-01	-13.794	0.000430	190.262	0.956291
201	23.9240	0.41799E-01	49.013	0.001528	2402.30	0.956292
202	23.9536	0.41747E-01	-165.41	0.005157	27361.1	0.956298
203	24.0104	0.41649E-01	88.866	0.002771	7897.13	0.956300
204	24.0303	0.41614E-01	175.36	0.005467	30751.4	0.956307
205	24.4104	0.40966E-01	-142.24	0.004435	20231.2	0.956312
206	24.4198	0.40950E-01	4941.5	0.154070	0.244189E+08	0.961965
207	24.6009	0.40649E-01	67.421	0.002102	4545.63	0.961966
208	24.6429	0.40580E-01	-640.42	0.019967	410144.	0.962061
209	24.7020	0.40483E-01	-1261.6	0.039335	0.159166E+07	0.962430
210	24.8368	0.40263E-01	-488.95	0.015245	239074.	0.962485
211	25.2048	0.39675E-01	-254.55	0.007936	64793.6	0.962500
212	25.6393	0.39003E-01	-1210.2	0.037732	0.146457E+07	0.962839
213	25.6630	0.38967E-01	1736.5	0.054143	0.301560E+07	0.963537
214	25.7993	0.38761E-01	83.345	0.002599	6946.46	0.963539
215	25.8583	0.38672E-01	-2295.9	0.071583	0.527117E+07	0.964759
216	25.9867	0.38481E-01	3892.3	0.121355	0.151498E+08	0.968267
217	26.4545	0.37801E-01	3370.8	0.105097	0.113624E+08	0.970898
218	26.7915	0.37325E-01	-936.28	0.029192	876628.	0.971101
219	26.8895	0.37189E-01	-1145.9	0.035726	0.131301E+07	0.971405
220	26.9795	0.37065E-01	261.79	0.008162	68534.0	0.971420

221	27.1240	0.36868E-01	720.75	0.022472	519485.	0.971541
222	27.6911	0.36113E-01	874.34	0.027260	764463.	0.971718
223	27.8117	0.35956E-01	-533.34	0.016629	284447.	0.971784
224	27.9753	0.35746E-01	31.996	0.000998	1023.76	0.971784
225	28.0043	0.35709E-01	-1146.5	0.035747	0.131451E+07	0.972088
226	28.2001	0.35461E-01	1760.7	0.054897	0.310020E+07	0.972806
227	28.5079	0.35078E-01	2084.5	0.064992	0.434523E+07	0.973812
228	28.8183	0.34700E-01	-98.115	0.003059	9626.55	0.973814
229	28.9889	0.34496E-01	-190.80	0.005949	36406.4	0.973823
230	29.3132	0.34114E-01	1012.6	0.031573	0.102544E+07	0.974060
231	29.3583	0.34062E-01	-528.13	0.016466	278919.	0.974125
232	29.4045	0.34008E-01	-121.07	0.003775	14656.9	0.974128
233	29.5232	0.33872E-01	518.28	0.016159	268611.	0.974190
234	29.7214	0.33646E-01	-156.84	0.004890	24597.5	0.974196
235	29.7479	0.33616E-01	789.32	0.024610	623025.	0.974340
236	30.3262	0.32975E-01	211.28	0.006588	44640.9	0.974350
237	30.6506	0.32626E-01	497.58	0.015514	247588.	0.974408
238	30.8213	0.32445E-01	-503.05	0.015684	253059.	0.974466
239	31.1413	0.32112E-01	-1962.0	0.061172	0.384939E+07	0.975357
240	31.2432	0.32007E-01	4713.9	0.146973	0.222209E+08	0.980502
241	31.4903	0.31756E-01	-760.79	0.023720	578803.	0.980636
242	31.6440	0.31602E-01	1874.5	0.058444	0.351378E+07	0.981450
243	31.8658	0.31382E-01	3575.2	0.111469	0.127821E+08	0.984409
244	31.9210	0.31327E-01	2177.5	0.067890	0.474139E+07	0.985507
245	32.0002	0.31250E-01	-3473.1	0.108286	0.120625E+08	0.988299
246	32.0657	0.31186E-01	-3261.5	0.101690	0.106376E+08	0.990762
247	32.2206	0.31036E-01	969.30	0.030221	939546.	0.990980
248	32.2450	0.31013E-01	-4450.0	0.138743	0.198022E+08	0.995564
249	32.3380	0.30923E-01	281.40	0.008774	79187.1	0.995583
250	32.5311	0.30740E-01	1809.0	0.056403	0.327261E+07	0.996340
251	32.5905	0.30684E-01	562.98	0.017553	316947.	0.996414
252	32.7119	0.30570E-01	3364.2	0.104891	0.113179E+08	0.999034
253	32.7647	0.30521E-01	-263.03	0.008201	69184.4	0.999050
254	32.8760	0.30417E-01	1442.2	0.044966	0.207998E+07	0.999532
255	32.9019	0.30393E-01	1289.8	0.040214	0.166354E+07	0.999917
256	32.9876	0.30314E-01	38.861	0.001212	1510.18	0.999917
257	33.2298	0.30093E-01	598.13	0.018649	357760.	1.00000
258	33.4842	0.29865E-01	18.018	0.000562	324.639	1.00000

SUM OF EFFECTIVE MASSES= 0.431927E+10

***** PARTICIPATION FACTOR CALCULATION *****ROTY DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	RATIO	CUMULATIVE EFFECTIVE MASS	MASS FRACTION
1	0.249298	4.0113	-6719.8	0.123507	0.451553E+08	0.554181E-02
2	0.311982	3.2053	-8004.2	0.147115	0.640678E+08	0.134047E-01
3	1.20128	0.83244	-12897.	0.237039	0.166327E+09	0.338177E-01
4	1.26346	0.79148	-6105.5	0.112217	0.372768E+08	0.383926E-01
5	1.30658	0.76535	-1081.7	0.019881	0.117001E+07	0.385362E-01
6	1.64672	0.60727	-54408.	1.000000	0.296022E+10	0.401838
7	1.75791	0.56886	23059.	0.423812	0.531704E+09	0.467093
8	1.76742	0.56580	3511.3	0.064537	0.123295E+08	0.468606
9	1.85555	0.53892	6354.6	0.116796	0.403815E+08	0.473562
10	1.95803	0.51072	-9895.4	0.181875	0.979193E+08	0.485579
11	2.07673	0.48153	-15251.	0.280309	0.232594E+09	0.514125
12	2.20683	0.45314	-3635.7	0.066823	0.132184E+08	0.515747
13	2.38055	0.42007	-6011.5	0.110490	0.361387E+08	0.520182
14	2.45983	0.40653	17378.	0.319394	0.301979E+09	0.557244
15	2.49180	0.40132	27575.	0.506828	0.760405E+09	0.650566
16	2.54516	0.39290	-1229.6	0.022600	0.151192E+07	0.650752
17	2.54633	0.39272	404.13	0.007428	163320.	0.650772
18	2.64535	0.37802	-7121.2	0.130886	0.507119E+08	0.656996
19	2.72503	0.36697	-910.09	0.016727	828268.	0.657097
20	2.79988	0.35716	6785.8	0.124722	0.460476E+08	0.662749
21	2.98085	0.33547	741.38	0.013626	549649.	0.662816
22	3.16978	0.31548	229.73	0.004222	52777.3	0.662823
23	3.19494	0.31300	-460.28	0.008460	211858.	0.662849
24	3.36620	0.29707	-1381.6	0.025394	0.190887E+07	0.663083
25	3.37205	0.29656	-1475.6	0.027121	0.217743E+07	0.663350
26	3.43059	0.29150	-823.41	0.015134	678001.	0.663433
27	3.80749	0.26264	2459.8	0.045209	0.605037E+07	0.664176
28	3.91527	0.25541	-688.75	0.012659	474374.	0.664234
29	4.11439	0.24305	3388.1	0.062272	0.114792E+08	0.665643

30	4.31001	0.23202	489.10	0.008990	239220.	0.665672
31	4.37853	0.22839	5965.9	0.109652	0.355922E+08	0.670040
32	4.53174	0.22067	4501.0	0.082727	0.202591E+08	0.672527
33	4.53424	0.22054	3022.0	0.055543	0.913244E+07	0.673648
34	4.69336	0.21307	-303.25	0.005574	91959.3	0.673659
35	4.70256	0.21265	-928.21	0.017060	861572.	0.673765
36	4.74571	0.21072	218.13	0.004009	47581.4	0.673770
37	4.80985	0.20791	173.60	0.003191	30137.0	0.673774
38	4.85721	0.20588	-4220.2	0.077565	0.178097E+08	0.675960
39	4.86634	0.20549	1722.7	0.031663	0.296776E+07	0.676324
40	4.96242	0.20151	4555.5	0.083728	0.207524E+08	0.678871
41	4.98989	0.20041	-3681.6	0.067667	0.135545E+08	0.680535
42	5.02577	0.19897	-2148.6	0.039491	0.461661E+07	0.681101
43	5.15623	0.19394	-1923.0	0.035344	0.369787E+07	0.681555
44	5.29906	0.18871	-989.53	0.018187	979177.	0.681675
45	5.52295	0.18106	1529.4	0.028109	0.233897E+07	0.681962
46	5.62548	0.17776	-4064.4	0.074702	0.165191E+08	0.683990
47	5.64538	0.17714	-3.0184	0.000055	9.11067	0.683990
48	5.79112	0.17268	-1377.1	0.025311	0.189643E+07	0.684222
49	6.17226	0.16202	-4830.8	0.088789	0.233366E+08	0.687086
50	6.28483	0.15911	-769.80	0.014149	592584.	0.687159
51	6.31257	0.15841	-3748.7	0.068900	0.140529E+08	0.688884
52	6.74989	0.14815	1353.8	0.024883	0.183287E+07	0.689109
53	7.18636	0.13915	-16184.	0.297457	0.261922E+09	0.721254
54	7.23934	0.13813	18123.	0.333096	0.328445E+09	0.761563
55	7.25477	0.13784	-2220.5	0.040812	0.493057E+07	0.762168
56	7.39473	0.13523	69.046	0.001269	4767.36	0.762169
57	7.56248	0.13223	5422.6	0.099665	0.294042E+08	0.765778
58	7.76711	0.12875	-399.40	0.007341	159524.	0.765797
59	7.81119	0.12802	2061.4	0.037888	0.424942E+07	0.766319
60	7.85594	0.12729	-7275.8	0.133727	0.529375E+08	0.772816
61	7.89493	0.12666	6359.5	0.116885	0.404432E+08	0.777779
62	8.01923	0.12470	-435.41	0.008003	189579.	0.777802
63	8.04604	0.12428	-4427.0	0.081367	0.195984E+08	0.780208
64	8.18629	0.12216	-2780.8	0.051111	0.773306E+07	0.781157
65	8.31031	0.12033	-2008.1	0.036909	0.403253E+07	0.781652
66	8.36551	0.11954	561.14	0.010314	314880.	0.781690
67	8.54867	0.11698	2035.5	0.037412	0.414331E+07	0.782199
68	8.74808	0.11431	1581.3	0.029063	0.250041E+07	0.782506
69	8.78690	0.11381	-236.29	0.004343	55834.1	0.782513
70	8.81472	0.11345	452.10	0.008309	204395.	0.782538
71	8.87587	0.11267	-1310.5	0.024086	0.171731E+07	0.782748
72	8.96492	0.11155	4682.4	0.086061	0.219248E+08	0.785439
73	9.04445	0.11057	-3340.3	0.061394	0.111579E+08	0.786809
74	9.07531	0.11019	-4661.4	0.085674	0.217282E+08	0.789475
75	9.08650	0.11005	-73.212	0.001346	5360.01	0.789476
76	9.13542	0.10946	2361.6	0.043405	0.557706E+07	0.790160
77	9.17336	0.10901	-1387.1	0.025494	0.192394E+07	0.790396
78	9.22544	0.10840	2010.3	0.036948	0.404114E+07	0.790892
79	9.38434	0.10656	12422.	0.228317	0.154312E+09	0.809831
80	9.58435	0.10434	3989.2	0.073320	0.159137E+08	0.811784
81	9.71445	0.10294	177.28	0.003258	31428.7	0.811788
82	9.84415	0.10158	-852.64	0.015671	726998.	0.811877
83	9.86740	0.10134	-5834.5	0.107237	0.340416E+08	0.816055
84	9.89593	0.10105	-2268.8	0.041700	0.514740E+07	0.816686
85	9.91514	0.10086	-3034.5	0.055774	0.920846E+07	0.817817
86	9.93896	0.10061	-2690.1	0.049444	0.723683E+07	0.818705
87	10.0400	0.99601E-01	2298.1	0.042239	0.528132E+07	0.819353
88	10.0651	0.99353E-01	-4524.6	0.083161	0.204722E+08	0.821865
89	10.2107	0.97936E-01	-3103.9	0.057048	0.963389E+07	0.823048
90	10.2205	0.97842E-01	1652.7	0.030376	0.273140E+07	0.823383
91	10.2436	0.97622E-01	-374.07	0.006875	139929.	0.823400
92	10.2648	0.97420E-01	1001.2	0.018403	0.100249E+07	0.823523
93	10.2660	0.97409E-01	-2144.2	0.039410	0.459772E+07	0.824087
94	10.2662	0.97407E-01	2618.1	0.048120	0.685455E+07	0.824929
95	10.2711	0.97361E-01	690.93	0.012699	477387.	0.824987
96	10.2728	0.97344E-01	-138.18	0.002540	19092.6	0.824990
97	10.2795	0.97281E-01	27.153	0.000499	737.268	0.824990
98	10.2821	0.97256E-01	-30.046	0.000552	902.786	0.824990
99	10.2843	0.97236E-01	41.009	0.000754	1681.74	0.824990
100	10.3618	0.96508E-01	547.53	0.010063	299786.	0.825027
101	10.3891	0.96255E-01	7594.6	0.139586	0.576776E+08	0.832105
102	10.4433	0.95755E-01	43.464	0.000799	1889.09	0.832106
103	10.4644	0.95562E-01	-4023.7	0.073954	0.161901E+08	0.834093
104	10.5288	0.94977E-01	-8090.7	0.148705	0.654600E+08	0.842126

105	10.5979	0.94358E-01	-18441.	0.338938	0.340067E+09	0.883862
106	10.7988	0.92603E-01	1394.3	0.025628	0.194420E+07	0.884101
107	10.8971	0.91768E-01	-1098.0	0.020180	0.120550E+07	0.884249
108	10.9607	0.91235E-01	2176.8	0.040008	0.473826E+07	0.884830
109	11.0211	0.90735E-01	-20.208	0.000371	408.375	0.884830
110	11.1888	0.89375E-01	-1455.7	0.026756	0.211913E+07	0.885090
111	11.5547	0.86545E-01	-197.21	0.003625	38892.2	0.885095
112	11.6219	0.86044E-01	220.53	0.004053	48631.6	0.885101
113	11.6489	0.85845E-01	-512.31	0.009416	262460.	0.885133
114	11.7053	0.85431E-01	90.463	0.001663	8183.64	0.885134
115	11.8368	0.84483E-01	321.17	0.005903	103149.	0.885147
116	11.8806	0.84171E-01	-7158.8	0.131577	0.512487E+08	0.891437
117	11.9747	0.83510E-01	-2809.3	0.051635	0.789232E+07	0.892405
118	12.0287	0.83135E-01	-599.55	0.011020	359464.	0.892449
119	12.1751	0.82135E-01	-193.52	0.003557	37450.3	0.892454
120	12.3701	0.80840E-01	-766.14	0.014081	586971.	0.892526
121	12.5436	0.79722E-01	-1.1491	0.000021	1.32041	0.892526
122	12.7156	0.78643E-01	-31.573	0.000580	996.837	0.892526
123	12.9309	0.77334E-01	316.15	0.005811	99950.0	0.892538
124	12.9950	0.76953E-01	2523.1	0.046374	0.636617E+07	0.893320
125	13.1257	0.76186E-01	-634.41	0.011660	402478.	0.893369
126	13.6046	0.73504E-01	-3501.5	0.064356	0.122605E+08	0.894874
127	13.8262	0.72327E-01	37.291	0.000685	1390.62	0.894874
128	13.9684	0.71590E-01	-182.74	0.003359	33392.2	0.894878
129	14.1568	0.70637E-01	-280.20	0.005150	78512.0	0.894888
130	14.2500	0.70175E-01	579.25	0.010646	335535.	0.894929
131	14.2889	0.69984E-01	-388.11	0.007133	150629.	0.894947
132	14.4676	0.69120E-01	-2.6657	0.000049	7.10593	0.894947
133	14.5386	0.68782E-01	1154.3	0.021216	0.133241E+07	0.895111
134	14.7310	0.67884E-01	147.33	0.002708	21707.0	0.895113
135	14.8716	0.67242E-01	-6271.7	0.115272	0.393344E+08	0.899941
136	15.0097	0.66624E-01	-77.576	0.001426	6018.05	0.899942
137	15.1165	0.66153E-01	-2693.5	0.049505	0.725482E+07	0.900832
138	15.2309	0.65656E-01	-2564.0	0.047126	0.657413E+07	0.901639
139	15.4298	0.64810E-01	666.19	0.012244	443816.	0.901693
140	15.4386	0.64773E-01	-129.71	0.002384	16825.1	0.901695
141	15.6948	0.63715E-01	-221.14	0.004064	48901.8	0.901701
142	15.7035	0.63680E-01	-186.75	0.003432	34875.2	0.901706
143	15.7337	0.63558E-01	3.7460	0.000069	14.0327	0.901706
144	15.8420	0.63123E-01	2006.9	0.036887	0.402779E+07	0.902200
145	15.9543	0.62679E-01	-4563.4	0.083874	0.208249E+08	0.904756
146	16.0425	0.62334E-01	-484.39	0.008903	234630.	0.904785
147	16.2032	0.61716E-01	-941.49	0.017304	886412.	0.904893
148	16.2691	0.61466E-01	-150.53	0.002767	22658.1	0.904896
149	16.5362	0.60473E-01	-10.858	0.000200	117.888	0.904896
150	16.7080	0.59852E-01	-1483.4	0.027265	0.220058E+07	0.905166
151	16.8039	0.59510E-01	-306.34	0.005631	93847.0	0.905178
152	17.3292	0.57706E-01	1362.1	0.025035	0.185529E+07	0.905405
153	17.4185	0.57410E-01	6912.9	0.127057	0.477884E+08	0.911270
154	17.6679	0.56600E-01	3270.6	0.060113	0.106969E+08	0.912583
155	17.7199	0.56434E-01	-767.48	0.014106	589023.	0.912656
156	17.8390	0.56057E-01	328.12	0.006031	107665.	0.912669
157	17.9163	0.55815E-01	-507.62	0.009330	257674.	0.912700
158	17.9871	0.55596E-01	-610.74	0.011225	373004.	0.912746
159	18.1188	0.55191E-01	2031.6	0.037339	0.412721E+07	0.913253
160	18.1739	0.55024E-01	-2145.9	0.039440	0.460477E+07	0.913818
161	18.3389	0.54529E-01	-624.50	0.011478	389998.	0.913866
162	18.4987	0.54058E-01	1036.0	0.019041	0.107327E+07	0.913997
163	18.5414	0.53933E-01	453.04	0.008327	205241.	0.914023
164	18.8630	0.53014E-01	-1234.0	0.022681	0.152287E+07	0.914209
165	18.9410	0.52795E-01	-165.08	0.003034	27250.6	0.914213
166	19.2013	0.52080E-01	97.986	0.001801	9601.25	0.914214
167	19.2118	0.52051E-01	-1290.1	0.023712	0.166437E+07	0.914418
168	19.2676	0.51900E-01	-8338.4	0.153258	0.695293E+08	0.922951
169	19.4936	0.51299E-01	909.60	0.016718	827369.	0.923053
170	19.6710	0.50836E-01	1377.1	0.025312	0.189654E+07	0.923286
171	19.9023	0.50246E-01	139.33	0.002561	19413.4	0.923288
172	20.0043	0.49989E-01	21.838	0.000401	476.886	0.923288
173	20.0221	0.49945E-01	42.752	0.000786	1827.77	0.923288
174	20.0793	0.49803E-01	785.20	0.014432	616538.	0.923364
175	20.1756	0.49565E-01	-232.39	0.004271	54004.1	0.923371
176	20.2087	0.49484E-01	41.445	0.000762	1717.70	0.923371
177	20.4317	0.48944E-01	330.27	0.006070	109080.	0.923384
178	20.4544	0.48889E-01	3226.5	0.059302	0.104102E+08	0.924662
179	20.6320	0.48468E-01	6.8628	0.000126	47.0980	0.924662

180	20.8337	0.47999E-01	108.90	0.002002	11860.2	0.924663
181	20.9048	0.47836E-01	1606.0	0.029518	0.257921E+07	0.924980
182	20.9285	0.47782E-01	5480.8	0.100735	0.300387E+08	0.928666
183	21.3059	0.46935E-01	8811.4	0.161950	0.776401E+08	0.938195
184	21.5916	0.46314E-01	-10286.	0.189047	0.105795E+09	0.951179
185	21.6017	0.46293E-01	-3949.6	0.072593	0.155997E+08	0.953094
186	21.8013	0.45869E-01	831.34	0.015280	691118.	0.953178
187	21.9552	0.45547E-01	4177.5	0.076780	0.174511E+08	0.955320
188	22.2868	0.44870E-01	239.09	0.004394	57163.3	0.955327
189	22.4746	0.44495E-01	5063.2	0.093061	0.256364E+08	0.958473
190	22.6909	0.44071E-01	572.02	0.010514	327205.	0.958514
191	22.7229	0.44008E-01	-47.915	0.000881	2295.85	0.958514
192	22.7940	0.43871E-01	-1297.8	0.023853	0.168424E+07	0.958721
193	23.1188	0.43255E-01	27.317	0.000502	746.234	0.958721
194	23.5460	0.42470E-01	-23.742	0.000436	563.664	0.958721
195	23.5865	0.42397E-01	-158.64	0.002916	25167.5	0.958724
196	23.8175	0.41986E-01	-3.1861	0.000059	10.1514	0.958724
197	23.8255	0.41972E-01	-1.6318	0.000030	2.66276	0.958724
198	23.8596	0.41912E-01	-1.4614	0.000027	2.13571	0.958724
199	23.8655	0.41902E-01	1.0330	0.000019	1.06716	0.958724
200	23.8769	0.41881E-01	-0.57116E-01	0.000001	0.326228E-02	0.958724
201	23.9240	0.41799E-01	-0.17459	0.000003	0.304801E-01	0.958724
202	23.9536	0.41747E-01	-1125.8	0.020692	0.126748E+07	0.958879
203	24.0104	0.41649E-01	-8.7703	0.000161	76.9184	0.958879
204	24.0303	0.41614E-01	-12.016	0.000221	144.383	0.958879
205	24.4104	0.40966E-01	-18.414	0.000338	339.080	0.958879
206	24.4198	0.40950E-01	-1400.3	0.025737	0.196078E+07	0.959120
207	24.6009	0.40649E-01	876.32	0.016106	767933.	0.959214
208	24.6429	0.40580E-01	553.80	0.010179	306700.	0.959252
209	24.7020	0.40483E-01	1165.9	0.021430	0.135941E+07	0.959419
210	24.8368	0.40263E-01	-52.966	0.000973	2805.39	0.959419
211	25.2048	0.39675E-01	-1249.3	0.022961	0.156068E+07	0.959611
212	25.6393	0.39003E-01	2532.3	0.046543	0.641257E+07	0.960398
213	25.6630	0.38967E-01	-1147.0	0.021082	0.131569E+07	0.960559
214	25.7993	0.38761E-01	309.56	0.005690	95829.4	0.960571
215	25.8583	0.38672E-01	-831.72	0.015287	691765.	0.960656
216	25.9867	0.38481E-01	-2166.8	0.039825	0.469505E+07	0.961232
217	26.4545	0.37801E-01	872.82	0.016042	761815.	0.961326
218	26.7915	0.37325E-01	313.93	0.005770	98552.8	0.961338
219	26.8895	0.37189E-01	137.26	0.002523	18841.6	0.961340
220	26.9795	0.37065E-01	-1337.1	0.024575	0.178777E+07	0.961559
221	27.1240	0.36868E-01	14.447	0.000266	208.716	0.961559
222	27.6911	0.36113E-01	-519.00	0.009539	269361.	0.961592
223	27.8117	0.35956E-01	-34.217	0.000629	1170.78	0.961593
224	27.9753	0.35746E-01	-23.300	0.000428	542.900	0.961593
225	28.0043	0.35709E-01	153.17	0.002815	23462.1	0.961596
226	28.2001	0.35461E-01	-1703.6	0.031312	0.290240E+07	0.961952
227	28.5079	0.35078E-01	110.98	0.002040	12316.2	0.961953
228	28.8183	0.34700E-01	-81.844	0.001504	6698.49	0.961954
229	28.9889	0.34496E-01	31.244	0.000574	976.210	0.961954
230	29.3132	0.34114E-01	434.05	0.007978	188404.	0.961977
231	29.3583	0.34062E-01	-116.93	0.002149	13672.4	0.961979
232	29.4045	0.34008E-01	-15.928	0.000293	253.686	0.961979
233	29.5232	0.33872E-01	80.380	0.001477	6460.96	0.961980
234	29.7214	0.33646E-01	26.264	0.000483	689.796	0.961980
235	29.7479	0.33616E-01	-56.920	0.001046	3239.86	0.961980
236	30.3262	0.32975E-01	43.352	0.000797	1879.42	0.961981
237	30.6506	0.32626E-01	-2402.4	0.044155	0.577135E+07	0.962689
238	30.8213	0.32445E-01	-489.18	0.008991	239293.	0.962718
239	31.1413	0.32112E-01	1024.5	0.018831	0.104968E+07	0.962847
240	31.2432	0.32007E-01	1097.3	0.020168	0.120411E+07	0.962995
241	31.4903	0.31756E-01	-54.192	0.000996	2936.79	0.962995
242	31.6440	0.31602E-01	-2227.9	0.040948	0.496340E+07	0.963604
243	31.8658	0.31382E-01	-653.77	0.012016	427413.	0.963657
244	31.9210	0.31327E-01	-1038.4	0.019085	0.107821E+07	0.963789
245	32.0002	0.31250E-01	1972.0	0.036245	0.388887E+07	0.964266
246	32.0657	0.31186E-01	1990.5	0.036586	0.396227E+07	0.964753
247	32.2206	0.31036E-01	-13.710	0.000252	187.968	0.964753
248	32.2450	0.31013E-01	994.97	0.018287	989973.	0.964874
249	32.3380	0.30923E-01	1779.3	0.032703	0.316585E+07	0.965263
250	32.5311	0.30740E-01	-1617.4	0.029727	0.261589E+07	0.965584
251	32.5905	0.30684E-01	1001.8	0.018412	0.100355E+07	0.965707
252	32.7119	0.30570E-01	-15672.	0.288037	0.245596E+09	0.995848
253	32.7647	0.30521E-01	-5190.0	0.095390	0.269360E+08	0.999154
254	32.8760	0.30417E-01	-204.41	0.003757	41783.6	0.999159

255	32.9019	0.30393E-01	-550.22	0.010113	302737.	0.999196
256	32.9876	0.30314E-01	543.89	0.009996	295812.	0.999233
257	33.2298	0.30093E-01	-48.704	0.000895	2372.06	0.999233
258	33.4842	0.29865E-01	-2499.8	0.045946	0.624915E+07	1.00000

SUM OF EFFECTIVE MASSES= 0.814811E+10

***** PARTICIPATION FACTOR CALCULATION *****ROTZ DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.249298	4.0113	-92.295	0.001969	8518.32	0.983321E-06
2	0.311982	3.2053	-25716.	0.548747	0.661320E+09	0.763411E-01
3	1.20128	0.83244	-46863.	1.000000	0.219618E+10	0.329859
4	1.26346	0.79148	6266.4	0.133716	0.392676E+08	0.334392
5	1.30658	0.76535	273.81	0.005843	74973.7	0.334400
6	1.64672	0.60727	2957.5	0.063108	0.874659E+07	0.335410
7	1.75791	0.56886	10741.	0.229202	0.115373E+09	0.348728
8	1.76742	0.56580	4839.0	0.103258	0.234160E+08	0.351431
9	1.85555	0.53892	5238.3	0.111778	0.274398E+08	0.354599
10	1.95803	0.51072	1645.1	0.035104	0.270627E+07	0.354911
11	2.07673	0.48153	821.71	0.017534	675203.	0.354989
12	2.20683	0.45314	-894.64	0.019090	800372.	0.355082
13	2.38055	0.42007	456.53	0.009742	208416.	0.355106
14	2.45983	0.40653	-9486.7	0.202433	0.899975E+08	0.365495
15	2.49180	0.40132	6935.3	0.147989	0.480978E+08	0.371047
16	2.54516	0.39290	-1388.1	0.029621	0.192690E+07	0.371269
17	2.54633	0.39272	202.21	0.004315	40889.7	0.371274
18	2.64535	0.37802	-9593.0	0.204701	0.920252E+08	0.381897
19	2.72503	0.36697	2205.5	0.047062	0.486425E+07	0.382459
20	2.79988	0.35716	9171.4	0.195704	0.841138E+08	0.392168
21	2.98085	0.33547	16236.	0.346449	0.263600E+09	0.422597
22	3.16978	0.31548	4402.5	0.093942	0.193816E+08	0.424835
23	3.19494	0.31300	-6560.4	0.139989	0.430382E+08	0.429803
24	3.36620	0.29707	1419.3	0.030287	0.201449E+07	0.430035
25	3.37205	0.29656	-495.98	0.010584	245996.	0.430064
26	3.43059	0.29150	-1168.6	0.024935	0.136553E+07	0.430221
27	3.80749	0.26264	4690.2	0.100082	0.219976E+08	0.432761
28	3.91527	0.25541	3390.4	0.072346	0.114947E+08	0.434088
29	4.11439	0.24305	-8956.6	0.191122	0.802214E+08	0.443348
30	4.31001	0.23202	4025.3	0.085895	0.162032E+08	0.445218
31	4.37853	0.22839	-3416.3	0.072899	0.116711E+08	0.446566
32	4.53174	0.22067	2705.8	0.057739	0.732158E+07	0.447411
33	4.53424	0.22054	17165.	0.366284	0.294648E+09	0.481424
34	4.69336	0.21307	3902.6	0.083277	0.152305E+08	0.483182
35	4.70256	0.21265	15110.	0.322430	0.228317E+09	0.509538
36	4.74571	0.21072	10859.	0.231713	0.117915E+09	0.523149
37	4.80985	0.20791	-1423.6	0.030377	0.202660E+07	0.523383
38	4.85721	0.20588	-757.26	0.016159	573444.	0.523450
39	4.86634	0.20549	6174.8	0.131763	0.381287E+08	0.527851
40	4.96242	0.20151	5068.7	0.108159	0.256918E+08	0.530817
41	4.98989	0.20041	-4352.0	0.092866	0.189399E+08	0.533003
42	5.02577	0.19897	-5910.6	0.126125	0.349356E+08	0.537036
43	5.15623	0.19394	-1579.8	0.033711	0.249587E+07	0.537324
44	5.29906	0.18871	2912.9	0.062158	0.848522E+07	0.538304
45	5.52295	0.18106	6366.3	0.135847	0.405293E+08	0.542982
46	5.62548	0.17776	11106.	0.236990	0.123347E+09	0.557221
47	5.64538	0.17714	2774.0	0.059194	0.769523E+07	0.558109
48	5.79112	0.17268	-280.72	0.005990	78806.2	0.558118
49	6.17226	0.16202	-3173.8	0.067726	0.100733E+08	0.559281
50	6.28483	0.15911	533.48	0.011384	284596.	0.559314
51	6.31257	0.15841	-3121.6	0.066610	0.974429E+07	0.560439
52	6.74989	0.14815	2066.8	0.044102	0.427158E+07	0.560932
53	7.18636	0.13915	-5626.2	0.120054	0.316536E+08	0.564586
54	7.23934	0.13813	-7461.8	0.159224	0.556777E+08	0.571013
55	7.25477	0.13784	-2006.3	0.042812	0.402524E+07	0.571478
56	7.39473	0.13523	13417.	0.286305	0.180022E+09	0.592259
57	7.56248	0.13223	3153.7	0.067296	0.994600E+07	0.593407
58	7.76711	0.12875	-3513.6	0.074976	0.123457E+08	0.594832
59	7.81119	0.12802	600.17	0.012807	360209.	0.594873
60	7.85594	0.12729	-1176.8	0.025111	0.138480E+07	0.595033
61	7.89493	0.12666	8093.3	0.172699	0.655012E+08	0.602595
62	8.01923	0.12470	-607.77	0.012969	369379.	0.602637
63	8.04604	0.12428	-10404.	0.222016	0.108252E+09	0.615133

64	8.18629	0.12216	4000.1	0.085357	0.160008E+08	0.616980
65	8.31031	0.12033	6025.2	0.128569	0.363027E+08	0.621171
66	8.36551	0.11954	885.06	0.018886	783330.	0.621262
67	8.54867	0.11698	3956.7	0.084431	0.156556E+08	0.623069
68	8.74808	0.11431	1155.0	0.024646	0.133397E+07	0.623223
69	8.78690	0.11381	-34.973	0.000746	1223.12	0.623223
70	8.81472	0.11345	128.33	0.002738	16467.8	0.623225
71	8.87587	0.11267	-121.06	0.002583	14656.5	0.623226
72	8.96492	0.11155	528.30	0.011273	279103.	0.623259
73	9.04445	0.11057	2136.4	0.045588	0.456426E+07	0.623786
74	9.07531	0.11019	-1032.7	0.022037	0.106654E+07	0.623909
75	9.08650	0.11005	3002.0	0.064059	0.901208E+07	0.624949
76	9.13542	0.10946	-3680.0	0.078526	0.135423E+08	0.626512
77	9.17336	0.10901	-6135.6	0.130925	0.376454E+08	0.630858
78	9.22544	0.10840	1360.5	0.029031	0.185098E+07	0.631072
79	9.38434	0.10656	2660.0	0.056761	0.707578E+07	0.631888
80	9.58435	0.10434	2168.7	0.046278	0.470344E+07	0.632431
81	9.71445	0.10294	-936.94	0.019993	877853.	0.632533
82	9.84415	0.10158	6493.4	0.138560	0.421641E+08	0.637400
83	9.86740	0.10134	3502.5	0.074739	0.122678E+08	0.638816
84	9.89593	0.10105	2006.4	0.042814	0.402575E+07	0.639281
85	9.91514	0.10086	1776.7	0.037912	0.315668E+07	0.639645
86	9.93896	0.10061	-326.93	0.006976	106886.	0.639657
87	10.0400	0.99601E-01	-1826.3	0.038970	0.333519E+07	0.640042
88	10.0651	0.99353E-01	1416.3	0.030222	0.200594E+07	0.640274
89	10.2107	0.97936E-01	-1725.0	0.036808	0.297545E+07	0.640618
90	10.2205	0.97842E-01	1038.0	0.022150	0.107748E+07	0.640742
91	10.2436	0.97622E-01	-434.61	0.009274	188887.	0.640764
92	10.2648	0.97420E-01	189.94	0.004053	36078.9	0.640768
93	10.2660	0.97409E-01	-497.61	0.010618	247615.	0.640796
94	10.2662	0.97407E-01	622.22	0.013277	387156.	0.640841
95	10.2711	0.97361E-01	239.68	0.005115	57448.2	0.640848
96	10.2728	0.97344E-01	-53.721	0.001146	2885.92	0.640848
97	10.2795	0.97281E-01	16.248	0.000347	263.985	0.640848
98	10.2821	0.97256E-01	-20.527	0.000438	421.353	0.640848
99	10.2843	0.97236E-01	9.3282	0.000199	87.0161	0.640848
100	10.3618	0.96508E-01	574.75	0.012264	330340.	0.640886
101	10.3891	0.96255E-01	-1934.7	0.041283	0.374288E+07	0.641318
102	10.4433	0.95755E-01	117.99	0.002518	13920.7	0.641320
103	10.4644	0.95562E-01	45.934	0.000980	2109.89	0.641320
104	10.5288	0.94977E-01	-868.00	0.018522	753433.	0.641407
105	10.5979	0.94358E-01	-3533.5	0.075399	0.124854E+08	0.642848
106	10.7988	0.92603E-01	304.46	0.006497	92696.9	0.642859
107	10.8971	0.91768E-01	1110.0	0.023687	0.123220E+07	0.643001
108	10.9607	0.91235E-01	279.50	0.005964	78122.1	0.643010
109	11.0211	0.90735E-01	-6.6711	0.000142	44.5031	0.643010
110	11.1888	0.89375E-01	-814.91	0.017389	664073.	0.643087
111	11.5547	0.86545E-01	2374.6	0.050671	0.563879E+07	0.643738
112	11.6219	0.86044E-01	292.66	0.006245	85652.4	0.643748
113	11.6489	0.85845E-01	246.98	0.005270	61000.9	0.643755
114	11.7053	0.85431E-01	552.67	0.011793	305443.	0.643790
115	11.8368	0.84483E-01	-1135.0	0.024220	0.128831E+07	0.643939
116	11.8806	0.84171E-01	480.12	0.010245	230512.	0.643966
117	11.9747	0.83510E-01	-1009.3	0.021538	0.101879E+07	0.644083
118	12.0287	0.83135E-01	-1705.0	0.036383	0.290710E+07	0.644419
119	12.1751	0.82135E-01	259.38	0.005535	67277.9	0.644426
120	12.3701	0.80840E-01	-1113.8	0.023767	0.124051E+07	0.644570
121	12.5436	0.79722E-01	-1165.1	0.024862	0.135747E+07	0.644726
122	12.7156	0.78643E-01	-266.37	0.005684	70953.3	0.644735
123	12.9309	0.77334E-01	-1426.8	0.030446	0.203575E+07	0.644970
124	12.9950	0.76953E-01	1250.6	0.026687	0.156406E+07	0.645150
125	13.1257	0.76186E-01	-1236.9	0.026393	0.152983E+07	0.645327
126	13.6046	0.73504E-01	557.11	0.011888	310371.	0.645363
127	13.8262	0.72327E-01	-26.202	0.000559	686.566	0.645363
128	13.9684	0.71590E-01	603.05	0.012868	363663.	0.645405
129	14.1568	0.70637E-01	-479.70	0.010236	230109.	0.645431
130	14.2500	0.70175E-01	-923.73	0.019711	853274.	0.645530
131	14.2889	0.69984E-01	21.059	0.000449	443.492	0.645530
132	14.4676	0.69120E-01	-0.21512	0.000005	0.462747E-01	0.645530
133	14.5386	0.68782E-01	-1587.0	0.033865	0.251867E+07	0.645820
134	14.7310	0.67884E-01	896.26	0.019125	803278.	0.645913
135	14.8716	0.67242E-01	-6151.1	0.131255	0.378356E+08	0.650281
136	15.0097	0.66624E-01	-1934.3	0.041276	0.374158E+07	0.650713
137	15.1165	0.66153E-01	1088.3	0.023223	0.118442E+07	0.650849
138	15.2309	0.65656E-01	-1091.4	0.023289	0.119117E+07	0.650987

139	15.4298	0.64810E-01	175.89	0.003753	30939.0	0.650990
140	15.4386	0.64773E-01	2765.1	0.059003	0.764575E+07	0.651873
141	15.6948	0.63715E-01	1233.9	0.026330	0.152249E+07	0.652049
142	15.7035	0.63680E-01	6459.0	0.137827	0.417193E+08	0.656865
143	15.7337	0.63558E-01	-30.216	0.000645	913.017	0.656865
144	15.8420	0.63123E-01	-374.66	0.007995	140368.	0.656881
145	15.9543	0.62679E-01	-369.46	0.007884	136501.	0.656897
146	16.0425	0.62334E-01	428.27	0.009139	183412.	0.656918
147	16.2032	0.61716E-01	294.47	0.006284	86711.2	0.656928
148	16.2691	0.61466E-01	783.44	0.016718	613782.	0.656999
149	16.5362	0.60473E-01	-1572.1	0.033546	0.247147E+07	0.657284
150	16.7080	0.59852E-01	4010.8	0.085586	0.160868E+08	0.659141
151	16.8039	0.59510E-01	-5.4360	0.000116	29.5505	0.659141
152	17.3292	0.57706E-01	3609.8	0.077028	0.130306E+08	0.660645
153	17.4185	0.57410E-01	-963.54	0.020561	928412.	0.660753
154	17.6679	0.56600E-01	718.58	0.015334	516360.	0.660812
155	17.7199	0.56434E-01	-399.15	0.008517	159318.	0.660831
156	17.8390	0.56057E-01	4470.1	0.095385	0.199816E+08	0.663137
157	17.9163	0.55815E-01	12873.	0.274691	0.165713E+09	0.682266
158	17.9871	0.55596E-01	5904.4	0.125991	0.348615E+08	0.686291
159	18.1188	0.55191E-01	4053.4	0.086495	0.164303E+08	0.688187
160	18.1739	0.55024E-01	8485.0	0.181058	0.719953E+08	0.696498
161	18.3389	0.54529E-01	417.15	0.008901	174016.	0.696518
162	18.4987	0.54058E-01	1959.8	0.041820	0.384100E+07	0.696962
163	18.5414	0.53933E-01	325.68	0.006950	106069.	0.696974
164	18.8630	0.53014E-01	-999.18	0.021321	998356.	0.697089
165	18.9410	0.52795E-01	208.61	0.004451	43517.3	0.697094
166	19.2013	0.52080E-01	13328.	0.284399	0.177632E+09	0.717599
167	19.2118	0.52051E-01	-12043.	0.256977	0.145029E+09	0.734341
168	19.2676	0.51900E-01	819.04	0.017477	670831.	0.734418
169	19.4936	0.51299E-01	1727.6	0.036865	0.298469E+07	0.734763
170	19.6710	0.50836E-01	623.49	0.013304	388739.	0.734808
171	19.9023	0.50246E-01	21.074	0.000450	444.118	0.734808
172	20.0043	0.49989E-01	-201.08	0.004291	40433.4	0.734812
173	20.0221	0.49945E-01	36.521	0.000779	1333.76	0.734813
174	20.0793	0.49803E-01	3913.2	0.083501	0.153128E+08	0.736580
175	20.1756	0.49565E-01	201.45	0.004299	40582.2	0.736585
176	20.2087	0.49484E-01	-52.998	0.001131	2808.76	0.736585
177	20.4317	0.48944E-01	3759.1	0.080214	0.141308E+08	0.738216
178	20.4544	0.48889E-01	7843.3	0.167366	0.615181E+08	0.745318
179	20.6320	0.48468E-01	-799.07	0.017051	638514.	0.745392
180	20.8337	0.47999E-01	1220.2	0.026037	0.148881E+07	0.745563
181	20.9048	0.47836E-01	-3318.2	0.070805	0.110102E+08	0.746834
182	20.9285	0.47782E-01	-433.04	0.009240	187520.	0.746856
183	21.3059	0.46935E-01	1192.8	0.025452	0.142269E+07	0.747020
184	21.5916	0.46314E-01	128.38	0.002739	16480.5	0.747022
185	21.6017	0.46293E-01	-8012.7	0.170979	0.642027E+08	0.754433
186	21.8013	0.45869E-01	-2881.3	0.061484	0.830211E+07	0.755392
187	21.9552	0.45547E-01	-5559.8	0.118638	0.309112E+08	0.758960
188	22.2868	0.44870E-01	-349.99	0.007468	122491.	0.758974
189	22.4746	0.44495E-01	2822.5	0.060229	0.796660E+07	0.759894
190	22.6909	0.44071E-01	-350.39	0.007477	122771.	0.759908
191	22.7229	0.44008E-01	-626.76	0.013374	392830.	0.759953
192	22.7940	0.43871E-01	1268.2	0.027061	0.160827E+07	0.760139
193	23.1188	0.43255E-01	165.43	0.003530	27366.9	0.760142
194	23.5460	0.42470E-01	-449.94	0.009601	202447.	0.760166
195	23.5865	0.42397E-01	-2510.2	0.053565	0.630133E+07	0.760893
196	23.8175	0.41986E-01	-45.918	0.000980	2108.42	0.760893
197	23.8255	0.41972E-01	-12.745	0.000272	162.424	0.760893
198	23.8596	0.41912E-01	-12.477	0.000266	155.665	0.760893
199	23.8655	0.41902E-01	3.9808	0.000085	15.8467	0.760893
200	23.8769	0.41881E-01	0.84619	0.000018	0.716039	0.760893
201	23.9240	0.41799E-01	19.032	0.000406	362.209	0.760893
202	23.9536	0.41747E-01	-1703.6	0.036351	0.290209E+07	0.761228
203	24.0104	0.41649E-01	237.12	0.005060	56223.6	0.761235
204	24.0303	0.41614E-01	512.03	0.010926	262171.	0.761265
205	24.4104	0.40966E-01	370.85	0.007914	137533.	0.761281
206	24.4198	0.40950E-01	16841.	0.359354	0.283604E+09	0.794019
207	24.6009	0.40649E-01	2611.3	0.055722	0.681895E+07	0.794806
208	24.6429	0.40580E-01	-2162.4	0.046142	0.467582E+07	0.795346
209	24.7020	0.40483E-01	-1914.2	0.040846	0.366416E+07	0.795769
210	24.8368	0.40263E-01	-2148.6	0.045848	0.461637E+07	0.796302
211	25.2048	0.39675E-01	-1854.4	0.039571	0.343898E+07	0.796699
212	25.6393	0.39003E-01	-3293.0	0.070269	0.108441E+08	0.797951
213	25.6630	0.38967E-01	3555.6	0.075871	0.126421E+08	0.799410

214	25.7993	0.38761E-01	585.01	0.012483	342232.	0.799449
215	25.8583	0.38672E-01	-7801.0	0.166463	0.608556E+08	0.806474
216	25.9867	0.38481E-01	9149.7	0.195243	0.837178E+08	0.816138
217	26.4545	0.37801E-01	15292.	0.326318	0.233857E+09	0.843134
218	26.7915	0.37325E-01	-1726.9	0.036850	0.298216E+07	0.843478
219	26.8895	0.37189E-01	-2411.2	0.051451	0.581371E+07	0.844149
220	26.9795	0.37065E-01	-950.53	0.020283	903498.	0.844254
221	27.1240	0.36868E-01	-1077.5	0.022992	0.116096E+07	0.844388
222	27.6911	0.36113E-01	1536.9	0.032796	0.236216E+07	0.844660
223	27.8117	0.35956E-01	135.94	0.002901	18479.7	0.844662
224	27.9753	0.35746E-01	73.216	0.001562	5360.62	0.844663
225	28.0043	0.35709E-01	1748.4	0.037309	0.305694E+07	0.845016
226	28.2001	0.35461E-01	1440.3	0.030734	0.207448E+07	0.845255
227	28.5079	0.35078E-01	19313.	0.412114	0.372993E+09	0.888312
228	28.8183	0.34700E-01	2578.3	0.055016	0.664741E+07	0.889080
229	28.9889	0.34496E-01	-5.8689	0.000125	34.4440	0.889080
230	29.3132	0.34114E-01	1660.6	0.035434	0.275745E+07	0.889398
231	29.3583	0.34062E-01	-1225.7	0.026155	0.150238E+07	0.889571
232	29.4045	0.34008E-01	-304.66	0.006501	92818.7	0.889582
233	29.5232	0.33872E-01	1338.6	0.028565	0.179196E+07	0.889789
234	29.7214	0.33646E-01	473.24	0.010098	223955.	0.889815
235	29.7479	0.33616E-01	-1116.5	0.023825	0.124660E+07	0.889959
236	30.3262	0.32975E-01	-2681.7	0.057225	0.719174E+07	0.890789
237	30.6506	0.32626E-01	2.2708	0.000048	5.15674	0.890789
238	30.8213	0.32445E-01	-6071.8	0.129564	0.368670E+08	0.895045
239	31.1413	0.32112E-01	-3608.0	0.076989	0.130175E+08	0.896547
240	31.2432	0.32007E-01	13458.	0.287184	0.181129E+09	0.917456
241	31.4903	0.31756E-01	-3543.6	0.075614	0.125567E+08	0.918906
242	31.6440	0.31602E-01	-564.88	0.012054	319086.	0.918942
243	31.8658	0.31382E-01	4817.0	0.102788	0.232032E+08	0.921621
244	31.9210	0.31327E-01	3248.0	0.069307	0.105492E+08	0.922839
245	32.0002	0.31250E-01	-10363.	0.221141	0.107400E+09	0.935236
246	32.0657	0.31186E-01	-11999.	0.256037	0.143971E+09	0.951856
247	32.2206	0.31036E-01	2996.8	0.063948	0.898095E+07	0.952893
248	32.2450	0.31013E-01	-14415.	0.307602	0.207800E+09	0.976880
249	32.3380	0.30923E-01	-236.23	0.005041	55806.8	0.976887
250	32.5311	0.30740E-01	8775.0	0.187247	0.770014E+08	0.985775
251	32.5905	0.30684E-01	4354.6	0.092922	0.189630E+08	0.987964
252	32.7119	0.30570E-01	-3459.5	0.073821	0.119683E+08	0.989346
253	32.7647	0.30521E-01	-5765.5	0.123028	0.332411E+08	0.993183
254	32.8760	0.30417E-01	2450.7	0.052295	0.600612E+07	0.993876
255	32.9019	0.30393E-01	5686.9	0.121350	0.323405E+08	0.997610
256	32.9876	0.30314E-01	1953.7	0.041688	0.381677E+07	0.998050
257	33.2298	0.30093E-01	2029.9	0.043316	0.412065E+07	0.998526
258	33.4842	0.29865E-01	3573.4	0.076251	0.127689E+08	1.00000

SUM OF EFFECTIVE MASSES= 0.866281E+10

Attachment 27

ANSYS Coupled Building/Crane Model Output, Crane at S, Modal Analysis

S O L U T I O N O P T I O N S

PROBLEM DIMENSIONALITY. 3-D
DEGREES OF FREEDOM. . . . . UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE . . . . . .MODAL
EXTRACTION METHOD. . . . . .BLOCK LANCZOS
LUMPED MASS MATRICES. . . . . .ON
EQUATION SOLVER OPTION. . . . . .SPARSE
NUMBER OF MODES TO EXTRACT. 300
MODAL EXTRACTION RANGE. . . . . 0.0000 TO 34.000
GLOBALLY ASSEMBLED MATRIX . . . . . .SYMMETRIC
NUMBER OF MODES TO EXPAND 300
ELEMENT RESULTS CALCULATION . . . . . .OFF

L O A D S T E P O P T I O N S

LOAD STEP NUMBER. 1
INERTIA LOADS X Y Z
ACEL 0.0000 386.09 0.0000
PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
DATABASE OUTPUT CONTROLS. . . . . .ALL DATA WRITTEN

Element Formation Element= 1000 Cum. Iter.= 1 CP= 134.774
Load Step= 1 Mode= 1.

**** CENTER OF MASS, MASS, AND MASS MOMENTS OF INERTIA ****

CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

TOTAL MASS = 6581.1

CENTER OF MASS	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTER OF MASS
XC = 873.19	IXX = 0.4586E+10	IXX = 0.6653E+09
YC = 714.65	IYY = 0.8980E+10	IYY = 0.3403E+10
ZC = -291.51	IZZ = 0.1187E+11	IZZ = 0.3492E+10
	IXY = -0.4211E+10	IXY = -0.1042E+09
	IYZ = 0.1376E+10	IYZ = 0.5394E+07
	IZX = 0.1681E+10	IZX = 0.5391E+07

AN AVERAGE OF THE X-, Y-, AND Z-DIRECTION MASS TERMS ARE USED FOR MASS21 ELEMENTS.

*** MASS SUMMARY BY ELEMENT TYPE ***

TYPE	MASS
1	2099.52
2	306.103
3	29.3637
7	268.237
8	36.3681
9	2548.37
16	13.8597
21	384.057
100	206.274
1004	688.961

Range of element maximum matrix coefficients in global coordinates
Maximum= 4.642966189E+12 at element 90509.
Minimum= 1.E-03 at element 90006.

*** ELEMENT MATRIX FORMULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	405	BEAM44	0.030	0.000074
2	43	BEAM44	0.010	0.000233
3	12	BEAM44	0.000	0.000000
7	42	BEAM44	0.000	0.000000
8	13	BEAM44	0.010	0.000770
9	207	BEAM44	0.010	0.000048
12	2	COMBIN14	0.000	0.000000
13	1	COMBIN14	0.000	0.000000

```
  14      2  COMBIN14     0.000   0.000000
  15      1  COMBIN14     0.000   0.000000
  16      1  BEAM44       0.000   0.000000
  21    367  BEAM44       0.040   0.000109
 100     18  MASS21       0.000   0.000000
 300     57  COMBIN14     0.010   0.000176
1001      1  COMBIN14     0.000   0.000000
1002      1  COMBIN14     0.000   0.000000
1003      1  COMBIN14     0.000   0.000000
1004      1  MASS21       0.000   0.000000
Time at end of element matrix formulation CP= 134.813853.

 BLOCK LANCZOS CALCULATION OF UP TO  300 EIGENVECTORS.
 NUMBER OF EQUATIONS      =       5918
 MAXIMUM WAVEFRONT        =        108
 MAXIMUM MODES STORED     =        300
 MINIMUM EIGENVALUE       = 0.0000
 MAXIMUM EIGENVALUE       = 34.000
 EST. OF MEMORY NEEDED          = 4.1755     (MB)
 MEMORY AVAILABLE FOR EIGENSOLVER =  229.05     (MB)

MEMORY TO PERFORM EIGENEXTRACTION:
 MIN. TO COMPLETE VALUE INPUT          =      162213     1.2376     (MB)
 MIN. FOR PART IN-CORE AND OUT-OF-CORE  =      239865     1.8300     (MB)
 MIN. FOR IN-CORE                      =      395909     3.0205     (MB)
 RECOM. FOR PART IN-CORE AND OUT-OF-CORE =      513995     3.9215     (MB)
 RECOM. FOR IN-CORE                    =      670039     5.1120     (MB)

 LANCZOS CYCLE NUMBER =   1

   new shift:  3.3355D-04     modes still needed:      256

 FREQUENCIES AT CURRENT LANCZOS CYCLE
   1  0.78451142E+01    2  0.77771535E+01    3  0.76586874E+01
   4  0.73947373E+01    5  0.72695691E+01    6  0.72420683E+01
   7  0.71998606E+01    8  0.68654818E+01    9  0.63126025E+01
  10  0.62848411E+01   11  0.61733673E+01   12  0.57911192E+01
  13  0.56453809E+01   14  0.56256856E+01   15  0.55233259E+01
  16  0.52987597E+01   17  0.51562707E+01   18  0.50258941E+01
  19  0.49902821E+01   20  0.49626320E+01   21  0.48663720E+01
  22  0.48575602E+01   23  0.48098612E+01   24  0.47457142E+01
  25  0.47025943E+01   26  0.46933798E+01   27  0.45343868E+01
  28  0.45331572E+01   29  0.43793016E+01   30  0.43100327E+01
  31  0.41144385E+01   32  0.39162867E+01   33  0.38093373E+01
  34  0.34298870E+01   35  0.33720489E+01   36  0.33662039E+01
  37  0.31967866E+01   38  0.31699843E+01   39  0.29808446E+01
  40  0.27999867E+01   41  0.27250866E+01   42  0.26455456E+01
  43  0.25463496E+01   44  0.25451915E+01   45  0.24876842E+01
  46  0.24286347E+01   47  0.23805226E+01   48  0.22068511E+01
  49  0.19592243E+01   50  0.18582092E+01   51  0.17674730E+01
  52  0.17580897E+01   53  0.16474048E+01   54  0.13066216E+01
  55  0.12632979E+01   56  0.12047503E+01   57  0.31198114E+00
  58  0.24928182E+00

   number of steps      :    22
   eigenvalues found    :    58
   total no. eigenvalues:    58

 LANCZOS CYCLE NUMBER =   2

   new shift:  7.4748D+03     modes still needed:      198

 FREQUENCIES AT CURRENT LANCZOS CYCLE
   1  0.24928182E+00    2  0.31198114E+00    3  0.12047503E+01
   4  0.12632979E+01    5  0.13066216E+01    6  0.16474048E+01
   7  0.17580897E+01    8  0.17674730E+01    9  0.18582092E+01
  10  0.19592243E+01   11  0.22068511E+01   12  0.23805226E+01
  13  0.24286347E+01   14  0.24876842E+01   15  0.25451915E+01
  16  0.25463496E+01   17  0.26455456E+01   18  0.27250866E+01
  19  0.27999867E+01   20  0.29808446E+01   21  0.31699843E+01
  22  0.31967866E+01   23  0.33662039E+01   24  0.33720489E+01
  25  0.34298870E+01   26  0.38093373E+01   27  0.39162867E+01
  28  0.41144385E+01   29  0.43100327E+01   30  0.43793016E+01
  31  0.45331572E+01   32  0.45343868E+01   33  0.46933798E+01
  34  0.47025943E+01   35  0.47457142E+01   36  0.48098612E+01
```

37 0.48575602E+01 38 0.48663720E+01 39 0.49626320E+01
40 0.49902821E+01 41 0.50258941E+01 42 0.51562707E+01
43 0.52987597E+01 44 0.55233259E+01 45 0.56256856E+01
46 0.56453809E+01 47 0.57911192E+01 48 0.61733673E+01
49 0.62848411E+01 50 0.63126025E+01 51 0.68654818E+01
52 0.71998606E+01 53 0.72420683E+01 54 0.72695691E+01
55 0.73947373E+01 56 0.76586874E+01 57 0.77771535E+01
58 0.78451142E+01 59 0.13604005E+02 60 0.13125612E+02
61 0.13040492E+02 62 0.12930890E+02 63 0.12588772E+02
64 0.12543498E+02 65 0.12370095E+02 66 0.12174726E+02
67 0.12038728E+02 68 0.11974958E+02 69 0.11896132E+02
70 0.11846261E+02 71 0.11705066E+02 72 0.11648981E+02
73 0.11621873E+02 74 0.11557088E+02 75 0.11188119E+02
76 0.11021155E+02 77 0.10971980E+02 78 0.10885324E+02
79 0.10798778E+02 80 0.10597782E+02 81 0.10531937E+02
82 0.10465296E+02 83 0.10443315E+02 84 0.10389209E+02
85 0.10359892E+02 86 0.10284304E+02 87 0.10282127E+02
88 0.10279493E+02 89 0.10272848E+02 90 0.10271104E+02
91 0.10266160E+02 92 0.10266001E+02 93 0.10264810E+02
94 0.10243661E+02 95 0.10220592E+02 96 0.10210824E+02
97 0.10070789E+02 98 0.10040393E+02 99 0.99525734E+01
100 0.99151966E+01 101 0.99030376E+01 102 0.98688330E+01
103 0.98441724E+01 104 0.97149358E+01 105 0.95847206E+01
106 0.93845044E+01 107 0.92250615E+01 108 0.91734366E+01
109 0.91352584E+01 110 0.90858143E+01 111 0.90751119E+01
112 0.90439957E+01 113 0.89627828E+01 114 0.88733492E+01
115 0.88136034E+01 116 0.87717376E+01 117 0.87464444E+01
118 0.85491374E+01 119 0.83646301E+01 120 0.83094041E+01
121 0.81807829E+01 122 0.80447816E+01 123 0.80190987E+01
124 0.78937935E+01 125 0.19970453E+02 126 0.19669284E+02
127 0.19492287E+02 128 0.19267678E+02 129 0.19213822E+02
130 0.19202177E+02 131 0.18919889E+02 132 0.18869822E+02
133 0.18503015E+02 134 0.18375775E+02 135 0.18282435E+02
136 0.18173733E+02 137 0.18118778E+02 138 0.17987061E+02
139 0.17916237E+02 140 0.17839031E+02 141 0.17700148E+02
142 0.17668632E+02 143 0.17418683E+02 144 0.17329184E+02
145 0.16804675E+02 146 0.16708004E+02 147 0.16536572E+02
148 0.16220733E+02 149 0.16166505E+02 150 0.16052920E+02
151 0.15954280E+02 152 0.15841502E+02 153 0.15733581E+02
154 0.15703598E+02 155 0.15694829E+02 156 0.15439526E+02
157 0.15430995E+02 158 0.15231266E+02 159 0.15117047E+02
160 0.15009692E+02 161 0.14872038E+02 162 0.14732442E+02
163 0.14538669E+02 164 0.14467532E+02 165 0.14301327E+02
166 0.14251480E+02 167 0.14157427E+02 168 0.13973579E+02
169 0.13826458E+02

number of steps : 27
eigenvalues found : 111
total no. eigenvalues: 169

LANCZOS CYCLE NUMBER = 3

new shift: 2.8753D+04 modes still needed: 87

FREQUENCIES AT CURRENT LANCZOS CYCLE
1 0.24928182E+00 2 0.31198114E+00 3 0.12047503E+01
4 0.12632979E+01 5 0.13066216E+01 6 0.16474048E+01
7 0.17580897E+01 8 0.17674730E+01 9 0.18582092E+01
10 0.19592243E+01 11 0.22068511E+01 12 0.23805226E+01
13 0.24286347E+01 14 0.24876842E+01 15 0.25451915E+01
16 0.25463496E+01 17 0.26455456E+01 18 0.27250866E+01
19 0.27999867E+01 20 0.29808446E+01 21 0.31699843E+01
22 0.31967866E+01 23 0.33662039E+01 24 0.33720489E+01
25 0.34298870E+01 26 0.38093373E+01 27 0.39162867E+01
28 0.41144385E+01 29 0.43100327E+01 30 0.43793016E+01
31 0.45331572E+01 32 0.45343868E+01 33 0.46933798E+01
34 0.47025943E+01 35 0.47457142E+01 36 0.48098612E+01
37 0.48575602E+01 38 0.48663720E+01 39 0.49626320E+01
40 0.49902821E+01 41 0.50258941E+01 42 0.51562707E+01
43 0.52987597E+01 44 0.55233259E+01 45 0.56256856E+01
46 0.56453809E+01 47 0.57911192E+01 48 0.61733673E+01
49 0.62848411E+01 50 0.63126025E+01 51 0.68654818E+01
52 0.71998606E+01 53 0.72420683E+01 54 0.72695691E+01
55 0.73947373E+01 56 0.76586874E+01 57 0.77771535E+01
58 0.78451142E+01 59 0.78937935E+01 60 0.80190987E+01

61	0.80447816E+01	62	0.81807829E+01	63	0.83094041E+01
64	0.83646301E+01	65	0.85491374E+01	66	0.87464444E+01
67	0.87717376E+01	68	0.88136034E+01	69	0.88733492E+01
70	0.89627828E+01	71	0.90439957E+01	72	0.90751119E+01
73	0.90858143E+01	74	0.91352584E+01	75	0.91734366E+01
76	0.92250615E+01	77	0.93845044E+01	78	0.95847206E+01
79	0.97149358E+01	80	0.98441724E+01	81	0.98688330E+01
82	0.99030376E+01	83	0.99151966E+01	84	0.99525734E+01
85	0.10040393E+02	86	0.10070789E+02	87	0.10210824E+02
88	0.10220592E+02	89	0.10243661E+02	90	0.10264810E+02
91	0.10266001E+02	92	0.10266160E+02	93	0.10271104E+02
94	0.10272848E+02	95	0.10279493E+02	96	0.10282127E+02
97	0.10284304E+02	98	0.10359892E+02	99	0.10389209E+02
100	0.10443315E+02	101	0.10465296E+02	102	0.10531937E+02
103	0.10597782E+02	104	0.10798778E+02	105	0.10885324E+02
106	0.10971980E+02	107	0.11021155E+02	108	0.11188119E+02
109	0.11557088E+02	110	0.11621873E+02	111	0.11648981E+02
112	0.11705066E+02	113	0.11846261E+02	114	0.11896132E+02
115	0.11974958E+02	116	0.12038728E+02	117	0.12174726E+02
118	0.12370095E+02	119	0.12543498E+02	120	0.12588772E+02
121	0.12930890E+02	122	0.13040492E+02	123	0.13125612E+02
124	0.13604005E+02	125	0.13826458E+02	126	0.13973579E+02
127	0.14157427E+02	128	0.14251480E+02	129	0.14301327E+02
130	0.14467532E+02	131	0.14538669E+02	132	0.14732442E+02
133	0.14872038E+02	134	0.15009692E+02	135	0.15117047E+02
136	0.15231266E+02	137	0.15430995E+02	138	0.15439526E+02
139	0.15694829E+02	140	0.15703598E+02	141	0.15733581E+02
142	0.15841502E+02	143	0.15954280E+02	144	0.16052920E+02
145	0.16166505E+02	146	0.16220733E+02	147	0.16536572E+02
148	0.16708004E+02	149	0.16804675E+02	150	0.17329184E+02
151	0.17418683E+02	152	0.17668632E+02	153	0.17700148E+02
154	0.17839031E+02	155	0.17916237E+02	156	0.17987061E+02
157	0.18118778E+02	158	0.18173733E+02	159	0.18282435E+02
160	0.18375775E+02	161	0.18503015E+02	162	0.18869822E+02
163	0.18919889E+02	164	0.19202177E+02	165	0.19213822E+02
166	0.19267678E+02	167	0.19492287E+02	168	0.19669284E+02
169	0.19970453E+02	170	0.26980573E+02	171	0.26963020E+02
172	0.26799878E+02	173	0.26455526E+02	174	0.25987128E+02
175	0.25858480E+02	176	0.25799344E+02	177	0.25662988E+02
178	0.25642150E+02	179	0.25204852E+02	180	0.24886665E+02
181	0.24728492E+02	182	0.24646996E+02	183	0.24625634E+02
184	0.24419813E+02	185	0.24378749E+02	186	0.24033517E+02
187	0.24005005E+02	188	0.23953583E+02	189	0.23923127E+02
190	0.23876886E+02	191	0.23865438E+02	192	0.23859615E+02
193	0.23825424E+02	194	0.23817373E+02	195	0.23585856E+02
196	0.23536698E+02	197	0.23112946E+02	198	0.22793780E+02
199	0.22690991E+02	200	0.22574198E+02	201	0.22473983E+02
202	0.22267958E+02	203	0.21955263E+02	204	0.21782415E+02
205	0.21596006E+02	206	0.21581075E+02	207	0.21305808E+02
208	0.20928661E+02	209	0.20905218E+02	210	0.20833167E+02
211	0.20624962E+02	212	0.20454365E+02	213	0.20431681E+02
214	0.20204059E+02	215	0.20172753E+02	216	0.20079299E+02
217	0.20021277E+02	218	0.19919607E+02	219	0.33484848E+02
220	0.33229559E+02	221	0.32993110E+02	222	0.32905461E+02
223	0.32877876E+02	224	0.32765878E+02	225	0.32712234E+02
226	0.32590562E+02	227	0.32531259E+02	228	0.32338030E+02
229	0.32244633E+02	230	0.32220450E+02	231	0.32065144E+02
232	0.31998864E+02	233	0.31904918E+02	234	0.31858916E+02
235	0.31643134E+02	236	0.31490203E+02	237	0.31243184E+02
238	0.31141257E+02	239	0.30826964E+02	240	0.30650671E+02
241	0.30331945E+02	242	0.29735002E+02	243	0.29726798E+02
244	0.29429799E+02	245	0.29399292E+02	246	0.29314560E+02
247	0.29311185E+02	248	0.29082139E+02	249	0.28946128E+02
250	0.28817031E+02	251	0.28200104E+02	252	0.28129482E+02
253	0.28004093E+02	254	0.27810957E+02	255	0.27690316E+02
256	0.27126295E+02				

number of steps : 25
eigenvalues found : 87
total no. eigenvalues: 256

*** NOTE *** CP = 149.245 TIME= 09:16:13
Fewer modes than the requested number of modes (300) were computed.
The range specified (FREQB= 0, FREQE= 34) contains only 256 modes.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 11.0 *****
ANSYS Mechanical U
00245050 VERSION=INTEL NT 09:16:13 SEP 17, 2010 CP= 149.245

Auxzilary Building Modifications

*** FREQUENCIES FROM BLOCK LANCZOS ITERATION ***

MODE FREQUENCY (HERTZ)

FREQUENCY RANGE REQUESTED= 0.00000 34.0000

1	0.2492818173149
2	0.3119811368759
3	1.204750282650
4	1.263297908051
5	1.306621616291
6	1.647404841888
7	1.758089728844
8	1.767472987684
9	1.858209179152
10	1.959224292982
11	2.206851092997
12	2.380522601540
13	2.428634676884
14	2.487684189206
15	2.545191474825
16	2.546349572218
17	2.645545616796
18	2.725086616009
19	2.799986744274
20	2.980844551196
21	3.169984296407
22	3.196786591949
23	3.366203944317
24	3.372048855648
25	3.429886974721
26	3.809337262240
27	3.916286684634
28	4.114438467942
29	4.310032715101
30	4.379301590870
31	4.533157162122
32	4.534386830145
33	4.693379830505
34	4.702594308477
35	4.745714222462
36	4.809861234814
37	4.857560235698
38	4.866372028927
39	4.962632016887
40	4.990282093642
41	5.025894100458
42	5.156270719873
43	5.298759723318
44	5.523325936895
45	5.625685593609
46	5.645380899940
47	5.791119165053
48	6.173367266948
49	6.284841136972
50	6.312602511422
51	6.865481786606
52	7.199860608106
53	7.242068346035
54	7.269569075175
55	7.394737278823
56	7.658687433761
57	7.777153544898
58	7.845114227030
59	7.893793527560
60	8.019098723656

61	8.044781612746
62	8.180782901344
63	8.309404090812
64	8.364630061225
65	8.549137388471
66	8.746444430624
67	8.771737590104
68	8.813603431494
69	8.873349199106
70	8.962782843376
71	9.043995747053
72	9.075111866525
73	9.085814335117
74	9.135258396260
75	9.173436556154
76	9.225061469269
77	9.384504377395
78	9.584720588046
79	9.714935828877
80	9.844172432313
81	9.868833037794
82	9.903037611287
83	9.915196603714
84	9.952573372055
85	10.04039276887
86	10.07078910555
87	10.21082442718
88	10.22059206012
89	10.24366061353
90	10.26481003262
91	10.26600061626
92	10.26616027363
93	10.27110435728
94	10.27284763350
95	10.27949320606
96	10.28212723794
97	10.28430367876
98	10.35989230658
99	10.38920916049
100	10.44331490141
101	10.46529646858
102	10.53193702363
103	10.59778191603
104	10.79877808899
105	10.88532409300
106	10.97197994582
107	11.02115530789
108	11.18811859338
109	11.55708848371
110	11.62187282604
111	11.64898080161
112	11.70506611135
113	11.84626054530
114	11.89613179944
115	11.97495775857
116	12.03872826672
117	12.17472562156
118	12.37009495118
119	12.54349797361
120	12.58877207535
121	12.93088990870
122	13.04049194841
123	13.12561236955
124	13.60400532684
125	13.82645775432
126	13.97357850262
127	14.15742710294
128	14.25148008152
129	14.30132728946
130	14.46753151991
131	14.53866928305
132	14.73244171013
133	14.87203825663
134	15.00969228598
135	15.11704720118

136	15.23126565833
137	15.43099462794
138	15.43952557375
139	15.69482926588
140	15.70359807580
141	15.73358115746
142	15.84150249075
143	15.95428049254
144	16.05292010091
145	16.16650485637
146	16.22073296429
147	16.53657239326
148	16.70800445816
149	16.80467495562
150	17.32918368854
151	17.41868322714
152	17.66863226078
153	17.70014767827
154	17.83903134103
155	17.91623739808
156	17.98706106046
157	18.11877763665
158	18.17373263340
159	18.28243455002
160	18.37577534900
161	18.50301545972
162	18.86982175210
163	18.91988860829
164	19.20217681751
165	19.21382154088
166	19.26767765643
167	19.49228667704
168	19.66928387573
169	19.91960693650
170	19.97045312287
171	20.02127663666
172	20.07929947891
173	20.17275304953
174	20.20405916710
175	20.43168068142
176	20.45436542507
177	20.62496213802
178	20.83316736911
179	20.90521753407
180	20.92866069232
181	21.30580753685
182	21.58107533837
183	21.59600622015
184	21.78241461837
185	21.95526276983
186	22.26795788039
187	22.47398333942
188	22.57419814814
189	22.69099115800
190	22.79377951226
191	23.11294576332
192	23.53669752083
193	23.58585600698
194	23.81737329937
195	23.82542426099
196	23.85961528840
197	23.86543776279
198	23.87688571328
199	23.92312676482
200	23.95358284206
201	24.00500543314
202	24.03351659096
203	24.37874940631
204	24.41981269985
205	24.62563370724
206	24.64699608819
207	24.72849243424
208	24.88666534205
209	25.20485214015
210	25.64215028655

211 25.66298769657
212 25.79934417969
213 25.85848015609
214 25.98712769688
215 26.45552591166
216 26.79987784185
217 26.96302036546
218 26.98057262086
219 27.12629486449
220 27.69031646848
221 27.81095749119
222 28.00409312835
223 28.12948199522
224 28.20010378747
225 28.81703126608
226 28.94612780299
227 29.08213926977
228 29.31118546512
229 29.31455985631
230 29.39929201965
231 29.42979945201
232 29.72679843247
233 29.73500211536
234 30.33194533266
235 30.65067074723
236 30.82696438487
237 31.14125694709
238 31.24318391988
239 31.49020305883
240 31.64313351649
241 31.85891584410
242 31.90491845569
243 31.99886421533
244 32.06514404601
245 32.22045049902
246 32.24463260970
247 32.33803039549
248 32.53125937465
249 32.59056153937
250 32.71223351856
251 32.76587813297
252 32.87787617153
253 32.90546088009
254 32.99310981857
255 33.22955855919
256 33.48484848692

Block Lanczos CP Time (sec) = 15.943
Block Lanczos ELAPSED Time (sec) = 19.503

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 11.0 *****
ANSYS Mechanical U
00245050 VERSION=INTEL NT 09:16:17 SEP 17, 2010 CP= 151.908

Auxzilary Building Modifications

***** PARTICIPATION FACTOR CALCULATION ***** X DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	RATIO	CUMULATIVE EFFECTIVE MASS	MASS FRACTION
1	0.249282	4.0115	0.10104	0.002039	0.102097E-01	0.165585E-05
2	0.311981	3.2053	28.024	0.565618	785.351	0.127373
3	1.20475	0.83005	49.546	1.000000	2454.81	0.525504
4	1.26330	0.79158	-7.0283	0.141855	49.3976	0.533516
5	1.30662	0.76533	3.2674	0.065946	10.6758	0.535247
6	1.64740	0.60702	-3.6459	0.073585	13.2923	0.537403
7	1.75809	0.56880	-10.371	0.209312	107.549	0.554846
8	1.76747	0.56578	-4.6310	0.093470	21.4466	0.558324
9	1.85821	0.53815	-5.9518	0.120127	35.4242	0.564069
10	1.95922	0.51041	-0.18245	0.003682	0.332882E-01	0.564075

11	2.20685	0.45313	1.5916	0.032124	2.53327	0.564486
12	2.38052	0.42008	-0.83599	0.016873	0.698882	0.564599
13	2.42863	0.41175	-6.4630	0.130444	41.7703	0.571373
14	2.48768	0.40198	-15.917	0.321248	253.337	0.612461
15	2.54519	0.39290	3.4525	0.069683	11.9197	0.614394
16	2.54635	0.39272	-0.61224E-02	0.000124	0.374843E-04	0.614394
17	2.64555	0.37799	20.842	0.420661	434.392	0.684845
18	2.72509	0.36696	-4.9296	0.099494	24.3005	0.688786
19	2.79999	0.35714	-20.147	0.406628	405.894	0.754616
20	2.98084	0.33548	0.44786E-01	0.000904	0.200583E-02	0.754616
21	3.16998	0.31546	-0.17081	0.003447	0.291759E-01	0.754621
22	3.19679	0.31281	0.36177	0.007302	0.130875	0.754642
23	3.36620	0.29707	-2.1363	0.043118	4.56397	0.755383
24	3.37205	0.29656	2.8233	0.056983	7.97080	0.756675
25	3.42989	0.29155	1.0347	0.020883	1.07051	0.756849
26	3.80934	0.26251	-7.6289	0.153975	58.1998	0.766288
27	3.91629	0.25534	-7.3252	0.147847	53.6587	0.774991
28	4.11444	0.24305	14.037	0.283311	197.036	0.806947
29	4.31003	0.23202	0.46320	0.009349	0.214555	0.806981
30	4.37930	0.22835	-0.47864	0.009661	0.229097	0.807019
31	4.53316	0.22060	-12.497	0.252228	156.172	0.832347
32	4.53439	0.22054	-5.9487	0.120065	35.3875	0.838087
33	4.69338	0.21307	0.23347	0.004712	0.545094E-01	0.838095
34	4.70259	0.21265	0.77783	0.015699	0.605022	0.838193
35	4.74571	0.21072	-0.48710	0.009831	0.237268	0.838232
36	4.80986	0.20791	-0.23231	0.004689	0.539670E-01	0.838241
37	4.85756	0.20586	8.8534	0.178690	78.3821	0.850953
38	4.86637	0.20549	-4.6865	0.094590	21.9636	0.854515
39	4.96263	0.20151	-12.566	0.253620	157.901	0.880124
40	4.99028	0.20039	15.225	0.307280	231.786	0.917716
41	5.02589	0.19897	11.285	0.227773	127.357	0.938371
42	5.15627	0.19394	4.8718	0.098328	23.7341	0.942221
43	5.29876	0.18872	-1.4158	0.028576	2.00459	0.942546
44	5.52333	0.18105	0.34273	0.006917	0.117466	0.942565
45	5.62569	0.17776	-0.19715	0.003979	0.388676E-01	0.942571
46	5.64538	0.17714	0.74851E-01	0.001511	0.560260E-02	0.942572
47	5.79112	0.17268	-0.47651	0.009618	0.227066	0.942609
48	6.17337	0.16199	6.3499	0.128162	40.3218	0.949148
49	6.28484	0.15911	-0.45441	0.009171	0.206490	0.949182
50	6.31260	0.15841	0.88123	0.017786	0.776575	0.949308
51	6.86548	0.14566	-0.61919	0.012497	0.383391	0.949370
52	7.19986	0.13889	3.4961	0.070563	12.2229	0.951352
53	7.24207	0.13808	0.39143	0.007900	0.153220	0.951377
54	7.26957	0.13756	-3.4399	0.069428	11.8328	0.953296
55	7.39474	0.13523	0.11559	0.002333	0.133604E-01	0.953298
56	7.65869	0.13057	0.90426	0.018251	0.817690	0.953431
57	7.77715	0.12858	-1.2583	0.025396	1.58319	0.953688
58	7.84511	0.12747	-3.3009	0.066623	10.8959	0.955455
59	7.89379	0.12668	-5.0094	0.101105	25.0938	0.959525
60	8.01910	0.12470	-0.31920E-01	0.000644	0.101891E-02	0.959525
61	8.04478	0.12430	-0.14519	0.002930	0.210796E-01	0.959528
62	8.18078	0.12224	-0.20414	0.004120	0.416718E-01	0.959535
63	8.30940	0.12035	0.26748	0.005399	0.715465E-01	0.959547
64	8.36463	0.11955	-0.39163	0.007904	0.153375	0.959572
65	8.54914	0.11697	-0.17668	0.003566	0.312164E-01	0.959577
66	8.74644	0.11433	-0.23236	0.004690	0.539921E-01	0.959585
67	8.77174	0.11400	-0.19267	0.003889	0.371215E-01	0.959591
68	8.81360	0.11346	-0.12936	0.002611	0.167344E-01	0.959594
69	8.87335	0.11270	0.49084	0.009907	0.240923	0.959633
70	8.96278	0.11157	0.45094E-01	0.000910	0.203348E-02	0.959634
71	9.04400	0.11057	-0.51567	0.010408	0.265915	0.959677
72	9.07511	0.11019	0.10836	0.002187	0.117414E-01	0.959679
73	9.08581	0.11006	0.21643	0.004368	0.468436E-01	0.959686
74	9.13526	0.10947	-0.60966E-01	0.001230	0.371689E-02	0.959687
75	9.17344	0.10901	-0.70904E-01	0.001431	0.502735E-02	0.959688
76	9.22506	0.10840	-0.29094	0.005872	0.846455E-01	0.959701
77	9.38450	0.10656	-0.37478	0.007564	0.140464	0.959724
78	9.58472	0.10433	-0.55953	0.011293	0.313071	0.959775
79	9.71494	0.10293	-0.17331	0.003498	0.300354E-01	0.959780
80	9.84417	0.10158	0.15384	0.003105	0.236670E-01	0.959784
81	9.86883	0.10133	0.33634	0.006789	0.113128	0.959802
82	9.90304	0.10098	-0.16906	0.003412	0.285818E-01	0.959807
83	9.91520	0.10086	-0.51221E-01	0.001034	0.262358E-02	0.959807
84	9.95257	0.10048	0.39196	0.007911	0.153631	0.959832
85	10.0404	0.99598E-01	0.15184	0.003065	0.230561E-01	0.959836

86	10.0708	0.99297E-01	1.1825	0.023867	1.39832	0.960062
87	10.2108	0.97935E-01	0.89981E-01	0.001816	0.809663E-02	0.960064
88	10.2206	0.97842E-01	0.14533E-01	0.000293	0.211209E-03	0.960064
89	10.2437	0.97621E-01	-0.74759E-01	0.001509	0.558891E-02	0.960065
90	10.2648	0.97420E-01	0.65015E-01	0.001312	0.422698E-02	0.960065
91	10.2660	0.97409E-01	-0.21739	0.004388	0.472585E-01	0.960073
92	10.2662	0.97407E-01	0.18043	0.003642	0.325554E-01	0.960078
93	10.2711	0.97361E-01	0.81274E-01	0.001640	0.660546E-02	0.960079
94	10.2728	0.97344E-01	-0.20988E-01	0.000424	0.440513E-03	0.960079
95	10.2795	0.97281E-01	0.88289E-02	0.000178	0.779497E-04	0.960079
96	10.2821	0.97256E-01	-0.14044E-01	0.000283	0.197236E-03	0.960080
97	10.2843	0.97236E-01	-0.12422E-02	0.000025	0.154315E-05	0.960080
98	10.3599	0.96526E-01	0.28826	0.005818	0.830920E-01	0.960093
99	10.3892	0.96254E-01	2.3219	0.046863	5.39118	0.960967
100	10.4433	0.95755E-01	0.83659E-01	0.001689	0.699883E-02	0.960969
101	10.4653	0.95554E-01	-1.1932	0.024082	1.42367	0.961199
102	10.5319	0.94949E-01	1.0185	0.020556	1.03726	0.961368
103	10.5978	0.94359E-01	3.8819	0.078348	15.0688	0.963812
104	10.7988	0.92603E-01	-0.30897	0.006236	0.954596E-01	0.963827
105	10.8853	0.91867E-01	-0.21269	0.004293	0.452371E-01	0.963834
106	10.9720	0.91141E-01	0.31084E-01	0.000627	0.966224E-03	0.963835
107	11.0212	0.90735E-01	-0.16827E-01	0.000340	0.283145E-03	0.963835
108	11.1881	0.89381E-01	0.98325	0.019845	0.966782	0.963991
109	11.5571	0.86527E-01	0.35082E-01	0.000708	0.123074E-02	0.963992
110	11.6219	0.86045E-01	-0.53712	0.010841	0.288494	0.964038
111	11.6490	0.85844E-01	-0.36980E-01	0.000746	0.136749E-02	0.964039
112	11.7051	0.85433E-01	-0.53395	0.010777	0.285098	0.964085
113	11.8463	0.84415E-01	-0.48404E-01	0.000977	0.234293E-02	0.964085
114	11.8961	0.84061E-01	-0.36567	0.007380	0.133716	0.964107
115	11.9750	0.83508E-01	2.8122	0.056759	7.90828	0.965389
116	12.0387	0.83065E-01	0.47865	0.009661	0.229111	0.965427
117	12.1747	0.82137E-01	-0.41659	0.008408	0.173544	0.965455
118	12.3701	0.80840E-01	0.67866	0.013698	0.460585	0.965529
119	12.5435	0.79723E-01	-0.11422	0.002305	0.130467E-01	0.965532
120	12.5888	0.79436E-01	-0.49847E-01	0.001006	0.248471E-02	0.965532
121	12.9309	0.77334E-01	-0.27257	0.005501	0.742924E-01	0.965544
122	13.0405	0.76684E-01	-0.21474	0.004334	0.461118E-01	0.965552
123	13.1256	0.76187E-01	2.7750	0.056008	7.70051	0.966800
124	13.6040	0.73508E-01	-0.68412	0.013808	0.468015	0.966876
125	13.8265	0.72325E-01	0.77749E-01	0.001569	0.604497E-02	0.966877
126	13.9736	0.71564E-01	-0.28181	0.005688	0.794170E-01	0.966890
127	14.1574	0.70634E-01	-0.32624	0.006585	0.106430	0.966907
128	14.2515	0.70168E-01	1.5893	0.032078	2.52597	0.967317
129	14.3013	0.69924E-01	-0.77885E-01	0.001572	0.606608E-02	0.967318
130	14.4675	0.69120E-01	0.15895E-01	0.000321	0.252660E-03	0.967318
131	14.5387	0.68782E-01	2.1463	0.043319	4.60658	0.968065
132	14.7324	0.67877E-01	-1.0813	0.021823	1.16914	0.968255
133	14.8720	0.67240E-01	10.093	0.203705	101.864	0.984776
134	15.0097	0.66624E-01	0.14631	0.002953	0.214080E-01	0.984779
135	15.1170	0.66150E-01	1.1352	0.022913	1.28873	0.984988
136	15.2313	0.65654E-01	1.9208	0.038768	3.68949	0.985586
137	15.4310	0.64805E-01	-0.54154	0.010930	0.293268	0.985634
138	15.4395	0.64769E-01	-0.39403	0.007953	0.155256	0.985659
139	15.6948	0.63715E-01	0.29614E-01	0.000598	0.876977E-03	0.985659
140	15.7036	0.63680E-01	0.70161E-01	0.001416	0.492260E-02	0.985660
141	15.7336	0.63558E-01	0.83922E-02	0.000169	0.704290E-04	0.985660
142	15.8415	0.63125E-01	-0.81525	0.016454	0.664631	0.985768
143	15.9543	0.62679E-01	1.6926	0.034162	2.86480	0.986233
144	16.0529	0.62294E-01	-0.30509	0.006158	0.930793E-01	0.986248
145	16.1665	0.61856E-01	-0.56526	0.011409	0.319520	0.986299
146	16.2207	0.61649E-01	0.30378	0.006131	0.922805E-01	0.986314
147	16.5366	0.60472E-01	0.56411	0.011386	0.318222	0.986366
148	16.7080	0.59852E-01	-0.15720	0.003173	0.247123E-01	0.986370
149	16.8047	0.59507E-01	0.97516	0.019682	0.950941	0.986524
150	17.3292	0.57706E-01	-4.2899	0.086584	18.4030	0.989509
151	17.4187	0.57410E-01	-0.16565	0.003343	0.274413E-01	0.989513
152	17.6686	0.56597E-01	-0.80636	0.016275	0.650209	0.989619
153	17.7001	0.56497E-01	0.49387	0.009968	0.243903	0.989658
154	17.8390	0.56057E-01	0.12282E-02	0.000025	0.150850E-05	0.989658
155	17.9162	0.55815E-01	0.57909	0.011688	0.335345	0.989713
156	17.9871	0.55596E-01	-0.17531	0.003538	0.307331E-01	0.989718
157	18.1188	0.55191E-01	0.28017	0.005655	0.784928E-01	0.989731
158	18.1737	0.55024E-01	0.71318	0.014394	0.508624	0.989813
159	18.2824	0.54697E-01	-0.75211	0.015180	0.565670	0.989905
160	18.3758	0.54419E-01	-0.20420	0.004121	0.416962E-01	0.989912

161	18.5030	0.54045E-01	0.38499	0.007770	0.148218	0.989936
162	18.8698	0.52995E-01	0.51022	0.010298	0.260329	0.989978
163	18.9199	0.52854E-01	-0.43996E-01	0.000888	0.193562E-02	0.989978
164	19.2022	0.52077E-01	0.11430	0.002307	0.130652E-01	0.989980
165	19.2138	0.52046E-01	0.16635	0.003357	0.276725E-01	0.989985
166	19.2677	0.51900E-01	-0.13212E-01	0.000267	0.174554E-03	0.989985
167	19.4923	0.51302E-01	-2.4120	0.048682	5.81783	0.990928
168	19.6693	0.50841E-01	-0.74904	0.015118	0.561057	0.991019
169	19.9196	0.50202E-01	-0.23795	0.004803	0.566201E-01	0.991028
170	19.9705	0.50074E-01	-0.53820	0.010863	0.289661	0.991075
171	20.0213	0.49947E-01	0.70560E-01	0.001424	0.497869E-02	0.991076
172	20.0793	0.49803E-01	0.13749E-01	0.000278	0.189037E-03	0.991076
173	20.1728	0.49572E-01	0.50022E-01	0.001010	0.250225E-02	0.991077
174	20.2041	0.49495E-01	-0.93993E-02	0.000190	0.883464E-04	0.991077
175	20.4317	0.48944E-01	0.83848	0.016923	0.703054	0.991191
176	20.4544	0.48889E-01	-0.33879	0.006838	0.114780	0.991209
177	20.6250	0.48485E-01	-0.18021	0.003637	0.324740E-01	0.991215
178	20.8332	0.48000E-01	0.15401E-01	0.000311	0.237205E-03	0.991215
179	20.9052	0.47835E-01	-0.75040E-01	0.001515	0.563104E-02	0.991216
180	20.9287	0.47781E-01	-0.81948E-02	0.000165	0.671541E-04	0.991216
181	21.3058	0.46936E-01	-0.17006	0.003432	0.289220E-01	0.991220
182	21.5811	0.46337E-01	-0.32464	0.006552	0.105393	0.991237
183	21.5960	0.46305E-01	-0.47330	0.009553	0.224009	0.991274
184	21.7824	0.45909E-01	0.54800E-01	0.001106	0.300309E-02	0.991274
185	21.9553	0.45547E-01	-0.27524	0.005555	0.757546E-01	0.991286
186	22.2680	0.44908E-01	0.21134E-01	0.000427	0.446650E-03	0.991287
187	22.4740	0.44496E-01	-1.1598	0.023409	1.34513	0.991505
188	22.5742	0.44298E-01	0.49500E-01	0.000999	0.245026E-02	0.991505
189	22.6910	0.44070E-01	-0.16486	0.003328	0.271803E-01	0.991509
190	22.7938	0.43872E-01	0.30591	0.006174	0.935781E-01	0.991525
191	23.1129	0.43266E-01	0.40325E-01	0.000814	0.162613E-02	0.991525
192	23.5367	0.42487E-01	-0.50051E-01	0.001010	0.250510E-02	0.991525
193	23.5859	0.42398E-01	-0.24233	0.004891	0.587222E-01	0.991535
194	23.8174	0.41986E-01	0.33980E-02	0.000069	0.115467E-04	0.991535
195	23.8254	0.41972E-01	0.15356E-02	0.000031	0.235799E-05	0.991535
196	23.8596	0.41912E-01	0.14104E-02	0.000028	0.198913E-05	0.991535
197	23.8654	0.41902E-01	0.42619E-03	0.000009	0.181639E-06	0.991535
198	23.8769	0.41882E-01	0.14464E-02	0.000029	0.209193E-05	0.991535
199	23.9231	0.41801E-01	-0.18896E-01	0.000381	0.357047E-03	0.991535
200	23.9536	0.41747E-01	2.2687	0.045789	5.14682	0.992370
201	24.0050	0.41658E-01	0.67663E-01	0.001366	0.457833E-02	0.992370
202	24.0335	0.41609E-01	0.84253E-01	0.001700	0.709857E-02	0.992372
203	24.3787	0.41019E-01	-0.11342E-01	0.000229	0.128643E-03	0.992372
204	24.4198	0.40950E-01	-0.12644	0.002552	0.159882E-01	0.992374
205	24.6256	0.40608E-01	-0.21670	0.004374	0.469604E-01	0.992382
206	24.6470	0.40573E-01	-0.18998E-01	0.000383	0.360915E-03	0.992382
207	24.7285	0.40439E-01	0.16395	0.003309	0.268780E-01	0.992386
208	24.8867	0.40182E-01	0.15193	0.003066	0.230814E-01	0.992390
209	25.2049	0.39675E-01	2.9172	0.058879	8.51010	0.993770
210	25.6422	0.38998E-01	-0.26920	0.005433	0.724708E-01	0.993782
211	25.6630	0.38967E-01	-0.10109	0.002040	0.102200E-01	0.993784
212	25.7993	0.38761E-01	0.31265	0.006310	0.977478E-01	0.993799
213	25.8585	0.38672E-01	-0.35483	0.007162	0.125904	0.993820
214	25.9871	0.38481E-01	0.55701E-01	0.001124	0.310266E-02	0.993820
215	26.4555	0.37799E-01	0.16946	0.003420	0.287164E-01	0.993825
216	26.7999	0.37314E-01	-0.47981E-01	0.000968	0.230220E-02	0.993825
217	26.9630	0.37088E-01	0.16773	0.003385	0.281346E-01	0.993830
218	26.9806	0.37064E-01	-0.65633	0.013247	0.430769	0.993900
219	27.1263	0.36865E-01	0.30254E-01	0.000611	0.915309E-03	0.993900
220	27.6903	0.36114E-01	-0.69377E-02	0.000140	0.481323E-04	0.993900
221	27.8110	0.35957E-01	0.78842E-02	0.000159	0.621598E-04	0.993900
222	28.0041	0.35709E-01	-0.79405E-02	0.000160	0.630522E-04	0.993900
223	28.1295	0.35550E-01	-0.20494E-01	0.000414	0.419988E-03	0.993900
224	28.2001	0.35461E-01	0.97860E-02	0.000198	0.957657E-04	0.993900
225	28.8170	0.34702E-01	-0.25407E-01	0.000513	0.645537E-03	0.993900
226	28.9461	0.34547E-01	-0.12185	0.002459	0.148466E-01	0.993903
227	29.0821	0.34385E-01	0.11524E-01	0.000233	0.132810E-03	0.993903
228	29.3112	0.34117E-01	0.81618E-01	0.001647	0.666152E-02	0.993904
229	29.3146	0.34113E-01	0.25786	0.005204	0.664921E-01	0.993914
230	29.3993	0.34014E-01	0.70876E-01	0.001431	0.502336E-02	0.993915
231	29.4298	0.33979E-01	0.24745E-01	0.000499	0.612338E-03	0.993915
232	29.7268	0.33640E-01	0.36265E-01	0.000732	0.131514E-02	0.993916
233	29.7350	0.33630E-01	0.13788	0.002783	0.190122E-01	0.993919
234	30.3319	0.32969E-01	-0.21290	0.004297	0.453251E-01	0.993926
235	30.6507	0.32626E-01	3.7734	0.076159	14.2382	0.996235

236	30.8270	0.32439E-01	0.83417	0.016836	0.695839	0.996348
237	31.1413	0.32112E-01	-2.6158	0.052795	6.84240	0.997458
238	31.2432	0.32007E-01	-0.34774	0.007019	0.120924	0.997477
239	31.4902	0.31756E-01	1.4432	0.029129	2.08284	0.997815
240	31.6431	0.31602E-01	1.9072	0.038493	3.63733	0.998405
241	31.8589	0.31388E-01	-0.71660	0.014463	0.513519	0.998488
242	31.9049	0.31343E-01	-1.4687	0.029644	2.15714	0.998838
243	31.9989	0.31251E-01	-0.68783	0.013883	0.473107	0.998915
244	32.0651	0.31187E-01	-0.73405	0.014816	0.538832	0.999002
245	32.2205	0.31036E-01	-0.32248	0.006509	0.103995	0.999019
246	32.2446	0.31013E-01	1.4706	0.029682	2.16275	0.999370
247	32.3380	0.30923E-01	0.12542	0.002531	0.157303E-01	0.999373
248	32.5313	0.30740E-01	0.67550	0.013634	0.456301	0.999447
249	32.5906	0.30684E-01	-0.32897	0.006640	0.108223	0.999464
250	32.7122	0.30570E-01	0.64947	0.013108	0.421809	0.999533
251	32.7659	0.30520E-01	-1.3623	0.027496	1.85591	0.999834
252	32.8779	0.30416E-01	0.94128E-01	0.001900	0.886000E-02	0.999835
253	32.9055	0.30390E-01	-0.90881	0.018343	0.825927	0.999969
254	32.9931	0.30309E-01	-0.26202	0.005288	0.686550E-01	0.999980
255	33.2296	0.30094E-01	-0.35048	0.007074	0.122838	1.00000
256	33.4848	0.29864E-01	-0.84137E-02	0.000170	0.707912E-04	1.00000

SUM OF EFFECTIVE MASSES= 6165.83

***** PARTICIPATION FACTOR CALCULATION ***** Y DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.249282	4.0115	-0.37103E-01	0.001365	0.137663E-02	0.266224E-06
2	0.311981	3.2053	0.48354E-02	0.000178	0.233814E-04	0.270746E-06
3	1.20475	0.83005	-0.11815E-01	0.000435	0.139593E-03	0.297741E-06
4	1.26330	0.79158	-0.56636	0.020841	0.320760	0.623289E-04
5	1.30662	0.76533	-0.20472E-01	0.000753	0.419093E-03	0.624099E-04
6	1.64740	0.60702	0.26805	0.009864	0.718481E-01	0.763045E-04
7	1.75809	0.56880	-0.11671	0.004295	0.136216E-01	0.789387E-04
8	1.76747	0.56578	-0.18243	0.006713	0.332807E-01	0.853748E-04
9	1.85821	0.53815	-0.28593	0.010522	0.817540E-01	0.101185E-03
10	1.95922	0.51041	0.10305	0.003792	0.106202E-01	0.103239E-03
11	2.20685	0.45313	0.47376	0.017434	0.224448	0.146645E-03
12	2.38052	0.42008	0.31093E-01	0.001144	0.966775E-03	0.146831E-03
13	2.42863	0.41175	0.34574	0.012723	0.119538	0.169949E-03
14	2.48768	0.40198	-0.17512	0.006444	0.306680E-01	0.175880E-03
15	2.54519	0.39290	-0.41043E-01	0.001510	0.168449E-02	0.176205E-03
16	2.54635	0.39272	-0.26183E-01	0.000963	0.685554E-03	0.176338E-03
17	2.64555	0.37799	-0.17743	0.006529	0.314822E-01	0.182426E-03
18	2.72509	0.36696	-0.13094	0.004818	0.171445E-01	0.185742E-03
19	2.79999	0.35714	0.37595	0.013834	0.141339	0.213075E-03
20	2.98084	0.33548	7.8958	0.290553	62.3441	0.122697E-01
21	3.16998	0.31546	18.185	0.669165	330.682	0.762197E-01
22	3.19679	0.31281	-27.175	1.000000	738.489	0.219035
23	3.36620	0.29707	0.45524	0.016752	0.207246	0.219075
24	3.37205	0.29656	0.24372	0.008968	0.593972E-01	0.219086
25	3.42989	0.29155	-1.5987	0.058829	2.55581	0.219581
26	3.80934	0.26251	0.82123	0.030220	0.674417	0.219711
27	3.91629	0.25534	-1.7986	0.066186	3.23497	0.220337
28	4.11444	0.24305	-3.3009	0.121468	10.8960	0.222444
29	4.31003	0.23202	18.621	0.685227	346.747	0.289500
30	4.37930	0.22835	-3.0928	0.113808	9.56511	0.291350
31	4.53316	0.22060	-4.8202	0.177374	23.2340	0.295843
32	4.53439	0.22054	9.3177	0.342877	86.8202	0.312633
33	4.69338	0.21307	4.2529	0.156499	18.0871	0.316131
34	4.70259	0.21265	9.3616	0.344491	87.6398	0.333080
35	4.74571	0.21072	11.601	0.426882	134.574	0.359105
36	4.80986	0.20791	1.9110	0.070323	3.65205	0.359811
37	4.85756	0.20586	2.5033	0.092117	6.26655	0.361023
38	4.86637	0.20549	3.3296	0.122523	11.0861	0.363167
39	4.96263	0.20151	-0.47614	0.017521	0.226709	0.363211
40	4.99028	0.20039	1.4551	0.053547	2.11746	0.363620
41	5.02589	0.19897	0.66759	0.024566	0.445678	0.363706
42	5.15627	0.19394	0.48014	0.017668	0.230535	0.363751
43	5.29876	0.18872	4.2068	0.154803	17.6970	0.367173
44	5.52333	0.18105	2.7326	0.100555	7.46716	0.368617
45	5.62569	0.17776	4.7463	0.174655	22.5270	0.372974
46	5.64538	0.17714	6.4816	0.238513	42.0115	0.381098

47	5.79112	0.17268	-0.49938	0.018376	0.249380	0.381147
48	6.17337	0.16199	-0.40451	0.014885	0.163631	0.381178
49	6.28484	0.15911	0.39980	0.014712	0.159843	0.381209
50	6.31260	0.15841	-1.9259	0.070871	3.70920	0.381926
51	6.86548	0.14566	0.23895E-01	0.000879	0.570988E-03	0.381926
52	7.19986	0.13889	-0.74806	0.027527	0.559598	0.382035
53	7.24207	0.13808	-4.5307	0.166724	20.5276	0.386005
54	7.26957	0.13756	-2.6822	0.098699	7.19401	0.387396
55	7.39474	0.13523	7.2846	0.268060	53.0651	0.397658
56	7.65869	0.13057	4.3902	0.161551	19.2736	0.401385
57	7.77715	0.12858	-2.9449	0.108366	8.67226	0.403062
58	7.84511	0.12747	0.11423	0.004203	0.130484E-01	0.403065
59	7.89379	0.12668	2.4981	0.091926	6.24051	0.404272
60	8.01910	0.12470	-0.72149	0.026550	0.520547	0.404372
61	8.04478	0.12430	-10.757	0.395835	115.711	0.426749
62	8.18078	0.12224	0.13199	0.004857	0.174207E-01	0.426753
63	8.30940	0.12035	4.3988	0.161868	19.3493	0.430495
64	8.36463	0.11955	-0.30181	0.011106	0.910907E-01	0.430512
65	8.54914	0.11697	1.5280	0.056228	2.33479	0.430964
66	8.74644	0.11433	0.62986	0.023178	0.396726	0.431041
67	8.77174	0.11400	0.74263	0.027327	0.551493	0.431147
68	8.81360	0.11346	0.11521	0.004240	0.132735E-01	0.431150
69	8.87335	0.11270	-0.26366	0.009702	0.695148E-01	0.431163
70	8.96278	0.11157	0.10459	0.003849	0.109384E-01	0.431165
71	9.04400	0.11057	1.3617	0.050108	1.85423	0.431524
72	9.07511	0.11019	-0.45877	0.016882	0.210468	0.431565
73	9.08581	0.11006	1.3480	0.049604	1.81713	0.431916
74	9.13526	0.10947	-3.3392	0.122876	11.1501	0.434072
75	9.17344	0.10901	-5.3811	0.198016	28.9565	0.439672
76	9.22506	0.10840	1.4250	0.052437	2.03055	0.440065
77	9.38450	0.10656	1.2158	0.044741	1.47829	0.440351
78	9.58472	0.10433	0.80843	0.029749	0.653564	0.440477
79	9.71494	0.10293	-0.37741	0.013888	0.142440	0.440505
80	9.84417	0.10158	5.7883	0.213000	33.5045	0.446984
81	9.86883	0.10133	1.6470	0.060605	2.71245	0.447509
82	9.90304	0.10098	0.77346E-02	0.000285	0.598240E-04	0.447509
83	9.91520	0.10086	1.2036	0.044290	1.44864	0.447789
84	9.95257	0.10048	-0.78946	0.029051	0.623246	0.447909
85	10.0404	0.99598E-01	-0.80130	0.029486	0.642079	0.448033
86	10.0708	0.99297E-01	0.28998E-01	0.001067	0.840883E-03	0.448034
87	10.2108	0.97935E-01	-0.62689	0.023069	0.392993	0.448110
88	10.2206	0.97842E-01	0.40950	0.015069	0.167694	0.448142
89	10.2437	0.97621E-01	-0.21757	0.008006	0.473381E-01	0.448151
90	10.2648	0.97420E-01	0.48937E-01	0.001801	0.239486E-02	0.448152
91	10.2660	0.97409E-01	-0.19689	0.007245	0.387649E-01	0.448159
92	10.2662	0.97407E-01	0.17568	0.006465	0.308632E-01	0.448165
93	10.2711	0.97361E-01	0.12180	0.004482	0.148360E-01	0.448168
94	10.2728	0.97344E-01	-0.23863E-01	0.000878	0.569420E-03	0.448168
95	10.2795	0.97281E-01	0.91598E-02	0.000337	0.839018E-04	0.448168
96	10.2821	0.97256E-01	-0.26893E-02	0.000099	0.723246E-05	0.448168
97	10.2843	0.97236E-01	0.24350E-01	0.000896	0.592931E-03	0.448168
98	10.3599	0.96526E-01	1.6972	0.062456	2.88066	0.448725
99	10.3892	0.96254E-01	-0.83768	0.030825	0.701705	0.448861
100	10.4433	0.95755E-01	0.23849	0.008776	0.568782E-01	0.448872
101	10.4653	0.95554E-01	0.26308E-01	0.000968	0.692131E-03	0.448872
102	10.5319	0.94949E-01	-2.6458	0.097360	7.00012	0.450226
103	10.5978	0.94359E-01	-0.10537	0.003877	0.111022E-01	0.450228
104	10.7988	0.92603E-01	0.86740E-02	0.000319	0.752379E-04	0.450228
105	10.8853	0.91867E-01	-2.9041	0.106867	8.43397	0.451859
106	10.9720	0.91141E-01	-1.6277	0.059897	2.64943	0.452371
107	11.0212	0.90735E-01	-0.10353	0.003810	0.107189E-01	0.452374
108	11.1881	0.89381E-01	0.10564E-01	0.000389	0.111591E-03	0.452374
109	11.5571	0.86527E-01	19.074	0.701877	363.803	0.522729
110	11.6219	0.86045E-01	0.30800	0.011334	0.948669E-01	0.522747
111	11.6490	0.85844E-01	1.2929	0.047578	1.67167	0.523070
112	11.7051	0.85433E-01	0.13717	0.005047	0.188145E-01	0.523074
113	11.8463	0.84415E-01	-6.0504	0.222643	36.6070	0.530153
114	11.8961	0.84061E-01	-0.36535E-01	0.001344	0.133483E-02	0.530154
115	11.9750	0.83508E-01	-1.4340	0.052770	2.05644	0.530551
116	12.0387	0.83065E-01	6.6474	0.244614	44.1881	0.539097
117	12.1747	0.82137E-01	0.30719	0.011304	0.943637E-01	0.539115
118	12.3701	0.80840E-01	-0.51699	0.019024	0.267279	0.539167
119	12.5435	0.79723E-01	-1.9915	0.073285	3.96616	0.539934
120	12.5888	0.79436E-01	-1.5696	0.057757	2.46352	0.540410
121	12.9309	0.77334E-01	-1.1490	0.042282	1.32028	0.540665

122	13.0405	0.76684E-01	0.55340	0.020364	0.306252	0.540725
123	13.1256	0.76187E-01	0.54974	0.020229	0.302211	0.540783
124	13.6040	0.73508E-01	0.51530E-01	0.001896	0.265537E-02	0.540784
125	13.8265	0.72325E-01	-0.67998E-02	0.000250	0.462371E-04	0.540784
126	13.9736	0.71564E-01	0.43556E-01	0.001603	0.189713E-02	0.540784
127	14.1574	0.70634E-01	-0.79573	0.029281	0.633181	0.540906
128	14.2515	0.70168E-01	0.49725	0.018298	0.247253	0.540954
129	14.3013	0.69924E-01	-0.15409	0.005670	0.237429E-01	0.540959
130	14.4675	0.69120E-01	-0.15595E-01	0.000574	0.243195E-03	0.540959
131	14.5387	0.68782E-01	-0.51404	0.018916	0.264232	0.541010
132	14.7324	0.67877E-01	-0.20931	0.007702	0.438111E-01	0.541018
133	14.8720	0.67240E-01	-0.26718	0.009832	0.713844E-01	0.541032
134	15.0097	0.66624E-01	0.72878E-01	0.002682	0.531118E-02	0.541033
135	15.1170	0.66150E-01	0.99045	0.036447	0.980987	0.541223
136	15.2313	0.65654E-01	-0.26714	0.009830	0.713661E-01	0.541237
137	15.4310	0.64805E-01	2.9572	0.108822	8.74528	0.542928
138	15.4395	0.64769E-01	6.5005	0.239207	42.2564	0.551100
139	15.6948	0.63715E-01	0.26826	0.009872	0.719638E-01	0.551114
140	15.7036	0.63680E-01	3.2638	0.120101	10.6521	0.553174
141	15.7336	0.63558E-01	-0.20118E-01	0.000740	0.404716E-03	0.553174
142	15.8415	0.63125E-01	-0.96287	0.035432	0.927122	0.553353
143	15.9543	0.62679E-01	0.67703	0.024914	0.458368	0.553442
144	16.0529	0.62294E-01	0.15441	0.005682	0.238423E-01	0.553446
145	16.1665	0.61856E-01	-0.92819E-01	0.003416	0.861539E-02	0.553448
146	16.2207	0.61649E-01	0.42681	0.015706	0.182165	0.553483
147	16.5366	0.60472E-01	-1.1392	0.041919	1.29771	0.553734
148	16.7080	0.59852E-01	3.8854	0.142975	15.0962	0.556654
149	16.8047	0.59507E-01	0.56162	0.020667	0.315415	0.556715
150	17.3292	0.57706E-01	1.2667	0.046611	1.60441	0.557025
151	17.4187	0.57410E-01	-0.84592	0.031128	0.715581	0.557163
152	17.6686	0.56597E-01	0.31275	0.011509	0.978129E-01	0.557182
153	17.7001	0.56497E-01	-0.29740	0.010944	0.884473E-01	0.557199
154	17.8390	0.56057E-01	4.8207	0.177393	23.2391	0.561694
155	17.9162	0.55815E-01	18.232	0.670913	332.412	0.625978
156	17.9871	0.55596E-01	8.4069	0.309359	70.6756	0.639646
157	18.1188	0.55191E-01	4.2961	0.158090	18.4567	0.643215
158	18.1737	0.55024E-01	5.9999	0.220788	35.9993	0.650177
159	18.2824	0.54697E-01	1.9494	0.071734	3.80014	0.650912
160	18.3758	0.54419E-01	-0.12553E-02	0.000046	0.157572E-05	0.650912
161	18.5030	0.54045E-01	1.1198	0.041208	1.25402	0.651155
162	18.8698	0.52995E-01	-0.18056	0.006644	0.326009E-01	0.651161
163	18.9199	0.52854E-01	-1.3865	0.051020	1.92235	0.651533
164	19.2022	0.52077E-01	14.868	0.547129	221.067	0.694284
165	19.2138	0.52046E-01	-9.6221	0.354076	92.5844	0.712189
166	19.2677	0.51900E-01	0.76130	0.028015	0.579580	0.712301
167	19.4923	0.51302E-01	2.0217	0.074394	4.08710	0.713092
168	19.6693	0.50841E-01	1.2185	0.044840	1.48485	0.713379
169	19.9196	0.50202E-01	-1.0497	0.038628	1.10194	0.713592
170	19.9705	0.50074E-01	-2.5542	0.093990	6.52384	0.714853
171	20.0213	0.49947E-01	0.21534	0.007924	0.463694E-01	0.714862
172	20.0793	0.49803E-01	3.1651	0.116469	10.0177	0.716800
173	20.1728	0.49572E-01	1.0099	0.037163	1.01990	0.716997
174	20.2041	0.49495E-01	-0.26687	0.009820	0.712212E-01	0.717011
175	20.4317	0.48944E-01	2.8976	0.106625	8.39586	0.718634
176	20.4544	0.48889E-01	6.0344	0.222057	36.4144	0.725677
177	20.6250	0.48485E-01	-2.4465	0.090027	5.98529	0.726834
178	20.8332	0.48000E-01	-0.93035E-01	0.003424	0.865559E-02	0.726836
179	20.9052	0.47835E-01	-1.7623	0.064849	3.10566	0.727436
180	20.9287	0.47781E-01	-0.10204	0.003755	0.104112E-01	0.727438
181	21.3058	0.46936E-01	1.6344	0.060142	2.67112	0.727955
182	21.5811	0.46337E-01	13.690	0.503769	187.416	0.764199
183	21.5960	0.46305E-01	-9.4886	0.349166	90.0342	0.781610
184	21.7824	0.45909E-01	-6.6631	0.245193	44.3975	0.790196
185	21.9553	0.45547E-01	-3.8699	0.142406	14.9761	0.793093
186	22.2680	0.44908E-01	-0.50168	0.018461	0.251683	0.793141
187	22.4740	0.44496E-01	2.0496	0.075423	4.20097	0.793954
188	22.5742	0.44298E-01	0.41994	0.015453	0.176353	0.793988
189	22.6910	0.44070E-01	-0.45633	0.016792	0.208241	0.794028
190	22.7938	0.43872E-01	1.2121	0.044602	1.46909	0.794312
191	23.1129	0.43266E-01	0.44464	0.016362	0.197705	0.794350
192	23.5367	0.42487E-01	-0.39438E-01	0.001451	0.155532E-02	0.794351
193	23.5859	0.42398E-01	-2.3850	0.087766	5.68845	0.795451
194	23.8174	0.41986E-01	-0.13042	0.004799	0.170099E-01	0.795454
195	23.8254	0.41972E-01	-0.42792E-01	0.001575	0.183119E-02	0.795454
196	23.8596	0.41912E-01	-0.18725E-01	0.000689	0.350637E-03	0.795454

197	23.8654	0.41902E-01	-0.11287E-01	0.000415	0.127404E-03	0.795454
198	23.8769	0.41882E-01	-0.27204E-01	0.001001	0.740049E-03	0.795455
199	23.9231	0.41801E-01	0.17119	0.006299	0.293044E-01	0.795460
200	23.9536	0.41747E-01	-0.59375	0.021849	0.352539	0.795528
201	24.0050	0.41658E-01	0.71276	0.026228	0.508031	0.795627
202	24.0335	0.41609E-01	1.4321	0.052697	2.05078	0.796023
203	24.3787	0.41019E-01	-1.5927	0.058610	2.53677	0.796514
204	24.4198	0.40950E-01	12.743	0.468924	162.386	0.827917
205	24.6256	0.40608E-01	-4.5466	0.167307	20.6715	0.831915
206	24.6470	0.40573E-01	-0.59947E-01	0.002206	0.359369E-02	0.831916
207	24.7285	0.40439E-01	-5.5502	0.204236	30.8042	0.837873
208	24.8867	0.40182E-01	-4.8033	0.176753	23.0716	0.842335
209	25.2049	0.39675E-01	0.66650	0.024526	0.444216	0.842421
210	25.6422	0.38998E-01	-2.0373	0.074969	4.15062	0.843223
211	25.6630	0.38967E-01	3.1312	0.115222	9.80422	0.845119
212	25.7993	0.38761E-01	-0.66817	0.024587	0.446450	0.845206
213	25.8585	0.38672E-01	-5.0469	0.185718	25.4713	0.850132
214	25.9871	0.38481E-01	4.4448	0.163563	19.7566	0.853952
215	26.4555	0.37799E-01	7.5951	0.279486	57.6851	0.865108
216	26.7999	0.37314E-01	-1.5116	0.055624	2.28487	0.865550
217	26.9630	0.37088E-01	-1.5832	0.058258	2.50646	0.866034
218	26.9806	0.37064E-01	-0.19722	0.007257	0.388946E-01	0.866042
219	27.1263	0.36865E-01	1.9861	0.073087	3.94475	0.866805
220	27.6903	0.36114E-01	0.81104	0.029845	0.657784	0.866932
221	27.8110	0.35957E-01	-0.22595E-01	0.000831	0.510552E-03	0.866932
222	28.0041	0.35709E-01	0.59731	0.021980	0.356776	0.867001
223	28.1295	0.35550E-01	0.64065E-01	0.002357	0.410437E-02	0.867002
224	28.2001	0.35461E-01	0.97376	0.035833	0.948210	0.867185
225	28.8170	0.34702E-01	1.3629	0.050154	1.85758	0.867545
226	28.9461	0.34547E-01	2.4991	0.091964	6.24575	0.868752
227	29.0821	0.34385E-01	-0.22234	0.008182	0.494355E-01	0.868762
228	29.3112	0.34117E-01	7.3094	0.268974	53.4276	0.879094
229	29.3146	0.34113E-01	0.45180	0.016626	0.204125	0.879134
230	29.3993	0.34014E-01	0.98310	0.036176	0.966478	0.879321
231	29.4298	0.33979E-01	-0.84751	0.031187	0.718280	0.879459
232	29.7268	0.33640E-01	-0.11658	0.004290	0.135905E-01	0.879462
233	29.7350	0.33630E-01	1.8577	0.068361	3.45109	0.880129
234	30.3319	0.32969E-01	-0.39082	0.014382	0.152742	0.880159
235	30.6507	0.32626E-01	1.8494	0.068055	3.42029	0.880820
236	30.8270	0.32439E-01	-3.1661	0.116506	10.0241	0.882759
237	31.1413	0.32112E-01	-5.4277	0.199728	29.4594	0.888456
238	31.2432	0.32007E-01	13.833	0.509018	191.342	0.925459
239	31.4902	0.31756E-01	-2.2140	0.081470	4.90165	0.926407
240	31.6431	0.31602E-01	2.1207	0.078040	4.49752	0.927277
241	31.8589	0.31388E-01	7.0778	0.260450	50.0947	0.936965
242	31.9049	0.31343E-01	1.9228	0.070756	3.69719	0.937680
243	31.9989	0.31251E-01	-7.3247	0.269536	53.6510	0.948055
244	32.0651	0.31187E-01	-7.2020	0.265020	51.8684	0.958086
245	32.2205	0.31036E-01	2.4165	0.088922	5.83926	0.959215
246	32.2446	0.31013E-01	-11.327	0.416797	128.290	0.984025
247	32.3380	0.30923E-01	-0.96424E-01	0.003548	0.929752E-02	0.984027
248	32.5313	0.30740E-01	3.7228	0.136993	13.8593	0.986707
249	32.5906	0.30684E-01	3.9716	0.146149	15.7737	0.989757
250	32.7122	0.30570E-01	-2.8998	0.106706	8.40863	0.991384
251	32.7659	0.30520E-01	-2.6795	0.098602	7.17984	0.992772
252	32.8779	0.30416E-01	4.3448	0.159880	18.8771	0.996423
253	32.9055	0.30390E-01	1.1877	0.043705	1.41058	0.996695
254	32.9931	0.30309E-01	-1.7360	0.063881	3.01357	0.997278
255	33.2296	0.30094E-01	0.73140	0.026914	0.534943	0.997382
256	33.4848	0.29864E-01	3.6795	0.135401	13.5390	1.00000

SUM OF EFFECTIVE MASSES= 5170.95

***** PARTICIPATION FACTOR CALCULATION ***** Z DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.249282	4.0115	28.396	0.862591	806.318	0.129582
2	0.311981	3.2053	-0.53573E-01	0.001627	0.287006E-02	0.129583
3	1.20475	0.83005	3.4265	0.104088	11.7408	0.131470
4	1.26330	0.79158	24.642	0.748573	607.247	0.229060
5	1.30662	0.76533	0.82823E-01	0.002516	0.685972E-02	0.229061
6	1.64740	0.60702	32.919	1.000000	1083.67	0.403216
7	1.75809	0.56880	-21.663	0.658076	469.298	0.478636

8	1.76747	0.56578	16.781	0.509771	281.609	0.523893
9	1.85821	0.53815	9.9232	0.301440	98.4690	0.539718
10	1.95922	0.51041	11.083	0.336665	122.827	0.559457
11	2.20685	0.45313	-1.2663	0.038468	1.60357	0.559715
12	2.38052	0.42008	5.4896	0.166760	30.1355	0.564558
13	2.42863	0.41175	13.534	0.411131	183.172	0.593995
14	2.48768	0.40198	-4.5112	0.137038	20.3505	0.597266
15	2.54519	0.39290	-0.27360	0.008311	0.748573E-01	0.597278
16	2.54635	0.39272	0.84281E-01	0.002560	0.710326E-02	0.597279
17	2.64555	0.37799	1.5734	0.047796	2.47558	0.597677
18	2.72509	0.36696	-12.635	0.383819	159.643	0.623333
19	2.79999	0.35714	2.5346	0.076995	6.42426	0.624365
20	2.98084	0.33548	-0.34966	0.010622	0.122265	0.624385
21	3.16998	0.31546	-0.67229E-02	0.000204	0.451968E-04	0.624385
22	3.19679	0.31281	-0.13799E-01	0.000419	0.190421E-03	0.624385
23	3.36620	0.29707	1.3853	0.042082	1.91911	0.624693
24	3.37205	0.29656	0.37367	0.011351	0.139626	0.624716
25	3.42989	0.29155	-1.0327	0.031372	1.06657	0.624887
26	3.80934	0.26251	-4.9057	0.149021	24.0654	0.628755
27	3.91629	0.25534	10.904	0.331247	118.905	0.647864
28	4.11444	0.24305	2.6954	0.081881	7.26541	0.649031
29	4.31003	0.23202	0.89522E-01	0.002719	0.801414E-02	0.649033
30	4.37930	0.22835	-5.2923	0.160768	28.0089	0.653534
31	4.53316	0.22060	1.1162	0.033907	1.24588	0.653734
32	4.53439	0.22054	-0.25770	0.007828	0.664101E-01	0.653745
33	4.69338	0.21307	1.0270	0.031196	1.05465	0.653914
34	4.70259	0.21265	0.93630	0.028442	0.876658	0.654055
35	4.74571	0.21072	0.77665	0.023593	0.603180	0.654152
36	4.80986	0.20791	2.0550	0.062425	4.22287	0.654831
37	4.85756	0.20586	-2.6178	0.079523	6.85310	0.655932
38	4.86637	0.20549	1.7382	0.052802	3.02134	0.656418
39	4.96263	0.20151	1.2640	0.038398	1.59778	0.656674
40	4.99028	0.20039	0.60555	0.018395	0.366691	0.656733
41	5.02589	0.19897	3.7642	0.114347	14.1692	0.659010
42	5.15627	0.19394	-0.13431	0.004080	0.180404E-01	0.659013
43	5.29876	0.18872	-1.8570	0.056410	3.44829	0.659568
44	5.52333	0.18105	-2.2578	0.068587	5.09783	0.660387
45	5.62569	0.17776	3.6639	0.111299	13.4240	0.662544
46	5.64538	0.17714	-0.42996E-01	0.001306	0.184869E-02	0.662544
47	5.79112	0.17268	2.6084	0.079237	6.80384	0.663638
48	6.17337	0.16199	0.54126	0.016442	0.292967	0.663685
49	6.28484	0.15911	-1.0683	0.032451	1.14117	0.663868
50	6.31260	0.15841	5.0118	0.152247	25.1186	0.667905
51	6.86548	0.14566	-1.7295	0.052536	2.99101	0.668386
52	7.19986	0.13889	10.799	0.328044	116.617	0.687127
53	7.24207	0.13808	-19.895	0.604346	395.792	0.750734
54	7.26957	0.13756	7.7661	0.235915	60.3124	0.760427
55	7.39474	0.13523	-0.92071E-01	0.002797	0.847708E-02	0.760428
56	7.65869	0.13057	-4.0650	0.123486	16.5246	0.763084
57	7.77715	0.12858	2.5692	0.078047	6.60093	0.764145
58	7.84511	0.12747	5.4444	0.165386	29.6411	0.768909
59	7.89379	0.12668	-0.55612	0.016894	0.309273	0.768958
60	8.01910	0.12470	0.78544	0.023860	0.616920	0.769057
61	8.04478	0.12430	4.5235	0.137413	20.4621	0.772346
62	8.18078	0.12224	3.3276	0.101083	11.0728	0.774125
63	8.30940	0.12035	-0.40146	0.012195	0.161172	0.774151
64	8.36463	0.11955	-0.46229	0.014043	0.213714	0.774186
65	8.54914	0.11697	0.25149E-01	0.000764	0.632459E-03	0.774186
66	8.74644	0.11433	-1.9209	0.058354	3.69004	0.774779
67	8.77174	0.11400	0.92350	0.028054	0.852854	0.774916
68	8.81360	0.11346	-0.13868	0.004213	0.192310E-01	0.774919
69	8.87335	0.11270	-0.94880E-01	0.002882	0.900222E-02	0.774920
70	8.96278	0.11157	-0.97842	0.029722	0.957298	0.775074
71	9.04400	0.11057	7.0702	0.214774	49.9875	0.783108
72	9.07511	0.11019	6.0769	0.184600	36.9282	0.789042
73	9.08581	0.11006	-0.25603	0.007778	0.655507E-01	0.789053
74	9.13526	0.10947	-2.3243	0.070606	5.40229	0.789921
75	9.17344	0.10901	1.5846	0.048136	2.51090	0.790324
76	9.22506	0.10840	-2.6615	0.080849	7.08340	0.791463
77	9.38450	0.10656	-6.9267	0.210417	47.9797	0.799174
78	9.58472	0.10433	-5.4084	0.164294	29.2511	0.803874
79	9.71494	0.10293	0.30062	0.009132	0.903724E-01	0.803889
80	9.84417	0.10158	1.0600	0.032200	1.12358	0.804070
81	9.86883	0.10133	5.0635	0.153817	25.6392	0.808190
82	9.90304	0.10098	2.9559	0.089792	8.73718	0.809594

83	9.91520	0.10086	1.3549	0.041160	1.83586	0.809889
84	9.95257	0.10048	2.6286	0.079849	6.90934	0.811000
85	10.0404	0.99598E-01	-0.85624	0.026010	0.733139	0.811117
86	10.0708	0.99297E-01	3.9417	0.119737	15.5366	0.813614
87	10.2108	0.97935E-01	5.9069	0.179436	34.8910	0.819222
88	10.2206	0.97842E-01	-3.5977	0.109289	12.9433	0.821302
89	10.2437	0.97621E-01	1.4641	0.044475	2.14351	0.821646
90	10.2648	0.97420E-01	-1.0736	0.032614	1.15269	0.821831
91	10.2660	0.97409E-01	3.0443	0.092478	9.26770	0.823321
92	10.2662	0.97407E-01	-2.6062	0.079171	6.79249	0.824412
93	10.2711	0.97361E-01	-1.1446	0.034771	1.31022	0.824623
94	10.2728	0.97344E-01	0.23447	0.007123	0.549776E-01	0.824632
95	10.2795	0.97281E-01	-0.53202E-01	0.001616	0.283041E-02	0.824632
96	10.2821	0.97256E-01	0.60901E-01	0.001850	0.370889E-02	0.824633
97	10.2843	0.97236E-01	-0.10258	0.003116	0.105229E-01	0.824635
98	10.3599	0.96526E-01	-4.1645	0.126507	17.3431	0.827422
99	10.3892	0.96254E-01	-10.592	0.321770	112.199	0.845453
100	10.4433	0.95755E-01	-0.45774	0.013905	0.209524	0.845487
101	10.4653	0.95554E-01	3.6612	0.111218	13.4043	0.847641
102	10.5319	0.94949E-01	11.396	0.346189	129.875	0.868513
103	10.5978	0.94359E-01	13.999	0.425246	195.965	0.900006
104	10.7988	0.92603E-01	-1.0311	0.031323	1.06323	0.900177
105	10.8853	0.91867E-01	-0.17717	0.005382	0.313897E-01	0.900182
106	10.9720	0.91141E-01	1.7729	0.053856	3.14310	0.900687
107	11.0212	0.90735E-01	0.53844E-01	0.001636	0.289920E-02	0.900688
108	11.1881	0.89381E-01	0.68911	0.020933	0.474876	0.900764
109	11.5571	0.86527E-01	0.97046	0.029480	0.941791	0.900915
110	11.6219	0.86045E-01	0.77572	0.023564	0.601737	0.901012
111	11.6490	0.85844E-01	0.36079	0.010960	0.130173	0.901033
112	11.7051	0.85433E-01	0.32135E-01	0.000976	0.103268E-02	0.901033
113	11.8463	0.84415E-01	-0.30805	0.009358	0.948926E-01	0.901048
114	11.8961	0.84061E-01	2.9182	0.088649	8.51611	0.902417
115	11.9750	0.83508E-01	0.63954	0.019428	0.409013	0.902483
116	12.0387	0.83065E-01	0.68631	0.020848	0.471018	0.902558
117	12.1747	0.82137E-01	0.41183	0.012510	0.169605	0.902586
118	12.3701	0.80840E-01	0.16181	0.004915	0.261821E-01	0.902590
119	12.5435	0.79723E-01	0.17133	0.005205	0.293535E-01	0.902595
120	12.5888	0.79436E-01	-0.30275E-01	0.000920	0.916546E-03	0.902595
121	12.9309	0.77334E-01	0.17019	0.005170	0.289635E-01	0.902599
122	13.0405	0.76684E-01	-0.98133	0.029810	0.963009	0.902754
123	13.1256	0.76187E-01	-4.5302	0.137616	20.5228	0.906052
124	13.6040	0.73508E-01	9.0013	0.273437	81.0237	0.919074
125	13.8265	0.72325E-01	0.72641E-01	0.002207	0.527670E-02	0.919074
126	13.9736	0.71564E-01	1.9289	0.058594	3.72052	0.919672
127	14.1574	0.70634E-01	1.5393	0.046759	2.36933	0.920053
128	14.2515	0.70168E-01	-2.9603	0.089927	8.76342	0.921461
129	14.3013	0.69924E-01	0.88466	0.026874	0.782622	0.921587
130	14.4675	0.69120E-01	-0.22840E-01	0.000694	0.521652E-03	0.921587
131	14.5387	0.68782E-01	-2.1943	0.066657	4.81498	0.922361
132	14.7324	0.67877E-01	1.2645	0.038414	1.59906	0.922618
133	14.8720	0.67240E-01	0.92542	0.028112	0.856407	0.922756
134	15.0097	0.66624E-01	0.14753	0.004481	0.217638E-01	0.922759
135	15.1170	0.66150E-01	2.4818	0.075392	6.15949	0.923749
136	15.2313	0.65654E-01	3.9166	0.118976	15.3397	0.926214
137	15.4310	0.64805E-01	-0.18258	0.005546	0.333369E-01	0.926220
138	15.4395	0.64769E-01	0.91388	0.027761	0.835178	0.926354
139	15.6948	0.63715E-01	0.65103E-01	0.001978	0.423840E-02	0.926355
140	15.7036	0.63680E-01	0.14859	0.004514	0.220797E-01	0.926358
141	15.7336	0.63558E-01	-0.20452E-01	0.000621	0.418283E-03	0.926358
142	15.8415	0.63125E-01	-1.3798	0.041916	1.90391	0.926664
143	15.9543	0.62679E-01	4.3482	0.132087	18.9068	0.929703
144	16.0529	0.62294E-01	0.39410	0.011972	0.155314	0.929728
145	16.1665	0.61856E-01	0.50859	0.015450	0.258668	0.929769
146	16.2207	0.61649E-01	0.55679	0.016914	0.310014	0.929819
147	16.5366	0.60472E-01	-0.16090	0.004888	0.258888E-01	0.929823
148	16.7080	0.59852E-01	1.4172	0.043051	2.00842	0.930146
149	16.8047	0.59507E-01	-0.35750	0.010860	0.127810	0.930166
150	17.3292	0.57706E-01	0.47726	0.014498	0.227779	0.930203
151	17.4187	0.57410E-01	-4.4994	0.136682	20.2450	0.933457
152	17.6686	0.56597E-01	-1.9561	0.059420	3.82617	0.934072
153	17.7001	0.56497E-01	0.17063E-01	0.000518	0.291160E-03	0.934072
154	17.8390	0.56057E-01	-0.35176	0.010686	0.123735	0.934091
155	17.9162	0.55815E-01	0.24319	0.007388	0.591425E-01	0.934101
156	17.9871	0.55596E-01	0.56937	0.017296	0.324181	0.934153
157	18.1188	0.55191E-01	-2.0792	0.063160	4.32296	0.934848

158	18.1737	0.55024E-01	1.3934	0.042328	1.94153	0.935160
159	18.2824	0.54697E-01	2.5620	0.077827	6.56375	0.936215
160	18.3758	0.54419E-01	0.29404	0.008932	0.864620E-01	0.936229
161	18.5030	0.54045E-01	-0.77249	0.023466	0.596743	0.936324
162	18.8698	0.52995E-01	0.90354	0.027447	0.816389	0.936456
163	18.9199	0.52854E-01	0.85030	0.025830	0.723002	0.936572
164	19.2022	0.52077E-01	-0.23742	0.007212	0.563692E-01	0.936581
165	19.2138	0.52046E-01	1.2182	0.037006	1.48404	0.936819
166	19.2677	0.51900E-01	5.2728	0.160173	27.8019	0.941287
167	19.4923	0.51302E-01	1.0151	0.030837	1.03050	0.941453
168	19.6693	0.50841E-01	-2.5041	0.076067	6.27031	0.942461
169	19.9196	0.50202E-01	0.18601	0.005650	0.345981E-01	0.942466
170	19.9705	0.50074E-01	0.75140	0.022826	0.564600	0.942557
171	20.0213	0.49947E-01	-0.19750	0.005999	0.390050E-01	0.942563
172	20.0793	0.49803E-01	-0.71353	0.021675	0.509125	0.942645
173	20.1728	0.49572E-01	0.49538	0.015048	0.245400	0.942685
174	20.2041	0.49495E-01	-0.43209E-01	0.001313	0.186701E-02	0.942685
175	20.4317	0.48944E-01	-0.62817	0.019082	0.394601	0.942748
176	20.4544	0.48889E-01	-2.8776	0.087414	8.28059	0.944079
177	20.6250	0.48485E-01	0.29775	0.009045	0.886522E-01	0.944093
178	20.8332	0.48000E-01	0.36986	0.011235	0.136797	0.944115
179	20.9052	0.47835E-01	-2.1279	0.064641	4.52801	0.944843
180	20.9287	0.47781E-01	-4.5486	0.138175	20.6896	0.948168
181	21.3058	0.46936E-01	-7.7444	0.235254	59.9752	0.957807
182	21.5811	0.46337E-01	5.6636	0.172046	32.0762	0.962961
183	21.5960	0.46305E-01	9.1325	0.277421	83.4016	0.976365
184	21.7824	0.45909E-01	-0.93268	0.028332	0.869885	0.976505
185	21.9553	0.45547E-01	-5.4897	0.166762	30.1365	0.981348
186	22.2680	0.44908E-01	0.74944E-01	0.002277	0.561665E-02	0.981349
187	22.4740	0.44496E-01	-3.4846	0.105853	12.1423	0.983300
188	22.5742	0.44298E-01	0.35333	0.010733	0.124840	0.983320
189	22.6910	0.44070E-01	-0.22005	0.006685	0.484223E-01	0.983328
190	22.7938	0.43872E-01	0.58747	0.017846	0.345124	0.983383
191	23.1129	0.43266E-01	-0.26541E-01	0.000806	0.704401E-03	0.983384
192	23.5367	0.42487E-01	0.32547E-01	0.000989	0.105934E-02	0.983384
193	23.5859	0.42398E-01	0.81071E-01	0.002463	0.657243E-02	0.983385
194	23.8174	0.41986E-01	-0.43231E-02	0.000131	0.186896E-04	0.983385
195	23.8254	0.41972E-01	-0.21735E-03	0.000007	0.472415E-07	0.983385
196	23.8596	0.41912E-01	-0.10785E-02	0.000033	0.116313E-05	0.983385
197	23.8654	0.41902E-01	-0.10647E-03	0.000003	0.113365E-07	0.983385
198	23.8769	0.41882E-01	0.28426E-03	0.000009	0.808065E-07	0.983385
199	23.9231	0.41801E-01	0.42391E-02	0.000129	0.179703E-04	0.983385
200	23.9536	0.41747E-01	-0.11785	0.003580	0.138879E-01	0.983387
201	24.0050	0.41658E-01	0.21353E-01	0.000649	0.455962E-03	0.983387
202	24.0335	0.41609E-01	0.46600E-01	0.001416	0.217154E-02	0.983387
203	24.3787	0.41019E-01	-0.85650E-02	0.000260	0.733600E-04	0.983387
204	24.4198	0.40950E-01	0.95319	0.028955	0.908563	0.983533
205	24.6256	0.40608E-01	0.48903	0.014855	0.239149	0.983572
206	24.6470	0.40573E-01	-0.38962	0.011836	0.151805	0.983596
207	24.7285	0.40439E-01	-0.76779	0.023323	0.589499	0.983691
208	24.8867	0.40182E-01	-0.17055	0.005181	0.290882E-01	0.983696
209	25.2049	0.39675E-01	-0.39259	0.011926	0.154129	0.983720
210	25.6422	0.38998E-01	-0.97722	0.029685	0.954959	0.983874
211	25.6630	0.38967E-01	1.1845	0.035981	1.40299	0.984099
212	25.7993	0.38761E-01	-0.32982	0.010019	0.108778	0.984117
213	25.8585	0.38672E-01	1.0257	0.031158	1.05203	0.984286
214	25.9871	0.38481E-01	1.3308	0.040427	1.77112	0.984571
215	26.4555	0.37799E-01	-0.41578	0.012630	0.172871	0.984598
216	26.7999	0.37314E-01	-0.19312	0.005866	0.372934E-01	0.984604
217	26.9630	0.37088E-01	0.12041	0.003658	0.144996E-01	0.984607
218	26.9806	0.37064E-01	-0.80278	0.024386	0.644457	0.984710
219	27.1263	0.36865E-01	0.45887E-01	0.001394	0.210562E-02	0.984711
220	27.6903	0.36114E-01	0.30158	0.009161	0.909523E-01	0.984725
221	27.8110	0.35957E-01	0.16154E-01	0.000491	0.260954E-03	0.984725
222	28.0041	0.35709E-01	-0.85294E-01	0.002591	0.727500E-02	0.984726
223	28.1295	0.35550E-01	0.39337E-01	0.001195	0.154742E-02	0.984727
224	28.2001	0.35461E-01	0.91904	0.027918	0.844634	0.984862
225	28.8170	0.34702E-01	0.47760E-01	0.001451	0.228100E-02	0.984863
226	28.9461	0.34547E-01	0.10016	0.003042	0.100311E-01	0.984864
227	29.0821	0.34385E-01	-0.43822E-01	0.001331	0.192038E-02	0.984865
228	29.3112	0.34117E-01	-0.36084	0.010961	0.130205	0.984886
229	29.3146	0.34113E-01	-0.81097	0.024635	0.657679	0.984991
230	29.3993	0.34014E-01	0.12843E-01	0.000390	0.164931E-03	0.984991
231	29.4298	0.33979E-01	-0.11955E-02	0.000036	0.142922E-05	0.984991
232	29.7268	0.33640E-01	-0.31230E-01	0.000949	0.975294E-03	0.984991

233	29.7350	0.33630E-01	0.86955E-01	0.002641	0.756115E-02	0.984993
234	30.3319	0.32969E-01	0.90740E-01	0.002756	0.823380E-02	0.984994
235	30.6507	0.32626E-01	0.74936E-01	0.002276	0.561538E-02	0.984995
236	30.8270	0.32439E-01	0.44098E-01	0.001340	0.194467E-02	0.984995
237	31.1413	0.32112E-01	0.34811	0.010575	0.121179	0.985015
238	31.2432	0.32007E-01	-0.79609	0.024183	0.633758	0.985117
239	31.4902	0.31756E-01	-0.43404	0.013185	0.188394	0.985147
240	31.6431	0.31602E-01	0.94479	0.028700	0.892623	0.985290
241	31.8589	0.31388E-01	1.3510	0.041039	1.82509	0.985584
242	31.9049	0.31343E-01	1.6702	0.050738	2.78970	0.986032
243	31.9989	0.31251E-01	-1.3918	0.042280	1.93715	0.986343
244	32.0651	0.31187E-01	-1.1127	0.033802	1.23820	0.986542
245	32.2205	0.31036E-01	0.66123E-01	0.002009	0.437231E-02	0.986543
246	32.2446	0.31013E-01	-0.99460	0.030214	0.989237	0.986702
247	32.3380	0.30923E-01	-0.97357	0.029575	0.947847	0.986854
248	32.5313	0.30740E-01	0.47185	0.014334	0.222646	0.986890
249	32.5906	0.30684E-01	-0.74983	0.022778	0.562238	0.986980
250	32.7122	0.30570E-01	8.2668	0.251124	68.3397	0.997963
251	32.7659	0.30520E-01	3.2229	0.097903	10.3870	0.999632
252	32.8779	0.30416E-01	-0.16559	0.005030	0.274188E-01	0.999637
253	32.9055	0.30390E-01	0.35425	0.010761	0.125492	0.999657
254	32.9931	0.30309E-01	-0.26167	0.007949	0.684688E-01	0.999668
255	33.2296	0.30094E-01	-0.10496E-01	0.000319	0.110162E-03	0.999668
256	33.4848	0.29864E-01	1.4372	0.043659	2.06559	1.00000

SUM OF EFFECTIVE MASSES= 6222.44

***** PARTICIPATION FACTOR CALCULATION *****ROTX DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.249282	4.0115	26121.	0.819313	0.682303E+09	0.158388
2	0.311981	3.2053	-46.743	0.001466	2184.91	0.158388
3	1.20475	0.83005	3289.3	0.103173	0.108196E+08	0.160900
4	1.26330	0.79158	22924.	0.719031	0.525501E+09	0.282888
5	1.30662	0.76533	60.390	0.001894	3646.95	0.282889
6	1.64740	0.60702	31882.	1.000000	0.101643E+10	0.518840
7	1.75809	0.56880	-16291.	0.510987	0.265398E+09	0.580448
8	1.76747	0.56578	6677.7	0.209454	0.445918E+08	0.590800
9	1.85821	0.53815	8939.7	0.280402	0.799174E+08	0.609351
10	1.95922	0.51041	11258.	0.353129	0.126749E+09	0.638774
11	2.20685	0.45313	-762.31	0.023911	581111.	0.638909
12	2.38052	0.42008	2727.6	0.085555	0.743994E+07	0.640636
13	2.42863	0.41175	13757.	0.431492	0.189245E+09	0.684567
14	2.48768	0.40198	-4488.6	0.140790	0.201476E+08	0.689244
15	2.54519	0.39290	-287.26	0.009010	82516.5	0.689263
16	2.54635	0.39272	88.648	0.002781	7858.53	0.689265
17	2.64555	0.37799	1477.9	0.046356	0.218419E+07	0.689772
18	2.72509	0.36696	-12148.	0.381027	0.147567E+09	0.724028
19	2.79999	0.35714	2515.7	0.078908	0.632871E+07	0.725497
20	2.98084	0.33548	2066.7	0.064823	0.427105E+07	0.726488
21	3.16998	0.31546	5239.6	0.164346	0.274535E+08	0.732861
22	3.19679	0.31281	-7779.1	0.244002	0.605152E+08	0.746909
23	3.36620	0.29707	730.04	0.022899	532961.	0.747033
24	3.37205	0.29656	208.15	0.006529	43325.5	0.747043
25	3.42989	0.29155	-1260.7	0.039545	0.158947E+07	0.747412
26	3.80934	0.26251	-3408.8	0.106920	0.116198E+08	0.750109
27	3.91629	0.25534	7021.4	0.220233	0.492994E+08	0.761553
28	4.11444	0.24305	1387.8	0.043530	0.192596E+07	0.762001
29	4.31003	0.23202	5564.3	0.174529	0.309609E+08	0.769188
30	4.37930	0.22835	-3966.6	0.124418	0.157342E+08	0.772840
31	4.53316	0.22060	-899.87	0.028226	809773.	0.773028
32	4.53439	0.22054	2872.8	0.090108	0.825286E+07	0.774944
33	4.69338	0.21307	1395.7	0.043777	0.194792E+07	0.775396
34	4.70259	0.21265	3291.4	0.103239	0.108333E+08	0.777911
35	4.74571	0.21072	3854.2	0.120892	0.148551E+08	0.781359
36	4.80986	0.20791	1664.8	0.052218	0.277152E+07	0.782003
37	4.85756	0.20586	-664.56	0.020845	441638.	0.782105
38	4.86637	0.20549	1826.1	0.057278	0.333462E+07	0.782879
39	4.96263	0.20151	332.35	0.010424	110454.	0.782905
40	4.99028	0.20039	385.70	0.012098	148766.	0.782940
41	5.02589	0.19897	2332.8	0.073172	0.544216E+07	0.784203
42	5.15627	0.19394	60.444	0.001896	3653.49	0.784204
43	5.29876	0.18872	343.04	0.010760	117676.	0.784231

44	5.52333	0.18105	-186.66	0.005855	34843.5	0.784239
45	5.62569	0.17776	2679.2	0.084036	0.717809E+07	0.785905
46	5.64538	0.17714	1852.4	0.058102	0.343134E+07	0.786702
47	5.79112	0.17268	1105.3	0.034670	0.122176E+07	0.786986
48	6.17337	0.16199	35.795	0.001123	1281.31	0.786986
49	6.28484	0.15911	-159.51	0.005003	25444.0	0.786992
50	6.31260	0.15841	1575.3	0.049412	0.248163E+07	0.787568
51	6.86548	0.14566	-1051.1	0.032970	0.110491E+07	0.787824
52	7.19986	0.13889	5063.6	0.158825	0.256399E+08	0.793776
53	7.24207	0.13808	-10719.	0.336201	0.114888E+09	0.820446
54	7.26957	0.13756	2981.5	0.093517	0.888918E+07	0.822510
55	7.39474	0.13523	2062.0	0.064678	0.425193E+07	0.823497
56	7.65869	0.13057	-988.30	0.030999	976732.	0.823723
57	7.77715	0.12858	156.88	0.004921	24610.5	0.823729
58	7.84511	0.12747	3158.1	0.099056	0.997334E+07	0.826044
59	7.89379	0.12668	30.861	0.000968	952.406	0.826044
60	8.01910	0.12470	-1818.4	0.057037	0.330663E+07	0.826812
61	8.04478	0.12430	-681.86	0.021387	464930.	0.826920
62	8.18078	0.12224	1941.1	0.060885	0.376795E+07	0.827795
63	8.30940	0.12035	1345.1	0.042192	0.180942E+07	0.828215
64	8.36463	0.11955	-257.39	0.008073	66248.3	0.828230
65	8.54914	0.11697	127.35	0.003994	16217.5	0.828234
66	8.74644	0.11433	-791.70	0.024833	626791.	0.828379
67	8.77174	0.11400	1108.5	0.034770	0.122879E+07	0.828665
68	8.81360	0.11346	-57.009	0.001788	3250.04	0.828665
69	8.87335	0.11270	-69.516	0.002180	4832.47	0.828666
70	8.96278	0.11157	-423.16	0.013273	179068.	0.828708
71	9.04400	0.11057	4594.4	0.144110	0.211090E+08	0.833608
72	9.07511	0.11019	2571.6	0.080661	0.661303E+07	0.835143
73	9.08581	0.11006	1068.0	0.033498	0.114053E+07	0.835408
74	9.13526	0.10947	-1911.6	0.059959	0.365419E+07	0.836256
75	9.17344	0.10901	-2551.6	0.080035	0.651079E+07	0.837768
76	9.22506	0.10840	32.740	0.001027	1071.89	0.837768
77	9.38450	0.10656	-3034.3	0.095174	0.920700E+07	0.839905
78	9.58472	0.10433	-2318.1	0.072710	0.537360E+07	0.841153
79	9.71494	0.10293	49.448	0.001551	2445.14	0.841153
80	9.84417	0.10158	759.57	0.023825	576954.	0.841287
81	9.86883	0.10133	3259.7	0.102245	0.106258E+08	0.843754
82	9.90304	0.10098	-2502.5	0.078493	0.626242E+07	0.845208
83	9.91520	0.10086	3454.7	0.108361	0.119351E+08	0.847978
84	9.95257	0.10048	-808.48	0.025359	653641.	0.848130
85	10.0404	0.99598E-01	-917.65	0.028783	842080.	0.848325
86	10.0708	0.99297E-01	2095.4	0.065724	0.439057E+07	0.849345
87	10.2108	0.97935E-01	2054.6	0.064444	0.422121E+07	0.850324
88	10.2206	0.97842E-01	-1216.8	0.038168	0.148070E+07	0.850668
89	10.2437	0.97621E-01	435.09	0.013647	189301.	0.850712
90	10.2648	0.97420E-01	-442.37	0.013876	195694.	0.850758
91	10.2660	0.97409E-01	1200.0	0.037640	0.144006E+07	0.851092
92	10.2662	0.97407E-01	-1015.1	0.031841	0.103053E+07	0.851331
93	10.2711	0.97361E-01	-389.49	0.012217	151701.	0.851366
94	10.2728	0.97344E-01	79.711	0.002500	6353.78	0.851368
95	10.2795	0.97281E-01	-16.392	0.000514	268.695	0.851368
96	10.2821	0.97256E-01	20.848	0.000654	434.634	0.851368
97	10.2843	0.97236E-01	-26.779	0.000840	717.130	0.851368
98	10.3599	0.96526E-01	-179.64	0.005635	32270.3	0.851376
99	10.3892	0.96254E-01	-5245.8	0.164540	0.275183E+08	0.857764
100	10.4433	0.95755E-01	45.620	0.001431	2081.21	0.857764
101	10.4653	0.95554E-01	1736.7	0.054473	0.301608E+07	0.858464
102	10.5319	0.94949E-01	2055.1	0.064462	0.422360E+07	0.859445
103	10.5978	0.94359E-01	7164.6	0.224727	0.513320E+08	0.871361
104	10.7988	0.92603E-01	-514.73	0.016145	264942.	0.871422
105	10.8853	0.91867E-01	-846.32	0.026546	716255.	0.871588
106	10.9720	0.91141E-01	-254.81	0.007992	64929.1	0.871603
107	11.0212	0.90735E-01	-41.367	0.001298	1711.26	0.871604
108	11.1881	0.89381E-01	437.06	0.013709	191019.	0.871648
109	11.5571	0.86527E-01	5550.4	0.174094	0.308067E+08	0.878800
110	11.6219	0.86045E-01	483.53	0.015166	233800.	0.878854
111	11.6490	0.85844E-01	528.85	0.016588	279681.	0.878919
112	11.7051	0.85433E-01	124.53	0.003906	15508.3	0.878922
113	11.8463	0.84415E-01	-1725.2	0.054114	0.297646E+07	0.879613
114	11.8961	0.84061E-01	2229.5	0.069931	0.497068E+07	0.880767
115	11.9750	0.83508E-01	115.16	0.003612	13261.8	0.880770
116	12.0387	0.83065E-01	2275.4	0.071370	0.517740E+07	0.881972
117	12.1747	0.82137E-01	393.68	0.012348	154982.	0.882008
118	12.3701	0.80840E-01	-0.16621	0.000005	0.276261E-01	0.882008

119	12.5435	0.79723E-01	-738.93	0.023177	546013.	0.882135
120	12.5888	0.79436E-01	-457.39	0.014347	209207.	0.882183
121	12.9309	0.77334E-01	2251.8	0.070629	0.507049E+07	0.883360
122	13.0405	0.76684E-01	-588.92	0.018472	346825.	0.883441
123	13.1256	0.76187E-01	-1860.2	0.058349	0.346051E+07	0.884244
124	13.6040	0.73508E-01	4705.8	0.147602	0.221443E+08	0.889385
125	13.8265	0.72325E-01	21.651	0.000679	468.783	0.889385
126	13.9736	0.71564E-01	681.88	0.021388	464966.	0.889493
127	14.1574	0.70634E-01	318.81	0.010000	101640.	0.889516
128	14.2515	0.70168E-01	-747.59	0.023449	558887.	0.889646
129	14.3013	0.69924E-01	261.89	0.008214	68586.6	0.889662
130	14.4675	0.69120E-01	5.8072	0.000182	33.7233	0.889662
131	14.5387	0.68782E-01	-1243.7	0.039010	0.154676E+07	0.890021
132	14.7324	0.67877E-01	101.49	0.003183	10300.3	0.890024
133	14.8720	0.67240E-01	262.16	0.008223	68730.2	0.890040
134	15.0097	0.66624E-01	426.37	0.013374	181791.	0.890082
135	15.1170	0.66150E-01	1666.9	0.052285	0.277867E+07	0.890727
136	15.2313	0.65654E-01	271.09	0.008503	73492.4	0.890744
137	15.4310	0.64805E-01	868.20	0.027232	753767.	0.890919
138	15.4395	0.64769E-01	2150.2	0.067444	0.462341E+07	0.891992
139	15.6948	0.63715E-01	-565.00	0.017722	319227.	0.892066
140	15.7036	0.63680E-01	1100.1	0.034505	0.121018E+07	0.892347
141	15.7336	0.63558E-01	-61.031	0.001914	3724.81	0.892348
142	15.8415	0.63125E-01	-257.43	0.008075	66269.0	0.892363
143	15.9543	0.62679E-01	5161.6	0.161900	0.266422E+08	0.898548
144	16.0529	0.62294E-01	375.78	0.011787	141209.	0.898581
145	16.1665	0.61856E-01	2653.5	0.083230	0.704109E+07	0.900215
146	16.2207	0.61649E-01	437.44	0.013721	191357.	0.900260
147	16.5366	0.60472E-01	-721.40	0.022628	520419.	0.900380
148	16.7080	0.59852E-01	-1133.6	0.035556	0.128498E+07	0.900679
149	16.8047	0.59507E-01	489.14	0.015343	239263.	0.900734
150	17.3292	0.57706E-01	660.59	0.020720	436382.	0.900836
151	17.4187	0.57410E-01	-702.97	0.022049	494162.	0.900950
152	17.6686	0.56597E-01	-1247.7	0.039137	0.155688E+07	0.901312
153	17.7001	0.56497E-01	-1175.1	0.036858	0.138084E+07	0.901632
154	17.8390	0.56057E-01	2477.1	0.077696	0.613594E+07	0.903057
155	17.9162	0.55815E-01	5420.0	0.170005	0.293765E+08	0.909876
156	17.9871	0.55596E-01	2391.0	0.074995	0.571673E+07	0.911203
157	18.1188	0.55191E-01	-1811.7	0.056827	0.328238E+07	0.911965
158	18.1737	0.55024E-01	2565.9	0.080481	0.658361E+07	0.913493
159	18.2824	0.54697E-01	6278.3	0.196927	0.394173E+08	0.922644
160	18.3758	0.54419E-01	133.13	0.004176	17723.4	0.922648
161	18.5030	0.54045E-01	1371.8	0.043029	0.188192E+07	0.923085
162	18.8698	0.52995E-01	514.73	0.016145	264942.	0.923146
163	18.9199	0.52854E-01	-1967.3	0.061707	0.387027E+07	0.924044
164	19.2022	0.52077E-01	4458.4	0.139842	0.198770E+08	0.928659
165	19.2138	0.52046E-01	-2390.6	0.074984	0.571502E+07	0.929985
166	19.2677	0.51900E-01	3616.8	0.113445	0.130813E+08	0.933022
167	19.4923	0.51302E-01	1006.7	0.031576	0.101346E+07	0.933257
168	19.6693	0.50841E-01	-2323.5	0.072878	0.539854E+07	0.934510
169	19.9196	0.50202E-01	-206.40	0.006474	42601.2	0.934520
170	19.9705	0.50074E-01	-304.89	0.009563	92960.3	0.934542
171	20.0213	0.49947E-01	-244.18	0.007659	59622.1	0.934556
172	20.0793	0.49803E-01	-533.27	0.016727	284374.	0.934622
173	20.1728	0.49572E-01	175.66	0.005510	30856.7	0.934629
174	20.2041	0.49495E-01	-17.418	0.000546	303.397	0.934629
175	20.4317	0.48944E-01	-27.438	0.000861	752.858	0.934629
176	20.4544	0.48889E-01	-1112.7	0.034900	0.123804E+07	0.934917
177	20.6250	0.48485E-01	-819.99	0.025720	672382.	0.935073
178	20.8332	0.48000E-01	956.40	0.029999	914709.	0.935285
179	20.9052	0.47835E-01	-2528.5	0.079308	0.639309E+07	0.936769
180	20.9287	0.47781E-01	-1307.5	0.041010	0.170949E+07	0.937166
181	21.3058	0.46936E-01	-3648.8	0.114450	0.133141E+08	0.940257
182	21.5811	0.46337E-01	6095.6	0.191197	0.371569E+08	0.948882
183	21.5960	0.46305E-01	1967.6	0.061715	0.387132E+07	0.949781
184	21.7824	0.45909E-01	-2891.8	0.090703	0.836229E+07	0.951722
185	21.9553	0.45547E-01	-4039.6	0.126707	0.163184E+08	0.955510
186	22.2680	0.44908E-01	-396.34	0.012432	157083.	0.955546
187	22.4740	0.44496E-01	-1196.9	0.037541	0.143246E+07	0.955879
188	22.5742	0.44298E-01	110.90	0.003478	12298.4	0.955882
189	22.6910	0.44070E-01	-361.55	0.011341	130721.	0.955912
190	22.7938	0.43872E-01	697.66	0.021883	486723.	0.956025
191	23.1129	0.43266E-01	497.55	0.015606	247552.	0.956083
192	23.5367	0.42487E-01	-109.39	0.003431	11966.3	0.956085
193	23.5859	0.42398E-01	-1029.6	0.032294	0.106002E+07	0.956331

194	23.8174	0.41986E-01	-19.699	0.000618	388.035	0.956332
195	23.8254	0.41972E-01	-12.182	0.000382	148.400	0.956332
196	23.8596	0.41912E-01	3.7098	0.000116	13.7627	0.956332
197	23.8654	0.41902E-01	-2.6208	0.000082	6.86857	0.956332
198	23.8769	0.41882E-01	-10.159	0.000319	103.203	0.956332
199	23.9231	0.41801E-01	38.279	0.001201	1465.31	0.956332
200	23.9536	0.41747E-01	-163.67	0.005134	26788.0	0.956338
201	24.0050	0.41658E-01	96.148	0.003016	9244.41	0.956340
202	24.0335	0.41609E-01	154.42	0.004844	23845.0	0.956346
203	24.3787	0.41019E-01	-169.57	0.005319	28755.1	0.956353
204	24.4198	0.40950E-01	4942.8	0.155035	0.244309E+08	0.962024
205	24.6256	0.40608E-01	239.22	0.007503	57224.8	0.962037
206	24.6470	0.40573E-01	-726.93	0.022801	528423.	0.962160
207	24.7285	0.40439E-01	-1147.8	0.036003	0.131748E+07	0.962466
208	24.8867	0.40182E-01	-445.13	0.013962	198137.	0.962512
209	25.2049	0.39675E-01	-253.02	0.007936	64020.2	0.962527
210	25.6422	0.38998E-01	-1262.0	0.039585	0.159276E+07	0.962896
211	25.6630	0.38967E-01	1730.5	0.054281	0.299480E+07	0.963591
212	25.7993	0.38761E-01	68.549	0.002150	4698.97	0.963593
213	25.8585	0.38672E-01	-2283.2	0.071616	0.521316E+07	0.964803
214	25.9871	0.38481E-01	3896.1	0.122204	0.151793E+08	0.968326
215	26.4555	0.37799E-01	3383.1	0.106115	0.114454E+08	0.970983
216	26.7999	0.37314E-01	-1165.4	0.036554	0.135818E+07	0.971299
217	26.9630	0.37088E-01	-827.73	0.025963	685130.	0.971458
218	26.9806	0.37064E-01	-453.24	0.014216	205427.	0.971505
219	27.1263	0.36865E-01	695.00	0.021799	483025.	0.971617
220	27.6903	0.36114E-01	882.71	0.027687	779184.	0.971798
221	27.8110	0.35957E-01	-556.47	0.017454	309660.	0.971870
222	28.0041	0.35709E-01	-1140.7	0.035781	0.130130E+07	0.972172
223	28.1295	0.35550E-01	120.49	0.003779	14517.0	0.972176
224	28.2001	0.35461E-01	1752.7	0.054977	0.307212E+07	0.972889
225	28.8170	0.34702E-01	9.6163	0.000302	92.4736	0.972889
226	28.9461	0.34547E-01	984.21	0.030871	968677.	0.973114
227	29.0821	0.34385E-01	-164.16	0.005149	26948.5	0.973120
228	29.3112	0.34117E-01	2013.1	0.063143	0.405255E+07	0.974061
229	29.3146	0.34113E-01	479.84	0.015051	230249.	0.974114
230	29.3993	0.34014E-01	216.23	0.006782	46755.4	0.974125
231	29.4298	0.33979E-01	-233.29	0.007318	54425.8	0.974138
232	29.7268	0.33640E-01	-152.55	0.004785	23272.3	0.974143
233	29.7350	0.33630E-01	713.98	0.022395	509772.	0.974261
234	30.3319	0.32969E-01	255.80	0.008023	65431.5	0.974277
235	30.6507	0.32626E-01	484.26	0.015189	234504.	0.974331
236	30.8270	0.32439E-01	-460.71	0.014451	212256.	0.974380
237	31.1413	0.32112E-01	-1964.2	0.061610	0.385821E+07	0.975276
238	31.2432	0.32007E-01	4714.2	0.147868	0.222241E+08	0.980435
239	31.4902	0.31756E-01	-765.59	0.024014	586135.	0.980571
240	31.6431	0.31602E-01	1841.6	0.057763	0.339144E+07	0.981358
241	31.8589	0.31388E-01	3318.8	0.104097	0.110142E+08	0.983915
242	31.9049	0.31343E-01	2529.0	0.079326	0.639594E+07	0.985400
243	31.9989	0.31251E-01	-3545.5	0.111210	0.125709E+08	0.988318
244	32.0651	0.31187E-01	-3198.2	0.100316	0.102286E+08	0.990692
245	32.2205	0.31036E-01	809.26	0.025383	654896.	0.990844
246	32.2446	0.31013E-01	-4510.2	0.141466	0.203415E+08	0.995566
247	32.3380	0.30923E-01	286.98	0.009002	82359.4	0.995586
248	32.5313	0.30740E-01	1807.7	0.056700	0.326776E+07	0.996344
249	32.5906	0.30684E-01	555.25	0.017416	308297.	0.996416
250	32.7122	0.30570E-01	3355.9	0.105261	0.112619E+08	0.999030
251	32.7659	0.30520E-01	-288.65	0.009054	83320.8	0.999049
252	32.8779	0.30416E-01	1549.1	0.048588	0.239961E+07	0.999606
253	32.9055	0.30390E-01	1158.5	0.036338	0.134212E+07	0.999918
254	32.9931	0.30309E-01	23.232	0.000729	539.739	0.999918
255	33.2296	0.30094E-01	593.83	0.018626	352631.	1.00000
256	33.4848	0.29864E-01	24.223	0.000760	586.739	1.00000

SUM OF EFFECTIVE MASSES= 0.430781E+10

***** PARTICIPATION FACTOR CALCULATION *****ROTY DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.249282	4.0115	-6719.7	0.124991	0.451547E+08	0.560083E-02
2	0.311981	3.2053	-8003.2	0.148864	0.640515E+08	0.135455E-01
3	1.20475	0.83005	-12963.	0.241124	0.168046E+09	0.343894E-01
4	1.26330	0.79158	-5983.4	0.111294	0.358006E+08	0.388299E-01

5	1.30662	0.76533	-1037.2	0.019293	0.107585E+07	0.389634E-01
6	1.64740	0.60702	-53762.	1.000000	0.289034E+10	0.397470
7	1.75809	0.56880	22801.	0.424116	0.519897E+09	0.461956
8	1.76747	0.56578	3654.1	0.067968	0.133523E+08	0.463612
9	1.85821	0.53815	5227.4	0.097233	0.273260E+08	0.467002
10	1.95922	0.51041	-8719.0	0.162178	0.760207E+08	0.476431
11	2.20685	0.45313	-4409.1	0.082011	0.194397E+08	0.478842
12	2.38052	0.42008	-6700.8	0.124638	0.449005E+08	0.484412
13	2.42863	0.41175	-32458.	0.603734	0.105351E+10	0.615086
14	2.48768	0.40198	16063.	0.298774	0.258009E+09	0.647088
15	2.54519	0.39290	-1352.6	0.025160	0.182963E+07	0.647315
16	2.54635	0.39272	418.45	0.007783	175102.	0.647337
17	2.64555	0.37799	-7051.5	0.131161	0.497230E+08	0.653504
18	2.72509	0.36696	-801.20	0.014903	641927.	0.653584
19	2.79999	0.35714	6734.4	0.125263	0.453518E+08	0.659209
20	2.98084	0.33548	734.55	0.013663	539568.	0.659276
21	3.16998	0.31546	215.76	0.004013	46550.5	0.659282
22	3.19679	0.31281	-458.44	0.008527	210170.	0.659308
23	3.36620	0.29707	-1380.9	0.025685	0.190679E+07	0.659545
24	3.37205	0.29656	-1475.4	0.027444	0.217687E+07	0.659815
25	3.42989	0.29155	-854.25	0.015889	729741.	0.659905
26	3.80934	0.26251	2476.4	0.046063	0.613260E+07	0.660666
27	3.91629	0.25534	-666.27	0.012393	443912.	0.660721
28	4.11444	0.24305	3375.8	0.062791	0.113958E+08	0.662134
29	4.31003	0.23202	488.98	0.009095	239101.	0.662164
30	4.37930	0.22835	6012.6	0.111838	0.361516E+08	0.666648
31	4.53316	0.22060	3515.5	0.065390	0.123587E+08	0.668181
32	4.53439	0.22054	4054.0	0.075406	0.164346E+08	0.670220
33	4.69338	0.21307	-297.37	0.005531	88429.4	0.670230
34	4.70259	0.21265	-938.08	0.017449	879987.	0.670340
35	4.74571	0.21072	219.05	0.004075	47985.0	0.670346
36	4.80986	0.20791	177.45	0.003301	31486.9	0.670349
37	4.85756	0.20586	-4217.1	0.078441	0.177841E+08	0.672555
38	4.86637	0.20549	1781.8	0.033143	0.317483E+07	0.672949
39	4.96263	0.20151	4588.4	0.085346	0.210532E+08	0.675561
40	4.99028	0.20039	-3609.0	0.067129	0.130246E+08	0.677176
41	5.02589	0.19897	-2171.0	0.040381	0.471311E+07	0.677761
42	5.15627	0.19394	-1921.7	0.035744	0.369285E+07	0.678219
43	5.29876	0.18872	-991.04	0.018434	982155.	0.678341
44	5.52333	0.18105	1566.4	0.029136	0.245358E+07	0.678645
45	5.62569	0.17776	-4041.0	0.075165	0.163299E+08	0.680670
46	5.64538	0.17714	-0.39045	0.000007	0.152454	0.680670
47	5.79112	0.17268	-1377.4	0.025620	0.189724E+07	0.680906
48	6.17337	0.16199	-4823.3	0.089717	0.232645E+08	0.683791
49	6.28484	0.15911	-767.94	0.014284	589733.	0.683864
50	6.31260	0.15841	-3755.4	0.069852	0.141028E+08	0.685614
51	6.86548	0.14566	2184.5	0.040634	0.477221E+07	0.686206
52	7.19986	0.13889	-17822.	0.331504	0.317633E+09	0.725604
53	7.24207	0.13808	16671.	0.310084	0.277912E+09	0.760075
54	7.26957	0.13756	-1947.8	0.036231	0.379404E+07	0.760545
55	7.39474	0.13523	60.899	0.001133	3708.67	0.760546
56	7.65869	0.13057	5058.5	0.094090	0.255882E+08	0.763720
57	7.77715	0.12858	-137.77	0.002563	18981.3	0.763722
58	7.84511	0.12747	-7642.3	0.142150	0.584040E+08	0.770966
59	7.89379	0.12668	5679.8	0.105648	0.322604E+08	0.774968
60	8.01910	0.12470	-337.23	0.006273	113725.	0.774982
61	8.04478	0.12430	-4750.0	0.088353	0.225625E+08	0.777781
62	8.18078	0.12224	-3008.5	0.055959	0.905078E+07	0.778903
63	8.30940	0.12035	-1985.3	0.036929	0.394160E+07	0.779392
64	8.36463	0.11955	569.21	0.010588	324001.	0.779432
65	8.54914	0.11697	2153.2	0.040050	0.463615E+07	0.780007
66	8.74644	0.11433	1572.8	0.029255	0.247371E+07	0.780314
67	8.77174	0.11400	45.828	0.000852	2100.17	0.780314
68	8.81360	0.11346	465.42	0.008657	216617.	0.780341
69	8.87335	0.11270	-1250.1	0.023253	0.156285E+07	0.780535
70	8.96278	0.11157	4660.8	0.086694	0.217232E+08	0.783230
71	9.04400	0.11057	-3314.2	0.061647	0.109842E+08	0.784592
72	9.07511	0.11019	-4701.6	0.087452	0.221047E+08	0.787334
73	9.08581	0.11006	-34.317	0.000638	1177.68	0.787334
74	9.13526	0.10947	2367.7	0.044040	0.560586E+07	0.788029
75	9.17344	0.10901	-1389.2	0.025840	0.192984E+07	0.788269
76	9.22506	0.10840	2001.9	0.037237	0.400767E+07	0.788766
77	9.38450	0.10656	12434.	0.231273	0.154596E+09	0.807941
78	9.58472	0.10433	3986.3	0.074148	0.158909E+08	0.809912
79	9.71494	0.10293	153.70	0.002859	23624.4	0.809915

80	9.84417	0.10158	-819.97	0.015252	672350.	0.809999
81	9.86883	0.10133	-5970.1	0.111047	0.356418E+08	0.814420
82	9.90304	0.10098	-1910.6	0.035537	0.365020E+07	0.814872
83	9.91520	0.10086	-3156.5	0.058713	0.996367E+07	0.816108
84	9.95257	0.10048	-2834.1	0.052716	0.803232E+07	0.817104
85	10.0404	0.99598E-01	2600.1	0.048363	0.676040E+07	0.817943
86	10.0708	0.99297E-01	-4127.0	0.076765	0.170321E+08	0.820056
87	10.2108	0.97935E-01	-3169.5	0.058954	0.100455E+08	0.821302
88	10.2206	0.97842E-01	1738.2	0.032331	0.302125E+07	0.821676
89	10.2437	0.97621E-01	-420.01	0.007812	176408.	0.821698
90	10.2648	0.97420E-01	1009.8	0.018782	0.101961E+07	0.821825
91	10.2660	0.97409E-01	-2592.7	0.048226	0.672207E+07	0.822658
92	10.2662	0.97407E-01	2156.9	0.040119	0.465208E+07	0.823235
93	10.2711	0.97361E-01	680.05	0.012649	462466.	0.823293
94	10.2728	0.97344E-01	-134.83	0.002508	18180.3	0.823295
95	10.2795	0.97281E-01	25.790	0.000480	665.119	0.823295
96	10.2821	0.97256E-01	-26.923	0.000501	724.854	0.823295
97	10.2843	0.97236E-01	46.019	0.000856	2117.75	0.823296
98	10.3599	0.96526E-01	528.12	0.009823	278911.	0.823330
99	10.3892	0.96254E-01	7635.0	0.142016	0.582936E+08	0.830561
100	10.4433	0.95755E-01	30.695	0.000571	942.180	0.830561
101	10.4653	0.95554E-01	-3874.9	0.072075	0.150149E+08	0.832423
102	10.5319	0.94949E-01	-8182.6	0.152202	0.669557E+08	0.840728
103	10.5978	0.94359E-01	-18408.	0.342406	0.338868E+09	0.882760
104	10.7988	0.92603E-01	1395.7	0.025961	0.194794E+07	0.883002
105	10.8853	0.91867E-01	-894.73	0.016643	800545.	0.883101
106	10.9720	0.91141E-01	-2180.1	0.040550	0.475265E+07	0.883690
107	11.0212	0.90735E-01	-39.615	0.000737	1569.35	0.883691
108	11.1881	0.89381E-01	-1487.8	0.027673	0.221347E+07	0.883965
109	11.5571	0.86527E-01	-208.27	0.003874	43377.6	0.883971
110	11.6219	0.86045E-01	208.08	0.003870	43299.2	0.883976
111	11.6490	0.85844E-01	-490.43	0.009122	240523.	0.884006
112	11.7051	0.85433E-01	82.681	0.001538	6836.18	0.884007
113	11.8463	0.84415E-01	326.81	0.006079	106805.	0.884020
114	11.8961	0.84061E-01	-6997.4	0.130156	0.489639E+08	0.890093
115	11.9750	0.83508E-01	-2971.8	0.055278	0.883172E+07	0.891189
116	12.0387	0.83065E-01	-470.29	0.008748	221174.	0.891216
117	12.1747	0.82137E-01	-185.91	0.003458	34561.1	0.891220
118	12.3701	0.80840E-01	-768.77	0.014299	591002.	0.891294
119	12.5435	0.79723E-01	-7.0110	0.000130	49.1546	0.891294
120	12.5888	0.79436E-01	10.516	0.000196	110.591	0.891294
121	12.9309	0.77334E-01	292.20	0.005435	85381.0	0.891304
122	13.0405	0.76684E-01	2643.6	0.049173	0.698879E+07	0.892171
123	13.1256	0.76187E-01	-593.90	0.011047	352712.	0.892215
124	13.6040	0.73508E-01	-3508.7	0.065263	0.123109E+08	0.893742
125	13.8265	0.72325E-01	52.658	0.000979	2772.86	0.893742
126	13.9736	0.71564E-01	-130.64	0.002430	17066.8	0.893744
127	14.1574	0.70634E-01	-274.95	0.005114	75594.9	0.893754
128	14.2515	0.70168E-01	599.14	0.011144	358965.	0.893798
129	14.3013	0.69924E-01	-363.75	0.006766	132317.	0.893815
130	14.4675	0.69120E-01	2.4352	0.000045	5.93031	0.893815
131	14.5387	0.68782E-01	1155.5	0.021493	0.133519E+07	0.893980
132	14.7324	0.67877E-01	134.70	0.002506	18145.1	0.893983
133	14.8720	0.67240E-01	-6273.1	0.116683	0.393520E+08	0.898864
134	15.0097	0.66624E-01	-93.799	0.001745	8798.33	0.898865
135	15.1170	0.66150E-01	-2724.8	0.050683	0.742461E+07	0.899786
136	15.2313	0.65654E-01	-2532.0	0.047096	0.641085E+07	0.900581
137	15.4310	0.64805E-01	656.04	0.012203	430383.	0.900634
138	15.4395	0.64769E-01	-150.89	0.002807	22768.5	0.900637
139	15.6948	0.63715E-01	-218.20	0.004059	47613.1	0.900643
140	15.7036	0.63680E-01	-185.69	0.003454	34481.9	0.900647
141	15.7336	0.63558E-01	8.7896	0.000163	77.2568	0.900647
142	15.8415	0.63125E-01	2001.6	0.037231	0.400642E+07	0.901144
143	15.9543	0.62679E-01	-4566.4	0.084938	0.208520E+08	0.903731
144	16.0529	0.62294E-01	-485.75	0.009035	235956.	0.903760
145	16.1665	0.61856E-01	248.43	0.004621	61715.0	0.903767
146	16.2207	0.61649E-01	-960.81	0.017872	923151.	0.903882
147	16.5366	0.60472E-01	-9.1079	0.000169	82.9542	0.903882
148	16.7080	0.59852E-01	-1483.1	0.027587	0.219968E+07	0.904155
149	16.8047	0.59507E-01	-305.80	0.005688	93511.8	0.904166
150	17.3292	0.57706E-01	1351.8	0.025144	0.182726E+07	0.904393
151	17.4187	0.57410E-01	6920.4	0.128723	0.478921E+08	0.910333
152	17.6686	0.56597E-01	3219.1	0.059877	0.103626E+08	0.911619
153	17.7001	0.56497E-01	-900.01	0.016741	810015.	0.911719
154	17.8390	0.56057E-01	332.41	0.006183	110494.	0.911733

155	17.9162	0.55815E-01	-501.85	0.009335	251849.	0.911764
156	17.9871	0.55596E-01	-609.38	0.011335	371349.	0.911810
157	18.1188	0.55191E-01	2021.4	0.037600	0.408615E+07	0.912317
158	18.1737	0.55024E-01	-2163.0	0.040234	0.467878E+07	0.912897
159	18.2824	0.54697E-01	-598.25	0.011128	357901.	0.912942
160	18.3758	0.54419E-01	100.60	0.001871	10120.8	0.912943
161	18.5030	0.54045E-01	1124.1	0.020909	0.126361E+07	0.913100
162	18.8698	0.52995E-01	-1240.6	0.023076	0.153906E+07	0.913291
163	18.9199	0.52854E-01	-277.46	0.005161	76982.6	0.913300
164	19.2022	0.52077E-01	283.43	0.005272	80330.2	0.913310
165	19.2138	0.52046E-01	-1216.1	0.022620	0.147895E+07	0.913494
166	19.2677	0.51900E-01	-8342.6	0.155178	0.695995E+08	0.922127
167	19.4923	0.51302E-01	923.81	0.017183	853428.	0.922232
168	19.6693	0.50841E-01	1366.8	0.025424	0.186824E+07	0.922464
169	19.9196	0.50202E-01	144.89	0.002695	20992.1	0.922467
170	19.9705	0.50074E-01	42.877	0.000798	1838.46	0.922467
171	20.0213	0.49947E-01	42.796	0.000796	1831.53	0.922467
172	20.0793	0.49803E-01	785.18	0.014605	616514.	0.922544
173	20.1728	0.49572E-01	-236.36	0.004397	55868.2	0.922551
174	20.2041	0.49495E-01	44.546	0.000829	1984.34	0.922551
175	20.4317	0.48944E-01	329.71	0.006133	108708.	0.922564
176	20.4544	0.48889E-01	3226.5	0.060015	0.104104E+08	0.923856
177	20.6250	0.48485E-01	7.0816	0.000132	50.1489	0.923856
178	20.8332	0.48000E-01	107.30	0.001996	11512.5	0.923857
179	20.9052	0.47835E-01	1673.0	0.031120	0.279908E+07	0.924204
180	20.9287	0.47781E-01	5459.8	0.101556	0.298097E+08	0.927902
181	21.3058	0.46936E-01	8801.9	0.163720	0.774733E+08	0.937511
182	21.5811	0.46337E-01	-5422.9	0.100869	0.294080E+08	0.941159
183	21.5960	0.46305E-01	-9586.0	0.178304	0.918910E+08	0.952557
184	21.7824	0.45909E-01	998.88	0.018580	997755.	0.952680
185	21.9553	0.45547E-01	4172.8	0.077617	0.174126E+08	0.954840
186	22.2680	0.44908E-01	-101.56	0.001889	10315.1	0.954841
187	22.4740	0.44496E-01	5057.7	0.094076	0.255803E+08	0.958014
188	22.5742	0.44298E-01	-314.75	0.005854	99066.7	0.958027
189	22.6910	0.44070E-01	576.63	0.010726	332504.	0.958068
190	22.7938	0.43872E-01	-1296.4	0.024113	0.168055E+07	0.958276
191	23.1129	0.43266E-01	29.673	0.000552	880.508	0.958276
192	23.5367	0.42487E-01	-19.287	0.000359	371.995	0.958277
193	23.5859	0.42398E-01	-159.02	0.002958	25288.3	0.958280
194	23.8174	0.41986E-01	-4.4787	0.000083	20.0588	0.958280
195	23.8254	0.41972E-01	-2.3320	0.000043	5.43825	0.958280
196	23.8596	0.41912E-01	-0.93700	0.000017	0.877975	0.958280
197	23.8654	0.41902E-01	-0.22762	0.000004	0.518113E-01	0.958280
198	23.8769	0.41882E-01	-1.7914	0.000033	3.20914	0.958280
199	23.9231	0.41801E-01	13.221	0.000246	174.801	0.958280
200	23.9536	0.41747E-01	-1125.5	0.020935	0.126679E+07	0.958437
201	24.0050	0.41658E-01	-15.159	0.000282	229.804	0.958437
202	24.0335	0.41609E-01	-9.7095	0.000181	94.2752	0.958437
203	24.3787	0.41019E-01	-83.513	0.001553	6974.40	0.958438
204	24.4198	0.40950E-01	-1398.3	0.026009	0.195518E+07	0.958680
205	24.6256	0.40608E-01	-1040.8	0.019359	0.108318E+07	0.958815
206	24.6470	0.40573E-01	765.64	0.014241	586204.	0.958887
207	24.7285	0.40439E-01	871.16	0.016204	758915.	0.958981
208	24.8867	0.40182E-01	-99.049	0.001842	9810.64	0.958983
209	25.2049	0.39675E-01	-1249.5	0.023242	0.156130E+07	0.959176
210	25.6422	0.38998E-01	2535.9	0.047170	0.643095E+07	0.959974
211	25.6630	0.38967E-01	-1138.5	0.021178	0.129628E+07	0.960135
212	25.7993	0.38761E-01	315.90	0.005876	99792.5	0.960147
213	25.8585	0.38672E-01	-840.09	0.015626	705758.	0.960235
214	25.9871	0.38481E-01	-2164.2	0.040255	0.468374E+07	0.960816
215	26.4555	0.37799E-01	870.30	0.016188	757419.	0.960910
216	26.7999	0.37314E-01	340.99	0.006343	116272.	0.960924
217	26.9630	0.37088E-01	-229.76	0.004274	52789.4	0.960931
218	26.9806	0.37064E-01	1317.2	0.024500	0.173498E+07	0.961146
219	27.1263	0.36865E-01	25.764	0.000479	663.773	0.961146
220	27.6903	0.36114E-01	-520.36	0.009679	270772.	0.961179
221	27.8110	0.35957E-01	-30.660	0.000570	940.045	0.961180
222	28.0041	0.35709E-01	151.21	0.002813	22865.4	0.961182
223	28.1295	0.35550E-01	-50.457	0.000939	2545.86	0.961183
224	28.2001	0.35461E-01	-1703.4	0.031685	0.290170E+07	0.961543
225	28.8170	0.34702E-01	-77.699	0.001445	6037.11	0.961543
226	28.9461	0.34547E-01	48.958	0.000911	2396.90	0.961544
227	29.0821	0.34385E-01	28.443	0.000529	809.020	0.961544
228	29.3112	0.34117E-01	337.04	0.006269	113598.	0.961558
229	29.3146	0.34113E-01	356.24	0.006626	126907.	0.961574

230	29.3993	0.34014E-01	2.9195	0.000054	8.52351	0.961574
231	29.4298	0.33979E-01	-44.483	0.000827	1978.74	0.961574
232	29.7268	0.33640E-01	22.156	0.000412	490.894	0.961574
233	29.7350	0.33630E-01	-65.709	0.001222	4317.70	0.961574
234	30.3319	0.32969E-01	47.806	0.000889	2285.42	0.961575
235	30.6507	0.32626E-01	-2406.2	0.044756	0.578958E+07	0.962293
236	30.8270	0.32439E-01	-474.43	0.008825	225082.	0.962321
237	31.1413	0.32112E-01	1025.1	0.019067	0.105080E+07	0.962451
238	31.2432	0.32007E-01	1097.4	0.020413	0.120438E+07	0.962600
239	31.4902	0.31756E-01	-58.257	0.001084	3393.93	0.962601
240	31.6431	0.31602E-01	-2225.5	0.041395	0.495269E+07	0.963215
241	31.8589	0.31388E-01	-573.00	0.010658	328330.	0.963256
242	31.9049	0.31343E-01	-941.32	0.017509	886081.	0.963366
243	31.9989	0.31251E-01	2059.3	0.038305	0.424086E+07	0.963892
244	32.0651	0.31187E-01	1983.3	0.036891	0.393353E+07	0.964380
245	32.2205	0.31036E-01	74.730	0.001390	5584.57	0.964380
246	32.2446	0.31013E-01	1028.8	0.019137	0.105852E+07	0.964512
247	32.3380	0.30923E-01	1772.7	0.032973	0.314245E+07	0.964902
248	32.5313	0.30740E-01	-1610.8	0.029962	0.259463E+07	0.965223
249	32.5906	0.30684E-01	1011.9	0.018821	0.102387E+07	0.965350
250	32.7122	0.30570E-01	-15718.	0.292370	0.247066E+09	0.995995
251	32.7659	0.30520E-01	-5043.8	0.093818	0.254404E+08	0.999151
252	32.8779	0.30416E-01	-274.77	0.005111	75500.0	0.999160
253	32.9055	0.30390E-01	-497.70	0.009257	247702.	0.999191
254	32.9931	0.30309E-01	524.16	0.009750	274748.	0.999225
255	33.2296	0.30094E-01	-55.624	0.001035	3093.97	0.999226
256	33.4848	0.29864E-01	-2498.7	0.046478	0.624364E+07	1.00000

SUM OF EFFECTIVE MASSES= 0.806215E+10

***** PARTICIPATION FACTOR CALCULATION *****ROTZ DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC.FACTOR	CUMULATIVE RATIO	EFFECTIVE MASS	MASS FRACTION
1	0.249282	4.0115	-98.043	0.002098	9612.38	0.112006E-05
2	0.311981	3.2053	-25711.	0.550117	0.661050E+09	0.770286E-01
3	1.20475	0.83005	-46737.	1.000000	0.218436E+10	0.331557
4	1.26330	0.79158	6570.7	0.140587	0.431734E+08	0.336587
5	1.30662	0.76533	437.72	0.009366	191600.	0.336610
6	1.64740	0.60702	3015.9	0.064530	0.909591E+07	0.337670
7	1.75809	0.56880	10631.	0.227465	0.113019E+09	0.350839
8	1.76747	0.56578	4951.0	0.105934	0.245127E+08	0.353695
9	1.85821	0.53815	5378.8	0.115086	0.289313E+08	0.357066
10	1.95922	0.51041	1532.5	0.032790	0.234859E+07	0.357340
11	2.20685	0.45313	-935.68	0.020020	875495.	0.357442
12	2.38052	0.42008	489.86	0.010481	239967.	0.357470
13	2.42863	0.41175	4701.0	0.100585	0.220998E+08	0.360045
14	2.48768	0.40198	10637.	0.227583	0.113137E+09	0.373228
15	2.54519	0.39290	-1311.9	0.028070	0.172108E+07	0.373429
16	2.54635	0.39272	232.91	0.004983	54245.9	0.373435
17	2.64555	0.37799	-9681.6	0.207150	0.937335E+08	0.384357
18	2.72509	0.36696	2253.2	0.048211	0.507707E+07	0.384949
19	2.79999	0.35714	9138.4	0.195528	0.835108E+08	0.394680
20	2.98084	0.33548	16236.	0.347382	0.263597E+09	0.425395
21	3.16998	0.31546	4247.4	0.090878	0.180401E+08	0.427497
22	3.19679	0.31281	-6674.6	0.142812	0.445503E+08	0.432688
23	3.36620	0.29707	1422.2	0.030430	0.202272E+07	0.432924
24	3.37205	0.29656	-495.10	0.010593	245127.	0.432952
25	3.42989	0.29155	-1166.1	0.024950	0.135975E+07	0.433111
26	3.80934	0.26251	4709.9	0.100774	0.221830E+08	0.435695
27	3.91629	0.25534	3384.1	0.072407	0.114521E+08	0.437030
28	4.11444	0.24305	-8986.0	0.192267	0.807482E+08	0.446439
29	4.31003	0.23202	4025.1	0.086123	0.162016E+08	0.448327
30	4.37930	0.22835	-3345.3	0.071576	0.111907E+08	0.449631
31	4.53316	0.22060	-1811.3	0.038755	0.328073E+07	0.450013
32	4.53439	0.22054	17279.	0.369711	0.298572E+09	0.484803
33	4.69338	0.21307	3922.3	0.083923	0.153845E+08	0.486596
34	4.70259	0.21265	15108.	0.323250	0.228245E+09	0.513192
35	4.74571	0.21072	10848.	0.232100	0.117672E+09	0.526903
36	4.80986	0.20791	-1438.6	0.030780	0.206949E+07	0.527145
37	4.85756	0.20586	-724.57	0.015503	524995.	0.527206
38	4.86637	0.20549	6191.8	0.132481	0.383380E+08	0.531673
39	4.96263	0.20151	5045.8	0.107962	0.254603E+08	0.534640
40	4.99028	0.20039	-4316.0	0.092347	0.186282E+08	0.536810

41	5.02589	0.19897	-5930.5	0.126891	0.351713E+08	0.540909
42	5.15627	0.19394	-1584.3	0.033898	0.250997E+07	0.541201
43	5.29876	0.18872	2889.4	0.061823	0.834889E+07	0.542174
44	5.52333	0.18105	6331.0	0.135460	0.400819E+08	0.546844
45	5.62569	0.17776	11137.	0.238298	0.124041E+09	0.561298
46	5.64538	0.17714	2769.3	0.059253	0.766910E+07	0.562192
47	5.79112	0.17268	-280.93	0.006011	78920.0	0.562201
48	6.17337	0.16199	-3174.9	0.067931	0.100799E+08	0.563375
49	6.28484	0.15911	534.06	0.011427	285220.	0.563409
50	6.31260	0.15841	-3126.3	0.066891	0.977365E+07	0.564547
51	6.86548	0.14566	2755.6	0.058959	0.759329E+07	0.565432
52	7.19986	0.13889	-4061.1	0.086893	0.164927E+08	0.567354
53	7.24207	0.13808	-7229.1	0.154676	0.522601E+08	0.573443
54	7.26957	0.13756	-4700.2	0.100567	0.220920E+08	0.576018
55	7.39474	0.13523	13401.	0.286724	0.179577E+09	0.596943
56	7.65869	0.13057	3668.1	0.078484	0.134550E+08	0.598510
57	7.77715	0.12858	-3117.5	0.066704	0.971902E+07	0.599643
58	7.84511	0.12747	-1141.2	0.024418	0.130241E+07	0.599795
59	7.89379	0.12668	7758.4	0.166001	0.601928E+08	0.606808
60	8.01910	0.12470	-493.50	0.010559	243544.	0.606837
61	8.04478	0.12430	-10495.	0.224543	0.110135E+09	0.619670
62	8.18078	0.12224	3983.9	0.085241	0.158717E+08	0.621519
63	8.30940	0.12035	5963.5	0.127596	0.355630E+08	0.625663
64	8.36463	0.11955	779.79	0.016685	608066.	0.625734
65	8.54914	0.11697	4085.5	0.087415	0.166916E+08	0.627679
66	8.74644	0.11433	1007.5	0.021558	0.101513E+07	0.627797
67	8.77174	0.11400	481.28	0.010298	231631.	0.627824
68	8.81360	0.11346	101.87	0.002180	10378.3	0.627826
69	8.87335	0.11270	-79.227	0.001695	6276.96	0.627826
70	8.96278	0.11157	563.38	0.012054	317394.	0.627863
71	9.04400	0.11057	2076.1	0.044420	0.431012E+07	0.628366
72	9.07511	0.11019	-944.69	0.020213	892448.	0.628470
73	9.08581	0.11006	3086.6	0.066041	0.952690E+07	0.629580
74	9.13526	0.10947	-3675.8	0.078649	0.135119E+08	0.631154
75	9.17344	0.10901	-6132.4	0.131211	0.376065E+08	0.635536
76	9.22506	0.10840	1350.2	0.028889	0.182305E+07	0.635749
77	9.38450	0.10656	2668.9	0.057104	0.712295E+07	0.636579
78	9.58472	0.10433	2176.2	0.046562	0.473576E+07	0.637130
79	9.71494	0.10293	-940.82	0.020130	885148.	0.637234
80	9.84417	0.10158	6484.6	0.138747	0.420507E+08	0.642133
81	9.86883	0.10133	3774.7	0.080765	0.142486E+08	0.643794
82	9.90304	0.10098	1350.4	0.028893	0.182353E+07	0.644006
83	9.91520	0.10086	1800.4	0.038522	0.324153E+07	0.644384
84	9.95257	0.10048	-383.51	0.008206	147080.	0.644401
85	10.0404	0.99598E-01	-1887.6	0.040388	0.356304E+07	0.644816
86	10.0708	0.99297E-01	1443.0	0.030876	0.208236E+07	0.645059
87	10.2108	0.97935E-01	-1687.3	0.036103	0.284714E+07	0.645391
88	10.2206	0.97842E-01	1041.1	0.022276	0.108395E+07	0.645517
89	10.2437	0.97621E-01	-439.25	0.009398	192942.	0.645539
90	10.2648	0.97420E-01	189.89	0.004063	36059.2	0.645544
91	10.2660	0.97409E-01	-596.37	0.012760	355654.	0.645585
92	10.2662	0.97407E-01	507.92	0.010868	257981.	0.645615
93	10.2711	0.97361E-01	234.24	0.005012	54867.0	0.645621
94	10.2728	0.97344E-01	-51.925	0.001111	2696.24	0.645622
95	10.2795	0.97281E-01	15.957	0.000341	254.628	0.645622
96	10.2821	0.97256E-01	-19.965	0.000427	398.584	0.645622
97	10.2843	0.97236E-01	11.145	0.000238	124.217	0.645622
98	10.3599	0.96526E-01	587.23	0.012564	344835.	0.645662
99	10.3892	0.96254E-01	-1892.3	0.040488	0.358078E+07	0.646079
100	10.4433	0.95755E-01	126.08	0.002698	15896.6	0.646081
101	10.4653	0.95554E-01	153.44	0.003283	23544.5	0.646084
102	10.5319	0.94949E-01	-884.87	0.018933	782996.	0.646175
103	10.5978	0.94359E-01	-3531.6	0.075563	0.124720E+08	0.647628
104	10.7988	0.92603E-01	306.08	0.006549	93684.2	0.647639
105	10.8853	0.91867E-01	1108.1	0.023709	0.122790E+07	0.647782
106	10.9720	0.91141E-01	-118.93	0.002545	14143.3	0.647784
107	11.0212	0.90735E-01	-4.1680	0.000089	17.3724	0.647784
108	11.1881	0.89381E-01	-828.65	0.017730	686669.	0.647864
109	11.5571	0.86527E-01	2329.3	0.049838	0.542548E+07	0.648496
110	11.6219	0.86045E-01	276.71	0.005921	76570.5	0.648505
111	11.6490	0.85844E-01	244.17	0.005224	59619.7	0.648512
112	11.7051	0.85433E-01	534.37	0.011434	285553.	0.648545
113	11.8463	0.84415E-01	-1111.8	0.023788	0.123602E+07	0.648689
114	11.8961	0.84061E-01	500.55	0.010710	250555.	0.648719
115	11.9750	0.83508E-01	-1064.9	0.022786	0.113409E+07	0.648851

116	12.0387	0.83065E-01	-1801.5	0.038546	0.324555E+07	0.649229
117	12.1747	0.82137E-01	242.91	0.005197	59006.5	0.649236
118	12.3701	0.80840E-01	-1114.3	0.023842	0.124163E+07	0.649381
119	12.5435	0.79723E-01	-1043.4	0.022325	0.108870E+07	0.649507
120	12.5888	0.79436E-01	-526.24	0.011260	276929.	0.649540
121	12.9309	0.77334E-01	-1439.6	0.030802	0.207247E+07	0.649781
122	13.0405	0.76684E-01	1252.9	0.026808	0.156985E+07	0.649964
123	13.1256	0.76187E-01	-1213.1	0.025955	0.147158E+07	0.650136
124	13.6040	0.73508E-01	538.44	0.011521	289920.	0.650169
125	13.8265	0.72325E-01	-24.065	0.000515	579.139	0.650169
126	13.9736	0.71564E-01	628.42	0.013446	394915.	0.650215
127	14.1574	0.70634E-01	-457.63	0.009792	209424.	0.650240
128	14.2515	0.70168E-01	-907.54	0.019418	823636.	0.650336
129	14.3013	0.69924E-01	44.802	0.000959	2007.18	0.650336
130	14.4675	0.69120E-01	-14.274	0.000305	203.740	0.650336
131	14.5387	0.68782E-01	-1593.9	0.034103	0.254050E+07	0.650632
132	14.7324	0.67877E-01	858.50	0.018369	737014.	0.650718
133	14.8720	0.67240E-01	-6181.1	0.132252	0.382055E+08	0.655170
134	15.0097	0.66624E-01	-1914.8	0.040971	0.366663E+07	0.655597
135	15.1170	0.66150E-01	1072.2	0.022940	0.114951E+07	0.655731
136	15.2313	0.65654E-01	-1014.9	0.021716	0.103009E+07	0.655851
137	15.4310	0.64805E-01	299.36	0.006405	89617.8	0.655861
138	15.4395	0.64769E-01	2745.3	0.058739	0.753667E+07	0.656740
139	15.6948	0.63715E-01	1096.4	0.023460	0.120217E+07	0.656880
140	15.7036	0.63680E-01	6478.4	0.138614	0.419699E+08	0.661770
141	15.7336	0.63558E-01	-47.958	0.001026	2300.01	0.661770
142	15.8415	0.63125E-01	-374.12	0.008005	139967.	0.661787
143	15.9543	0.62679E-01	-359.10	0.007683	128950.	0.661802
144	16.0529	0.62294E-01	428.90	0.009177	183953.	0.661823
145	16.1665	0.61856E-01	83.447	0.001785	6963.48	0.661824
146	16.2207	0.61649E-01	401.02	0.008580	160818.	0.661843
147	16.5366	0.60472E-01	-1651.2	0.035329	0.272645E+07	0.662160
148	16.7080	0.59852E-01	4009.5	0.085789	0.160764E+08	0.664034
149	16.8047	0.59507E-01	8.5028	0.000182	72.2973	0.664034
150	17.3292	0.57706E-01	3625.9	0.077582	0.131474E+08	0.665566
151	17.4187	0.57410E-01	-948.23	0.020288	899133.	0.665670
152	17.6686	0.56597E-01	682.83	0.014610	466260.	0.665725
153	17.7001	0.56497E-01	-405.42	0.008675	164369.	0.665744
154	17.8390	0.56057E-01	4471.2	0.095668	0.199919E+08	0.668073
155	17.9162	0.55815E-01	12871.	0.275381	0.165650E+09	0.687375
156	17.9871	0.55596E-01	5889.5	0.126013	0.346859E+08	0.691417
157	18.1188	0.55191E-01	4060.7	0.086884	0.164895E+08	0.693339
158	18.1737	0.55024E-01	8489.1	0.181636	0.720656E+08	0.701736
159	18.2824	0.54697E-01	503.74	0.010778	253755.	0.701765
160	18.3758	0.54419E-01	586.85	0.012556	344396.	0.701806
161	18.5030	0.54045E-01	1938.3	0.041472	0.375686E+07	0.702243
162	18.8698	0.52995E-01	-1002.2	0.021444	0.100448E+07	0.702360
163	18.9199	0.52854E-01	-3.3828	0.000072	11.4431	0.702360
164	19.2022	0.52077E-01	14718.	0.314919	0.216632E+09	0.727603
165	19.2138	0.52046E-01	-10299.	0.220355	0.106064E+09	0.739962
166	19.2677	0.51900E-01	804.25	0.017208	646818.	0.740037
167	19.4923	0.51302E-01	1747.1	0.037381	0.305223E+07	0.740393
168	19.6693	0.50841E-01	624.77	0.013368	390334.	0.740438
169	19.9196	0.50202E-01	-46.751	0.001000	2185.70	0.740439
170	19.9705	0.50074E-01	-229.99	0.004921	52895.4	0.740445
171	20.0213	0.49947E-01	2.8321	0.000061	8.02084	0.740445
172	20.0793	0.49803E-01	3913.1	0.083726	0.153123E+08	0.742229
173	20.1728	0.49572E-01	197.00	0.004215	38809.4	0.742234
174	20.2041	0.49495E-01	-86.387	0.001848	7462.68	0.742234
175	20.4317	0.48944E-01	3757.5	0.080396	0.141187E+08	0.743880
176	20.4544	0.48889E-01	7844.0	0.167833	0.615288E+08	0.751049
177	20.6250	0.48485E-01	-808.18	0.017292	653158.	0.751125
178	20.8332	0.48000E-01	1196.2	0.025593	0.143080E+07	0.751292
179	20.9052	0.47835E-01	-3312.1	0.070866	0.109699E+08	0.752570
180	20.9287	0.47781E-01	-403.65	0.008637	162932.	0.752589
181	21.3058	0.46936E-01	1209.2	0.025873	0.146225E+07	0.752760
182	21.5811	0.46337E-01	4848.3	0.103735	0.235056E+08	0.755499
183	21.5960	0.46305E-01	-6006.8	0.128522	0.360812E+08	0.759703
184	21.7824	0.45909E-01	-3607.6	0.077189	0.130148E+08	0.761219
185	21.9553	0.45547E-01	-5546.3	0.118671	0.307618E+08	0.764804
186	22.2680	0.44908E-01	128.55	0.002751	16525.4	0.764806
187	22.4740	0.44496E-01	2768.2	0.059230	0.766313E+07	0.765699
188	22.5742	0.44298E-01	-858.04	0.018359	736228.	0.765784
189	22.6910	0.44070E-01	-313.01	0.006697	97974.5	0.765796
190	22.7938	0.43872E-01	1293.5	0.027676	0.167315E+07	0.765991

191	23.1129	0.43266E-01	170.40	0.003646	29034.7	0.765994
192	23.5367	0.42487E-01	-324.13	0.006935	105062.	0.766006
193	23.5859	0.42398E-01	-2522.6	0.053974	0.636341E+07	0.766748
194	23.8174	0.41986E-01	-55.993	0.001198	3135.26	0.766748
195	23.8254	0.41972E-01	-23.601	0.000505	557.018	0.766748
196	23.8596	0.41912E-01	-7.6056	0.000163	57.8445	0.766748
197	23.8654	0.41902E-01	-4.3780	0.000094	19.1672	0.766748
198	23.8769	0.41882E-01	-16.141	0.000345	260.541	0.766748
199	23.9231	0.41801E-01	85.388	0.001827	7291.11	0.766749
200	23.9536	0.41747E-01	-1700.3	0.036380	0.289099E+07	0.767086
201	24.0050	0.41658E-01	244.92	0.005240	59984.2	0.767093
202	24.0335	0.41609E-01	505.45	0.010815	255476.	0.767123
203	24.3787	0.41019E-01	-585.15	0.012520	342395.	0.767163
204	24.4198	0.40950E-01	16863.	0.360811	0.284370E+09	0.800298
205	24.6256	0.40608E-01	-2156.0	0.046130	0.464825E+07	0.800840
206	24.6470	0.40573E-01	-1986.4	0.042502	0.394586E+07	0.801300
207	24.7285	0.40439E-01	-2302.5	0.049265	0.530148E+07	0.801917
208	24.8867	0.40182E-01	-2252.0	0.048184	0.507141E+07	0.802508
209	25.2049	0.39675E-01	-1857.1	0.039734	0.344873E+07	0.802910
210	25.6422	0.38998E-01	-3663.4	0.078383	0.134204E+08	0.804474
211	25.6630	0.38967E-01	3533.4	0.075601	0.124848E+08	0.805929
212	25.7993	0.38761E-01	509.42	0.010900	259506.	0.805959
213	25.8585	0.38672E-01	-7737.4	0.165551	0.598668E+08	0.812935
214	25.9871	0.38481E-01	9147.9	0.195731	0.836843E+08	0.822686
215	26.4555	0.37799E-01	15273.	0.326784	0.233263E+09	0.849866
216	26.7999	0.37314E-01	-2318.4	0.049606	0.537514E+07	0.850493
217	26.9630	0.37088E-01	-1847.7	0.039534	0.341404E+07	0.850891
218	26.9806	0.37064E-01	579.63	0.012402	335971.	0.850930
219	27.1263	0.36865E-01	-1126.1	0.024095	0.126817E+07	0.851078
220	27.6903	0.36114E-01	1820.7	0.038956	0.331489E+07	0.851464
221	27.8110	0.35957E-01	111.96	0.002395	12534.8	0.851465
222	28.0041	0.35709E-01	1692.0	0.036203	0.286293E+07	0.851799
223	28.1295	0.35550E-01	59.742	0.001278	3569.09	0.851799
224	28.2001	0.35461E-01	1352.1	0.028930	0.182822E+07	0.852012
225	28.8170	0.34702E-01	2806.0	0.060039	0.787387E+07	0.852930
226	28.9461	0.34547E-01	1363.6	0.029176	0.185938E+07	0.853146
227	29.0821	0.34385E-01	135.43	0.002898	18341.4	0.853149
228	29.3112	0.34117E-01	16953.	0.362728	0.287401E+09	0.886637
229	29.3146	0.34113E-01	-3862.3	0.082639	0.149175E+08	0.888376
230	29.3993	0.34014E-01	1804.4	0.038608	0.325588E+07	0.888755
231	29.4298	0.33979E-01	-1068.8	0.022868	0.114230E+07	0.888888
232	29.7268	0.33640E-01	243.94	0.005219	59505.6	0.888895
233	29.7350	0.33630E-01	-815.32	0.017445	664744.	0.888972
234	30.3319	0.32969E-01	-2537.8	0.054298	0.644020E+07	0.889723
235	30.6507	0.32626E-01	-47.961	0.001026	2300.22	0.889723
236	30.8270	0.32439E-01	-6037.8	0.129186	0.364547E+08	0.893971
237	31.1413	0.32112E-01	-3595.9	0.076940	0.129307E+08	0.895478
238	31.2432	0.32007E-01	13465.	0.288090	0.181293E+09	0.916602
239	31.4902	0.31756E-01	-3572.5	0.076439	0.127630E+08	0.918090
240	31.6431	0.31602E-01	-650.37	0.013916	422984.	0.918139
241	31.8589	0.31388E-01	4945.1	0.105808	0.244545E+08	0.920988
242	31.9049	0.31343E-01	3075.9	0.065813	0.946121E+07	0.922091
243	31.9989	0.31251E-01	-10474.	0.224094	0.109695E+09	0.934873
244	32.0651	0.31187E-01	-11763.	0.251680	0.138364E+09	0.950995
245	32.2205	0.31036E-01	2421.8	0.051817	0.586492E+07	0.951679
246	32.2446	0.31013E-01	-14636.	0.313162	0.214221E+09	0.976640
247	32.3380	0.30923E-01	-217.36	0.004651	47245.4	0.976646
248	32.5313	0.30740E-01	8801.2	0.188313	0.774613E+08	0.985672
249	32.5906	0.30684E-01	4328.6	0.092616	0.187370E+08	0.987855
250	32.7122	0.30570E-01	-3532.7	0.075588	0.124803E+08	0.989309
251	32.7659	0.30520E-01	-5684.3	0.121624	0.323118E+08	0.993075
252	32.8779	0.30416E-01	2905.0	0.062157	0.843919E+07	0.994058
253	32.9055	0.30390E-01	5546.1	0.118666	0.307592E+08	0.997642
254	32.9931	0.30309E-01	1836.4	0.039292	0.337232E+07	0.998035
255	33.2296	0.30094E-01	2045.6	0.043767	0.418434E+07	0.998523
256	33.4848	0.29864E-01	3560.8	0.076189	0.126797E+08	1.00000

SUM OF EFFECTIVE MASSES= 0.858200E+10

Attachment 28

GT STRUDL Coupled Building/Crane Model Output, Crane at K, All Analyses

{ 4266} >
{ 4267} > $ Eigen solution
{ 4268} > DYNAMIC ANALYSIS EIGENSOLUTION

BANDWIDTH INFORMATION BEFORE RENUMBERING.

THE MAXIMUM BANDWIDTH IS 401 AND OCCURS AT JOINT CNR916
THE AVERAGE BANDWIDTH IS 31.053
THE STANDARD DEVIATION OF THE BANDWIDTH IS 64.921

95.974
==========

BANDWIDTH INFORMATION AFTER RENUMBERING.

THE MAXIMUM BANDWIDTH IS 54 AND OCCURS AT JOINT 4118
THE AVERAGE BANDWIDTH IS 17.161
THE STANDARD DEVIATION OF THE BANDWIDTH IS 15.411

32.572
==========
TIME FOR CONSISTENCY CHECKS FOR 1075 MEMBERS 0.11 SECONDS
TIME FOR BANDWIDTH REDUCTION 0.06 SECONDS
TIME TO GENERATE 1075 ELEMENT STIF. MATRICES 0.05 SECONDS
TIME TO PROCESS 349 MEMBER RELEASES 0.06 SECONDS
TIME TO ASSEMBLE THE STIFFNESS MATRIX 0.14 SECONDS
TIME TO PROCESS 778 JOINTS 0.21 SECONDS
TIME TO GENERATE REDUCED STIFFNESS MATRIX 0.12 SECONDS

****
* GT/LANCZOS SOLUTION DATA *
****

NUMBER OF DYNAMIC DEGREES-OF-FREEDOM = 4537
NUMBER OF MODES REQUESTED = 300
EIGENVALUE TOLERANCE = 1.00000E-06
NUMBER OF TERMS IN SKYLINE = 423175
AVERAGE COLUMN HEIGHT OF SKYLINE = 93
RANK OF MASS MATRIX = 2126
OUT-OF-CORE EQUATION SOLVER USED (5 BLOCKS)
NUMBER OF LANCZOS VECTORS COMPUTED = 531

****
* END OF GT/LANCZOS SOLUTION DATA *
****

TIME TO SOLVE EIGENPROBLEM 125.10 SECONDS
TIME TO TRANSFORM EIGENVECTORS TO JOINTS 0.99 SECONDS

****
* EIGEN-SOLUTION CHECKS *
****

**** STRUDL MESSAGE - STURM SEQUENCE CHECK WAS SUCCESSFUL - THERE ARE NO MISSING MODES

MODE	EIGENVALUE ((RAD/SEC)**2)	FREQUENCY (RAD/SEC)	FREQUENCY (CYC/SEC)	PERIOD (SEC/CYC)	ESTIMATED ACCURACY
1	2.426902D+00	1.557852D+00	2.479398D-01	4.033238D+00	9.693979D-09
2	3.828665D+00	1.956697D+00	3.114180D-01	3.211118D+00	1.442118D-08
3	5.672555D+01	7.531636D+00	1.198697D+00	8.342391D-01	6.469762D-08
4	6.358177D+01	7.973818D+00	1.269072D+00	7.879771D-01	2.997646D-07
5	6.725361D+01	8.200830D+00	1.305203D+00	7.661646D-01	1.136230D-07

6	1.162493D+02	1.078190D+01	1.715992D+00	5.827533D-01	1.546341D-08
7	1.194585D+02	1.092971D+01	1.739517D+00	5.748722D-01	1.291024D-08
8	1.262874D+02	1.123777D+01	1.788546D+00	5.591133D-01	1.096929D-07
9	1.386088D+02	1.177322D+01	1.873766D+00	5.336845D-01	6.328180D-08
10	1.512703D+02	1.229920D+01	1.957478D+00	5.108613D-01	3.034356D-08
11	1.881962D+02	1.371846D+01	2.183361D+00	4.580094D-01	1.147225D-09
12	1.926359D+02	1.387933D+01	2.208965D+00	4.527008D-01	1.180447D-08
13	2.397238D+02	1.548302D+01	2.464199D+00	4.058114D-01	4.552746D-08
14	2.411838D+02	1.553009D+01	2.471691D+00	4.045813D-01	4.434629D-08
15	2.551314D+02	1.597283D+01	2.542155D+00	3.933670D-01	1.181112D-08
16	2.733710D+02	1.653394D+01	2.631457D+00	3.800175D-01	3.020586D-08
17	2.842775D+02	1.686053D+01	2.683437D+00	3.726565D-01	1.427085D-08
18	3.335583D+02	1.826358D+01	2.906739D+00	3.440282D-01	1.541400D-08
19	3.498511D+02	1.870431D+01	2.976883D+00	3.359219D-01	3.506871D-10
20	3.922259D+02	1.980469D+01	3.152015D+00	3.172574D-01	1.870407D-09
21	3.952791D+02	1.988163D+01	3.164259D+00	3.160297D-01	4.077036D-10
22	4.056461D+02	2.014066D+01	3.205485D+00	3.119653D-01	1.610620D-10
23	4.273157D+02	2.067162D+01	3.289990D+00	3.039523D-01	2.011345D-09
24	4.674909D+02	2.162154D+01	3.441175D+00	2.905985D-01	7.290086D-09
25	5.529641D+02	2.351519D+01	3.742558D+00	2.671969D-01	6.346631D-09
26	5.727538D+02	2.393228D+01	3.808940D+00	2.625402D-01	2.413532D-08
27	6.666566D+02	2.581969D+01	4.109332D+00	2.433486D-01	7.118068D-09
28	7.299271D+02	2.701716D+01	4.299915D+00	2.325627D-01	5.662353D-10
29	7.602454D+02	2.757255D+01	4.388307D+00	2.278783D-01	1.486378D-08
30	8.207850D+02	2.864935D+01	4.559685D+00	2.193134D-01	7.126838D-09
31	8.272302D+02	2.876161D+01	4.577552D+00	2.184574D-01	7.551904D-09
32	8.699278D+02	2.949454D+01	4.694201D+00	2.130288D-01	7.022881D-10
33	8.901756D+02	2.983581D+01	4.748517D+00	2.105921D-01	9.823245D-10
34	9.008206D+02	3.001367D+01	4.776824D+00	2.093441D-01	2.850109D-09
35	9.139348D+02	3.023135D+01	4.811469D+00	2.078367D-01	8.874411D-10
36	9.370135D+02	3.061068D+01	4.871840D+00	2.052612D-01	7.976586D-10
37	9.494826D+02	3.081368D+01	4.904149D+00	2.039090D-01	2.727861D-09
38	9.637236D+02	3.104390D+01	4.940790D+00	2.023968D-01	5.018724D-09
39	9.858084D+02	3.139759D+01	4.997081D+00	2.001168D-01	1.364058D-09
40	9.922457D+02	3.149993D+01	5.013370D+00	1.994666D-01	7.200712D-09
41	1.015956D+03	3.187407D+01	5.072915D+00	1.971253D-01	7.518707D-09
42	1.031026D+03	3.210960D+01	5.110402D+00	1.956793D-01	3.561499D-09
43	1.139323D+03	3.375386D+01	5.372093D+00	1.861472D-01	4.904433D-10
44	1.257476D+03	3.546090D+01	5.643778D+00	1.771863D-01	1.477990D-09
45	1.257885D+03	3.546667D+01	5.644695D+00	1.771575D-01	7.879748D-10
46	1.301335D+03	3.607401D+01	5.741358D+00	1.741748D-01	1.532402D-09
47	1.346359D+03	3.669276D+01	5.839834D+00	1.712377D-01	4.461254D-10
48	1.506052D+03	3.880789D+01	6.176467D+00	1.619049D-01	3.397689D-09
49	1.608724D+03	4.010890D+01	6.383530D+00	1.566531D-01	2.416319D-09
50	1.943524D+03	4.408542D+01	7.016412D+00	1.425230D-01	7.916988D-09
51	2.070678D+03	4.550470D+01	7.242297D+00	1.380777D-01	1.115649D-09
52	2.107629D+03	4.590892D+01	7.306632D+00	1.368620D-01	8.038914D-10
53	2.146558D+03	4.633096D+01	7.373801D+00	1.356153D-01	2.659834D-10
54	2.275250D+03	4.769959D+01	7.591625D+00	1.317241D-01	6.379332D-09
55	2.306267D+03	4.802361D+01	7.643195D+00	1.308353D-01	1.095237D-09
56	2.312688D+03	4.809042D+01	7.653828D+00	1.306536D-01	1.845196D-09
57	2.363531D+03	4.861616D+01	7.737502D+00	1.292407D-01	6.147684D-10
58	2.426891D+03	4.926348D+01	7.840527D+00	1.275425D-01	2.249255D-09
59	2.436556D+03	4.936148D+01	7.856124D+00	1.272892D-01	1.364667D-09
60	2.528424D+03	5.028343D+01	8.002857D+00	1.249554D-01	7.711826D-10
61	2.581066D+03	5.080419D+01	8.085737D+00	1.236746D-01	5.753805D-10
62	2.678463D+03	5.175387D+01	8.236884D+00	1.214051D-01	4.022877D-09
63	2.729524D+03	5.224485D+01	8.315026D+00	1.202642D-01	6.219334D-09
64	2.846206D+03	5.334984D+01	8.490891D+00	1.177733D-01	2.067124D-09
65	2.890630D+03	5.376458D+01	8.556899D+00	1.168648D-01	6.919938D-10
66	2.990080D+03	5.468162D+01	8.702850D+00	1.149049D-01	1.272534D-08
67	3.025184D+03	5.500168D+01	8.753788D+00	1.142363D-01	7.351667D-09
68	3.046894D+03	5.519868D+01	8.785142D+00	1.138286D-01	6.643016D-09
69	3.057016D+03	5.529029D+01	8.799723D+00	1.136399D-01	5.764792D-09
70	3.114749D+03	5.580994D+01	8.882428D+00	1.125818D-01	4.933837D-09
71	3.149072D+03	5.611659D+01	8.931233D+00	1.119666D-01	1.866161D-08
72	3.167333D+03	5.627906D+01	8.957090D+00	1.116434D-01	3.471906D-09
73	3.214658D+03	5.669796D+01	9.023760D+00	1.108186D-01	3.199454D-09
74	3.233785D+03	5.686638D+01	9.050565D+00	1.104903D-01	6.945949D-10
75	3.299777D+03	5.744369D+01	9.142447D+00	1.093799D-01	6.667143D-09
76	3.367589D+03	5.803094D+01	9.235910D+00	1.082730D-01	1.823745D-08
77	3.492545D+03	5.909776D+01	9.405701D+00	1.063185D-01	4.699832D-09
78	3.554856D+03	5.962262D+01	9.489234D+00	1.053826D-01	6.650056D-09
79	3.640746D+03	6.033859D+01	9.603185D+00	1.041321D-01	6.402697D-09
80	3.694479D+03	6.078223D+01	9.673792D+00	1.033721D-01	6.505067D-09

81	3.729667D+03	6.107100D+01	9.719751D+00	1.028833D-01	6.272104D-10
82	3.809430D+03	6.172058D+01	9.823135D+00	1.018005D-01	5.142010D-09
83	3.870050D+03	6.220973D+01	9.900985D+00	1.010001D-01	9.376634D-09
84	3.876034D+03	6.225781D+01	9.908637D+00	1.009221D-01	1.652208D-09
85	3.935477D+03	6.273338D+01	9.984328D+00	1.001570D-01	1.158261D-08
86	3.957996D+03	6.291261D+01	1.001285D+01	9.987165D-02	6.196287D-09
87	4.020237D+03	6.340534D+01	1.009127D+01	9.909552D-02	7.811753D-09
88	4.115071D+03	6.414882D+01	1.020960D+01	9.794702D-02	2.377694D-09
89	4.136000D+03	6.431174D+01	1.023553D+01	9.769888D-02	5.767444D-09
90	4.158245D+03	6.448445D+01	1.026302D+01	9.743722D-02	5.174958D-09
91	4.159474D+03	6.449398D+01	1.026454D+01	9.742281D-02	4.721513D-09
92	4.160110D+03	6.449891D+01	1.026532D+01	9.741537D-02	6.070978D-09
93	4.164999D+03	6.453681D+01	1.027135D+01	9.735817D-02	6.172482D-09
94	4.165348D+03	6.453951D+01	1.027178D+01	9.735409D-02	5.792822D-09
95	4.170522D+03	6.457958D+01	1.027816D+01	9.729369D-02	4.234706D-10
96	4.172782D+03	6.459708D+01	1.028094D+01	9.726734D-02	4.912084D-10
97	4.174566D+03	6.461088D+01	1.028314D+01	9.724655D-02	1.073743D-09
98	4.229306D+03	6.503311D+01	1.035034D+01	9.661517D-02	5.991548D-09
99	4.285913D+03	6.546689D+01	1.041938D+01	9.597502D-02	6.734939D-09
100	4.350556D+03	6.595874D+01	1.049766D+01	9.525933D-02	3.823726D-09
101	4.436050D+03	6.660368D+01	1.060030D+01	9.433692D-02	2.719141D-09
102	4.440851D+03	6.663971D+01	1.060604D+01	9.428590D-02	2.429798D-09
103	4.478704D+03	6.692312D+01	1.065114D+01	9.388662D-02	1.933347D-09
104	4.612437D+03	6.791492D+01	1.080900D+01	9.251554D-02	4.844557D-09
105	4.781671D+03	6.914963D+01	1.100550D+01	9.086362D-02	1.171535D-08
106	4.832699D+03	6.951762D+01	1.106407D+01	9.038264D-02	1.717736D-09
107	4.893079D+03	6.995055D+01	1.113298D+01	8.982325D-02	6.146522D-09
108	5.014919D+03	7.081609D+01	1.127073D+01	8.872539D-02	1.973942D-08
109	5.181027D+03	7.197935D+01	1.145587D+01	8.729150D-02	3.005453D-09
110	5.483180D+03	7.404850D+01	1.178518D+01	8.485230D-02	5.311903D-09
111	5.510367D+03	7.423184D+01	1.181436D+01	8.464272D-02	7.008292D-09
112	5.533715D+03	7.438894D+01	1.183937D+01	8.446397D-02	1.022084D-09
113	5.606886D+03	7.487914D+01	1.191739D+01	8.391102D-02	7.502815D-10
114	5.721264D+03	7.563904D+01	1.203833D+01	8.306802D-02	1.018815D-09
115	5.942370D+03	7.708677D+01	1.226874D+01	8.150797D-02	7.320546D-09
116	5.991758D+03	7.740644D+01	1.231962D+01	8.117135D-02	3.850222D-09
117	6.036343D+03	7.769391D+01	1.236537D+01	8.087102D-02	2.481947D-09
118	6.241662D+03	7.900419D+01	1.257391D+01	7.952978D-02	1.333332D-09
119	6.269798D+03	7.918206D+01	1.260222D+01	7.935113D-02	4.301680D-10
120	6.334013D+03	7.958651D+01	1.266659D+01	7.894787D-02	7.815290D-09
121	6.950556D+03	8.336999D+01	1.326875D+01	7.536507D-02	2.902164D-09
122	6.980059D+03	8.354675D+01	1.329688D+01	7.520563D-02	2.141082D-09
123	7.499915D+03	8.660205D+01	1.378314D+01	7.255239D-02	4.335015D-09
124	7.709594D+03	8.780429D+01	1.397449D+01	7.155898D-02	1.674234D-09
125	7.793131D+03	8.827871D+01	1.404999D+01	7.117441D-02	9.109516D-09
126	7.955157D+03	8.919169D+01	1.419530D+01	7.044586D-02	1.321883D-09
127	7.958349D+03	8.920958D+01	1.419814D+01	7.043174D-02	4.432592D-09
128	8.224129D+03	9.068698D+01	1.443328D+01	6.928431D-02	1.573217D-09
129	8.260288D+03	9.088613D+01	1.446498D+01	6.913250D-02	6.351063D-11
130	8.335786D+03	9.130053D+01	1.453093D+01	6.881872D-02	8.043956D-09
131	8.653399D+03	9.302365D+01	1.480517D+01	6.754396D-02	1.964985D-09
132	8.785411D+03	9.373052D+01	1.491768D+01	6.703457D-02	1.189032D-09
133	8.854118D+03	9.409633D+01	1.497589D+01	6.677397D-02	2.070112D-09
134	8.933925D+03	9.451944D+01	1.504324D+01	6.647506D-02	4.091818D-09
135	9.065914D+03	9.521509D+01	1.515395D+01	6.598938D-02	1.053913D-09
136	9.125546D+03	9.552772D+01	1.520371D+01	6.577342D-02	6.288005D-10
137	9.343261D+03	9.666054D+01	1.538400D+01	6.500259D-02	1.405721D-09
138	9.520790D+03	9.757454D+01	1.552947D+01	6.439370D-02	2.568767D-09
139	9.771426D+03	9.885052D+01	1.573255D+01	6.356249D-02	4.447572D-11
140	1.006168D+04	1.003079D+02	1.596450D+01	6.263896D-02	1.085710D-09
141	1.014776D+04	1.007361D+02	1.603265D+01	6.237273D-02	1.135457D-09
142	1.030002D+04	1.014890D+02	1.615248D+01	6.190999D-02	1.913688D-09
143	1.041086D+04	1.020336D+02	1.623916D+01	6.157955D-02	7.183731D-10
144	1.071781D+04	1.035268D+02	1.647681D+01	6.069136D-02	1.559553D-09
145	1.081354D+04	1.039882D+02	1.655023D+01	6.042213D-02	2.405098D-09
146	1.114650D+04	1.055770D+02	1.680310D+01	5.951283D-02	2.146074D-10
147	1.126728D+04	1.061474D+02	1.689389D+01	5.919300D-02	4.006089D-09
148	1.181387D+04	1.086916D+02	1.729881D+01	5.780745D-02	1.489514D-09
149	1.187133D+04	1.089556D+02	1.734083D+01	5.766737D-02	1.807892D-09
150	1.217164D+04	1.103251D+02	1.755879D+01	5.695153D-02	8.171496D-10
151	1.242367D+04	1.114615D+02	1.773965D+01	5.637090D-02	4.762166D-09
152	1.259233D+04	1.122156D+02	1.785966D+01	5.599211D-02	6.757374D-10
153	1.274521D+04	1.128947D+02	1.796775D+01	5.565528D-02	4.162989D-10
154	1.287517D+04	1.134688D+02	1.805912D+01	5.537368D-02	9.891843D-10
155	1.305362D+04	1.142525D+02	1.818384D+01	5.499388D-02	2.647051D-09

156	1.315890D+04	1.147122D+02	1.825702D+01	5.477346D-02	2.488189D-09
157	1.328410D+04	1.152567D+02	1.834367D+01	5.451472D-02	2.058159D-09
158	1.333291D+04	1.154682D+02	1.837734D+01	5.441485D-02	5.701475D-09
159	1.335661D+04	1.155708D+02	1.839367D+01	5.436654D-02	3.156984D-09
160	1.380110D+04	1.174781D+02	1.869722D+01	5.348389D-02	4.031938D-09
161	1.391137D+04	1.179465D+02	1.877176D+01	5.327151D-02	3.820646D-09
162	1.408579D+04	1.186836D+02	1.888908D+01	5.294065D-02	3.239199D-09
163	1.450675D+04	1.204440D+02	1.916925D+01	5.216687D-02	9.759574D-10
164	1.460189D+04	1.208383D+02	1.923201D+01	5.199664D-02	7.056764D-09
165	1.466808D+04	1.211118D+02	1.927555D+01	5.187920D-02	1.746008D-09
166	1.485163D+04	1.218673D+02	1.939578D+01	5.155761D-02	9.988743D-10
167	1.493689D+04	1.222166D+02	1.945137D+01	5.141026D-02	5.892831D-10
168	1.496284D+04	1.223227D+02	1.946826D+01	5.136566D-02	6.616926D-11
169	1.500186D+04	1.224821D+02	1.949363D+01	5.129882D-02	2.774442D-09
170	1.534328D+04	1.238680D+02	1.971420D+01	5.072485D-02	6.199924D-10
171	1.565867D+04	1.251346D+02	1.991579D+01	5.021141D-02	6.335012D-10
172	1.596927D+04	1.263696D+02	2.011234D+01	4.972071D-02	8.677550D-10
173	1.601866D+04	1.265649D+02	2.014342D+01	4.964400D-02	5.953642D-11
174	1.608926D+04	1.268434D+02	2.018776D+01	4.953497D-02	4.418583D-10
175	1.670440D+04	1.292455D+02	2.057006D+01	4.861434D-02	3.711164D-10
176	1.672213D+04	1.293141D+02	2.058097D+01	4.858857D-02	1.606280D-10
177	1.693369D+04	1.301295D+02	2.071075D+01	4.828409D-02	6.737452D-10
178	1.738041D+04	1.318348D+02	2.098216D+01	4.765954D-02	6.245325D-10
179	1.751004D+04	1.323255D+02	2.106026D+01	4.748280D-02	3.738410D-10
180	1.804636D+04	1.343367D+02	2.138036D+01	4.677191D-02	5.181450D-10
181	1.861297D+04	1.364293D+02	2.171340D+01	4.605450D-02	2.414518D-10
182	1.872517D+04	1.368399D+02	2.177875D+01	4.591631D-02	4.372376D-10
183	1.903192D+04	1.379562D+02	2.195641D+01	4.554478D-02	4.017694D-10
184	1.928534D+04	1.388717D+02	2.210211D+01	4.524455D-02	9.832982D-10
185	1.933815D+04	1.390617D+02	2.213235D+01	4.518273D-02	3.526009D-10
186	1.956671D+04	1.398811D+02	2.226276D+01	4.491806D-02	3.445473D-10
187	1.957771D+04	1.399204D+02	2.226902D+01	4.490544D-02	2.368559D-10
188	1.999620D+04	1.414079D+02	2.250577D+01	4.443305D-02	4.500868D-10
189	2.038385D+04	1.427720D+02	2.272287D+01	4.400852D-02	1.491348D-09
190	2.100618D+04	1.449351D+02	2.306714D+01	4.335172D-02	2.211711D-10
191	2.176757D+04	1.475384D+02	2.348146D+01	4.258679D-02	1.607470D-09
192	2.194675D+04	1.481443D+02	2.357790D+01	4.241259D-02	1.478087D-09
193	2.238299D+04	1.496095D+02	2.381109D+01	4.199725D-02	1.232435D-10
194	2.240087D+04	1.496692D+02	2.382059D+01	4.198048D-02	5.097820D-11
195	2.244609D+04	1.498202D+02	2.384462D+01	4.193818D-02	3.371081D-11
196	2.247867D+04	1.499289D+02	2.386192D+01	4.190777D-02	7.674396D-11
197	2.250067D+04	1.500022D+02	2.387360D+01	4.188728D-02	5.909705D-11
198	2.258427D+04	1.502806D+02	2.391791D+01	4.180968D-02	7.894579D-11
199	2.260593D+04	1.503527D+02	2.392937D+01	4.178965D-02	2.592285D-10
200	2.272499D+04	1.507481D+02	2.399230D+01	4.168003D-02	1.203752D-09
201	2.278759D+04	1.509556D+02	2.402533D+01	4.162274D-02	1.164783D-09
202	2.317651D+04	1.522383D+02	2.422948D+01	4.127204D-02	1.842598D-09
203	2.346829D+04	1.531936D+02	2.438153D+01	4.101466D-02	3.609384D-10
204	2.401070D+04	1.549539D+02	2.466167D+01	4.054875D-02	9.086803D-11
205	2.405413D+04	1.550939D+02	2.468397D+01	4.051213D-02	2.075354D-10
206	2.428541D+04	1.558378D+02	2.480235D+01	4.031876D-02	3.160793D-10
207	2.452869D+04	1.566164D+02	2.492627D+01	4.011831D-02	8.757619D-10
208	2.503262D+04	1.582170D+02	2.518102D+01	3.971246D-02	5.638471D-11
209	2.523829D+04	1.588656D+02	2.528425D+01	3.955031D-02	4.320031D-10
210	2.555370D+04	1.598552D+02	2.544175D+01	3.930547D-02	1.499324D-10
211	2.598602D+04	1.612018D+02	2.565606D+01	3.897714D-02	8.411819D-10
212	2.620755D+04	1.618874D+02	2.576519D+01	3.881206D-02	1.759385D-10
213	2.645091D+04	1.626374D+02	2.588454D+01	3.863310D-02	2.156043D-10
214	2.695059D+04	1.641664D+02	2.612789D+01	3.827328D-02	1.326109D-10
215	2.710633D+04	1.646400D+02	2.620327D+01	3.816318D-02	5.841866D-10
216	2.835991D+04	1.684040D+02	2.680233D+01	3.731019D-02	2.751276D-10
217	2.868516D+04	1.693669D+02	2.695558D+01	3.709807D-02	7.858366D-11
218	2.929387D+04	1.711545D+02	2.724009D+01	3.671060D-02	5.986395D-11
219	2.935028D+04	1.713192D+02	2.726630D+01	3.667531D-02	6.720002D-11
220	2.960921D+04	1.720733D+02	2.738631D+01	3.651459D-02	2.165905D-10
221	2.972913D+04	1.724214D+02	2.744171D+01	3.644087D-02	3.639004D-11
222	3.010982D+04	1.735218D+02	2.761685D+01	3.620977D-02	2.814565D-10
223	3.068870D+04	1.751819D+02	2.788107D+01	3.586664D-02	3.616964D-10
224	3.175815D+04	1.782082D+02	2.836271D+01	3.525756D-02	8.093202D-11
225	3.239259D+04	1.799794D+02	2.864461D+01	3.491058D-02	4.012626D-10
226	3.333975D+04	1.825918D+02	2.906038D+01	3.441111D-02	3.574779D-10
227	3.387831D+04	1.840606D+02	2.929416D+01	3.413650D-02	4.065127D-10
228	3.409644D+04	1.846522D+02	2.938831D+01	3.402713D-02	2.227676D-10
229	3.414118D+04	1.847733D+02	2.940759D+01	3.400483D-02	3.544707D-10
230	3.416935D+04	1.848495D+02	2.941972D+01	3.399081D-02	8.961424D-11

231	3.456418D+04	1.859144D+02	2.958920D+01	3.379611D-02	2.605615D-09
232	3.475939D+04	1.864387D+02	2.967264D+01	3.370108D-02	1.016996D-09
233	3.650706D+04	1.910682D+02	3.040945D+01	3.288452D-02	5.596386D-10
234	3.681809D+04	1.918804D+02	3.053872D+01	3.274532D-02	1.043827D-10
235	3.762175D+04	1.939633D+02	3.087021D+01	3.239369D-02	2.960098D-10
236	3.773511D+04	1.942553D+02	3.091669D+01	3.234499D-02	6.150437D-11
237	3.851241D+04	1.962458D+02	3.123349D+01	3.201692D-02	4.546178D-10
238	3.878688D+04	1.969438D+02	3.134458D+01	3.190344D-02	8.850622D-10
239	3.910251D+04	1.977436D+02	3.147186D+01	3.177441D-02	1.690435D-10
240	3.988914D+04	1.997227D+02	3.178685D+01	3.145955D-02	1.294110D-10
241	4.006547D+04	2.001636D+02	3.185703D+01	3.139025D-02	1.410165D-10
242	4.032787D+04	2.008180D+02	3.196118D+01	3.128796D-02	1.701233D-10
243	4.050312D+04	2.012539D+02	3.203055D+01	3.122020D-02	2.174809D-10
244	4.099251D+04	2.024661D+02	3.222347D+01	3.103328D-02	1.839551D-10
245	4.121285D+04	2.030095D+02	3.230996D+01	3.095021D-02	2.455196D-10
246	4.126681D+04	2.031423D+02	3.233111D+01	3.092997D-02	6.802235D-11
247	4.147796D+04	2.036614D+02	3.241371D+01	3.085114D-02	9.286667D-11
248	4.192383D+04	2.047531D+02	3.258747D+01	3.068665D-02	1.050209D-10
249	4.195163D+04	2.048210D+02	3.259827D+01	3.067648D-02	2.439635D-10
250	4.221000D+04	2.054507D+02	3.269850D+01	3.058245D-02	6.013092D-10
251	4.240594D+04	2.059270D+02	3.277430D+01	3.051171D-02	2.419203D-10
252	4.252407D+04	2.062136D+02	3.281992D+01	3.046930D-02	2.085886D-10
253	4.300143D+04	2.073679D+02	3.300362D+01	3.029971D-02	1.171335D-10
254	4.328983D+04	2.080621D+02	3.311411D+01	3.019861D-02	2.320597D-10
255	4.340030D+04	2.083274D+02	3.315633D+01	3.016015D-02	3.539002D-10
256	4.416100D+04	2.101452D+02	3.344564D+01	2.989926D-02	1.879809D-10
257	4.431675D+04	2.105154D+02	3.350457D+01	2.984667D-02	4.530056D-10
258	4.571389D+04	2.138081D+02	3.402861D+01	2.938703D-02	6.521596D-10
259	4.602352D+04	2.145309D+02	3.414366D+01	2.928802D-02	5.789982D-10
260	4.691794D+04	2.166055D+02	3.447383D+01	2.900751D-02	1.064228D-10
261	4.745105D+04	2.178326D+02	3.466914D+01	2.884410D-02	3.643325D-10
262	4.752892D+04	2.180113D+02	3.469757D+01	2.882046D-02	3.386201D-10
263	4.783734D+04	2.187175D+02	3.480997D+01	2.872740D-02	4.782293D-11
264	4.861104D+04	2.204791D+02	3.509034D+01	2.849787D-02	3.407805D-11
265	4.922400D+04	2.218648D+02	3.531088D+01	2.831988D-02	1.677451D-09
266	5.006287D+04	2.237473D+02	3.561049D+01	2.808161D-02	2.937985D-10
267	5.037323D+04	2.244398D+02	3.572071D+01	2.799497D-02	1.366249D-10
268	5.045152D+04	2.246142D+02	3.574845D+01	2.797324D-02	1.293822D-10
269	5.093852D+04	2.256956D+02	3.592057D+01	2.783920D-02	3.448765D-10
270	5.163517D+04	2.272337D+02	3.616537D+01	2.765076D-02	3.582301D-11
271	5.190286D+04	2.278220D+02	3.625899D+01	2.757936D-02	6.365136D-10
272	5.200548D+04	2.280471D+02	3.629482D+01	2.755214D-02	2.372920D-10
273	5.226933D+04	2.286249D+02	3.638678D+01	2.748251D-02	1.288868D-10
274	5.267270D+04	2.295053D+02	3.652691D+01	2.737708D-02	2.279579D-10
275	5.294435D+04	2.300964D+02	3.662098D+01	2.730675D-02	3.349636D-10
276	5.345406D+04	2.312013D+02	3.679683D+01	2.717625D-02	5.991005D-11
277	5.364575D+04	2.316155D+02	3.686275D+01	2.712765D-02	2.392751D-10
278	5.431352D+04	2.330526D+02	3.709147D+01	2.696037D-02	2.001156D-10
279	5.489282D+04	2.342922D+02	3.728875D+01	2.681774D-02	5.602834D-11
280	5.507918D+04	2.346895D+02	3.735200D+01	2.677233D-02	1.397955D-10
281	5.528449D+04	2.351265D+02	3.742155D+01	2.672257D-02	2.766528D-10
282	5.532659D+04	2.352160D+02	3.743580D+01	2.671240D-02	4.281348D-11
283	5.587778D+04	2.363848D+02	3.762181D+01	2.658033D-02	3.202501D-10
284	5.629406D+04	2.372637D+02	3.776169D+01	2.648187D-02	2.604651D-10
285	5.783191D+04	2.404827D+02	3.827400D+01	2.612740D-02	1.613016D-10
286	5.785750D+04	2.405359D+02	3.828247D+01	2.612162D-02	4.128715D-10
287	5.790136D+04	2.406270D+02	3.829698D+01	2.611172D-02	5.703720D-10
288	5.803399D+04	2.409024D+02	3.834081D+01	2.608187D-02	6.181571D-11
289	5.946954D+04	2.438638D+02	3.881212D+01	2.576514D-02	8.039834D-11
290	5.969785D+04	2.443314D+02	3.888655D+01	2.571583D-02	4.841967D-10
291	6.088561D+04	2.467501D+02	3.927150D+01	2.546376D-02	2.392131D-10
292	6.109827D+04	2.471806D+02	3.934002D+01	2.541941D-02	3.169269D-11
293	6.153331D+04	2.480591D+02	3.947983D+01	2.532939D-02	2.886612D-11
294	6.331503D+04	2.516248D+02	4.004733D+01	2.497046D-02	7.302640D-10
295	6.339457D+04	2.517828D+02	4.007247D+01	2.495479D-02	2.670581D-10
296	6.364237D+04	2.522744D+02	4.015072D+01	2.490616D-02	3.431823D-10
297	6.484935D+04	2.546554D+02	4.052966D+01	2.467329D-02	4.182653D-10
298	6.520849D+04	2.553595D+02	4.064173D+01	2.460525D-02	9.202194D-11
299	6.530165D+04	2.555419D+02	4.067075D+01	2.458769D-02	5.789906D-11
300	6.546083D+04	2.558531D+02	4.072029D+01	2.455778D-02	1.016866D-10

ORTHOGONALITY CHECK

WITH RESPECT TO MASS

OFF DIAGONALS: MAXIMUM = 0.1213E-13
MINIMUM = 0.3388E-20
MEAN = 0.3600E-15

DIAGONALS: MAXIMUM = 0.1000E+01
MINIMUM = 0.1000E+01
MEAN = 0.1000E+01

WITH RESPECT TO STIFFNESS

OFF DIAGONALS: MAXIMUM = 0.8633E-05
MINIMUM = 0.2974E-14
MEAN = 0.4216E-07

DIAGONALS: MAXIMUM = 0.6546E+05
MINIMUM = 0.2427E+01
MEAN = 0.1920E+05

****
* END OF EIGEN-SOLUTION CHECKS *
****

TIME TO CHECK EIGENSOLUTION 33.73 SECONDS
{ 4269} > LIST DYNAMIC PARTICIPATION FACTORS
1

****
RESULTS OF LATEST ANALYSES
****

PROBLEM - N1E3_HU_ TITLE - BRIDGE LOCATION 1 TROLLEY POSITION 3 - LOAD UP - MHE

ACTIVE UNITS FEET KIP DEG DEGF SEC

NORMALIZED PARTICIPATION FACTORS

% OF X DIRECTION MASS PARTICIPATING

MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT
1	0.1000142E-03	2	12.35019	3	1.807860	4	38.68913	5	0.7703317	6	0.5989513E-01
7	0.4087146E-01	8	0.9817550	9	0.3074841	10	0.4587888E-02	11	0.1713017E-02	12	0.6248905E-03
13	3.611739	14	0.8415300	15	0.5544128E-02	16	3.135182	17	8.141340	18	2.912078
19	0.6980520E-04	20	0.1459369	21	0.5594620E-05	22	0.2070613E-03	23	0.1579070E-01	24	0.2345800E-01
25	0.4128439E-02	26	1.594481	27	3.032122	28	0.6021833E-03	29	0.1495480	30	2.606580
31	0.4992821	32	0.1362908E-01	33	0.1879233E-02	34	0.9334879E-02	35	0.1622765E-02	36	0.1493360E-03
37	3.707611	38	0.2149276E-01	39	0.6029409E-02	40	4.553502	41	0.8241060	42	0.7581956
43	0.6174031E-02	44	0.1592720E-02	45	0.8407101E-03	46	0.1934507E-04	47	0.3470354E-04	48	0.6424303
49	0.2637642E-01	50	0.1092718E-02	51	0.9682683E-01	52	0.2258723	53	0.2292428E-03	54	0.2300246E-01
55	0.2404170	56	0.3387216	57	0.5640740E-05	58	0.7035666E-01	59	0.6446802E-02	60	0.5955075E-01
61	0.1023522E-02	62	0.1885793	63	0.5986579E-02	64	0.5224073E-02	65	0.2648608E-02	66	0.1024034E-02
67	0.3696725E-04	68	0.1675162E-05	69	0.3897491E-05	70	0.8551987E-05	71	0.4957384E-02	72	0.3333417E-02
73	0.2521038E-03	74	0.5711806E-04	75	0.8078348E-03	76	0.1972230E-03	77	0.8578014E-05	78	0.2683533E-02
79	0.4800821E-03	80	0.8167821E-02	81	0.7333167E-04	82	0.9909079E-04	83	0.6620930E-03	84	0.4728798E-03

85 0.8713076E-04 86 0.1960748E-02 87 0.1241629E-01 88 0.3365768E-03 89 0.1906840E-02 90 0.2349611E-02
91 0.1809353E-02 92 0.4333172E-02 93 0.1060435E-02 94 0.1656171E-02 95 0.4444823E-06 96 0.1417007E-08
97 0.1698117E-04 98 0.8670156E-05 99 0.2727944E-02 100 0.1745892 101 0.5868009E-01 102 0.1169856
103 0.2903621E-04 104 0.5182304E-02 105 0.4535079E-02 106 0.4339910E-05 107 0.2979657E-04 108 0.1623445E-01
109 0.3414864E-03 110 0.9561330E-04 111 0.1075814E-03 112 0.1500582E-04 113 0.2938512E-03 114 0.2230494E-04
115 0.1327908E-01 116 0.1903157E-03 117 0.3491987E-03 118 0.1442721E-02 119 0.2392519E-02 120 0.5043421
121 0.1624939 122 0.2067683E-03 123 0.1570041E-03 124 0.1474123E-03 125 0.5191222E-03 126 0.1518394E-03
127 0.4038841E-02 128 0.5665110E-01 129 0.8277405E-06 130 0.8865939E-01 131 0.6605648E-03 132 0.1059761
133 0.9359472 134 0.2501370E-01 135 0.6339100E-04 136 0.1941707E-03 137 0.2945553E-03 138 0.3615552E-01
139 0.1920241E-07 140 0.1599451E-02 141 0.3691466E-01 142 0.1490766E-01 143 0.4732489E-04 144 0.2690593E-02
145 0.3301093E-01 146 0.1766502E-02 147 0.1229310 148 0.1626778E-02 149 0.9962547E-02 150 0.3225577E-03
151 0.4120181E-01 152 0.5066588E-02 153 0.3234602E-02 154 0.1161037E-02 155 0.4250626E-01 156 0.1960687E-02
157 0.2590817E-04 158 0.4284427E-03 159 0.1732125E-01 160 0.1491966E-01 161 0.3705621E-01 162 0.7744159E-02
163 0.6256843E-04 164 0.2102613E-02 165 0.8688108E-02 166 0.1875226E-02 167 0.1601150E-03 168 0.1622069E-04
169 0.8860893E-03 170 0.4284210E-03 171 0.2866852E-03 172 0.1723704E-01 173 0.9603504E-05 174 0.6641668E-06
175 0.7209204E-05 176 0.1386330E-05 177 0.1024600E-03 178 0.1281156E-03 179 0.7576445E-05 180 0.6517971E-05
181 0.6527206E-03 182 0.4723735E-02 183 0.4406440E-03 184 0.6062786E-03 185 0.1873914E-03 186 0.6639430E-04
187 0.2760847E-02 188 0.6368759E-01 189 0.5271471E-01 190 0.2612188E-02 191 0.6562593E-01 192 0.1074714
193 0.1038828E-03 194 0.6292488E-05 195 0.7196776E-05 196 0.1857057E-04 197 0.1806753E-04 198 0.2340741E-04
199 0.7573536E-01 200 0.6413648E-02 201 0.1130150E-01 202 0.2487770E-01 203 0.9692716E-06 204 0.7810708E-03
205 0.3390836E-04 206 0.1466786E-02 207 0.1950212E-01 208 0.3227262E-04 209 0.9420768E-01 210 0.1473001E-02
211 0.2930662E-03 212 0.1053287E-04 213 0.1533165E-02 214 0.2034363E-08 215 0.3083674E-04 216 0.1562354E-04
217 0.5946873E-02 218 0.4926912E-05 219 0.6090270E-03 220 0.1059810E-03 221 0.3457595E-05 222 0.3517288E-06
223 0.2246280E-04 224 0.5070217E-07 225 0.5558841E-05 226 0.5737426E-06 227 0.1254578E-05 228 0.3978742E-05
229 0.2498247E-03 230 0.5598698E-03 231 0.1821244E-03 232 0.1711723E-04 233 0.4326558E-05 234 0.5955171E-01
235 0.3644620E-02 236 0.1799143 237 0.4040975E-03 238 0.3753286E-02 239 0.1409259E-01 240 0.6468439E-04
241 0.4648974E-02 242 0.9713283E-07 243 0.1071387 244 0.2674394E-02 245 0.7340540E-01 246 0.8246873E-02
247 0.4896973E-03 248 0.4247161E-03 249 0.1525505E-02 250 0.4935526E-02 251 0.2599500E-01 252 0.2470420E-02
253 0.5614093E-02 254 0.1429790E-03 255 0.1163908E-02 256 0.1039586E-02 257 0.2570537E-04 258 0.8004475E-05
259 0.4690270E-04 260 0.7360567E-03 261 0.5032249E-04 262 0.3658207E-05 263 0.2356672E-05 264 0.6044196E-01
265 0.6996466E-04 266 0.2919193E-02 267 0.6799859E-06 268 0.2984637E-04 269 0.1249620E-03 270 0.6237904E-02
271 0.1194964E-04 272 0.1232998E-04 273 0.3286080E-06 274 0.2251318E-03 275 0.6960315E-04 276 0.1199726E-01
277 0.2004671E-01 278 0.2721649E-07 279 0.9668094 280 0.1105902E-03 281 0.1330684E-01 282 0.3837356E-01
283 0.9874757E-03 284 0.7816823E-05 285 0.1208153E-04 286 0.9346891E-04 287 0.1558051E-04 288 0.2777216E-05
289 0.4069850E-04 290 0.1926385E-04 291 0.1097525E-04 292 0.2238820E-05 293 0.7822158E-01 294 0.2576967E-03
295 0.2672168E-03 296 0.2013130E-03 297 0.3367516E-05 298 0.3082872E-06 299 0.3173109E-06 300 0.3159169E-04

TOTAL PERCENTAGE OF X DIRECTION MASS PARTICIPATING: 98.626

% OF Y DIRECTION MASS PARTICIPATING

MODE PERCENT MODE PERCENT MODE PERCENT MODE PERCENT MODE PERCENT MODE PERCENT

1 0.1098970E-04 2 0.1495143E-06 3 0.1603071E-02 4 0.5448171E-04 5 0.2293778E-05 6 0.6999682E-03
7 0.5634228E-03 8 0.2744103E-03 9 0.4844577E-03 10 0.3209120E-03 11 0.3759581E-07 12 0.1243509E-02
13 0.1307284E-02 14 0.3198585E-03 15 0.1365375E-01 16 0.2011537E-03 17 0.1441206E-03 18 0.2036805E-03
19 1.132907 20 0.4966287E-04 21 1.139005 22 15.01478 23 0.1681059E-02 24 0.3599981E-01
25 0.8851439E-02 26 0.2009023E-04 27 0.9332526E-01 28 5.956498 29 0.1275633 30 0.3885812
31 1.675569 32 0.6796037 33 2.289946 34 0.5600936 35 0.1348159 36 0.2872251
37 0.4490059E-01 38 0.7615578E-01 39 0.4222771E-03 40 0.2366925E-01 41 0.6980542E-01 42 0.1966418E-03
43 0.3842439E-02 44 0.7611873E-01 45 0.6117886 46 0.5883882 47 0.1568729E-01 48 0.1083314E-02
49 0.4605585E-01 50 0.2670870E-02 51 0.8656684E-01 52 0.2697321E-02 53 0.8808513 54 0.1011744E-01
55 0.3152986 56 0.4741140 57 0.3295590E-03 58 0.1281134E-01 59 0.1315643E-01 60 0.2302226
61 1.771291 62 0.1488682E-02 63 0.2095496 64 0.4307114E-03 65 0.5470744 66 0.2218331E-01
67 0.1337011E-01 68 0.1959044E-01 69 0.8536295E-03 70 0.4041082E-01 71 0.3574594E-03 72 0.9935037E-02
73 0.6719549E-01 74 0.5564113 75 0.4912774E-03 76 0.1771951E-02 77 0.2182063E-01 78 0.1332625E-01
79 0.1662231E-02 80 0.7597423E-03 81 0.2224426E-02 82 0.5080101E-03 83 0.1884033E-03 84 0.3473139E-04
85 0.7024712E-01 86 0.4233103E-01 87 0.8046494E-02 88 0.2392087E-04 89 0.1166962E-03 90 0.2335915E-03
91 0.2132354E-03 92 0.4957552E-03 93 0.1457363E-03 94 0.2286081E-03 95 0.4165595E-06 96 0.3034506E-07
97 0.5610051E-05 98 0.1003787E-02 99 0.3412622E-01 100 0.6084480E-01 101 0.2942710E-01 102 0.2251246E-01
103 0.5855038E-03 104 0.4062960E-01 105 0.9119890E-01 106 0.8081213 107 0.9467788E-05 108 0.3130936E-02
109 0.2936525E-05 110 0.4486108E-02 111 0.2505052 112 4.353596 113 1.105366 114 0.2832010E-01
115 0.2506676E-01 116 0.6110214 117 0.9784507E-02 118 0.1047963E-01 119 0.2344954E-01 120 0.4831903E-02
121 0.2213742E-01 122 0.9920001E-05 123 0.5584445E-04 124 0.4049622E-03 125 0.1646332E-03 126 0.2933255E-02
127 0.1702075E-01 128 0.8310345E-06 129 0.3731462E-05 130 0.2692483E-02 131 0.1778766E-01 132 0.6798057
133 0.1313657 134 0.3361699E-02 135 0.1238996 136 0.6917035E-03 137 0.3791956E-03 138 0.3731812E-01
139 0.1454826E-06 140 0.4415267E-05 141 0.9860560E-03 142 0.1369040E-05 143 0.2887929E-02 144 0.1085931E-01
145 0.8465883E-02 146 0.2911966 147 0.5946366E-01 148 0.2001876 149 0.2391357 150 0.1477206
151 0.7032165 152 1.007125 153 3.590724 154 0.2479848 155 1.184046 156 0.1652593
157 0.1085498 158 0.1322225 159 0.8118753E-01 160 0.8449966E-01 161 0.4455283E-01 162 0.3961240E-02
163 0.3392584E-02 164 0.1916720 165 0.8994936E-04 166 0.1151925E-01 167 0.7763324E-02 168 4.806491
169 0.1744344 170 0.2079115E-02 171 0.6123417E-03 172 0.3694199E-03 173 0.7350384E-04 174 0.1063685E-02

175 0.4691507E-01 176 0.7804623 177 0.2683827E-03 178 0.4900851E-01 179 0.3416131E-02 180 0.1141908
181 5.099264 182 0.1694751E-02 183 0.2009364 184 0.5641062E-03 185 0.6772632E-02 186 0.4722473E-02
187 0.2734636E-01 188 0.1386370E-01 189 0.4502218E-01 190 0.1345153E-02 191 0.1025456E-02 192 0.1662973E-02
193 0.1568925E-05 194 0.2251085E-04 195 0.4367558E-06 196 0.5480671E-05 197 0.2894910E-04 198 0.1399193E-03
199 0.3487746E-02 200 0.4065403E-03 201 0.8451677E-03 202 0.2160647E-02 203 0.3993185E-02 204 1.724687
205 0.1431842 206 0.1386331E-01 207 0.1050930 208 0.2533334 209 0.1421455 210 0.7522580
211 1.864274 212 0.1232777E-02 213 0.2336225E-01 214 0.1646544E-02 215 0.3724832E-05 216 0.8339251E-04
217 0.4898983E-03 218 0.2688158E-04 219 0.1996210E-01 220 0.5495563E-01 221 0.4676547E-03 222 0.7894287E-03
223 0.4231096E-02 224 0.3974459E-01 225 0.2975652E-04 226 0.9496579E-04 227 0.1070702E-01 228 0.7819385
229 0.5995160E-02 230 0.8768423E-01 231 0.2063950E-06 232 0.1172412E-03 233 0.6051091E-03 234 0.4452240E-02
235 0.3890948E-01 236 0.1032296 237 2.962472 238 2.468080 239 0.2012952E-01 240 0.1405304
241 1.209441 242 0.2426632E-02 243 0.1878454E-02 244 0.4596314 245 0.3192189E-01 246 0.1523937E-01
247 0.3925798E-02 248 0.1603415E-02 249 0.1329708E-01 250 2.550568 251 0.3432259 252 0.3952925E-02
253 0.3508555 254 0.1084114 255 0.1580056 256 0.2449663E-01 257 0.3444093 258 0.8084739E-01
259 0.3385463 260 0.1520522E-01 261 0.7218011E-01 262 0.1943598E-02 263 0.2648381E-01 264 0.1358407E-01
265 0.1536364E-07 266 1.257375 267 0.5709221E-03 268 0.3436862E-01 269 0.1989494 270 0.7185129E-05
271 0.3831404E-02 272 0.1291186 273 0.9589159E-03 274 0.8461172E-02 275 0.2518830E-01 276 0.1115451E-02
277 0.2193130E-02 278 0.3936571E-02 279 0.9994100E-03 280 0.7072199E-03 281 0.1041492E-01 282 0.1029153E-01
283 0.6838910 284 0.4350628E-01 285 0.7012954 286 0.1157819E-01 287 0.1304662E-02 288 0.3294354E-01
289 0.1083794 290 0.3115359E-02 291 0.1268833E-02 292 0.3027388 293 0.4684970E-04 294 0.2264674
295 0.1012252E-02 296 0.3008473E-04 297 0.2302216E-02 298 0.1427422E-03 299 0.1116366E-03 300 0.1592325

TOTAL PERCENTAGE OF Y DIRECTION MASS PARTICIPATING: 86.952

% OF Z DIRECTION MASS PARTICIPATING

MODE PERCENT MODE PERCENT MODE PERCENT MODE PERCENT MODE PERCENT MODE PERCENT

1 12.94773 2 0.1975793E-04 3 9.623395 4 0.5481439 5 0.2892401E-01 6 17.67861
7 10.64425 8 1.099213 9 1.287997 10 1.697304 11 0.5039920 12 0.1559609
13 0.5648338 14 0.1943655 15 0.4185019 16 3.657492 17 0.1872462 18 0.7959271E-02
19 0.2742322E-02 20 0.4306939E-03 21 0.6534763E-05 22 0.2860591E-03 23 0.2681161E-01 24 0.1889126E-01
25 2.883435 26 0.4418722E-04 27 0.5537768E-04 28 0.8015825E-04 29 0.3956484 30 0.1911705E-01
31 0.2040452E-01 32 0.2984891E-01 33 0.9174907E-03 34 0.5922205E-02 35 0.1627901E-01 36 0.3075640E-03
37 0.2369650 38 0.7287628E-01 39 0.5846157E-02 40 0.1075755 41 0.1140093 42 0.1548359E-02
43 0.9814862E-01 44 0.1459403 45 0.3318359E-01 46 0.5082459E-01 47 0.1340188E-01 48 0.7797203E-03
49 0.2628133 50 0.1577131 51 6.199547 52 3.618603 53 0.2729006E-03 54 0.3171614E-01
55 0.1273222E-03 56 0.1437778 57 0.1337801E-03 58 0.2828932 59 0.7803446E-01 60 0.1569196
61 0.1872116 62 0.3574329E-04 63 0.3879614E-02 64 0.4898382E-01 65 0.3300048E-01 66 0.1693106E-01
67 0.2261133E-02 68 0.3259519E-02 69 0.1454358E-03 70 0.1695445 71 0.2043510E-03 72 0.3923458
73 0.8682108 74 0.4152512E-03 75 0.4048210 76 0.4729218E-01 77 0.1363484 78 0.8397556
79 0.1236319E-01 80 0.5146708 81 0.2937007E-01 82 0.1859540E-01 83 0.1722875E-01 84 0.2438554E-02
85 0.7562323E-01 86 0.2066148 87 0.2429584E-01 88 0.4682923E-02 89 0.4226921E-01 90 0.1068537
91 0.9154931E-01 92 0.2178869 93 0.6148775E-01 94 0.1000474 95 0.9340694E-04 96 0.6071412E-04
97 0.8995667E-03 98 0.3846971E-01 99 0.6089134 100 0.8771758E-01 101 6.783033 102 0.1651188E-01
103 0.1062610 104 0.7117095E-03 105 0.3575511E-01 106 0.1445666E-01 107 0.7794267E-07 108 0.1484553E-01
109 0.1936789E-01 110 0.9526735E-06 111 0.6549121E-02 112 0.1538225E-01 113 0.2703401E-02 114 0.1320101
115 0.4534819E-02 116 0.5300271E-03 117 0.3253089E-03 118 0.1682267E-04 119 0.9994023E-03 120 0.4102641E-03
121 0.7034201 122 0.1167508 123 0.8024052 124 0.1458310 125 0.4391306E-02 126 0.8737882E-03
127 0.2568754E-01 128 0.3851227E-01 129 0.3583029E-06 130 0.1645850E-01 131 0.1979013 132 0.3455585E-01
133 0.2962859E-01 134 0.8657044E-01 135 0.1684691E-02 136 0.2237981E-02 137 0.7864861E-02 138 0.2418165
139 0.5702247E-06 140 0.9363362E-01 141 0.1340806 142 0.9164846E-02 143 0.7753226E-04 144 0.1332890E-01
145 0.2968042E-02 146 0.3558000E-01 147 0.1221023E-01 148 0.1288974 149 0.6714591E-01 150 0.1413051
151 0.1272061E-02 152 0.8207283E-04 153 0.1352065E-02 154 0.7367727E-01 155 0.6449687E-01 156 0.4434457E-02
157 0.3650659E-02 158 0.3266253E-01 159 0.4280674E-02 160 0.4542615E-01 161 0.3482675E-01 162 0.1393279E-03
163 0.2783973E-03 164 0.6787297E-02 165 0.6925415E-03 166 0.3971704 167 0.1941797E-01 168 0.1315526E-01
169 0.1453631E-01 170 0.1040564 171 0.6807939E-04 172 0.9943275E-04 173 0.9148004E-02 174 0.2292899E-04
175 0.6210461E-02 176 0.1287774 177 0.5560418E-03 178 0.2617044 179 0.2194767E-02 180 1.353928
181 0.1496899E-01 182 1.339825 183 0.4708412 184 0.1985823E-01 185 0.5999018E-02 186 0.6290087E-01
187 0.1905805 188 0.1391031 189 0.5845188E-02 190 0.1652238E-03 191 0.4596207E-03 192 0.9453325E-03
193 0.9494727E-06 194 0.1520937E-06 195 0.1676086E-06 196 0.2926553E-06 197 0.3440461E-06 198 0.1028513E-05
199 0.1735366E-03 200 0.1462949E-03 201 0.2002673E-03 202 0.8849878E-04 203 0.1887152E-04 204 0.1577544E-01
205 0.6178052E-02 206 0.1425397E-02 207 0.1949720E-02 208 0.3789664E-01 209 0.5545549E-03 210 0.8611865E-03
211 0.3824870E-02 212 0.1793830E-01 213 0.2593171E-01 214 0.1355585E-01 215 0.8765354E-03 216 0.3500799E-03
217 0.2904997E-02 218 0.1326578E-03 219 0.2669259E-01 220 0.1579033E-03 221 0.3344575E-04 222 0.2678574E-03
223 0.5132112E-03 224 0.1933046E-04 225 0.5645238E-03 226 0.4414688E-05 227 0.2322697E-04 228 0.3812540E-03
229 0.4282051E-02 230 0.6921362E-02 231 0.1084422E-03 232 0.2880052E-05 233 0.2735647E-01 234 0.3514249E-04
235 0.2793611E-04 236 0.1773613E-05 237 0.9335381E-02 238 0.1547992E-02 239 0.3312500E-02 240 0.8087493E-03
241 0.9974569E-01 242 0.2360985E-03 243 0.1658864E-01 244 0.4152425E-03 245 0.4332704E-02 246 0.5432909E-02
247 0.2542271E-02 248 0.2249134E-03 249 0.4831202E-02 250 0.2648414E-01 251 0.1109467 252 1.179214
253 0.3373732E-03 254 0.1215970E-01 255 0.2801065E-02 256 0.1664974E-02 257 0.2636134E-01 258 0.2565926E-03
259 0.3061698E-01 260 0.2374938E-03 261 0.7040993E-02 262 0.3550218E-03 263 0.3405610E-04 264 0.3256784E-02

265 0.5832335E-04 266 0.3312428E-02 267 0.2592057E-05 268 0.1370190E-02 269 0.2941792E-04 270 0.3059730E-03
271 0.4831164E-03 272 0.8610500E-03 273 0.5061626E-05 274 0.1260768E-02 275 0.4900428E-02 276 0.6003035E-02
277 0.1245302E-05 278 0.1839602E-03 279 0.8690593E-04 280 0.4377078E-04 281 0.5293956E-03 282 0.1087529E-02
283 0.2927792E-01 284 0.2661625E-02 285 0.3721827E-03 286 0.4847821E-04 287 0.9625261E-03 288 0.2586304E-03
289 0.1970538 290 0.1538947E-01 291 0.2344780E-02 292 0.7505645E-06 293 0.1088256E-02 294 0.1058931E-01
295 0.8963288E-03 296 0.9589822E-02 297 0.5758178E-03 298 0.4643552E-04 299 0.4538808E-03 300 0.4358691E-04

TOTAL PERCENTAGE OF Z DIRECTION MASS PARTICIPATING: 99.025

--- LOADING - 35 UNIT LOAD IN X DIRECTION ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------//			----------MOMENT----------/		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	130.9030609	-5089.7285156	139.8897858	58690.8242188	-365.1295776	0.0000000
12	GLOBAL	111.9399643	4592.3520508	2419.4116211	67344.9843750	121.2488251	0.0000000
101	GLOBAL	-24632.0039062	-41250.6171875	-2092.4328613	-390821.1562500	-1365.5114746	0.0000000
111	GLOBAL	147.8711548	-1785.5334473	-2122.4118652	-395933.0000000	1498.5131836	0.0000000
123	GLOBAL	0.0000000	-326.4864807	0.0000000	0.0000000	-63.7192154	0.0000000
1101	GLOBAL	-466.3433838	43495.2890625	-3886.1020508	-555493.3750000	-18049.7519531	0.0000000
1111	GLOBAL	208.5557404	10288.7226562	-4006.9177246	-563553.6875000	9154.2001953	0.0000000
1123	GLOBAL	0.0000000	686.2628784	0.0000000	0.0000000	-64.8451996	0.0000000
2101	GLOBAL	150.0116119	-310.0557251	512.8995972	93976.7578125	-708.0598755	-0.0000021
2111	GLOBAL	10.4255104	131.7731476	-317.8093262	-10365.3310547	1118.6671143	0.0000000
2123	GLOBAL	0.0000000	169.3768463	0.0000000	0.0000000	-67.5671768	0.0000000
3101	GLOBAL	392.3095398	-3160.2822266	12292.0068359	1632236.2500000	-752.4137573	0.0000000
3111	GLOBAL	-176.7359924	2295.2216797	11341.3623047	1557543.3750000	729.2220459	0.0000000
3123	GLOBAL	0.0000000	-100.6455154	0.0000000	0.0000000	-70.4804001	0.0000000
4101	GLOBAL	-24434.2187500	-40489.9882812	2605.6801758	379875.5312500	325.5604858	0.0000000
4111	GLOBAL	-10653.4687500	-19564.4179688	-170.1883240	19001.1445312	1023.9345703	0.0000000
5101	GLOBAL	542.1823730	41368.3046875	950.2218628	22209.3632812	-17840.0390625	0.0000000
5111	GLOBAL	-214.5273285	19087.7636719	1786.9384766	93004.0312500	6668.0644531	0.0000000
6101	GLOBAL	-219.0561981	241.6776886	-5.1087298	0.0000000	-1318.1735840	0.0000000
7101	GLOBAL	-185.6173706	108.5885849	-619.3732910	-280817.2812500	-1234.4990234	0.0000000
7111	GLOBAL	-284.0878296	-4513.1445312	-132.4526672	-194069.0000000	554.1245117	0.0000000
8100	GLOBAL	0.0000000	226.3316193	0.0000000	0.0000000	1.9332596	0.0000000
8101	GLOBAL	-218.1211548	-270.7229614	379.2241821	166172.3281250	-1251.0638428	0.0000000
8111	GLOBAL	-154.3097382	4492.0703125	-32.9494095	84642.0937500	358.7851562	0.0000000
112	GLOBAL	-23427.0898438	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
1112	GLOBAL	-17037.3750000	0.0000000	-0.0000123	0.0000000	0.0000000	0.0000000
2112	GLOBAL	-65092.5976562	0.0000000	3873.3002930	0.0000000	0.0000000	0.0000000
2122	GLOBAL	1.3559263	17.7948570	23.6614246	0.0000000	-4.4378028	0.0000000
3112	GLOBAL	0.0000000	0.0000000	0.0000335	0.0000000	0.0000000	0.0000000
5112	GLOBAL	0.0000000	0.0000000	-4669.6035156	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000000	-10610.2597656	-18702.9726562	0.0000000	32.5233040	57.3296547
8157	GLOBAL	0.0000000	270.3562012	433.7265625	0.0000000	11.6515007	18.6922493

--- LOADING - 36 UNIT LOADS IN Y DIRECTION ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------//			----------MOMENT----------/		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	-2.4874668	76599.9218750	-775.3510742	-186137.5625000	107.0476303	0.0000000
12	GLOBAL	3.9972830	76876.6796875	666.5615234	-11029.4267578	-123.1021118	0.0000000
101	GLOBAL	-5844.6328125	32960.1484375	1384.1939697	-81048.8359375	215.9150543	0.0000000
111	GLOBAL	-1.9711459	37878.5156250	-4214.9116211	-297610.3750000	-85.6163406	0.0000000
123	GLOBAL	0.0000000	214461.5781250	0.0000000	0.0000000	-109.7150955	0.0000000
1101	GLOBAL	-111.8577805	32445.2636719	2177.6020508	-37137.5585938	-612.3130493	0.0000000
1111	GLOBAL	2.6920052	27699.3828125	-4876.8349609	-328600.4375000	161.3958435	0.0000000

1123	GLOBAL	0.0000000	213659.4062500	0.0000000	0.0000000	-109.6991653	0.0000000
2101	GLOBAL	-102.7651215	27565.3222656	3832.2197266	195563.3750000	280.5907593	-0.0000004
2111	GLOBAL	29.8967609	27338.0429688	-3166.8981934	-134334.5468750	-80.3793869	0.0000000
2123	GLOBAL	0.0000000	213958.7656250	0.0000000	0.0000000	-109.5298157	0.0000000
3101	GLOBAL	403.1726379	58049.4882812	5203.9067383	711176.0000000	552.5579224	0.0000000
3111	GLOBAL	-7.0278831	56062.6601562	5291.4467773	973326.2500000	-145.1087189	0.0000000
3123	GLOBAL	0.0000000	215111.4687500	0.0000000	0.0000000	-108.3730850	0.0000000
4101	GLOBAL	-5849.4018555	43814.3671875	-25757.2871094	-4428955.5000000	-1141.0096436	0.0000000
4111	GLOBAL	393.6339111	39957.0703125	-6877.1967773	-127677.4296875	-134.9736938	0.0000000
5101	GLOBAL	255.9702148	81159.9062500	9826.7744141	325521.2187500	494.0179749	0.0000000
5111	GLOBAL	-13.3084545	84499.9062500	-8933.8564453	-464976.5937500	-405.4449768	0.0000000
6101	GLOBAL	-30.4413948	19098.4570312	405.6594238	0.0000000	152.0094147	0.0000000
7101	GLOBAL	-25.9680176	19668.5703125	-6073.1748047	-2090738.0000000	161.6067047	0.0000000
7111	GLOBAL	-27.2147789	30283.1328125	4541.9746094	1711043.1250000	675.5968018	0.0000000
8100	GLOBAL	0.0000000	19193.1191406	0.0000000	0.0000000	-6.6804652	0.0000000
8101	GLOBAL	-30.0110397	212.7031555	-25.8909416	-4932.7983398	158.9337158	0.0000000
8111	GLOBAL	-46.1385155	75.4253006	869.9548340	237523.4062500	689.7235718	0.0000000
112	GLOBAL	-926.5465088	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
1112	GLOBAL	1030.1241455	0.0000000	-0.0000026	0.0000000	0.0000000	0.0000000
2112	GLOBAL	10899.3427734	0.0000000	19124.3203125	0.0000000	0.0000000	0.0000000
2122	GLOBAL	0.9429918	275.7366638	-109.2885132	0.0000000	-2.0622580	0.0000000
3112	GLOBAL	0.0000000	0.0000000	0.0000242	0.0000000	0.0000000	0.0000000
5112	GLOBAL	0.0000000	0.0000000	-2120.6789551	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000000	-1080.8892822	-1905.3109131	0.0000000	-1.5092732	-2.6604340
8157	GLOBAL	0.0000000	7175.8544922	11512.0664062	0.0000000	-0.4401944	-0.7061943

--- LOADING - 37 UNIT LOAD IN Z DIRECTION ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------/			/----------MOMENT----------/		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	0.9639173	20115.8632812	-1325.0883789	-448548.2500000	95.8742599	0.0000000
12	GLOBAL	3.4673507	-20145.3417969	-16708.5859375	-503287.1875000	92.8209915	0.0000000
101	GLOBAL	2175.5153809	5079.7963867	-2481.6372070	-607855.0625000	127.8556061	0.0000000
111	GLOBAL	-0.9229194	10562.9599609	-1277.4307861	-451692.3750000	180.4296417	0.0000000
123	GLOBAL	0.0000000	-100.5008621	0.0000000	0.0000000	10.2053099	0.0000000
1101	GLOBAL	37.1822777	884.7799683	-3976.2451172	-897914.0625000	588.0881958	0.0000000
1111	GLOBAL	2.3764381	-2667.4709473	-3988.3598633	-898347.6875000	499.9948730	0.0000000
1123	GLOBAL	0.0000000	-30.5314312	0.0000000	0.0000000	10.2104855	0.0000000
2101	GLOBAL	29.1565037	3089.8032227	628.8878174	-321760.9687500	108.3031998	0.0000001
2111	GLOBAL	-4.6032805	-2337.9160156	3913.9848633	92654.1796875	105.7202148	0.0000000
2123	GLOBAL	0.0000000	-684.2137451	0.0000000	0.0000000	10.2057314	0.0000000
3101	GLOBAL	-22.5743542	4060.8623047	-7615.9282227	-1349430.5000000	78.3091965	0.0000000
3111	GLOBAL	-3.0788815	-4012.4013672	-6820.0009766	-1286623.6250000	102.3337173	0.0000000
3123	GLOBAL	0.0000000	73.1444855	0.0000000	0.0000000	10.2127962	0.0000000
4101	GLOBAL	2157.7998047	2888.5437012	-4147.0561523	-1314153.7500000	-325.2989502	0.0000000
4111	GLOBAL	-213.8308105	3553.7631836	5719.3793945	89035.6796875	98.1730957	0.0000000
5101	GLOBAL	-15.8036270	-778.4266968	6480.2788086	153409.6562500	501.2425842	0.0000000
5111	GLOBAL	-3.7536998	-690.0882568	8050.8837891	419020.8750000	303.1360474	0.0000000
6101	GLOBAL	16.7139626	55.2016678	0.9502080	0.0000000	213.0941162	0.0000000
7101	GLOBAL	36.0268288	807.8056030	-2156.7441406	-948600.7500000	228.6826324	0.0000000
7111	GLOBAL	-6.8378687	-1127.9360352	-2534.2424316	-1046747.2500000	-147.3455200	0.0000000
8100	GLOBAL	0.0000000	60.7889442	0.0000000	0.0000000	8.2580194	0.0000000
8101	GLOBAL	19.8540306	741.6439209	-2043.9714355	-899411.0625000	205.5852203	0.0000000
8111	GLOBAL	3.9658771	-472.1111450	-1907.5604248	-864429.2500000	-159.1566315	0.0000000
112	GLOBAL	-1271.9846191	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
1112	GLOBAL	-641.3326416	0.0000000	-0.0000239	0.0000000	0.0000000	0.0000000
2112	GLOBAL	-2298.2312012	0.0000000	-69653.7500000	0.0000000	0.0000000	0.0000000
2122	GLOBAL	-0.0684100	-135.3435211	86.3073273	0.0000000	2.4528008	0.0000000
3112	GLOBAL	0.0000000	0.0000000	-0.0000323	0.0000000	0.0000000	0.0000000
5112	GLOBAL	0.0000000	0.0000000	-31424.7343750	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000000	-13699.5556641	-24148.5546875	0.0000000	3.1265247	5.5112047
8157	GLOBAL	0.0000000	-5093.1206055	-8170.7817383	0.0000000	0.7558755	1.2126346

--- LOADING - 38 ACCELERATION Y ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		FORCE			MOMENT		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	5.7315049	64189.9257812	-560.3041992	-161528.9375000	-18.2054710	0.0000000
12	GLOBAL	4.9869919	66010.4453125	496.4874268	-136510.7968750	-34.9938736	0.0000000
101	GLOBAL	-246.2804413	60456.3515625	7.3589287	-67090.1640625	-98.4991302	0.0000000
111	GLOBAL	-4.1964564	62251.0273438	-1375.7662354	-129960.0468750	44.7771683	0.0000000
123	GLOBAL	0.0000000	11088.1806641	0.0000000	0.0000000	-9.3060112	0.0000000
1101	GLOBAL	-8.0593863	39284.5585938	157.6389008	-15841.6562500	-553.7778931	0.0000000
1111	GLOBAL	-4.2236438	38675.9726562	-703.8350830	-47928.1718750	100.5244980	0.0000000
1123	GLOBAL	0.0000000	14838.9130859	0.0000000	0.0000000	-9.3831882	0.0000000
2101	GLOBAL	13.1693029	40398.1718750	471.1344910	14377.3476562	-4.2635860	-0.0000001
2111	GLOBAL	-3.4212701	39881.3007812	-495.2905884	-24860.5820312	-257.9931335	0.0000000
2123	GLOBAL	0.0000000	13103.3818359	0.0000000	0.0000000	-9.4900560	0.0000000
3101	GLOBAL	31.5400486	43503.7656250	683.0075073	49546.4335938	15.5972538	0.0000000
3111	GLOBAL	6.2503133	39088.9375000	-187.1173248	25469.8593750	-426.0414734	0.0000000
3123	GLOBAL	0.0000000	12859.2666016	0.0000000	0.0000000	-9.5182657	0.0000000
4101	GLOBAL	342.4661865	43195.1210938	-812.2741089	-305382.3750000	-27.4273815	0.0000000
4111	GLOBAL	1166.6394043	42048.9140625	-1759.0114746	-80513.5234375	-550.4232178	0.0000000
5101	GLOBAL	27.0845203	84398.3437500	1219.8450928	22727.8945312	655.0319824	0.0000000
5111	GLOBAL	-13.8453379	115870.6250000	-1658.2971191	-86308.6796875	-2098.0603027	0.0000000
6101	GLOBAL	-5.6677456	127450.8984375	-2268.6018066	0.0000000	77.2289352	0.0000000
7101	GLOBAL	-11.4232092	85095.7890625	-2460.4709473	-324019.5000000	72.3150330	0.0000000
7111	GLOBAL	-626.1403809	193615.1406250	5142.8549805	321813.6875000	1342.3734131	0.0000000
8100	GLOBAL	0.0000000	9607.1865234	0.0000000	0.0000000	-3.1441338	0.0000000
8101	GLOBAL	-6.8153830	16096.5087891	-94.0156784	-40649.3710938	78.8237076	0.0000000
8111	GLOBAL	-98.7406235	-13340.8535156	-1096.2041016	-60809.8554688	613.6301880	0.0000000
112	GLOBAL	467.8582153	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
1112	GLOBAL	-803.8833618	0.0000000	-0.0000004	0.0000000	0.0000000	0.0000000
2112	GLOBAL	-232.9365540	0.0000000	575.5140381	0.0000000	0.0000000	0.0000000
2122	GLOBAL	-0.0926272	3352.1840820	-19.2947311	0.0000000	-0.0373260	0.0000000
3112	GLOBAL	0.0000000	0.0000000	0.0000012	0.0000000	0.0000000	0.0000000
5112	GLOBAL	0.0000000	0.0000000	880.0360718	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000771	2721.6975098	1220.6984863	0.0000000	0.5886841	1.0376884
8157	GLOBAL	0.0000425	2789.5578613	2635.9077148	0.0000000	-3.3412170	-5.3602414

--- LOADING - 39 ACCELERATION X ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		FORCE			MOMENT		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	-2126.9035645	-13240.5351562	177.1426849	86807.9062500	-2896.8115234	0.0000000
12	GLOBAL	-4284.0136719	-401.0921631	3540.0512695	120361.1640625	3589.0075684	0.0000000
101	GLOBAL	-173820.4687500	-401382.7812500	-26853.2441406	-3548988.2500000	-15172.0039062	0.0000000
111	GLOBAL	2957.0783691	-202856.9062500	-15833.4531250	-2495335.2500000	34629.8867188	0.0000000
123	GLOBAL	-1144.3054199	-5903.3061523	0.0000000	0.0000000	-544.3411865	0.0000000
1101	GLOBAL	-3422.7648926	418071.9375000	-19222.6406250	-3169731.2500000	-277347.6875000	0.0000000
1111	GLOBAL	3725.0209961	271719.8125000	-27870.2246094	-3569556.7500000	255282.7031250	0.0000000
1123	GLOBAL	-1144.3054199	5272.1909180	0.0000500	0.0000000	-567.5637207	0.0000000
2101	GLOBAL	7162.8198242	-1560.3267822	2688.9919434	487136.1562500	2206.9416504	-0.0000159
2111	GLOBAL	2352.1323242	729.5571899	-1068.9360352	13198.4736328	30766.2949219	0.0000000
2123	GLOBAL	-1144.3054199	781.8862915	0.0000500	0.0000000	-623.9161377	0.0000000
3101	GLOBAL	6105.5180664	-18019.8554688	71108.7656250	9256741.0000000	4959.8588867	0.0000000
3111	GLOBAL	-3329.4821777	13847.4892578	62319.4414062	8563617.0000000	6695.0737305	0.0000000
3123	GLOBAL	-1144.3054199	-863.2015991	0.0000500	0.0000000	-679.6383667	0.0000000
4101	GLOBAL	-160325.1875000	-421097.5000000	37642.5000000	5317541.5000000	2615.5854492	0.0000000
4111	GLOBAL	-197876.8125000	-423696.6250000	315.3537292	486562.2187500	11829.5175781	0.0000000
5101	GLOBAL	5496.7290039	350727.6250000	2381.0163574	37711.5859375	-258853.2812500	0.0000000
5111	GLOBAL	-3904.8146973	360272.6875000	8492.4316406	442002.0312500	193246.4843750	0.0000000
6101	GLOBAL	-7528.1215820	24552.5000000	-534.1527100	0.0000000	28941.8632812	0.0000000
7101	GLOBAL	-7441.2211914	49817.4648438	-2549.0354004	-608038.8125000	29235.7460938	0.0000000
7111	GLOBAL	-11830.9931641	51229.7695312	2637.3752441	-55649.7851562	6929.9873047	0.0000000
8100	GLOBAL	-2298.1040039	755.8930054	0.0000000	0.0000000	-57.2151527	0.0000000

8101	GLOBAL	-7497.6757812	-1065.5031738	2015.7955322	884973.4375000	29263.9414062	0.0000000
8111	GLOBAL	-9676.6289062	11820.9375000	1807.4538574	883745.1250000	3165.4582520	0.0000000
112	GLOBAL	-243526.5156250	0.0000000	0.0000000	-0.0000002	0.0000000	0.0000000
1112	GLOBAL	-212346.3906250	0.0000000	-0.0000734	0.0000000	0.0000000	0.0000000
2112	GLOBAL	-227202.1718750	0.0000000	43172.0234375	0.0000000	0.0000002	0.0000000
2122	GLOBAL	-139.4317474	97.3670120	-72.4997864	0.0000000	-24.8139858	0.0000000
3112	GLOBAL	0.0000000	0.0000000	0.0001843	0.0000000	0.0000000	0.0000000
5112	GLOBAL	0.0000000	0.0000000	-21327.1386719	0.0000000	0.0000000	0.0000000
8156	GLOBAL	-2029.1910400	-71279.3125000	-125645.8437500	0.0000000	793.9583740	1399.5305176
8157	GLOBAL	-1146.5087891	1669.8154297	2678.8483887	0.0000000	189.9738770	304.7709351

--- LOADING - 40 ACCELERATION Z ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		FORCE			MOMENT		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	258.1281433	152873.2187500	-15265.6044922	-3730430.7500000	-202.9119568	0.0000000
12	GLOBAL	-248.9650726	-153215.1250000	-131496.0312500	-4135971.5000000	-704.5001221	0.0000000
101	GLOBAL	-2236.2185059	-9262.0615234	-391.3588562	-2758393.2500000	-1511.4187012	0.0000000
111	GLOBAL	-476.1786194	93967.0078125	7032.7587891	-1854711.2500000	-3591.7023926	0.0000000
123	GLOBAL	0.0000000	-327.8766174	-1144.3054199	0.0000000	-72.7336426	0.0000000
1101	GLOBAL	-5.6863365	51028.3242188	-3627.9755859	-3790958.0000000	-23185.9433594	0.0000000
1111	GLOBAL	-496.1337585	-55523.0117188	-4415.4541016	-3827163.2500000	-23411.4941406	0.0000000
1123	GLOBAL	-0.0000500	-423.9669189	-1144.3054199	0.0000000	-71.3871613	0.0000000
2101	GLOBAL	952.1627808	19828.8808594	21118.8652344	-494450.3750000	72.7903748	-0.0000008
2111	GLOBAL	-461.1452332	-16278.7382812	36477.0312500	1426961.7500000	-4504.9550781	0.0000000
2123	GLOBAL	-0.0000500	-3063.7438965	-1144.3054199	0.0000000	-67.7063446	0.0000000
3101	GLOBAL	1076.7012939	21775.9238281	-13417.3525391	-4659036.5000000	303.6441345	0.0000000
3111	GLOBAL	-22.9377918	-20466.4472656	-11925.8388672	-4546061.5000000	-5026.6430664	0.0000000
3123	GLOBAL	-0.0000500	208.1764526	-1144.3054199	0.0000000	-62.4209175	0.0000000
4101	GLOBAL	2290.9282227	-20032.4667969	1611.8358154	-11066630.0000000	105.5636978	0.0000000
4111	GLOBAL	13900.7939453	112683.7812500	78159.6171875	751876.3125000	-6424.8325195	0.0000000
5101	GLOBAL	665.0653687	48676.5429688	140723.7187500	4541315.0000000	-22665.0156250	0.0000000
5111	GLOBAL	48.8611412	-70599.3906250	285162.7500000	14888189.0000000	-25635.8906250	0.0000000
6101	GLOBAL	-135.9310760	41941.6757812	-9862.6992188	0.0000000	2676.2041016	0.0000000
7101	GLOBAL	153.8154907	27250.8027344	-59825.5273438	-23733952.0000000	2986.8010254	0.0000000
7111	GLOBAL	1104.0301514	-92685.0468750	-223482.7968750	-67959480.0000000	-33613.7343750	0.0000000
8100	GLOBAL	0.0000000	4164.8540039	-2298.1040039	0.0000000	-222.3201447	0.0000000
8101	GLOBAL	-100.4569016	14499.4863281	-54651.8828125	-21255160.0000000	2665.8559570	0.0000000
8111	GLOBAL	1474.6018066	13924.6171875	-42389.9960938	-18399396.0000000	-33673.8476562	0.0000000
112	GLOBAL	-369.3508911	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
1112	GLOBAL	8300.1914062	0.0000000	-0.0001262	0.0000000	0.0000000	0.0000000
2112	GLOBAL	-25655.2128906	0.0000000	-324881.4375000	0.0000000	0.0000000	0.0000000
2122	GLOBAL	-17.0760498	-972.7401123	923.9091797	0.0000000	4.7767968	0.0000000
3112	GLOBAL	0.0000000	0.0000000	-0.0001376	0.0000000	0.0000000	0.0000000
5112	GLOBAL	0.0000000	0.0000000	-654880.3750000	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000438	-79116.5156250	-141489.8750000	0.0000000	-80.1649094	-141.3087158
8157	GLOBAL	0.0000265	-80856.1718750	-130862.3046875	0.0000000	-53.1355324	-85.2441711

--- LOADING - 35 UNIT LOAD IN X DIRECTION ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT	DISPLACEMENT			ROTATION		
	X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT	DISPLACEMENT			ROTATION		
	X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

2	GLOBAL	0.1034319	0.0009739	-0.0074878	-0.0011645	0.0145145	-0.0280331
19	GLOBAL	0.1655484	-0.0009366	-0.0177187	-0.0002293	-0.0061245	-0.0056424
27	GLOBAL	0.2718229	0.0001408	-0.0077757	-0.0001548	0.0068510	-0.0581967
38	GLOBAL	0.8846102	0.0001661	-0.0183760	-0.0001211	-0.0087570	-0.0657255
102	GLOBAL	0.1039905	0.0018844	0.0097652	0.0035282	0.0220314	-0.0373766
118	GLOBAL	0.1644054	0.0027060	0.0983486	0.0055319	-0.0023120	-0.0144181
128	GLOBAL	0.2688675	0.0006586	0.0010268	-0.0001533	0.0068573	0.0000939
146	GLOBAL	0.1156858	0.0025174	0.0098117	-0.0015975	0.0010315	-0.0247220
152	GLOBAL	0.8870119	0.0014570	0.0986841	-0.0024268	-0.0104495	-2.9357677
1102	GLOBAL	0.0976713	-0.0034304	0.0122369	0.0032054	0.2957546	-0.0180081
1118	GLOBAL	0.1613986	-0.0019626	0.0332258	0.0000626	-0.0046135	-0.0042671
1146	GLOBAL	0.1136519	0.0008447	0.0127019	-0.0003544	0.0072507	-0.0130361
1153	GLOBAL	0.8050103	-0.0067523	0.0331322	0.0009599	-0.0910305	-0.0107623
2102	GLOBAL	0.1068528	0.0000245	-0.0023308	-0.0008292	0.0116019	-0.0334346
2118	GLOBAL	0.1606601	-0.0004593	-0.0191201	-0.0011691	-0.0108566	-0.0023205
2146	GLOBAL	0.1136214	-0.0004241	-0.0015329	0.0002431	0.0019591	-0.0215513
2152	GLOBAL	0.8880687	0.0007295	-0.0191735	0.0003026	-0.0105059	-2.8437252
3102	GLOBAL	0.1059765	0.0002370	-0.0340499	-0.0078906	0.0123287	-0.0366501
3118	GLOBAL	0.1593505	-0.0011259	-0.0803454	-0.0000732	-0.0133180	-0.0020409
3153	GLOBAL	0.8067632	-0.0000106	-0.0802616	-0.0002573	-0.0907582	-0.0084586
4102	GLOBAL	0.1068127	0.0019869	-0.0082576	-0.0024217	-0.0007057	-0.0399783
4118	GLOBAL	0.1577326	0.0019995	-0.0178772	-0.0021058	-0.0179208	-0.0059549
4152	GLOBAL	0.8877894	0.0077357	-0.0179441	-0.0001407	-0.0081551	-2.2073972
5102	GLOBAL	0.1034896	-0.0030819	0.0008799	0.0014893	0.2923573	-0.0339726
5118	GLOBAL	0.1584466	-0.0020367	0.0514850	0.0024802	-0.0168996	-0.0058580
5153	GLOBAL	0.8077123	-0.0061000	0.0515866	0.0001116	-0.0905613	-0.0130932
6118	GLOBAL	0.1596964	0.0002003	0.0553867	0.0028832	-0.0002199	0.0004129
6152	GLOBAL	0.8864309	-0.0004745	0.0553890	0.0001267	-0.0044654	-2.5964799
7118	GLOBAL	0.1607162	0.0019888	0.0540147	0.0032257	0.0032652	-0.0029300
7152	GLOBAL	0.8842154	0.0015227	0.0521965	-0.0013859	-0.0024405	-3.8863122
8118	GLOBAL	0.1586641	-0.0017623	-0.0289698	-0.0031556	0.0000328	-0.0117759
8152	GLOBAL	0.8822772	-0.0001455	-0.0284000	0.0007587	-0.0011372	-3.9825585

--- LOADING - 36 UNIT LOADS IN Y DIRECTION ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	0.0239045	-0.0146565	0.0131282	-0.0001816	-0.0042553	-0.0024925
19	GLOBAL	0.0071230	-0.0266126	0.0199856	0.0047468	0.0102330	-0.0008504
27	GLOBAL	0.0173518	-0.1520699	0.0097022	0.0000117	0.0060654	-0.0012063
38	GLOBAL	0.0286304	-0.1147213	0.0108780	-0.0000001	0.0040329	-0.0009575
102	GLOBAL	0.0237584	-0.0029159	0.0053034	0.0043405	-0.0035577	-0.0053935
118	GLOBAL	0.0071283	-0.0187235	0.0080392	0.1798826	0.0113661	-0.0021236
128	GLOBAL	0.0173511	-0.0087899	0.0068543	0.0000000	0.0060582	0.0015476
146	GLOBAL	0.0192993	-0.0299359	0.0043310	-0.0074164	0.0096859	-0.0033638
152	GLOBAL	0.0285635	-0.8237938	0.0063866	0.0001057	0.0040797	0.0734511
1102	GLOBAL	0.0237974	-0.0025589	0.0052128	0.0050522	0.0100331	-0.0044244
1118	GLOBAL	0.0071890	-0.0149665	0.0091116	0.1841290	0.0090069	-0.0007815
1146	GLOBAL	0.0188815	-0.0296031	0.0043829	-0.0075921	0.0099664	-0.0027648
1153	GLOBAL	0.0332279	-0.7472402	0.0072661	-0.1105522	0.0030578	-0.0005700
2102	GLOBAL	0.0268553	-0.0021741	0.0001348	0.0037624	-0.0045976	-0.0054810
2118	GLOBAL	0.0075193	-0.0145879	0.0086832	0.1824586	0.0080551	-0.0006833
2146	GLOBAL	0.0178292	-0.0301456	-0.0003219	-0.0073061	0.0124451	-0.0035626
2152	GLOBAL	0.0284032	-0.8249257	0.0071450	-0.0001465	0.0040879	-0.0104891
3102	GLOBAL	0.0327374	-0.0044859	-0.0176760	-0.0020933	-0.0090540	-0.0141928
3118	GLOBAL	0.0078459	-0.0164879	-0.0050133	0.1848833	0.0070565	-0.0009130
3153	GLOBAL	0.0331196	-0.7429796	-0.0067107	-0.1109939	0.0030501	-0.0033307
4102	GLOBAL	0.0334858	-0.0036993	0.1052306	0.0370807	0.0128255	-0.0156053

4118	GLOBAL	0.0081603	-0.0149662	0.0463535	0.1975352	0.0065953	0.0000584
4152	GLOBAL	0.0282043	-0.8772359	0.0451106	0.0022111	0.0042302	0.2116295
5102	GLOBAL	0.0307908	-0.0063552	0.0064134	0.0131215	-0.0080936	-0.0115444
5118	GLOBAL	0.0083440	-0.0208294	0.0571283	0.1913043	0.0026266	0.0010363
5153	GLOBAL	0.0327974	-0.7614095	0.0557365	-0.1128396	0.0030435	-0.0003968
6118	GLOBAL	0.0079707	-0.4025966	0.0072309	0.1815831	0.0046076	0.0162983
6152	GLOBAL	0.0279578	-3.1071985	0.0072071	-0.0378710	0.0040462	-0.0986134
7118	GLOBAL	0.0076541	-0.0152721	0.0129467	0.1733201	-0.0212912	0.0008634
7152	GLOBAL	0.0278738	-0.8027512	0.0110223	-0.0001178	0.0040350	-0.1001161
8118	GLOBAL	0.0069795	-0.0006411	-0.0042450	0.0043130	-0.0199985	0.0019524
8152	GLOBAL	0.0278263	-0.0123383	-0.0040733	-0.0004575	0.0039295	-0.1786830

--- LOADING - 37 UNIT LOAD IN Z DIRECTION ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		/----------DISPLACEMENT----------//----------ROTATION----------/					
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		/----------DISPLACEMENT----------//----------ROTATION----------/					
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	-0.0087127	-0.0038489	0.0490310	0.0059096	-0.0038112	0.0009015
19	GLOBAL	0.0073927	0.0015957	0.0786261	0.0021482	-0.0073770	-0.0003635
27	GLOBAL	-0.0046394	-0.0010419	0.0518330	0.0004864	-0.0008121	-0.0015556
38	GLOBAL	0.0093217	-0.0010204	0.0795296	0.0004975	-0.0076130	-0.0010320
102	GLOBAL	-0.0087152	-0.0002830	0.0165831	0.0070223	-0.0021000	0.0019314
118	GLOBAL	0.0070808	0.0034559	0.1885237	0.0086249	-0.0074438	-0.0001953
128	GLOBAL	-0.0046407	-0.0011464	0.0329735	0.0001829	-0.0008123	0.0001561
146	GLOBAL	-0.0059713	0.0038520	0.0166338	-0.0022867	-0.0008798	0.0012030
152	GLOBAL	0.0090978	-0.0011146	0.1889135	-0.0026809	-0.0071915	0.2575310
1102	GLOBAL	-0.0081412	-0.0000698	0.0239366	0.0097571	-0.0096361	0.0015362
1118	GLOBAL	0.0062032	0.0056582	0.2589595	0.0114625	-0.0061616	-0.0001754
1146	GLOBAL	-0.0060979	0.0054250	0.0241706	-0.0032547	-0.0010223	0.0009476
1153	GLOBAL	0.0000867	0.0047383	0.2593906	-0.0028106	-0.0062498	0.0015228
2102	GLOBAL	-0.0089325	-0.0002437	0.0122804	0.0075728	-0.0017746	0.0019276
2118	GLOBAL	0.0055564	0.0063958	0.2619334	0.0146823	-0.0053177	-0.0000004
2146	GLOBAL	-0.0064788	0.0040246	0.0103916	-0.0023635	-0.0002397	0.0012185
2152	GLOBAL	0.0085374	-0.0030283	0.2626869	-0.0045173	-0.0062728	-0.0751817
3102	GLOBAL	-0.0090881	-0.0003191	0.0327333	0.0115829	-0.0012831	0.0027045
3118	GLOBAL	0.0048827	0.0060737	0.2769343	0.0112351	-0.0043458	0.0000935
3153	GLOBAL	0.0000938	0.0045987	0.2773194	-0.0025958	-0.0060968	-0.0000013
4102	GLOBAL	-0.0090835	-0.0001214	0.0378507	0.0177234	0.0039860	0.0029015
4118	GLOBAL	0.0042214	0.0063377	0.2873515	0.0162748	-0.0035017	-0.0003819
4152	GLOBAL	0.0079943	-0.0115766	0.2880591	-0.0037002	-0.0056449	-0.0527638
5102	GLOBAL	-0.0086239	0.0000456	0.0063522	0.0098571	-0.0082125	0.0023810
5118	GLOBAL	0.0037343	0.0070557	0.2982689	0.0177434	-0.0026482	-0.0004542
5153	GLOBAL	0.0000683	0.0014171	0.2991163	-0.0045019	-0.0059687	-0.0013487
6118	GLOBAL	0.0036062	0.0064364	0.2374132	0.0132412	0.0182961	-0.0004129
6152	GLOBAL	0.0076172	0.0049557	0.2374255	0.0015172	-0.0051318	-0.5702820
7118	GLOBAL	0.0034913	0.0043056	0.1608600	0.0094144	0.0055363	-0.0005149
7152	GLOBAL	0.0075183	0.0021162	0.1616013	-0.0035156	-0.0047200	-0.0817384
8118	GLOBAL	0.0034279	0.0037120	0.1530233	0.0107704	0.0052739	-0.0007238
8152	GLOBAL	0.0074708	-0.0000391	0.1536125	-0.0039070	-0.0048574	-0.0840468

--- LOADING - 38 ACCELERATION Y ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT	/----------DISPLACEMENT----------//----------ROTATION----------/

X DISP. Y DISP. Z DISP. X ROT. Y ROT. Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT /----------DISPLACEMENT----------//----------ROTATION----------/
X DISP. Y DISP. Z DISP. X ROT. Y ROT. Z ROT.

2	GLOBAL	0.0034419	-0.0111094	0.0149957	0.0011571	0.0007237	-0.0011003
19	GLOBAL	0.0012259	-0.0164420	0.0172395	0.0007736	0.0047514	0.0012625
27	GLOBAL	0.0019900	-0.0319867	0.0146113	0.0000121	0.0005409	-0.0007680
38	GLOBAL	0.0096276	-0.0301001	0.0159204	0.0000014	0.0017767	-0.0007456
102	GLOBAL	0.0034311	-0.0045656	0.0023374	0.0013333	0.0016026	-0.0017293
118	GLOBAL	0.0012234	-0.0120072	0.0073182	0.0322329	0.0053133	-0.0001194
128	GLOBAL	0.0019899	-0.1447827	0.0083951	-0.0000043	0.0005403	0.0000705
146	GLOBAL	0.0024079	-0.0031107	0.0022190	0.0008817	0.0007913	-0.0010439
152	GLOBAL	0.0096293	-0.1434983	0.0069749	0.0002882	0.0017994	-0.0084539
1102	GLOBAL	0.0030888	-0.0028991	0.0008330	0.0006243	0.0090739	-0.0007086
1118	GLOBAL	0.0012674	-0.0084739	0.0000683	0.0343307	0.0100972	0.0005323
1146	GLOBAL	0.0023954	-0.0041319	0.0007043	0.0008801	0.0008294	-0.0004133
1153	GLOBAL	0.0117870	-0.1348787	-0.0002835	-0.0161217	0.0014629	-0.0000270
2102	GLOBAL	0.0028903	-0.0029869	0.0003514	0.0006525	0.0000699	-0.0010939
2118	GLOBAL	0.0011374	-0.0086106	0.0030551	0.0351258	0.0154046	-0.0000709
2146	GLOBAL	0.0023549	-0.0038781	0.0002061	0.0009424	0.0009667	-0.0006594
2152	GLOBAL	0.0096355	-0.1507151	0.0027304	0.0003049	0.0018549	0.0245310
3102	GLOBAL	0.0030164	-0.0032082	-0.0005862	0.0004472	-0.0002556	-0.0013863
3118	GLOBAL	0.0010124	-0.0083574	0.0017614	0.0334550	0.0209042	-0.0010200
3153	GLOBAL	0.0118268	-0.1315339	0.0013918	-0.0157848	0.0014532	-0.0010879
4102	GLOBAL	0.0029830	-0.0031208	0.0091014	0.0044019	0.0002463	-0.0012861
4118	GLOBAL	0.0009151	-0.0093705	0.0031954	0.0361717	0.0259849	-0.0014884
4152	GLOBAL	0.0096258	-0.1540488	0.0029364	0.0004587	0.0018824	0.0172429
5102	GLOBAL	0.0030503	-0.0064255	0.0013945	0.0019851	-0.0107341	-0.0014527
5118	GLOBAL	-0.0002938	-0.0242486	-0.0002181	0.0225217	0.0263517	-0.0005502
5153	GLOBAL	0.0118361	-0.1199305	-0.0012561	-0.0135702	0.0014584	0.0000712
6118	GLOBAL	-0.0012964	-0.1416416	-0.0075786	0.0173627	-0.0019784	0.0052079
6152	GLOBAL	0.0096010	-0.4610777	-0.0075908	-0.0117841	0.0019233	0.0637563
7118	GLOBAL	-0.0021497	-0.0236628	0.0107785	0.0129775	0.0032427	0.0044095
7152	GLOBAL	0.0095900	-0.1012144	0.0095605	-0.0004280	0.0019323	-0.0216125
8118	GLOBAL	-0.0045780	0.0007029	0.0011488	0.0047684	-0.0133487	0.0019066
8152	GLOBAL	0.0095837	-0.0046987	0.0012567	-0.0000070	0.0018494	-0.0271481

--- LOADING - 39 ACCELERATION X ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT /----------DISPLACEMENT----------//----------ROTATION----------/
X DISP. Y DISP. Z DISP. X ROT. Y ROT. Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT /----------DISPLACEMENT----------//----------ROTATION----------/
X DISP. Y DISP. Z DISP. X ROT. Y ROT. Z ROT.

2	GLOBAL	0.8306664	0.0025334	-0.0120280	-0.0020701	0.1151531	-0.3979963
19	GLOBAL	4.0817952	0.0010290	-0.0263433	-0.0015157	-0.0082531	0.1081226
27	GLOBAL	0.7793119	0.0016307	-0.0124214	-0.0002047	0.0528322	-0.5618165
38	GLOBAL	5.5772829	0.0016933	-0.0274505	-0.0001625	0.0207994	-0.3913584
102	GLOBAL	0.8267118	0.0216744	0.0745124	0.0164498	0.2433685	-0.4568227
118	GLOBAL	4.0726171	0.0285850	0.2419252	0.0022116	0.0705955	-0.0700092
128	GLOBAL	0.7782565	0.0102528	0.0268930	-0.0003683	0.0528838	0.0022770
146	GLOBAL	0.5101277	0.0144984	0.0682813	-0.0096520	0.0807001	-0.3255574
152	GLOBAL	5.5730023	0.0395271	0.2420661	-0.0029364	0.0177089	-4.5401344
1102	GLOBAL	0.7177114	-0.0329729	0.0751481	0.0241499	4.5444865	-0.1719111
1118	GLOBAL	4.0531716	-0.0499281	0.2328320	0.0224052	0.2379083	0.0640261
1146	GLOBAL	0.5084155	0.0046623	0.0770894	-0.0011589	0.0873783	-0.1534283

1153	GLOBAL	5.5336146	-0.1177823	0.2336526	-0.0013203	-0.0580305	0.0353531
2102	GLOBAL	0.7152465	0.0001231	-0.0120272	-0.0042379	-0.0361619	-0.3914183
2118	GLOBAL	4.0432415	-0.0022764	-0.0964434	-0.0057918	0.2406773	0.1442254
2146	GLOBAL	0.5084666	-0.0021835	-0.0084228	0.0012573	0.0845881	-0.2797553
2152	GLOBAL	5.5692534	0.0035706	-0.0967091	0.0015054	0.0162288	-6.1594763
3102	GLOBAL	0.7662874	0.0013538	-0.1893756	-0.0427136	-0.0812699	-0.3872482
3118	GLOBAL	4.0218353	-0.0063973	-0.4466448	-0.0007609	0.3381074	0.0920493
3153	GLOBAL	5.5346508	-0.0002873	-0.4462128	-0.0013246	-0.0548542	0.0455355
4102	GLOBAL	0.7953663	0.0250163	-0.1134796	-0.0315864	-0.0545901	-0.4432007
4118	GLOBAL	3.9930379	0.0385117	-0.1782105	-0.0206035	0.3925208	-0.0558278
4152	GLOBAL	5.5655136	0.0918561	-0.1789083	0.0000982	0.0216688	-2.9817479
5102	GLOBAL	0.7394138	-0.0264368	0.0026012	0.0042264	4.2420082	-0.3040036
5118	GLOBAL	3.9864783	-0.0498549	0.1665487	0.0109717	0.5042959	-0.0234183
5153	GLOBAL	5.5349154	-0.0816382	0.1669612	0.0005442	-0.0537198	-0.0452500
6118	GLOBAL	3.9895370	-0.0244459	0.1579082	0.0084176	0.0068992	0.0058697
6152	GLOBAL	5.5613856	-0.0156237	0.1579240	-0.0018705	0.0275603	-4.9222260
7118	GLOBAL	3.9913497	-0.0028395	0.1186972	0.0062466	0.0313091	-0.0160637
7152	GLOBAL	5.5598712	0.0039300	0.1146897	-0.0041396	0.0310511	-8.0270452
8118	GLOBAL	3.9847341	-0.0068552	-0.1519557	-0.0110448	-0.0082925	-0.0296097
8152	GLOBAL	5.5598283	-0.0004859	-0.1508338	0.0032866	0.0336545	-8.2285089

--- LOADING - 40 ACCELERATION Z ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		/----------DISPLACEMENT----------//----------ROTATION----------/					
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		/----------DISPLACEMENT----------//----------ROTATION----------/					
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	0.0240445	-0.0292505	0.3660269	0.0472820	0.0080661	-0.0342396
19	GLOBAL	-0.4793081	0.0119720	0.6109128	-0.0030764	0.0099982	0.0361396
27	GLOBAL	0.0172250	-0.0078718	0.3812043	0.0041287	0.0040489	-0.0434724
38	GLOBAL	0.4496109	-0.0077041	0.6148119	0.0034170	0.1179721	-0.0416669
102	GLOBAL	0.0238236	0.0005462	0.0968885	0.0572567	0.0242149	-0.0302792
118	GLOBAL	-0.4805949	0.0251862	1.4102867	0.0318804	-0.0175927	0.0677769
128	GLOBAL	0.0172198	-0.0082079	1.0668174	0.0012222	0.0040446	0.0012668
146	GLOBAL	0.0177315	0.0324454	0.0906509	-0.0194527	0.0072335	-0.0152132
152	GLOBAL	0.4488721	-0.0055581	1.4091939	-0.0055100	0.1206840	1.7949406
1102	GLOBAL	0.0156210	-0.0040246	0.1263952	0.0706564	0.3799138	-0.0043133
1118	GLOBAL	-0.4852241	0.0552087	1.9373995	0.0720579	0.0561831	0.0345140
1146	GLOBAL	0.0172430	0.0380009	0.1226850	-0.0226089	0.0077940	0.0011228
1153	GLOBAL	0.5659561	0.0135382	1.9386935	-0.0120986	0.0540519	0.0169655
2102	GLOBAL	0.0090918	-0.0015639	0.0568155	0.0549794	-0.0011927	-0.0223867
2118	GLOBAL	-0.5042941	0.0466894	1.8215080	0.0754185	0.1282957	0.0231620
2146	GLOBAL	0.0158425	0.0296447	0.0433049	-0.0175426	0.0120808	-0.0106310
2152	GLOBAL	0.4468414	-0.0131543	1.8230696	-0.0197116	0.1278942	-1.6520888
3102	GLOBAL	0.0068678	-0.0017067	0.1383674	0.0685784	-0.0049754	-0.0235105
3118	GLOBAL	-0.5229226	0.0415303	1.7374899	0.0528576	0.1923679	0.0266037
3153	GLOBAL	0.5749370	0.0185175	1.7376034	-0.0088616	0.0552423	0.0051393
4102	GLOBAL	0.0076887	0.0016244	0.3911973	0.2227379	-0.0021884	-0.0238956
4118	GLOBAL	-0.5402488	0.0792621	3.7999783	0.1777401	0.2574939	0.0136927
4152	GLOBAL	0.4441620	-0.1158048	3.8053269	-0.0407135	0.1420485	10.7396412
5102	GLOBAL	0.0042079	-0.0038477	0.0967863	0.1941492	0.3714597	-0.0115883
5118	GLOBAL	-0.5498221	0.2024097	6.1940041	-0.1176245	0.2957461	-0.0206731
5153	GLOBAL	0.5736274	0.7285097	6.1772165	0.0557367	0.0557661	-0.0453733
6118	GLOBAL	-0.5511515	0.2063269	5.1348095	-0.2786750	0.2632528	-0.0005711
6152	GLOBAL	0.4384423	0.0666607	5.1330256	0.0327274	0.1391475	-7.7131214
7118	GLOBAL	-0.5523434	0.2017256	4.2266712	-0.4155679	1.0732385	-0.0156743
7152	GLOBAL	0.4365069	1.2481678	4.2042861	0.0225164	0.1422768	-2.8167195
8118	GLOBAL	-0.5473597	0.0778375	3.3810794	0.2461616	1.0400047	-0.0383223
8152	GLOBAL	0.4354952	-0.0026774	3.3931522	-0.0873619	0.1307708	-2.7697096

Attachment 29

GT STRUDL Coupled Building/Crane Model Output, Crane at P, All Analyses

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{ 4271} >
{ 4272} > $ Eigen solution
{ 4273} > DYNAMIC ANALYSIS EIGENSOLUTION


BANDWIDTH INFORMATION BEFORE RENUMBERING.


THE MAXIMUM BANDWIDTH IS    401 AND OCCURS AT JOINT CNR916
THE AVERAGE BANDWIDTH IS                30.780
THE STANDARD DEVIATION OF THE BANDWIDTH IS     64.326
                              ----------
                                95.106
                              ==========



BANDWIDTH INFORMATION AFTER  RENUMBERING.


THE MAXIMUM BANDWIDTH IS     65 AND OCCURS AT JOINT 102
THE AVERAGE BANDWIDTH IS                19.925
THE STANDARD DEVIATION OF THE BANDWIDTH IS     19.209
                              ----------
                                39.134
                              ==========
TIME FOR CONSISTENCY CHECKS FOR   1075 MEMBERS      0.06 SECONDS
TIME FOR BANDWIDTH REDUCTION                  0.04 SECONDS
TIME TO GENERATE   1075 ELEMENT STIF. MATRICES      0.04 SECONDS
TIME TO PROCESS    349 MEMBER RELEASES             0.05 SECONDS
TIME TO ASSEMBLE THE STIFFNESS MATRIX              0.14 SECONDS
TIME TO PROCESS    778 JOINTS                   0.18 SECONDS
TIME TO GENERATE REDUCED STIFFNESS MATRIX          0.12 SECONDS


***************************
* GT/LANCZOS SOLUTION DATA *
***************************

NUMBER OF DYNAMIC DEGREES-OF-FREEDOM =  4537
NUMBER OF MODES REQUESTED           =  300
EIGENVALUE TOLERANCE               =  1.00000E-06
NUMBER OF TERMS IN SKYLINE         =    495559
AVERAGE COLUMN HEIGHT OF SKYLINE     =   109
RANK OF MASS MATRIX =   2126
OUT-OF-CORE EQUATION SOLVER USED (   6 BLOCKS)
NUMBER OF LANCZOS VECTORS COMPUTED =    531

***********************************
* END OF GT/LANCZOS SOLUTION DATA *
***********************************


TIME TO SOLVE EIGENPROBLEM                    129.75 SECONDS
TIME TO TRANSFORM EIGENVECTORS TO JOINTS           0.95 SECONDS

*************************
* EIGEN-SOLUTION CHECKS *
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**** STRUDL MESSAGE - STURM SEQUENCE CHECK WAS SUCCESSFUL - THERE ARE NO MISSING MODES


MODE------EIGENVALUE--------FREQUENCY--------FREQUENCY---------PERIOD---------ESTIMATED---/
      ((RAD/SEC)**2)    (RAD/SEC)       (CYC/SEC)       (SEC/CYC)      ACCURACY

  1    2.473248D+00   1.572656D+00   2.502960D-01   3.995269D+00   1.450884D-08
  2    3.828096D+00   1.956552D+00   3.113949D-01   3.211356D+00   3.061483D-08
  3    6.232969D+01   7.894915D+00   1.256515D+00   7.958522D-01   4.097776D-07
  4    6.502084D+01   8.063550D+00   1.283354D+00   7.792084D-01   9.133583D-08
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5	6.717712D+01	8.196165D+00	1.304460D+00	7.666006D-01	6.831928D-08
6	1.093988D+02	1.045939D+01	1.664663D+00	6.007221D-01	3.753201D-08
7	1.197646D+02	1.094370D+01	1.741744D+00	5.741371D-01	6.141020D-09
8	1.256095D+02	1.120756D+01	1.783739D+00	5.606201D-01	1.768374D-07
9	1.482250D+02	1.217477D+01	1.937675D+00	5.160825D-01	2.566390D-08
10	1.559815D+02	1.248925D+01	1.987727D+00	5.030873D-01	4.405121D-08
11	1.881987D+02	1.371855D+01	2.183375D+00	4.580065D-01	1.083696D-09
12	2.246046D+02	1.498681D+01	2.385226D+00	4.192476D-01	9.876892D-09
13	2.317945D+02	1.522480D+01	2.423102D+00	4.126941D-01	5.075413D-08
14	2.408021D+02	1.551780D+01	2.469734D+00	4.049019D-01	2.128958D-08
15	2.446276D+02	1.564058D+01	2.489275D+00	4.017234D-01	6.719988D-08
16	2.715336D+02	1.647828D+01	2.622599D+00	3.813012D-01	4.788122D-08
17	2.841971D+02	1.685815D+01	2.683057D+00	3.727091D-01	9.655309D-09
18	3.334802D+02	1.826144D+01	2.906398D+00	3.440685D-01	7.489415D-09
19	3.498533D+02	1.870437D+01	2.976892D+00	3.359208D-01	2.537269D-10
20	3.922245D+02	1.980466D+01	3.152009D+00	3.172580D-01	8.010284D-10
21	3.952786D+02	1.988161D+01	3.164257D+00	3.160299D-01	6.215022D-10
22	4.106774D+02	2.026518D+01	3.225303D+00	3.100484D-01	3.563172D-10
23	4.278699D+02	2.068502D+01	3.292122D+00	3.037554D-01	1.181719D-09
24	4.409293D+02	2.099832D+01	3.341986D+00	2.992233D-01	1.384884D-08
25	5.561446D+02	2.358272D+01	3.753306D+00	2.664318D-01	1.102833D-08
26	5.707808D+02	2.389102D+01	3.802374D+00	2.629936D-01	3.131485D-08
27	6.666507D+02	2.581958D+01	4.109314D+00	2.433496D-01	8.014327D-09
28	7.299301D+02	2.701722D+01	4.299924D+00	2.325623D-01	4.567257D-10
29	7.600593D+02	2.756917D+01	4.387770D+00	2.279062D-01	1.981457D-08
30	8.201770D+02	2.863873D+01	4.557996D+00	2.193947D-01	6.801632D-09
31	8.257746D+02	2.873629D+01	4.573523D+00	2.186498D-01	4.582227D-09
32	8.663683D+02	2.943413D+01	4.684588D+00	2.134660D-01	2.004128D-09
33	8.725093D+02	2.953827D+01	4.701161D+00	2.127134D-01	9.525460D-10
34	9.052689D+02	3.008769D+01	4.788604D+00	2.088291D-01	4.582037D-09
35	9.256037D+02	3.042374D+01	4.842088D+00	2.065225D-01	5.691682D-09
36	9.356497D+02	3.058839D+01	4.868293D+00	2.054108D-01	3.181921D-09
37	9.589145D+02	3.096634D+01	4.928447D+00	2.029037D-01	3.063185D-09
38	9.770669D+02	3.125807D+01	4.974876D+00	2.010100D-01	5.653891D-09
39	9.910333D+02	3.148068D+01	5.010306D+00	1.995886D-01	3.513608D-09
40	9.963261D+02	3.156463D+01	5.023667D+00	1.990578D-01	3.121890D-09
41	1.006233D+03	3.172118D+01	5.048583D+00	1.980754D-01	6.676644D-09
42	1.031081D+03	3.211044D+01	5.110536D+00	1.956742D-01	6.208870D-09
43	1.139324D+03	3.375387D+01	5.372096D+00	1.861471D-01	7.559344D-10
44	1.209040D+03	3.477125D+01	5.534016D+00	1.807006D-01	1.460390D-09
45	1.257815D+03	3.546569D+01	5.644539D+00	1.771624D-01	9.752429D-11
46	1.288407D+03	3.589439D+01	5.712770D+00	1.750464D-01	1.241063D-09
47	1.346922D+03	3.670044D+01	5.841056D+00	1.712019D-01	6.719105D-10
48	1.505809D+03	3.880476D+01	6.175969D+00	1.619179D-01	3.773514D-09
49	1.653668D+03	4.066532D+01	6.472086D+00	1.545097D-01	3.053262D-09
50	1.909673D+03	4.369980D+01	6.955040D+00	1.437806D-01	5.913400D-09
51	2.047495D+03	4.524925D+01	7.201642D+00	1.388572D-01	3.569503D-09
52	2.100120D+03	4.582706D+01	7.293604D+00	1.371064D-01	1.757149D-09
53	2.123626D+03	4.608282D+01	7.334308D+00	1.363455D-01	9.239307D-10
54	2.146651D+03	4.633197D+01	7.373962D+00	1.356123D-01	2.146252D-10
55	2.302920D+03	4.798875D+01	7.637646D+00	1.309304D-01	3.157229D-09
56	2.310835D+03	4.807115D+01	7.650760D+00	1.307060D-01	6.943551D-10
57	2.362339D+03	4.860390D+01	7.735551D+00	1.292733D-01	1.050648D-09
58	2.373729D+03	4.872093D+01	7.754177D+00	1.289628D-01	3.198181D-09
59	2.423479D+03	4.922884D+01	7.835013D+00	1.276322D-01	1.253594D-09
60	2.523452D+03	5.023397D+01	7.994984D+00	1.250784D-01	8.303353D-10
61	2.677214D+03	5.174180D+01	8.234963D+00	1.214335D-01	5.320397D-09
62	2.701380D+03	5.197480D+01	8.272046D+00	1.208891D-01	3.480953D-09
63	2.757200D+03	5.250905D+01	8.357074D+00	1.196591D-01	1.590476D-09
64	2.884770D+03	5.371006D+01	8.548221D+00	1.169834D-01	3.466595D-09
65	2.905914D+03	5.390653D+01	8.579490D+00	1.165570D-01	1.421204D-09
66	2.980945D+03	5.459804D+01	8.689547D+00	1.150808D-01	8.723640D-09
67	3.033917D+03	5.508100D+01	8.766414D+00	1.140717D-01	2.810837D-09
68	3.045366D+03	5.518483D+01	8.782938D+00	1.138571D-01	2.390106D-09
69	3.058021D+03	5.529937D+01	8.801169D+00	1.136213D-01	3.584353D-09
70	3.137101D+03	5.600983D+01	8.914241D+00	1.121801D-01	7.852029D-09
71	3.163898D+03	5.624854D+01	8.952232D+00	1.117040D-01	3.029316D-09
72	3.173769D+03	5.633621D+01	8.966186D+00	1.115301D-01	1.912783D-09
73	3.223561D+03	5.677641D+01	9.036247D+00	1.106654D-01	1.482640D-09
74	3.240507D+03	5.692545D+01	9.059966D+00	1.103757D-01	4.423742D-10
75	3.312871D+03	5.755754D+01	9.160567D+00	1.091635D-01	6.397507D-09
76	3.374609D+03	5.809138D+01	9.245531D+00	1.081604D-01	6.734297D-09
77	3.479306D+03	5.898565D+01	9.387857D+00	1.065206D-01	2.204054D-09
78	3.610544D+03	6.008781D+01	9.563271D+00	1.045667D-01	6.597840D-09
79	3.642922D+03	6.035663D+01	9.606055D+00	1.041010D-01	7.131174D-09

80	3.719661D+03	6.098903D+01	9.706705D+00	1.030216D-01	3.668253D-09
81	3.729753D+03	6.107170D+01	9.719863D+00	1.028821D-01	5.676331D-10
82	3.817102D+03	6.178270D+01	9.833022D+00	1.016981D-01	5.911553D-09
83	3.850949D+03	6.205601D+01	9.876521D+00	1.012502D-01	5.496181D-09
84	3.875875D+03	6.225653D+01	9.908434D+00	1.009241D-01	4.443549D-10
85	3.914344D+03	6.256472D+01	9.957484D+00	1.004270D-01	5.457314D-09
86	3.944339D+03	6.280397D+01	9.995562D+00	1.000444D-01	5.938687D-09
87	3.985229D+03	6.312867D+01	1.004724D+01	9.952982D-02	5.020361D-09
88	4.114937D+03	6.414777D+01	1.020943D+01	9.794862D-02	4.421957D-09
89	4.135198D+03	6.430551D+01	1.023454D+01	9.770836D-02	4.377885D-09
90	4.152771D+03	6.444200D+01	1.025626D+01	9.750141D-02	4.469297D-09
91	4.158700D+03	6.448798D+01	1.026358D+01	9.743188D-02	3.554064D-09
92	4.159702D+03	6.449575D+01	1.026482D+01	9.742014D-02	1.674294D-09
93	4.164241D+03	6.453093D+01	1.027042D+01	9.736704D-02	3.515297D-09
94	4.165160D+03	6.453805D+01	1.027155D+01	9.735630D-02	9.302156D-10
95	4.170520D+03	6.457956D+01	1.027816D+01	9.729371D-02	1.487089D-10
96	4.172779D+03	6.459705D+01	1.028094D+01	9.726737D-02	2.264476D-10
97	4.174561D+03	6.461084D+01	1.028313D+01	9.724661D-02	7.075585D-10
98	4.225396D+03	6.500304D+01	1.034556D+01	9.665987D-02	9.436410D-09
99	4.254571D+03	6.522707D+01	1.038121D+01	9.632788D-02	1.248973D-08
100	4.357699D+03	6.601287D+01	1.050627D+01	9.518122D-02	3.939139D-09
101	4.432636D+03	6.657804D+01	1.059622D+01	9.437324D-02	1.497969D-09
102	4.446574D+03	6.668263D+01	1.061287D+01	9.422521D-02	9.256183D-10
103	4.461547D+03	6.679482D+01	1.063072D+01	9.406696D-02	1.902890D-09
104	4.498365D+03	6.706985D+01	1.067450D+01	9.368122D-02	2.837276D-09
105	4.811936D+03	6.936812D+01	1.104028D+01	9.057742D-02	8.805105D-09
106	4.833983D+03	6.952685D+01	1.106554D+01	9.037063D-02	1.784405D-09
107	4.893146D+03	6.995102D+01	1.113305D+01	8.982264D-02	7.752002D-09
108	5.021102D+03	7.085974D+01	1.127768D+01	8.867074D-02	8.564981D-09
109	5.181562D+03	7.198307D+01	1.145646D+01	8.728699D-02	2.450399D-09
110	5.483375D+03	7.404981D+01	1.178539D+01	8.485080D-02	9.505748D-09
111	5.520438D+03	7.429965D+01	1.182516D+01	8.456548D-02	7.179824D-09
112	5.534484D+03	7.439411D+01	1.184019D+01	8.445810D-02	2.482302D-09
113	5.599247D+03	7.482811D+01	1.190926D+01	8.396824D-02	3.561228D-10
114	5.659003D+03	7.522634D+01	1.197264D+01	8.352374D-02	1.028558D-09
115	5.961530D+03	7.721094D+01	1.228850D+01	8.137688D-02	4.395879D-09
116	6.037108D+03	7.769883D+01	1.236615D+01	8.086590D-02	2.223524D-09
117	6.115511D+03	7.820173D+01	1.244619D+01	8.034586D-02	3.157977D-10
118	6.220105D+03	7.886764D+01	1.255217D+01	7.966747D-02	8.972665D-10
119	6.269845D+03	7.918235D+01	1.260226D+01	7.935083D-02	3.990374D-10
120	6.340962D+03	7.963016D+01	1.267353D+01	7.890460D-02	3.618945D-09
121	6.660115D+03	8.160953D+01	1.298856D+01	7.699083D-02	1.697829D-09
122	6.953203D+03	8.338587D+01	1.327127D+01	7.535072D-02	2.601071D-09
123	7.426906D+03	8.617950D+01	1.371589D+01	7.290812D-02	9.053252D-10
124	7.507240D+03	8.664433D+01	1.378987D+01	7.251698D-02	1.793199D-09
125	7.647247D+03	8.744854D+01	1.391787D+01	7.185009D-02	2.508350D-09
126	7.790826D+03	8.826566D+01	1.404791D+01	7.118494D-02	9.926396D-09
127	7.941770D+03	8.911661D+01	1.418335D+01	7.050521D-02	4.019021D-09
128	8.214608D+03	9.063447D+01	1.442492D+01	6.932446D-02	3.419808D-09
129	8.253772D+03	9.085027D+01	1.445927D+01	6.915979D-02	4.320848D-09
130	8.260378D+03	9.088662D+01	1.446505D+01	6.913213D-02	2.411681D-10
131	8.599145D+03	9.273158D+01	1.475869D+01	6.775670D-02	1.476327D-09
132	8.781029D+03	9.370714D+01	1.491395D+01	6.705130D-02	1.027353D-09
133	8.834660D+03	9.399287D+01	1.495943D+01	6.684747D-02	2.216148D-09
134	8.883966D+03	9.425479D+01	1.500112D+01	6.666171D-02	5.065983D-09
135	9.057121D+03	9.516891D+01	1.514660D+01	6.602141D-02	6.219897D-10
136	9.126103D+03	9.553064D+01	1.520417D+01	6.577142D-02	2.881919D-10
137	9.311472D+03	9.649597D+01	1.535781D+01	6.511345D-02	1.846378D-09
138	9.523302D+03	9.758741D+01	1.553152D+01	6.438521D-02	1.120026D-09
139	9.771543D+03	9.885112D+01	1.573264D+01	6.356211D-02	5.195168D-11
140	1.001827D+04	1.000913D+02	1.593002D+01	6.277455D-02	8.266880D-10
141	1.009783D+04	1.004880D+02	1.599316D+01	6.252674D-02	4.754222D-10
142	1.021488D+04	1.010687D+02	1.608558D+01	6.216749D-02	1.210337D-09
143	1.037744D+04	1.018697D+02	1.621307D+01	6.167865D-02	1.343525D-09
144	1.047887D+04	1.023664D+02	1.629211D+01	6.137940D-02	5.831539D-10
145	1.080561D+04	1.039500D+02	1.654416D+01	6.044429D-02	4.733925D-09
146	1.113939D+04	1.055433D+02	1.679774D+01	5.953182D-02	2.519875D-10
147	1.125252D+04	1.060779D+02	1.688282D+01	5.923180D-02	2.551899D-09
148	1.176843D+04	1.084824D+02	1.726551D+01	5.791895D-02	1.759835D-09
149	1.185832D+04	1.088959D+02	1.733132D+01	5.769900D-02	1.179201D-09
150	1.217192D+04	1.103264D+02	1.755900D+01	5.695086D-02	6.124881D-10
151	1.243160D+04	1.114971D+02	1.774531D+01	5.635290D-02	1.584928D-09
152	1.257083D+04	1.121197D+02	1.784441D+01	5.603996D-02	6.454013D-10
153	1.274037D+04	1.128732D+02	1.796433D+01	5.566585D-02	3.753282D-10
154	1.286010D+04	1.134024D+02	1.804855D+01	5.540612D-02	1.373818D-09

155	1.308435D+04	1.143869D+02	1.820523D+01	5.492926D-02	2.377172D-09
156	1.322253D+04	1.149893D+02	1.830111D+01	5.464150D-02	2.286802D-09
157	1.325568D+04	1.151333D+02	1.832404D+01	5.457313D-02	2.632193D-09
158	1.329487D+04	1.153034D+02	1.835110D+01	5.449263D-02	1.967774D-09
159	1.334184D+04	1.155069D+02	1.838349D+01	5.439664D-02	2.299210D-09
160	1.378334D+04	1.174025D+02	1.868518D+01	5.351834D-02	1.650141D-09
161	1.388928D+04	1.178528D+02	1.875685D+01	5.331385D-02	1.137310D-09
162	1.402607D+04	1.184317D+02	1.884899D+01	5.305324D-02	1.614214D-09
163	1.450760D+04	1.204475D+02	1.916981D+01	5.216535D-02	8.736603D-10
164	1.462736D+04	1.209436D+02	1.924877D+01	5.195137D-02	1.484676D-09
165	1.466445D+04	1.210969D+02	1.927316D+01	5.188562D-02	4.078604D-09
166	1.485077D+04	1.218637D+02	1.939521D+01	5.155911D-02	8.272125D-10
167	1.493753D+04	1.222192D+02	1.945179D+01	5.140915D-02	5.615142D-10
168	1.498464D+04	1.224118D+02	1.948244D+01	5.132828D-02	1.174467D-10
169	1.533932D+04	1.238520D+02	1.971166D+01	5.073140D-02	1.262503D-09
170	1.544670D+04	1.242848D+02	1.978053D+01	5.055476D-02	5.795953D-10
171	1.596685D+04	1.263600D+02	2.011082D+01	4.972448D-02	7.356509D-10
172	1.601865D+04	1.265648D+02	2.014341D+01	4.964403D-02	6.194787D-11
173	1.608721D+04	1.268354D+02	2.018648D+01	4.953812D-02	3.264625D-10
174	1.667614D+04	1.291361D+02	2.055265D+01	4.865552D-02	2.859252D-10
175	1.670072D+04	1.292313D+02	2.056779D+01	4.861970D-02	3.234965D-10
176	1.693367D+04	1.301294D+02	2.071074D+01	4.828412D-02	9.677560D-10
177	1.719121D+04	1.311153D+02	2.086764D+01	4.792109D-02	7.198699D-10
178	1.737642D+04	1.318196D+02	2.097975D+01	4.766502D-02	8.770601D-10
179	1.797589D+04	1.340742D+02	2.133857D+01	4.686349D-02	7.604118D-10
180	1.807161D+04	1.344307D+02	2.139531D+01	4.673921D-02	6.215560D-10
181	1.859302D+04	1.363562D+02	2.170177D+01	4.607919D-02	2.930670D-09
182	1.861571D+04	1.364394D+02	2.171501D+01	4.605110D-02	3.529381D-10
183	1.872981D+04	1.368569D+02	2.178145D+01	4.591062D-02	1.540726D-09
184	1.907061D+04	1.380964D+02	2.197872D+01	4.549855D-02	5.775320D-10
185	1.934750D+04	1.390953D+02	2.213770D+01	4.517181D-02	2.879698D-10
186	1.997534D+04	1.413341D+02	2.249403D+01	4.445625D-02	2.807849D-10
187	2.079660D+04	1.442103D+02	2.295178D+01	4.356961D-02	1.618094D-09
188	2.100060D+04	1.449159D+02	2.306407D+01	4.335747D-02	4.563601D-10
189	2.104440D+04	1.450669D+02	2.308811D+01	4.331234D-02	6.766334D-10
190	2.139571D+04	1.462727D+02	2.328003D+01	4.295528D-02	9.382834D-10
191	2.185679D+04	1.478404D+02	2.352953D+01	4.249978D-02	3.944055D-10
192	2.209348D+04	1.486387D+02	2.365659D+01	4.227152D-02	1.589926D-09
193	2.238533D+04	1.496173D+02	2.381233D+01	4.199505D-02	2.451447D-10
194	2.240088D+04	1.496693D+02	2.382060D+01	4.198047D-02	7.678737D-11
195	2.244611D+04	1.498203D+02	2.384463D+01	4.193816D-02	1.833509D-11
196	2.247889D+04	1.499296D+02	2.386204D+01	4.190757D-02	5.566344D-11
197	2.250075D+04	1.500025D+02	2.387364D+01	4.188721D-02	8.860900D-11
198	2.258819D+04	1.502937D+02	2.391998D+01	4.180605D-02	2.906626D-10
199	2.260279D+04	1.503422D+02	2.392771D+01	4.179255D-02	2.582772D-10
200	2.274000D+04	1.507979D+02	2.400023D+01	4.166627D-02	2.833956D-10
201	2.283656D+04	1.511177D+02	2.405113D+01	4.157809D-02	2.178015D-09
202	2.297621D+04	1.515791D+02	2.412456D+01	4.145154D-02	1.484257D-09
203	2.327417D+04	1.525588D+02	2.428048D+01	4.118535D-02	4.729553D-10
204	2.345697D+04	1.531567D+02	2.437564D+01	4.102456D-02	2.467596D-10
205	2.350873D+04	1.533256D+02	2.440252D+01	4.097937D-02	2.095109D-10
206	2.393609D+04	1.547129D+02	2.462333D+01	4.061189D-02	2.377521D-10
207	2.416154D+04	1.554398D+02	2.473902D+01	4.042198D-02	1.425118D-10
208	2.439944D+04	1.562032D+02	2.486051D+01	4.022444D-02	1.070398D-09
209	2.519558D+04	1.587312D+02	2.526285D+01	3.958382D-02	4.167375D-10
210	2.589293D+04	1.609128D+02	2.561007D+01	3.904714D-02	4.700694D-10
211	2.599001D+04	1.612142D+02	2.565803D+01	3.897415D-02	6.562737D-10
212	2.637578D+04	1.624062D+02	2.584775D+01	3.868808D-02	2.184786D-10
213	2.646409D+04	1.626779D+02	2.589099D+01	3.862348D-02	4.583983D-10
214	2.657433D+04	1.630163D+02	2.594486D+01	3.854329D-02	3.128227D-10
215	2.709951D+04	1.646193D+02	2.619997D+01	3.816798D-02	7.503719D-10
216	2.716754D+04	1.648258D+02	2.623284D+01	3.812016D-02	6.044804D-10
217	2.744605D+04	1.656685D+02	2.636696D+01	3.792625D-02	2.937914D-10
218	2.757818D+04	1.660668D+02	2.643035D+01	3.783529D-02	3.461636D-10
219	2.838401D+04	1.684755D+02	2.681372D+01	3.729435D-02	1.924187D-10
220	2.869083D+04	1.693837D+02	2.695825D+01	3.709440D-02	7.314975D-11
221	2.929453D+04	1.711564D+02	2.724039D+01	3.671019D-02	6.142367D-11
222	2.936311D+04	1.713567D+02	2.727226D+01	3.666729D-02	6.497055D-11
223	2.961114D+04	1.720789D+02	2.738720D+01	3.651340D-02	2.460387D-10
224	3.026628D+04	1.739721D+02	2.768851D+01	3.611606D-02	2.332751D-10
225	3.061819D+04	1.749805D+02	2.784902D+01	3.590791D-02	3.853910D-10
226	3.139285D+04	1.771803D+02	2.819911D+01	3.546211D-02	4.583807D-11
227	3.181124D+04	1.783571D+02	2.838641D+01	3.522813D-02	5.501903D-11
228	3.270521D+04	1.808458D+02	2.878251D+01	3.474333D-02	3.607592D-10
229	3.369026D+04	1.835491D+02	2.921274D+01	3.423164D-02	1.750005D-10

230	3.389071D+04	1.840943D+02	2.929952D+01	3.413025D-02	7.713040D-11
231	3.402964D+04	1.844712D+02	2.935951D+01	3.406052D-02	2.840292D-10
232	3.418539D+04	1.848929D+02	2.942662D+01	3.398284D-02	5.737658D-11
233	3.456951D+04	1.859288D+02	2.959148D+01	3.379351D-02	1.370334D-10
234	3.505459D+04	1.872287D+02	2.979838D+01	3.355888D-02	3.631128D-10
235	3.666459D+04	1.914800D+02	3.047499D+01	3.281380D-02	1.046495D-09
236	3.687673D+04	1.920331D+02	3.056302D+01	3.271928D-02	6.641275D-10
237	3.767643D+04	1.941042D+02	3.089264D+01	3.237017D-02	2.010265D-10
238	3.813826D+04	1.952902D+02	3.108140D+01	3.217358D-02	1.076753D-09
239	3.843869D+04	1.960579D+02	3.120358D+01	3.204761D-02	8.945159D-10
240	3.907641D+04	1.976775D+02	3.146136D+01	3.178503D-02	6.866741D-11
241	3.929640D+04	1.982332D+02	3.154979D+01	3.169593D-02	2.659077D-09
242	3.987329D+04	1.996830D+02	3.178053D+01	3.146580D-02	1.416056D-10
243	4.006943D+04	2.001735D+02	3.185860D+01	3.138870D-02	1.549889D-10
244	4.035337D+04	2.008815D+02	3.197128D+01	3.127807D-02	1.287753D-10
245	4.074144D+04	2.018451D+02	3.212464D+01	3.112875D-02	4.040992D-10
246	4.079024D+04	2.019659D+02	3.214388D+01	3.111012D-02	3.849400D-10
247	4.118038D+04	2.029295D+02	3.229723D+01	3.096241D-02	2.688322D-10
248	4.130243D+04	2.032300D+02	3.234506D+01	3.091662D-02	9.061077D-11
249	4.146230D+04	2.036229D+02	3.240760D+01	3.085696D-02	2.166804D-10
250	4.169128D+04	2.041844D+02	3.249696D+01	3.077211D-02	4.828702D-10
251	4.173855D+04	2.043001D+02	3.251538D+01	3.075468D-02	1.186160D-10
252	4.233648D+04	2.057583D+02	3.274745D+01	3.053673D-02	2.251150D-10
253	4.234578D+04	2.057809D+02	3.275105D+01	3.053338D-02	1.512847D-10
254	4.279193D+04	2.068621D+02	3.292312D+01	3.037379D-02	1.002518D-10
255	4.298624D+04	2.073312D+02	3.299779D+01	3.030506D-02	3.395596D-10
256	4.336381D+04	2.082398D+02	3.314239D+01	3.017284D-02	3.139915D-10
257	4.403185D+04	2.098377D+02	3.339670D+01	2.994308D-02	6.359284D-10
258	4.419623D+04	2.102290D+02	3.345898D+01	2.988734D-02	1.949325D-10
259	4.482069D+04	2.117090D+02	3.369453D+01	2.967841D-02	6.261964D-10
260	4.558521D+04	2.135069D+02	3.398068D+01	2.942849D-02	2.084174D-10
261	4.605920D+04	2.146141D+02	3.415689D+01	2.927667D-02	3.136875D-10
262	4.619724D+04	2.149354D+02	3.420804D+01	2.923290D-02	3.847436D-10
263	4.689249D+04	2.165467D+02	3.446448D+01	2.901538D-02	2.012520D-10
264	4.714830D+04	2.171366D+02	3.455836D+01	2.893656D-02	2.735791D-10
265	4.751731D+04	2.179847D+02	3.469334D+01	2.882398D-02	2.573144D-10
266	4.783843D+04	2.187200D+02	3.481036D+01	2.872708D-02	5.870470D-11
267	4.840358D+04	2.200081D+02	3.501538D+01	2.855888D-02	4.297304D-10
268	4.864789D+04	2.205627D+02	3.510364D+01	2.848708D-02	6.744225D-11
269	4.934766D+04	2.221433D+02	3.535521D+01	2.828438D-02	6.310918D-11
270	4.982593D+04	2.232172D+02	3.552612D+01	2.814830D-02	6.934134D-10
271	5.005933D+04	2.237394D+02	3.560923D+01	2.808260D-02	2.376378D-10
272	5.037266D+04	2.244385D+02	3.572050D+01	2.799513D-02	5.884530D-11
273	5.163220D+04	2.272272D+02	3.616433D+01	2.765155D-02	4.584794D-11
274	5.226656D+04	2.286188D+02	3.638581D+01	2.748324D-02	1.107060D-10
275	5.252099D+04	2.291746D+02	3.647427D+01	2.741659D-02	4.554920D-10
276	5.273239D+04	2.296353D+02	3.654760D+01	2.736158D-02	7.615713D-10
277	5.341940D+04	2.311264D+02	3.678491D+01	2.718506D-02	2.184458D-10
278	5.347445D+04	2.312454D+02	3.680385D+01	2.717107D-02	2.215088D-10
279	5.403705D+04	2.324587D+02	3.699695D+01	2.702925D-02	4.815882D-10
280	5.423611D+04	2.328865D+02	3.706503D+01	2.697961D-02	3.690704D-10
281	5.433336D+04	2.330952D+02	3.709825D+01	2.695545D-02	2.736786D-10
282	5.489603D+04	2.342990D+02	3.728985D+01	2.681695D-02	3.307003D-11
283	5.507946D+04	2.346901D+02	3.735209D+01	2.677226D-02	1.108608D-10
284	5.533642D+04	2.352370D+02	3.743912D+01	2.671003D-02	4.639719D-11
285	5.563938D+04	2.358800D+02	3.754147D+01	2.663721D-02	3.356711D-10
286	5.697241D+04	2.386889D+02	3.798852D+01	2.632374D-02	3.631232D-10
287	5.768734D+04	2.401819D+02	3.822613D+01	2.616011D-02	1.355748D-10
288	5.802979D+04	2.408937D+02	3.833943D+01	2.608281D-02	5.612629D-11
289	5.869754D+04	2.422758D+02	3.855938D+01	2.593402D-02	3.188029D-10
290	5.977612D+04	2.444916D+02	3.891204D+01	2.569899D-02	2.584221D-10
291	6.088724D+04	2.467534D+02	3.927202D+01	2.546342D-02	3.081259D-10
292	6.104910D+04	2.470812D+02	3.932419D+01	2.542964D-02	1.421256D-10
293	6.128673D+04	2.475616D+02	3.940064D+01	2.538030D-02	2.709403D-10
294	6.153411D+04	2.480607D+02	3.948008D+01	2.532923D-02	4.297531D-11
295	6.215711D+04	2.493133D+02	3.967944D+01	2.520197D-02	7.283519D-10
296	6.295784D+04	2.509140D+02	3.993421D+01	2.504119D-02	5.463451D-11
297	6.360348D+04	2.521973D+02	4.013845D+01	2.491377D-02	2.964489D-10
298	6.379175D+04	2.525703D+02	4.019781D+01	2.487698D-02	4.539813D-10
299	6.456800D+04	2.541023D+02	4.044164D+01	2.472699D-02	3.401642D-10
300	6.520438D+04	2.553515D+02	4.064045D+01	2.460603D-02	1.413514D-10

ORTHOGONALITY CHECK

WITH RESPECT TO MASS

OFF DIAGONALS: MAXIMUM = 0.7443E-13
MINIMUM = 0.0000E+00
MEAN = 0.4281E-15

DIAGONALS: MAXIMUM = 0.1000E+01
MINIMUM = 0.1000E+01
MEAN = 0.1000E+01

WITH RESPECT TO STIFFNESS

OFF DIAGONALS: MAXIMUM = 0.8564E-05
MINIMUM = 0.4721E-13
MEAN = 0.5990E-07

DIAGONALS: MAXIMUM = 0.6520E+05
MINIMUM = 0.2473E+01
MEAN = 0.1894E+05

****
* END OF EIGEN-SOLUTION CHECKS *
****

TIME TO CHECK EIGENSOLUTION 35.83 SECONDS
{ 4274} > LIST DYNAMIC PARTICIPATION FACTORS
1

****
RESULTS OF LATEST ANALYSES
****

PROBLEM - N1E3_HU_ TITLE - BRIDGE LOCATION 1 TROLLEY POSITION 3 - LOAD UP - MHE

ACTIVE UNITS FEET KIP DEG DEGF SEC

NORMALIZED PARTICIPATION FACTORS

% OF X DIRECTION MASS PARTICIPATING

MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT
1	0.1602227E-04	2	12.34109	3	37.88419	4	2.783411	5	0.2399304	6	0.2217343
7	0.2600833E-02	8	1.379187	9	0.5173311E-01	10	0.2888960E-01	11	0.1919119E-02	12	0.2104701E-01
13	1.894332	14	0.6983319E-01	15	2.834928	16	2.549307	17	8.462606	18	2.938334
19	0.5148587E-04	20	0.1457426	21	0.4943821E-05	22	0.1513310E-03	23	0.1513315E-01	24	0.9561315E-02
25	0.2638460E-03	26	1.622504	27	2.968909	28	0.6321810E-03	29	0.1254313	30	2.783568
31	0.3885715	32	0.2095827E-02	33	0.1482345E-01	34	0.2622644E-03	35	0.1218310E-02	36	0.5998285
37	4.159068	38	0.6689490	39	0.5344390E-01	40	0.9440818	41	2.686100	42	0.7594025
43	0.6224774E-02	44	0.2695023E-02	45	0.9461535E-04	46	0.2533003E-02	47	0.1782307E-03	48	0.6322498
49	0.2633468E-01	50	0.2222669E-02	51	0.3185949E-01	52	0.8697732E-01	53	0.1824171	54	0.1235545E-03
55	0.4008876E-03	56	0.5762118	57	0.3711556E-02	58	0.5968965E-01	59	0.2572658E-01	60	0.7546085E-01
61	0.1848469	62	0.1495962E-01	63	0.8484621E-02	64	0.1195953E-02	65	0.1117637E-01	66	0.2461114E-02
67	0.2522298E-04	68	0.4979226E-04	69	0.3864312E-04	70	0.3761628E-02	71	0.3305004E-03	72	0.1977076E-02
73	0.1584345E-03	74	0.5113926E-04	75	0.5297326E-02	76	0.1786865E-02	77	0.1522356E-03	78	0.1401673E-05

79	0.8460917E-04	80	0.5399088E-02	81	0.1134687E-03	82	0.3222093E-03	83	0.1372880E-03	84	0.3262679E-03			
85	0.2852554E-04	86	0.9238977E-02	87	0.3742572E-02	88	0.3472914E-03	89	0.3306851E-02	90	0.1561737E-01			
91	0.1722265E-03	92	0.5648556E-04	93	0.7231977E-03	94	0.2530146E-04	95	0.1630422E-06	96	0.9592401E-08			
97	0.1027804E-04	98	0.8265992E-03	99	0.5427040E-02	100	0.1521819	101	0.3977362E-03	102	0.1753383			
103	0.1334954E-01	104	0.4986563E-04	105	0.1842363E-02	106	0.4664207E-04	107	0.2662981E-04	108	0.1662741E-01			
109	0.3161242E-03	110	0.1095427E-03	111	0.4076855E-03	112	0.2038894E-05	113	0.1982918E-04	114	0.3011710E-05			
115	0.8987877E-02	116	0.2805223E-03	117	0.3969927E-04	118	0.2585230E-03	119	0.1878959E-02	120	0.5060076			
121	0.9749283E-02	122	0.1576751	123	0.2069192E-05	124	0.1697785E-03	125	0.4778741E-03	126	0.1136222E-02			
127	0.9572329E-04	128	0.1194599	129	0.3358620E-01	130	0.6177604E-05	131	0.1147209E-03	132	0.5944035E-01			
133	0.5514215	134	0.4488793	135	0.1694630E-03	136	0.1717067E-03	137	0.6660214E-03	138	0.3672753E-01			
139	0.8935059E-07	140	0.3502696E-04	141	0.1605227E-01	142	0.3679556E-01	143	0.1506735E-02	144	0.8128544E-04			
145	0.3299833E-01	146	0.1757049E-02	147	0.1236087	148	0.6192054E-02	149	0.6058602E-02	150	0.5963177E-04			
151	0.3833600E-01	152	0.6075402E-02	153	0.3987939E-02	154	0.8864525E-03	155	0.4058071E-01	156	0.4577442E-02			
157	0.6463749E-02	158	0.2576619E-02	159	0.1228928E-01	160	0.2042015E-01	161	0.1966037E-01	162	0.1794323E-01			
163	0.3258482E-04	164	0.6551688E-03	165	0.1095586E-01	166	0.1108927E-02	167	0.1120054E-03	168	0.1723243E-05			
169	0.6590246E-03	170	0.3650923E-03	171	0.1740102E-01	172	0.6584392E-05	173	0.7557750E-06	174	0.4831620E-05			
175	0.2405680E-07	176	0.1133248E-03	177	0.2671491E-04	178	0.1305044E-03	179	0.1430486E-04	180	0.1059101E-06			
181	0.1671322E-02	182	0.6364313E-04	183	0.2183229E-02	184	0.6368789E-03	185	0.5126332E-03	186	0.4141435E-01			
187	0.1217945	188	0.4815950E-02	189	0.4186250E-01	190	0.1475997E-01	191	0.5589887E-04	192	0.1981757E-01			
193	0.2031095E-03	194	0.1217241E-04	195	0.1433708E-05	196	0.2197591E-05	197	0.8568444E-05	198	0.9500523E-03			
199	0.9273142E-01	200	0.7239583E-04	201	0.5992964E-01	202	0.1352684E-01	203	0.2864024E-05	204	0.9111964E-03			
205	0.2401644E-04	206	0.5277774E-03	207	0.2212993E-02	208	0.1470592E-01	209	0.9898588E-01	210	0.1049432E-02			
211	0.1221546E-02	212	0.1669111E-02	213	0.1425065E-03	214	0.9051981E-04	215	0.4392000E-05	216	0.3295402E-05			
217	0.1553327E-03	218	0.4380936E-04	219	0.2359236E-05	220	0.5863030E-02	221	0.1075081E-05	222	0.6236155E-03			
223	0.1162018E-03	224	0.1026987E-05	225	0.3044198E-05	226	0.2232541E-06	227	0.1158565E-06	228	0.6506741E-03			
229	0.5330117E-03	230	0.2753146E-05	231	0.3536887E-04	232	0.4851429E-03	233	0.1086785E-04	234	0.1395659E-03			
235	0.3463880E-01	236	0.2850846E-01	237	0.1443167	238	0.3380673E-01	239	0.2608863E-03	240	0.1680429E-01			
241	0.1722749E-06	242	0.7266925E-04	243	0.1830320E-03	244	0.4278974E-04	245	0.1614492	246	0.1842174E-01			
247	0.3683464E-03	248	0.1323944E-02	249	0.9730363E-02	250	0.4499181E-02	251	0.1171453E-03	252	0.1816780E-01			
253	0.1004183E-01	254	0.1544707E-01	255	0.2862568E-03	256	0.1190495E-02	257	0.2913411E-03	258	0.7795104E-03			
259	0.2248888E-08	260	0.9334829E-05	261	0.4850200E-07	262	0.1816952E-06	263	0.5027197E-03	264	0.7653508E-04			
265	0.1497540E-02	266	0.1669337E-05	267	0.4082764E-02	268	0.5455747E-01	269	0.2962463E-06	270	0.9625870E-04			
271	0.2826010E-02	272	0.5902570E-08	273	0.6491268E-02	274	0.1265223E-05	275	0.1054361E-02	276	0.1065605E-02			
277	0.1699640E-01	278	0.4291083E-02	279	0.2561998E-02	280	0.1583264E-02	281	0.9498095E-03	282	0.9748145			
283	0.2906192E-03	284	0.4331457E-01	285	0.2351549E-02	286	0.6144721E-03	287	0.4566494E-04	288	0.1342608E-05			
289	0.1837432E-04	290	0.6957268E-05	291	0.3983797E-04	292	0.1617341E-04	293	0.1652262E-05	294	0.7859686E-01			
295	0.1823343E-03	296	0.2646994E-05	297	0.1800311E-04	298	0.6074230E-04	299	0.4146677E-04	300	0.1431669E-05			

TOTAL PERCENTAGE OF X DIRECTION MASS PARTICIPATING: 98.628

% OF Y DIRECTION MASS PARTICIPATING

MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT
1	0.8339378E-05	2	0.1215204E-06	3	0.4224722E-04	4	0.1254884E-02	5	0.1756062E-04	6	0.2041062E-03
7	0.1902574E-03	8	0.2407252E-03	9	0.1447134E-02	10	0.1081196E-03	11	0.1206439E-05	12	0.3331539E-04
13	0.6056120E-02	14	0.1351201E-03	15	0.5848403E-02	16	0.6414106E-02	17	0.1651607E-04	18	0.1527946E-03
19	0.9651005	20	0.1299236E-04	21	1.135936	22	15.29809	23	0.1217968E-01	24	0.5412945E-01
25	0.3395392E-03	26	0.3227404E-03	27	0.8156108E-01	28	5.961588	29	0.1502102	30	0.2891107
31	1.825674	32	0.7296342E-02	33	0.9958220	34	0.9866450	35	0.8460492	36	0.8956414
37	0.1764577	38	0.2596449E-01	39	0.1162691E-01	40	0.1392618	41	0.3613338E-01	42	0.3264492E-02
43	0.3621334E-02	44	0.2585883	45	0.6830806	46	0.1539111	47	0.1254859E-01	48	0.1899979E-02
49	0.9978973E-01	50	0.3461931E-03	51	0.1783693	52	0.4708987	53	0.4718162E-01	54	0.8261059
55	0.4650775	56	0.7887752E-01	57	0.4789806E-02	58	0.8949080E-02	59	0.2583454E-01	60	0.2035910
61	0.4505639E-01	62	0.2155042	63	1.806267	64	0.1470809E-02	65	0.3207830	66	0.1388339E-02
67	0.5859071E-02	68	0.6276277E-01	69	0.3825866E-02	70	0.1339641E-02	71	0.2581420E-01	72	0.4249128E-02
73	0.3386941E-01	74	0.5021937	75	0.7169240E-03	76	0.3352760E-04	77	0.2786655E-01	78	0.2359636E-02
79	0.6896937E-03	80	0.4914186E-03	81	0.2238722E-02	82	0.1667471E-03	83	0.2304648E-03	84	0.1359785E-04
85	0.2324822E-01	86	0.7201045E-01	87	0.6557491E-03	88	0.6828358E-04	89	0.1242208E-02	90	0.1094768E-01
91	0.1776193E-03	92	0.3909248E-04	93	0.6475744E-03	94	0.2583928E-04	95	0.1293209E-05	96	0.5370448E-06
97	0.9662515E-05	98	0.2267124E-03	99	0.6351519E-02	100	0.9226708E-01	101	0.6280003E-01	102	0.3480732E-03
103	0.2447774E-02	104	0.6596896E-03	105	0.1414523	106	0.7383052	107	0.6224888E-06	108	0.4254745E-03
109	0.1428497E-03	110	0.7675087E-03	111	0.5807617	112	3.991807	113	1.081351	114	0.2480166E-03
115	0.1983896E-02	116	0.8298628E-02	117	0.9677988	118	0.4012747E-02	119	0.1751714E-01	120	0.3484366E-04
121	0.5266629E-02	122	0.1928003E-01	123	0.1616511E-04	124	0.8928803E-03	125	0.6091486E-04	126	0.2224851E-03
127	0.1869920E-01	128	0.6142966E-03	129	0.3572440E-02	130	0.2694568E-06	131	0.3254213E-02	132	0.7215583
133	0.1322312E-01	134	0.9044904E-01	135	0.1471461	136	0.3882498E-03	137	0.6323246E-03	138	0.4321813E-01
139	0.1261562E-05	140	0.7120810E-03	141	0.9745061E-03	142	0.3343835E-03	143	0.7268038E-02	144	0.2192504E-02
145	0.1279991E-01	146	0.2591078	147	0.5981860E-01	148	0.4566809E-01	149	0.4023067	150	0.1644078
151	0.5177810	152	1.168971	153	3.516363	154	0.3422114	155	1.252756	156	0.2076029E-03
157	0.1649248	158	0.2766093E-01	159	0.1851178	160	0.6593014E-01	161	0.5984884E-01	162	0.3758766E-02
163	0.1004875E-02	164	0.3492730E-01	165	0.2139847E-01	166	0.1506534E-02	167	0.4280315E-03	168	4.731458

169 0.9142346E-04 170 0.7451193E-06 171 0.3198861E-02 172 0.1359597E-03 173 0.2886362E-05 174 0.7454258
175 0.4677140E-01 176 0.3789645E-03 177 0.3127737E-01 178 0.4839995E-01 179 0.1122523E-01 180 0.2845979E-01
181 1.048291 182 4.210561 183 0.9533563E-01 184 0.1521771 185 0.4267283E-02 186 0.1752450E-01
187 0.1841385E-02 188 0.1013710 189 0.5005066E-02 190 0.3459454 191 0.3361333E-01 192 0.3651589E-01
193 0.1226016E-02 194 0.5741503E-04 195 0.7617136E-06 196 0.1759737E-03 197 0.1469297E-03 198 0.2944097E-02
199 0.1574318E-02 200 0.9794293E-03 201 0.4839884E-02 202 0.2201149E-02 203 0.9670430E-02 204 0.5724457E-05
205 0.9667555E-01 206 0.3600087E-01 207 2.193315 208 0.1770230E-02 209 0.6317708E-01 210 1.834786
211 0.5825273 212 0.1256798 213 1.708941 214 0.6140755E-02 215 0.4238041E-01 216 0.9107101
217 0.4749584 218 0.4641310 219 0.3258705E-01 220 0.3350067E-02 221 0.1165092E-04 222 0.1817123E-01
223 0.5224589E-01 224 0.3514786E-01 225 0.2207376E-04 226 0.9381145 227 0.2843113E-01 228 0.1218815
229 0.1631531E-01 230 0.4363160E-03 231 0.6904904 232 0.1396235 233 0.2536408E-03 234 0.1128140
235 0.3483996E-01 236 0.4235356E-03 237 0.1135555 238 0.2213231 239 0.1600552 240 0.1500979E-02
241 0.6410599E-04 242 0.2255435E-03 243 0.8347031E-01 244 0.5613883E-02 245 0.3135197E-02 246 0.9726817
247 1.551007 248 0.7466540E-01 249 0.1586142E-01 250 0.2313787 251 0.6191660E-01 252 0.6417869E-01
253 0.4032957 254 0.9706286E-02 255 0.7287695 256 0.2568206E-01 257 0.4904632E-01 258 0.5706278E-01
259 0.3600133E-02 260 0.2985815E-02 261 0.1885837E-01 262 0.3001504E-01 263 0.1909617E-02 264 0.1489407E-03
265 0.3894947 266 0.2547355E-01 267 0.3936841E-01 268 0.4606019E-01 269 0.7914334E-01 270 0.1335073E-01
271 1.316520 272 0.9778648E-04 273 0.2462103E-02 274 0.7573657E-03 275 0.1740017 276 0.2179070E-01
277 0.7927356E-02 278 0.2159699E-03 279 0.1198101 280 0.1386879E-01 281 0.2108112E-01 282 0.2477627E-04
283 0.6506402E-03 284 0.3448015E-02 285 0.1022152 286 0.2410484 287 0.4853741 288 0.8949591E-01
289 0.1307463E-02 290 0.9522513E-01 291 0.1764877E-02 292 0.3630896 293 0.2714195E-02 294 0.3248819E-04
295 0.1025910E-01 296 0.1128742E-03 297 0.7874096E-02 298 0.1459483E-02 299 0.6098950E-03 300 0.1010865E-01

TOTAL PERCENTAGE OF Y DIRECTION MASS PARTICIPATING: 84.777

% OF Z DIRECTION MASS PARTICIPATING

MODE PERCENT MODE PERCENT MODE PERCENT MODE PERCENT MODE PERCENT MODE PERCENT

1 12.85370 2 0.1917223E-05 3 0.9157137 4 14.12498 5 0.5344529E-01 6 9.070986
7 11.52103 8 0.3194274 9 3.868586 10 1.422484 11 0.5221995 12 1.100186
13 2.588915 14 0.3354277E-01 15 0.3522314 16 2.423808 17 0.9865099E-01 18 0.4973930E-02
19 0.1876199E-02 20 0.3634246E-03 21 0.1260802E-04 22 0.4912669E-03 23 0.2927558E-01 24 0.1007479
25 2.832465 26 0.1154953E-01 27 0.2409422E-03 28 0.8261214E-04 29 0.4125737 30 0.2042030E-01
31 0.1512968E-01 32 0.4902454E-02 33 0.2501621E-01 34 0.1540126E-02 35 0.6840168E-02 36 0.2044100
37 0.4953958E-01 38 0.5919866E-03 39 0.2423933E-02 40 0.2096700E-02 41 0.2694346 42 0.1785837E-02
43 0.9778984E-01 44 0.7933277E-02 45 0.5133305E-04 46 0.2546864 47 0.8065836E-02 48 0.9177196E-03
49 0.5655082 50 0.1112333 51 0.7943808 52 3.510530 53 4.892414 54 0.7741418E-03
55 0.1641733 56 0.5850002E-01 57 0.2394664E-01 58 0.2970954 59 0.3017663E-02 60 0.5868179E-01
61 0.2719212E-02 62 0.1635283E-01 63 0.8457628 64 0.4382433 65 0.2229676E-01 66 0.1386424E-01
67 0.2255343 68 0.2694856E-01 69 0.3066434E-01 70 0.8624235E-02 71 0.1600154E-01 72 0.7198159
73 0.2917610 74 0.2674488E-04 75 0.6673371E-03 76 0.3558711E-02 77 0.4259813 78 0.3344295
79 0.3518829E-02 80 0.4432954 81 0.2015401E-01 82 0.6342387E-02 83 0.2984378E-01 84 0.4900958E-02
85 0.1353356 86 0.4840751 87 0.3846773E-03 88 0.5660164E-02 89 0.7095686E-01 90 0.4544661
91 0.5904904E-02 92 0.1807086E-02 93 0.2607024E-01 94 0.9493877E-03 95 0.1227404E-04 96 0.1020189E-04
97 0.4663553E-03 98 0.2628553E-02 99 0.3426019 100 0.1735579E-01 101 4.811390 102 1.665181
103 0.4202298 104 0.3182812 105 0.2779219E-01 106 0.2438883E-01 107 0.1512162E-04 108 0.1669714E-01
109 0.2036638E-01 110 0.9968695E-04 111 0.1059764E-01 112 0.1235300E-01 113 0.1798649E-02 114 0.1441882
115 0.5906827E-02 116 0.5794297E-03 117 0.3565988E-03 118 0.1863160E-04 119 0.1038054E-02 120 0.6512988E-03
121 0.1527906E-01 122 0.8022061 123 0.9586570E-01 124 0.5797869 125 0.2640206 126 0.8645498E-02
127 0.3238653E-01 128 0.5301345E-01 129 0.2442863E-02 130 0.6328605E-06 131 0.1076577 132 0.2743241E-02
133 0.1756251 134 0.5094322E-01 135 0.7649594E-03 136 0.2140898E-02 137 0.8147021E-02 138 0.2454689
139 0.6052141E-06 140 0.1274118E-01 141 0.1754702 142 0.3968346E-01 143 0.1379253E-01 144 0.5596607E-03
145 0.7142990E-02 146 0.3449667E-01 147 0.1318514E-01 148 0.5236569E-01 149 0.1441185 150 0.1421283
151 0.2259913E-02 152 0.1492437E-02 153 0.1952289E-04 154 0.7917129E-01 155 0.6923622E-01 156 0.1152977E-01
157 0.3089718E-03 158 0.1829914E-02 159 0.2583258E-01 160 0.3548125E-01 161 0.4472785E-01 162 0.5093754E-03
163 0.1435156E-03 164 0.2594764E-03 165 0.7906458E-02 166 0.4047532 167 0.2066063E-01 168 0.1079973E-01
169 0.1042749 170 0.5423509E-04 171 0.2104516E-03 172 0.9195906E-02 173 0.1072378E-05 174 0.1396830
175 0.8102009E-02 176 0.5918317E-03 177 0.3464152E-02 178 0.2705565 179 0.9418826 180 0.4116944
181 0.5835174 182 0.5544909E-01 183 0.6505152 184 0.5169839 185 0.1125955 186 0.2009623
187 0.1657006E-02 188 0.3213738E-02 189 0.2025367E-02 190 0.2842068E-01 191 0.2714106E-02 192 0.4925312E-02
193 0.4159375E-04 194 0.4840642E-06 195 0.2284917E-06 196 0.2604755E-05 197 0.2073982E-08 198 0.3320548E-04
199 0.1254054E-03 200 0.2971110E-05 201 0.5194264E-04 202 0.3156226E-05 203 0.6448344E-01 204 0.5552405E-03
205 0.6611805E-03 206 0.1636699E-01 207 0.2813088E-01 208 0.3005913E-05 209 0.2080044E-02 210 0.1975194E-01
211 0.1737475E-02 212 0.2757644E-01 213 0.1105755E-03 214 0.1253136E-01 215 0.1677333E-02 216 0.4364696E-02
217 0.5009814E-03 218 0.8464114E-05 219 0.3429733E-03 220 0.2585018E-02 221 0.2821559E-04 222 0.2878187E-01
223 0.1920958E-03 224 0.2601647E-03 225 0.3816199E-03 226 0.8939051E-05 227 0.1074215E-04 228 0.1494963E-03
229 0.7623205E-03 230 0.1257166E-06 231 0.6619721E-03 232 0.7703930E-02 233 0.5800859E-05 234 0.4089085E-02
235 0.1858253E-03 236 0.5819162E-05 237 0.1378476E-04 238 0.2125848E-03 239 0.1648443E-02 240 0.9334998E-02
241 0.1720603E-03 242 0.1246302E-02 243 0.9997646E-01 244 0.4033442E-02 245 0.8525645E-02 246 0.1524509E-01
247 0.3222391E-01 248 0.3218239E-02 249 0.5334164E-04 250 0.2429148E-01 251 0.2350340E-09 252 0.3866768
253 0.8740948 254 0.9709738E-03 255 0.1562470E-02 256 0.9011750E-03 257 0.1502366E-01 258 0.8354729E-02

259 0.1966672E-03 260 0.1252077E-03 261 0.4298808E-01 262 0.3989373E-01 263 0.2154003E-04 264 0.1053684E-02
265 0.5942410E-02 266 0.2585958E-04 267 0.8191503E-04 268 0.2525717E-02 269 0.1905498E-02 270 0.1092096E-04
271 0.3114541E-02 272 0.1573216E-05 273 0.1102311E-03 274 0.4446804E-08 275 0.6322859E-04 276 0.2256849E-03
277 0.9739207E-03 278 0.5245399E-02 279 0.5007696E-02 280 0.2105255E-03 281 0.2798207E-03 282 0.1508253E-03
283 0.1410929E-06 284 0.2060397E-03 285 0.1781468E-03 286 0.6673759E-03 287 0.4189813E-01 288 0.5477290E-03
289 0.2765128E-01 290 0.1545975 291 0.2123316E-02 292 0.1243147E-02 293 0.4395929E-01 294 0.1201424E-02
295 0.8155395E-02 296 0.4537847E-04 297 0.7711881E-05 298 0.1089369E-02 299 0.4374479E-02 300 0.3140178E-03

TOTAL PERCENTAGE OF Z DIRECTION MASS PARTICIPATING: 99.046

--- LOADING - 35 UNIT LOAD IN X DIRECTION ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		FORCE			MOMENT		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	132.3631897	-5094.0122070	139.9929352	4896.9975586	-30.5745049	0.0000000
12	GLOBAL	110.1880493	4596.8144531	2423.1523438	5618.8691406	9.9886093	0.0000000
101	GLOBAL	-24731.0585938	-41429.5859375	-2108.4047852	-32877.9492188	-114.3625107	0.0000000
111	GLOBAL	145.1443787	-1600.0529785	-2126.2084961	-33209.9257812	123.6986618	0.0000000
123	GLOBAL	0.0000000	-324.5777283	0.0000000	0.0000000	-5.3527784	0.0000000
1101	GLOBAL	-467.6204529	43656.3203125	-3900.4458008	-46858.2578125	-1515.9038086	0.0000000
1111	GLOBAL	205.7642975	10052.9003906	-3966.9785156	-47332.9218750	752.3128662	0.0000000
1123	GLOBAL	0.0000000	711.4342651	0.0000000	0.0000000	-5.4459386	0.0000000
2101	GLOBAL	153.8348389	-155.9211426	520.6660767	7887.5439453	-58.5404015	0.0000000
2111	GLOBAL	8.1767988	208.1378174	-298.9880676	-776.9249878	92.8094177	0.0000000
2123	GLOBAL	0.0000000	178.7465973	0.0000000	0.0000000	-5.6710777	0.0000000
3101	GLOBAL	396.6017151	-3284.0866699	12354.3310547	137025.8281250	-61.9629631	0.0000000
3111	GLOBAL	-176.5698395	2331.0551758	11326.5068359	130503.0546875	60.8913193	0.0000000
3123	GLOBAL	0.0000000	-136.6624146	0.0000000	0.0000000	-5.9121981	0.0000000
4101	GLOBAL	-24528.8847656	-40721.6757812	2608.2089844	33043.5507812	27.2658424	0.0000000
4111	GLOBAL	-10565.5107422	-19433.2500000	-292.3173218	1401.3725586	85.2726135	0.0000000
5101	GLOBAL	545.4566650	41616.0390625	735.1812134	1233.0737305	-1496.5576172	0.0000000
5111	GLOBAL	-213.8771667	18981.5253906	1218.5954590	5285.3105469	547.3012085	0.0000000
6101	GLOBAL	-220.9910736	-0.0324522	0.1537582	0.0000000	-107.4646454	0.0000000
7101	GLOBAL	-187.6810760	315.9861755	-674.7691650	-25319.4648438	-100.4832535	0.0000000
7111	GLOBAL	-278.9693909	-4699.6577148	-329.5241089	-21581.3925781	46.0837822	0.0000000
8100	GLOBAL	0.0000000	203.2985840	0.0000000	0.0000000	0.0961049	0.0000000
8101	GLOBAL	-220.1767273	-252.4369812	340.3770142	12424.3730469	-101.8515778	0.0000000
8111	GLOBAL	-150.5856934	4572.8710938	-138.1727600	4260.2802734	30.0209503	0.0000000
112	GLOBAL	-23426.9726562	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
1112	GLOBAL	-16963.9882812	0.0000000	-0.0000125	0.0000000	0.0000000	0.0000000
2112	GLOBAL	-65065.9101562	0.0000000	3912.5932617	0.0000000	0.0000000	0.0000000
2122	GLOBAL	1.2657155	19.0622749	22.8549366	0.0000000	-0.3928502	0.0000000
3112	GLOBAL	0.0000000	0.0000000	0.0000338	0.0000000	0.0000000	0.0000000
5112	GLOBAL	0.0000000	0.0000000	-3529.3830566	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000000	-10689.4912109	-18842.6367188	0.0000000	2.6812496	4.7263064
8157	GLOBAL	0.0000000	377.2508545	605.2153320	0.0000000	0.9660891	1.5498756

--- LOADING - 36 UNIT LOADS IN Y DIRECTION ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		FORCE			MOMENT		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	-1.6185634	76600.7500000	-775.4141846	-15512.5615234	8.7646837	0.0000000
12	GLOBAL	2.9376254	76876.3437500	666.3128662	-920.3453979	-10.4503593	0.0000000
101	GLOBAL	-5883.4472656	32865.1953125	1374.4901123	-6849.2519531	17.5380917	0.0000000
111	GLOBAL	-3.5342820	37963.2656250	-4222.2495117	-24876.2167969	-8.0252190	0.0000000
123	GLOBAL	0.0000000	214461.8437500	0.0000000	0.0000000	-9.1612253	0.0000000
1101	GLOBAL	-112.2503281	32510.0644531	2170.8117676	-3210.9729004	-57.7923622	0.0000000
1111	GLOBAL	1.0435122	27589.8144531	-4874.5429688	-27466.8789062	6.9878521	0.0000000
1123	GLOBAL	0.0000000	213663.2031250	0.0000000	0.0000000	-9.1595631	0.0000000

2101	GLOBAL	-100.1058731	27635.4648438	3834.3310547	16307.6796875	23.5148621	0.0000000
2111	GLOBAL	28.4355049	27403.4453125	-3179.5046387	-11246.3935547	-7.0564451	0.0000000
2123	GLOBAL	0.0000000	213954.4062500	0.0000000	0.0000000	-9.1445045	0.0000000
3101	GLOBAL	405.4060059	58012.4257812	5221.7641602	59453.8515625	46.3076782	0.0000000
3111	GLOBAL	-6.9450088	56031.9453125	5311.1176758	81300.8359375	-12.0967274	0.0000000
3123	GLOBAL	0.0000000	215112.1406250	0.0000000	0.0000000	-9.0472012	0.0000000
4101	GLOBAL	-5888.0346680	43694.2421875	-25759.6035156	-368708.2187500	-95.0736008	0.0000000
4111	GLOBAL	444.7003784	40051.7070312	-6913.2729492	-10698.4902344	-11.3325987	0.0000000
5101	GLOBAL	257.7962952	81053.5156250	9745.1357422	26896.9824219	35.0268021	0.0000000
5111	GLOBAL	-12.9415693	84437.0156250	-9148.5947266	-39679.4179688	-38.6694908	0.0000000
6101	GLOBAL	-31.5503635	19505.3164062	396.7992554	0.0000000	13.8394728	0.0000000
7101	GLOBAL	-27.1777630	19483.2675781	-6089.4252930	-175012.5468750	14.6428432	0.0000000
7111	GLOBAL	-24.1306438	30183.0410156	4476.3022461	140718.5781250	56.5181427	0.0000000
8100	GLOBAL	0.0000000	19181.2597656	0.0000000	0.0000000	-0.5918751	0.0000000
8101	GLOBAL	-31.1725140	219.7509918	-39.3102951	-902.7603149	14.4319658	0.0000000
8111	GLOBAL	-44.1729660	123.5069046	822.8364868	18600.7148438	57.8495255	0.0000000
112	GLOBAL	-908.5713501	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
1112	GLOBAL	1069.8332520	0.0000000	-0.0000026	0.0000000	0.0000000	0.0000000
2112	GLOBAL	10864.6152344	0.0000000	19145.6152344	0.0000000	0.0000000	0.0000000
2122	GLOBAL	0.8851506	275.8654785	-109.2563477	0.0000000	-0.1704341	0.0000000
3112	GLOBAL	0.0000000	0.0000000	0.0000242	0.0000000	0.0000000	0.0000000
5112	GLOBAL	0.0000000	0.0000000	-1684.7110596	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000000	-1096.1112061	-1932.1429443	0.0000000	-0.1461885	-0.2576901
8157	GLOBAL	0.0000000	7207.2983398	11562.5117188	0.0000000	-0.0398753	-0.0639711

--- LOADING - 37 UNIT LOAD IN Z DIRECTION ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------/			/----------MOMENT----------/		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	-0.6851871	20111.8789062	-1324.8714600	-37373.3046875	8.3128014	0.0000000
12	GLOBAL	5.4132738	-20141.6445312	-16706.2050781	-41934.2890625	8.1486731	0.0000000
101	GLOBAL	2243.1030273	5259.0014648	-2463.1362305	-50500.2695312	11.5711613	0.0000000
111	GLOBAL	1.9521717	10406.0283203	-1261.9272461	-37513.3476562	16.7958546	0.0000000
123	GLOBAL	0.0000000	-100.7475052	0.0000000	0.0000000	0.8831266	0.0000000
1101	GLOBAL	37.7876625	700.4952393	-3965.3249512	-74683.1796875	61.7746162	0.0000000
1111	GLOBAL	5.4247446	-2510.4445801	-3983.8754883	-74742.6718750	53.8596458	0.0000000
1123	GLOBAL	0.0000000	-34.0008240	0.0000000	0.0000000	0.8829559	0.0000000
2101	GLOBAL	23.9992256	3092.4372559	625.6965942	-26830.5527344	8.8488398	0.0000000
2111	GLOBAL	-1.8739928	-2370.9306641	3935.3613281	7809.5356445	9.6841679	0.0000000
2123	GLOBAL	0.0000000	-674.4194946	0.0000000	0.0000000	0.8808143	0.0000000
3101	GLOBAL	-26.6389790	4059.4125977	-7646.6660156	-112720.8593750	6.1270132	0.0000000
3111	GLOBAL	-3.2236791	-3991.6149902	-6862.4741211	-107521.1328125	8.8157463	0.0000000
3123	GLOBAL	0.0000000	66.6150131	0.0000000	0.0000000	0.8797296	0.0000000
4101	GLOBAL	2221.5815430	3100.2158203	-4141.5083008	-110109.8828125	-27.1136360	0.0000000
4111	GLOBAL	-308.0715332	3369.0656738	5779.4462891	7520.3007812	8.6683407	0.0000000
5101	GLOBAL	-19.2882748	-936.8737793	6626.3945312	13204.1376953	52.8876686	0.0000000
5111	GLOBAL	-4.4242549	-514.0805054	8430.6591797	36565.5781250	34.6815071	0.0000000
6101	GLOBAL	18.7201672	43.2460136	1.2110540	0.0000000	15.7057180	0.0000000
7101	GLOBAL	38.1367950	774.5340576	-2119.1906738	-77654.5156250	16.9914570	0.0000000
7111	GLOBAL	-11.5370436	-1051.1212158	-2402.4621582	-83541.0312500	-11.8143911	0.0000000
8100	GLOBAL	0.0000000	75.8828201	0.0000000	0.0000000	0.7564117	0.0000000
8101	GLOBAL	21.9464989	730.9268799	-2021.9379883	-74143.3671875	15.0526428	0.0000000
8111	GLOBAL	0.1751098	-502.9555359	-1840.3869629	-70310.7500000	-12.9611397	0.0000000
112	GLOBAL	-1309.9180908	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
1112	GLOBAL	-713.9550171	0.0000000	-0.0000239	0.0000000	0.0000000	0.0000000
2112	GLOBAL	-2218.6635742	0.0000000	-69686.5625000	0.0000000	0.0000000	0.0000000
2122	GLOBAL	0.0393782	-135.2921906	86.0846100	0.0000000	0.1990323	0.0000000
3112	GLOBAL	0.0000000	0.0000000	-0.0000323	0.0000000	0.0000000	0.0000000
5112	GLOBAL	0.0000000	0.0000000	-32189.1972656	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000000	-13680.2871094	-24114.5878906	0.0000000	0.3002145	0.5291957
8157	GLOBAL	0.0000000	-5145.3276367	-8254.5371094	0.0000000	0.0711816	0.1141950

--- LOADING - 38 ACCELERATION Y ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		FORCE			MOMENT		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	3.3738546	63927.3554688	-555.9946289	-13298.0136719	-1.2600962	0.0000000
12	GLOBAL	3.0208533	65996.7031250	572.6029663	-11186.6025391	-0.7663305	0.0000000
101	GLOBAL	209.4278717	62409.1718750	-9.8187494	-5609.3491211	-5.3855143	0.0000000
111	GLOBAL	1.4921156	63041.1289062	-1365.8164062	-10805.5449219	5.5861149	0.0000000
123	GLOBAL	0.0000000	11139.2343750	0.0000000	0.0000000	-0.6708393	0.0000000
1101	GLOBAL	15.8700438	68137.2812500	254.9507141	-1763.5726318	22.9007721	0.0000000
1111	GLOBAL	1.5240844	67746.7968750	-943.0156860	-5291.4682617	-18.3407536	0.0000000
1123	GLOBAL	0.0000000	15416.1328125	0.0000000	0.0000000	-0.6758257	0.0000000
2101	GLOBAL	6.4108543	173458.5156250	1010.2086182	1457.4482422	0.0417538	0.0000000
2111	GLOBAL	4.8121772	168925.4687500	-1255.9609375	-5315.1723633	-2.7036953	0.0000000
2123	GLOBAL	0.0000000	15867.9863281	0.0000000	0.0000000	-0.6839328	0.0000000
3101	GLOBAL	32.4934998	90513.6875000	848.4522705	4039.3193359	0.8643216	0.0000000
3111	GLOBAL	-3.0777426	84757.3750000	-567.5137329	597.3245850	-4.5702310	0.0000000
3123	GLOBAL	0.0000000	13783.8457031	0.0000000	0.0000000	-0.6859761	0.0000000
4101	GLOBAL	-159.9517822	41660.9179688	-815.8930664	-25679.9785156	-2.6275399	0.0000000
4111	GLOBAL	95.1950607	37624.1562500	-1692.9262695	-6056.5380859	-4.3553147	0.0000000
5101	GLOBAL	19.7719250	39783.4921875	1516.0367432	3855.9963379	-15.0444384	0.0000000
5111	GLOBAL	-21.1548080	43368.4531250	-1749.0039062	-7585.8046875	-10.1325932	0.0000000
6101	GLOBAL	-6.5661716	22831.4511719	12.8891878	0.0000000	0.0849909	0.0000000
7101	GLOBAL	-6.0685515	23255.7011719	-1035.6506348	-28941.0976562	0.2267931	0.0000000
7111	GLOBAL	-49.5736008	35724.4179688	944.4437866	24426.1230469	17.3806953	0.0000000
8100	GLOBAL	0.0000000	9583.9648438	0.0000000	0.0000000	-0.1116926	0.0000000
8101	GLOBAL	-6.5454979	16075.9130859	-60.6013107	-2210.2155762	0.2260444	0.0000000
8111	GLOBAL	-18.3053837	14247.0878906	83.5138168	4684.8525391	13.5650415	0.0000000
112	GLOBAL	577.2684937	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
1112	GLOBAL	-589.8059082	0.0000000	-0.0000005	0.0000000	0.0000000	0.0000000
2112	GLOBAL	-109.7922745	0.0000000	994.9812622	0.0000000	0.0000000	0.0000000
2122	GLOBAL	0.1809900	3734.5168457	-2.1311362	0.0000000	-0.1695554	0.0000000
3112	GLOBAL	0.0000000	0.0000000	0.0000013	0.0000000	0.0000000	0.0000000
5112	GLOBAL	0.0000000	0.0000000	-59.9452858	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000771	2751.0507812	1272.4401855	0.0000000	0.0988514	0.1742479
8157	GLOBAL	0.0000425	2769.5144043	2603.7526855	0.0000000	-0.0112890	-0.0181107

--- LOADING - 39 ACCELERATION X ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		FORCE			MOMENT		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	-2103.2265625	-12754.6279297	168.0921173	6920.9589844	-243.1923370	0.0000000
12	GLOBAL	-4275.3159180	-456.3885803	3399.1086426	9681.0039062	298.4629822	0.0000000
101	GLOBAL	-175587.9062500	-406721.4375000	-26968.3496094	-299631.0000000	-1275.9594727	0.0000000
111	GLOBAL	2947.4980469	-202764.0468750	-15775.1025391	-210392.4375000	2886.9587402	0.0000000
123	GLOBAL	-1144.3054199	-5953.6762695	0.0000000	0.0000000	-45.7626190	0.0000000
1101	GLOBAL	-3475.4826660	367372.6562500	-19617.4160156	-271893.0625000	-23383.9863281	0.0000000
1111	GLOBAL	3716.6960449	218801.0468750	-26851.9003906	-300721.8750000	21333.2148438	0.0000000
1123	GLOBAL	-1144.3054199	4628.8598633	0.0000500	0.0000000	-47.6931458	0.0000000
2101	GLOBAL	7224.2924805	16502.5078125	2833.6691895	41370.1210938	169.4971619	0.0000000
2111	GLOBAL	2343.5578613	19685.5546875	-1314.0487061	223.1157227	2540.5722656	0.0000000
2123	GLOBAL	-1144.3054199	1114.1340332	0.0000500	0.0000000	-52.3718147	0.0000000
3101	GLOBAL	6128.3344727	19851.3300781	71912.4687500	784080.0000000	327.9912415	0.0000000
3111	GLOBAL	-3316.2028809	48457.8632812	61758.5703125	721583.8750000	585.3420410	0.0000000
3123	GLOBAL	-1144.3054199	-564.7439575	0.0000500	0.0000000	-56.9978638	0.0000000
4101	GLOBAL	-160433.5000000	-419368.5937500	37576.0742188	459541.6875000	219.6672821	0.0000000
4111	GLOBAL	-195954.6250000	-417749.2187500	-1273.5770264	37603.8906250	1056.8559570	0.0000000
5101	GLOBAL	5518.6376953	422301.9062500	-246.4529266	-6124.7612305	-21670.1230469	0.0000000
5111	GLOBAL	-3889.2243652	413931.2812500	2082.8266602	9033.6738281	16007.4189453	0.0000000
6101	GLOBAL	-7524.0639648	-0.3568060	0.6544970	0.0000000	2018.5877686	0.0000000
7101	GLOBAL	-7437.2509766	917.7944336	-2049.2827148	-76218.7890625	2044.4989014	0.0000000
7111	GLOBAL	-11592.1757812	-20075.6953125	-848.1600342	-60194.2656250	562.4072876	0.0000000
8100	GLOBAL	-2298.1040039	491.7238770	0.0000000	0.0000000	-5.5267673	0.0000000
8101	GLOBAL	-7494.4697266	-868.5689697	1581.0543213	57778.2968750	2047.4937744	0.0000000

8111 GLOBAL -9489.0849609 22438.5273438 500.9429932 39208.5703125 258.7844238 0.0000000
112 GLOBAL -244535.2031250 0.0000000 0.0000000 0.0000000 0.0000000 0.0000000
1112 GLOBAL -212757.2656250 0.0000000 -0.0000766 0.0000000 0.0000000 0.0000000
2112 GLOBAL -226354.6562500 0.0000000 44574.5585938 0.0000000 0.0000000 -0.0000001
2122 GLOBAL -139.6658630 233.1068726 -82.9444351 0.0000000 -2.3188725 0.0000000
3112 GLOBAL 0.0000000 0.0000000 0.0001887 0.0000000 0.0000000 0.0000000
5112 GLOBAL 0.0000000 0.0000000 -8459.5126953 0.0000000 0.0000000 0.0000000
8156 GLOBAL -2029.1910400 -72469.8828125 -127744.5000000 0.0000000 66.1556549 116.6142578
8157 GLOBAL -1146.5087891 3018.9555664 4843.2441406 0.0000000 16.2677193 26.0979462

--- LOADING - 40 ACCELERATION Z ---

RESULTANT JOINT LOADS SUPPORTS

JOINT /----------FORCE----------//----------MOMENT----------/
X FORCE Y FORCE Z FORCE X MOMENT Y MOMENT Z MOMENT

1 GLOBAL -1.4395711 141408.9531250 -14846.1767578 -295510.0000000 204.8622742 0.0000000
12 GLOBAL 74.2298279 -141951.9062500 -123575.2890625 -327433.7500000 271.2655029 0.0000000
101 GLOBAL 24815.6875000 62209.6992188 11122.4667969 -297113.1250000 298.2258911 0.0000000
111 GLOBAL 0.8185417 83624.8671875 24749.5351562 -172236.5000000 445.1626282 0.0000000
123 GLOBAL 0.0000000 496.8540649 -1144.3054199 0.0000000 12.4364100 0.0000000
1101 GLOBAL 629.3438110 34267.1289062 4473.4106445 -642300.1875000 716.0089111 0.0000000
1111 GLOBAL 46.3776093 -68951.3750000 31416.1250000 -544217.5625000 820.8535767 0.0000000
1123 GLOBAL -0.0000500 12497.0078125 -1144.3054199 0.0000000 12.6410246 0.0000000
2101 GLOBAL 270.7071228 81698.3828125 67854.8593750 -51039.5039062 216.2480469 0.0000000
2111 GLOBAL -8.5112362 -133575.6718750 243935.1562500 929142.0625000 298.6414795 0.0000000
2123 GLOBAL -0.0000500 49840.1171875 -1144.3054199 0.0000000 12.7942495 0.0000000
3101 GLOBAL -206.3894348 78470.8437500 -20518.4746094 -995975.5000000 207.5441437 0.0000000
3111 GLOBAL -78.7875061 -92215.9765625 23980.0214844 -820686.8125000 255.7333069 0.0000000
3123 GLOBAL -0.0000500 19461.9121094 -1144.3054199 0.0000000 12.9951715 0.0000000
4101 GLOBAL 22235.5566406 21293.2363281 -24596.6484375 -1244683.7500000 -175.2954254 0.0000000
4111 GLOBAL -3082.1667480 75270.8281250 81908.7812500 70861.9531250 208.1143951 0.0000000
5101 GLOBAL -76.7741470 -6940.9965820 51691.5351562 120197.3828125 525.5681152 0.0000000
5111 GLOBAL -71.9019699 -7124.5478516 68773.5390625 302156.0312500 372.0968628 0.0000000
6101 GLOBAL 198.5162201 216.3454132 -8955.1240234 0.0000000 252.0632629 0.0000000
7101 GLOBAL 298.9540100 3716.8334961 -26458.6953125 -709051.3750000 256.5579224 0.0000000
7111 GLOBAL -50.8472214 -12514.7324219 -32173.6503906 -834535.1875000 -139.1524048 0.0000000
8100 GLOBAL 0.0000000 698.1701660 -2298.1040039 0.0000000 5.8593221 0.0000000
8101 GLOBAL 215.5912628 4534.3583984 -24795.5136719 -675984.2500000 245.4817047 0.0000000
8111 GLOBAL 126.2150497 3792.9152832 -23285.0273438 -642241.3125000 -154.1855469 0.0000000
112 GLOBAL -19795.7441406 0.0000000 0.0000000 0.0000000 0.0000000 0.0000000
1112 GLOBAL -7728.3647461 0.0000000 -0.0002845 0.0000000 0.0000000 0.0000000
2112 GLOBAL -17812.1679688 0.0000000 -998958.0625000 0.0000000 0.0000000 0.0000000
2122 GLOBAL 1.0840995 -4619.2500000 3712.6040039 0.0000000 -9.2624731 0.0000000
3112 GLOBAL 0.0000000 0.0000000 -0.0003860 0.0000000 0.0000000 0.0000000
5112 GLOBAL 0.0000000 0.0000000 -214849.7656250 0.0000000 0.0000000 0.0000000
8156 GLOBAL 0.0000438 -121427.8437500 -216073.1406250 0.0000000 7.7389364 13.6416197
8157 GLOBAL 0.0000265 -84176.1718750 -136188.5000000 0.0000000 1.4909589 2.3919129

{ 5} > LIST DISPLACEMENTS JOINTS EXISTING 2 19 27 38 102 118 128 146 152 1102 1118 -
{ 6} >_1146 1153 2102 2118 2146 2152 3102 3118 3153 4102 4118 4152 5102 5118 5153 -
{ 7} >_6118 6152 7118 7152 8118 8152

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RESULTS OF LATEST ANALYSES
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PROBLEM - N1E3_HU_ TITLE - BRIDGE LOCATION 1 TROLLEY POSITION 3 - LOAD UP - MHE

ACTIVE UNITS FEET LB DEG DEGF SEC

--- LOADING - 35 UNIT LOAD IN X DIRECTION ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		DISPLACEMENT			ROTATION		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		DISPLACEMENT			ROTATION		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	0.0086557	0.0000812	-0.0006250	-0.0011668	0.0145847	-0.0282619
19	GLOBAL	0.0136363	-0.0000780	-0.0014775	-0.0002168	-0.0064640	-0.0057530
27	GLOBAL	0.0226666	0.0000118	-0.0006490	-0.0001550	0.0068922	-0.0582805
38	GLOBAL	0.0738029	0.0000139	-0.0015321	-0.0001218	-0.0083044	-0.0658103
102	GLOBAL	0.0087022	0.0001577	0.0008221	0.0035695	0.0221406	-0.0376050
118	GLOBAL	0.0135411	0.0002263	0.0082808	0.0055393	-0.0026923	-0.0144300
128	GLOBAL	0.0224203	0.0000548	0.0000889	-0.0001545	0.0068985	0.0000934
146	GLOBAL	0.0096621	0.0002120	0.0008254	-0.0016140	0.0010629	-0.0248434
152	GLOBAL	0.0740029	0.0001247	0.0083087	-0.0024345	-0.0099921	-2.9190586
1102	GLOBAL	0.0081731	-0.0002869	0.0010372	0.0033107	0.2980665	-0.0180966
1118	GLOBAL	0.0132905	-0.0001517	0.0030509	-0.0000881	-0.0051101	-0.0043496
1146	GLOBAL	0.0094927	0.0000753	0.0010759	-0.0003908	0.0072805	-0.0130701
1153	GLOBAL	0.0672114	-0.0005183	0.0030419	0.0010203	-0.0906954	-0.0107664
2102	GLOBAL	0.0089412	0.0000010	-0.0001950	-0.0008270	0.0115106	-0.0336395
2118	GLOBAL	0.0132302	-0.0000385	-0.0015770	-0.0012523	-0.0113927	-0.0024589
2146	GLOBAL	0.0094902	-0.0000354	-0.0001283	0.0002436	0.0019849	-0.0216615
2152	GLOBAL	0.0740902	0.0000749	-0.0015818	0.0003130	-0.0100716	-2.8549449
3102	GLOBAL	0.0088692	0.0000206	-0.0028628	-0.0080055	0.0121835	-0.0368645
3118	GLOBAL	0.0131227	-0.0001029	-0.0069573	0.0002217	-0.0139533	-0.0021469
3153	GLOBAL	0.0673558	-0.0000605	-0.0069483	-0.0003545	-0.0904227	-0.0084876
4102	GLOBAL	0.0089397	0.0001667	-0.0007360	-0.0027426	-0.0007642	-0.0402147
4118	GLOBAL	0.0129896	0.0001537	-0.0019917	-0.0024412	-0.0186209	-0.0059790
4152	GLOBAL	0.0740667	0.0006606	-0.0019985	-0.0000575	-0.0077174	-2.2204704
5102	GLOBAL	0.0086599	-0.0002584	0.0000625	0.0012075	0.2943017	-0.0341315
5118	GLOBAL	0.0130497	-0.0001982	0.0034518	0.0031227	-0.0177121	-0.0059026
5153	GLOBAL	0.0674368	-0.0006745	0.0034650	-0.0000963	-0.0902249	-0.0130787
6118	GLOBAL	0.0131539	0.0000137	0.0044347	0.0029714	-0.0020904	0.0004881
6152	GLOBAL	0.0739537	-0.0000378	0.0044349	0.0001174	-0.0039953	-2.5424559
7118	GLOBAL	0.0132388	0.0001845	0.0048719	0.0028428	0.0029014	-0.0029738
7152	GLOBAL	0.0737691	0.0002332	0.0047181	-0.0013776	-0.0019762	-3.8912184
8118	GLOBAL	0.0130675	-0.0001398	-0.0021727	-0.0031362	-0.0003084	-0.0118369
8152	GLOBAL	0.0736075	-0.0000109	-0.0021258	0.0007339	-0.0006784	-3.9874434

--- LOADING - 36 UNIT LOADS IN Y DIRECTION ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		DISPLACEMENT			ROTATION		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		DISPLACEMENT			ROTATION		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	0.0020078	-0.0012214	0.0010941	-0.0001817	-0.0041809	-0.0026204
19	GLOBAL	0.0004996	-0.0022177	0.0016661	0.0047519	0.0101517	-0.0009300
27	GLOBAL	0.0014509	-0.0126725	0.0008086	0.0000117	0.0060824	-0.0012512
38	GLOBAL	0.0024285	-0.0095601	0.0009072	-0.0000004	0.0042825	-0.0010027
102	GLOBAL	0.0019955	-0.0002426	0.0004438	0.0043437	-0.0034698	-0.0055122

118	GLOBAL	0.0005001	-0.0015610	0.0006653	0.1798706	0.0112707	-0.0021547
128	GLOBAL	0.0014508	-0.0007325	0.0005721	-0.0000006	0.0060752	0.0015475
146	GLOBAL	0.0016164	-0.0024943	0.0003626	-0.0074190	0.0096989	-0.0034256
152	GLOBAL	0.0024229	-0.0686491	0.0005275	0.0001082	0.0043310	0.0783549
1102	GLOBAL	0.0019967	-0.0002137	0.0004374	0.0050661	0.0113635	-0.0044626
1118	GLOBAL	0.0005051	-0.0012447	0.0007863	0.1840921	0.0088000	-0.0008402
1146	GLOBAL	0.0015816	-0.0024664	0.0003683	-0.0075961	0.0099784	-0.0027759
1153	GLOBAL	0.0028351	-0.0622637	0.0006322	-0.1105367	0.0032419	-0.0005584
2102	GLOBAL	0.0022517	-0.0001816	0.0000112	0.0037641	-0.0046236	-0.0055833
2118	GLOBAL	0.0005335	-0.0012173	0.0007259	0.1825273	0.0078008	-0.0007635
2146	GLOBAL	0.0014939	-0.0025123	-0.0000269	-0.0073046	0.0124576	-0.0036154
2152	GLOBAL	0.0024092	-0.0687546	0.0005981	-0.0001599	0.0043357	-0.0085216
3102	GLOBAL	0.0027433	-0.0003736	-0.0014768	-0.0021029	-0.0091053	-0.0142930
3118	GLOBAL	0.0005619	-0.0013733	-0.0004212	0.1848719	0.0067296	-0.0009775
3153	GLOBAL	0.0028252	-0.0619127	-0.0005627	-0.1109905	0.0032347	-0.0033467
4102	GLOBAL	0.0028064	-0.0003077	0.0087559	0.0369891	0.0128087	-0.0157215
4118	GLOBAL	0.0005893	-0.0012514	0.0037163	0.1974371	0.0062131	0.0000510
4152	GLOBAL	0.0023923	-0.0730985	0.0036124	0.0022345	0.0044720	0.2044765
5102	GLOBAL	0.0025804	-0.0005289	0.0005302	0.0130134	-0.0068859	-0.0116154
5118	GLOBAL	0.0006052	-0.0017464	0.0044423	0.1915474	0.0021801	0.0010223
5153	GLOBAL	0.0027985	-0.0635143	0.0043281	-0.1129216	0.0032289	-0.0003794
6118	GLOBAL	0.0005742	-0.0335509	0.0005345	0.1816443	0.0038867	0.0163268
6152	GLOBAL	0.0023717	-0.2589356	0.0005325	-0.0378711	0.0042986	-0.0769924
7118	GLOBAL	0.0005479	-0.0012655	0.0012257	0.1732267	-0.0216247	0.0008456
7152	GLOBAL	0.0023647	-0.0668639	0.0010646	-0.0001223	0.0042841	-0.1030357
8118	GLOBAL	0.0004916	-0.0000508	-0.0002705	0.0042891	-0.0203051	0.0019319
8152	GLOBAL	0.0023607	-0.0010276	-0.0002566	-0.0004578	0.0041778	-0.1816283

--- LOADING - 37 UNIT LOAD IN Z DIRECTION ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		/----------DISPLACEMENT----------//----------ROTATION----------/					
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		/----------DISPLACEMENT----------//----------ROTATION----------/					
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	-0.0007544	-0.0003207	0.0040853	0.0059089	-0.0039654	0.0011421
19	GLOBAL	0.0007952	0.0001329	0.0065501	0.0021402	-0.0072968	-0.0002349
27	GLOBAL	-0.0003949	-0.0000868	0.0043188	0.0004863	-0.0008424	-0.0014682
38	GLOBAL	0.0006950	-0.0000850	0.0066252	0.0004978	-0.0080960	-0.0009441
102	GLOBAL	-0.0007546	-0.0000244	0.0013794	0.0070226	-0.0022774	0.0021534
118	GLOBAL	0.0007691	0.0002898	0.0157359	0.0086526	-0.0073306	-0.0001605
128	GLOBAL	-0.0003950	-0.0000955	0.0027463	0.0001840	-0.0008426	0.0001562
146	GLOBAL	-0.0005119	0.0003207	0.0013838	-0.0022841	-0.0009029	0.0013190
152	GLOBAL	0.0006764	-0.0000932	0.0157685	-0.0026876	-0.0076779	0.2497054
1102	GLOBAL	-0.0007027	-0.0000046	0.0019914	0.0097450	-0.0121465	0.0016060
1118	GLOBAL	0.0006960	0.0004689	0.0215706	0.0115024	-0.0058831	-0.0000817
1146	GLOBAL	-0.0005225	0.0004519	0.0020108	-0.0032538	-0.0010437	0.0009678
1153	GLOBAL	-0.0001203	0.0003909	0.0216068	-0.0028305	-0.0066070	0.0015019
2102	GLOBAL	-0.0007684	-0.0000203	0.0010235	0.0075705	-0.0017399	0.0021168
2118	GLOBAL	0.0006410	0.0005344	0.0218229	0.0145503	-0.0049879	0.0001334
2146	GLOBAL	-0.0005542	0.0003354	0.0008661	-0.0023643	-0.0002625	0.0013161
2152	GLOBAL	0.0006302	-0.0002323	0.0218850	-0.0044934	-0.0067559	-0.0813411
3102	GLOBAL	-0.0007843	-0.0000266	0.0027324	0.0115858	-0.0012047	0.0028861
3118	GLOBAL	0.0005835	0.0005042	0.0230452	0.0112911	-0.0039221	0.0002023
3153	GLOBAL	-0.0001182	0.0003713	0.0230776	-0.0026137	-0.0064550	0.0000284
4102	GLOBAL	-0.0007853	-0.0000112	0.0031759	0.0178742	0.0040112	0.0031135
4118	GLOBAL	0.0005267	0.0005353	0.0241888	0.0164370	-0.0030155	-0.0003671
4152	GLOBAL	0.0005856	-0.0009719	0.0242483	-0.0037386	-0.0061154	-0.0391607
5102	GLOBAL	-0.0007445	0.0000048	0.0005367	0.0100485	-0.0103987	0.0025131
5118	GLOBAL	0.0004854	0.0006057	0.0254224	0.0173228	-0.0020682	-0.0004200
5153	GLOBAL	-0.0001204	0.0002286	0.0254899	-0.0043680	-0.0063281	-0.0013620
6118	GLOBAL	0.0004747	0.0005378	0.0198987	0.0131762	0.0195857	-0.0004612

6152	GLOBAL	0.0005544	0.0004126	0.0198998	0.0015214	-0.0056226	-0.6093980
7118	GLOBAL	0.0004651	0.0003463	0.0131382	0.0096517	0.0057144	-0.0004869
7152	GLOBAL	0.0005462	0.0001066	0.0132016	-0.0035148	-0.0052052	-0.0762072
8118	GLOBAL	0.0004602	0.0003051	0.0126151	0.0107759	0.0054450	-0.0006752
8152	GLOBAL	0.0005423	-0.0000041	0.0126646	-0.0038977	-0.0053391	-0.0784770

--- LOADING - 38 ACCELERATION Y ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT	/----------DISPLACEMENT----------//			----------ROTATION----------/		
	X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT	/----------DISPLACEMENT----------//			----------ROTATION----------/		
	X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2 GLOBAL	0.0002390	-0.0009216	0.0012280	0.0011144	0.0006011	-0.0007461
19 GLOBAL	0.0004130	-0.0013686	0.0013949	0.0008549	0.0015601	-0.0002984
27 GLOBAL	0.0001581	-0.0026620	0.0011953	0.0000081	0.0004775	-0.0005984
38 GLOBAL	0.0006529	-0.0025048	0.0012849	-0.0000031	0.0007552	-0.0005734
102 GLOBAL	0.0002382	-0.0003912	0.0001928	0.0013036	0.0010626	-0.0012700
118 GLOBAL	0.0004134	-0.0010093	0.0006233	0.0320631	0.0025297	-0.0016719
128 GLOBAL	0.0001581	-0.0120678	0.0006881	-0.0000026	0.0004769	0.0000533
146 GLOBAL	0.0001813	-0.0002631	0.0001839	0.0009138	0.0006697	-0.0008003
152 GLOBAL	0.0006525	-0.0119272	0.0005941	0.0002891	0.0007649	-0.0112096
1102 GLOBAL	0.0002398	-0.0004312	0.0000994	0.0009220	-0.0045029	-0.0011465
1118 GLOBAL	0.0004184	-0.0011809	0.0000811	0.0307188	0.0012172	-0.0001546
1146 GLOBAL	0.0001792	-0.0003754	0.0000813	0.0012100	0.0006864	-0.0007196
1153 GLOBAL	0.0007357	-0.0109604	0.0000320	-0.0152499	0.0007416	-0.0003351
2102 GLOBAL	0.0002272	-0.0011234	0.0001013	0.0016613	-0.0000082	-0.0009069
2118 GLOBAL	0.0004116	-0.0028168	0.0002841	0.0180166	0.0031859	-0.0001701
2146 GLOBAL	0.0001732	-0.0004834	0.0000616	0.0025751	0.0008748	-0.0006057
2152 GLOBAL	0.0006520	-0.0109966	0.0001812	0.0004745	0.0008016	0.0133987
3102 GLOBAL	0.0002405	-0.0005763	-0.0000208	0.0007959	-0.0001699	-0.0013248
3118 GLOBAL	0.0004045	-0.0014453	0.0000646	0.0279194	0.0032352	-0.0002756
3153 GLOBAL	0.0007376	-0.0105710	0.0000036	-0.0144010	0.0007478	-0.0004701
4102 GLOBAL	0.0002421	-0.0002520	0.0007660	0.0044489	0.0003812	-0.0013493
4118 GLOBAL	0.0003979	-0.0007079	0.0003482	0.0361050	0.0033179	-0.0001868
4152 GLOBAL	0.0006505	-0.0127679	0.0003257	0.0005352	0.0008232	0.0260594
5102 GLOBAL	0.0002305	-0.0002419	0.0000927	0.0021106	0.0029589	-0.0010607
5118 GLOBAL	0.0003810	-0.0008589	0.0002766	0.0332619	0.0019616	0.0001365
5153 GLOBAL	0.0007355	-0.0108711	0.0002527	-0.0157324	0.0007530	-0.0001309
6118 GLOBAL	0.0003694	-0.0104773	-0.0000245	0.0306641	0.0000047	0.0055371
6152 GLOBAL	0.0006480	-0.0371332	-0.0000247	-0.0109821	0.0008122	0.0120166
7118 GLOBAL	0.0003596	-0.0005831	0.0001906	0.0284560	-0.0032852	0.0004945
7152 GLOBAL	0.0006471	-0.0102876	0.0001621	-0.0001748	0.0008092	-0.0180595
8118 GLOBAL	0.0003349	-0.0001854	-0.0000900	0.0033845	-0.0041690	0.0005026
8152 GLOBAL	0.0006466	-0.0003903	-0.0000887	-0.0000672	0.0007884	-0.0269851

--- LOADING - 39 ACCELERATION X ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT	/----------DISPLACEMENT----------//			----------ROTATION----------/		
	X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		DISPLACEMENT			ROTATION		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	0.0696680	0.0002034	-0.0009627	-0.0019967	0.1160077	-0.4015045
19	GLOBAL	0.3391044	0.0000855	-0.0021081	-0.0015903	-0.0037300	0.1143492
27	GLOBAL	0.0650629	0.0001301	-0.0009943	-0.0001960	0.0532327	-0.5634608
38	GLOBAL	0.4662580	0.0001353	-0.0021988	-0.0001568	0.0260680	-0.3929673
102	GLOBAL	0.0693378	0.0018328	0.0063265	0.0171369	0.2455916	-0.4603089
118	GLOBAL	0.3383362	0.0024157	0.0216152	0.0026705	0.0730515	-0.0627623
128	GLOBAL	0.0649749	0.0008586	0.0023141	-0.0003808	0.0532845	0.0023051
146	GLOBAL	0.0427305	0.0012481	0.0057984	-0.0099540	0.0809416	-0.3276705
152	GLOBAL	0.4658988	0.0033048	0.0216283	-0.0030893	0.0230384	-4.3222089
1102	GLOBAL	0.0601693	-0.0024145	0.0064715	0.0251940	4.5979056	-0.1720399
1118	GLOBAL	0.3367052	-0.0031536	0.0234954	0.0262657	0.2571599	0.0681849
1146	GLOBAL	0.0425892	0.0005217	0.0066453	-0.0023278	0.0875960	-0.1534585
1153	GLOBAL	0.4631067	-0.0096092	0.0235788	-0.0019412	-0.0540386	0.0377892
2102	GLOBAL	0.0599815	-0.0001085	-0.0010074	-0.0041336	-0.0333276	-0.3939828
2118	GLOBAL	0.3357848	-0.0005054	-0.0080660	-0.0074212	0.2571865	0.1467573
2146	GLOBAL	0.0425951	-0.0002055	-0.0007076	0.0014955	0.0847807	-0.2812833
2152	GLOBAL	0.4655772	0.0003877	-0.0080948	0.0013742	0.0212271	-6.3565583
3102	GLOBAL	0.0642074	-0.0001361	-0.0160979	-0.0441257	-0.0644917	-0.3889954
3118	GLOBAL	0.3339071	-0.0012253	-0.0414332	-0.0019624	0.3192737	0.0929903
3153	GLOBAL	0.4631744	-0.0004602	-0.0413976	-0.0012228	-0.0508810	0.0454238
4102	GLOBAL	0.0666118	0.0020729	-0.0100383	-0.0355672	-0.0488196	-0.4444381
4118	GLOBAL	0.3314198	0.0029866	-0.0211711	-0.0246329	0.3418491	-0.0588522
4152	GLOBAL	0.4652641	0.0077625	-0.0212436	0.0011120	0.0267851	-3.0838459
5102	GLOBAL	0.0619621	-0.0026734	0.0001443	0.0011878	4.2614794	-0.3057252
5118	GLOBAL	0.3307932	-0.0053526	0.0044023	0.0099734	0.4132514	-0.0299765
5153	GLOBAL	0.4632225	-0.0079007	0.0044451	0.0005269	-0.0497574	-0.0486675
6118	GLOBAL	0.3310107	-0.0021216	0.0112647	0.0101131	-0.0142605	0.0090570
6152	GLOBAL	0.4649226	-0.0011766	0.0112662	-0.0021841	0.0330340	-4.2839322
7118	GLOBAL	0.3311297	0.0006098	0.0141334	0.0102318	0.0186626	-0.0198139
7152	GLOBAL	0.4647962	0.0004107	0.0138100	-0.0040455	0.0364528	-8.0976334
8118	GLOBAL	0.3304674	-0.0006383	-0.0099465	-0.0115124	-0.0209187	-0.0401500
8152	GLOBAL	0.4647921	-0.0000263	-0.0098619	0.0029168	0.0390108	-8.3011055

--- LOADING - 40 ACCELERATION Z ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		DISPLACEMENT			ROTATION		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		DISPLACEMENT			ROTATION		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	-0.0084676	-0.0022547	0.0284897	0.0433928	-0.0977235	0.0120576
19	GLOBAL	0.0064348	0.0008770	0.0467988	0.0002082	-0.2554628	0.0165719
27	GLOBAL	-0.0034369	-0.0006040	0.0296754	0.0037788	-0.0100230	-0.0094156
38	GLOBAL	0.0036422	-0.0005913	0.0471127	0.0030371	-0.0280085	-0.0062930
102	GLOBAL	-0.0084724	-0.0002971	0.0121337	0.0959724	-0.0587477	0.0222176
118	GLOBAL	0.0063173	0.0052098	0.2315326	0.0821381	-0.2685882	0.0320777
128	GLOBAL	-0.0034375	-0.0007164	0.0896895	0.0013356	-0.0100253	0.0009328
146	GLOBAL	-0.0058901	0.0044092	0.0113194	-0.0315753	-0.0074050	0.0137038
152	GLOBAL	0.0033665	0.0009197	0.2316128	-0.0221417	-0.0241319	10.9698029
1102	GLOBAL	-0.0076216	-0.0002252	0.0230570	0.1637219	-0.1407862	0.0128549
1118	GLOBAL	0.0059868	0.0119241	0.4412385	0.0796455	-0.2173807	0.0125341
1146	GLOBAL	-0.0060653	0.0077418	0.0224267	-0.0564639	-0.0085216	0.0071748
1153	GLOBAL	-0.0006667	0.0272565	0.4412346	-0.0081958	-0.0417458	-0.0394968
2102	GLOBAL	-0.0081346	-0.0005370	0.0120975	0.1500635	-0.0425200	0.0220619
2118	GLOBAL	0.0057774	0.0199320	0.5118819	-0.4284909	-0.1823591	0.0107424
2146	GLOBAL	-0.0065198	0.0075713	0.0093938	-0.0573554	0.0029209	0.0136557
2152	GLOBAL	0.0024121	0.1111193	0.5092247	0.0283785	-0.0358426	0.9355767
3102	GLOBAL	-0.0077432	-0.0005144	0.0314245	0.1985206	-0.0408086	0.0291801

3118	GLOBAL	0.0055488	0.0142182	0.5085956	0.0291043	-0.1455756	0.0048038
3153	GLOBAL	-0.0031133	0.0376224	0.5081986	0.0106662	-0.0418403	0.0520782
4102	GLOBAL	-0.0075962	-0.0000503	0.0396720	0.2479775	0.0224249	0.0266520
4118	GLOBAL	0.0053190	0.0071055	0.3318095	0.1924704	-0.1090639	-0.0124491
4152	GLOBAL	0.0014419	-0.0120321	0.3322890	-0.0408748	-0.0505110	-11.3355198
5102	GLOBAL	-0.0072723	0.0000321	0.0036583	0.0781629	-0.1033410	0.0230639
5118	GLOBAL	0.0050225	0.0045423	0.1755267	0.0822683	-0.0867516	-0.0116906
5153	GLOBAL	-0.0041987	0.0018275	0.1756585	-0.0162674	-0.0422213	-0.0175696
6118	GLOBAL	0.0048690	0.0040143	0.1376802	0.0572263	0.1361915	-0.0028905
6152	GLOBAL	0.0010330	0.0020928	0.1375363	0.0105906	-0.0443819	-3.9592063
7118	GLOBAL	0.0047363	0.0028923	0.0953156	0.0359407	0.0611909	-0.0066791
7152	GLOBAL	0.0009479	0.0034554	0.0954006	-0.0143765	-0.0411827	-0.3196629
8118	GLOBAL	0.0044707	0.0022415	0.0951460	0.0693507	0.0542785	-0.0171113
8152	GLOBAL	0.0009097	-0.0000374	0.0953613	-0.0236078	-0.0413581	-0.3276839

Attachment 30

GT STRUDL Coupled Building/Crane Model Output, Crane at S, All Analyses

{ 4265} >
{ 4266} > $ Eigen solution
{ 4267} > DYNAMIC ANALYSIS EIGENSOLUTION

BANDWIDTH INFORMATION BEFORE RENUMBERING.

THE MAXIMUM BANDWIDTH IS 401 AND OCCURS AT JOINT CNR916
THE AVERAGE BANDWIDTH IS 30.682
THE STANDARD DEVIATION OF THE BANDWIDTH IS 64.018

94.700
==========

BANDWIDTH INFORMATION AFTER RENUMBERING.

THE MAXIMUM BANDWIDTH IS 60 AND OCCURS AT JOINT 2112
THE AVERAGE BANDWIDTH IS 17.499
THE STANDARD DEVIATION OF THE BANDWIDTH IS 15.914

33.413
==========
TIME FOR CONSISTENCY CHECKS FOR 1075 MEMBERS 0.06 SECONDS
TIME FOR BANDWIDTH REDUCTION 0.05 SECONDS
TIME TO GENERATE 1075 ELEMENT STIF. MATRICES 0.03 SECONDS
TIME TO PROCESS 349 MEMBER RELEASES 0.05 SECONDS
TIME TO ASSEMBLE THE STIFFNESS MATRIX 0.14 SECONDS
TIME TO PROCESS 778 JOINTS 0.21 SECONDS
TIME TO GENERATE REDUCED STIFFNESS MATRIX 0.12 SECONDS

****
* GT/LANCZOS SOLUTION DATA *
****

NUMBER OF DYNAMIC DEGREES-OF-FREEDOM = 4537
NUMBER OF MODES REQUESTED = 300
EIGENVALUE TOLERANCE = 1.00000E-06
NUMBER OF TERMS IN SKYLINE = 432653
AVERAGE COLUMN HEIGHT OF SKYLINE = 95
RANK OF MASS MATRIX = 2126
OUT-OF-CORE EQUATION SOLVER USED (5 BLOCKS)
NUMBER OF LANCZOS VECTORS COMPUTED = 531

****
* END OF GT/LANCZOS SOLUTION DATA *
****

TIME TO SOLVE EIGENPROBLEM 114.10 SECONDS
TIME TO TRANSFORM EIGENVECTORS TO JOINTS 1.32 SECONDS

****
* EIGEN-SOLUTION CHECKS *
****

**** STRUDL MESSAGE - STURM SEQUENCE CHECK WAS SUCCESSFUL - THERE ARE NO MISSING MODES

MODE	EIGENVALUE ((RAD/SEC)**2)	FREQUENCY (RAD/SEC)	FREQUENCY (CYC/SEC)	PERIOD (SEC/CYC)	ESTIMATED ACCURACY
1	2.442548D+00	1.562865D+00	2.487377D-01	4.020299D+00	1.437866D-08
2	3.826663D+00	1.956186D+00	3.113367D-01	3.211957D+00	1.823822D-08
3	6.018344D+01	7.757799D+00	1.234692D+00	8.099186D-01	2.484388D-07
4	6.336924D+01	7.960480D+00	1.266950D+00	7.892974D-01	8.740786D-08
5	6.709185D+01	8.190962D+00	1.303632D+00	7.670877D-01	3.650377D-08

6	1.070409D+02	1.034606D+01	1.646626D+00	6.073024D-01	3.035237D-08
7	1.202379D+02	1.096531D+01	1.745183D+00	5.730059D-01	1.290181D-08
8	1.233521D+02	1.110640D+01	1.767638D+00	5.657267D-01	1.117947D-07
9	1.368953D+02	1.170023D+01	1.862149D+00	5.370140D-01	8.446438D-08
10	1.520267D+02	1.232991D+01	1.962366D+00	5.095889D-01	1.406037D-08
11	1.882143D+02	1.371912D+01	2.183466D+00	4.579875D-01	8.041506D-10
12	1.926695D+02	1.388054D+01	2.209157D+00	4.526614D-01	2.397961D-08
13	2.336290D+02	1.528493D+01	2.432672D+00	4.110707D-01	1.782615D-08
14	2.407861D+02	1.551729D+01	2.469653D+00	4.049153D-01	3.462298D-08
15	2.437889D+02	1.561374D+01	2.485004D+00	4.024139D-01	5.031783D-08
16	2.750364D+02	1.658422D+01	2.639461D+00	3.788653D-01	2.926635D-08
17	2.840444D+02	1.685362D+01	2.682336D+00	3.728093D-01	9.234944D-09
18	3.333609D+02	1.825817D+01	2.905878D+00	3.441300D-01	1.507216D-08
19	3.498587D+02	1.870451D+01	2.976915D+00	3.359182D-01	2.499390D-10
20	3.838799D+02	1.959285D+01	3.118300D+00	3.206876D-01	2.936088D-10
21	3.922173D+02	1.980448D+01	3.151980D+00	3.172609D-01	9.839209D-10
22	3.958327D+02	1.989554D+01	3.166474D+00	3.158087D-01	4.289228D-10
23	4.273180D+02	2.067167D+01	3.289999D+00	3.039515D-01	1.211363D-09
24	4.635046D+02	2.152916D+01	3.426472D+00	2.918454D-01	1.627159D-08
25	5.756202D+02	2.399209D+01	3.818459D+00	2.618858D-01	2.805037D-08
26	5.993293D+02	2.448120D+01	3.896304D+00	2.566535D-01	9.378458D-09
27	6.695616D+02	2.587589D+01	4.118276D+00	2.428201D-01	8.140016D-09
28	7.301509D+02	2.702130D+01	4.300574D+00	2.325271D-01	6.491493D-10
29	7.568700D+02	2.751127D+01	4.378554D+00	2.283859D-01	1.458155D-08
30	8.184203D+02	2.860805D+01	4.553112D+00	2.196300D-01	5.365874D-09
31	8.253502D+02	2.872891D+01	4.572348D+00	2.187060D-01	3.113123D-09
32	8.668491D+02	2.944230D+01	4.685888D+00	2.134067D-01	1.134513D-09
33	8.728243D+02	2.954360D+01	4.702010D+00	2.126750D-01	8.632282D-10
34	8.917267D+02	2.986179D+01	4.752652D+00	2.104088D-01	1.025393D-09
35	9.229054D+02	3.037936D+01	4.835025D+00	2.068242D-01	1.832383D-09
36	9.349743D+02	3.057735D+01	4.866536D+00	2.054850D-01	7.972187D-09
37	9.387532D+02	3.063908D+01	4.876361D+00	2.050710D-01	3.984865D-09
38	9.761217D+02	3.124295D+01	4.972469D+00	2.011073D-01	4.092023D-09
39	9.914842D+02	3.148784D+01	5.011446D+00	1.995432D-01	4.644990D-09
40	1.002243D+03	3.165822D+01	5.038562D+00	1.984693D-01	2.961502D-09
41	1.030708D+03	3.210464D+01	5.109612D+00	1.957096D-01	2.519184D-09
42	1.111770D+03	3.334322D+01	5.306738D+00	1.884397D-01	3.250262D-09
43	1.140030D+03	3.376433D+01	5.373760D+00	1.860894D-01	1.379980D-09
44	1.210941D+03	3.479858D+01	5.538366D+00	1.805587D-01	1.550695D-09
45	1.257847D+03	3.546613D+01	5.644611D+00	1.771601D-01	1.946402D-10
46	1.277914D+03	3.574792D+01	5.689458D+00	1.757637D-01	1.415325D-09
47	1.346337D+03	3.669247D+01	5.839787D+00	1.712391D-01	4.692637D-10
48	1.505990D+03	3.880709D+01	6.176341D+00	1.619082D-01	3.400575D-09
49	1.610924D+03	4.013632D+01	6.387893D+00	1.565461D-01	1.900643D-09
50	1.942664D+03	4.407566D+01	7.014859D+00	1.425545D-01	1.172391D-08
51	2.061015D+03	4.539840D+01	7.225380D+00	1.384010D-01	4.342940D-09
52	2.087585D+03	4.569010D+01	7.271805D+00	1.375174D-01	4.401881D-09
53	2.117873D+03	4.602035D+01	7.324366D+00	1.365306D-01	2.136993D-09
54	2.146680D+03	4.633228D+01	7.374011D+00	1.356114D-01	2.838209D-10
55	2.309340D+03	4.805559D+01	7.648285D+00	1.307483D-01	6.094103D-10
56	2.325124D+03	4.821954D+01	7.674378D+00	1.303037D-01	4.312948D-09
57	2.364097D+03	4.862198D+01	7.738429D+00	1.292252D-01	1.158540D-09
58	2.411987D+03	4.911199D+01	7.816416D+00	1.279359D-01	5.259817D-09
59	2.511523D+03	5.011510D+01	7.976066D+00	1.253751D-01	2.099410D-09
60	2.577384D+03	5.076794D+01	8.079969D+00	1.237629D-01	6.456008D-10
61	2.657184D+03	5.154789D+01	8.204101D+00	1.218903D-01	4.709169D-09
62	2.681632D+03	5.178448D+01	8.241755D+00	1.213334D-01	4.126947D-09
63	2.725263D+03	5.220405D+01	8.308532D+00	1.203582D-01	6.259704D-09
64	2.857494D+03	5.345553D+01	8.507712D+00	1.175404D-01	1.505251D-09
65	2.891318D+03	5.377097D+01	8.557916D+00	1.168509D-01	6.725479D-10
66	2.974936D+03	5.454297D+01	8.680783D+00	1.151970D-01	8.973458D-09
67	3.032183D+03	5.506526D+01	8.763908D+00	1.141043D-01	2.512157D-09
68	3.044047D+03	5.517289D+01	8.781037D+00	1.138818D-01	1.849524D-09
69	3.056308D+03	5.528389D+01	8.798704D+00	1.136531D-01	8.399387D-09
70	3.125205D+03	5.590353D+01	8.897323D+00	1.123934D-01	8.623618D-09
71	3.140941D+03	5.604410D+01	8.919695D+00	1.121115D-01	2.265344D-08
72	3.178271D+03	5.637615D+01	8.972543D+00	1.114511D-01	5.137129D-09
73	3.212945D+03	5.668285D+01	9.021355D+00	1.108481D-01	4.188864D-09
74	3.233452D+03	5.686345D+01	9.050100D+00	1.104960D-01	8.812242D-10
75	3.264571D+03	5.713642D+01	9.093544D+00	1.099681D-01	7.271901D-09
76	3.370153D+03	5.805302D+01	9.239425D+00	1.082318D-01	7.036723D-09
77	3.473798D+03	5.893893D+01	9.380422D+00	1.066050D-01	2.736926D-09
78	3.532594D+03	5.943563D+01	9.459474D+00	1.057141D-01	9.019160D-09
79	3.645999D+03	6.038211D+01	9.610111D+00	1.040571D-01	7.996628D-09
80	3.697268D+03	6.080516D+01	9.677442D+00	1.033331D-01	8.389206D-09

81	3.728453D+03	6.106106D+01	9.718169D+00	1.029000D-01	1.039507D-09
82	3.821800D+03	6.182071D+01	9.839072D+00	1.016356D-01	7.745183D-09
83	3.852068D+03	6.206503D+01	9.877956D+00	1.012355D-01	7.326390D-09
84	3.875879D+03	6.225656D+01	9.908438D+00	1.009241D-01	6.593382D-10
85	3.911430D+03	6.254142D+01	9.953776D+00	1.004644D-01	8.445305D-09
86	3.961898D+03	6.294361D+01	1.001779D+01	9.982245D-02	9.193795D-09
87	4.034686D+03	6.351917D+01	1.010939D+01	9.891793D-02	2.257275D-08
88	4.115059D+03	6.414873D+01	1.020959D+01	9.794716D-02	4.969350D-09
89	4.135983D+03	6.431161D+01	1.023551D+01	9.769909D-02	7.685616D-09
90	4.158304D+03	6.448491D+01	1.026309D+01	9.743652D-02	9.120441D-09
91	4.159609D+03	6.449503D+01	1.026470D+01	9.742123D-02	4.101090D-09
92	4.160588D+03	6.450262D+01	1.026591D+01	9.740977D-02	6.878458D-09
93	4.164998D+03	6.453680D+01	1.027135D+01	9.735819D-02	5.528618D-09
94	4.165409D+03	6.453998D+01	1.027186D+01	9.735338D-02	4.717968D-09
95	4.170524D+03	6.457959D+01	1.027816D+01	9.729367D-02	5.638648D-10
96	4.172785D+03	6.459709D+01	1.028095D+01	9.726731D-02	9.199211D-10
97	4.174559D+03	6.461083D+01	1.028313D+01	9.724664D-02	7.204215D-10
98	4.229173D+03	6.503209D+01	1.035018D+01	9.661669D-02	7.573901D-09
99	4.267425D+03	6.532553D+01	1.039688D+01	9.618270D-02	1.079158D-08
100	4.366561D+03	6.607996D+01	1.051695D+01	9.508459D-02	6.338649D-09
101	4.437365D+03	6.661355D+01	1.060188D+01	9.432294D-02	2.746378D-09
102	4.455029D+03	6.674601D+01	1.062296D+01	9.413575D-02	1.512472D-09
103	4.469696D+03	6.685578D+01	1.064043D+01	9.398118D-02	4.573028D-09
104	4.581452D+03	6.768642D+01	1.077263D+01	9.282785D-02	4.595990D-09
105	4.805327D+03	6.932046D+01	1.103269D+01	9.063969D-02	8.456504D-09
106	4.849020D+03	6.963491D+01	1.108274D+01	9.023040D-02	1.003426D-08
107	4.893197D+03	6.995139D+01	1.113311D+01	8.982217D-02	7.173113D-09
108	5.034109D+03	7.095145D+01	1.129227D+01	8.855612D-02	2.682466D-08
109	5.175601D+03	7.194165D+01	1.144987D+01	8.733725D-02	4.226358D-09
110	5.197188D+03	7.209153D+01	1.147372D+01	8.715567D-02	1.617673D-09
111	5.483278D+03	7.404916D+01	1.178529D+01	8.485154D-02	4.015730D-09
112	5.534452D+03	7.439390D+01	1.184016D+01	8.445834D-02	1.355822D-08
113	5.638023D+03	7.508677D+01	1.195043D+01	8.367899D-02	1.167414D-09
114	5.712252D+03	7.557944D+01	1.202884D+01	8.313352D-02	1.361994D-09
115	5.929408D+03	7.700265D+01	1.225535D+01	8.159701D-02	3.853909D-09
116	5.973964D+03	7.729142D+01	1.230131D+01	8.129215D-02	8.471049D-09
117	6.039445D+03	7.771387D+01	1.236855D+01	8.085025D-02	1.547284D-09
118	6.236989D+03	7.897461D+01	1.256920D+01	7.955957D-02	1.753001D-09
119	6.269769D+03	7.918187D+01	1.260219D+01	7.935131D-02	2.630737D-10
120	6.348563D+03	7.967787D+01	1.268113D+01	7.885735D-02	5.745475D-09
121	6.871613D+03	8.289519D+01	1.319318D+01	7.579674D-02	2.127759D-09
122	6.928966D+03	8.324041D+01	1.324812D+01	7.548239D-02	1.983027D-09
123	7.417849D+03	8.612694D+01	1.370753D+01	7.295262D-02	2.695542D-09
124	7.670680D+03	8.758242D+01	1.393917D+01	7.174026D-02	1.437018D-09
125	7.791281D+03	8.826823D+01	1.404833D+01	7.118286D-02	1.134731D-08
126	7.951123D+03	8.916907D+01	1.419170D+01	7.046373D-02	4.903771D-09
127	7.955382D+03	8.919295D+01	1.419550D+01	7.044487D-02	2.285618D-09
128	8.176769D+03	9.042549D+01	1.439166D+01	6.948467D-02	7.764682D-09
129	8.223201D+03	9.068187D+01	1.443247D+01	6.928822D-02	4.444962D-09
130	8.260304D+03	9.088621D+01	1.446499D+01	6.913244D-02	5.807633D-10
131	8.599068D+03	9.273116D+01	1.475862D+01	6.775700D-02	1.871501D-09
132	8.787124D+03	9.373966D+01	1.491913D+01	6.702804D-02	1.625800D-09
133	8.855200D+03	9.410207D+01	1.497681D+01	6.676989D-02	1.440387D-09
134	9.051508D+03	9.513941D+01	1.514191D+01	6.604188D-02	9.397630D-10
135	9.116587D+03	9.548082D+01	1.519624D+01	6.580574D-02	7.988539D-10
136	9.142150D+03	9.561459D+01	1.521753D+01	6.571367D-02	8.033318D-09
137	9.293031D+03	9.640037D+01	1.534259D+01	6.517802D-02	2.387622D-09
138	9.366697D+03	9.678170D+01	1.540328D+01	6.492122D-02	3.769274D-09
139	9.747132D+03	9.872757D+01	1.571298D+01	6.364165D-02	5.753543D-09
140	9.771349D+03	9.885014D+01	1.573249D+01	6.356274D-02	2.694404D-09
141	9.868019D+03	9.933790D+01	1.581012D+01	6.325064D-02	3.755037D-09
142	1.000207D+04	1.000104D+02	1.591714D+01	6.282534D-02	1.263106D-09
143	1.011432D+04	1.005700D+02	1.600621D+01	6.247576D-02	7.396452D-10
144	1.025679D+04	1.012758D+02	1.611855D+01	6.204033D-02	9.105798D-10
145	1.049172D+04	1.024291D+02	1.630210D+01	6.134181D-02	1.160329D-09
146	1.113613D+04	1.055279D+02	1.679528D+01	5.954054D-02	2.088980D-09
147	1.115367D+04	1.056109D+02	1.680850D+01	5.949370D-02	1.550060D-09
148	1.144707D+04	1.069910D+02	1.702815D+01	5.872630D-02	1.824845D-09
149	1.179774D+04	1.086174D+02	1.728699D+01	5.784695D-02	8.524692D-10
150	1.189315D+04	1.090557D+02	1.735676D+01	5.761445D-02	3.581899D-09
151	1.213723D+04	1.101691D+02	1.753396D+01	5.703219D-02	6.630422D-10
152	1.231295D+04	1.109637D+02	1.766042D+01	5.662378D-02	1.105544D-09
153	1.246884D+04	1.116640D+02	1.777187D+01	5.626870D-02	1.244279D-09
154	1.257975D+04	1.121595D+02	1.785073D+01	5.602011D-02	2.981465D-10
155	1.274676D+04	1.129015D+02	1.796884D+01	5.565191D-02	4.654809D-10

156	1.285227D+04	1.133678D+02	1.804305D+01	5.542300D-02	6.131982D-10
157	1.293338D+04	1.137250D+02	1.809990D+01	5.524893D-02	1.464714D-09
158	1.325847D+04	1.151455D+02	1.832597D+01	5.456738D-02	1.845056D-09
159	1.329041D+04	1.152840D+02	1.834803D+01	5.450178D-02	1.197732D-09
160	1.331369D+04	1.153850D+02	1.836409D+01	5.445410D-02	1.233138D-09
161	1.362203D+04	1.167135D+02	1.857552D+01	5.383428D-02	1.436006D-09
162	1.397450D+04	1.182138D+02	1.881431D+01	5.315104D-02	6.769661D-10
163	1.401640D+04	1.183909D+02	1.884249D+01	5.307154D-02	2.924556D-10
164	1.452574D+04	1.205228D+02	1.918180D+01	5.213276D-02	4.386890D-10
165	1.458805D+04	1.207810D+02	1.922289D+01	5.202130D-02	6.657033D-10
166	1.467374D+04	1.211352D+02	1.927927D+01	5.186919D-02	2.393802D-09
167	1.483313D+04	1.217913D+02	1.938369D+01	5.158976D-02	1.272079D-10
168	1.496292D+04	1.223230D+02	1.946831D+01	5.136553D-02	7.855759D-11
169	1.532100D+04	1.237780D+02	1.969989D+01	5.076171D-02	4.233856D-10
170	1.556254D+04	1.247499D+02	1.985457D+01	5.036625D-02	5.121452D-10
171	1.565693D+04	1.251277D+02	1.991469D+01	5.021420D-02	4.044460D-10
172	1.594288D+04	1.262651D+02	2.009572D+01	4.976185D-02	5.779320D-10
173	1.603092D+04	1.266133D+02	2.015112D+01	4.962502D-02	5.191069D-11
174	1.609034D+04	1.268477D+02	2.018844D+01	4.953331D-02	1.821135D-10
175	1.671916D+04	1.293026D+02	2.057914D+01	4.859289D-02	1.330736D-10
176	1.674019D+04	1.293839D+02	2.059209D+01	4.856235D-02	4.218628D-10
177	1.706633D+04	1.306381D+02	2.079171D+01	4.809610D-02	5.893940D-10
178	1.719733D+04	1.311386D+02	2.087135D+01	4.791256D-02	2.572278D-10
179	1.736809D+04	1.317880D+02	2.097472D+01	4.767645D-02	2.114180D-10
180	1.797586D+04	1.340741D+02	2.133855D+01	4.686353D-02	6.524408D-10
181	1.803294D+04	1.342868D+02	2.137241D+01	4.678931D-02	2.941374D-10
182	1.868061D+04	1.366770D+02	2.175283D+01	4.597104D-02	1.816344D-09
183	1.875647D+04	1.369543D+02	2.179695D+01	4.587799D-02	1.579004D-10
184	1.907327D+04	1.381060D+02	2.198025D+01	4.549538D-02	2.916018D-10
185	1.934114D+04	1.390724D+02	2.213407D+01	4.517923D-02	1.272256D-10
186	1.957192D+04	1.398997D+02	2.226573D+01	4.491208D-02	1.548266D-10
187	1.957902D+04	1.399250D+02	2.226976D+01	4.490394D-02	2.308271D-10
188	2.001699D+04	1.414814D+02	2.251747D+01	4.440997D-02	1.879880D-10
189	2.008068D+04	1.417063D+02	2.255326D+01	4.433949D-02	7.509106D-10
190	2.084648D+04	1.443831D+02	2.297929D+01	4.351745D-02	1.039372D-09
191	2.109875D+04	1.452541D+02	2.311791D+01	4.325651D-02	5.994283D-10
192	2.173334D+04	1.474223D+02	2.346299D+01	4.262031D-02	6.291315D-10
193	2.193089D+04	1.480908D+02	2.356939D+01	4.242792D-02	9.116455D-10
194	2.238306D+04	1.496097D+02	2.381112D+01	4.199718D-02	5.427024D-11
195	2.240098D+04	1.496696D+02	2.382065D+01	4.198038D-02	7.141717D-11
196	2.244610D+04	1.498202D+02	2.384463D+01	4.193817D-02	3.377367D-11
197	2.247873D+04	1.499291D+02	2.386195D+01	4.190772D-02	7.844583D-11
198	2.250080D+04	1.500027D+02	2.387366D+01	4.188716D-02	6.664497D-11
199	2.258342D+04	1.502778D+02	2.391746D+01	4.181047D-02	1.378262D-10
200	2.258514D+04	1.502835D+02	2.391837D+01	4.180888D-02	1.270989D-10
201	2.274067D+04	1.508001D+02	2.400058D+01	4.166566D-02	5.738905D-10
202	2.284591D+04	1.511487D+02	2.405605D+01	4.156958D-02	1.405553D-09
203	2.308563D+04	1.519395D+02	2.418193D+01	4.135319D-02	1.585126D-09
204	2.348917D+04	1.532618D+02	2.439237D+01	4.099643D-02	3.167841D-10
205	2.392152D+04	1.546658D+02	2.461583D+01	4.062426D-02	1.168340D-10
206	2.401165D+04	1.549569D+02	2.466216D+01	4.054795D-02	9.072014D-10
207	2.402531D+04	1.550010D+02	2.466918D+01	4.053642D-02	3.674893D-09
208	2.424658D+04	1.557131D+02	2.478251D+01	4.035103D-02	5.565149D-10
209	2.452281D+04	1.565976D+02	2.492328D+01	4.012313D-02	9.394568D-10
210	2.503682D+04	1.582303D+02	2.518313D+01	3.970912D-02	6.437633D-11
211	2.517055D+04	1.586523D+02	2.525029D+01	3.960350D-02	3.218926D-10
212	2.555110D+04	1.598471D+02	2.544046D+01	3.930747D-02	5.812164D-11
213	2.595123D+04	1.610938D+02	2.563888D+01	3.900326D-02	2.684233D-10
214	2.638921D+04	1.624476D+02	2.585433D+01	3.867824D-02	9.377724D-11
215	2.657263D+04	1.630111D+02	2.594403D+01	3.854451D-02	2.153435D-10
216	2.747609D+04	1.657591D+02	2.638138D+01	3.790552D-02	3.723497D-10
217	2.832815D+04	1.683097D+02	2.678732D+01	3.733110D-02	2.662742D-10
218	2.868300D+04	1.693606D+02	2.695457D+01	3.709946D-02	8.101994D-11
219	2.899953D+04	1.702925D+02	2.710289D+01	3.689643D-02	1.830664D-10
220	2.920779D+04	1.709029D+02	2.720003D+01	3.676466D-02	3.523474D-11
221	2.936858D+04	1.713726D+02	2.727480D+01	3.666388D-02	5.083992D-11
222	2.972820D+04	1.724187D+02	2.744128D+01	3.644144D-02	3.990411D-11
223	3.021045D+04	1.738115D+02	2.766296D+01	3.614942D-02	3.674148D-10
224	3.052647D+04	1.747183D+02	2.780727D+01	3.596181D-02	3.789021D-10
225	3.181117D+04	1.783568D+02	2.838637D+01	3.522817D-02	4.782818D-11
226	3.264382D+04	1.806760D+02	2.875548D+01	3.477598D-02	1.976077D-10
227	3.334183D+04	1.825974D+02	2.906129D+01	3.441004D-02	6.455500D-11
228	3.388987D+04	1.840920D+02	2.929915D+01	3.413068D-02	8.997844D-11
229	3.409476D+04	1.846477D+02	2.938759D+01	3.402797D-02	6.209401D-11
230	3.415947D+04	1.848228D+02	2.941546D+01	3.399573D-02	6.917291D-11

231	3.416131D+04	1.848278D+02	2.941625D+01	3.399481D-02	1.029390D-10
232	3.470076D+04	1.862814D+02	2.964760D+01	3.372954D-02	1.172123D-10
233	3.566071D+04	1.888404D+02	3.005489D+01	3.327246D-02	1.097905D-09
234	3.681568D+04	1.918741D+02	3.053771D+01	3.274639D-02	5.569378D-11
235	3.745097D+04	1.935225D+02	3.080006D+01	3.246746D-02	3.135585D-10
236	3.773155D+04	1.942461D+02	3.091523D+01	3.234652D-02	4.922429D-11
237	3.821646D+04	1.954903D+02	3.111325D+01	3.214065D-02	6.412150D-10
238	3.852438D+04	1.962763D+02	3.123834D+01	3.201195D-02	2.941511D-10
239	3.907424D+04	1.976720D+02	3.146048D+01	3.178591D-02	4.750521D-11
240	3.986433D+04	1.996605D+02	3.177696D+01	3.146934D-02	1.642521D-10
241	4.000820D+04	2.000205D+02	3.183425D+01	3.141271D-02	1.916304D-10
242	4.020509D+04	2.005121D+02	3.191248D+01	3.133570D-02	3.347988D-10
243	4.035119D+04	2.008761D+02	3.197042D+01	3.127892D-02	2.523721D-10
244	4.051014D+04	2.012713D+02	3.203332D+01	3.121749D-02	2.761609D-10
245	4.076653D+04	2.019072D+02	3.213453D+01	3.111917D-02	2.799802D-10
246	4.119000D+04	2.029532D+02	3.230100D+01	3.095879D-02	2.496873D-10
247	4.126014D+04	2.031259D+02	3.232850D+01	3.093246D-02	1.025115D-10
248	4.144906D+04	2.035904D+02	3.240242D+01	3.086189D-02	3.801062D-10
249	4.148956D+04	2.036899D+02	3.241825D+01	3.084682D-02	2.022012D-10
250	4.192830D+04	2.047640D+02	3.258920D+01	3.068501D-02	1.085580D-10
251	4.199226D+04	2.049201D+02	3.261405D+01	3.066163D-02	3.478059D-10
252	4.234685D+04	2.057835D+02	3.275146D+01	3.053299D-02	1.094434D-10
253	4.241925D+04	2.059593D+02	3.277944D+01	3.050692D-02	2.217310D-10
254	4.299978D+04	2.073639D+02	3.300299D+01	3.030029D-02	7.909129D-11
255	4.329294D+04	2.080696D+02	3.311530D+01	3.019752D-02	4.989003D-10
256	4.382051D+04	2.093335D+02	3.331646D+01	3.001520D-02	1.085578D-10
257	4.457142D+04	2.111195D+02	3.360070D+01	2.976128D-02	2.791642D-10
258	4.553015D+04	2.133780D+02	3.396015D+01	2.944627D-02	2.858257D-10
259	4.611947D+04	2.147544D+02	3.417923D+01	2.925754D-02	9.583755D-11
260	4.671565D+04	2.161380D+02	3.439944D+01	2.907024D-02	6.711189D-10
261	4.690110D+04	2.165666D+02	3.446765D+01	2.901272D-02	4.277986D-11
262	4.743625D+04	2.177986D+02	3.466373D+01	2.884860D-02	2.356480D-10
263	4.778740D+04	2.186033D+02	3.479179D+01	2.874241D-02	1.708064D-10
264	4.813939D+04	2.194069D+02	3.491969D+01	2.863714D-02	5.274062D-10
265	4.860697D+04	2.204699D+02	3.508887D+01	2.849906D-02	5.092167D-11
266	4.897985D+04	2.213139D+02	3.522320D+01	2.839038D-02	3.761507D-10
267	4.940148D+04	2.222644D+02	3.537448D+01	2.826896D-02	8.215270D-10
268	5.037255D+04	2.244383D+02	3.572046D+01	2.799516D-02	5.720399D-11
269	5.046037D+04	2.246339D+02	3.575159D+01	2.797079D-02	7.708716D-11
270	5.108892D+04	2.260286D+02	3.597356D+01	2.779819D-02	3.562295D-10
271	5.138124D+04	2.266743D+02	3.607634D+01	2.771900D-02	9.358686D-10
272	5.163370D+04	2.272305D+02	3.616486D+01	2.765115D-02	4.607718D-11
273	5.226873D+04	2.286236D+02	3.638657D+01	2.748267D-02	1.280900D-10
274	5.232513D+04	2.287469D+02	3.640619D+01	2.746785D-02	2.481404D-10
275	5.307469D+04	2.303794D+02	3.666603D+01	2.727320D-02	9.485659D-11
276	5.343951D+04	2.311699D+02	3.679183D+01	2.717995D-02	4.541643D-11
277	5.375990D+04	2.318618D+02	3.690195D+01	2.709884D-02	2.964211D-10
278	5.428806D+04	2.329980D+02	3.708278D+01	2.696670D-02	1.925878D-10
279	5.444222D+04	2.333286D+02	3.713539D+01	2.692849D-02	2.492350D-10
280	5.487650D+04	2.342573D+02	3.728321D+01	2.682172D-02	7.068679D-11
281	5.507939D+04	2.346900D+02	3.735207D+01	2.677228D-02	1.457467D-10
282	5.533135D+04	2.352262D+02	3.743741D+01	2.671125D-02	5.454997D-11
283	5.614670D+04	2.369529D+02	3.771223D+01	2.651660D-02	2.872771D-10
284	5.692564D+04	2.385909D+02	3.797293D+01	2.633455D-02	8.780411D-10
285	5.764036D+04	2.400841D+02	3.821056D+01	2.617077D-02	6.972708D-11
286	5.782656D+04	2.404715D+02	3.827223D+01	2.612860D-02	1.475212D-10
287	5.800275D+04	2.408376D+02	3.833049D+01	2.608889D-02	6.623721D-11
288	5.841955D+04	2.417014D+02	3.846797D+01	2.599565D-02	3.866588D-10
289	5.946275D+04	2.438498D+02	3.880991D+01	2.576662D-02	3.297355D-10
290	6.013437D+04	2.452231D+02	3.902847D+01	2.562232D-02	3.890188D-10
291	6.081738D+04	2.466118D+02	3.924949D+01	2.547804D-02	1.899502D-10
292	6.109825D+04	2.471806D+02	3.934001D+01	2.541941D-02	6.042086D-11
293	6.153961D+04	2.480718D+02	3.948185D+01	2.532809D-02	5.950188D-11
294	6.181686D+04	2.486300D+02	3.957069D+01	2.527123D-02	3.757884D-10
295	6.391380D+04	2.528118D+02	4.023624D+01	2.485321D-02	2.625686D-10
296	6.465332D+04	2.542702D+02	4.046835D+01	2.471067D-02	5.139453D-10
297	6.524550D+04	2.554320D+02	4.065326D+01	2.459827D-02	2.347594D-10
298	6.538771D+04	2.557102D+02	4.069754D+01	2.457151D-02	2.132091D-10
299	6.546647D+04	2.558642D+02	4.072204D+01	2.455672D-02	1.023753D-10
300	6.557484D+04	2.560759D+02	4.075574D+01	2.453642D-02	2.794196D-10

ORTHOGONALITY CHECK

WITH RESPECT TO MASS

OFF DIAGONALS: MAXIMUM = 0.1304E-13
MINIMUM = 0.0000E+00
MEAN = 0.4740E-15

DIAGONALS: MAXIMUM = 0.1000E+01
MINIMUM = 0.1000E+01
MEAN = 0.1000E+01

WITH RESPECT TO STIFFNESS

OFF DIAGONALS: MAXIMUM = 0.2165E-04
MINIMUM = 0.3146E-13
MEAN = 0.8709E-07

DIAGONALS: MAXIMUM = 0.6557E+05
MINIMUM = 0.2443E+01
MEAN = 0.1908E+05

****
* END OF EIGEN-SOLUTION CHECKS *
****

TIME TO CHECK EIGENSOLUTION 38.63 SECONDS
{ 4268} > LIST DYNAMIC PARTICIPATION FACTORS
1

****
RESULTS OF LATEST ANALYSES
****

PROBLEM - N1E3_HU_ TITLE - BRIDGE LOCATION 1 TROLLEY POSITION 3 - LOAD UP - MHE

ACTIVE UNITS FEET KIP DEG DEGF SEC

NORMALIZED PARTICIPATION FACTORS

% OF X DIRECTION MASS PARTICIPATING

MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT
1	0.1693436E-03	2	12.41273	3	36.09025	4	4.488520	5	0.6360130E-05	6	0.1728502
7	0.4559302E-01	8	1.371719	9	0.4348728	10	0.5238389E-02	11	0.2006308E-02	12	0.4453210E-01
13	0.7376254	14	0.1416696	15	3.555198	16	2.383651	17	8.655061	18	2.986975
19	0.4583659E-04	20	0.3696012E-03	21	0.1477323	22	0.3977890E-05	23	0.1673396E-01	24	0.2021959E-01
25	1.258997	26	0.4859958	27	2.835965	28	0.1908491E-02	29	0.5307393E-01	30	3.244966
31	0.1739967	32	0.2731313E-02	33	0.1532883E-01	34	0.2738132E-02	35	0.3315102E-02	36	1.101435
37	0.4402454	38	4.219875	39	2.933706	40	0.5286945	41	0.5788759	42	0.3539996E-01
43	0.3565753E-02	44	0.1604230E-02	45	0.9687708E-04	46	0.1190335E-02	47	0.6924708E-04	48	0.6411395
49	0.2648873E-01	50	0.1577688E-02	51	0.1040962	52	0.3126430E-02	53	0.2036425	54	0.9394311E-04
55	0.6130953	56	0.6762377E-02	57	0.2368830E-03	58	0.5112786E-01	59	0.7985403E-01	60	0.2495824E-02
61	0.2040728E-01	62	0.1686767	63	0.4505006E-02	64	0.3723609E-02	65	0.3035130E-02	66	0.1196847E-02
67	0.4689406E-04	68	0.1456865E-04	69	0.1870029E-04	70	0.7713123E-04	71	0.4630224E-02	72	0.1997216E-02
73	0.9186104E-04	74	0.2209169E-03	75	0.2424223E-02	76	0.2415635E-03	77	0.4612693E-03	78	0.3209560E-02
79	0.1174662E-04	80	0.5587309E-02	81	0.1506737E-05	82	0.3020151E-03	83	0.8773989E-04	84	0.3038845E-03

85	0.7048741E-03	86	0.2008377E-02	87	0.2252293E-01	88	0.3608786E-03	89	0.1703525E-02	90	0.1037841E-02			
91	0.2720136E-03	92	0.3969072E-02	93	0.6462565E-03	94	0.1301810E-02	95	0.6438026E-06	96	0.3875989E-07			
97	0.6881580E-05	98	0.1197514E-03	99	0.4567204E-02	100	0.1877660	101	0.1213059	102	0.3121187E-01			
103	0.1042935E-01	104	0.8326191E-04	105	0.1545226E-03	106	0.4914002E-03	107	0.2298142E-04	108	0.1591764E-01			
109	0.1902386E-03	110	0.4241694E-04	111	0.1178204E-03	112	0.4689637E-03	113	0.4017285E-03	114	0.6393225E-05			
115	0.7231505E-03	116	0.6339224E-02	117	0.3058275E-03	118	0.2928393E-02	119	0.1842284E-02	120	0.5194507			
121	0.1822112E-01	122	0.1241584	123	0.2578038E-03	124	0.3008378E-03	125	0.1190262E-02	126	0.3025475E-02			
127	0.6441737E-02	128	0.1392040	129	0.1769056E-03	130	0.2277837E-04	131	0.3274012E-02	132	0.1267530			
133	0.9202686	134	0.6960151E-04	135	0.2425527E-02	136	0.1753758E-02	137	0.1791060E-01	138	0.2179206E-01			
139	0.1107359E-04	140	0.6842197E-04	141	0.2239610E-02	142	0.3666211E-01	143	0.2527583E-01	144	0.3864652E-02			
145	0.2876658E-02	146	0.1364674E-01	147	0.4080321E-02	148	0.9898233E-01	149	0.1186947E-01	150	0.3846698E-02			
151	0.4097096E-01	152	0.1665374	153	0.2707754E-02	154	0.4476224E-05	155	0.3638800E-02	156	0.2450474E-03			
157	0.7127461E-04	158	0.9148593E-03	159	0.5845362E-03	160	0.2299069E-03	161	0.6470794E-02	162	0.1176677E-02			
163	0.3016595E-02	164	0.1833426E-03	165	0.1312451E-02	166	0.6216097E-02	167	0.2843615E-05	168	0.1305977E-06			
169	0.4677188E-03	170	0.2675050E-04	171	0.1478941E-03	172	0.1334331E-01	173	0.2040372E-06	174	0.4957230E-07			
175	0.4884717E-04	176	0.3703574E-05	177	0.5001573E-03	178	0.8587084E-05	179	0.6169419E-05	180	0.3773001E-03			
181	0.8567601E-06	182	0.3510038E-02	183	0.8061968E-03	184	0.5589846E-03	185	0.2624635E-03	186	0.4115965E-03			
187	0.1457871E-02	188	0.3533402E-01	189	0.2203262E-02	190	0.8302057E-01	191	0.1168765	192	0.1083038E-01			
193	0.9764278E-02	194	0.6620253E-05	195	0.8772672E-05	196	0.2096126E-09	197	0.8042879E-05	198	0.1823510E-04			
199	0.6343587E-01	200	0.1620672E-01	201	0.5800857E-03	202	0.9286057E-02	203	0.6401361E-01	204	0.1355713E-03			
205	0.8870644E-03	206	0.1184001E-02	207	0.2123455E-03	208	0.2627023E-02	209	0.1807824E-01	210	0.3193596E-04			
211	0.9601422E-01	212	0.7039130E-03	213	0.2161534E-02	214	0.1451722E-02	215	0.3725985E-04	216	0.1513318E-03			
217	0.3001162E-05	218	0.5962942E-02	219	0.1984661E-06	220	0.1355807E-05	221	0.5776767E-03	222	0.1320748E-05			
223	0.1269275E-04	224	0.3238158E-04	225	0.1202733E-06	226	0.8356411E-04	227	0.1006037E-05	228	0.1536159E-05			
229	0.1087084E-05	230	0.8440513E-03	231	0.4431427E-04	232	0.2233574E-04	233	0.6714873E-03	234	0.6009661E-01			
235	0.2703859E-02	236	0.1756143	237	0.6429744E-02	238	0.8654515E-03	239	0.1683872E-01	240	0.5650500E-05			
241	0.8364818E-02	242	0.3621217E-02	243	0.5600818E-02	244	0.4831247E-01	245	0.8907667E-01	246	0.1251405E-02			
247	0.5169582E-03	248	0.2449090E-01	249	0.1684662E-01	250	0.2746179E-04	251	0.1968083E-03	252	0.4550482E-03			
253	0.3215283E-01	254	0.6205324E-02	255	0.1047139E-03	256	0.1810857E-02	257	0.2833397E-04	258	0.2020735E-05			
259	0.5288272E-07	260	0.7962506E-04	261	0.7216357E-03	262	0.6137559E-04	263	0.2347972E-05	264	0.4499442E-05			
265	0.5968104E-01	266	0.1437034E-02	267	0.8753520E-03	268	0.9972080E-07	269	0.6359955E-07	270	0.2907531E-04			
271	0.1847334E-03	272	0.6285603E-02	273	0.4569189E-05	274	0.1253389E-06	275	0.3046689E-02	276	0.1674619E-01			
277	0.2710635E-02	278	0.1294502E-02	279	0.1537266E-01	280	0.9625787	281	0.4805475E-03	282	0.4344588E-01			
283	0.1840458E-02	284	0.5117649E-02	285	0.1936125E-04	286	0.1446438E-06	287	0.4330306E-06	288	0.2345917E-03			
289	0.3617089E-04	290	0.2056745E-04	291	0.2188967E-05	292	0.1677181E-05	293	0.7919225E-01	294	0.1371349E-03			
295	0.9224119E-04	296	0.1904654E-04	297	0.2959407E-05	298	0.8134216E-06	299	0.7208908E-04	300	0.3132574E-05			

TOTAL PERCENTAGE OF X DIRECTION MASS PARTICIPATING: 98.626

% OF Y DIRECTION MASS PARTICIPATING

MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT	MODE	PERCENT
1	0.2709923E-04	2	0.5632277E-07	3	0.1742153E-03	4	0.6085401E-02	5	0.3240678E-04	6	0.2837007E-05
7	0.1391353E-03	8	0.1110319E-02	9	0.5282062E-04	10	0.1344675E-03	11	0.1530212E-06	12	0.4895060E-02
13	0.1848658E-02	14	0.2262094E-04	15	0.5067529E-03	16	0.2326844E-02	17	0.5770743E-03	18	0.4721384E-03
19	0.9623522	20	17.32915	21	0.7129877E-03	22	0.3485388E-01	23	0.6378945E-02	24	0.5674712E-02
25	0.2498240E-01	26	0.5992292E-01	27	0.1568301	28	5.563639	29	0.1189428	30	0.1057979
31	2.171948	32	0.2869685E-01	33	1.124012	34	2.025103	35	0.1510419	36	0.1049469
37	0.2703959	38	0.4740683E-01	39	0.1728747E-01	40	0.4158313E-03	41	0.3708980E-02	42	0.2178505
43	0.1762762E-01	44	0.2519568	45	0.6565085	46	0.2194100	47	0.1158884E-01	48	0.2130928E-02
49	0.6761086E-01	50	0.1902013E-02	51	0.1623213E-01	52	0.4586505	53	0.2483772E-02	54	0.8323020
55	0.2673388E-01	56	0.3143839	57	0.6141082E-02	58	0.8595845E-01	59	0.5211548E-01	60	2.076918
61	0.1974723E-02	62	0.2715831E-02	63	0.2399935	64	0.3066759E-01	65	0.4985499	66	0.1293032E-01
67	0.1292581E-02	68	0.3260000E-01	69	0.4391379E-03	70	0.2756931E-01	71	0.8577760E-02	72	0.1977721E-01
73	0.7222331E-01	74	0.4992384	75	0.3711862E-01	76	0.1291227E-02	77	0.4020275E-01	78	0.6526440E-02
79	0.2509179E-03	80	0.4914857E-02	81	0.1164692E-02	82	0.4882532E-03	83	0.7957899E-02	84	0.5976762E-06
85	0.6578339E-01	86	0.7391294E-02	87	0.1091712	88	0.1218726E-03	89	0.5894228E-04	90	0.1105352E-03
91	0.6821775E-04	92	0.7756644E-03	93	0.1187502E-03	94	0.3378723E-03	95	0.2527551E-05	96	0.1631046E-04
97	0.1103802E-04	98	0.2043131E-01	99	0.1705523	100	0.3574595E-01	101	0.9865148E-02	102	0.5511538E-01
103	0.7004820E-01	104	0.5961710	105	1.057236	106	0.2051955	107	0.2674197E-04	108	0.4028614E-01
109	0.9846210	110	1.891358	111	0.1892092E-02	112	0.2165929E-02	113	2.195114	114	0.1276213E-02
115	0.2617677E-03	116	0.1525695E-02	117	0.7250867E-02	118	0.9265007E-02	119	0.2387327E-01	120	0.2874047E-03
121	0.2442332E-02	122	0.5833966E-02	123	0.9399475E-03	124	0.3824308E-05	125	0.1148396E-06	126	0.8400543E-02
127	0.2311084E-02	128	0.3502942E-02	129	0.2714842E-02	130	0.3994902E-06	131	0.2084297E-02	132	0.6131701
133	0.1495466	134	0.1330268	135	0.9309958E-04	136	0.1256413E-01	137	0.7018011E-02	138	0.1433169E-01
139	0.4631805E-01	140	0.1274158E-02	141	0.2306984E-02	142	0.2435736E-03	143	0.4979719E-02	144	0.7452428E-02
145	0.4917959E-02	146	0.2564009	147	0.7217132E-01	148	0.9794265E-05	149	0.5121434	150	0.1389965E-01
151	0.1111469	152	0.1611496	153	0.6376390E-02	154	0.4158235	155	3.280860	156	2.112187
157	1.099520	158	0.1321463	159	0.1207144	160	0.3573724E-03	161	0.1980480E-01	162	0.4418441E-03
163	0.6152527E-05	164	0.6618032E-02	165	0.1310988E-01	166	0.4100406E-01	167	0.5796869E-03	168	4.678804
169	0.2148117E-02	170	0.1610530E-01	171	0.4922303E-03	172	0.6531924E-03	173	0.1282110E-02	174	0.4103458E-03

175 0.7489080 176 0.8027895E-01 177 0.5221897E-01 178 0.3337666E-01 179 0.5656110E-01 180 3.051581
181 0.7862419E-01 182 0.1310293 183 2.564287 184 0.2339851 185 0.4950613E-02 186 0.5332558E-02
187 0.5362908E-02 188 0.1399715E-02 189 0.9691885E-01 190 0.1222208E-02 191 0.6813357E-02 192 0.3453949E-01
193 0.1889513E-01 194 0.4355517E-06 195 0.7041408E-05 196 0.2159548E-05 197 0.1223222E-05 198 0.3620078E-05
199 0.1950103E-03 200 0.9465309E-04 201 0.1688003E-03 202 0.7093020E-02 203 0.1442770 204 0.2522493E-02
205 0.1491143 206 1.471311 207 0.3838242 208 0.7132196E-03 209 0.9290849E-02 210 0.2795759
211 0.2740943E-02 212 0.5776741 213 0.2658739 214 0.1384525 215 0.7353345E-01 216 0.9952419
217 0.8389661E-01 218 0.9738275E-03 219 0.1029882 220 0.5798346E-04 221 0.1235457E-01 222 0.1556198E-03
223 0.5302939E-01 224 0.1458056E-02 225 0.2904141E-01 226 0.6831608E-01 227 0.1043184E-02 228 0.3229121E-02
229 0.7680662 230 0.7581843E-01 231 0.6763205E-02 232 0.1595935E-03 233 0.1562718 234 0.3409569E-04
235 0.1002504E-02 236 0.5281193E-01 237 0.2474169 238 3.407839 239 0.5852537E-01 240 0.1320872E-01
241 0.6513726 242 0.1902418 243 0.2354763E-01 244 0.1933952 245 0.4857925 246 1.738844
247 0.2871124 248 0.4013905 249 0.2580745 250 0.1246044E-03 251 0.7537094 252 0.1545408
253 0.1206641 254 0.3369561 255 0.4229275E-01 256 0.1559675E-01 257 0.3916280E-01 258 0.5321482E-02
259 0.5620459E-02 260 0.8900820E-01 261 0.5830890E-05 262 0.1772550E-01 263 0.1511292 264 0.5248243E-01
265 0.2032717E-01 266 1.312858 267 0.1839601E-01 268 0.2431501E-03 269 0.7199754E-01 270 0.1605814
271 0.2609178E-02 272 0.4035303E-02 273 0.1679513E-01 274 0.2034398 275 0.2742055E-02 276 0.1023872E-01
277 0.1447973 278 0.2152066E-03 279 0.2741962E-03 280 0.1155151E-03 281 0.1059961E-04 282 0.3597935E-02
283 0.1498116 284 0.1759308E-02 285 0.6673697 286 0.6803959 287 0.1303975E-01 288 0.6177167E-01
289 0.5149843E-01 290 0.4945587E-01 291 0.2786262E-03 292 0.3030085 293 0.4555945E-04 294 0.5390656E-03
295 0.6974733E-01 296 0.1906243E-04 297 0.2395901E-02 298 0.1953511E-02 299 0.7402923 300 0.5640614E-02

TOTAL PERCENTAGE OF Y DIRECTION MASS PARTICIPATING: 86.504

% OF Z DIRECTION MASS PARTICIPATING

MODE PERCENT MODE PERCENT MODE PERCENT MODE PERCENT MODE PERCENT MODE PERCENT

1 12.84243 2 0.4272420E-04 3 1.062168 4 8.763404 5 0.6751174E-02 6 16.84159
7 10.74151 8 1.447960 9 1.572861 10 2.096533 11 0.4775661 12 0.2179835E-01
13 3.028443 14 0.3001929E-01 15 0.1647292 16 2.170341 17 0.1398073 18 0.4111796E-02
19 0.2158939E-02 20 0.3333216E-02 21 0.3131586E-03 22 0.3001626E-03 23 0.2904871E-01 24 0.8935872E-02
25 0.3107716 26 2.301279 27 0.3354307E-01 28 0.1790379E-03 29 0.4795384 30 0.1679879E-01
31 0.7339221E-02 32 0.7028363E-02 33 0.2296444E-01 34 0.5304240E-02 35 0.8722859E-01 36 0.7135324E-01
37 0.6553347E-01 38 0.6798322E-02 39 0.8718940E-01 40 0.1319106 41 0.1882303E-05 42 0.4866507E-01
43 0.1161615 44 0.1780486E-01 45 0.9918725E-04 46 0.2344279 47 0.1313383E-01 48 0.1221957E-02
49 0.2988440 50 0.1404333 51 3.260908 52 3.446915 53 2.975924 54 0.2409532E-04
55 0.1185874 56 0.5097762 57 0.1331702E-01 58 0.9388682E-01 59 0.4836188E-01 60 0.2650422
61 0.1146608 62 0.1917533E-01 63 0.4259542E-04 64 0.1436274E-01 65 0.3997090E-01 66 0.1237374E-01
67 0.5053655E-01 68 0.1339012E-02 69 0.2786878E-03 70 0.4046029E-01 71 0.5507599E-02 72 0.1748092
73 1.109593 74 0.6723881E-02 75 0.9771165E-01 76 0.8644422E-02 77 0.7222756 78 0.7069892
79 0.1528638E-01 80 0.1416553 81 0.4379024E-01 82 0.2746749E-02 83 0.3115517E-01 84 0.4665334E-02
85 0.2907860 86 0.2072178 87 0.1306271 88 0.5144113E-02 89 0.3908937E-01 90 0.5552800E-01
91 0.1731528E-01 92 0.2505555 93 0.4916989E-01 94 0.1042099 95 0.1718490E-03 96 0.1264773E-03
97 0.5003906E-03 98 0.4381516E-01 99 0.3246086 100 0.2869882 101 6.497748 102 0.4149091
103 0.3719754E-02 104 0.2865751E-01 105 0.9420683E-02 106 0.4082492E-01 107 0.7568741E-04 108 0.8152707E-02
109 0.4734437E-02 110 0.1917068E-01 111 0.1267373E-03 112 0.1325954E-02 113 0.1811026E-01 114 0.1284570
115 0.2075711E-02 116 0.2767460E-02 117 0.4702055E-03 118 0.1457232E-03 119 0.9877589E-03 120 0.9521522E-04
121 0.3481006E-02 122 0.5704057 123 0.9527906 124 0.2063120 125 0.1673055E-03 126 0.1160868
127 0.1872925E-01 128 0.7956271E-01 129 0.3532875E-02 130 0.3521876E-07 131 0.5158417E-01 132 0.2287763E-01
133 0.1733540E-01 134 0.7498567E-02 135 0.2463348E-01 136 0.1092357 137 0.9497345E-01 138 0.1114900
139 0.2695543E-01 140 0.4757678E-03 141 0.5572037E-02 142 0.2115746E-01 143 0.2721911 144 0.7720624E-02
145 0.3108793E-02 146 0.3050374E-01 147 0.8523998E-02 148 0.1815146E-02 149 0.1686480 150 0.5869154E-03
151 0.1689494 152 0.1611299E-03 153 0.5777846E-01 154 0.5303902E-03 155 0.1047760E-02 156 0.2537075E-01
157 0.6412387E-01 158 0.2757591E-02 159 0.5007321E-02 160 0.3833170E-02 161 0.8457784E-02 162 0.4157922E-01
163 0.2475946E-01 164 0.1626349E-01 165 0.8643800E-03 166 0.8863971E-02 167 0.4068831 168 0.1255301E-01
169 0.1107679 170 0.2049129E-01 171 0.1813215E-02 172 0.4025164E-03 173 0.6259772E-02 174 0.1011661E-04
175 0.1297869 176 0.1067320E-01 177 0.1797929E-02 178 0.3537809E-02 179 0.2184994 180 0.3012184E-01
181 1.259559 182 1.497024 183 0.3598038E-01 184 0.3941923 185 0.1145263E-02 186 0.3101918E-01
187 0.2394525 188 0.1483302 189 0.4114134E-02 190 0.8439332E-04 191 0.8670025E-03 192 0.4957096E-03
193 0.3264026E-03 194 0.2397657E-07 195 0.3091267E-06 196 0.3111182E-08 197 0.1026528E-06 198 0.3408540E-06
199 0.9884816E-04 200 0.1892910E-04 201 0.4999806E-05 202 0.4755444E-04 203 0.5794597E-04 204 0.7691592E-05
205 0.1874328E-01 206 0.5786965E-02 207 0.9327812E-03 208 0.9356450E-03 209 0.3071240E-03 210 0.3839082E-01
211 0.3471837E-02 212 0.1390855E-02 213 0.1629128E-01 214 0.2695962E-01 215 0.1398543E-01 216 0.6312790E-03
217 0.6396122E-03 218 0.2989633E-02 219 0.1764056E-03 220 0.1462473E-05 221 0.2733759E-01 222 0.1536261E-04
223 0.3911657E-03 224 0.2925800E-03 225 0.1123077E-04 226 0.2119480E-03 227 0.6445736E-05 228 0.7018672E-05
229 0.2309662E-03 230 0.1036479E-01 231 0.1316671E-02 232 0.2934473E-05 233 0.1818285E-03 234 0.3493844E-04
235 0.2172692E-03 236 0.9533728E-08 237 0.3000522E-04 238 0.9065489E-02 239 0.5369477E-02 240 0.1806782E-02
241 0.6068677E-01 242 0.2715469E-01 243 0.5028551E-02 244 0.2539771E-01 245 0.9022403E-02 246 0.3889694E-01
247 0.3019844E-02 248 0.2514244E-03 249 0.6994754E-02 250 0.1104347E-02 251 0.8858073E-03 252 1.268133
253 0.6498606E-02 254 0.3014575E-02 255 0.5336990E-02 256 0.1242620E-04 257 0.1417677E-01 258 0.8064861E-04
259 0.7214768E-01 260 0.9329913E-02 261 0.2908378E-05 262 0.4494053E-02 263 0.2586184E-03 264 0.1303205E-03

265 0.3046572E-02 266 0.5856211E-02 267 0.9800324E-04 268 0.4681064E-06 269 0.1707818E-02 270 0.5290154E-05
271 0.6865236E-04 272 0.1328656E-03 273 0.2283930E-05 274 0.8094394E-07 275 0.4780268E-04 276 0.5080488E-02
277 0.6628741E-02 278 0.8802035E-05 279 0.1520587E-03 280 0.9093826E-04 281 0.1480147E-05 282 0.2202897E-03
283 0.3374036E-03 284 0.2386396E-05 285 0.4486565E-01 286 0.3664541E-03 287 0.4034684E-03 288 0.6142136E-02
289 0.9081239E-01 290 0.1060947 291 0.2580247E-04 292 0.5796998E-05 293 0.1844840E-02 294 0.2957561E-01
295 0.7019177E-03 296 0.1126232E-02 297 0.1010680E-02 298 0.7434394E-03 299 0.1349139E-02 300 0.1123500E-02

TOTAL PERCENTAGE OF Z DIRECTION MASS PARTICIPATING: 99.042

--- LOADING - 35 UNIT LOAD IN X DIRECTION ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------//			----------MOMENT----------/		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	129.7808990	-4256.3159180	115.8541031	47231.7109375	-370.9805908	0.0000000
12	GLOBAL	113.2372284	3695.0334473	1904.1431885	53901.1171875	121.4818115	0.0000000
101	GLOBAL	-24558.6113281	-41173.8476562	-2041.7117920	-378095.8437500	-1372.3001709	0.0000000
111	GLOBAL	149.7516327	-1918.3165283	-2410.6992188	-400865.4375000	1511.7766113	0.0000000
123	GLOBAL	0.0000000	-467.1255188	0.0000000	0.0000000	-63.1989098	0.0000000
1101	GLOBAL	-464.9511108	43267.7187500	-3894.7802734	-544980.5625000	-17963.8203125	0.0000000
1111	GLOBAL	210.5595551	10426.2802734	-4043.0935059	-554239.1875000	9245.3154297	0.0000000
1123	GLOBAL	0.0000000	671.8027344	0.0000000	0.0000003	-64.3278351	-0.0000003
2101	GLOBAL	147.4514160	-337.0254822	479.9064636	93862.0312500	-718.2703247	0.0000000
2111	GLOBAL	12.0552835	155.3760071	-365.3382263	-12332.0380859	1123.7902832	-0.0000002
2123	GLOBAL	0.0000000	172.5573578	0.0000000	0.0000000	-67.0606537	0.0000000
3101	GLOBAL	388.3572083	-3142.9519043	12283.2500000	1629276.5000000	-763.9154663	0.0000000
3111	GLOBAL	-176.7794952	2277.5900879	11336.1640625	1554878.2500000	731.1145020	0.0000000
3123	GLOBAL	0.0000000	-100.4685135	0.0000000	0.0000000	-69.9877625	0.0000000
4101	GLOBAL	-24371.8652344	-40382.1015625	2557.3891602	384792.4375000	323.1633911	0.0000000
4111	GLOBAL	-10704.8945312	-19713.1328125	-252.1251373	17761.5703125	1027.4224854	0.0000000
5101	GLOBAL	539.7324829	41279.7734375	727.6705933	14559.0087891	-17764.4726562	0.0000000
5111	GLOBAL	-214.8528442	19286.7343750	1206.7116699	62805.2148438	6732.3066406	0.0000000
6101	GLOBAL	-217.6375885	-0.0321952	0.1516415	0.0000000	-1336.4808350	0.0000000
7101	GLOBAL	-184.3852539	309.8574219	-660.7963257	-297707.4062500	-1253.2102051	0.0000000
7111	GLOBAL	-285.9528503	-4654.9057617	-327.1008911	-255451.0468750	571.2672119	0.0000000
8100	GLOBAL	0.0000000	204.5346375	0.0000000	0.0000000	2.3369732	0.0000000
8101	GLOBAL	-216.8085632	-246.7113647	325.0359802	142356.3125000	-1269.7656250	0.0000000
8111	GLOBAL	-156.4762878	4530.6113281	-143.3410187	46662.8593750	375.8031006	0.0000000
112	GLOBAL	-23435.7246094	0.0000000	0.0000000	0.0000000	0.0000000	0.0000003
1112	GLOBAL	-17091.5742188	0.0000000	-0.0000119	0.0000000	0.0000000	-0.0000057
2112	GLOBAL	-65111.8320312	0.0000000	4191.2958984	0.0000000	0.0000000	-0.0000001
2122	GLOBAL	1.4202454	18.1675529	23.2912827	0.0000000	-4.2874546	0.0000000
3112	GLOBAL	-0.0000001	0.0000000	0.0000334	0.0000000	-0.0000114	0.0000047
5112	GLOBAL	0.0000000	0.0000000	-3501.2211914	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000000	-10245.2304688	-18059.5273438	0.0000000	32.8244781	57.8605423
8157	GLOBAL	0.0000000	342.1294861	548.8708496	0.0000000	11.7083244	18.7834091

--- LOADING - 36 UNIT LOADS IN Y DIRECTION ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------//			----------MOMENT----------/		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	0.6936451	76008.8281250	-760.0891724	-178748.5468750	104.6452408	0.0000000
12	GLOBAL	0.1863289	77433.6328125	998.2659912	-2297.8635254	-131.4371643	0.0000000
101	GLOBAL	-5998.3286133	32760.9375000	1323.7348633	-92239.3671875	200.4444580	0.0000000
111	GLOBAL	-7.5768585	38258.2617188	-4051.1037598	-296845.5312500	-124.0586166	0.0000000
123	GLOBAL	0.0000000	214555.3125000	0.0000000	0.0000000	-110.6633835	0.0000000
1101	GLOBAL	-113.7375412	32806.8945312	2171.4509277	-46200.1406250	-898.9342041	0.0000000
1111	GLOBAL	-3.1927590	27357.7363281	-4867.2011719	-336983.6875000	-119.7147293	0.0000000
1123	GLOBAL	0.0000000	213667.3437500	0.0000000	0.0000000	-110.6347427	0.0000000
2101	GLOBAL	-93.5235596	27584.5097656	3859.9431152	196104.9375000	289.7006836	0.0000000

2111	GLOBAL	24.7481518	27320.8359375	-3131.3222656	-132784.1250000	-99.1985016	0.0000000
2123	GLOBAL	0.0000000	213956.9843750	0.0000000	0.0000000	-110.4268341	0.0000000
3101	GLOBAL	411.8645935	58031.7500000	5264.6982422	719497.5000000	566.8596802	0.0000000
3111	GLOBAL	-6.7721682	56077.3789062	5344.8232422	981064.5000000	-150.4787292	0.0000000
3123	GLOBAL	0.0000000	215110.7343750	0.0000000	0.0000000	-109.2307358	0.0000000
4101	GLOBAL	-5991.0209961	43421.7343750	-25731.7500000	-4420302.0000000	-1139.0712891	0.0000000
4111	GLOBAL	570.5290527	40327.4531250	-6919.7724609	-128771.3984375	-144.5100708	0.0000000
5101	GLOBAL	262.7337341	81327.0078125	9747.1113281	322792.0937500	243.3375702	0.0000000
5111	GLOBAL	-12.0710077	84160.7343750	-9142.7041016	-475846.4062500	-616.8967896	0.0000000
6101	GLOBAL	-34.4016800	19505.3144531	396.8009644	0.0000000	199.9947815	0.0000000
7101	GLOBAL	-30.0038815	19488.5390625	-6101.4311523	-2105407.2500000	210.0610504	0.0000000
7111	GLOBAL	-17.9085217	30153.5234375	4474.2192383	1685662.6250000	661.7986450	0.0000000
8100	GLOBAL	0.0000000	19180.0175781	0.0000000	0.0000000	-8.1583624	0.0000000
8101	GLOBAL	-34.0378609	214.7294769	-25.5909748	-4808.6201172	207.6842957	0.0000000
8111	GLOBAL	-39.0998917	150.7890167	828.2886963	227349.0468750	680.3541870	0.0000000
112	GLOBAL	-863.2724609	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
1112	GLOBAL	1174.3175049	0.0000000	-0.0000029	0.0000000	0.0000000	0.0000000
2112	GLOBAL	10799.1357422	0.0000000	18935.4199219	0.0000000	0.0000000	0.0000000
2122	GLOBAL	0.7390786	275.3505859	-108.6748047	0.0000000	-2.1678810	0.0000000
3112	GLOBAL	0.0000000	-0.0000001	0.0000243	-0.0000003	-0.0000001	0.0000000
5112	GLOBAL	0.0000000	0.0000000	-1698.3356934	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000000	-1348.9465332	-2377.8222656	0.0000000	-2.3898492	-4.2126479
8157	GLOBAL	0.0000000	7212.6162109	11571.0419922	0.0000000	-0.6150334	-0.9866847

--- LOADING - 37 UNIT LOAD IN Z DIRECTION ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------//			----------MOMENT----------/		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	-1.1414012	20197.3847656	-1328.3742676	-450098.2812500	99.5318375	0.0000000
12	GLOBAL	5.9541907	-20229.2949219	-16778.9082031	-505119.0000000	98.4681778	0.0000000
101	GLOBAL	2269.3806152	5335.1342773	-2453.1801758	-603812.6250000	139.7258453	0.0000000
111	GLOBAL	2.7652032	10310.3603516	-1299.2517090	-450473.0000000	206.2009430	0.0000000
123	GLOBAL	0.0000000	-120.3364487	0.0000000	0.0000000	10.7592888	0.0000000
1101	GLOBAL	38.0967903	633.9287720	-3968.1533203	-894522.3750000	781.5768433	0.0000000
1111	GLOBAL	6.2698836	-2469.4106445	-3983.9152832	-895113.1250000	685.5194092	0.0000000
1123	GLOBAL	0.0000000	-33.0124626	0.0000000	0.0000000	10.7554474	0.0000000
2101	GLOBAL	22.7670383	3084.3547363	618.9269409	-322140.6875000	104.2976151	0.0000000
2111	GLOBAL	-1.1583711	-2332.8271484	3903.0163574	92139.5859375	118.4117126	0.0000000
2123	GLOBAL	0.0000000	-683.9401855	0.0000000	0.0000000	10.7243261	0.0000000
3101	GLOBAL	-27.9842739	4068.4912109	-7660.5175781	-1354895.7500000	70.8502502	0.0000000
3111	GLOBAL	-3.2590137	-4017.5644531	-6860.0644531	-1291738.3750000	106.2493591	0.0000000
3123	GLOBAL	0.0000000	73.6553955	0.0000000	0.0000000	10.7055235	0.0000000
4101	GLOBAL	2245.0993652	3158.4208984	-4149.3515625	-1322811.6250000	-325.9497681	0.0000000
4111	GLOBAL	-332.9196167	3316.3046875	5783.3857422	90362.6875000	105.1529236	0.0000000
5101	GLOBAL	-20.2747936	-994.8778687	6625.6752930	158433.0937500	670.0634155	0.0000000
5111	GLOBAL	-4.5968547	-459.2540894	8429.1259766	438707.0625000	445.9126587	0.0000000
6101	GLOBAL	19.2861824	43.2460518	1.2106773	0.0000000	181.5264740	0.0000000
7101	GLOBAL	38.6970863	773.4613037	-2116.7453613	-930783.1875000	196.8706818	0.0000000
7111	GLOBAL	-12.7762709	-1044.1434326	-2402.0617676	-1001889.3125000	-138.5188751	0.0000000
8100	GLOBAL	0.0000000	76.1317368	0.0000000	0.0000000	9.2892475	0.0000000
8101	GLOBAL	22.5155602	731.9420166	-2024.7019043	-890934.0625000	173.5758972	0.0000000
8111	GLOBAL	-0.8545534	-509.5057983	-1841.4055176	-844548.6250000	-152.7754974	0.0000000
112	GLOBAL	-1316.8106689	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
1112	GLOBAL	-735.1951294	0.0000000	-0.0000238	0.0000000	0.0000000	-0.0000003
2112	GLOBAL	-2213.9287109	0.0000000	-69618.4531250	0.0000000	0.0000000	0.0000000
2122	GLOBAL	0.0677642	-135.1714325	85.9582977	0.0000000	2.4818020	0.0000000
3112	GLOBAL	0.0000000	0.0000001	-0.0000324	0.0000001	-0.0000006	0.0000003
5112	GLOBAL	0.0000000	0.0000000	-32185.5292969	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000000	-13624.7529297	-24016.6972656	0.0000000	3.7142668	6.5472322
8157	GLOBAL	0.0000000	-5148.7236328	-8259.9853516	0.0000000	0.8774114	1.4076118

--- LOADING - 38 ACCELERATION Y ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		FORCE			MOMENT		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	-9.3968267	147376.5937500	-558.3123169	-234641.6875000	-247.1795807	0.0000000
12	GLOBAL	-12.6694355	148400.7500000	645.2143555	-350818.4062500	164.0513306	0.0000000
101	GLOBAL	-389.0114746	205500.0625000	-335.8210449	-223592.4218750	-1141.9461670	0.0000000
111	GLOBAL	-75.1714249	199533.8906250	-3927.7380371	-379245.6250000	1574.9046631	0.0000000
123	GLOBAL	0.0000000	13782.9482422	0.0000000	0.0000000	-10.8096037	0.0000000
1101	GLOBAL	-55.1374588	22226.8007812	-370.0314331	-67075.9765625	-576.4953613	0.0000000
1111	GLOBAL	-49.4517174	22963.9023438	-700.5640259	-78707.6796875	218.3856506	0.0000000
1123	GLOBAL	0.0000000	14678.0058594	0.0000000	0.0000000	-10.8622169	0.0000000
2101	GLOBAL	-42.6830025	40429.9257812	475.1795959	10753.9384766	-217.6697083	0.0000000
2111	GLOBAL	-48.0000725	39857.4882812	-455.3963928	-23943.2050781	44.8045311	0.0000000
2123	GLOBAL	0.0000000	13095.7617188	0.0000000	0.0000000	-10.7872553	0.0000000
3101	GLOBAL	7.7918057	43490.9414062	688.2460327	50643.6679688	-138.5776062	0.0000000
3111	GLOBAL	-1.4459066	39092.7890625	-182.7458496	26500.0351562	-3.7476585	0.0000000
3123	GLOBAL	0.0000000	12859.0712891	0.0000000	0.0000000	-10.6200619	0.0000000
4101	GLOBAL	-232.6713409	44488.2695312	-811.9874878	-313270.8750000	-29.6234531	0.0000000
4111	GLOBAL	1142.3132324	41355.1093750	-1686.7998047	-77902.8281250	-101.9782104	0.0000000
5101	GLOBAL	-4.7543168	36962.3906250	1500.5562744	45193.9375000	1143.7108154	0.0000000
5111	GLOBAL	-14.2517195	39695.6562500	-1761.8034668	-91695.8203125	-1475.4516602	0.0000000
6101	GLOBAL	-5.4089279	22831.4511719	12.8676968	0.0000000	-255.4399414	0.0000000
7101	GLOBAL	-5.2641406	23254.3496094	-1032.3197021	-345722.7812500	-253.3800049	0.0000000
7111	GLOBAL	6.1920457	36159.5703125	932.1195068	293208.7500000	76.8815460	0.0000000
8100	GLOBAL	0.0000000	9579.2832031	0.0000000	0.0000000	-1.2027744	0.0000000
8101	GLOBAL	-5.4388809	16077.6552734	-59.3081169	-25944.4316406	-252.6410217	0.0000000
8111	GLOBAL	19.0582466	13785.3652344	104.1063538	59637.3320312	62.6279335	0.0000000
112	GLOBAL	1181.6125488	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000001
1112	GLOBAL	-1430.7557373	0.0000000	-0.0000015	0.0000000	0.0000000	0.0000008
2112	GLOBAL	26.1996365	0.0000000	-151.3974152	0.0000000	0.0000000	-0.0000001
2122	GLOBAL	-1.6550217	3351.5520020	-18.0063972	0.0000000	-0.1505818	0.0000000
3112	GLOBAL	0.0000000	0.0000000	0.0000012	-0.0000001	0.0000016	-0.0000007
5112	GLOBAL	0.0000000	0.0000000	-32.2525177	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000771	4965.0581055	5175.1269531	0.0000000	24.1656475	42.5974007
8157	GLOBAL	0.0000425	2736.6740723	2551.0676270	0.0000000	-1.1449497	-1.8368176

--- LOADING - 39 ACCELERATION X ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		FORCE			MOMENT		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	-2100.1315918	-73004.9375000	-40.8073845	45564.5937500	-2506.0446777	0.0000000
12	GLOBAL	-4238.8588867	-70322.3750000	-952.8215332	173713.5781250	3057.1037598	0.0000000
101	GLOBAL	-173825.0781250	-333474.8125000	-26907.3808594	-3536695.7500000	-15718.1611328	0.0000000
111	GLOBAL	2963.8356934	-140296.1718750	-19484.6582031	-2659824.2500000	35218.7421875	0.0000000
123	GLOBAL	-1144.3054199	-5718.1733398	0.0000000	0.0000000	-543.7950439	0.0000000
1101	GLOBAL	-3432.2541504	415906.4375000	-19442.4960938	-3093790.0000000	-280090.5937500	0.0000000
1111	GLOBAL	3743.9396973	269216.5625000	-28425.2890625	-3508681.5000000	257849.2500000	0.0000000
1123	GLOBAL	-1144.3054199	5051.8671875	0.0000500	0.0000043	-567.0531616	-0.0000036
2101	GLOBAL	7188.9936523	-1792.9572754	2424.5080566	488324.7500000	292.5241089	0.0000000
2111	GLOBAL	2367.4045410	930.9799805	-1470.3032227	-3011.8410645	31696.5449219	-0.0000027
2123	GLOBAL	-1144.3054199	811.4971924	0.0000500	0.0000000	-623.3516235	0.0000000
3101	GLOBAL	6079.0346680	-17936.4785156	71319.2578125	9267273.0000000	2197.0317383	0.0000000
3111	GLOBAL	-3317.0476074	13734.2441406	62531.9023438	8574455.0000000	8105.8540039	0.0000000
3123	GLOBAL	-1144.3054199	-864.9291382	0.0000500	0.0000000	-679.0324707	0.0000000
4101	GLOBAL	-159436.8281250	-417110.0625000	37192.7695312	5393593.0000000	2598.8820801	0.0000000
4111	GLOBAL	-196498.4843750	-417445.8125000	-757.6720581	458282.5000000	13662.3808594	0.0000000
5101	GLOBAL	5485.4980469	420100.3437500	-379.9139709	-78425.2656250	-260391.8593750	0.0000000
5111	GLOBAL	-3893.7854004	413973.1250000	1856.6102295	96630.3046875	193516.8750000	0.0000000
6101	GLOBAL	-7506.3237305	-0.3552410	0.6436316	0.0000000	21531.1894531	0.0000000
7101	GLOBAL	-7420.0385742	900.8980713	-2004.3850098	-894730.5000000	21848.4980469	0.0000000
7111	GLOBAL	-11600.2626953	-21975.0664062	-701.0902100	-687101.5000000	6855.7788086	0.0000000
8100	GLOBAL	-2298.1040039	475.4247131	0.0000000	0.0000000	-62.0464058	0.0000000
8101	GLOBAL	-7476.3930664	-842.9019165	1517.5332031	665439.9375000	21888.9472656	0.0000000
8111	GLOBAL	-9463.7275391	24394.2089844	288.0014038	415646.0937500	3179.1938477	0.0000000

112	GLOBAL	-244057.8750000	-0.0000005	0.0000000	0.0000000	0.0000000	0.0000097
1112	GLOBAL	-213856.6562500	0.0000000	-0.0000703	0.0000000	0.0000000	-0.0001579
2112	GLOBAL	-228046.6250000	0.0000000	46106.9804688	0.0000000	0.0000002	-0.0000020
2122	GLOBAL	-138.6321106	100.5566254	-73.8274612	-0.0000001	-23.6021976	0.0000000
3112	GLOBAL	-0.0000034	-0.0000001	0.0001843	-0.0000002	-0.0003070	0.0001283
5112	GLOBAL	0.0000000	0.0000000	-7949.7773438	0.0000000	0.0000000	0.0000000
8156	GLOBAL	-2029.1910400	-67358.3828125	-118734.3359375	0.0000000	804.3797607	1417.9006348
8157	GLOBAL	-1146.5087891	2547.2888184	4086.5598145	0.0000000	202.1684265	324.3344116

--- LOADING - 40 ACCELERATION Z ---

RESULTANT JOINT LOADS SUPPORTS

JOINT		/----------FORCE----------/			/----------MOMENT----------/		
		X FORCE	Y FORCE	Z FORCE	X MOMENT	Y MOMENT	Z MOMENT
1	GLOBAL	-5.3853159	522708.8125000	-26087.7558594	-8646011.0000000	191.8300476	0.0000000
12	GLOBAL	-35.2004585	-520882.6875000	-345946.8750000	-9843978.0000000	-7970.7299805	0.0000000
101	GLOBAL	-4310.9536133	92094.6953125	-1530.4222412	-6819369.5000000	171.9065094	0.0000000
111	GLOBAL	-15.3175306	73250.3906250	136814.4531250	943738.9375000	-12709.5117188	0.0000000
123	GLOBAL	0.0000000	54172.4882812	-1144.3054199	0.0000000	-13.5088387	0.0000000
1101	GLOBAL	-287.5414734	26891.5742188	265.3009644	-6232690.0000000	3300.0935059	0.0000000
1111	GLOBAL	-14.0855856	-20612.7324219	-3375.3750000	-6393460.5000000	-9619.8798828	0.0000000
1123	GLOBAL	-0.0000500	-1652.8476562	-1144.3054199	0.0000000	-13.0016108	0.0000000
2101	GLOBAL	-158.2731934	28325.6601562	31863.1328125	-419415.3437500	460.9595337	0.0000000
2111	GLOBAL	-8.6653337	-23665.7812500	51757.6093750	2080136.7500000	-9916.8076172	0.0000000
2123	GLOBAL	-0.0000500	-4056.9946289	-1144.3054199	0.0000000	-13.2159958	0.0000000
3101	GLOBAL	358.9924622	21897.8281250	-10906.8388672	-4382429.5000000	683.2376709	0.0000000
3111	GLOBAL	-45.4768600	-20901.3789062	-9215.5849609	-4251935.5000000	-9053.4599609	0.0000000
3123	GLOBAL	-0.0000500	206.9120178	-1144.3054199	0.0000000	-12.3496838	0.0000000
4101	GLOBAL	-1505.9748535	7445.9863281	-10287.8652344	-7951230.0000000	-338.3109436	0.0000000
4111	GLOBAL	-2512.8505859	28414.8378906	44509.5820312	303023.3125000	-7906.1713867	0.0000000
5101	GLOBAL	53.9643898	2344.5053711	58563.2929688	1718713.5000000	3022.8347168	0.0000000
5111	GLOBAL	-40.1927605	11894.4951172	76593.7343750	4032886.5000000	-3904.2570801	0.0000000
6101	GLOBAL	11.2391777	216.3286133	-8954.9658203	0.0000000	671.0153809	0.0000000
7101	GLOBAL	138.9592590	3821.9912109	-26828.5488281	-8679057.0000000	798.5969238	0.0000000
7111	GLOBAL	-257.4674988	9227.5517578	-34354.2929688	-10529671.0000000	-2314.4697266	0.0000000
8100	GLOBAL	0.0000000	1097.4815674	-2298.1040039	0.0000000	60.4794273	0.0000000
8101	GLOBAL	32.1478462	4362.5561523	-24594.4335938	-8023737.5000000	658.3347168	0.0000000
8111	GLOBAL	-378.1219788	-18610.4570312	-21001.1777344	-7218924.0000000	-2268.2658691	0.0000000
112	GLOBAL	-1469.3099365	0.0000000	0.0000000	0.0000001	0.0000000	0.0000001
1112	GLOBAL	74.9601822	0.0000000	-0.0002170	0.0000000	0.0000000	0.0000032
2112	GLOBAL	10375.5878906	0.0000001	-414023.1562500	0.0000005	0.0000000	0.0000001
2122	GLOBAL	-1.0475041	-1205.7344971	1041.9707031	0.0000000	-25.1228428	0.0000000
3112	GLOBAL	0.0000001	0.0000006	-0.0001323	0.0000010	0.0000031	-0.0000013
5112	GLOBAL	0.0000000	0.0000000	-232936.9218750	0.0000000	0.0000000	0.0000000
8156	GLOBAL	0.0000438	-225969.6875000	-400351.6875000	0.0000000	-219.3337097	-386.6250916
8157	GLOBAL	0.0000265	-50815.7851562	-82669.1640625	0.0000000	-52.2584114	-83.8370285

{ 5} > LIST DISPLACEMENTS JOINTS EXISTING 2 19 27 38 102 118 128 146 152 1102 1118 -
{ 6} >_1146 1153 2102 2118 2146 2152 3102 3118 3153 4102 4118 4152 5102 5118 5153 -
{ 7} >_6118 6152 7118 7152 8118 8152

****
RESULTS OF LATEST ANALYSES
****

PROBLEM - N1E3_HU_ TITLE - BRIDGE LOCATION 1 TROLLEY POSITION 3 - LOAD UP - MHE

ACTIVE UNITS INCH LB DEG DEGF SEC

--- LOADING - 35 UNIT LOAD IN X DIRECTION ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	0.1031020	0.0008144	-0.0059209	-0.0008989	0.0147471	-0.0278579
19	GLOBAL	0.1668792	-0.0007392	-0.0146090	-0.0009619	-0.0057692	-0.0055402
27	GLOBAL	0.2716490	0.0001032	-0.0061543	-0.0001266	0.0068146	-0.0579608
38	GLOBAL	0.8823440	0.0001297	-0.0153000	-0.0000754	-0.0091062	-0.0655760
102	GLOBAL	0.1036614	0.0018825	0.0094158	0.0033787	0.0221446	-0.0372292
118	GLOBAL	0.1657397	0.0023896	0.0927755	0.0070418	-0.0020442	-0.0144272
128	GLOBAL	0.2686938	0.0006362	0.0016627	-0.0001417	0.0068208	0.0001010
146	GLOBAL	0.1154643	0.0024064	0.0094625	-0.0015221	0.0009958	-0.0246446
152	GLOBAL	0.8847743	-0.0018552	0.0932053	-0.0026315	-0.0107465	-2.9435148
1102	GLOBAL	0.0973693	-0.0034125	0.0118570	0.0029815	0.2943466	-0.0179514
1118	GLOBAL	0.1627466	-0.0021561	0.0260815	-0.0000938	-0.0043360	-0.0042067
1146	GLOBAL	0.1134301	0.0007229	0.0123306	-0.0002813	0.0072146	-0.0130164
1153	GLOBAL	0.8026144	-0.0070955	0.0259821	0.0009812	-0.0910413	-0.0109652
2102	GLOBAL	0.1065295	0.0000266	-0.0023863	-0.0008924	0.0117692	-0.0332896
2118	GLOBAL	0.1620239	-0.0005244	-0.0217610	-0.0013204	-0.0106080	-0.0022299
2146	GLOBAL	0.1133993	-0.0004581	-0.0015742	0.0002632	0.0019218	-0.0214736
2152	GLOBAL	0.8858891	0.0007580	-0.0218222	0.0003523	-0.0107580	-2.8161004
3102	GLOBAL	0.1056686	0.0002356	-0.0339645	-0.0078490	0.0125172	-0.0364905
3118	GLOBAL	0.1607287	-0.0010953	-0.0790369	-0.0000092	-0.0130674	-0.0020127
3153	GLOBAL	0.8044370	0.0000046	-0.0789491	-0.0002726	-0.0907708	-0.0084831
4102	GLOBAL	0.1065054	0.0019816	-0.0085204	-0.0026109	-0.0006367	-0.0398172
4118	GLOBAL	0.1591233	0.0019095	-0.0219830	-0.0023227	-0.0176758	-0.0060010
4152	GLOBAL	0.8856583	0.0078193	-0.0220600	-0.0000766	-0.0084237	-2.2328658
5102	GLOBAL	0.1032057	-0.0030754	0.0007449	0.0011972	0.2911189	-0.0338628
5118	GLOBAL	0.1598341	-0.0024304	0.0410608	0.0031053	-0.0167088	-0.0058639
5153	GLOBAL	0.8054483	-0.0080863	0.0412181	-0.0001054	-0.0905783	-0.0130659
6118	GLOBAL	0.1610748	0.0001247	0.0524696	0.0029105	-0.0020015	0.0004910
6152	GLOBAL	0.8843423	-0.0004656	0.0524719	0.0001121	-0.0046924	-2.5449119
7118	GLOBAL	0.1620871	0.0021839	0.0574089	0.0027449	0.0028253	-0.0029678
7152	GLOBAL	0.8821393	0.0028417	0.0555713	-0.0013469	-0.0026688	-3.8717864
8118	GLOBAL	0.1600441	-0.0016425	-0.0249217	-0.0030324	-0.0003848	-0.0117435
8152	GLOBAL	0.8802074	-0.0001315	-0.0243570	0.0006998	-0.0013746	-3.9675667

--- LOADING - 36 UNIT LOADS IN Y DIRECTION ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	0.0246489	-0.0145434	0.0121103	-0.0003556	-0.0041598	-0.0029669
19	GLOBAL	0.0030225	-0.0267330	0.0179865	0.0052345	0.0099283	-0.0011259
27	GLOBAL	0.0176245	-0.1520362	0.0086495	-0.0000071	0.0061362	-0.0014869
38	GLOBAL	0.0315488	-0.1146884	0.0089032	-0.0000314	0.0049764	-0.0011830
102	GLOBAL	0.0245012	-0.0029092	0.0055820	0.0044404	-0.0033098	-0.0058471
118	GLOBAL	0.0030271	-0.0185606	0.0112580	0.1788515	0.0111071	-0.0022479

128	GLOBAL	0.0176237	-0.0087763	0.0064650	-0.0000092	0.0061290	0.0015409
146	GLOBAL	0.0197141	-0.0298591	0.0046060	-0.0074685	0.0097454	-0.0036030
152	GLOBAL	0.0314616	-0.8216231	0.0095419	0.0002495	0.0049942	0.0904723
1102	GLOBAL	0.0244473	-0.0025874	0.0055156	0.0052181	0.0147295	-0.0045696
1118	GLOBAL	0.0030809	-0.0147942	0.0140528	0.1842539	0.0084107	-0.0009746
1146	GLOBAL	0.0192969	-0.0295190	0.0046812	-0.0076417	0.0100236	-0.0028102
1153	GLOBAL	0.0370429	-0.7470592	0.0122117	-0.1105617	0.0035955	-0.0004227
2102	GLOBAL	0.0275173	-0.0021756	0.0001660	0.0038068	-0.0047469	-0.0058611
2118	GLOBAL	0.0034270	-0.0145403	0.0106118	0.1825693	0.0073654	-0.0009562
2146	GLOBAL	0.0182442	-0.0301216	-0.0002984	-0.0073203	0.0125044	-0.0037608
2152	GLOBAL	0.0312550	-0.8249449	0.0090794	-0.0001832	0.0049672	-0.0204981
3102	GLOBAL	0.0334378	-0.0044846	-0.0178521	-0.0021378	-0.0092883	-0.0145725
3118	GLOBAL	0.0037778	-0.0164995	-0.0056548	0.1848701	0.0061884	-0.0011046
3153	GLOBAL	0.0368629	-0.7429836	-0.0073527	-0.1109920	0.0035899	-0.0033408
4102	GLOBAL	0.0342110	-0.0036757	0.1049780	0.0369606	0.0127407	-0.0160313
4118	GLOBAL	0.0041210	-0.0150434	0.0443633	0.1974162	0.0056020	0.0000681
4152	GLOBAL	0.0310142	-0.8771497	0.0431157	0.0022310	0.0051025	0.2081729
5102	GLOBAL	0.0314536	-0.0063673	0.0063645	0.0130169	-0.0039856	-0.0118159
5118	GLOBAL	0.0043235	-0.0209134	0.0534493	0.1915511	0.0015054	0.0009963
5153	GLOBAL	0.0365031	-0.7621754	0.0520779	-0.1129106	0.0035877	-0.0003851
6118	GLOBAL	0.0039589	-0.4025787	0.0069733	0.1816925	0.0037893	0.0163244
6152	GLOBAL	0.0307370	-3.1072168	0.0069494	-0.0378670	0.0049216	-0.0723189
7118	GLOBAL	0.0036494	-0.0151629	0.0156073	0.1733126	-0.0215517	0.0008406
7152	GLOBAL	0.0306429	-0.8024090	0.0136686	-0.0001490	0.0049023	-0.1177367
8118	GLOBAL	0.0029659	-0.0006392	-0.0042755	0.0041979	-0.0202238	0.0018682
8152	GLOBAL	0.0305899	-0.0123299	-0.0041110	-0.0004272	0.0047988	-0.1966660

--- LOADING - 37 UNIT LOAD IN Z DIRECTION ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT	/----------DISPLACEMENT----------//----------ROTATION----------/					
	X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT	/----------DISPLACEMENT----------//----------ROTATION----------/					
	X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	-0.0091749	-0.0038645	0.0492419	0.0059451	-0.0039566	0.0012119
19	GLOBAL	0.0101261	0.0016103	0.0790241	0.0020281	-0.0072093	-0.0001980
27	GLOBAL	-0.0047909	-0.0010478	0.0520512	0.0004890	-0.0008545	-0.0014183
38	GLOBAL	0.0078241	-0.0010261	0.0799209	0.0005023	-0.0082361	-0.0009061
102	GLOBAL	-0.0091764	-0.0002976	0.0164943	0.0069993	-0.0022908	0.0022177
118	GLOBAL	0.0098136	0.0034452	0.1880145	0.0088661	-0.0072554	-0.0001446
128	GLOBAL	-0.0047922	-0.0011487	0.0330400	0.0001855	-0.0008546	0.0001574
146	GLOBAL	-0.0062163	0.0038299	0.0165477	-0.0022716	-0.0009135	0.0013528
152	GLOBAL	0.0076056	-0.0015774	0.1884189	-0.0027151	-0.0078113	0.2467327
1102	GLOBAL	-0.0085410	-0.0000500	0.0238337	0.0097065	-0.0128065	0.0016306
1118	GLOBAL	0.0089377	0.0055949	0.2576332	0.0114317	-0.0057693	-0.0000566
1146	GLOBAL	-0.0063433	0.0054032	0.0240684	-0.0032424	-0.0010541	0.0009767
1153	GLOBAL	-0.0020796	0.0047027	0.2580637	-0.0028148	-0.0066761	0.0014843
2102	GLOBAL	-0.0093353	-0.0002433	0.0122756	0.0075605	-0.0017090	0.0021748
2118	GLOBAL	0.0082780	0.0063816	0.2613613	0.0146494	-0.0048686	0.0001715
2146	GLOBAL	-0.0067238	0.0040179	0.0103878	-0.0023595	-0.0002726	0.0013468
2152	GLOBAL	0.0070604	-0.0030234	0.2621131	-0.0045062	-0.0068813	-0.0773607
3102	GLOBAL	-0.0095272	-0.0003197	0.0328407	0.0116028	-0.0011609	0.0029456
3118	GLOBAL	0.0075853	0.0060717	0.2769638	0.0112222	-0.0037846	0.0002262
3153	GLOBAL	-0.0020419	0.0045963	0.2773478	-0.0025917	-0.0065244	0.0000187
4102	GLOBAL	-0.0095425	-0.0001381	0.0381476	0.0178883	0.0040286	0.0031786
4118	GLOBAL	0.0069018	0.0064323	0.2904448	0.0164490	-0.0028671	-0.0003709
4152	GLOBAL	0.0065324	-0.0116755	0.2911598	-0.0037396	-0.0062423	-0.0406769
5102	GLOBAL	-0.0090428	0.0000619	0.0064398	0.0100473	-0.0109791	0.0025560
5118	GLOBAL	0.0064048	0.0072590	0.3050259	0.0173211	-0.0019090	-0.0004140
5153	GLOBAL	-0.0020613	0.0027450	0.3058369	-0.0043700	-0.0063980	-0.0013583
6118	GLOBAL	0.0062746	0.0064472	0.2386647	0.0131660	0.0196038	-0.0004607
6152	GLOBAL	0.0061639	0.0049496	0.2386770	0.0015205	-0.0057478	-0.6102441

7118	GLOBAL	0.0061578	0.0041508	0.1574755	0.0096342	0.0057005	-0.0004860
7152	GLOBAL	0.0060684	0.0012877	0.1582367	-0.0035094	-0.0053295	-0.0731535
8118	GLOBAL	0.0061008	0.0036670	0.1515888	0.0107944	0.0054303	-0.0006607
8152	GLOBAL	0.0060228	-0.0000489	0.1521833	-0.0039039	-0.0054640	-0.0753535

--- LOADING - 38 ACCELERATION Y ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		/----------DISPLACEMENT----------//----------ROTATION----------/					
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		/----------DISPLACEMENT----------//----------ROTATION----------/					
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	0.0047566	-0.0270262	0.0299664	0.0046668	0.0098258	0.0005879
19	GLOBAL	-0.0319864	-0.0411243	0.0320321	-0.0062139	-0.0146425	0.0044582
27	GLOBAL	0.0015535	-0.0525832	0.0286820	0.0000552	0.0006222	0.0028158
38	GLOBAL	-0.0264589	-0.0509397	0.0309712	0.0000576	0.0005657	0.0027366
102	GLOBAL	0.0047553	-0.0160270	0.0071402	0.0037283	0.0186996	-0.0074804
118	GLOBAL	-0.0320164	-0.0391229	0.0206294	0.0164334	0.0074894	-0.0227319
128	GLOBAL	0.0015539	-0.1582117	0.0176397	0.0000475	0.0006217	0.0006764
146	GLOBAL	0.0025599	-0.0045579	0.0067337	0.0022911	0.0008350	-0.0040784
152	GLOBAL	-0.0264368	-0.1292922	0.0194231	0.0003467	0.0005770	-0.0630751
1102	GLOBAL	0.0036835	-0.0015538	0.0016565	0.0005840	0.0094462	0.0001020
1118	GLOBAL	-0.0311412	-0.0053808	0.0039133	0.0351551	-0.0095210	0.0036541
1146	GLOBAL	0.0025602	-0.0037968	0.0016457	0.0006061	0.0008700	0.0004345
1153	GLOBAL	-0.0254805	-0.1337025	0.0036267	-0.0163569	0.0008357	0.0049149
2102	GLOBAL	0.0030438	-0.0029894	0.0004842	0.0007318	0.0035666	0.0000244
2118	GLOBAL	-0.0294050	-0.0085454	0.0057509	0.0352819	-0.0068660	0.0026263
2146	GLOBAL	0.0025271	-0.0038361	0.0003044	0.0009177	0.0010306	0.0003894
2152	GLOBAL	-0.0263791	-0.1507641	0.0054340	0.0002567	0.0006563	0.0104081
3102	GLOBAL	0.0026735	-0.0032073	-0.0006145	0.0004358	0.0022707	-0.0005952
3118	GLOBAL	-0.0276642	-0.0083643	0.0014579	0.0334420	-0.0042674	0.0016407
3153	GLOBAL	-0.0253915	-0.1315383	0.0010876	-0.0157819	0.0007556	0.0027684
4102	GLOBAL	0.0024359	-0.0032487	0.0093749	0.0045577	0.0006398	-0.0002044
4118	GLOBAL	-0.0260066	-0.0090930	0.0064321	0.0363647	-0.0016758	0.0015615
4152	GLOBAL	-0.0263281	-0.1542501	0.0061767	0.0004871	0.0007244	0.0391241
5102	GLOBAL	0.0024929	-0.0026804	0.0011211	0.0021015	-0.0187424	-0.0006424
5118	GLOBAL	-0.0252461	-0.0095324	0.0028421	0.0330384	-0.0021449	0.0010820
5153	GLOBAL	-0.0253643	-0.1291445	0.0025413	-0.0156935	0.0006915	0.0021232
6118	GLOBAL	-0.0252718	-0.1254237	-0.0007687	0.0305581	-0.0000154	0.0054262
6152	GLOBAL	-0.0263054	-0.4454416	-0.0007716	-0.0109538	0.0007327	0.0408178
7118	GLOBAL	-0.0252901	-0.0070912	0.0019431	0.0284498	-0.0031508	0.0012408
7152	GLOBAL	-0.0263008	-0.1235394	0.0016152	-0.0001769	0.0007280	0.0144308
8118	GLOBAL	-0.0253051	-0.0021037	-0.0011807	0.0034059	-0.0036678	0.0014792
8152	GLOBAL	-0.0262991	-0.0046807	-0.0011715	-0.0000520	0.0007075	0.0062815

--- LOADING - 39 ACCELERATION X ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		/----------DISPLACEMENT----------//----------ROTATION----------/					
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	0.8322661	0.0139686	-0.0105967	-0.0026495	0.0996195	-0.4014429
19	GLOBAL	4.0874100	0.0213405	-0.0121130	-0.0025768	0.0521205	0.1204578
27	GLOBAL	0.7784200	0.0173632	-0.0098259	-0.0000709	0.0528073	-0.5621354
38	GLOBAL	5.5806851	0.0176253	-0.0136834	0.0000533	0.0228554	-0.3921277
102	GLOBAL	0.8283060	0.0163089	0.0739888	0.0161006	0.2522694	-0.4608684
118	GLOBAL	4.0781770	0.0129929	0.1897095	0.0056722	0.0832571	-0.0643614
128	GLOBAL	0.7773652	0.0135973	0.0278360	-0.0003067	0.0528593	0.0000238
146	GLOBAL	0.5098492	0.0127909	0.0676223	-0.0083082	0.0806112	-0.3281434
152	GLOBAL	5.5766082	0.0207458	0.1901455	-0.0042463	0.0201986	-4.5382314
1102	GLOBAL	0.7182686	-0.0328021	0.0721209	0.0222208	4.5894303	-0.1718718
1118	GLOBAL	4.0588307	-0.0505336	0.1706577	0.0221468	0.2222328	0.0721934
1146	GLOBAL	0.5081533	0.0035889	0.0741660	-0.0005113	0.0872771	-0.1535692
1153	GLOBAL	5.5413942	-0.1222581	0.1714995	-0.0012970	-0.0546106	0.0381273
2102	GLOBAL	0.7149072	0.0001414	-0.0125453	-0.0047862	-0.0047932	-0.3918665
2118	GLOBAL	4.0469799	-0.0028323	-0.1189898	-0.0070819	0.1971700	0.1502762
2146	GLOBAL	0.5082100	-0.0024783	-0.0088075	0.0014317	0.0845165	-0.2801619
2152	GLOBAL	5.5732479	0.0038200	-0.1193214	0.0019282	0.0190470	-5.8798528
3102	GLOBAL	0.7656933	0.0013469	-0.1893629	-0.0425017	-0.0359995	-0.3866962
3118	GLOBAL	4.0236192	-0.0061360	-0.4361897	-0.0001593	0.2667553	0.0952431
3153	GLOBAL	5.5428114	-0.0001475	-0.4357183	-0.0014749	-0.0514689	0.0464425
4102	GLOBAL	0.7945002	0.0247481	-0.1169810	-0.0339398	-0.0425582	-0.4420259
4118	GLOBAL	3.9929695	0.0362501	-0.2277496	-0.0230223	0.2968307	-0.0594746
4152	GLOBAL	5.5697956	0.0916281	-0.2285480	0.0007458	0.0242494	-3.2311957
5102	GLOBAL	0.7390615	-0.0319150	0.0016610	0.0010201	4.2672210	-0.3040857
5118	GLOBAL	3.9848268	-0.0642404	0.0472334	0.0098188	0.3723238	-0.0317809
5153	GLOBAL	5.5434580	-0.0947838	0.0477406	0.0005207	-0.0503838	-0.0493424
6118	GLOBAL	3.9871731	-0.0253378	0.1305811	0.0099802	-0.0145249	0.0090900
6152	GLOBAL	5.5659280	-0.0140128	0.1305986	-0.0021813	0.0305302	-4.2464705
7118	GLOBAL	3.9883771	0.0075519	0.1660257	0.0101174	0.0156195	-0.0201218
7152	GLOBAL	5.5644822	0.0048943	0.1621924	-0.0039327	0.0339510	-7.9937935
8118	GLOBAL	3.9798334	-0.0080278	-0.1145662	-0.0114191	-0.0254597	-0.0432922
8152	GLOBAL	5.5644717	-0.0003056	-0.1135677	0.0027845	0.0364963	-8.1949100

--- LOADING - 40 ACCELERATION Z ---

RESULTANT JOINT DISPLACEMENTS SUPPORTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.

RESULTANT JOINT DISPLACEMENTS FREE JOINTS

JOINT		/----------DISPLACEMENT----------//			----------ROTATION----------/		
		X DISP.	Y DISP.	Z DISP.	X ROT.	Y ROT.	Z ROT.
2	GLOBAL	0.0191287	-0.1000142	1.0217879	0.1552603	-0.0076256	-0.0015812
19	GLOBAL	0.0342472	0.0854666	1.9906900	-0.1619186	0.6506678	-0.0458838
27	GLOBAL	0.0213065	-0.0243723	1.0609760	0.0159953	0.0015888	-0.0530535
38	GLOBAL	0.4418299	-0.0240297	1.9994808	0.0183570	-0.0204759	-0.0189244
102	GLOBAL	0.0190946	-0.0074950	0.2355175	0.1348189	-0.0029631	-0.0037634
118	GLOBAL	0.0321927	0.1742756	4.4057693	-0.5016056	0.6719862	-0.0525297
128	GLOBAL	0.0212217	-0.0213821	1.4755076	0.0064398	0.0015924	0.0039116
146	GLOBAL	0.0114077	0.0834161	0.2286891	-0.0529866	0.0032142	-0.0022456
152	GLOBAL	0.4318781	1.2584882	4.3704724	0.0604544	-0.0412329	-3.6979833
1102	GLOBAL	0.0175939	-0.0021209	0.2180020	0.1263786	-0.0540738	0.0009903
1118	GLOBAL	0.0263208	0.0833119	3.7562585	0.1698977	0.6028156	-0.0364443
1146	GLOBAL	0.0105746	0.0696799	0.2119645	-0.0416516	0.0030458	0.0009009
1153	GLOBAL	0.3386827	0.0159702	3.7637229	-0.0389047	-0.0795485	0.0681073
2102	GLOBAL	0.0188267	-0.0022340	0.0735881	0.0748304	-0.0075531	-0.0020486
2118	GLOBAL	0.0270524	0.0672973	2.6569645	0.1233780	0.5386786	-0.0333707
2146	GLOBAL	0.0084030	0.0403308	0.0556406	-0.0238679	0.0082539	-0.0011326
2152	GLOBAL	0.4142159	-0.0221899	2.6609895	-0.0354900	-0.0478689	-7.7738376
3102	GLOBAL	0.0100655	-0.0017203	0.1332320	0.0681712	-0.0111952	-0.0074219
3118	GLOBAL	0.0274242	0.0424736	1.7699875	0.0555544	0.4767882	-0.0191985

3153	GLOBAL	0.3203643	0.0190146	1.7702944	-0.0095849	-0.0790906	-0.0068359
4102	GLOBAL	0.0072678	-0.0006723	0.2601856	0.1388807	0.0019538	-0.0026631
4118	GLOBAL	0.0275191	0.0494987	2.0925004	0.0846709	0.4133858	-0.0018638
4152	GLOBAL	0.4009815	-0.0681046	2.0934794	-0.0131080	-0.0422907	-0.8891845
5102	GLOBAL	0.0067872	-0.0001734	0.0468830	0.0862743	-0.0495228	-0.0025530
5118	GLOBAL	0.0291438	0.0548718	2.3612008	0.0952045	0.3844509	0.0098064
5153	GLOBAL	0.3136662	0.0251451	2.3636761	-0.0204442	-0.0776760	0.0025645
6118	GLOBAL	0.0310070	0.0470105	1.7896904	0.0621144	0.1646581	-0.0033684
6152	GLOBAL	0.3924054	0.0231567	1.7879646	0.0107427	-0.0388736	-6.3940344
7118	GLOBAL	0.0325307	0.0321433	1.1785958	0.0339879	0.0997345	-0.0021539
7152	GLOBAL	0.3900264	0.0470685	1.1784655	-0.0150989	-0.0354976	-2.6226113
8118	GLOBAL	0.0363857	0.0319249	1.1261441	0.0718303	0.1083319	0.0180063
8152	GLOBAL	0.3888236	-0.0007055	1.1293312	-0.0233747	-0.0355746	-2.6822491

Attachment 31

Vendor-Supplied Stand-Alone Crane Models

MORRIS MATERIAL HANDLING

DOCUMENT SUBMITTAL

PN036539 Transmittal 04-4

To:	Crystal River Nuclear Power Plant	**Date:**	12/9/2010
Attn:	Jody Grier	**Contract #:**	429190
	15760 W Powerline Street (NW2A)	**P&H Job #:**	PN036539
	Crystal River, FL 34428	**Sent Via:**	e-mail
	Joseph.GrierIII@pgnmail.com	**Project:**	Crystal River Crane Replacement
	(352) 464 7321		

Document No.	Description	Rev.	Status Code	Notes
36539-29	Crane Stick Model	01	4	
none	HookUpDown12092010.zip	n/a	4	
none	Attachments.pdf	n/a	4	

SUBMITTED FOR:

x	Approval
	Reference
	Final Design Revision
	As-Built

INSTRUCTIONS

A. Please review and/or verify the data and/or dimensions contained on this drawing(s).

B. Review any other relevant information provided.

C. Provide the status code, attach comments as necessary, and return one (1) copy to the address shown below.

DEADLINE Approval Drawing(s) must be returned by: 12/16/2010

CONDITIONS

MORRIS MATERIAL HANDLING, INC. ("MORRIS") certifies that the crane(s) will be built according to the dimensions and information on the drawing(s). Our responsibility is limited to the crane(s) and not the building. MORRIS has not inspected the building. MORRIS shall not be responsible for increased expenses or costs related to the building information being inaccurate, all of which will be paid by the customer.

MORRIS is not responsible for changes to the crane(s) as a result of building changes after the customer signs approval. If changes are necessary after approval, the customer shall notify MORRIS and MORRIS will evaluate their impact on the contract price/delivery and report any changes.

Status Codes

1. Work may proceed. Document is approved.
2. Revise and resubmit, work may proceed.
3. Revise and resubmit, work may not proceed.
4. Information only.

Contact::

MORRIS MATERIAL HANDLING, INC.

Attn. Andrew Steiner
Phone: 262 364 5757
Fax: 262 364 5701
E-mail: asteiner@morriscranes.com

Crystal River 3

Crane Stick Model

Morris Material Handling

P&H Job #: PN036539

Document #: 36539-29

Revision No.: 1

Author: _____ Date: 12/09/10
Pugazhendhi Kanakasabai

Checker: _____ Date: 12/09/10
Cagatay Aycan

Approver: _____ Date: 12/09/10
Jay D Edmundson P.E.

REVISION PAGE

Revision #	Description of Revision	Date of Revision
0	Official transmittal of the initial version	8/20/10
1	Revised to simulate trolley/bridge interface as per NOG-1 2004	12/09/10

TABLE OF CONTENTS

Stiffness computation for hook up position

Length of the rope in the hook up position $L_{hu} := 96.16in$ (P&H Drawing: R88752)

Earth's gravity $g = 386.089 \cdot \frac{in}{s^2}$

Rope Dia $D_{rope} := 1.625in$ (P&H Drawing QR89197)

Rope Young's Modulus $E_{rope} := 13137518psi$ (Attachment A & B)

Number of parts of rope $n_{rope} := 8$

Frequency of the pendulum in the hook up position $f_{hu} := \frac{1}{2\pi} \cdot \sqrt{\frac{g}{L_{hu}}} = 0.319 \cdot Hz$

Mass of the live load + bottom block $M := \frac{266000lbf}{g}$ (P&H Drawing R88764)

Lateral stiffness of the rope $K_{latHU} := (2 \cdot \pi f_{hu})^2 \cdot M = 2766.223 \cdot \frac{lbf}{in}$

Vertical Stiffness of the rope $K_{longHU} := \frac{n_{rope} \frac{\pi \cdot D_{rope}^2}{4} \cdot E_{rope}}{L_{hu}} = 2.267 \times 10^6 \cdot \frac{lbf}{in}$

Stiffness computation for hook down position

Length of the rope in the hook down position $L_{hd} := 80ft + 96.16in = 1056.16 \cdot in$

Frequency of the pendulum in the hook down position $f_{hd} := \frac{1}{2\pi} \cdot \sqrt{\frac{g}{L_{hd}}} = 0.096 \cdot Hz$

Lateral stiffness of the rope $K_{latHD} := (2 \cdot \pi f_{hd})^2 \cdot M = 251.856 \cdot \frac{lbf}{in}$

Vertical Stiffness of the rope $K_{longHD} := \frac{n_{rope} \frac{\pi \cdot D_{rope}^2}{4} \cdot E_{rope}}{L_{hd}} = 2.064 \times 10^5 \cdot \frac{lbf}{in}$

! Hook Down Position

```
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/PREP7
/NOPR
/TITLE,
ANTYPE, 2
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MODOPT,LANB,    20,  0.00000000    ,  0.00000000    ,     0, 0,
0.00000000    , 0
MXPAND,    20,  0.00000000    ,  0.00000000    , 0,,-1
*IF,_CDRDOFF,EQ,1,THEN     !if solid model was read in
_CDRDOFF=             !reset flag, numoffs already performed
*ELSE              !offset database for the following FE model
NUMOFF,NODE,     450
NUMOFF,ELEM,     481
NUMOFF,MAT ,       7
NUMOFF,REAL,    1004
NUMOFF,SECN,      17
NUMOFF,COUP,      10
NUMOFF,CEQN,      10
NUMOFF,TYPE,    1004
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*SET,_GUI_CLR_SELFG,' systemHighlightText           '
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*SET,_ZC     (       9,       1,       1),'SECT    '
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ET,       1, 21
ET,       2,188
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KEYOP,    1001, 2,        1
ET,    1002, 14
KEYOP,    1002, 2,        3
ET,    1003, 14
KEYOP,    1003, 2,        2
ET,    1004, 21
RLBLOCK,       9,    1004,       6,       7
(2i8,6g16.9)
(7g16.9)
       1       6  51.7598344      219.979296      51.7598344
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       2       6  1.15000000      1.15000000      1.15000000
0.00000000      0.00000000      0.00000000
       3       6  2.27743000      2.27743000      2.27743000
0.00000000      0.00000000      0.00000000
       4       6  3.66200000      3.66200000      3.66200000
0.00000000      0.00000000      0.00000000
       5       6 0.646990000     0.646990000     0.646990000
0.00000000      0.00000000      0.00000000
    1001       6  251.855779      0.00000000      0.00000000
0.00000000      0.00000000      0.00000000
    1002       6  251.855779      0.00000000      0.00000000
0.00000000      0.00000000      0.00000000
    1003       6  206381.235      0.00000000      0.00000000
0.00000000      0.00000000      0.00000000
    1004       6  688.405797      688.405797      688.405797
0.00000000      0.00000000      0.00000000
MAT ,        5
TYPE,     1004
REAL,     1004
NBLOCK,6,SOLID,       450,       352
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1.1100000000000E
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1.1100000000000E
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1.1100000000000E
      33       0       0 4.8230434800000E 0.0000000000000E
1.1100000000000E
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1.1100000000000E
      35       0       0 4.6239130400000E 0.0000000000000E
1.1100000000000E
      36       0       0 4.5243478300000E 0.0000000000000E
1.1100000000000E
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1.1100000000000E
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1.1100000000000E
      39       0       0 4.2256521700000E 0.0000000000000E
1.1100000000000E
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1.1100000000000E
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6.5800000000000E9.7810000000000E
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```
     423       0       0 2.3970833300000E
6.5800000000000E8.0180000000000E
     424       0       0 2.5916666700000E
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     426       0       0 2.3970833300000E
6.5800000000000E5.7750000000000E
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6.5800000000000E5.7750000000000E
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9.1500000000000E
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9.1500000000000E
     432       0       0 2.3970833300000E
6.5800000000000E9.1180000000000E
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6.5800000000000E9.1180000000000E
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     435       0       0 2.7862500000000E 6.5800000000000E
1.1500000000000E
     436       0       0 2.7862500000000E
6.5800000000000E1.1500000000000E
     437       0       0 3.2300000000000E 6.5800000000000E
1.1100000000000E
     438       0       0 2.9341666700000E 6.5800000000000E
1.1100000000000E
     439       0       0 3.0820833300000E 6.5800000000000E
1.1100000000000E
     440       0       0 3.2300000000000E
6.5800000000000E1.1100000000000E
     441       0       0 2.9341666700000E
6.5800000000000E1.1100000000000E
     442       0       0 3.0820833300000E
6.5800000000000E1.1100000000000E
     443       0       0 2.2900000000000E 6.5800000000000E
1.1100000000000E
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1.1100000000000E
     445       0       0 2.6208333300000E 6.5800000000000E
1.1100000000000E
     446       0       0 2.2900000000000E
6.5800000000000E1.1100000000000E
     447       0       0 2.4554166700000E
6.5800000000000E1.1100000000000E
     448       0       0 2.6208333300000E
6.5800000000000E1.1100000000000E
     450       0       0 2.7862500000000E9.9036000000000E
N,R5.3,LOC,     -1,
EBLOCK,19,SOLID,       481,       380
(19i8)
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0       1       1       3
       6       2       1       1       0       0       0       0       2
0       2       3       4
```

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      6     2     1     1     0     0     0     0     2
0     3     4     5
      6     2     1     1     0     0     0     0     2
0     4     5     6
      6     2     1     1     0     0     0     0     2
0     5     6     7
      6     2     1     1     0     0     0     0     2
0     6     7     8
      6     2     1     1     0     0     0     0     2
0     7     8     9
      6     2     1     1     0     0     0     0     2
0     8     9    10
      6     2     1     1     0     0     0     0     2
0     9    10    11
      6     2     1     1     0     0     0     0     2
0    10    11    12
      6     2     1     1     0     0     0     0     2
0    11    12    13
      6     2     1     1     0     0     0     0     2
0    12    13    14
      6     2     1     1     0     0     0     0     2
0    13    14    15
      6     2     1     1     0     0     0     0     2
0    14    15    16
      6     2     1     1     0     0     0     0     2
0    15    16    17
      6     2     1     1     0     0     0     0     2
0    16    17    18
      6     2     1     1     0     0     0     0     2
0    17    18    19
      6     2     1     1     0     0     0     0     2
0    18    19    20
      6     2     1     1     0     0     0     0     2
0    19    20    21
      6     2     1     1     0     0     0     0     2
0    20    21    22
      6     2     1     1     0     0     0     0     2
0    21    22    23
      6     2     1     1     0     0     0     0     2
0    22    23    24
      6     2     1     1     0     0     0     0     2
0    23    24     2
      6     2     1     1     0     0     0     0     2
0    24    25    27
      6     2     1     1     0     0     0     0     2
0    25    27    28
      6     2     1     1     0     0     0     0     2
0    26    28    29
      6     2     1     1     0     0     0     0     2
0    27    29    30
      6     2     1     1     0     0     0     0     2
0    28    30    31
      6     2     1     1     0     0     0     0     2
0    29    31    32
```

```
        6       2       1       1       0       0       0       0       2
0       30      32      33
        6       2       1       1       0       0       0       0       2
0       31      33      34
        6       2       1       1       0       0       0       0       2
0       32      34      35
        6       2       1       1       0       0       0       0       2
0       33      35      36
        6       2       1       1       0       0       0       0       2
0       34      36      37
        6       2       1       1       0       0       0       0       2
0       35      37      38
        6       2       1       1       0       0       0       0       2
0       36      38      39
        6       2       1       1       0       0       0       0       2
0       37      39      40
        6       2       1       1       0       0       0       0       2
0       38      40      41
        6       2       1       1       0       0       0       0       2
0       39      41      42
        6       2       1       1       0       0       0       0       2
0       40      42      43
        6       2       1       1       0       0       0       0       2
0       41      43      44
        6       2       1       1       0       0       0       0       2
0       42      44      45
        6       2       1       1       0       0       0       0       2
0       43      45      46
        6       2       1       1       0       0       0       0       2
0       44      46      47
        6       2       1       1       0       0       0       0       2
0       45      47      48
        6       2       1       1       0       0       0       0       2
0       46      48      26
        2       2       1       1       0       0       0       0       2
0       47      49      51
        2       2       1       1       0       0       0       0       2
0       48      51      52
        2       2       1       1       0       0       0       0       2
0       49      52      53
        2       2       1       1       0       0       0       0       2
0       50      53      54
        2       2       1       1       0       0       0       0       2
0       51      54      55
        2       2       1       1       0       0       0       0       2
0       52      55      56
        2       2       1       1       0       0       0       0       2
0       53      56      57
        2       2       1       1       0       0       0       0       2
0       54      57      58
        2       2       1       1       0       0       0       0       2
0       55      58      59
        2       2       1       1       0       0       0       0       2
0       56      59      60
```

```
        2       2       1       1       0       0       0       0       2
0       57      60      61
        2       2       1       1       0       0       0       0       2
0       58      61      62
        2       2       1       1       0       0       0       0       2
0       59      62      63
        2       2       1       1       0       0       0       0       2
0       60      63      64
        2       2       1       1       0       0       0       0       2
0       61      64      65
        2       2       1       1       0       0       0       0       2
0       62      65      66
        2       2       1       1       0       0       0       0       2
0       63      66      67
        2       2       1       1       0       0       0       0       2
0       64      67      68
        2       2       1       1       0       0       0       0       2
0       65      68      69
        2       2       1       1       0       0       0       0       2
0       66      69      70
        2       2       1       1       0       0       0       0       2
0       67      70      71
        2       2       1       1       0       0       0       0       2
0       68      71      72
        2       2       1       1       0       0       0       0       2
0       69      72      50
        6       2       1       1       0       0       0       0       2
0       70      26      73
        6       2       1       1       0       0       0       0       2
0       71      73      74
        6       2       1       1       0       0       0       0       2
0       72      74      75
        6       2       1       1       0       0       0       0       2
0       73      75      76
        6       2       1       1       0       0       0       0       2
0       74      76      77
        6       2       1       1       0       0       0       0       2
0       75      77      78
        6       2       1       1       0       0       0       0       2
0       76      78      79
        6       2       1       1       0       0       0       0       2
0       77      79      80
        6       2       1       1       0       0       0       0       2
0       78      80      81
        6       2       1       1       0       0       0       0       2
0       79      81       2
        2       2       1       1       0       0       0       0       2
0       80      82      84
        2       2       1       1       0       0       0       0       2
0       81      84      85
        2       2       1       1       0       0       0       0       2
0       82      85      86
        2       2       1       1       0       0       0       0       2
0       83      86      87
```

```
         2       2       1       1       0       0       0       0       2
0       84      87      88
         2       2       1       1       0       0       0       0       2
0       85      88      89
         2       2       1       1       0       0       0       0       2
0       86      89      90
         2       2       1       1       0       0       0       0       2
0       87      90      91
         2       2       1       1       0       0       0       0       2
0       88      91      92
         2       2       1       1       0       0       0       0       2
0       89      92      93
         2       2       1       1       0       0       0       0       2
0       90      93      94
         2       2       1       1       0       0       0       0       2
0       91      94      95
         2       2       1       1       0       0       0       0       2
0       92      95      96
         2       2       1       1       0       0       0       0       2
0       93      96      97
         2       2       1       1       0       0       0       0       2
0       94      97      98
         2       2       1       1       0       0       0       0       2
0       95      98      99
         2       2       1       1       0       0       0       0       2
0       96      99     100
         2       2       1       1       0       0       0       0       2
0       97     100     101
         2       2       1       1       0       0       0       0       2
0       98     101     102
         2       2       1       1       0       0       0       0       2
0       99     102     103
         2       2       1       1       0       0       0       0       2
0      100     103     104
         2       2       1       1       0       0       0       0       2
0      101     104     105
         2       2       1       1       0       0       0       0       2
0      102     105      83
         2       2       1       1       0       0       0       0       2
0      103      83     106
         2       2       1       1       0       0       0       0       2
0      104     106     107
         2       2       1       1       0       0       0       0       2
0      105     107     108
         2       2       1       1       0       0       0       0       2
0      106     108     109
         2       2       1       1       0       0       0       0       2
0      107     109     110
         2       2       1       1       0       0       0       0       2
0      108     110     111
         2       2       1       1       0       0       0       0       2
0      109     111     112
         2       2       1       1       0       0       0       0       2
0      110     112     113
```

```
        2       2       1       1       0       0       0       0       2
0     111     113     114
        2       2       1       1       0       0       0       0       2
0     112     114      50
        5       2       1       2       0       0       0       0       2
0     113     115     117
        5       2       1       8       0       0       0       0       2
0     114     117     118
        5       2       1       8       0       0       0       0       2
0     115     118     119
        5       2       1       8       0       0       0       0       2
0     116     119     120
        5       2       1       8       0       0       0       0       2
0     117     120     121
        5       2       1       8       0       0       0       0       2
0     118     121     116
        5       2       1       2       0       0       0       0       2
0     119     122     124
        5       2       1       8       0       0       0       0       2
0     120     124     125
        5       2       1       8       0       0       0       0       2
0     121     125     126
        5       2       1       8       0       0       0       0       2
0     122     126     127
        5       2       1       8       0       0       0       0       2
0     123     127     128
        5       2       1       8       0       0       0       0       2
0     124     128     123
        5       2       1       2       0       0       0       0       2
0     125     129     131
        5       2       1       8       0       0       0       0       2
0     126     131     132
        5       2       1       8       0       0       0       0       2
0     127     132     133
        5       2       1       8       0       0       0       0       2
0     128     133     134
        5       2       1       8       0       0       0       0       2
0     129     134     135
        5       2       1       8       0       0       0       0       2
0     130     135     130
        5       2       1       8       0       0       0       0       2
0     131     136     138
        5       2       1       8       0       0       0       0       2
0     132     138     139
        5       2       1       8       0       0       0       0       2
0     133     139     140
        5       2       1       8       0       0       0       0       2
0     134     140     141
        5       2       1       8       0       0       0       0       2
0     135     141     142
        5       2       1       8       0       0       0       0       2
0     136     142     137
        3       2       1       4       0       0       0       0       2
0     207      25     205
```

```
     3     2     1     4     0     0     0     0     2
0  208   205   206
     3     2     1     4     0     0     0     0     2
0  209   206   207
     3     2     1     4     0     0     0     0     2
0  210   207   208
     3     2     1     4     0     0     0     0     2
0  211   208   209
     3     2     1     4     0     0     0     0     2
0  212   209   210
     3     2     1     4     0     0     0     0     2
0  213   210   211
     3     2     1     4     0     0     0     0     2
0  214   211   212
     3     2     1     4     0     0     0     0     2
0  215   212   213
     3     2     1     4     0     0     0     0     2
0  216   213   214
     3     2     1     4     0     0     0     0     2
0  217   214   215
     3     2     1     4     0     0     0     0     2
0  218   215   216
     3     2     1     4     0     0     0     0     2
0  219   216   217
     3     2     1     4     0     0     0     0     2
0  220   217   218
     3     2     1     4     0     0     0     0     2
0  221   218   219
     3     2     1     4     0     0     0     0     2
0  222   219   220
     3     2     1     4     0     0     0     0     2
0  223   220   221
     3     2     1     4     0     0     0     0     2
0  224   221   222
     3     2     1     4     0     0     0     0     2
0  225   222   223
     3     2     1     4     0     0     0     0     2
0  226   223   224
     3     2     1     4     0     0     0     0     2
0  227   224   225
     3     2     1     4     0     0     0     0     2
0  228   225   226
     3     2     1     4     0     0     0     0     2
0  229   226    82
     3     2     1     4     0     0     0     0     2
0  230    49   227
     3     2     1     4     0     0     0     0     2
0  231   227   228
     3     2     1     4     0     0     0     0     2
0  232   228   229
     3     2     1     4     0     0     0     0     2
0  233   229   230
     3     2     1     4     0     0     0     0     2
0  234   230   231
```

```
        3       2       1       4       0       0       0       0       2
0     235     231     232
        3       2       1       4       0       0       0       0       2
0     236     232     233
        3       2       1       4       0       0       0       0       2
0     237     233     234
        3       2       1       4       0       0       0       0       2
0     238     234     235
        3       2       1       4       0       0       0       0       2
0     239     235     236
        3       2       1       4       0       0       0       0       2
0     240     236     237
        3       2       1       4       0       0       0       0       2
0     241     237     238
        3       2       1       4       0       0       0       0       2
0     242     238     239
        3       2       1       4       0       0       0       0       2
0     243     239     240
        3       2       1       4       0       0       0       0       2
0     244     240     241
        3       2       1       4       0       0       0       0       2
0     245     241     242
        3       2       1       4       0       0       0       0       2
0     246     242     243
        3       2       1       4       0       0       0       0       2
0     247     243     244
        3       2       1       4       0       0       0       0       2
0     248     244     245
        3       2       1       4       0       0       0       0       2
0     249     245     246
        3       2       1       4       0       0       0       0       2
0     250     246     247
        3       2       1       4       0       0       0       0       2
0     251     247     248
        3       2       1       4       0       0       0       0       2
0     252     248       1
        5       2       1       8       0       0       0       0       2
0     253     249     250
        5       2       1       8       0       0       0       0       2
0     254     250     251
        5       2       1       8       0       0       0       0       2
0     255     251     252
        5       2       1       8       0       0       0       0       2
0     256     252     253
        5       2       1       8       0       0       0       0       2
0     257     253      25
        5       2       1       8       0       0       0       0       2
0     258     254     255
        5       2       1       8       0       0       0       0       2
0     259     255     256
        5       2       1       8       0       0       0       0       2
0     260     256     257
        5       2       1       8       0       0       0       0       2
0     261     257     258
```

```
        5       2       1       8       0       0       0       0       2
0     262     258      82
        5       2       1       8       0       0       0       0       2
0     263     259     260
        5       2       1       8       0       0       0       0       2
0     264     260     261
        5       2       1       8       0       0       0       0       2
0     265     261     262
        5       2       1       8       0       0       0       0       2
0     266     262     263
        5       2       1       8       0       0       0       0       2
0     267     263       1
        5       2       1       8       0       0       0       0       2
0     268     264     265
        5       2       1       8       0       0       0       0       2
0     269     265     266
        5       2       1       8       0       0       0       0       2
0     270     266     267
        5       2       1       8       0       0       0       0       2
0     271     267     268
        5       2       1       8       0       0       0       0       2
0     272     268      49
        4       2       1       2       0       0       0       0       2
0     273     269     270
        4       2       1       2       0       0       0       0       2
0     274     271     272
        4       2       1       2       0       0       0       0       2
0     275     273     274
        4       2       1       2       0       0       0       0       2
0     276     275     276
        4       2       1       2       0       0       0       0       2
0     277     277     278
        4       2       1       2       0       0       0       0       2
0     278     279     280
        4       2       1       2       0       0       0       0       2
0     279     281     282
        4       2       1       2       0       0       0       0       2
0     280     283     284
        4       2       1       7       0       0       0       0       2
0     281     270     285
        4       2       1       7       0       0       0       0       2
0     282     285     286
        4       2       1       7       0       0       0       0       2
0     283     286     249
        4       2       1       7       0       0       0       0       2
0     284     274     287
        4       2       1       7       0       0       0       0       2
0     285     287     288
        4       2       1       7       0       0       0       0       2
0     286     288     254
        4       2       1       7       0       0       0       0       2
0     287     272     289
        4       2       1       7       0       0       0       0       2
0     288     289     290
```

```
      4       2       1       7       0       0       0       0       2
0     289     290     249
      4       2       1       7       0       0       0       0       2
0     290     276     291
      4       2       1       7       0       0       0       0       2
0     291     291     292
      4       2       1       7       0       0       0       0       2
0     292     292     254
      4       2       1       7       0       0       0       0       2
0     293     278     293
      4       2       1       7       0       0       0       0       2
0     294     293     294
      4       2       1       7       0       0       0       0       2
0     295     294     259
      4       2       1       7       0       0       0       0       2
0     296     282     295
      4       2       1       7       0       0       0       0       2
0     297     295     296
      4       2       1       7       0       0       0       0       2
0     298     296     264
      4       2       1       7       0       0       0       0       2
0     299     280     297
      4       2       1       7       0       0       0       0       2
0     300     297     298
      4       2       1       7       0       0       0       0       2
0     301     298     259
      4       2       1       7       0       0       0       0       2
0     302     284     299
      4       2       1       7       0       0       0       0       2
0     303     299     300
      4       2       1       7       0       0       0       0       2
0     304     300     264
      4       2       1       6       0       0       0       0       2
0     305     272     301
      4       2       1       6       0       0       0       0       2
0     306     301     302
      4       2       1       6       0       0       0       0       2
0     307     302     303
      4       2       1       6       0       0       0       0       2
0     308     303     304
      4       2       1       6       0       0       0       0       2
0     309     304     305
      4       2       1       6       0       0       0       0       2
0     310     305     306
      4       2       1       6       0       0       0       0       2
0     311     306     307
      4       2       1       6       0       0       0       0       2
0     312     307     308
      4       2       1       6       0       0       0       0       2
0     313     308     309
      4       2       1       6       0       0       0       0       2
0     314     309     310
      4       2       1       6       0       0       0       0       2
0     315     310     311
```

```
        4       2       1       6       0       0       0       0       2
0     316     311     312
        4       2       1       6       0       0       0       0       2
0     317     312     313
        4       2       1       6       0       0       0       0       2
0     318     313     314
        4       2       1       6       0       0       0       0       2
0     319     314     315
        4       2       1       6       0       0       0       0       2
0     320     315     316
        4       2       1       6       0       0       0       0       2
0     321     316     274
        4       2       1       6       0       0       0       0       2
0     322     282     317
        4       2       1       6       0       0       0       0       2
0     323     317     318
        4       2       1       6       0       0       0       0       2
0     324     318     319
        4       2       1       6       0       0       0       0       2
0     325     319     320
        4       2       1       6       0       0       0       0       2
0     326     320     321
        4       2       1       6       0       0       0       0       2
0     327     321     322
        4       2       1       6       0       0       0       0       2
0     328     322     323
        4       2       1       6       0       0       0       0       2
0     329     323     324
        4       2       1       6       0       0       0       0       2
0     330     324     325
        4       2       1       6       0       0       0       0       2
0     331     325     326
        4       2       1       6       0       0       0       0       2
0     332     326     327
        4       2       1       6       0       0       0       0       2
0     333     327     328
        4       2       1       6       0       0       0       0       2
0     334     328     329
        4       2       1       6       0       0       0       0       2
0     335     329     330
        4       2       1       6       0       0       0       0       2
0     336     330     331
        4       2       1       6       0       0       0       0       2
0     337     331     332
        4       2       1       6       0       0       0       0       2
0     338     332     280
        1       1       2       2       0       0       0       0       1
0     339       6
        1       1       2       2       0       0       0       0       1
0     340       7
        1       1       3       2       0       0       0       0       1
0     341     285
        1       1       4       2       0       0       0       0       1
0     342     270
```

```
         1         1         4         2         0         0         0         0         1
0      343       278
         1         1         5         2         0         0         0         0         1
0      344         3
         1         1         5         2         0         0         0         0         1
0      345        27
         1         1         5         2         0         0         0         0         1
0      346        51
         1         1         5         2         0         0         0         0         1
0      347        84
         7         2         5        11         0         0         0         0         2
0      360       347       337
         7         2         5        11         0         0         0         0         2
0      361       347       348
         7         2         5        11         0         0         0         0         2
0      362       348       349
         7         2         5        11         0         0         0         0         2
0      363       349       350
         7         2         5        11         0         0         0         0         2
0      364       350       351
         7         2         5        11         0         0         0         0         2
0      365       351       352
         7         2         5        11         0         0         0         0         2
0      366       334       353
         7         2         5        11         0         0         0         0         2
0      367       353       354
         7         2         5        11         0         0         0         0         2
0      368       354       355
         7         2         5        11         0         0         0         0         2
0      369       352       357
         7         2         5        11         0         0         0         0         2
0      370       357       358
         7         2         5        11         0         0         0         0         2
0      371       358       356
         7         2         5        11         0         0         0         0         2
0      372       355       360
         7         2         5        11         0         0         0         0         2
0      373       360       359
         7         2         5        11         0         0         0         0         2
0      374       359       362
         7         2         5        11         0         0         0         0         2
0      375       362       361
         7         2         5        11         0         0         0         0         2
0      376       361       356
         7         2         5        12         0         0         0         0         2
0      377       363       338
         7         2         5        12         0         0         0         0         2
0      378       363       365
         7         2         5        12         0         0         0         0         2
0      379       365       366
         7         2         5        12         0         0         0         0         2
0      380       366       367
         7         2         5        12         0         0         0         0         2
0      384       367       372
```

```
      7       2       5      12       0       0       0       0       2
0     385     372     368
      7       2       5      12       0       0       0       0       2
0     386     333     373
      7       2       5      12       0       0       0       0       2
0     387     373     374
      7       2       5      12       0       0       0       0       2
0     388     374     375
      7       2       5      12       0       0       0       0       2
0     389     375     377
      7       2       5      12       0       0       0       0       2
0     390     377     376
      7       2       5      12       0       0       0       0       2
0     391     376     379
      7       2       5      12       0       0       0       0       2
0     392     379     378
      7       2       5      12       0       0       0       0       2
0     393     369     378
      7       2       5      14       0       0       0       0       2
0     406     351     392
      7       2       5      14       0       0       0       0       2
0     407     392     393
      7       2       5      14       0       0       0       0       2
0     408     393     372
      7       2       5      14       0       0       0       0       2
0     409     361     395
      7       2       5      14       0       0       0       0       2
0     410     395     396
      7       2       5      14       0       0       0       0       2
0     411     396     378
      7       2       5      14       0       0       0       0       2
0     412     368     397
      7       2       5      14       0       0       0       0       2
0     413     352     399
      7       2       5      14       0       0       0       0       2
0     414     356     400
      7       2       5      14       0       0       0       0       2
0     415     399     401
      7       2       5      14       0       0       0       0       2
0     416     401     397
      7       2       5      14       0       0       0       0       2
0     417     369     402
      7       2       5      14       0       0       0       0       2
0     418     400     403
      7       2       5      14       0       0       0       0       2
0     419     403     402
      7       2       5      15       0       0       0       0       2
0     420     397     405
      7       2       5      15       0       0       0       0       2
0     421     405     406
      7       2       5      15       0       0       0       0       2
0     422     406     402
      7       2       5      16       0       0       0       0       2
0     423     399     408
```

```
        7       2       5      16       0       0       0       0       2
0     424     408     409
        7       2       5      16       0       0       0       0       2
0     425     409     400
        7       2       5      15       0       0       0       0       2
0     426     348     411
        7       2       5      15       0       0       0       0       2
0     427     411     412
        7       2       5      15       0       0       0       0       2
0     428     412     365
        7       2       5      15       0       0       0       0       2
0     429     349     414
        7       2       5      15       0       0       0       0       2
0     430     414     415
        7       2       5      15       0       0       0       0       2
0     431     415     366
        7       2       5      15       0       0       0       0       2
0     432     350     417
        7       2       5      15       0       0       0       0       2
0     433     417     418
        7       2       5      15       0       0       0       0       2
0     434     418     367
        7       2       5      15       0       0       0       0       2
0     435     353     420
        7       2       5      15       0       0       0       0       2
0     436     420     421
        7       2       5      15       0       0       0       0       2
0     437     421     373
        7       2       5      15       0       0       0       0       2
0     438     355     423
        7       2       5      15       0       0       0       0       2
0     439     423     424
        7       2       5      15       0       0       0       0       2
0     440     424     375
        7       2       5      15       0       0       0       0       2
0     441     359     426
        7       2       5      15       0       0       0       0       2
0     442     426     427
        7       2       5      15       0       0       0       0       2
0     443     427     376
        7       2       5      17       0       0       0       0       2
0     444     347     429
        7       2       5      17       0       0       0       0       2
0     445     429     430
        7       2       5      17       0       0       0       0       2
0     446     430     363
        7       2       5      17       0       0       0       0       2
0     447     354     432
        7       2       5      17       0       0       0       0       2
0     448     432     433
        7       2       5      17       0       0       0       0       2
0     449     433     374
        7       2       5      12       0       0       0       0       2
0     450     368     435
```

```
        7       2       5      12       0       0       0       0       2
0     451     435     434
        7       2       5      12       0       0       0       0       2
0     452     369     436
        7       2       5      12       0       0       0       0       2
0     453     436     434
        7       2       5      10       0       0       0       0       2
0     454     338     438
        7       2       5      10       0       0       0       0       2
0     455     438     439
        7       2       5      10       0       0       0       0       2
0     456     439     437
        7       2       5      10       0       0       0       0       2
0     457     333     441
        7       2       5      10       0       0       0       0       2
0     458     441     442
        7       2       5      10       0       0       0       0       2
0     459     442     440
        7       2       5      10       0       0       0       0       2
0     460     443     444
        7       2       5      10       0       0       0       0       2
0     461     444     445
        7       2       5      10       0       0       0       0       2
0     462     445     338
        7       2       5      10       0       0       0       0       2
0     463     446     447
        7       2       5      10       0       0       0       0       2
0     464     447     448
        7       2       5      10       0       0       0       0       2
0     465     448     333
        7       2       5      10       0       0       0       0       2
0     466     443     337
        7       2       5      10       0       0       0       0       2
0     467     446     334
        7       2       5      10       0       0       0       0       2
0     468     437     341
        7       2       5      10       0       0       0       0       2
0     469     344     440
        5       2       1       8       0       0       0       0       2
0     470     130     443
        5       2       1       8       0       0       0       0       2
0     471     123     437
        5       2       1       8       0       0       0       0       2
0     472     116     440
        5       2       1       8       0       0       0       0       2
0     473     137     446
        5    1001    1001       8       0       0       0       0       2
0     478     434     450
        5    1002    1002       8       0       0       0       0       2
0     479     434     450
        5    1003    1003       8       0       0       0       0       2
0     480     434     450
        5    1004    1004       8       0       0       0       0       1
0     481     450
```

```
      -1
CMBLOCK,_CERGCM ,NODE,       2  ! users node component definition
(8i10)
        83       115
CMBLOCK,_NODECM ,NODE,       2  ! users node component definition
(8i10)
         1      -142
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,EX  ,       1, 1,  30000000.0    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,NUXY,       1, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,DENS,       1, 1, 7.450000000E-04,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,PRXY,       1, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,EX  ,       2, 1,  30000000.0    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,NUXY,       2, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,DENS,       2, 1, 1.166000000E-03,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,PRXY,       2, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,EX  ,       3, 1,  30000000.0    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,NUXY,       3, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,DENS,       3, 1, 9.600000000E-04,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,PRXY,       3, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,EX  ,       4, 1,  30000000.0    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,NUXY,       4, 1, 8.000000000E-04,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,DENS,       4, 1, 1.230000000E-03,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,PRXY,       4, 1, 8.000000000E-04,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,EX  ,       5, 1,  30000000.0    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,NUXY,       5, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,DENS,       5, 1,  0.00000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,PRXY,       5, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,EX  ,       6, 1,  30000000.0    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,NUXY,       6, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,DENS,       6, 1, 1.210000000E-03,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
```

```
MPDATA,R5.0, 1,PRXY,       6, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,EX  ,       7, 1,  30000000.0    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,NUXY,       7, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,DENS,       7, 1, 6.241000000E-03,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,PRXY,       7, 1, 0.300000000    ,
SECTYPE,      1,BEAM,HREC,
SECDATA,  61.000    ,  17.125    ,  1.0000    ,  1.0000    , 0.62500    ,
0.62500    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
SECTYPE,      2,BEAM,CSOL,
SECDATA,  4.0000    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
SECTYPE,      3,BEAM,RECT,trolgirt
SECDATA,  22.000    ,  2.5000    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
SECTYPE,      4,BEAM,HREC,endtie
SECDATA,  10.000    ,  8.0000    ,  1.0000    ,  1.0000    ,  1.0000    ,
1.0000    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
SECTYPE,      6,BEAM,HREC,asagitie
SECDATA,  8.0000    ,  8.0000    , 0.75000    , 0.75000    , 0.75000    ,
0.75000    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
SECTYPE,      7,BEAM,HREC,endtruck
SECDATA,  22.000    ,  16.600    ,  1.5000    ,  1.5000    ,  1.0000    ,
1.0000    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
SECTYPE,      8,BEAM,RECT,
SECDATA,  14.000    ,  14.000    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
SECTYPE,     10,BEAM,HREC,Ttrucks
SECDATA,  22.250    ,  9.0000    , 0.75000    , 0.75000    , 0.50000    ,
0.50000    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
SECTYPE,     11,BEAM,RECT,girt1
SECDATA,  33.000    ,  1.2500    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
SECTYPE,     12,BEAM,RECT,girt2
SECDATA,  42.625    ,  1.0000    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
```

```
SECTYPE,     13,BEAM,RECT,girt3
SECDATA,  33.000    ,  1.2500    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
SECTYPE,     14,BEAM,RECT,
SECDATA,  20.000    , 0.50000    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
SECTYPE,     15,BEAM,RECT,stiff2
SECDATA,  6.0000    , 0.50000    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
SECTYPE,     16,BEAM,RECT,
SECDATA,  15.000    , 0.50000    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
SECTYPE,     17,BEAM,RECT,9luk
SECDATA,  9.0000    , 0.50000    ,
SECOFFSET,CENT
SECCONTROL,  0.0000    ,  0.0000    ,  0.0000    ,  0.0000
CP,R5.0,     2,     1,UX  ,       2,     129,
CP,R5.0,     2,     2,UY  ,       2,     129,
CP,R5.0,     2,     3,UZ  ,       2,     129,
CP,R5.0,     2,     4,UX  ,      50,     136,
CP,R5.0,     2,     5,UY  ,      50,     136,
CP,R5.0,     2,     6,UZ  ,      50,     136,
CP,R5.0,     2,     7,UY  ,      26,     122,
CP,R5.0,     2,     8,UZ  ,      26,     122,
CP,R5.0,     2,     9,UY  ,      83,     115,
CP,R5.0,     2,    10,UZ  ,      83,     115,
EXTOPT,ATTR,      0,      0,      0
EXTOPT,ESIZE,  0,  0.0000
EXTOPT,ACLEAR,      0
BFUNIF,TEMP,_TINY
TREF,  0.00000000
ALPHAD,  0.00000000
BETAD,  0.00000000
DMPRAT,  0.00000000
ERESX,DEFA
ACEL,  0.00000000    ,  386.400000    ,  0.00000000
OMEGA,  0.00000000    ,  0.00000000    ,  0.00000000,     0
DOMEGA,  0.00000000    ,  0.00000000    ,  0.00000000
CGLOC,  0.00000000    ,  0.00000000    ,  0.00000000
CGOMEGA,  0.00000000    ,  0.00000000    ,  0.00000000
DCGOMG,  0.00000000    ,  0.00000000    ,  0.00000000
MXPAND,    20,  0.00000000    ,  0.00000000    , 0,,-1
D,    269,UY  ,  0.00000000    ,  0.00000000
D,    271,UY  ,  0.00000000    ,  0.00000000
D,    273,UY  ,  0.00000000    ,  0.00000000
D,    273,UZ  ,  0.00000000    ,  0.00000000
D,    275,UY  ,  0.00000000    ,  0.00000000
D,    275,UZ  ,  0.00000000    ,  0.00000000
D,    277,UX  ,  0.00000000    ,  0.00000000
D,    277,UY  ,  0.00000000    ,  0.00000000
```

```
D,    279,UX  ,  0.00000000    ,  0.00000000
D,    279,UY  ,  0.00000000    ,  0.00000000
D,    281,UX  ,  0.00000000    ,  0.00000000
D,    281,UY  ,  0.00000000    ,  0.00000000
D,    281,UZ  ,  0.00000000    ,  0.00000000
D,    283,UX  ,  0.00000000    ,  0.00000000
D,    283,UY  ,  0.00000000    ,  0.00000000
D,    283,UZ  ,  0.00000000    ,  0.00000000
/GO
FINISH
```

! Hook Up Position

```
/COM,ANSYS RELEASE 12.0.1  UP20090415       08:28:09    12/09/2010
/PREP7
/NOPR
/TITLE,
ANTYPE, 0
*IF,_CDRDOFF,EQ,1,THEN     !if solid model was read in
_CDRDOFF=             !reset flag, numoffs already performed
*ELSE               !offset database for the following FE model
NUMOFF,NODE,     450
NUMOFF,ELEM,     481
NUMOFF,MAT ,       7
NUMOFF,REAL,    1004
NUMOFF,SECN,      17
NUMOFF,COUP,      10
NUMOFF,TYPE,    1004
*ENDIF
*SET,FREQ    , 0.3190373014355
*SET,GRAV    ,  386.4000000000
*SET,HOOKUPLENGTH,  96.16000000000
*SET,I       ,  1.000000000000
*SET,LATSTIFFNESS,  2766.222961730
*SET,LONGSTIFFNESS,  2266759.624568
*SET,MASS    ,  688.4057971014
*SET,MAXLAYER,  0.000000000000
*SET,MAXND   ,  450.0000000000
*SET,PI      ,  3.141592653590
*SET,ROPEAREA,  2.073942025221
*SET,ROPEDIA ,  1.625000000000
*SET,ROPEYOUNGSMOD,  13137518.00000
*SET,TROPEAREA,  16.59153620177
*SET,XDRUM   ,  0.000000000000
*SET,YDRUM   ,  0.000000000000
*SET,ZDRUM   ,  0.000000000000
*SET,_ABORT  ,  0.000000000000
*SET,_ANDISP1,  31.00000000000
*SET,_AWBE_B ,  0.000000000000
*SET,_BUTTON ,  0.000000000000
*SET,_ET_NEXT,  3.000000000000
*SET,_ET_TYPE,  1.000000000000
*SET,_GUI_CLR_BG,' systemButtonFace               '
*SET,_GUI_CLR_FG,' systemButtonText               '
*SET,_GUI_CLR_INFOBG,' systemInfoBackground          '
*SET,_GUI_CLR_SEL,' systemHighlight                '
*SET,_GUI_CLR_SELBG,' systemHighlight                '
*SET,_GUI_CLR_SELFG,' systemHighlightText            '
*SET,_GUI_CLR_WIN,' systemWindow                   '
*SET,_GUI_FNT_FMLY,'Arial                           '
*SET,_GUI_FNT_PXLS,  16.00000000000
*SET,_GUI_FNT_SLNT,'r                              '
*SET,_GUI_FNT_WEGT,'medium                         '
*SET,_I      ,  10.00000000000
```

```
*SET,_KDIST  ,  286.2892429432
*SET,_PINQ   ,  0.000000000000
*SET,_PROGRS ,  100.0000000000
*SET,_RC_SET ,  4.000000000000
*SET,_RETURN ,  0.000000000000
*SET,_STATUS ,  1.000000000000
*SET,_UIQR   ,  1.000000000000
*DIM,_Z      ,ARRAY,      15,       1,       1,
*SET,_Z      (       1,       1,       1),  2.000000000000
*SET,_Z      (      11,       1,       1),  1.000000000000
*SET,_Z      (      12,       1,       1),  1.000000000000
*SET,_Z      (      13,       1,       1),  1.000000000000
*SET,_Z11    ,  1.000000000000
*SET,_Z13    ,  0.000000000000
*DIM,_ZBF    ,ARRAY,      20,       1,       1,
*SET,_ZBFN   ,  1.000000000000
*SET,_ZBFO   ,  1.000000000000
*DIM,_ZCBF   ,CHAR,      15,       1,       1,
*SET,_ZCBF   (       1,       1,       1),'DEFA    '
*SET,_ZCBF   (       2,       1,       1),'TEMP    '
*SET,_ZCBF   (       3,       1,       1),'FLUE    '
*SET,_ZCBF   (       4,       1,       1),'HGEN    '
*SET,_ZCBF   (       5,       1,       1),'JS      '
*SET,_ZCBF   (       6,       1,       1),'MVDI    '
*SET,_ZCBF   (       7,       1,       1),'CHRGD   '
*SET,_ZCBF   (       8,       1,       1),'VLTG    '
*SET,_ZCBF   (       9,       1,       1),'FORC    '
*SET,_ZCBF   (      10,       1,       1),'EF      '
*SET,_ZCBF   (      11,       1,       1),'H       '
*SET,_ZCBF   (      12,       1,       1),'PORT    '
*SET,_ZCBF   (      13,       1,       1),'PHASE   '
*SET,_ZCBF   (      14,       1,       1),'FVIN    '
*SET,_ZCBF   (      15,       1,       1),'LUMP    '
*DIM,_ZCREP  ,CHAR,       2,       1,       1,
*SET,_ZCREP  (       1,       1,       1),'!       '
*SET,_ZCREP  (       2,       1,       1),'/REP    '
*DIM,_ZCSF   ,CHAR,      33,       1,       1,
*SET,_ZCSF   (       2,       1,       1),'DEFA    '
*SET,_ZCSF   (       3,       1,       1),'PRES    '
*SET,_ZCSF   (       4,       1,       1),'NORM    '
*SET,_ZCSF   (       5,       1,       1),'TANX    '
*SET,_ZCSF   (       6,       1,       1),'TANY    '
*SET,_ZCSF   (       7,       1,       1),'CONV    '
*SET,_ZCSF   (       8,       1,       1),'HCOE    '
*SET,_ZCSF   (       9,       1,       1),'TBUL    '
*SET,_ZCSF   (      10,       1,       1),'HFLU    '
*SET,_ZCSF   (      11,       1,       1),'FSI     '
*SET,_ZCSF   (      12,       1,       1),'IMPD    '
*SET,_ZCSF   (      13,       1,       1),'MXWF    '
*SET,_ZCSF   (      14,       1,       1),'INF     '
*SET,_ZCSF   (      15,       1,       1),'CHRG    '
*SET,_ZCSF   (      16,       1,       1),'MCI     '
*SET,_ZCSF   (      17,       1,       1),'RAD     '
*SET,_ZCSF   (      18,       1,       1),'EMIS    '
```

```
*SET,_ZCSF   (      19,       1,       1),'TAMB    '
*SET,_ZCSF   (      20,       1,       1),'PORT    '
*SET,_ZCSF   (      21,       1,       1),'FSIN    '
*SET,_ZCSF   (      22,       1,       1),'RDSF    '
*SET,_ZCSF   (      23,       1,       1),'EMSS    '
*SET,_ZCSF   (      24,       1,       1),'ENCL    '
*SET,_ZCSF   (      25,       1,       1),'SHLD    '
*SET,_ZCSF   (      26,       1,       1),'COND    '
*SET,_ZCSF   (      27,       1,       1),'MUR     '
*SET,_ZCSF   (      28,       1,       1),'VFRC    '
*SET,_ZCSF   (      29,       1,       1),'BNDR    '
*SET,_ZCSF   (      30,       1,       1),'WETT    '
*SET,_ZCSF   (      31,       1,       1),'INRM    '
*SET,_ZCSF   (      32,       1,       1),'ITNX    '
*SET,_ZCSF   (      33,       1,       1),'ITNY    '
*DIM,_ZICA   ,CHAR,       2,       1,       1,
*SET,_ZICA   (       1,       1,       1),'DEFA    '
*SET,_ZICA   (       2,       1,       1),'VFRC    '
*DIM,_ZICF   ,ARRAY,       2,       1,       1,
*SET,_ZICI   ,  1.000000000000
*SET,_ZREP   ,  2.000000000000
*DIM,_ZSC    ,ARRAY,      15,       1,       1,
*DIM,_ZSF    ,ARRAY,      15,       1,       1,
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*SET,_ZSFCL  ,  1.000000000000
*SET,_ZSFN   ,  2.000000000000
*SET,_ZSFO   ,  1.000000000000
*SET,_ZSFSH  ,  0.000000000000
DOF,DELETE
ET,       1, 21
ET,       2,188
ET,    1001, 14
KEYOP,    1001, 2,        1
ET,    1002, 14
KEYOP,    1002, 2,        3
ET,    1003, 14
KEYOP,    1003, 2,        2
ET,    1004, 21
RLBLOCK,       9,    1004,       6,       7
(2i8,6g16.9)
(7g16.9)
       1       6  51.7598344      219.979296      51.7598344
0.00000000      0.00000000      0.00000000
       2       6  1.15000000      1.15000000      1.15000000
0.00000000      0.00000000      0.00000000
       3       6  2.27743000      2.27743000      2.27743000
0.00000000      0.00000000      0.00000000
       4       6  3.66200000      3.66200000      3.66200000
0.00000000      0.00000000      0.00000000
       5       6 0.646990000     0.646990000     0.646990000
0.00000000      0.00000000      0.00000000
    1001       6  2766.22296      0.00000000      0.00000000
0.00000000      0.00000000      0.00000000
```

```
    1002       6  2766.22296      0.00000000      0.00000000
0.00000000      0.00000000      0.00000000
    1003       6  2266759.62      0.00000000      0.00000000
0.00000000      0.00000000      0.00000000
    1004       6  688.405797      688.405797      688.405797
0.00000000      0.00000000      0.00000000
MAT ,        5
TYPE,     1004
REAL,     1004
NBLOCK,6,SOLID,       450,       352
(3i8,6e20.13)
       1       0       0 0.0000000000000E 0.0000000000000E
1.1100000000000E
       2       0       0 2.2900000000000E 0.0000000000000E
1.1100000000000E
       3       0       0 9.9565217400000E 0.0000000000000E
1.1100000000000E
       4       0       0 1.9913043500000E 0.0000000000000E
1.1100000000000E
       5       0       0 2.9869565200000E 0.0000000000000E
1.1100000000000E
       6       0       0 3.9826087000000E 0.0000000000000E
1.1100000000000E
       7       0       0 4.9782608700000E 0.0000000000000E
1.1100000000000E
       8       0       0 5.9739130400000E 0.0000000000000E
1.1100000000000E
       9       0       0 6.9695652200000E 0.0000000000000E
1.1100000000000E
      10       0       0 7.9652173900000E 0.0000000000000E
1.1100000000000E
      11       0       0 8.9608695700000E 0.0000000000000E
1.1100000000000E
      12       0       0 9.9565217400000E 0.0000000000000E
1.1100000000000E
      13       0       0 1.0952173900000E 0.0000000000000E
1.1100000000000E
      14       0       0 1.1947826100000E 0.0000000000000E
1.1100000000000E
      15       0       0 1.2943478300000E 0.0000000000000E
1.1100000000000E
      16       0       0 1.3939130400000E 0.0000000000000E
1.1100000000000E
      17       0       0 1.4934782600000E 0.0000000000000E
1.1100000000000E
      18       0       0 1.5930434800000E 0.0000000000000E
1.1100000000000E
      19       0       0 1.6926087000000E 0.0000000000000E
1.1100000000000E
      20       0       0 1.7921739100000E 0.0000000000000E
1.1100000000000E
      21       0       0 1.8917391300000E 0.0000000000000E
1.1100000000000E
```

```
      22       0       0 1.9913043500000E 0.0000000000000E
1.1100000000000E
      23       0       0 2.0908695700000E 0.0000000000000E
1.1100000000000E
      24       0       0 2.1904347800000E 0.0000000000000E
1.1100000000000E
      25       0       0 5.5200000000000E 0.0000000000000E
1.1100000000000E
      26       0       0 3.2300000000000E 0.0000000000000E
1.1100000000000E
      27       0       0 5.4204347800000E 0.0000000000000E
1.1100000000000E
      28       0       0 5.3208695700000E 0.0000000000000E
1.1100000000000E
      29       0       0 5.2213043500000E 0.0000000000000E
1.1100000000000E
      30       0       0 5.1217391300000E 0.0000000000000E
1.1100000000000E
      31       0       0 5.0221739100000E 0.0000000000000E
1.1100000000000E
      32       0       0 4.9226087000000E 0.0000000000000E
1.1100000000000E
      33       0       0 4.8230434800000E 0.0000000000000E
1.1100000000000E
      34       0       0 4.7234782600000E 0.0000000000000E
1.1100000000000E
      35       0       0 4.6239130400000E 0.0000000000000E
1.1100000000000E
      36       0       0 4.5243478300000E 0.0000000000000E
1.1100000000000E
      37       0       0 4.4247826100000E 0.0000000000000E
1.1100000000000E
      38       0       0 4.3252173900000E 0.0000000000000E
1.1100000000000E
      39       0       0 4.2256521700000E 0.0000000000000E
1.1100000000000E
      40       0       0 4.1260869600000E 0.0000000000000E
1.1100000000000E
      41       0       0 4.0265217400000E 0.0000000000000E
1.1100000000000E
      42       0       0 3.9269565200000E 0.0000000000000E
1.1100000000000E
      43       0       0 3.8273913000000E 0.0000000000000E
1.1100000000000E
      44       0       0 3.7278260900000E 0.0000000000000E
1.1100000000000E
      45       0       0 3.6282608700000E 0.0000000000000E
1.1100000000000E
      46       0       0 3.5286956500000E 0.0000000000000E
1.1100000000000E
      47       0       0 3.4291304300000E 0.0000000000000E
1.1100000000000E
      48       0       0 3.3295652200000E 0.0000000000000E
1.1100000000000E
```

```
      49       0       0 0.0000000000000E
0.0000000000000E1.1100000000000E
      50       0       0 2.2900000000000E
0.0000000000000E1.1100000000000E
      51       0       0 9.9565217400000E
0.0000000000000E1.1100000000000E
      52       0       0 1.9913043500000E
0.0000000000000E1.1100000000000E
      53       0       0 2.9869565200000E
0.0000000000000E1.1100000000000E
      54       0       0 3.9826087000000E
0.0000000000000E1.1100000000000E
      55       0       0 4.9782608700000E
0.0000000000000E1.1100000000000E
      56       0       0 5.9739130400000E
0.0000000000000E1.1100000000000E
      57       0       0 6.9695652200000E
0.0000000000000E1.1100000000000E
      58       0       0 7.9652173900000E
0.0000000000000E1.1100000000000E
      59       0       0 8.9608695700000E
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      60       0       0 9.9565217400000E
0.0000000000000E1.1100000000000E
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      62       0       0 1.1947826100000E
0.0000000000000E1.1100000000000E
      63       0       0 1.2943478300000E
0.0000000000000E1.1100000000000E
      64       0       0 1.3939130400000E
0.0000000000000E1.1100000000000E
      65       0       0 1.4934782600000E
0.0000000000000E1.1100000000000E
      66       0       0 1.5930434800000E
0.0000000000000E1.1100000000000E
      67       0       0 1.6926087000000E
0.0000000000000E1.1100000000000E
      68       0       0 1.7921739100000E
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      69       0       0 1.8917391300000E
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      70       0       0 1.9913043500000E
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      71       0       0 2.0908695700000E
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      72       0       0 2.1904347800000E
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      73       0       0 3.1360000000000E 0.0000000000000E
1.1100000000000E
      74       0       0 3.0420000000000E 0.0000000000000E
1.1100000000000E
      75       0       0 2.9480000000000E 0.0000000000000E
1.1100000000000E
```

```
      76       0       0 2.8540000000000E 0.0000000000000E
1.1100000000000E
      77       0       0 2.7600000000000E 0.0000000000000E
1.1100000000000E
      78       0       0 2.6660000000000E 0.0000000000000E
1.1100000000000E
      79       0       0 2.5720000000000E 0.0000000000000E
1.1100000000000E
      80       0       0 2.4780000000000E 0.0000000000000E
1.1100000000000E
      81       0       0 2.3840000000000E 0.0000000000000E
1.1100000000000E
      82       0       0 5.5200000000000E
0.0000000000000E1.1100000000000E
      83       0       0 3.2300000000000E
0.0000000000000E1.1100000000000E
      84       0       0 5.4204347800000E
0.0000000000000E1.1100000000000E
      85       0       0 5.3208695700000E
0.0000000000000E1.1100000000000E
      86       0       0 5.2213043500000E
0.0000000000000E1.1100000000000E
      87       0       0 5.1217391300000E
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      88       0       0 5.0221739100000E
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      89       0       0 4.9226087000000E
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      90       0       0 4.8230434800000E
0.0000000000000E1.1100000000000E
      91       0       0 4.7234782600000E
0.0000000000000E1.1100000000000E
      92       0       0 4.6239130400000E
0.0000000000000E1.1100000000000E
      93       0       0 4.5243478300000E
0.0000000000000E1.1100000000000E
      94       0       0 4.4247826100000E
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      95       0       0 4.3252173900000E
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      96       0       0 4.2256521700000E
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      97       0       0 4.1260869600000E
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      98       0       0 4.0265217400000E
0.0000000000000E1.1100000000000E
      99       0       0 3.9269565200000E
0.0000000000000E1.1100000000000E
     100       0       0 3.8273913000000E
0.0000000000000E1.1100000000000E
     101       0       0 3.7278260900000E
0.0000000000000E1.1100000000000E
     102       0       0 3.6282608700000E
0.0000000000000E1.1100000000000E
```

```
     103       0       0 3.5286956500000E
0.0000000000000E1.1100000000000E
     104       0       0 3.4291304300000E
0.0000000000000E1.1100000000000E
     105       0       0 3.3295652200000E
0.0000000000000E1.1100000000000E
     106       0       0 3.1360000000000E
0.0000000000000E1.1100000000000E
     107       0       0 3.0420000000000E
0.0000000000000E1.1100000000000E
     108       0       0 2.9480000000000E
0.0000000000000E1.1100000000000E
     109       0       0 2.8540000000000E
0.0000000000000E1.1100000000000E
     110       0       0 2.7600000000000E
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     111       0       0 2.6660000000000E
0.0000000000000E1.1100000000000E
     112       0       0 2.5720000000000E
0.0000000000000E1.1100000000000E
     113       0       0 2.4780000000000E
0.0000000000000E1.1100000000000E
     114       0       0 2.3840000000000E
0.0000000000000E1.1100000000000E
     115       0       0 3.2300000000000E
1.0000000000000E1.1100000000000E
     116       0       0 3.2300000000000E
5.2800000000000E1.1100000000000E
     117       0       0 3.2300000000000E
9.6333333300000E1.1100000000000E
     118       0       0 3.2300000000000E
1.8266666700000E1.1100000000000E
     119       0       0 3.2300000000000E
2.6900000000000E1.1100000000000E
     120       0       0 3.2300000000000E
3.5533333300000E1.1100000000000E
     121       0       0 3.2300000000000E
4.4166666700000E1.1100000000000E
     122       0       0 3.2300000000000E 1.0000000000000E
1.1100000000000E
     123       0       0 3.2300000000000E 5.2800000000000E
1.1100000000000E
     124       0       0 3.2300000000000E 9.6333333300000E
1.1100000000000E
     125       0       0 3.2300000000000E 1.8266666700000E
1.1100000000000E
     126       0       0 3.2300000000000E 2.6900000000000E
1.1100000000000E
     127       0       0 3.2300000000000E 3.5533333300000E
1.1100000000000E
     128       0       0 3.2300000000000E 4.4166666700000E
1.1100000000000E
     129       0       0 2.2900000000000E 1.0000000000000E
1.1100000000000E
```

```
     130       0       0 2.2900000000000E 5.2800000000000E
1.1100000000000E
     131       0       0 2.2900000000000E 9.6333333300000E
1.1100000000000E
     132       0       0 2.2900000000000E 1.8266666700000E
1.1100000000000E
     133       0       0 2.2900000000000E 2.6900000000000E
1.1100000000000E
     134       0       0 2.2900000000000E 3.5533333300000E
1.1100000000000E
     135       0       0 2.2900000000000E 4.4166666700000E
1.1100000000000E
     136       0       0 2.2900000000000E
1.0000000000000E1.1100000000000E
     137       0       0 2.2900000000000E
5.2800000000000E1.1100000000000E
     138       0       0 2.2900000000000E
9.6333333300000E1.1100000000000E
     139       0       0 2.2900000000000E
1.8266666700000E1.1100000000000E
     140       0       0 2.2900000000000E
2.6900000000000E1.1100000000000E
     141       0       0 2.2900000000000E
3.5533333300000E1.1100000000000E
     142       0       0 2.2900000000000E
4.4166666700000E1.1100000000000E
     205       0       0 5.5200000000000E 0.0000000000000E
1.0134782600000E
     206       0       0 5.5200000000000E 0.0000000000000E
9.1695652200000E
     207       0       0 5.5200000000000E 0.0000000000000E
8.2043478300000E
     208       0       0 5.5200000000000E 0.0000000000000E
7.2391304300000E
     209       0       0 5.5200000000000E 0.0000000000000E
6.2739130400000E
     210       0       0 5.5200000000000E 0.0000000000000E
5.3086956500000E
     211       0       0 5.5200000000000E 0.0000000000000E
4.3434782600000E
     212       0       0 5.5200000000000E 0.0000000000000E
3.3782608700000E
     213       0       0 5.5200000000000E 0.0000000000000E
2.4130434800000E
     214       0       0 5.5200000000000E 0.0000000000000E
1.4478260900000E
     215       0       0 5.5200000000000E 0.0000000000000E
4.8260869600000E
     216       0       0 5.5200000000000E
0.0000000000000E4.8260869600000E
     217       0       0 5.5200000000000E
0.0000000000000E1.4478260900000E
     218       0       0 5.5200000000000E
0.0000000000000E2.4130434800000E
```

```
     219       0       0 5.5200000000000E
0.0000000000000E3.3782608700000E
     220       0       0 5.5200000000000E
0.0000000000000E4.3434782600000E
     221       0       0 5.5200000000000E
0.0000000000000E5.3086956500000E
     222       0       0 5.5200000000000E
0.0000000000000E6.2739130400000E
     223       0       0 5.5200000000000E
0.0000000000000E7.2391304300000E
     224       0       0 5.5200000000000E
0.0000000000000E8.2043478300000E
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0.0000000000000E9.1695652200000E
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     227       0       0 0.0000000000000E
0.0000000000000E1.0134782600000E
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0.0000000000000E9.1695652200000E
     229       0       0 0.0000000000000E
0.0000000000000E8.2043478300000E
     230       0       0 0.0000000000000E
0.0000000000000E7.2391304300000E
     231       0       0 0.0000000000000E
0.0000000000000E6.2739130400000E
     232       0       0 0.0000000000000E
0.0000000000000E5.3086956500000E
     233       0       0 0.0000000000000E
0.0000000000000E4.3434782600000E
     234       0       0 0.0000000000000E
0.0000000000000E3.3782608700000E
     235       0       0 0.0000000000000E
0.0000000000000E2.4130434800000E
     236       0       0 0.0000000000000E
0.0000000000000E1.4478260900000E
     237       0       0 0.0000000000000E
0.0000000000000E4.8260869600000E
     238       0       0 0.0000000000000E 0.0000000000000E
4.8260869600000E
     239       0       0 0.0000000000000E 0.0000000000000E
1.4478260900000E
     240       0       0 0.0000000000000E 0.0000000000000E
2.4130434800000E
     241       0       0 0.0000000000000E 0.0000000000000E
3.3782608700000E
     242       0       0 0.0000000000000E 0.0000000000000E
4.3434782600000E
     243       0       0 0.0000000000000E 0.0000000000000E
5.3086956500000E
     244       0       0 0.0000000000000E 0.0000000000000E
6.2739130400000E
     245       0       0 0.0000000000000E 0.0000000000000E
7.2391304300000E
```

```
     246       0       0 0.0000000000000E 0.0000000000000E
8.20434783000000E
     247       0       0 0.0000000000000E 0.0000000000000E
9.16956522000000E
     248       0       0 0.0000000000000E 0.0000000000000E
1.01347826000000E
     249       0       0 5.52000000000000E4.15000000000000E
1.11000000000000E
     250       0       0 5.52000000000000E3.32000000000000E
1.11000000000000E
     251       0       0 5.52000000000000E2.49000000000000E
1.11000000000000E
     252       0       0 5.52000000000000E1.66000000000000E
1.11000000000000E
     253       0       0 5.52000000000000E8.30000000000000E
1.11000000000000E
     254       0       0 5.52000000000000E4.15000000000000E1.11000000000000E
     255       0       0 5.52000000000000E3.32000000000000E1.11000000000000E
     256       0       0 5.52000000000000E2.49000000000000E1.11000000000000E
     257       0       0 5.52000000000000E1.66000000000000E1.11000000000000E
     258       0       0 5.52000000000000E8.30000000000000E1.11000000000000E
     259       0       0 0.0000000000000E4.15000000000000E
1.11000000000000E
     260       0       0 0.0000000000000E3.32000000000000E
1.11000000000000E
     261       0       0 0.0000000000000E2.49000000000000E
1.11000000000000E
     262       0       0 0.0000000000000E1.66000000000000E
1.11000000000000E
     263       0       0 0.0000000000000E8.30000000000000E
1.11000000000000E
     264       0       0 0.0000000000000E4.15000000000000E1.11000000000000E
     265       0       0 0.0000000000000E3.32000000000000E1.11000000000000E
     266       0       0 0.0000000000000E2.49000000000000E1.11000000000000E
     267       0       0 0.0000000000000E1.66000000000000E1.11000000000000E
     268       0       0 0.0000000000000E8.30000000000000E1.11000000000000E
     269       0       0 5.52000000000000E5.15000000000000E
1.38000000000000E
     270       0       0 5.52000000000000E4.15000000000000E
1.38000000000000E
     271       0       0 5.52000000000000E5.15000000000000E
8.40000000000000E
     272       0       0 5.52000000000000E4.15000000000000E
8.40000000000000E
     273       0       0 5.52000000000000E5.15000000000000E8.40000000000000E
     274       0       0 5.52000000000000E4.15000000000000E8.40000000000000E
     275       0       0 5.52000000000000E5.15000000000000E1.38000000000000E
     276       0       0 5.52000000000000E4.15000000000000E1.38000000000000E
     277       0       0 0.0000000000000E5.15000000000000E
1.38000000000000E
     278       0       0 0.0000000000000E4.15000000000000E
1.38000000000000E
     279       0       0 0.0000000000000E5.15000000000000E
8.40000000000000E
```

```
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8.4000000000000E
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1.2900000000000E
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1.2000000000000E
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1.0200000000000E
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1.2900000000000E
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1.2000000000000E
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8.2810000000000E
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6.5310000000000E
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4.9000000000000E
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2.3000000000000E
     369       0       0 2.7862500000000E
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3.1500000000000E
     373       0       0 2.7862500000000E
6.5800000000000E9.7810000000000E
     374       0       0 2.7862500000000E
6.5800000000000E9.1180000000000E
     375       0       0 2.7862500000000E
6.5800000000000E8.0180000000000E
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6.5800000000000E5.7750000000000E
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3.1500000000000E
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2.3000000000000E
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7.6666666700000E
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7.6666666700000E
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6.5800000000000E7.6666666700000E
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8.2810000000000E
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8.2810000000000E
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6.5310000000000E
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6.5310000000000E
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4.9000000000000E
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4.9000000000000E
     420       0       0 2.3970833300000E
6.5800000000000E9.7810000000000E
     421       0       0 2.5916666700000E
6.5800000000000E9.7810000000000E
     423       0       0 2.3970833300000E
6.5800000000000E8.0180000000000E
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6.5800000000000E8.0180000000000E
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9.1500000000000E
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9.1500000000000E
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6.5800000000000E9.1180000000000E
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1.1500000000000E
     436       0       0 2.7862500000000E
6.5800000000000E1.1500000000000E
```

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1.1100000000000E
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1.1100000000000E
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1.1100000000000E
     440       0       0 3.2300000000000E
6.5800000000000E1.1100000000000E
     441       0       0 2.9341666700000E
6.5800000000000E1.1100000000000E
     442       0       0 3.0820833300000E
6.5800000000000E1.1100000000000E
     443       0       0 2.2900000000000E 6.5800000000000E
1.1100000000000E
     444       0       0 2.4554166700000E 6.5800000000000E
1.1100000000000E
     445       0       0 2.6208333300000E 6.5800000000000E
1.1100000000000E
     446       0       0 2.2900000000000E
6.5800000000000E1.1100000000000E
     447       0       0 2.4554166700000E
6.5800000000000E1.1100000000000E
     448       0       0 2.6208333300000E
6.5800000000000E1.1100000000000E
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N,R5.3,LOC,     -1,
EBLOCK,19,SOLID,       481,       380
(19i8)
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0       2       3       4
       6       2       1       1       0       0       0       0       2
0       3       4       5
       6       2       1       1       0       0       0       0       2
0       4       5       6
       6       2       1       1       0       0       0       0       2
0       5       6       7
       6       2       1       1       0       0       0       0       2
0       6       7       8
       6       2       1       1       0       0       0       0       2
0       7       8       9
       6       2       1       1       0       0       0       0       2
0       8       9      10
       6       2       1       1       0       0       0       0       2
0       9      10      11
       6       2       1       1       0       0       0       0       2
0      10      11      12
       6       2       1       1       0       0       0       0       2
0      11      12      13
       6       2       1       1       0       0       0       0       2
0      12      13      14
       6       2       1       1       0       0       0       0       2
0      13      14      15
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0       14      15      16
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0       15      16      17
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0       16      17      18
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0       17      18      19
        6       2       1       1       0       0       0       0       2
0       18      19      20
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0       19      20      21
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0       20      21      22
        6       2       1       1       0       0       0       0       2
0       21      22      23
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0       22      23      24
        6       2       1       1       0       0       0       0       2
0       23      24       2
        6       2       1       1       0       0       0       0       2
0       24      25      27
        6       2       1       1       0       0       0       0       2
0       25      27      28
        6       2       1       1       0       0       0       0       2
0       26      28      29
        6       2       1       1       0       0       0       0       2
0       27      29      30
        6       2       1       1       0       0       0       0       2
0       28      30      31
        6       2       1       1       0       0       0       0       2
0       29      31      32
        6       2       1       1       0       0       0       0       2
0       30      32      33
        6       2       1       1       0       0       0       0       2
0       31      33      34
        6       2       1       1       0       0       0       0       2
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0       33      35      36
        6       2       1       1       0       0       0       0       2
0       34      36      37
        6       2       1       1       0       0       0       0       2
0       35      37      38
        6       2       1       1       0       0       0       0       2
0       36      38      39
        6       2       1       1       0       0       0       0       2
0       37      39      40
        6       2       1       1       0       0       0       0       2
0       38      40      41
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0       39      41      42
        6       2       1       1       0       0       0       0       2
0       40      42      43
```

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0       41      43      44
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0       42      44      45
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0       43      45      46
        6       2       1       1       0       0       0       0       2
0       44      46      47
        6       2       1       1       0       0       0       0       2
0       45      47      48
        6       2       1       1       0       0       0       0       2
0       46      48      26
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0       47      49      51
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0       48      51      52
        2       2       1       1       0       0       0       0       2
0       49      52      53
        2       2       1       1       0       0       0       0       2
0       50      53      54
        2       2       1       1       0       0       0       0       2
0       51      54      55
        2       2       1       1       0       0       0       0       2
0       52      55      56
        2       2       1       1       0       0       0       0       2
0       53      56      57
        2       2       1       1       0       0       0       0       2
0       54      57      58
        2       2       1       1       0       0       0       0       2
0       55      58      59
        2       2       1       1       0       0       0       0       2
0       56      59      60
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0       57      60      61
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0       58      61      62
        2       2       1       1       0       0       0       0       2
0       59      62      63
        2       2       1       1       0       0       0       0       2
0       60      63      64
        2       2       1       1       0       0       0       0       2
0       61      64      65
        2       2       1       1       0       0       0       0       2
0       62      65      66
        2       2       1       1       0       0       0       0       2
0       63      66      67
        2       2       1       1       0       0       0       0       2
0       64      67      68
        2       2       1       1       0       0       0       0       2
0       65      68      69
        2       2       1       1       0       0       0       0       2
0       66      69      70
        2       2       1       1       0       0       0       0       2
0       67      70      71
```

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0       71      73      74
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0       72      74      75
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0       73      75      76
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0       74      76      77
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0       75      77      78
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0       77      79      80
        6       2       1       1       0       0       0       0       2
0       78      80      81
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0       79      81       2
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0       80      82      84
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0       81      84      85
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0       82      85      86
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0       84      87      88
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0       85      88      89
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0       86      89      90
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0       87      90      91
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0       88      91      92
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0       89      92      93
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0       90      93      94
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0       91      94      95
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0       92      95      96
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0       93      96      97
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0       94      97      98
```

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0      101     104     105
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0      102     105      83
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0      103      83     106
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0      104     106     107
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0      105     107     108
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         2       2       1       1       0       0       0       0       2
0      107     109     110
         2       2       1       1       0       0       0       0       2
0      108     110     111
         2       2       1       1       0       0       0       0       2
0      109     111     112
         2       2       1       1       0       0       0       0       2
0      110     112     113
         2       2       1       1       0       0       0       0       2
0      111     113     114
         2       2       1       1       0       0       0       0       2
0      112     114      50
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0      113     115     117
         5       2       1       8       0       0       0       0       2
0      114     117     118
         5       2       1       8       0       0       0       0       2
0      115     118     119
         5       2       1       8       0       0       0       0       2
0      116     119     120
         5       2       1       8       0       0       0       0       2
0      117     120     121
         5       2       1       8       0       0       0       0       2
0      118     121     116
         5       2       1       2       0       0       0       0       2
0      119     122     124
         5       2       1       8       0       0       0       0       2
0      120     124     125
         5       2       1       8       0       0       0       0       2
0      121     125     126
```

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0     127     132     133
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0     128     133     134
        5       2       1       8       0       0       0       0       2
0     129     134     135
        5       2       1       8       0       0       0       0       2
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0     131     136     138
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0     132     138     139
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0     133     139     140
        5       2       1       8       0       0       0       0       2
0     134     140     141
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0     135     141     142
        5       2       1       8       0       0       0       0       2
0     136     142     137
        3       2       1       4       0       0       0       0       2
0     207      25     205
        3       2       1       4       0       0       0       0       2
0     208     205     206
        3       2       1       4       0       0       0       0       2
0     209     206     207
        3       2       1       4       0       0       0       0       2
0     210     207     208
        3       2       1       4       0       0       0       0       2
0     211     208     209
        3       2       1       4       0       0       0       0       2
0     212     209     210
        3       2       1       4       0       0       0       0       2
0     213     210     211
        3       2       1       4       0       0       0       0       2
0     214     211     212
        3       2       1       4       0       0       0       0       2
0     215     212     213
        3       2       1       4       0       0       0       0       2
0     216     213     214
        3       2       1       4       0       0       0       0       2
0     217     214     215
        3       2       1       4       0       0       0       0       2
0     218     215     216
```

```
        3       2       1       4       0       0       0       0       2
0     219     216     217
        3       2       1       4       0       0       0       0       2
0     220     217     218
        3       2       1       4       0       0       0       0       2
0     221     218     219
        3       2       1       4       0       0       0       0       2
0     222     219     220
        3       2       1       4       0       0       0       0       2
0     223     220     221
        3       2       1       4       0       0       0       0       2
0     224     221     222
        3       2       1       4       0       0       0       0       2
0     225     222     223
        3       2       1       4       0       0       0       0       2
0     226     223     224
        3       2       1       4       0       0       0       0       2
0     227     224     225
        3       2       1       4       0       0       0       0       2
0     228     225     226
        3       2       1       4       0       0       0       0       2
0     229     226      82
        3       2       1       4       0       0       0       0       2
0     230      49     227
        3       2       1       4       0       0       0       0       2
0     231     227     228
        3       2       1       4       0       0       0       0       2
0     232     228     229
        3       2       1       4       0       0       0       0       2
0     233     229     230
        3       2       1       4       0       0       0       0       2
0     234     230     231
        3       2       1       4       0       0       0       0       2
0     235     231     232
        3       2       1       4       0       0       0       0       2
0     236     232     233
        3       2       1       4       0       0       0       0       2
0     237     233     234
        3       2       1       4       0       0       0       0       2
0     238     234     235
        3       2       1       4       0       0       0       0       2
0     239     235     236
        3       2       1       4       0       0       0       0       2
0     240     236     237
        3       2       1       4       0       0       0       0       2
0     241     237     238
        3       2       1       4       0       0       0       0       2
0     242     238     239
        3       2       1       4       0       0       0       0       2
0     243     239     240
        3       2       1       4       0       0       0       0       2
0     244     240     241
        3       2       1       4       0       0       0       0       2
0     245     241     242
```

```
         3       2       1       4       0       0       0       0       2
0      246     242     243
         3       2       1       4       0       0       0       0       2
0      247     243     244
         3       2       1       4       0       0       0       0       2
0      248     244     245
         3       2       1       4       0       0       0       0       2
0      249     245     246
         3       2       1       4       0       0       0       0       2
0      250     246     247
         3       2       1       4       0       0       0       0       2
0      251     247     248
         3       2       1       4       0       0       0       0       2
0      252     248       1
         5       2       1       8       0       0       0       0       2
0      253     249     250
         5       2       1       8       0       0       0       0       2
0      254     250     251
         5       2       1       8       0       0       0       0       2
0      255     251     252
         5       2       1       8       0       0       0       0       2
0      256     252     253
         5       2       1       8       0       0       0       0       2
0      257     253      25
         5       2       1       8       0       0       0       0       2
0      258     254     255
         5       2       1       8       0       0       0       0       2
0      259     255     256
         5       2       1       8       0       0       0       0       2
0      260     256     257
         5       2       1       8       0       0       0       0       2
0      261     257     258
         5       2       1       8       0       0       0       0       2
0      262     258      82
         5       2       1       8       0       0       0       0       2
0      263     259     260
         5       2       1       8       0       0       0       0       2
0      264     260     261
         5       2       1       8       0       0       0       0       2
0      265     261     262
         5       2       1       8       0       0       0       0       2
0      266     262     263
         5       2       1       8       0       0       0       0       2
0      267     263       1
         5       2       1       8       0       0       0       0       2
0      268     264     265
         5       2       1       8       0       0       0       0       2
0      269     265     266
         5       2       1       8       0       0       0       0       2
0      270     266     267
         5       2       1       8       0       0       0       0       2
0      271     267     268
         5       2       1       8       0       0       0       0       2
0      272     268      49
```

```
        4       2       1       2       0       0       0       0       2
0     273     269     270
        4       2       1       2       0       0       0       0       2
0     274     271     272
        4       2       1       2       0       0       0       0       2
0     275     273     274
        4       2       1       2       0       0       0       0       2
0     276     275     276
        4       2       1       2       0       0       0       0       2
0     277     277     278
        4       2       1       2       0       0       0       0       2
0     278     279     280
        4       2       1       2       0       0       0       0       2
0     279     281     282
        4       2       1       2       0       0       0       0       2
0     280     283     284
        4       2       1       7       0       0       0       0       2
0     281     270     285
        4       2       1       7       0       0       0       0       2
0     282     285     286
        4       2       1       7       0       0       0       0       2
0     283     286     249
        4       2       1       7       0       0       0       0       2
0     284     274     287
        4       2       1       7       0       0       0       0       2
0     285     287     288
        4       2       1       7       0       0       0       0       2
0     286     288     254
        4       2       1       7       0       0       0       0       2
0     287     272     289
        4       2       1       7       0       0       0       0       2
0     288     289     290
        4       2       1       7       0       0       0       0       2
0     289     290     249
        4       2       1       7       0       0       0       0       2
0     290     276     291
        4       2       1       7       0       0       0       0       2
0     291     291     292
        4       2       1       7       0       0       0       0       2
0     292     292     254
        4       2       1       7       0       0       0       0       2
0     293     278     293
        4       2       1       7       0       0       0       0       2
0     294     293     294
        4       2       1       7       0       0       0       0       2
0     295     294     259
        4       2       1       7       0       0       0       0       2
0     296     282     295
        4       2       1       7       0       0       0       0       2
0     297     295     296
        4       2       1       7       0       0       0       0       2
0     298     296     264
        4       2       1       7       0       0       0       0       2
0     299     280     297
```

```
        4       2       1       7       0       0       0       0       2
0       300     297     298
        4       2       1       7       0       0       0       0       2
0       301     298     259
        4       2       1       7       0       0       0       0       2
0       302     284     299
        4       2       1       7       0       0       0       0       2
0       303     299     300
        4       2       1       7       0       0       0       0       2
0       304     300     264
        4       2       1       6       0       0       0       0       2
0       305     272     301
        4       2       1       6       0       0       0       0       2
0       306     301     302
        4       2       1       6       0       0       0       0       2
0       307     302     303
        4       2       1       6       0       0       0       0       2
0       308     303     304
        4       2       1       6       0       0       0       0       2
0       309     304     305
        4       2       1       6       0       0       0       0       2
0       310     305     306
        4       2       1       6       0       0       0       0       2
0       311     306     307
        4       2       1       6       0       0       0       0       2
0       312     307     308
        4       2       1       6       0       0       0       0       2
0       313     308     309
        4       2       1       6       0       0       0       0       2
0       314     309     310
        4       2       1       6       0       0       0       0       2
0       315     310     311
        4       2       1       6       0       0       0       0       2
0       316     311     312
        4       2       1       6       0       0       0       0       2
0       317     312     313
        4       2       1       6       0       0       0       0       2
0       318     313     314
        4       2       1       6       0       0       0       0       2
0       319     314     315
        4       2       1       6       0       0       0       0       2
0       320     315     316
        4       2       1       6       0       0       0       0       2
0       321     316     274
        4       2       1       6       0       0       0       0       2
0       322     282     317
        4       2       1       6       0       0       0       0       2
0       323     317     318
        4       2       1       6       0       0       0       0       2
0       324     318     319
        4       2       1       6       0       0       0       0       2
0       325     319     320
        4       2       1       6       0       0       0       0       2
0       326     320     321
```

```
        4       2       1       6       0       0       0       0       2
0     327     321     322
        4       2       1       6       0       0       0       0       2
0     328     322     323
        4       2       1       6       0       0       0       0       2
0     329     323     324
        4       2       1       6       0       0       0       0       2
0     330     324     325
        4       2       1       6       0       0       0       0       2
0     331     325     326
        4       2       1       6       0       0       0       0       2
0     332     326     327
        4       2       1       6       0       0       0       0       2
0     333     327     328
        4       2       1       6       0       0       0       0       2
0     334     328     329
        4       2       1       6       0       0       0       0       2
0     335     329     330
        4       2       1       6       0       0       0       0       2
0     336     330     331
        4       2       1       6       0       0       0       0       2
0     337     331     332
        4       2       1       6       0       0       0       0       2
0     338     332     280
        1       1       2       2       0       0       0       0       1
0     339       6
        1       1       2       2       0       0       0       0       1
0     340       7
        1       1       3       2       0       0       0       0       1
0     341     285
        1       1       4       2       0       0       0       0       1
0     342     270
        1       1       4       2       0       0       0       0       1
0     343     278
        1       1       5       2       0       0       0       0       1
0     344       3
        1       1       5       2       0       0       0       0       1
0     345      27
        1       1       5       2       0       0       0       0       1
0     346      51
        1       1       5       2       0       0       0       0       1
0     347      84
        7       2       5      11       0       0       0       0       2
0     360     347     337
        7       2       5      11       0       0       0       0       2
0     361     347     348
        7       2       5      11       0       0       0       0       2
0     362     348     349
        7       2       5      11       0       0       0       0       2
0     363     349     350
        7       2       5      11       0       0       0       0       2
0     364     350     351
        7       2       5      11       0       0       0       0       2
0     365     351     352
```

```
        7       2       5      11       0       0       0       0       2
0     366     334     353
        7       2       5      11       0       0       0       0       2
0     367     353     354
        7       2       5      11       0       0       0       0       2
0     368     354     355
        7       2       5      11       0       0       0       0       2
0     369     352     357
        7       2       5      11       0       0       0       0       2
0     370     357     358
        7       2       5      11       0       0       0       0       2
0     371     358     356
        7       2       5      11       0       0       0       0       2
0     372     355     360
        7       2       5      11       0       0       0       0       2
0     373     360     359
        7       2       5      11       0       0       0       0       2
0     374     359     362
        7       2       5      11       0       0       0       0       2
0     375     362     361
        7       2       5      11       0       0       0       0       2
0     376     361     356
        7       2       5      12       0       0       0       0       2
0     377     363     338
        7       2       5      12       0       0       0       0       2
0     378     363     365
        7       2       5      12       0       0       0       0       2
0     379     365     366
        7       2       5      12       0       0       0       0       2
0     380     366     367
        7       2       5      12       0       0       0       0       2
0     384     367     372
        7       2       5      12       0       0       0       0       2
0     385     372     368
        7       2       5      12       0       0       0       0       2
0     386     333     373
        7       2       5      12       0       0       0       0       2
0     387     373     374
        7       2       5      12       0       0       0       0       2
0     388     374     375
        7       2       5      12       0       0       0       0       2
0     389     375     377
        7       2       5      12       0       0       0       0       2
0     390     377     376
        7       2       5      12       0       0       0       0       2
0     391     376     379
        7       2       5      12       0       0       0       0       2
0     392     379     378
        7       2       5      12       0       0       0       0       2
0     393     369     378
        7       2       5      14       0       0       0       0       2
0     406     351     392
        7       2       5      14       0       0       0       0       2
0     407     392     393
```

```
        7       2       5      14       0       0       0       0       2
0     408     393     372
        7       2       5      14       0       0       0       0       2
0     409     361     395
        7       2       5      14       0       0       0       0       2
0     410     395     396
        7       2       5      14       0       0       0       0       2
0     411     396     378
        7       2       5      14       0       0       0       0       2
0     412     368     397
        7       2       5      14       0       0       0       0       2
0     413     352     399
        7       2       5      14       0       0       0       0       2
0     414     356     400
        7       2       5      14       0       0       0       0       2
0     415     399     401
        7       2       5      14       0       0       0       0       2
0     416     401     397
        7       2       5      14       0       0       0       0       2
0     417     369     402
        7       2       5      14       0       0       0       0       2
0     418     400     403
        7       2       5      14       0       0       0       0       2
0     419     403     402
        7       2       5      15       0       0       0       0       2
0     420     397     405
        7       2       5      15       0       0       0       0       2
0     421     405     406
        7       2       5      15       0       0       0       0       2
0     422     406     402
        7       2       5      16       0       0       0       0       2
0     423     399     408
        7       2       5      16       0       0       0       0       2
0     424     408     409
        7       2       5      16       0       0       0       0       2
0     425     409     400
        7       2       5      15       0       0       0       0       2
0     426     348     411
        7       2       5      15       0       0       0       0       2
0     427     411     412
        7       2       5      15       0       0       0       0       2
0     428     412     365
        7       2       5      15       0       0       0       0       2
0     429     349     414
        7       2       5      15       0       0       0       0       2
0     430     414     415
        7       2       5      15       0       0       0       0       2
0     431     415     366
        7       2       5      15       0       0       0       0       2
0     432     350     417
        7       2       5      15       0       0       0       0       2
0     433     417     418
        7       2       5      15       0       0       0       0       2
0     434     418     367
```

```
        7       2       5      15       0       0       0       0       2
0     435     353     420
        7       2       5      15       0       0       0       0       2
0     436     420     421
        7       2       5      15       0       0       0       0       2
0     437     421     373
        7       2       5      15       0       0       0       0       2
0     438     355     423
        7       2       5      15       0       0       0       0       2
0     439     423     424
        7       2       5      15       0       0       0       0       2
0     440     424     375
        7       2       5      15       0       0       0       0       2
0     441     359     426
        7       2       5      15       0       0       0       0       2
0     442     426     427
        7       2       5      15       0       0       0       0       2
0     443     427     376
        7       2       5      17       0       0       0       0       2
0     444     347     429
        7       2       5      17       0       0       0       0       2
0     445     429     430
        7       2       5      17       0       0       0       0       2
0     446     430     363
        7       2       5      17       0       0       0       0       2
0     447     354     432
        7       2       5      17       0       0       0       0       2
0     448     432     433
        7       2       5      17       0       0       0       0       2
0     449     433     374
        7       2       5      12       0       0       0       0       2
0     450     368     435
        7       2       5      12       0       0       0       0       2
0     451     435     434
        7       2       5      12       0       0       0       0       2
0     452     369     436
        7       2       5      12       0       0       0       0       2
0     453     436     434
        7       2       5      10       0       0       0       0       2
0     454     338     438
        7       2       5      10       0       0       0       0       2
0     455     438     439
        7       2       5      10       0       0       0       0       2
0     456     439     437
        7       2       5      10       0       0       0       0       2
0     457     333     441
        7       2       5      10       0       0       0       0       2
0     458     441     442
        7       2       5      10       0       0       0       0       2
0     459     442     440
        7       2       5      10       0       0       0       0       2
0     460     443     444
        7       2       5      10       0       0       0       0       2
0     461     444     445
```

```
       7       2       5      10       0       0       0       0       2
0      462     445     338
       7       2       5      10       0       0       0       0       2
0      463     446     447
       7       2       5      10       0       0       0       0       2
0      464     447     448
       7       2       5      10       0       0       0       0       2
0      465     448     333
       7       2       5      10       0       0       0       0       2
0      466     443     337
       7       2       5      10       0       0       0       0       2
0      467     446     334
       7       2       5      10       0       0       0       0       2
0      468     437     341
       7       2       5      10       0       0       0       0       2
0      469     344     440
       5       2       1       8       0       0       0       0       2
0      470     130     443
       5       2       1       8       0       0       0       0       2
0      471     123     437
       5       2       1       8       0       0       0       0       2
0      472     116     440
       5       2       1       8       0       0       0       0       2
0      473     137     446
       5    1001    1001       8       0       0       0       0       2
0      478     434     450
       5    1002    1002       8       0       0       0       0       2
0      479     434     450
       5    1003    1003       8       0       0       0       0       2
0      480     434     450
       5    1004    1004       8       0       0       0       0       1
0      481     450
      -1
CMBLOCK,_CERGCM ,NODE,       2  ! users node component definition
(8i10)
        83       115
CMBLOCK,_NODECM ,NODE,       2  ! users node component definition
(8i10)
         1      -142
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MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,NUXY,       1, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
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MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,PRXY,       1, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
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MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,NUXY,       2, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
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MPTEMP,R5.0, 1, 1,  0.00000000    ,
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MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,NUXY,       3, 1, 0.300000000    ,
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MPDATA,R5.0, 1,DENS,       3, 1, 9.600000000E-04,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,PRXY,       3, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
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MPDATA,R5.0, 1,EX  ,       5, 1,  30000000.0    ,
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MPDATA,R5.0, 1,NUXY,       5, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
MPDATA,R5.0, 1,DENS,       5, 1,  0.00000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
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MPDATA,R5.0, 1,NUXY,       6, 1, 0.300000000    ,
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MPDATA,R5.0, 1,PRXY,       6, 1, 0.300000000    ,
MPTEMP,R5.0, 1, 1,  0.00000000    ,
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FINISH
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MORRIS MATERIAL HANDLING

DESIGN VERIFICATION CHECKLIST

Document Name: Crystal River 3 - Crane Stick Model

Document Number: 36539-29 Revision: 1

#	Description	YES	NO	N/A
1.	Were the inputs correctly selected and incorporated into the design?	☑	☐	☐
2.	Are assumptions necessary to perform the design activity adequately described and reasonable?	☐	☐	☑
3.	Are appropriate quality and quality assurance requirements specified?	☑	☐	☐
4.	Are the applicable codes, standards and regulatory requirements properly identified and are their requirements for design met?	☑	☐	☐
5.	Have applicable manufacturing and installation experiences been considered?	☐	☐	☑
6.	Have the design interface requirements been satisfied?	☑	☐	☐
7.	Was an appropriate design method used?	☑	☐	☐
8.	Is the output reasonable compared to inputs?	☑	☐	☐
9.	Can the results of the 3-D ANSYS outputs been compared and/or verified by an alternative method?	☑	☐	☐
10.	Are the specified materials compatible with each other and the design environment conditions to which the material will be exposed?	☑	☐	☐
11.	Have adequate maintenance features and requirements been specified?	☐	☐	☑
12.	Are materials clearly specified with their ASTM (or other recognized standard) minimum requirements?	☐	☐	☑
13.	Has adequate accessibility been provided to perform the in-service inspection expected to be required during the equipment lift?	☐	☐	☑
14.	Are the acceptance criteria incorporated in the design documents sufficient to allow verification that design requirements have been accomplished?	☐	☐	☑
15.	Have adequate pre-operational and subsequent test requirements been appropriately specified?	☐	☐	☑
16.	Are adequate handling, storage, cleaning, and shipping requirements specified?	☐	☐	☑
17.	Are adequate identification requirements specified?	☐	☐	☑
18.	Are the specified parts, equipment and processes suitable for the required application?	☑	☐	☐
19.	Are accessibility and other design provisions adequate for performance of needed maintenance or repair?	☐	☐	☑

The subject document has been verified by the "Design Review" method.

Verified By: [signature] Date: 12/09/2010

ATTACHMENT A

Calculation to establish the E-Modulus

Rope Construction: Python Super 8 V RRL

and the following rope data

Control #: **2079**

Reel #: **D5444**

Rope Diameter:	41.28	[mm]
Tensile grade:	2,160	[kN/mm²]
Min Brkg strength:	1,713	[kN]
Fill Factor:	0.667	
Test sample length:	2,250	[mm]

Rope tension calculated [%]	Rope tension actual [%]	Rope elongation actual [%]	Rope E-Modul actual [kN/mm²]
5	**7.66**	**0.01**	**2376.31**
10	**10.69**	**0.04**	**484.11**
15	**15.57**	**0.15**	**205.20**
20	**20.92**	**0.26**	**156.62**
25	**26.38**	**0.37**	**137.55**
30	**31.16**	**0.47**	**127.43**
35	**36.41**	**0.58**	**120.95**
40	**41.64**	**0.69**	**115.71**
45	**47.33**	**0.81**	**111.59**

According to ISO: 12076_2002_08

$E_{10\text{-}30}$= **92.02** [kN/mm²]

Construction: Python Super 8 V RRL

Diameter: 41.28 [mm]

Tensile grade: 2160 [N/mm²]

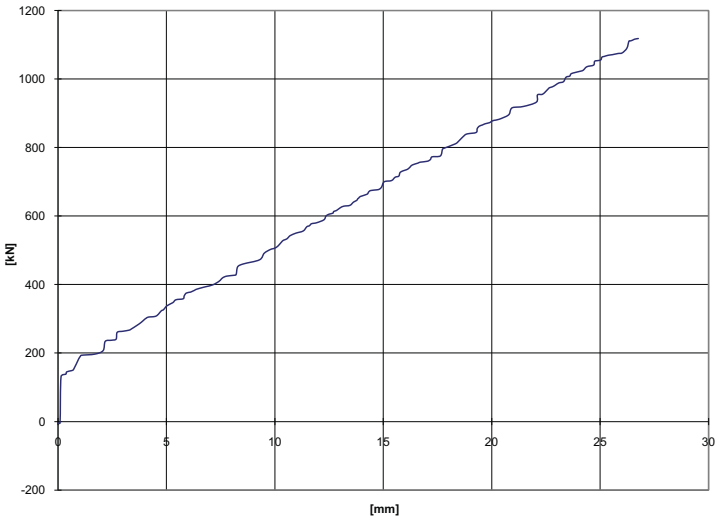
Surface: brigth

Fmax.: 1120.9 [kN]

Rope was not broken

Control #: 2079

Reel #: D5444



ATTACHMENT B

Calculation to establish the E-Modulus

Rope Construction: Python Super 8 V LRL

and the following rope data

Control #: **2080**

Reel # **D5445**

Rope Diameter:	41.28 [mm]
Tensile grade:	2,160 [kN/mm²]
Min Brkg strength:	1,713 [kN]
Fill Factor:	0.667
Test sample length:	2,250 [mm]

Rope tension calculated [%]	Rope tension actual [%]	Rope elongation actual [%]	Rope E-Modul actual [kN/mm²]
5	11.68	-0.01	-4212.39
10	14.59	0.01	5252.32
15	16.07	0.03	934.70
20	21.83	0.14	309.97
25	26.01	0.25	199.59
30	31.12	0.36	168.01
35	36.55	0.47	150.10
40	42.01	0.59	137.73
45	46.84	0.70	127.76

According to ISO: 12076_2002_08

$E_{10\text{-}30}$= **90.58** [kN/mm²]

Construction: Super 8 V LRL

Diameter: 41.28 [mm]

Tensile grade: 2160 [N/mm²]

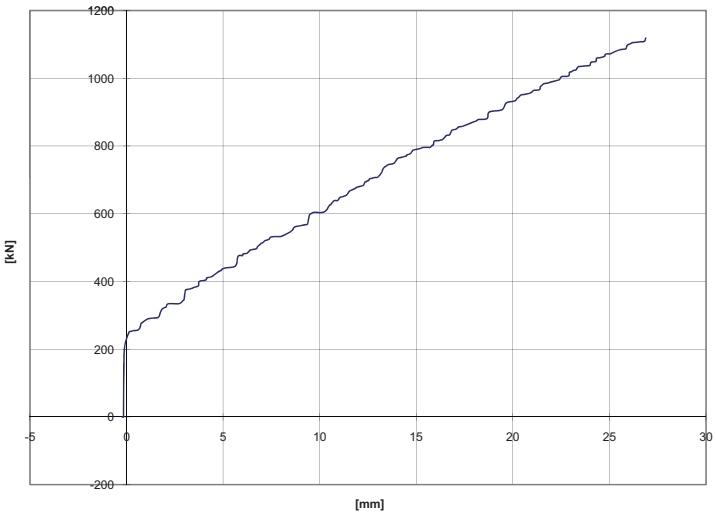
Surface: brigth

Fmax.: 1121.7 [kN]

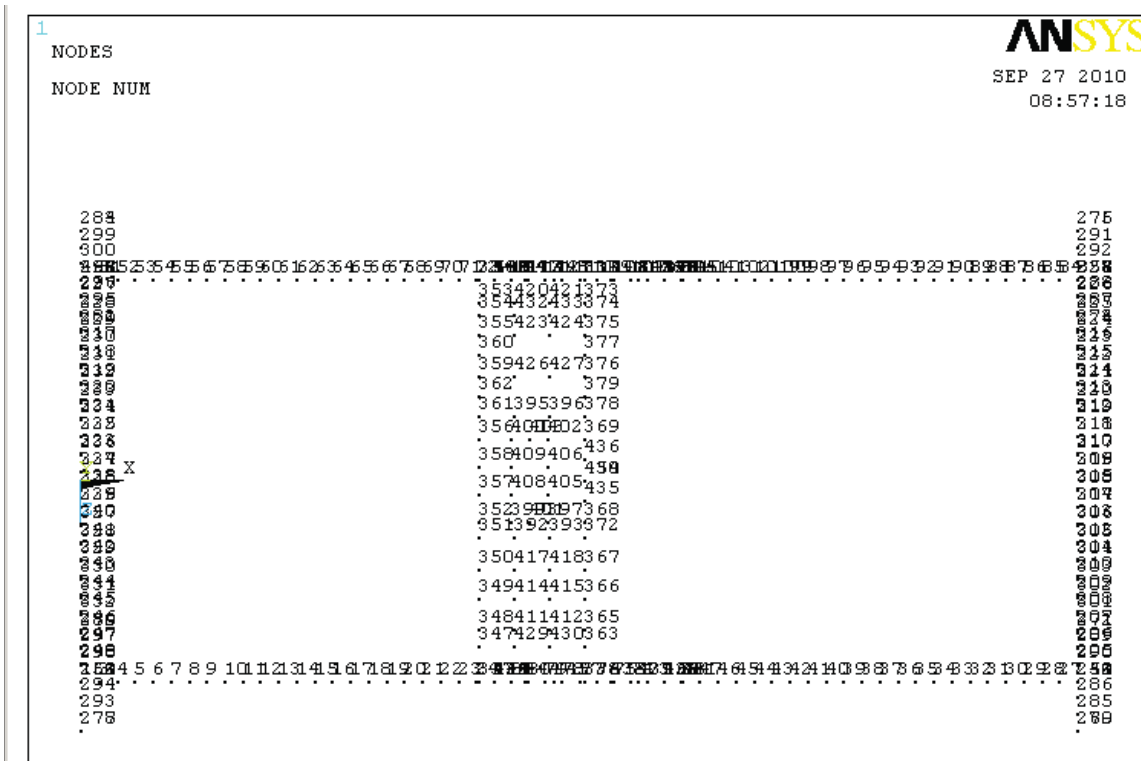
Rope was not broken

Control #: 2080

Reel #: D5445



Sketch of Node Points



Record of Lead Review

Document Transmittal 04-2: Trolley Stick Model **Revision** 001

The signature below of the Lead Reviewer records that:
- the review indicated below has been performed by the Lead Reviewer;
- appropriate reviews were performed and errors/deficiencies (for all reviews performed) have been resolved and these records are included in the design package;
- the review was performed in accordance with EGR-NGGC-0003.

☐ **Design Verification Review** ☐ **Engineering Review** ☒ **Owner's Review**
- ☐ Design Review
- ☐ Alternate Calculation
- ☐ Qualification Testing

☐ **Special Engineering Review**

☐ YES ☐ N/A **Other Records are attached**

Casaba Ranganath	Ranganath, Casaba 2010.12.16 14:07:27 -05'00'	Civil / Structural	9-23-10
Lead Reviewer (print)	**(sign)**	**Discipline**	**Date**

Item No.	Deficiency	Resolution
1	In the calculation for stiffness of the rope the Young's Modulus for the rope is used as 1313751psi and references Attachments A and B. However, the Attachments A and B are not in the Stick model file, verify.	Please find the Attachment A and B attached to this document. Young's Modulus of 90.58 kN/mm² is used with respect to Attachment B.
2	Is it possible to provide a sketch of the stick model showing the node points.	MMH provided the cdb files of the model which has all the requested information about the stick model. Sketch of the stick model is also attached in the document. Due to the high number of node points it is not efficient to use a sketch for node points.

FORM EGR-NGGC-0003-2-5
This form is a QA Record when completed and included with a completed design package. Owner's Reviews may be processed as stand alone QA records when Owner's Review is completed