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November 14, 2011 U7-C-NINA-NRC-110138

U. S. Nuclear Regulatory Commission Attention: Document Control Desk One White Flint North 11555 Rockville Pike Rockville MD 20852-2738

South Texas Project Units 3 and 4 Docket Nos. 52-012 and 52-013 Supplemental Response to Request for Additional Information

During audits of May 23-27, 2011, July 25-29, 2011, and September 27-30, 2011, the NRC Staff requested that Nuclear Innovation North America LLC (NINA) provide additional information to support the review of the Combined License Application (COLA). Attached is a supplemental response to NRC staff questions included in Request for Additional Information (RAI) 03.08.04-30 and 03.08.04-34 related to COLA Part 2, Tier 2, Section 3.8.

There are no commitments in this letter.

If you have any questions regarding these responses, please contact me at (361) 972-7136 or Bill Mookhoek at (361) 972-7274.

I declare under penalty of perjury that the foregoing is true and correct.

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Scott Head Manager, Regulatory Affairs South Texas Project Units 3 & 4

jep

Attachments:

RAI 03.08.04-30, Supplement 7 RAI 03.08.04-34, Supplement 2

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cc: w/o attachment except* (paper copy)

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RAI 03.08.04-30, Supplement 7

QUESTION:

Follow-up to Question 03.08.04-23

In response to staff question requesting additional information (Letter U7-C-STP-NRC-100036, dated February 10, 2010) about how various steel and concrete elements of site-specific structures are designed, and the design results, the applicant provided some analysis and design information. The applicant also referred to the Supplement 2 response to Question 03.07.01-13 (Letter U7-C-STP-NRC-090230, dated 12/30/09) for pertinent design summary information. In order for the staff to conclude that the design of site-specific structures meet the requirements of GDC 2 by meeting the guidance provided in SRP 3.8.4 and 3.8.5, or otherwise, the applicant is requested to provide the following additional information:

- The applicant states in the response that a three dimensional finite element analysis (FEA) is used for structural analysis and design of the UHS/RSW Pump House. FSAR Section 3H.6.6.1 states that analysis for the seismic loads was performed using equivalent static loads and the induced forces due to X, Y, and Z seismic excitations were combined using the SRSS method of combination. However, the applicant did not describe how the equivalent static loads due to seismic excitation were determined and applied to the static FEA model from the results of soil structure interaction (SSI) analysis used for determination of seismic response. Therefore, the applicant is requested to provide details of how seismic response analysis results from dynamic SSI analysis were transferred to the static FEA model, including how the effects of accidental torsion were included in the analysis and design of UHS/RSW Pump house. Please also update FSAR with the information, as appropriate.
- 2. The applicant stated in its response that the modulus of subgrade reaction for static loading was calculated as the average of the local values at nine locations under the foundation. The applicant is requested to provide these nine values, and explain why it is considered appropriate to use the average value. Please also explain how the foundation subgrade modulus was used for calculating nodal springs for the FEA model, and how the effect due to coupling of soil springs was considered in the analysis.
- 3. For seismic loading, the applicant has outlined a hand-calculated procedure that utilizes published formulas and charts to estimate the foundation spring constants. According to this procedure, the equivalent modulus and Poisson's ratio of a layered soil system are first estimated using the cumulative strain energy method. The resulting values are then used in the equations for computation of the spring constants for a rigid foundation of an arbitrary shape embedded in a uniform half-space. The shear moduli used for individual layers are strain compatible values, and include the mean, upper bound, and lower bound soil cases. The approximate procedure outlined above for developing the foundation spring constants does not take into account the pressure distribution under the base slab. Furthermore, this procedure does not account for the frequency dependence of these springs. As such, the applicant is requested to provide a justification for not considering the effects of pressure

distribution and system frequency in developing the foundation dynamic springs including describing the impact on the calculated results.

- 4. The applicant's response does not provide details as to how the soil springs calculated under static and seismic loadings are inputted to the 3-D static FEA model to calculate the design stresses. Therefore, the applicant is requested to describe in detail how the static and seismic soil springs are inputted into the FEA model, and how the results are obtained for stress evaluations. Specifically, the applicant is requested to explain if the two sets of springs were used in a single model, and how the two sets were combined to a single set of springs. Otherwise, if the two sets of springs were applied to separate FEA models, describe how the load combinations were performed. The applicant is also requested to provide sufficient detail to assist staff in understanding how static and seismic soil springs are used in the FEA model and results combined for stress evaluations.
- 5. In the FSAR mark-up of Sections 3H.6.6.3.1 and 3H.6.6.3.2 provided with the response, the applicant identifies the method used by the applicant for combining forces and moments. In this method, for each reinforcing zone, the maximum force or moment is coupled with the corresponding moment or force for design for the same load combination. It is not clear if this method of combining forces and moments for design will envelop the worst combination of forces and moments for all elements in a reinforcing zone. Therefore, the applicant is requested to describe the method of combining forces and moments used by the applicant with a typical example of a reinforcing zone, and demonstrate that this method of combination will yield the worst combination of forces and moments that should be considered for design.
- 6. The staff notes that in the FSAR mark-up of Section 3H.6.6.3.1 provided with the response, the reported values of soil springs for the RSW Pump House are significantly larger than those for the UHS basin. The applicant is requested to confirm these values, and explain the reason for the large difference.
- 7. The response did not include any information about the maximum static and dynamic bearing pressures under the foundations of UHS/RSW Pump House. The applicant is requested to provide the maximum static and dynamic bearing pressure under the foundations of UHS/RSW Pump House, compare these values with the maximum allowable static and dynamic bearing pressures, and include this information in the FSAR.
- 8. In its response to Question 03.07.01-19 (letter U7-C-STP-NRC-100129, dated June 7, 2010), the applicant provided analysis and design information for the seismic category I Diesel Generator Fuel Oil Storage Vault (DGFOSV) a which was not previously included in the FSAR. The information included in the response does not describe how structural analysis and design of the structure was performed. Also, reference is made to FSAR Section 3H.6.4 for design loads. FSAR Section 3H.6.4 has been updated several times in various responses, and it is not clear where this information can be found. Therefore, the applicant is requested to provide complete structural analysis and design information for the DGFOSV to ensure it meets acceptance criteria 1 through 7 of SRP 3.8.4 and 3.8.5. The staff needs this information to conclude that the DGFOSV is designed to withstand seismic loads and meet GDC 2. Include

in the response an updated version of Appendix 3H where structural analysis and design information for all seismic category I structures can be found.

- 9. While reviewing this response, and other responses referenced in this response, the staff noted that the applicant has used different values of coefficient of friction for sliding stability evaluation; e.g., the value 0.3 was used for the RSW Pump House, 0.4 was used for UHS basin, 0.58 was used DGFOSV, and for the Reactor Building (RB) and the Control Building (CB), it was stated to be more than 0.47. It is not clear if these values are the required coefficient of friction, or the minimum coefficient of friction available. The applicant is requested to clearly specify the minimum coefficient of friction at various locations of the site, if they are different, and explain how these values were determined. Please also clarify this information in the FSAR.
- 10. The staff noted references to Diesel Generator Fuel Oil Tunnel (DGFOT) in several RAI responses. Please confirm that DGFOT is not a seismic category I structure, and if it is seismic category I, include the analysis and design information to show how the design of the DGFOT meets the acceptance criteria 1 through 7 in the SRP 3.8.4 and 3.8.5 in the FSAR.

SUPPLEMENTAL RESPONSE:

The Supplement 6 response to this RAI was submitted with Nuclear Innovation North America (NINA) letter U7-C-NINA-NRC-110116, dated September 12, 2011. This supplement provides the response to the following action items discussed in the NRC audit performed during the week of September 27, 2011.

Punch List Item 131

In RAI 03.08.04-30 S5, clarify why the wave propagation for DGFOT is based on site-specific SSE.

Action: Design parameters table (i.e. Table 3H.9-1) will be updated per Action Item 3.7-58.

Punch List Item 134

In COLA Rev. 6, Figures 3H.7-31 and 3H.7-32 are not legible and the table number in the table heading for Table 3H.9-1 is noted as Table 3H.8-1.

Action: COLA Rev 6 Figures 3H.7-31 and 32 will be replaced and design parameters table (i.e. Table 3H.9-1) will be updated per Action Item 3.7-58.

Action Item 3.7-58

Add a note to the design parameters table (i.e. Table 3H.9-1) to specify that the wave propagation parameters are site-specific and correct the table number in the table heading (Punch List Items 131 and 134) in RAI 03.08.04-30 S7.

Axial tensile strains, forces and moments at tunnel bends due to seismic wave propagation are layout dependent. Since the layout of Diesel Generator Fuel Oil Tunnels (DGFOT) is site-specific, the seismic wave propagation for DGFOT is based on the site-specific Safe Shutdown Earthquake.

COLA Figures 3H.7-31 and 3H.7-32 have been revised. The revised figures are provided in the RAI 03.07.01-29 Supplement 1 response which is being submitted concurrently with this response.

COLA Table 3H.9-1 has been revised per Action Item 3.7-58 (see Enclosure).

As a result of this response COLA Part 2, Tier 2, Appendix 3H will be revised as shown in the Enclosure.

Enclosure

Mark-ups to COLA Revision 6

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							Table 3H.8	Extreme Enviro	onmental Design Parameters for Seismic ,	Analysis, De	esign, Stability Evalu	ation and Seismic C	ategory II/I Des	ign				
			Seismic Analysis	a. a		l	<u></u>		Design									
		SSI		S	ssI			Structure			-	Stability			•		Design fo	r II/I
Structure	Input Motion	Soil Type	Structural Damping for Generation of ISRS	Input Motion	Soil Type	Seismic	Tornado	Tornado Missiles	Flood .	Seismic	Tornado	Tornado Missiles	Flotation	Coeff. Of Friction for Waterproofing Membrane	Seismic	Tornado	Tornado Missiles	Flood
Diesel Generator Fuel Oil Turnels (DGFOT)	Envelope of Amplified ⁽³⁾ Site- Specific SSE & 0.3g R6 1.60	DCD & Site-Specific	4% for all SSI analysis cases	Site-Specific SSE	Site-Specific	Envelope of Amplified ⁽¹⁾ Site- Specific SSE & 0.3g R6 1.60 (See Note 4)	DCD Tornado Wind Parameters (As described in Table 5.0 of DCD/Tier 1)	DCD Missile Spectrum 1 as defined in Table 5.0 of DCD/Tier 1	Flood El. 40' MSL, Water Density 63.85 lb/ft3 (above grode) + Drag Effect 44 psf (above grade) + Impact of Floating Debris per COLA Section 3.4.2 + Wind Generated Wave Action per COLA Figure 3.4-1 (only hydrodynamic portion)	Amplified ⁽¹⁾ Site-Specific SSE	Site-Specific Tornado Wind Parameters (Region II, RØ 1.76 Rev. 1)	Site-Specific Tornado Missile Spectrum for Region II as shown in Table 2 of RØ 1.76 Rev. 1 (Note 2)	Flood El. 40' MSL, Water Density 63.85 Ib/ft ³ (above grade)	Site-Specific	NA	NA .	NA	NA
UHS/RSW Pump House	Site-Specific SSE	Site-Specific	4% for all SSI analysis cases	Site-Specific SSE	Site-Specific	Site-Specific SSE	Site-Specific Tornado Wind Parameters (Region II, RØ 1.76 Rev. I)	Site-Specific Tornado Missile Spectrum for Region II as shown in Table 2 of R G 1.76 Rev. 1	Flood El. 40' MSL, Water Density 63.85 lb/ft ³ (above grade) + Drag Effect 44 psf (above grade) + Impact of Floating Debris per COLA Section 3.4.2 + Wind Generated Wave Action per COLA Figure 3.4-1 (only hydrodynamic portion)	Site-Specific SSE	Site-Specific Tornado Wind Parameters (Region II, RG 1.76 Rev. 1)	Site-Specific Tornado Missile Spectrum for Region II as shown in Table 2 of RG 1.76 Rev. 1	Flood El. 40' MSL, Water Density 63.85 Ib/ft ³ (above grade)	Site-Specific	NA	NA	NA	NA
RSW Piping Tunnels	Amplified ⁽¹⁾ Site-Specific SSE	Site-Specific	4% for all SSI analysis cases Except 7% for Cracked Case	Site-Specific SSE	Site-Specific	Amplified ⁽¹⁾ Site-Specific SSE	Site-Specific Tornado Wind Parameters (Region II, RG 1.76 Rev. 1)	Site-Specific Tornado Missile Spectrum for Region II as shown in Table 2 of RG 1.76 Rev. 1	Flood El. 40' MSL, Water Density 63.85 lb/ft ³ (above grade) + Drag Effect 44 psf (above grade) + Impact of Floating Debris per COLA Section 3.4.2 + Wind Generated Wave Action per COLA Figure 3.4-1 (only hydrodynamic portion)	Amplified ⁽¹⁾ Site-Specific SSE	Site-Specific Tornado Wind Parameters (Region II, RG 1.76 Rev. 1)	Site-Specific Tornado Missile Spectrum for Region II as shown in Table 2 of R6 1.76 Rev. 1	Flood El. 40' MSL. Water Density 63.85 Ib/ft ³ (above grade)	Site-Specific	NA	NA	NA	NA
Diesel Generator Fuel Oil Storage Vault (DGFOSV)	Envelope of Amplified ⁽¹⁾ Site- Specific SSE & 0.3g R G 1.60	Site-Specific	4% for all SSI analysis cases	Site-Specific SSE	Site-Specific	Envelope of Amplified ⁽¹⁾ Site- Specific SSE & 0.3g RG 1.60	Site-Specific Tornado Wind Parameters (Regian II, RG 1.76 Rev. 1)	Site-Specific Tornado Missile Spectrum for Region II as shown in Table 2 of RG 1.76 Rev. 1	Flood El. 40' MSL, Water Density 63.85 lb/ft ³ (above grade) • Drag Effect 44 psf (above grade) • Impact of Floating Debris per COLA Section 3.4.2 • Wind Generated Wave Action per COLA Figure 3.4-1 (only hydrodynamic portion)	Amplified ⁽¹⁾ Site-Specific SSE	Site-Specific Tornado Wind Parameters (Region II, RS 1.76 Rev. 1)	Site-Specific Tornado Missile Spectrum for Region II as shown in Table 2 of RG 1.76 Rev. 1	Flood El. 40' MSL. Water Density 63.85 Ib/ft ³ (above grade)	Site-Specific	NA	NA	NA	NA .
Radwaste Building (RWB)	NA	NA	NA	Site-Specific SSE	Site-Specific	1/2 of 0.3g R6 1.60 SSE for RW-IIa Classification, 4% Damping) Per Table 2 of RG 1.143 Rev. 2 for RW-IIc Classification	Per Table 2 of RG 1.143 Rev. 2 for RW-IIa Classification	Flood El. 33' MSL RW-IIb Classification	Amplified ⁽¹⁾ Site-Specific SSE , 7% Damping	Site-Specific Tornado Wind Parameters (Region II, RG 1.76 Rev. 1)	Site-Specific Tornado Missile Spectrum for Region II as shown in Table 2 of R6 1.76 Rev. 1	Flood El. 40' MSL, Water Density 63.85 Ib/ft ³ (above grode)	Site-Specific	Envelope of Amplified ⁽¹⁾ Sitè- Specific SSE & 0.3g RG 1.60, 7% Damping	DCD Tornado Wind Parameters (As described in Table 5.0 of DCD/Tier 1)	DCD Missile Spectrum 1 as defined in Table 5.0 of DCD/Tier 1	Flood El. 40' MSL, Water Density 63.85 lb/ft ³ (above grade) + Drag Effect 44 psf (above grade) + Impact of Floating Debris per COLA Section 3.4.2 + Wind Generated Wave Action per COLA Figure 3.4-1 (only hydrodynamic portion)
Control Bidg. Annex (CBA)	NA	NA	NA	NA	NA	IBC 2006	NA	NA	NA'	Amplified ⁽¹⁾ Site-Specific SSE	Site-Specific Tornado Wind Parameters (Region II, R6 1.76 Rev. 1)	Site-Specific Tornado Missile Spectrum for Region II as shown in Table 2 of RG 1.76 Rev. 1	Flood El. 40' MSL. Water Density 63.85 Ib/ft ³ (above grade)	Site-Specific	Envelope of Amplified ⁽¹⁾ Site- Specific SSE & 0.3g R G 1.60	DCD Tornado Wind Parameters (As described in Table 5.0 of DCD/Tier 1)	DCD Missile Spectrum 1 as defined in Table 5.0 ef DCD/Tier 1	Flood El. 40' MSL, Water Density 63.85 lb/ft ³ (above grade) + Drag Effect 44 psf (above grade) + Impact of Floating Debris per COLA Section 3.4.2 + Wind Generated Wave Action per COLA Figure 3.4-1 (only hydrodynamic portion)
Turbine Building (TB)	NA	NA	NA	NA	NA	IBC 2006	NA	NA	NA .	Site-Specific SSE	Site-Specific Tornado Wind Parameters (Region II, RG 1.76 Rev. 1)	Site-Specific Tornado Missile Spectrum for Region II as shown in Table 2 of RG 1.76 Rev. 1	Flood El. 40' MSL, Water Density 63.85 Ib/ft ³ (above grade)	Site-Specific	0.3g R& 1.60 SSE	DCD Tornado Wind Parameters (As described in Table 5.0 of DCD/Tier 1)	DCD Missile Spectrum 1 as defined in Table 5.0 of DCD/Tier 1	Flood El. 40' MSL, Water Density 63.85 lb/ft ³ (above grade) + Drag Effect 44 psf (above grade) * Impact of Floating Debris per COLA Section 3.4.2 * Wind Generated Wave Action per COLA Figure 3.4-1 (only hydrodynamic portion)
Service Building (SB)	NA	NA	NA	NA	NA	IBC 2006	NA	NA	NA	Amplified ⁽¹⁾ Site-Specific SSE	Site-Specific Tornado Wind Parameters (Region II, RG 1.76 Rev. 1)	Site-Specific Tornado Missile Spectrum for Region II as shown in Table 2 of RG 1.76 Rev. 1	Flood El. 40' MSL. Water Density 63.85 Ib/ft ³ (above grade)	Site-Specific	Envelope of Amplified ⁽¹⁾ Site- Specific SSE & 0.3g RG 1.60	DCD Tornado Wind Parameters (As described in Table 5.0 of DCD/Tier 1)	DCD Missile Spectrum 1 as defined in Table 5.0 of DCD/Tier 1	Flood El. 40' MSL, Water Density 63.85 lb/ft ³ (above grade) + Drag Effect 44 psf (above grade) + Impact of Floating Debris per COLA Section 3.4.2 + Wind Generated Wave Action per COLA Figure 3.4-1 (only hydradynamic portion)

General Notes

1) Amplified Site-Specific SSE accounts for the influence of nearby heavy Reactor Building, Control Building, and/or UHS/RSW Pump House.

2) For stability under tornado loading with tornado missile, restraints are required at top of DGFOT access regions.

3) NA: Not Applicable

(4) Seismic wave propagation for DGFOT is based on site specific SSE because its layout is site specific.

Table 3H.9-1 Extreme Environmental Design Parameters for Seismic Analysis, Design, Stability Evaluation and Seismic Category II/I Design

U7-C-NINA-NRC-110138 Attachment 1 Page 6 of 6

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RAI 03.08.04-34, Supplement 2

QUESTION:

10 CFR 50, Appendix A, GDC 2, requires that structures important to safety shall be designed to withstand the effects of natural phenomena with appropriate combination of the effects of normal and accident conditions. To meet this requirement, all seismic category I structures must be designed for required strength at all locations in the structure. During the October 2010 Audit the applicant presented the procedures to verify the concrete sections of the UHS/PH structural members resulting from the code-required load combinations. The internal forces (i.e. shear, moment, axial force, torsion, etc.) used to determine the required strength of the structural members (i.e. walls, slabs, beam, columns, etc.) of the UHS/PH building are generated by the applicant with the help of SAP2000 models simulating the building's static and dynamic behavior. These element forces are subsequently processed by the applicant with a number of in-house developed programs for design of concrete sections. It was noted that concrete slabs and walls were designed for out-of-plane shear by averaging the element shear forces across cut lines that extended along the entire width of the walls and slabs. The staff considers that averaging of out of plane shear along the entire cut line of a slab or wall could lead to unconservative estimate of shear stress in slabs. The subject was discussed with the applicant during the audit. Although the applicant explained the procedure by referencing to ACI 349-97, Section 11.12, "Special provisions for slabs and footings," it did not provide the staff with a sufficient interpretation of the provision of the ACI code, which appears to be intended for shear strength of slabs and footings in the vicinity of columns, concentrated loads, or reactions, to close this issue. ACI 349-97, Section 13.3.1, states that a slab system may be designed by any procedure satisfying conditions of equilibrium and geometric compatibility, if shown that the design strength at every section is at least equal to the required strength. Averaging of out-of-plane shear across the entire width of a slab may not show that the design strength at every section is at least equal to the required strength. Therefore, in order for the staff to conclude that the site-specific structures are adequately designed for out-of plane shear, the staff requests STP to demonstrate that use of average shear force across the entire width of slab, instead of the shear force demand at every section obtained from analysis may be considered acceptable by any or more of the following:

- Obtain clarification from the ACI regarding validity of use of Section 11.12 of ACI 349-87 for the situations where the provisions of the code were used,
- Provide examples of any precedence where similar methodology was accepted by the staff,
- Provide detailed justification using industry accepted standards, technical references, experimental results, etc., to justify redistribution of the shear forces obtained from finite element analysis.

The applicant is also requested to update the FSAR as necessary.

SUPPLEMENTAL RESPONSE:

The original response to this RAI was submitted with Nuclear Innovation North America (NINA) letter U7-C-NINA-NRC-110050, dated April 5, 2011. This supplement provides the response to the following action item discussed in the NRC audits performed during the weeks of May 23, 2011 and July 25, 2011.

Beam shear discussion (Punch List Item 119):

Calculations will be revised and FSAR tables will be updated as a Confirmatory Action (Follow-up to Punch List Item 56, Audit Action Item 3.8-21)

Finite element analysis was used for design of the following structures:

- Ultimate Heat Sink (UHS)/Reactor Service Water (RSW) Pump House
- Diesel Generator Fuel Oil Tunnels (DGFOT)
- Diesel Generator Fuel Oil Storage Vaults (DGFOSV)
- Radwaste Building (RWB)

As noted in the original response, unless noted otherwise, design of these structures for out-of-plane shear have been conservatively revised based on finite element analysis results for each element without averaging the shear over several elements. The Supplement 1 response to this RAI submitted with NINA letter U7-C-NINA-NRC-110116, dated September 12, 2011 provided the summary of results for UHS/RSW Pump House and DGFOT. This supplemental response provides the summary of results for RWB and DGFOSV.

RWB:

No averaging has been used for out-of-plane shear design. Tables 3H.3-3 and 3H.3-4 and Figures 3H.3-8 through 3H.3-49 (see Enclosure) have been revised to reflect the results of this analysis and replace the existing tables and figures in the COLA.

DGFOSV:

No averaging has been used for out-of-plane shear design. Table 3H.6-11 and Figures 3H.6-142 through 3H.6-208 (see Enclosure) have been revised to reflect the results of this analysis and replace the existing tables and figures in the COLA.

As a result of this response COLA Part 2, Tier 2, Appendix 3H will be revised as shown in the Enclosure.

Enclosure

Mark-ups to COLA Revision 6

3H.6.7.2.1 Wall and Slab Design

For each reinforcement zone, the following in-plane and transverse shears with the corresponding load combination are reported in Table 3H.6-11. The in-plane shear is the maximum average in-plane shear along a plane that crosses the longitudinal reinforcement zone.

The shell forces from every element for every load combination in the finite element model were evaluated to determine the required transverse reinforcement. The transverse shear and axial force reported in Tables 3H-6-11 correspond to the maximum required transverse reinforcement for an element within that transverse reinforcement zone.

- The in-plane shear is the maximum average in plane shear along a plane that crosses the longitudinal reinforcement zone.
- The transverse shear is the maximum average transverse shear along a plane in that transverse reinforcement zone.

3H.6.7.3.1 Uplift Analysis

The SAP2000 finite element models were checked for uplift effects by reviewing the joint reaction at the basemat. It was determined that under seismic loading the DGFOSV experiences uplift. Using the 100%, 40%, 40% rule for combination of three seismic excitations, non-linear analysis was run on each model with uniform Winkler soil springs and pseudo-coupled soil springs to determine an enveloping adjustment factor for forces and moments from the linear analysis for the foundation mat and the connecting walls. The non-linear analysis iterates multiple times removing soil springs that go into tension during each iteration until no soil springs are in tension. For the directional earthquake loading required for the nonlinear analysis, the DGFOSV critical loading, a safe shutdown earthquake (SSE) from the southwest in combination with static active and passive loads for SSE, is considered.

Comparing resultant foundation mat and wall reactions from the linear analysis with mat and wall reactions from the nonlinear analysis, there is a maximum reaction increase of approximately 22167% for the foundation mat out-of-plane shear forces, 0.1% increase for the foundation mat in-plane shear and axial forces, 21247% increase for the foundation mat bending moments, 4% increase for the connecting walls shear forces and axial forces, and 106% increase for the connecting walls shear forces, and bending moments (enveloping cases with Winkler and pseudo-coupled soil springs) in the nonlinear analysis. To account for this, the resulting forces and moments from the linear analyses were adjusted by applying an increase factor of 3.211.67 to out-of-plane shearall forces in the foundation mat, an increase factor of 3.124.17 to all moments in the foundation mat, an increase factor 1.07 to all forces in the connecting walls, and an increase factor 1.11.06 to all forces and moments in the connecting walls for the DGFOSV design.

Table 3H.3-3: Results of Radwaste Building Concrete Wall Design (Continued)

	1	1	= =		76	6			Longitudinal	Reinforcement	Qesign Loads								1	
ğ	:	lion	Numt	1.	Cerne	Fart	Ĩ	Artal and Flaxure	Loads		in-Plane Shear Load	3	Longitudiati Reinforcement			Transverse Shear Design Loads **			Transverse Shear ^{sh}	Remarks
Lee	2	Dire	Reinfor Luy Drawing	E C	Reintor Zone Ni	mumina	E Pr	Load Combination	Axiai ^{(Q} (ktps / tt)	Fiezure ⁽⁴⁾ (11:4dps / 11)	Load Combination	tn-plane ^(S) Shear (kips / ft)	Provided (m²/ft)	Load Combination	Horiz Transverse Shear Force (kip / ft)	Corresponding Axial Force (kip / ft)	Verti: Transverse Shear Force (kip / fi)	Corresponding Axial Force (kip / ft)	(at ² /it ²)	
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ŧ		(Honcontal and Vertical)	36.3-12	5.5	10-T		· 1	-	· ·		-	· ·		D+1+X+E	9	44	194	-45	0.44 (#0@12)	
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ľ						NCCM	34147	1.40 + 1.72 + 1.74 + 1.753	-109	-4										
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						ASMAC	25252	140 • L/L • 174 • 176s	-11	-113										
						MITCM	31845	1.40 + I.7L + 1.7H + 1.7Ea	103	-43										
						NCCH	25031	140 + 171 + 17H + 17Es	-194	-52										
					2444	HEMAT	315392	140 • L/L • L/H • 1/Hs	11	-243			112			-		_		-
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						MCCM	34158	10-12-12-12-	-259	\$	140+170+1707+1750	174	163							
					, "	MGAAT	25245	140+121-124+125	11	-312	the set the step									
						804AC	25248	140・131・134・1385	-104	-322										
						MICH	25737	140 + 1.7 + 1.74 + 1.765	#13	-210										
						MCCH	534	140 · 1A · 174 · 176	-270	-300	140+171+1747+1756	112	624					-	_	
						MCAA.5	25234	140 • LA • LM • LM	30	-395										
						ROUNC	25254	115-1 1 -126-126	-239	-332										
					1	BLC21	23294	140 · 121 - 123 · 1285	70	-118]	
						NICCH	14538	140-121-124-1255	-154	-352	140-171-174-1760	125	112			-				
						MONAT	23316	UQ+UA+124+175	a a	-196										
A A B	Near Sid	Hariaantai	\$6.3-13			Lastre	19367	0+1+X-E	-97	-362										
gore						NICH	11521	140 + LA + L7-7 + L769	64	e-										
					6++L	NICCH	14323	した・した・しだ・した	-1465	-352	1.40 • 1.7L • 1.7K • 1.7E0	135 .	4.65			-				
						MINT	11561	0+1+X-E	1	-362										
						LUNAC	11570	0+L+#-E	42	-579										
						MILEN .	23297	1.10 - 1.71 - 1.7E)	113	344									1	
					7444	acca	23259	140-171-177-1755	-296	-431	1.40 + 1.7L + 1.7H + 1.7Es	115	621		-			-		
						HBSAT	23385	140+1A+1A+1/5	2	430	ļ									
						MILLO	23365	140-131-124-1253	47	477										<u> </u>
1						RICH	4128	140-12-12-12-1	27	-58	-								1	
					-	NCCM	8521	140-131-134-135	-224	-215	140-17L-17H-17E0	135	3.12	-	-					
						MBAT	1145	140+17(+17)+179	1	-143		1								
						\$25AC	# \$03	0-L-H+E	-73	-425				1					 	
						MICH	2345	1.40 - 1 .1. - 1.747 + 1.7Es	47	-47	ļ									
				5.5	-	NCOM	3142	1.40 + 1.7L + 1.7H + 1.7Es	-168	-241	1.40 - 1.7L + 1.7H + 1.7Eo	160	454	-	-		-			
						MMAT	2268	140+171+174+176	4	-198										
					<u> </u>	MINC	3085	9+1+*-5	-109	-363									<u> </u>	
						MICH	2345	1.40 - 1.7L - 1.7.7 + 1.7Es	62	-42	-									
					10444	MCCM	6531	0-1-X+E	355	-1157	1.4D + 1.7L + 1.7H + 1.7Eo	160	6.24		· ·				-	-
						MMA7	2257	0+1-#-5	4	-463	1									
		1				REARC	6531	0-L-H-E	-355	-1365										<u> </u>

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RAI 03.08.04-34, Supplement 2

Table 3H.3-3: Results of Radwaste Building Concrete Wall Design (Continued)

	Т	1				ē,			Longitudinal	Reinforcement	Design Loads							······································	Γ	1
ş		- Fa	duna duna	1	and a sector	Force	Ţ	Axial and Flexar	Loads		In-Plane Shear Load	5	Longitudinal Reinforcement			Transverse Shear Design Loads ^m			Transverse Sbear ⁽²⁾	
	Pac	Okec	I not	목면	e Nu	1 E	Elan I	Load	Arts (Q	Flavora (4)	Load	in-ptane ^(S)	Provided (m ²) fo	Load	Horiz	ontal Section	Vertic	al Section	(In ² /7 ²)	Rounders
_			Des C	-	Re Zoc	Axe N		Combination	(kups / ft)	(n-kips/m)	Combination	Shear (kips / ft)		Combination	Transverse Sbear Force (kip / ft)	Corresponding Axial Force (htp / ft)	Transverse Shear Force (kip / ft)	Corresponding Axial Force (kip / ft)		
						NITCH	25214	1.40 - 1.7L + 1.7H + 1.7Eo	33	-51										
					144	NICCM	26584	1.4D + 1.7L + 1.7H + 1.7Ea	-259	-8	1.4D • 1.7L • 1.7H • 1.7Eo	130	3.12] .				-		(8)
						TANDA	31135	1.40 + 1.7L - 1.7H" + 1.7Eo	1	-231										
						Ranc	31135	1.4D + 1.7L + 1.7X* + 1.7Es	-43	-231		ļ								ļ
						MITCH	34164	1.40 + 1.7L + 1.7H + 1.7Eo	79	-203										
					2.44	HCCM	34156	1.40 + 1.7L + 1.7H + 1.7Eo	-187	-190	1.40 + 1.7L + 1.7H + 1.7Es	97	4.58	-		-				-
						MOLAT	32162	1.4D + 1.7L + 1.7H + 1.7Eq	51	-287										
					L	MARING	32162	1.40 + 1.7L + 1.7H + 1.7Eo	-41	-287		ļ								
						мтсы	26220	1.40 + 1.7L + 1.7K + 1.7Ep	e	-218										
					341	NCCH	27076	140 - 1.7L - 1.7H	-197	-91	1.4D = 1.7L + 1.7H + 1.7Es	89	6.24	-	-	-	-		-	· ·
						MALAT	26239	1.40 + 1.7L + 1.7H + 1.7Es	19	-455										
1						MMAC	26239	1.40 + 1.7L + 1.7H + 1.7Es	-156	-493			<u> </u>					<u> </u>	1	
						MICH	28229	0+L+K+E	24	423										
				3.	+++	NCCN	27377	140 - 1.7L - 1.7H	-190	-74	1.40 + 1.71 + 1.757 + 1.759	87	7.6				-	-		· ·
						ABAAT	26229	1,40 + 1.7L + 1.7H" + 1.7Eo	4	-563										
			1		<u> </u>	MARC	25229	1,40 + 1.7L + 1.7H + 1.7Ea	-120	-511								<u> </u>		
						MITCA	26237	1.40 - 1.7L + 1.7H + 1.7Eo	112	-452										-
					542	MCCM	26237	1.40 + 1.7L + 1.7H" + 1.760	-351	-90+	1.40 + 1.71 + 1.777 + 1.760	- 69	12.48	· ·			· ·	-	-	40.09)
						MONAT	36237	1.40 + 1.7L + 1.7K + 1.7Es	31	-899										
					<u> </u>	MAC .	26237	1.40+1.31+1.74*+1.764	130	-364			<u> </u>							<u> </u>
					1	MICM	26234	0-[-X-E	~	6 80										
Ň	Near State	Vencal	31.3-14		6¥1	MCCM	26549	140-171-174	-262	-621	1.40 + 1.71 + 1.747 + 1.750	n	12-31	-	-	-	· ·	-	-	381.(3)
a a						MENCAT	26236	1.40 + 1.72 + 1.757 + 1.759												
					<u> </u>	-	26239	1.40+1.52+1.78+1.780		~										<u> </u>
				1		10,00	20044				1									
					744	here a	205567	140 + 17 + 176 + 176			1.40 + 1.71 + 1.751 + 1.750	62	78	-	-	-	· ·	-	-	(B),(B)
		1.	1				26557	140 +172 +176 +1750		-347										
				<u> </u>			26557													<u> </u>
						MICH NO.	113.4	140+171+176+175		-	1									
1					844	19417	11518	0+1+K+F		- 218	140 + LR + 174 + 1750	183	3.12		-	-	· ·	-	-	(B)
				ļ			18456	D+L+H+E	-152		1				••					
1						HICH	23273	1.40 + 1.71 + 1.747 + 1.765	109	-12			-							
						HICCH	16525	1.40 + 1.71, + 1.74" + 1.750	357	-65	t									
					94L	MMAT	22077	1.40 + 1.7L + 1.73f + 1.7Ep		-411	1.40 + 1.7L + 1.7H + 1.7Eo	223	4.58	-		· ·	-			· ·
						MAKC	22078	1.40 + 1.7L + 1.7N + 1.7Es	-149	471				1						
	1			•	<u> </u>	MICM	11569	1.40 + 1.7L + 1.7H" + 1.7Eo	115	-97										<u> </u>
						HICCH	11570	1.4D + 1.7L + 1.7H' + 1.7Eo	-435	-229										
					13-44	MOMAT	23304	1.40 + 1.7L + 1.7H + 1.7Eo	1	-632	1.4D + 1.7L + 1.7M + 1.7Eo	217	6.24			-	-		· ·	· ·
						NOMAC	23304	1.40 + 1.71 + 1.717 + 1.760	-151	-692	· ·									
					<u> </u>	MICH	22531	1.40 + 1.7L + 1.7H + 1.7Eo	91	-365			<u> </u>					-		
1						NCCM	22631	1.4D + 1.7L + 1.7H + 1.7Eo	-304	-633	1									
1					11-¥-L	NORAT	23297	0+L+H+E	6	-132	1.4D + 1.7L + 1.7.4 + 1.7Eo	157	7.8	-	· ·	· ·		-	-	
						MORAC	23297	1.40 + 1.7L + 1.7H + 1.7Eo	-236	423	1									
L			1	1.	1	1			_		<u> </u>			1	Lawrence and the second second	1	L	L.,	·	1

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Table 3H.3-3: Results of Radwaste Building Concrete Wall Design (Continued)

r	1	1	-			6				Daimformer -	Desire Louis		1					· · · · · · · · · · · · · · · · · · ·		
ç		5	neni 1	:	Per B		1		Congressional i	Realitor Centent	uesqn 10325		Longitudinal			Transverse Shear Design Loads ⁽⁶⁾			Transverse Shear ²⁷	
e e e e e e e e e e e e e e e e e e e	Face	actic	no Au I Nor	a tig	Num	L.	Ē		LCadis		In-engine sciegr Load	a (9	Provided		Horiz	ontal Section	Vertit	al Section	Reinforcement Provided	Remarks
2		a	Reh Drawl	f	Rain	adm.	-	Load Combination	Axiai ⁽⁴⁾ (ktps/ft)	Flexure ⁽⁴⁾ (ft-kips / ft)	Load Combination	Shear Crims / ftp	{in²/ ft)	Load Combination	Transverse Shear Force	Corresponding Axial Force	Transverse Shear Force (kip / ft)	Corresponding Axial Force (kip (ft)	(max)	
	+	<u>†</u>				MICH	4073	1.40 + 1.7L + 1.7H + 1.7Es	100	-129		-	İ							
						MCCM	3100	140 - LT. + 1747 + 1760	-347	-111										
					0.94	MALAT	3123	0+L-X-E	6	-275	1.40*1.72*1.74*1.768	194			-					
						MMAC	3102	D+L-X+E	-037	-281										
						NITON	4357	1,40 + 1,71 + 1,747 + 1,769	218	43										
						NICCH	4369	1.40 + 1.7L + 1.7H + 1.7E)	-650	-121	140+171+176	285	- 65							
					GAR	MARAT	3124	0+L+K-E	15	-251		-								
						8083C	3124	0+L+X+E	-213	-252										
						NTCM	2287	1.40 - 1.7. + 1.75 + 1.755	301	-251										
	Nov 944	Varies	34 3.14		1444	NCCH	2257	1.40 • 1.7. • 1.7 . • 1.7Es	-747	-323	1.40 - 1.7 1.75 - 1.750	285	624	-	-	-	-			
						MEMAT	22592	0-1-X-E	15	-874										
						1544	225%	0+L+H+E	-253	-874	1		ļ							
						MITCH.	2333	1.40 • 1.71 • 1.74 • 1.755	114	-249										
					15-9-1	NECH	2335	1.40 + 1.7L + 1.7H + 1.7Es	-345	-254	1.40 + 1.7L + 1.7H + 1.7Eo	22%	13					-	-	
						MORAT	2329	0+1+H+E	33	-51	-									
						85470	2323	0+1+1+5	-217	-551										
1						MICM	2345	140 • 171 • 1747 • 1759	296	-224										
					16-Y-L	BICCAI	2345	1.40 - 1.7 1.7.7 - 1.753	. 497		1.4D + 1.7L + 1.7H + 1.7Es	285	935						-	
						MERA!	2343	0-F+H+E	20	-315	1									
		-				E2NAC	2345	0-L-H-E	-217											
						MICH	34675	140 • 1.7. • 1.7. • 1.7.5	2	58	1									
					+++4	erces	34147	140+171-176	-109	*	1.40 + 1.7L + 1.7H + 1.7Es	67	1.56	-	-	-	-	-		-
						MELAT	25252	140 - 17 - 17 - 1765	" "		ł									
× ÷						10040	2022	10-12-12-12-12	-11	104					-				<u> </u>	
8 .	1					8,08	3123	10-10-17-17-			ł									
					2444		2201	15-18-126-126	1	207	1.4D + 1.7L + 1.7H + 1.7Eo	124	3.12	-			-	-	•	
						1794C	2354	140+13+124+175		207	-									
						MITM	2007	140+17.+176+176		172		+			1					
						MICH	2529	140-171-177-1760	-270	151	1									
				3	મન્દ	HEAT	30873	140-17.+174+176	3	250	1.4D+1.7L+1.7A+1.7Eo	124	4.65		-		-	-	•	
						MENC	10173	140+17.+174+175	-141	251										
					-	MITCH	32170	140+17(+17(+17E)	120	77	1	1	1							
						RECOM	31309	140 • 1月 • 124 • 1260	-200	321	1									
	Far Side	Horzontal	34:3-15		+++	MSKAT	31900)	1.40 + 1.7L + 1.7H + 1.7Es	59	361	1.4D + 1.7L + 1.7if + 1.7Eo	45	624		-	-		-		
						MARAC	31900	1.40 + 1.7L + 1.7+F + 1.7Es	-147	361	1									
						MITCH	34154	1.40-171-1751-1761	122	63										
1						SICCM	34156	1.40 + 1.7L + 1.7H + 1.7Es	-259	64	140 + 171 + 175 + 175	67	7.							
					5++1	MMAT	34162	1,40 + 1,71, + 1,747 + 1,783	54	196				-						
						24658	34152	140 + 17L + 17H + 17Es	-71	196										
			1			MICH	25391	1.40 + 1.7L + 1.7+7 + 1.7Es	70	108										
		1			6.44	NICOM	11557	140-121-124-1269	-199	114	1.4D + 1.7L + 1.7H + 1.7Es	135	312		.		-			
1						MMAT	23278	. D+L-#+E	٥	180										
				4		MIRAC	11518	0+L-H-E	-162	292										ļ
						MICH	23297	1.40 + 1.71 + 1.747 + 1.765	113	338	1									
1					7444	NCCM	23257	140+171+174+1760	-296	190	1.4D - 1.7L - 1.7H + 1.7Eo	115	6.24					-		· ·
						MOSAT	21305	1.40 + 1.71 + 1.769	к	485	4									
			1			59440	23305	1.40 + 1.7L - 1.75f + 1.764	-36	485					1				L	

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	1		7 B		78	ĉ,			Longitudinal	Restorcement	Design Loads									
<u>s</u>		ş		1.	a a	Fore	1	Axial and Flexure	Loads	-	in-Plane Shear Loads	,	Longitudinal Remforcement			Transverse Shear Design Loads ¹⁴			Transverse Shear ⁽⁷⁾	Paratte
L ocal	1	Dime	hfor Laye	(hich	andra Mun e	-		Laad	Artal F4	Elayuna ⁽⁴⁾	Load	in-piane ^(S)	Provided (m ¹ /f0)	Land	Horiz	ontal Section	Vertic	al Section	(in ² /ft ²)	
			a c	-	2 No	MAA		Combination	()class / 10)	(ft-kops/ft)	Contribution	Shear (kips / ft)		Combination	Transverse Sbear Force (kip / ft)	Corresponding Axial Force (kip / ft)	Transverse Shear Force (kip / ft)	Corresponding Axial Porce (kip / ft)		
	T					MICH	\$514	1.40 + 1.7L + 1.7M + 1.7Eo	22	29										
					8++L	мссм	8521	1.40 + 1.JL + 1.JH + 1.JEs	-224	128	1.4D + 1.7L + 1.7H + 1.FE4	135	3.12	-						
						MMAT	8515	1.4D + 1.7L + 1.7H + 1.7M		190										
		Hotance	3H,3-15	55		MANAC	4529	0+L+H+E	-125	545										
						мтсы	2245	1.40 • 1.7t • 1.7H • 1.7Es	47	65										
					-	MCCM	3141	1.40 + 1.7L + 1.7H + 1.7Eo	-153	250	1.40 - 1.7L + 1.74f + 1.7Eo	160	- 451	-						-
						MMAT	6475	1.40 • 1.7L • 1.7H • 1.7Ea	,	164										
						NDAAC	6477	D+L+H+E	-55	627			<u> </u>		<u> </u>					
						MITCM	26214	1.40 + 1.7L + 1.7H + 1.7Es	8 3	63										
					144	MCCM	26584	1.40 + 1.71 + 1.757 + 1.750	369	8	1.40 • 1.7L • 1.7AT • 1.7E#	130	3.12	-		-	· ·			-
		ł			1	MOKAT	29788	1,40+1,71+1,78*+1,765		- 233										
					<u> </u>	LOUXC	29743	1.40 + 1.7 + 1.7 + 1.7 ES												
							39104		+											
					244	10017	27476	140 - 17 - 175 - 175		*	1.40 + 1.71 + 1.717 + 1.764	57	4.63	-			•	-	-	-
		1					11678	140 - 1 0 - 1 76 - 1 751											1	
· ·						NUCH	12181	140+171+1751+1759	6	43						-				
		1				MCCH	25739	1.40 + 1.71 + 1.7H	-192	104		97 6.24 -								
					341	AMAT	31634	140+17.+17.+176	1	45	1.0-1.1-1.7-1.7.4	97	6.24			-	•	-		•
						MAAAC	31534	1.40 + L/L + 1.747 + 1.7E3	40	45										
				3		MICH	32162	1.40 + 1.7L + 1.7H" + 1.7Es		50		<u> </u>	[
1	l l					ыссы	28244	1.40 - 1.71 - 1.7H	-1\$1	-										
5	Far 540	'			₩	MUSAT	32162	1.40 • 1.7L • 1.7H • 1.7Es	58	560	1.40 + 17L + 1747 + 1.754	**	7.8							
						MINAC	32162	1.40 + 1.7L + 1.7M + 1.7Es	R.	960										
						MICH	26542	0+L+H+E	112	375										
						NCCH	29431	1.40 + 1.7L + 1.7H + 1.7Ep	-303	237	10.13.15.15									തക
		Veccal	3+.3-18		344	MUAT	26542	1.40 + 1.7L + 1.74" + 1.7Es	το	47		-								
		1				Manut	26542	1.4D + 1.7L + 1.7M + 1.7Ea	÷ 55	13										
					[MICH	262377 25238	1.4D + 1.7L + 1.75F + 1.7Ea	n	563										
						NCCH	26548 / 26549	1.40 + 1.7L + 1.74" + 1.7Ep	-362	44	1.40 + 1.71 + 1.74* + 1.750		124		-	-	-			ഭാത
						MOAAT	26237/ 25238	1.40 + 1,71 + 1,747 + 1,759	63	•••										
						MAAC	26237/ 25230	1.40 + 1.7L + 1.7H + 1.7Es	-181	•••			ļ							
						ates	11512	1.4D + 1.7L + 1.7H + 1.7Ep	113	ର										
					7-V-L	MCCM	11513	1.40 + 1.JL + 1.7H + 1.7E)	-389	80	1.40 • 1.71 • 1.74" • 1.764	213	3.12			-	-		-	
						HOLAT	22079	1.40 + 1.7L + 1.7H + 1.7Ep	11	217										
					ļ	RENVC	22079	1.40 + 1.7L + 1.7% + 1.7Es	-114	347		1	<u> </u>				· · · · ·			
						HITCM	16529	1.40 + 1.7L + 1.7H + 1.7Ea	80	7										
				•	#¥4	MCCM	18528	0+L+#+E	-315	23	1.4Q + 1.7L + 1.7H + 1.7Ee	277	4.65					-		•
						BERNT	23304	1.40 + 1.7L + 1.7H + 1.7E3		509				1						
1						MORAC	23304	1.40 + 1.7L + 1.7K + 1.7Es	-110	509										
						HITCH	11569	1.40 - 1.7L - 1.7H - 1.7Eo	115											
					9-V4	MCCM	11569	140+1/1+1/7+1/20		~	1.40 + 1.7L + 1.7H + 1.7Es	213	6.24	· ·		-	-			-
						SGKAT	23297	1.40 + 1.7L + 1.7H + 1.7E0												
1		1	1	1	1	MANAC	23297	1.40 + 1.75 + 1.757 + 1.755	-154	1		I		I	1		1	I	1	1

Table 3H.3-3: Results of Radwaste Building Concrete Wall Design (Continued)

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Longitudinal Reinforcement Design Loads Direction Tah forcement Layout rawing Number (1) Reinlansement Zone Number⁽³⁾ Transverse Shear Design Loads^{#)} Longitudinai Resularcement Provided (sr²/ ft) Yhickness (ft) ámuìn Force Location Azial and Rexure Loads In-Plane Shear Loads Face Electrent in-piane ⁽⁵ Shear Azial ⁽⁴⁾ Flazure ⁽⁴⁾ (kips / 10) (10-kips / 10) Load Combination Load Combination Load Combination Transverse Shear Force (kip / ft) onding Axial Force (kip / ft) ransverse Shear Force (kip / ft) Corres MICH 3025 1.40 • 1.72 • 1.77 • 1.763 196 60 -594 16 NICCH 2259 1.40 • L7L • 1.7A • 1.7Es 172 224 1.40 • 1.7L • 1.7H • 1.7Eo 10.44 4.68 . . -MOLAT 4782 682 0+L-H-E MMAC 6313 0-1-K-E -233 718 MITCH 2257 1.40 • 1.7L • 1.7H • 1.7Es 30: 67 MCCM 1.40 + 1.7L + 1.7+C + 1.7ED -747 221 2237 55 1.40 • 1.74 • 1.74 • 1.750 3:-.3-16 203 6.24 For Side Versical 11+¥-L MEAT 0+L+#+E 19 711 6781 NSNAC 30 739 6781 0-L+H-E 1.40 + 1.71 + 1.74 + 1.750 MTT2NI 2345 296 181 MCCM 314) 1.40 • 1.71 • 1.74 • 1.76: -653 103 1.40 - 1.7L + 1.7H + 1.7Eo 755 u . -12-24 10/AS 7762 0.1.H.E 23 671 671 154AC 7752 0+L+H+E -257 143+17.+175+175 1-T --54 48 -39 . Bouth Wall 3-1 0.1.4.6 -59 57 -39 ы . 3 1.42 + 1.7L + 1.7H + 1.7Eo 4 306 -13 4-T 140+1.1.+1.75+1.750 -149 -101 - 2 3 5-7 143+1.7L+1.7F+1.7Es -178 14 -125 6-1 143+1.7.-1.74+1.750 91 å 5 14 D-1-4-E 103 2 4 Conserve (Honcontar and Vertical) 19.3-17 8-1 1.43+1.72+1.75+1.75+ 136 -58 4 -. **\$-**T 116 D-1-H-F -1 94 14-T 143+171+176 236 Ę 80 11-7 142+1Д+177+1750 196 -59 168 12-7 D.T.K.E -132 -15 0 13-7 0+L+F+E 145 -49 15 5.5 14-7 D+1+K+E -191 -12 0 D+L+K+E 15-7 130 -30 132 1.0-1.1-1.2-1.25 6022 32259 -12 ព NCON 25046 140+171+174+1765 -73 -13 1444 1.40 + 1.71 + 1.747 + 1.750 67 1.55 . MUAT 142-121-124-125 15 -114 23933 S223AC 27131 0+L+H-E -24 -134 80.00 31453 140+131+135 124 -22 BCCM 25394 -92 -17 D+1+#-E 3 મ્મર 1.40 + 1 7L + 1.74 + 1.7Ee 121 3.12 . M04AT 34107 1.40 + 1.7L + 1.7H + 1.7Ea -210 23 MERAC 34107 1.40 • 1.7L • 1.747 • 1.7Es -13 -210 MTC24 31192 1.40 • L/L • 1.74 • 1.7Es 168 -37 68CCM 31192 -63 East Wall 1.40 - 1.7L - 1.7H - 1.7Eg -126 3¥-3-18 મ્મ 1.40 • 1.7L • 1.7H • 1.7Es 121 153 . --. MOAT \$2251 1.40 + 1.71 + 1.74" + 1.760 21 -263 -305 MANC 25404 0+L-#+E -81 MITCH 23467 140+17.+17#+1765 33 -80 11576 0+L+#+E -181 -287 4#iL 1.40 • 1.71. • 1.747 • 1.769 160 3.12 MDda; 23407 1.40 • 1.71 • 1.74" • 1.769 23 -96 -295 M254C 11576 0-1-H-E -175 4 ALCH 1.40 • 1.71 • 1.74* • 1.750 -87 23408 47 LACCHI 11549 0-1-#-E -199 -259 544 1.40 • 1.72 • 1.74" • 1.760 175 4.58 -. -177 NDA: 23411 1.40 + 1.7L + 1.7A + 1.7Es 3 KOMAC 11849 0+L+H-E -199 -259

Table 3H.3-3: Results of Radwaste Building Concrete Wall Design (Continued)

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	Transverse Shear ⁽⁷⁾ Reinforcement Provided (m ² /17 ²)	Remarks
ing Axial Ferce (p / ft)		
-		-
-	-	-
-		-
18	0.27(#4@12)	•
-18	6.31 (#52) 121	-
135	0,44 (#62)121	-
¢	1.76 (#6@6)	-
-83	2.43 (\$7(25)	-
-41	0.23 (#42912)	-
\$	0.31 (#5@12)	-
-13	ũ 44 (#6@12)	-
-17	0.50 (#72)12	-
4	1.24 (#S@E)	•
-445	1,75 (1605)	•
-17	6.20 (44 \$12)	-
27 7	0.31 (#5@12)	-
a,	0 44 (#S G 12)	•
-71	0.50 (#7@12)	•
-	-	-
-	-	- -
-	-	-
-	-	
-	÷	÷

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			- 1		28	÷.			Longstudinai	Reinforcement	Design Loads									
ă		ā	Nurth	1.	amen	Lon	Į	Aidal and Flexure	Loads		in-Ptane Shear Loads		Reinforcement			Transverse Shear Design Loads **			Transverse Shear ⁽⁷⁾	Remarks
90	2	Direc	who into in	19th	an a	-	- Se la	Load	Axial ⁽⁴⁾	Flaxure ⁽⁴⁾	Load	in-plane ^(S)	Provided (In ² / ft)	Laad	Horiz	ontal Section	Verti	cal Section	(in ² /h ²)	
			. .	-	2 N			Combination	(Kips / 10)	(ft-kips / ft)	Combination	Shear (kips / ft)		Combination	(kip / ft)	Corresponding Axial Porce (kip / ft)	(kip / ft)	Corresponding Axial Force (kip / ft)		
						мтсы	22106	1.40 - 1.71 - 1.74 - 1.764	2	-0			[
					6444	SICCM	13553	0-1-4-2	-111	-391	1.4D + 1.7L + 1.7H + 1.7Eo	178	6.24							
						MERAT	22108	1.40 + L7L + 1.7×7 + 1.7E3	3	-184										
				4		MMAC	14507	0+L+H+E	-104	-418										
						SITC34	22750	1.40 + 1.7.1 + 1.7.1 + 1.7.5	21	-339										
					7+44	MCCM	11851	0-1-K-E	-225	-209	1.4D + 1.7L + 1.7H* + 1.7Eo	174	7.8						-	
						MOUAT	23415	D+L+K+E		-585										
						MOLAC	15859	0-L-X-E	-145	-72										
						MICH .	5472	1.40 • 1.7. • 1.747 • 1.783	12	-57										
					8.444	MCCM	£125	0+L+K+E	-243	-451	1.4D + 1.7L + 1.7H" + 1.7Eo	141	3.12			-			-	
						EDUAT	5473	140 • L/L • 17:1 • 17Es	10	-40										
		Horsonsal	3H.3-18			MMAC	\$125	D-L-H+E	-235	473										
						MICM	2352	1.40 • 1.71 • 1.74 • 1.7Es	4	-34										
					9444	MCCM	6390	0-1-K-E	-245	-529	1.4D + 1.7L + 1.7XF + 1.7Eo	sen	4.68	-		-		-	-	
						MUAT	235	10-17-174-178	5											
				5		HOMAC	84590	D-1-K-E	343	410						,				
						MICH	2348	140+1.4+1.7#+1.7%	» ~					24						
					10 414	MCCH	1162	D+L+R+E	- 34	-1026	1.40 + 1.7L + 1.7H + 1.7Es	181	624		-	-		-		
						HELAT	2349	0+L+R+E	-	-3843										
					<u> </u>	BORAL .	1714	10.13.177.175											! 	
						MCCH	1904	0.1.47.5		416										
Ň	New Side				11442	Maat	7715	140+12+125+1759	+ <u>,</u>	307	1,4D + 1,7L + 1,7H + 1,7Ep	181	1.5			-	-	-	•	•
- -					1	17417	118	D-1+F-F		4721										
						MICH	255.38	140+171-175	75	-27										
						NCCH	255.66	140-12-121-12B	- 268	-19										
					144	MUAT	25234	1.40 - 1.71 + 1.747 + 1.7Es	•	-104	1.40 + 1.7L + 1.7H + 1.7Eb	74	1.56	-	-	-		-	-	•
						M21AC	8234	140 • 171 • 174 • 1755	-150	-161										
						итсм	25344	D-1-H-E	*	-29										
						NICCH	23353	140 - 171 - 174 - 1769	-334	-34	1									
				3	244	MUAT	25306	0+1+H-E	13	-216	140-120-078-0760	^	\$.12						-	
						MILAC	25308	140+1月+1月+1月	-227	-291										
						MICH	32279	140 - 171 - 1747 - 17ED	190	-5										
		Vinteral				MICOM	26310	1.00 - 1.72 - 1.747 - 1.769	-225	-363	10.17.17.17.17.		15					_		
		Vecacas	371.3-14		-	MMAT	33710	D-L-K-E	5	-270		1								
						Marks:	33710	140-121-124-1263	-115	-161										
						MTCM	11578	1.40 + 1.71 + 1.747 + 1.769	129	-25										
	1				4.44	NICCM	11570	140 • 131 • 134 • 136	-44	-128	1.40 - 1.7 1.75 - 1.750	129	3.12		-			-	- ,	
						MD437	18173	D-1-K-E	23	-195										
				4		MAJAC	22708	1.40 • 1.71 • 1.74 • 1.769	-241	-292										
						MICH	11651	1.40 • 1.71 • 1.74 • 1.754	145	-39	ļ									
					5-14	NCCH	11651	140+171+175	-474	-151	1.4D + 17L + 17H + 1.7Es	123	- 44	-					-	
						MOKAT	14358	D+L+K+E	31	-354	ļ									
		ļ				MALAC	14384	1.40 • 1.7L • 1.7H • 1.7Ea	-320	-135			1					1		

Table 3H.3-3: Results of Radwaste Building Concrete Wall Design (Continued)

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	- <u>T</u>		7 F		78	÷.,	T		Longitudinal	Reinforcement	Oesign Loads								T	
ē		ğ	Turn a	1	mber m	Ferci	Ĩ	Axial and Plexure	Loads		in-Plane Shear Loads		Longitudinal Rectorcement			Transverse Shear Design Loads**			Transverse Shear ⁽⁷⁾ Reinforcement Provided	Remarks
20	2	Divec	n fan An Lay	a di a	ne Nu	- m	e a	Last	Axial ^[4]	Fiexure (4)	Load	tn-pione ^(S)	(m ² / ft)	Load	Honto	Company and the Articl Rosen	Vertic	al Section	(in²/π²)	
			a g		# 2	-		Combination	(kips / ft)	(it-kips / it)	Combination	(ktps/ft)		Combination	(kip / ft)	(kip / ft)	(kip/ft)	(kip / ft)		<u></u>
						MICH.	8532	1.40 + 1.7L + 1.7H + 1.7Es	33	•	1									
					644	LICCH	4258	1.40 + 1.7L + 1.7H + 1.7E)	-385	-61	1.40 + 1.7L + 1.7H + 1.7Es	187	3.12							
						MOLAT	4259	1.40 + 1.7L + 1.7H + 1.7Es	21	-118										
						KINAC	4255	1.40 + 1.7L + 1.7H + 1.7Ea	-178	-118			ļ					<u>.</u>		
						MICH	4474	1.40 • 1.7L • 1.7H • 1.7Eo	111	45		1	1							
					2444	MCCM	4874	1.40 + 1.7L + 1.7-F + 1.7Ep	-430	-115	1.40 - 1.71 + 1.75 + 1.750	235	4.58		-		-	-		
						MERAT	4451	8+L+H+F	16	-199										
					<u> </u>	\$04%C	4451	0+L+X+E	-228	-199					1					+
						uncu u	457	1.40 + 1.7L + 1.7F + 1.7Es	23										1	
1	Near Sid	-	34.3-19	5	8-8-4	MCCM	4130	1.40 + 1.74 + 1.781 + 1.785	419	-40	1.40 + 1.7L + 1.75* + 1.75#	225	624				-		-	-
1						SERAT	4139	0-L-H-E	24	-194										
					<u> </u>	LEUXC	8255	0+L+H+E	-363	33										+
						Bic.V	2715	1.40 + 1.71 + 1.747 + 1.762	<u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>	*										
					ક્રમ્પ	HECCH	2715	1.40+1.74+1.74		-165	1.40 - 1.71 + 1.717 + 1.760	147	7.8	-			-			
			1					0-1-17-E		-1147					-					
					<u> </u>		25.1		-150	-1144			1				· · · · · · · · · · · · · · · · · · ·			
					1		2.041		47											
					10-7-L		200	0.1.4545			1.40 + 1.7L + 1.7H + 1.7Eo	- 235	135				-		-	
						1993	250	0-1-17-5	.199		-				-					
	-	+	-			417734	17760	140+171-1751+1750	14							-			1	
			-			MCCM	11752	1.40 - 1.7 1.7.5 - 1.750	-45	61		ĺ								
Ň						MONT	75543	140 • 17. • 17. • 175	-	121	1.40 - 1.7L - 1.7H + 1.7E0	¢۲	1.56		-			-	-	
a l						5254-XC	25549	1.40 - 1.7 1.7-1 + 1.751	-23	121										
						NICH	31453	140 - 1.7 1.7.5 - 1.750	E24	-										
						HICCH	25364	0+L+H+E	46	39	1									
			1	3	244	MIAT	34168	140 • 1.7. • 1.747 • 1.759		237	1.4D - 1.7L + 1.7H + 1.7E0	121	3.12	*	-	-	-	-	-	
						BERAC	34108	1.40 + 1.7L + 1.7H + 1.7Es	-19	237	1									
						ылсы	31192	1.40 + 1.7L + 1.7-7 + 1.7Ep	168	61										
						MICCHA	31152	1.40 + 1.7L + 1.7-1 + 1.750	-128	62	1									
		1			3441	MUAT	34107	1.40 - 1.7L - 1.7H - 1.7Es	14	272	(AD+17L+17H+17E)	6	453	-						
						SUISAC	34107	1.40 + 1.7L + 1.7-F + 1.7Es	-72	272	1									
1	For Sad	Horanta	3-3-32			ытсы	23408	140 • 171 • 1747 • 1785	47	62										
						MCCM	11576	0+L+H-E	-175	200	10,17,175,175		1.0							
					FHIT	MMAT	23408	1.40 + 1.7L + 1.7H + 1.7Es	1	109	140-120-149-1260	ļ ~~	5.14				-			
						MMAC	13561	0+L+K+E	-102	314										
						MICH	14415	1.4D - 1.7L - 1.7H - 1.7W	10	17										
				Ι.		NCCM	14407	0-L-H-E	-152	2	140 - 17 - 176 - 176	17	144					_	-	
				•	344	MALT	14338)	1.40 • 1.7. • 1.74 • 1.759	1	23										
				1		MANC	14345	0+L-H-E	-91	162										
						NICH	14334	1.40 + 1.71, + 1.74 + 1.79	17	23	1									
					8442	NCCM	14333	0-L-H-E	-102	175	1.4D - 1 TL - 1 747 - 1.7Ea	178	6.24	-			.			·.
						MOLAT	14501	1.40 + 1.7L + 1.747 + 1.7Es	•	71										
			1		1	2040	14805	0-L-H-E	-85	342		I	1						1	1

Table 3H.3-3: Results of Radwaste Building Concrete Wall Design (Continued)

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			2		28	ē.	1		Longaudinal	Reinforcement	Design Loads					Transmission Chan Daviers Lands D				
Leg L		libu	Indiana (erne m	Forc	Ten	Aidal and Plexure	Loads		in-Plane Shear Load	s	Restorcement			transverse snear Design Coads			Transverse Shear ^{ch} Reinforcement Provided	Remarks
2	1	Ole	Rainfo Drawing	in the	Reinta Zone N	and more	â	Load Combination	Axial ⁽⁴⁾ (kips / ft)	Flexure ⁽⁴⁾ (ft-kips / ft)	Load Combination	tn-ptane ^(S) Shear	(m²/ ft)	Load Combination	Honze Transverse Shear Porce	Corresponding Axial Porce	Verto Transverse Shear Force	Corresponding Axial Force	(in²/ᠯᢪ)	
					1	MICH	5:90	1.40 • 1.7. • 1.7.5 • 1.7.50	14	39		(kups) ro				1.007.10	(cdp.) tel	(kdp / rd)		
						MCCM	5323	D-1-H-E	-194	214										
					7446	MDCAT	5445	140 - 17L - 17H - 17Ea	_	50	1.40 • 1.7L • 1.7H • 1.7Ee	143	3.12		-	-			•	•
						MAC	5182	D+L+H+E	-153	387										
		Hortooncal	34.3-20	5		erce	2715	1.40 + 1.7. + 1.74 + 1.769	55	2										
						NCCH	8537	0+L-H-E	-230	163										
					•++L	MOLAT	3:49	1.40 + 1.71 + 1.747 + 1.750	1	70	1.40 - 1.7L - 1.74" - 1.7Es	141	*53	-	•	-	-	· ·	•	•
						1241-12	8 591	0-L-K-E	-160	409	-									
					<u> </u>	MITCH	25543	1.40 + 1.7L + 1.7H + 1.7EJ	55	28										
						MCCM	25849	1.40 + 1.7L + 1.7H + 1.7Es	-241	34										
					- FYL	MOKAT	30916	1.40 + 1.7L - 1.7H + 1.7Ec	3	110	1.40 + 1.7L + 1.7K + 1.7E+	1	1.56		-	-	-		-	-
						1714-44	25395	1.40 • 1.7. • 1.7.4 • 1.75	-151	163										
					<u> </u>	RUCH	25354	0+L+H-E	95 ⁻	מ										
						NCCHI	25393	1.40 + 1.7L + 1.7H + 1.7Es	-340	40										
				3	2-94	MOZAT	32320	1.40 + 1.71 + 1.717 + 1.750	9	256	140+126+128+1260	1	112						-	
						83440	25636	1.40 + 1.7L + 1.7M + 1.7Es	-151	240					1					
						MITCH	12279	1.40 + 1.7L + 1.7H + 1.7Es	190	64										
						RCCRI	12273	140 + 1.7L + 1.75 + 1.7Es	-191	æ										
					3.64	MERAT	23615	1.40 + 1.7 + 1.7% + 1.750	58	198	140* DE* 174* 1720		• • •		-	-				
						828440	23615	140 + 1.7. + 1.747 + 1.769	-138	198										
	Farsida					81258	11651	140+1.2.+1.75+1.750	129	27										
						MCCM	13584	140+17L+17N+17ED	-390	114	140+170+174+1750		10						-	(2)
					****	MISA.	13564	D-L-H-E	14	199		-			1					
Mail			** 1.74			LIBYC	14637	1.40 + 1.7L + 1.747 + 1.759	-271	235										
East			37.2561			MC21M	11578	1.40 • 1.7L • 1.75° • 1.7Eo	129	34										
					5474	MCCN	11576	1.40 + 1.7L + 1.7H + 1.7Ep	-478	u	1.4D + 1.7L + 1.7HF + 1.7Es	185	4.58		-	-	-			
						MUAT	11614	0+L+H-E	- 25	426										
1						MILLAC	11614	0-1-H-E	-193	426			L		ļ	ļ		· · · ·		
						utcu	4481	1.40 • 1.7. • 1.741 • 1.755	137	u										
						RCCM	4481	1.40 - 1.71 + 1.747 + 1.760	-461	201	1.40 - 1.7L + 1.7M + 1.7Eo	190	4.55		-		-			· .
						BEZAT	3455	0+1+H-E	24	253										
						MERIC	2530	1.40 • 1.71 • 1.747 • 1.759	-453	254							<u> </u>	-		ļ
						STOR .	4137	1.45 • 1.7L • 1.7H • 1.7Es	23	12										
				5	744	HCCH	4:30	1.40 • 1.7L • 1.7H • 1.7Eq	-614	36	1.40 + 1.7L + 1.7H + 1.7Ee	235	4.21		-		-	-		
						MOLAT	6935	D+1+H+E	22	731										
					<u> </u>	\$48440	6933	0+1+#+6	-264	739		<u> </u>		ļ				<u> </u>		
						MICH	2715	1.40 + 1.7L + 1.7H + 1.7Ep	321	*										
					***	SECCH	2715	1.40 + 1.74 + 1.760	-591	23	1.40 + 1.7L + 1.7H + 1.7Eo	25	7.8				• .			
						anes;	6203	0+1+#+5	ŝ	718										
						\$514AC	6303	0-1-4-6	-271	725			<u> </u>							<u> </u>
				-	HT I	· · ·	· ·	-	+ ·	· · ·	•	·	<u> </u>	140+13+27-175	¥	1 12 11	نا م	223 mt	0.31 (15/017)	
		1		'	2.1	· ·	-		+	+ .		<u> </u>	<u>-</u>	140+171+176+175		43		-18	0.44 (#6@12)	· ·
							<u> </u>		<u> ·</u>	+		<u> </u>		0-L-W-F	3			-125	0.20 (#42) 12)	
	· ·	(Honcontal and Verboalt	3+3-22			· ·	+		+	<u> </u>	•			0+L+H+E	103	3	-1	-57	¢.31 (#5@12)	
					61	+	+	· · · · · · · · · · · · · · · · · · ·	+ .	· ·		<u> </u>	· ·	0.F.A.E	125	30	4		0.44 (#5@12)	· ·
					M	<u> </u>			+ -	1.		+ .	<u> </u>	0-L-H-E	-120	-34	-102	-120	0.50 (#7@12)	· ·
					BT I	· ·	+	· · ·		· ·				9.1.X.E	-191	-74	-160	-185	1,24 (#5@5)	

Table 3H.3-3: Results of Radwaste Building Concrete Wall Design (Continued)

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Table 3H.3-3: Results of Radwaste Building Concrete Wall Design (Continued)

	T	1			78	Ê,			Longitudinal	Reinforcement	Design Loads									
ų		q	Numt	1.	mber	Forc		Azial and Flexure	Loads		In-Piane Shear Load	5	Longitudinal Reinforcement			Transverse Shear Design Loads N			Transverse Shear ⁽⁷⁾	Remarks
Loca	, i	Dirac	Rainford Lay Drawing	14 14 14	Reinfar Zone Nu	mumbra	1	Load Combination	Azial ¹⁰ (ktps/ft)	Flazora ⁽⁴⁾ (ft-kips / ft)	Load Combination	in-plane ^(S) Shear	Provided (25 ³ / ft)	Load Combination	Hono Transverse Shear Force	Corresponding Axial Force	Verti Transverse Shear Force	Corresponding Axial Force	(int ² /it ²)	
	+				9-1	<u> </u>		-				(Kdps/m)		D-L-H-E	-1	-36	123	-124	0.20 (#4@12)	· ·
					10-7		<u> </u>		· .					0-L-H-E	и	43	151	-202	0.31 (#5@12)	· · ·
Nation 1	.	Frankrise (Hostorical	34.3-22	5	11-7				 .					D+1+#+E	-163	12	0	-22	0.44 (P5@ 12)	<u> </u>
1 3		and Verbcal)			12-7		<u> </u> .	-	1.					0+L+#+E	-205	10	0	-21	0.50 (#7@12)	· ·
					13-7		<u> </u>		· ·					0-1-H-E	107	-26	-212	-184	0.79 (#8@12)	
	1					MICH	31715	1.40 • 1.7L • 1.7-f • 1.7ED	66	-41										
		1				MCCM	31715	1.40 + 1.7L + 1.7H + 1.7Es	-6	-43										
	1	i i			1444	HOMAT	31425	1.4D + 1.7L + 1.7S + 1.7Es	21	-81	1.4D + 1.7L + 1.7H + 1.7E0		1.56			-	-			
						MARAC	31426	1.40 + 1.71 + 1.75 + 1.760	-3	-81										
				3		MITCM	32204	1.40 + 1.7L + 1.7-1 + 1.7Es	61	-173			• .							
						MCCM	12243	1.4D - 1.7L - 1.7H + 1.7Ec	-67	-63					[
					2446	BEMAT	31152	1.40 • 1.7L • 1.7.F • 1.7Es	25	310	140*120*124*124	~	3.52				-			
						MARAC	31152	1.4D + 1.7L + 1.7.F + 1.7Eo	- G	-210										
						MTCM	22696	1.40 + 1.7L + 1.7H + 1.7Es	2	4										
						MCCM	11573	D-L-H-E	-278	-461	140 + 171 + 1747 + 1756	- un				_				
						MULAT	11573	140 • 171 • 1757 • 17Ea	3	-142				7						
						MANAC	11573	0-L-X-E	-274	454		-								
						NITCH	23343	140 + LR + L75 + 17Es	97	ĸ										
		HT.TT	843.23			NCCM	11433	0-L-X-E	-195	-112	140+17L+17+F+17E0	143	4.54			-	-		-	
						MMAT	23333	140+171+176	•	-136										
						BOARC	13167	D+L+H+E	-116	स्त										
						NUCCH	4:54	140+17L+17-7+17Es	39	-7										1
					544	MCCH	8291	D+L+#+E	343	-415	14D+1.7L+1.7F+1.7E0	135	3.12	-		-				.
				1		MAJAT	8713	140+171+1747+1750	8	-113										
N N	Neor Sol	ŀ				LONAC	1537	0-L+#-E	-121	-527									<u></u>	
¥,e						MITCH	2353	140 • 1.A. • 1.74 • 1.7Es	e -	-3										
				5	5442	мссы	3199	140+171-174+176	-176	-324	140-17-17-175	164	4.53	-	-	-	-		-	.
						MELAT	\$629	1.40 + 1.71 + 1.711 + 1.711	•	-270		1								
						ATASAC	8794	0+L+F+E	-198	£78										
				ļ		MITCH	2711	1.40 + 1.71 + 1.747 + 1.755	\$	-75]	
1					7+41	MICCH	8534	0+1+#+6	20	***	1.40-171-1.74-1.754	164	624		· ·	-				.
						HOMAT	8532	D+L+H+E	3	407							-		1	
	1	<u> </u>				MARAC	8563	D+L+H-E	-13	-										
		1				WICH HICH	25402	1.40 + 1.7L + 1.74 + 1.7Es	111	-39										
					1-44			10-12-135-135			1.40 - 1.71 + 1.747 + 1.759	80	3.12	-	· ·			-		· ·
1						10140	12224	140-12-12-12		30										
				3		HICH	1 174	Detaile	+ .	40										
						800	12243	L40+1/1+1/V+1/7+		-341										
1		Vencal	394.3-24		2442	HOVAT	17241	0+L+K+F	-	- 273	1.40 - 1 AL + 1 PC + 17Ea	- 20	- 65	· ·	· ·		-	-	-	
1						MILAC	12241	140+12+125+175	-12	-341										
		1		├ ──	-	ытсы	11647	140-12-174-178	112	4		<u> </u>			1				1	<u> </u>
1						MCCM	13129	140+17-17-17-5	-411	-37										
				•	3446	MMAT	21538	0-1-K-E	1	-176	1.4D + 1.7L + 1.7H + 1.7Es	177	312		•	-				· ·
						KANAC	21534	0-L-#-E	-120	-196										
1	1	1	1	1	1	1	1	1	1	1	1	diama and	L	1	1	1	I	L		

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	T				78	Ê,			Longstudinal	Reinforcement	Design Loads					_				[
g		ş	and the second		and a	fore	Ē	Anial and Flexure	Loads		In-Plane Shear Load	5	Longitudinal Reinforcement		Transverse Shear Design Loads ^{FL}			Transverse Shear th	0 mm mm m	
Local Local	, end	Direct	hore		in fare	E STATE	E e a	Load	Arts 19	Earner (4)	Load	in-piane ^(S)	Provided fm ² / 65	Load	Horiz	ontal Section	Vero	cal Section	(in ² /R ²)	rusarks
1	ļ	⁻	Press and Press	-	88	Na M		Combination	(icips / iti)	(ft-kips / ft)	Combination	Shear (kips / ft)		Combination	Transverse Shear Force (kip / ft)	Corresponding Axial Force (kip / ft)	Transverse Shear Porce (kip / ft)	Corresponding Axial Force (kip / ft)		
				1	1	MICH	11573	1.40 + 1.7L + 1.74* + 1.7Es	178	-63										
						MCCM	11573	1.40 + 1.7L + 1.7H + 1.7Es	-589	-314									_	
					-**	BOKAT	23785	0+L+H+E	3	-375	1.40*1.70*1.70									
			1			RINC	23345	0-L-H-E	-128	-411	1									
				•		NITCH	22596	0-1-1-5	45	-55										
		1		1		NCCM	22131	1.40 + 1.7L + 1.7H + 1.7Ep	-204	-129	1									
				1	541	BRIAT	21361	0.1.H.E	0	-349	1.40-1.42+1.44+1.760	1	0.24	-		-	-	-		
						SCHAC	23387	1.40 + 1.7L - 1.7H + 1.7Bs	-165	-377	1									
						MITCM	5196	1.40 + 1.7L + 1.7A + 1.7Ep	71	-29										
		1				MCCM	4195	140+171+175+1765	-309	-3	1									
					644	MONAT	4:95	0-1-K-E	12	-139	1.40 - 1.15 + 1.097 + 1.750	1 12	3.12				-			
						MMAC	4312	0-1-H-E	-153	-158	1									
	Near Sta	e Vectocal	34.3-34			SETCM	4132	1.40 + 1.7L + 1.7H + 1.7Ec	183	-35		1								
						MCCM	413	1.40 + 1.7L - 1.7H + 1.7Es	-659	-36										
					744	MOLAT	4535	1.40 + 1.7L + 1.7H + 1.7Es	18	-215					-					
			1	1		858AC	\$535	1.40 + 1,7L + 1.7M + 1.7Ep	-418	-270	1									
				1		NICH	4129	1.40 + 1.7. + 1.7.9 + 1.7Es	204	-19										
	1					MCCM	4129	1,40 • 1,7, • 1,74 • 1,755	623	-103	140-17-17-17-17-		674							
					ave	MORAT	8534	1.40 • 1.7. • 1.74 • 1.755	5	-211										
						12444	1534	0+L+H-E	-332	-૩૯૧										
						BITCH	2347	1.40 · L/L · L/S/ · L/Es	312	-43		I								
						нссы	2347	1.40 + 1.71 + 1.747 + 1.760	-741	-178	140 417 4175 4175									
-					sec	MONT	2443	0+L-H-E	22	-750		-								
				1		RUBAC	2582	0+L+H-E	-184	-775										
3						NICH	31715	1.40 • 1.7. • 1.747 • 1.760	4	2										
				Ì		HICCH	31715	1.40 + 1.7L + 1.7H + 1.7Ep	-45	10	140-17-17-17-17-		154							
		Í				MISAT	31159	140 • 1.7. • 1.74° • 1.7Es	3	94										
				Ι.		MERAC	31159	1.10 · 1.7. • 1.7. • 1.784	-32	×										
				1		MICH	22.9	1.40 + 1.7L + 1.7H + 1.7Ep	63	53										
						NCCH	12343	140 • 17L • 17H • 17Es	-67	49	140+17-+175+1750	103	3.12	-				-	· .	.
						HUAT	31152	1.42 + 1.7L + 1.7AT + 1.7Ep	29	171					t l					
						MERIC	31152	1.40 • 1.7L • 1.74" • 1.7Es	-38	171										
			1			NICH	22696	1.40 + 1.71 + 1.715 + 1.755	25	14										
1		1			3#1	NCCH	11553	0+1+#+8	-225	178	1.40 + 1.7L + 1.7H + 1.7Eo	143	112					.		
						BELSAT	11625	140+171+174+174	2	142	1									
	For Ski	Horizonta	1947-52			MENAC	11625	0+L+H+E	-73	303							[ļ	<u> </u>
			1			RICH	23343	1.40 + 1.7L + 1.7H + 1.7Eo	\$7	146	4									
					4+++L	MCCH	23343	0+1+#+E	-86	126	1.40 + 1.7L + 1.7H + 1.7Es	143	624	•						•
							23545	140 + 171 + 174 + 175	~ ~	221										
	1			-	+	NICH	4:92	140 • 1.7. • 1.75 • 1.75	8		· · · · ·									1
1						NICCM	8591	0+L+H+E	-239	176	1									
					5#14	TAUN	6730	1.40 • 1.7L • 1.7F • 1.7Es	•		1.40 - 1.7L + 1.7H + 1.7Ea	135	3.12						-	(5)
						A2MAC	8534	0+L+H+E	-174	500										
				5		SITCH	2711	1.40 + 1.7L + 1.74* + 1.7Eo	53	14										
						MCCM	3199	1.40 + 1.7L + 1.7H + 1.7Eo	-159	143	140+17 +175+155+		44							
					0	10M	3205	0-L-#+E	1	64		"								
1			1		1	MOMAC	3205	0-L-H-E	-139	258		1	1							1

Table 3H.3-3: Results of Radwaste Building Concrete Wall Design (Continued)

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Longitudinal Reinforcement Design Loads Transverse Shear Design Loads^{#)} Reinforcement Layout Srawing Number (1) Reinforcement Zone Number⁽²⁾ Longitudinai Reinforcemen Provided {in²/ ft} Thickness (ft) in-Plane Shear Loads Direction Aztal and Flexure Loads Location f no Elemen in-plane ^(S) Shear (Rips / ft) Load Combination Axial⁽⁴⁾ Flezure⁽⁴⁾ (kips / fl) (ft-kips / fl) Load Combination Load Combination rse Shear Force (kip / ft) Transverse Shear Force (kip / ff) (holp:/ft) 1.40 • 1.7L • 1.7.4 • 1.7Es £ # MTCM 29048 MCCM 1.40 + 1.7. + 1.7.4" + 1.761 421 **E** 29050 1.40 - 1.7. - 1.74 + 1.7Eo n 1.56 --. 1-44 MOMAT 32206 1.4D + 1.7L + 1.7-1 + 1.7E2 3 101 1.4D + 1.7L + 1.7H + 1.7Es -61 101 MMAC 32206 1.40 + L.T. + 1.7H + 1.7Es 111 32 25402 MTCM MCCM 25402 1.40 + 1.7. + 1.7.5 + 1.782 323 33 1,40 • 1,7L • 1,7F • 1,7Eo 30 3.12 -. -3 244 + 196 0+L+H+E MMAT 25590 1.40 · 1.7L · 1.7H · 1.7Es -65 220 404AC 25890 MITCHI 26300 1.40 + 1.7L + 1.7H + 1.7Ep 43 122 -143 164 1.40 • 1.71 • 1.757 • 1.752 MCCM 26377 1.40 + 1.71 + 1.74" + 1.760 90 4.58 --. 3-9-• 1.40 • 1.7L • 1.7H • 1.7Es 282 MOKAT 25344 M04AC 25344 1.40 + 1.7. + 1.7.5 + 1.7Bs -57 309 1.4D + 1.7L + 1.7A + 1.7Eo 123 39 MITCH 13204 1.40 + 1.7c - 1.7cf + 1.7Es -50 64 MCCM 13204 3.12 4-4-6 1.40 + 1.7L + 1.74" + 1.750 177 . 1 253 -110 254 MAAT 0-1-H-E 14385 NMAC 14385 0+L-H-E 3H.3-28 4 ar Side ancal 178 97 MTCM 11573 140 + 1.7L + 1.757 + 1.750 MCCM 11573 1.40 + 1.71 + 1.717 + 1.752 43 F 1.40 - 1.71 - 1.74 - 1.760 212 1.68 5-V-L 2 233 MMAT 11623 0-1-M-E 0-1-H-E -232 334 804AC 11597 140 • 1.A. • 1.7.4 • 1.7Es 214 LITCM 2353 74 140 • 171 • 176 • 1760 547 TH3 50 West Wall NCCH 2150 235 4.68 1.40 + 1.7L + 1.7H + 1.7Eo 4-V-4 8 0-L+#-E 343 MAA7 5196 12MAC 6247 0+1-H-E -128 369 MICH 2402 140+1.7.+1.74+1.769 112 27 MCCM 3199 140+171+174+1752 \$ 190 624 1.40 - 1.7L + 1.7H + 1.7Eo 175 . . 5 7.8.4 M02AT \$191 0-1-H-E \$3 337 D+1+#+E 31 309 MIMAC 4190 140-12-17-170 312 55 2347 MITCH MCCM 2347 1.40 + 1.72 + 1.747 + 1.755 -735 59 . 6-V-L 1,40 - 1,71 - 1,757 - 1,759 149 7.8 . -. 1.40 • 1.71 • 1.747 • 1.755 5 219 MDHAT 8534 MILAC 8534 140+171+174+176 -251 219 1.40 + 1.71 + 1.7H + 1.7Ep 18 28 21 1-1 3 47 10 44 1.40 - 1.7L - 1.7H + 1.7Eo 3-1 D+L+H+E . 43 -91 3-1 0.1.4.5 **4**-T -1 -68 -115 -65 120 0+L+H+E -1 . 5-1 0+1+H+E -135 ţ, 126 1-8 -Closental Closental 34.3-27 -144 -66 -171 1-1 0.1.K.E 0+L+#+E 18 -40 84 6-T 0+L+#+E -175 31 -12 9-T 10-7 0.1.4.5 -165 4 -7 -56 -122 8+L+#+E -42 15-7 D-L-H-E 147 ŝ -229 12-7 -

Table 3H.3-3: Results of Radwaste Building Concrete Wall Design (Continued)

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ng Axial Force	Transverse Shear ⁰⁷ Reinforcement Provided (in?।ग?)	Remarks
· ·	-	-
-		-
-	-	-
-	-	-
-		-
-	-	-
-	-	-
-	-	-
15	6.20 (#4812)	-
28	0.31 (#5@12)	•
49 	0.20 (#4@12)	-
29	0 44 (#62)123	-
366	0.79(#82)12	
కు	1.76 (8625)	-
110	0.23 (140) 12)	•
-15	0.31 (#5@12)	-
185	650 (67 (812)	
251	12405@51	

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Table 3H.3-3: Results of Radwaste Building Concrete Wall Design (Continued)

(1) The reinforcement layou drawings show the knows constrained in the constrained based on brait rebuind on the dimensions of the reported provided reinforcement and the zones with higher reinforcement may be extended beyond their reported boundaries. The dimensions in the reinforcement drawings are based on the dimensions of the dimensions of the set boundary development and the zones with higher reinforcement may be extended beyond their reported boundaries. The dimensions in the reinforcement drawings are based on the dimensions of the dimensions of boundaries. The dimensions are based on the dimensions of the dimensions of the dimensional based on the dim Notes

sment zones. The reinforcement zone naming convention is as kellows: "A" = horizontal. "A" = longbudnul restorcement. "A" = tanswerse reinforcement. For slats, vertical corresponds to North-South direction and horizontal corresponds to East-West direction

on (ADART) in the same load combination and the maximum moment (Hallhos a corresponding compression (HAHAC) in the same load combination are ablo provided. For the roof, the maximum iteration and maximum moment (HATNAN) are reported SCCM) axial forces are provided with the corresponding moment from the same load co (3) The max um tension (MTCM) and compression (

(4) Negative additional is compression and possible additional is console, Negative moment applies tension to the spel element and possive moment applies tension to the shell element. For walks or states where the same reinforcement is provided on boin faces, the moment is shown as absolute value. The addit and tenural loco's n the 2 node parts on the shell element edges parallel to the sendorzement dendom do not stately PSAL interaction, then only the 2 node parts on the shell element edges parallel to the small excession as well at design (effective with uncodered). The detament mesh is sufficiently reflect for the design approach.

(5) The reported in-plane shear is the maximum average in-plane shear along a plane that crosses the longitudinal reinforcement zone

ne sheur restorcement loads are reported for the calical element requiring the largest area of steel for transverse restorcement within the zone. The sheur force and the corresponding acid force in the same load combination for each direction is reported for the orbical element

shear retritoroement is the summation of the required shear reinforcement in the horizontal direction and the required shear reinforcement in the vehical direction

(8) For certain areas of the structure, the structure, the structure post-processing methods were too conservative. For such cases, detailed manual design was performed and the design forces determined by the detailed manual design are provided in the table

storcement shown is required to be hed (9) The longitudity

(10) The reported forces are from the FEM analysis. The provided longitudinal reinforcement includes additional reinforcement required due to manual one-way design calculations

(1) The reported anal and in-plane forces are from the FEM analysis. The reported Benural forces are from manual one-way design calculations.

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ded in the table are the average of the 2 code pairs that from the 4 edges of the orbital rectangular shell element. If

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Longitudinal Reinforcement Design Loads Reinforcement Zone Number¹⁸ Transverse Shear Design Loads ⁴⁹ Longitudinal Reinforcement Provided (m²/ ft) Direction Relationcemen Layout Crewing Wurnb-(1) (1) (1) (1) (1) (1) (1) In-Plane Shear Loads Inemeti Axial and Rexure Loads Fice Locatio Antical S in-piane^{(S} Shear (kips / ft) Load Combination Autal ⁴⁴ (kopa / 8) Load Combination Load Combination Plexure ⁽⁴⁾ (ft-kips / ft) Transverse Shear Force (kip / ft) (kip / ft) Force Corre (http:/ft) 79 -218 NTCH 1259 D+L+#+2 440.044 1673 140+171+171-1750 -125 -54 85 6.24 144 1.40 + 1.7L + 1.7H + 1.75o . . 143+17.+176+1760 1 -1162 **6256**47 297 িয -1480 M364C 514 143+17.+176+1750 34.3-28 12 NITCM 23155 140+1A+1/H-1/50 86 -403 -102 -173 460044 25:55 1.40 + 1.74 + 1.76 + 1.760 7.8 1.40 + 1.7L + 1.7H + 1.7Eo 75 . 1-n. 140+17.+17#+1750 21 -1377 M3IA7 39850 4244-0 25853 140+17-175 -1377 -28 NCC08 944 142+17_+176+1780 4 -175 1800 H 880 0-L+H+E -189 -126 1.40 + 1.7L + 1.7H + 1.7Ep 66 6.24 H¥4 -143+17.+178-178 *ब*र -1136 NGUAT 850 134×C 25113 140+1.6.+1.75-1.750 -38 -1359 Viertucal 34.3-29 12 NITCM 27825 140+15.+17#-1750 125 -1615 MCCM 27825 1.40 • 1.1. • 1.74 • 1.759 -158 -643 62 7.8 244 1.40 • 1.7L • 1.7H • 1.7Ep --853447 27628 143+1.5. - 1.78 - 1.780 12 -1\$15 -1815 -63 27825 140+17.+175-1750 NE7CM 29555 140+17.+174+1750 83 1105 NCCM 933 140+1.1.+1.17-1.750 -12 1593 68 6.34 140+174+175 1-14 . 83841T E15 140+17.+176-1750 28 1579 1823 M28VC 933 140+171+175+1750 -67 N7CM 633 140+1.1.+1.77+1.750 1642 ຄ 0-1-H-E -14 MCCW 545 480 75 7.8 2444 140+1.7L+1.7H+1.7E> 1 M2837 453 140+1.5 + 175+175+ 2329 NEANC 654 1.40 + 1.7. + 1.797 + 1.750 47 2510 MAI 34,3-30 2 onzont NT7CH 27354 1049 0-L-H-2 174 MCCCM 27345 140+13,+175+1750 -127 2252 1.40 • 1.7L • 1.7H • 1.7Ep 65 9.38 -. . . <u>Part</u> 3-14 1094AT 39542 1.40 + 1.7. + 1.7.7 + 1.750 34 2642 27347 -207 3199 12170 1.49 + 1.7. + 1.78* + 1.782 140+12+17-178 91 634 NI7CM 25125 -163 MOCH 3:59 140+17.+17#+1750 1429 13.22 n -##HL 1.40 + 1.71 + 1.711 + 1.750 . 104A7 25155 140+121+124+125 15 3252 10044C 28755 140+17.+174+1750 -134 3259 a sia C28 BCTM 147+17.+178-1750 67 1062 いいいたいだいがら -130 MCCM 880 2096 58 6.24 1.40 + 1.71 + 1.711 + 1.750 . 144 C38-7 7483 140+12-12-120 ä 1055 1204-24 550 140+17.+178+176 -190 2096 127CM 1251 0-L-H-E 83 1051 MCCM 32363 1.42+1.A.+1.7#+1.7E0 -171 1458 244 1.40 + 1.74 + 1.7H + 1.7Es 35 1.8 . 12127 32352 143+17-178-178-, 2039 153240 12353 142-17.-17.4.1750 -163 2104 1H3-31 Vetas 12 0-L-H-S a 437 87758 23433 MCC18 72 0+L-H+2 -228 2034 1.40+1.7L+1.7H+1.760 66 935 3484 -. 29 3045 12171 12171 149+12-176+1750 2912 1040-C 20 1.42+1.2.+1.24+1.750 -144 140+14.+1.78*+1.750 1572 NTCH 27625 125 NCCH 27425 140+17.+1.74+1.750 -224 3713 1.40 + 1.7L + 1.7H + 1.7Es 62 10.92 . 4-V-L Marks? 2763 142+17.+176-1752 6 3675 MEAC 27623 1.40 + 1.72 + 1.77 + 1.750 -224 3713 1.60 + 1.7L + 1.7K + 1.7Ep 211 21 12 Transverse (Honzonical) and Verscal) 1-1 . 34 3-32 12 178 41 2-7 140+171+176+1760 268

Table 3H.3-4: Results of Radwaste Building Concrete Slab Design

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onding Axial Force	Transverse Shear ⁽⁷⁾ Reinforcement Provided (ar ² fft ²)	Remarks
(mp) (m)		
-	-	-
		• •
		•
	-	-
		_
		-
	-	
	-	
		-
	-	÷
0 	0.20 (84@12)	·
	4.4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	

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			2 2		2.6			······································	esign Loads											
ş		ų	Num 1		mber	Fore	1 E	Axial and Flex	zre Loads		In-Plane Shear Load	5	Longitudinal Reinforcement			Transverse Shear Design Loads ⁴⁹			Transverse Shear ⁽⁷⁾	-
9	1 X	Dirac	note in the	1 AC	no nu	E		Load	A	Elavian (4	Load	in-plane (5)	Provided Im ² / ft)	Land	Honzo	ntal Section	Vertica	I Section	Reinforcement Provided (in ² /ft ²)	Reinterks
			8 G		# N	N N		Combination	(kups/ttp	(11-tips / 11)	Combination	Shear (kips / ft)	(41.7.44)	Combination	Transverse Shear Force (tup / ft)	Corresponding Axial Force (kp / ft)	Transverse Shear Force (Kip / ft)	Corresponding Adal Force (ktp / ft)		
						M7CM	37891	140 + 1.7L + 1.7H + 1.7Ep	25	45										
						NCCM	37891	1.40 + 1.7L + 1.7H + 1.7Ep	-251	-110	1									
					1+++L	MULAT	36339	140+1.7L+1.7F+1.7Ep	1	-256	1.40 • 1.70 • 1.78 • 1.780	122	3.12	-						
						MELAC	38165	140+174+178-1750	-190	-354	1									
						MTCM	36329	140 + 1.7L + 1.7H + 1.7Eo	64	-298	1									1
						MCCM	35144	140+12-178-1750	-224	- 300	1									
				1	2444	Main?	15343	140+17.+176+1750	19	405	1.42 + 1.7L + 1.7H + 1.7Ep	197	4.65	-					-	· ·
				1		HIMAC	38231	140+17.+17#+1750	-70	-366	Í									
						MITCH	37635	140 + 1.7. + 1.77 + 1.7Es	67	-144		1					-			
						NICON	37854	140+17L+1.7H-1.7Eg	-302	427	1									
		Hortzontal	3H 3-33		3-442	MAAT	37835	0.1.4.5	13	-0	1 40 + 1.7L + 1.7H + 1.7E0	73	6.24		· ·				-	· ·
						MRIAC	37835	142+17.+178+1750	-273	-64	-									
				<u> </u>		MITCH	38 193	140+1.1 1.77 - 1.759	6											
						NCCM	37825	140+17 +174 -1750	-203	.121	{ .									
				•	****	ADMAT	3/773	142+12 +178 +1754		-124	1.40+1.7.+1.74+1.750	97	3.12	•	-		· ·			· ·
						MULC	37735	140+18+107+1750	-	307	-									
				<u> </u>		NTCH	3335	140+12 +175+1750	n	41.				· · ·				1	+	
						MCCM	35115	142+12.+175-1750	-195	- 32	-									
				2	5++1	104AT	19029	140+12 +127+1750	6	-115	1.40+1.7L+1.7K+1.759	122	3.12			-	-	-		(C)(10)
						MAK	19079	143+12 +176+1750		-118	-									
				+	+	MICH	15514	140+12+17F+17=0	8											
						MCCM	10704	0-1+#+2		-143	-									
					144	179137	8125	147-12-12-1250			- 1.40 • 1.7L • 1.7H • 1.750	72	3.12				-			-
						NO.4	11105	140+17 +176+1750			-									
							16762	140-12-176-176					+							
1		1				Million I		Del arces		- 100	-						-			
r 36-	Na <i>y</i> Side	•		f 1	2.44	17917	1171	1/3-17-17-17-1			1.40 + 1.7L + 1.7H + 1.7Eo	52	4.63				-	-	-	
				1		HINA	17773	147+12 +120	.177		-									
					-	11703	36810	143+12+120+1750	120	.05										
						MCCM	35810	140+17.+176+1750			-									
					3-94	LINAT	16771	140+17 +176+1750			1.43 + 1.7L + 1.7H + 1.7Ep	72	6.24						-	
						inter	17874	140-12-126-126			-									
					+	11704		10-18-176-176			+	+		· · · · · · · · · · · · · · · · · · ·					+	
		i i					10+61	1/0+12+120+125			-									
					444	1/1147	1776	1/0 17 17/10 170			0+L+#+E	80	3.12					· ·	-	•
			1				79740	147+17 +175-175			1									
		Verscal	34.3-34			UTCH	3440	143+12+174+1750												
						MUCH	3141	140+17.+176+1754			1							1		
				•	5¥4	Josef T	347	0+L+H+*	-	471	- D+L+H+E	68	4.63						-	-
		1				10445	1000	140+17 +174+1720			1									
1					<u> </u>	HEAR	2014	140+17 +172+1754				+								
						MCCH	111165	141+17+176+1759			-							1		
					6-V-L		31.00	140+12+12+12=0	<u> </u>	.701	1.40 + 1.7L + 1.7H + 1.7Ep	52	6.24						-	
								147+12 +172+1754	211	.724	-									
					+	NCC1	28111	140+17 +172+1724		.10		+			1					1
							25m	0+1+17+=			-									
					7-¥4	PILAT .	10007	140+10 +175-1750	<u> </u>		140 + 1.7L + 1.7H + 1.7Ep	41	1.56			-		-	-	(10)
			1			- Marine	10007	140+12 +120	- ·		-									
				2		NTCH		140+12+174+175				-					[
						NCCM	34574	0+L+H+F		.16	4									
	5-VL	કન્પન	10417	 Ven	140+17 +1747 - 1750			- 140 + 1.7L + 1.7H + 1.7E0	50	3.12 -						-	(10)			
								100-10-00-00			-									
L				1	1	BELAC	10013	140+1.12+1.79(+1.750	- **	1. ³²	1	1	1		1			1	I	

Table 3H.3-4: Results of Radwaste Building Concrete Slab Design (Continued)

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	1	1			-8	Č,			Longitudinal	Reinforcement De	rsign Loads									
Ę		ŋ		1	Land L	orce	1	Axial and Flext	279 L0303		in-Piane Shear Loads	,	Longitudinal Reinforcement			Transverse Shear Design Loads ⁴⁹			Transverse Shear	Remarks
Toost	1	Direct	Layo Layo (1)	Hold I	n lor		Elem	Lozd	Art at (4)	Flexue (Q	Load	in-plane ⁽⁵⁾	Provided (m ² / ft)	Load	Horizon	tal Section	Vertical	Section	(in ² /ft ²)	
-			Cr Ra	-	2 2	d×ell		Combination	(kups/ft)	(it-kips / ft)	Combination	Shear (ktps / ft)		Combination	Transverse Shear Force (hp / ft)	Corresponding Axial Force (Rep / R)	(Rup / ft)	(kip / ft)		
						MTCM	38352	140 + 17. + 177 + 1750	"	50								1		
						NICCIN	383546	1.40 + 1.7L + 1.7K + 1.7Ep	-194	78	140+171+175-1759	172	3.12		-	-	-	-	-	
					HAL	MOLAT	36138	140+1.7L+1.7F-1.7Es	5	252		-								
						MALAC	36353	1.40 + 1.7L + 1.7H + 1.7Eo	-23	155										
						MTCM	38230	14D • 1.7L • 1.7H • 1.7Eo	S 1	68										
						NCCN	37817	140+1.R.+1.7H-1.750	-195	48	142+17.+176+1759	107	4.58			-	-		-	
					2444	MANT	38224	140 + 1.7. + 1.76 + 1.750	6	374										
						REAC	38224	140 - 1.7 1.79 - 1.750	-93	416		1								
		Horboita	34.3-5			MICH	38193	1.40 + 1.7L + 1.7H + 1.75a	 \$1	9										
						NCCH	35193	1.40 + 1.7L + 1.7H + 1.7Es	-239	173	10.17 -1 20.172	67	10							
1				•	3-44	MAAT	38195	1.40 + 1.7L + 1.7H - 1.759	1	227		"								
	1					HOLAC	38509	1.40 + 1.7L + 1.7H + 1.7Ep	-139	237	}									
						NTCM	25335	1.4D + 1.7L + 1.7H + 1.7Es	*	15										
						NCCM	25335	1.40 + 1.7L + 1.7H + 1.7Ea	-247	31	1									
				2		MMAT	39021	1.40 + 1.7L + 1.7H* + 1.750	24	61	1.40+1.52+1.58+1.550	142	3.12			-	-			
						MARC	39021	1.40 + 1.7L + 1.7H + 1.7Eo	-11	61	1									
			1			NTCM	38119	1.40 + 1.7. + 1.77 + 1.780	54	n										
						MCCM	37842	D+L+H+E	-730	129										
					ļ₩Ļ	MMAT	35053	140+17.+17.750	34	209	140+131+131+1350	12	3.12				•			
1						MMAC	37845	1.43 + 1.7. + 1.717 + 1.760	-139	303	ĺ									
						MITCH	37131	140+124+124+126	17	E E			1							
						MCCM	37074	0-1-4-6	-144	231										
	Far Stat	•		5	244	NOUAT	37559	1.40 + 1.7L + 1.75f + 1.7Es	11	EX.	140+171+178+1750	12	4.63	-	-		-		-	•
1 .	1					Market	37809	1.40 + 1.7. + 1.7% + 1.750	-149	557					-					
100			i			MITCH	35810	1.40 + 1.7L + 1.7H + 1.7Es	150	173										
						NCCM	35810	1.40 + 1.7L + 1.7H + 1.7Es	-319	240	-	1								
					3-94	LOUAT	35252	1.40 + 1.7. + 1.75 + 1.750	78	536	1.42+1.7L-1.7H+1.7E0	- 43	6.24	•	•	-		-	-	-
			1			INAC	15282	140+1.7.+1.7.5+1.750	-103	536										
				<u> </u>	+	HTCM	38165	140+17L+17H+17E0	65	59										
		1				MCCM	38165	D+L+H+E	-191	49										
		Vettta	34.3-38		4.42	MUAT	37754	140 + 171 + 176 + 1750	21	201	- 0+L+X+E	66	3.12	-	-		-	•	-	
			1			10420	18553	140+1.7.+1.7.++1.759	-135	423	1									
				•		HTCH	18157	140+10+105+1769	28	85			+							
	1	1					38157	140+10+176+176	-159	125	-									
1					544.	Land Land	28154	140+17+175+1750		121	143+17.+171+1750	2	4.53		-		-		-	
			1				19167				-									
			Ì	<u> </u>	+		25310	140+17-175	n				<u> </u>	+						
1					1		25114	D+L+H+E		•	1									
				ļ	ક્રમ્પ		3087.1	140+17.+176+178	3	11	143+17L+17H+17E	41	1.55	-	-	-				(1C)
							1 20001	140+17+176+175		31			1							
				2			30001	10-12-175-175				1			· · · · · ·					
						10.01	1100	140+170+176+1750			-									
					7-V-L		14821				1.43 • 1.71 • 1.7H • 1.7Es	50	3.12		•		-	-	-	(10)
	1						4323		<u> </u>		-									1
		_				MAAC	345/6	1.40 • 1.70 • 1.750						145) + 17) + 17H + 17H		-35			0.20 (94-012)	
		.			14	· · · · ·	<u> </u>	·				+ .		140+171+17H+17H	5	123	54	120	0.31 (#5@12)	
		Processoria Origination	a 34.3-37a			· · ·		·	· · · ·	+		<u>.</u>	· · ·	140+171+178+176	117		65	115	0 80 (8406)	
				<u> </u>		<u> </u>		· · · · · · · · · · · · · · · · · · ·	+	+		+		14D+17L+17H+17Fa	28		62	48	0.80 (#4@6)	
	_	-		2	4-1				+	+	143+17 - 176+176-	<u> </u>	0.70	-	+ <u>.</u>				-	
	Near St	de Honzanto i	DH 3-38	+ -		MTMM	·	1.40 + 1.7L + 1.7H + 1.7E0			147+171-174-175-		120						<u> </u>	
Root		Verbcal	06.C.MQ		1-V-L	ATTACA		140+3./L+3./H++1./b0		10	10110-10-10-10-		0.70						· ·	(11)
-	FarSk	*	094,3443	+ '	1+++L	NULL N	· · · · ·	1.40 + 1.7L + 1.7H + 1.7E0		+	1.50 - 1.75 + 1.78 + 1.720	+ :		· · · · · · · · · · · · · · · · · · ·	-			<u> </u>		
I	1	Vencal	34.3-41	1 1	1-V-L	NULL NULL N	1 .	1 40 + 1.7L + 1.7H + 1.7Ep	22	1 16	L40 + L7L + 1.7H + 1.750	61	1.20	· ·	-	· ·		<u> </u>		

Table 3H.3-4: Results of Radwaste Building Concrete Slab Design (Continued)

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Table 3H.3-4: Results of Radwaste Building Concrete Slab Design (Continued)

(1) The restancement layout dawargs show the vanous zones used to define the manuman restorement that will be provided based on link element analysis results. Aduat provided restorement dawargs are based on link element analysis results, aduat generators of the SAP2000 and restorement and the zones with higher restorement and the zones with higher restorement dawargs are based on link element analysis results. Aduat generators of the safe analysis and networks of the safe analysis results are doubled at the comes with higher restorement dawarg are based on link element analysis results.

nert zones. The reinforcement zone naming convertion is as ballows; 🎌 e hortzantal, 💙 e kerkeal, 🙄 e kangkadinal endorcement, 🕶 e kansverse reinforcement, For state, vencal consistends to North-South direction and horizontal conseponds to East-West direction

n (ACCA), and stores are provided with the corresponding moment item the same load combination. The maximum moment shall has a corresponding lension (ALAAT) in the same load combination and the maximum moment shall has a corresponding compression (ALAAT) in the same load combination and the maximum moment shall has a corresponding compression (ALAAT) in the same load combination and the maximum moment shall has a corresponding compression (ALAAT) in the same load combination and the maximum moment shall has a corresponding compression (ALAAT) in the same load combination and the maximum moment shall has a company of the same load combination and the maximum moment shall has a company of the same load combination and the maximum moment shall have a company of the same load combination and the maximum moment shall have a company of the same load combination and the maximum moment shall have a company of the same load combination and the maximum moment shall have a company of the same load combination and the maximum moment shall have a company of the same load combination and the maximum moment shall have a company of the same load combination and the maximum moment shall have a company of the same load combination and the maximum moment shall have a company of the same load combination and the maximum moment shall have a company of the same load combination and the maximum moment shall have a company of the same load combination and the same load combin (3) The o

(4) Negadre and load is compression and possive axis load is tension. Negative moment applies tension to the top tens of the other and possive moment applies tension to the top tens of the other and possive moment applies tension to the top tens of the other and possive moment applies tension to the top tens of the other and tens of tens of the other and tens of the other

(5) The reported in-plane shear is the maximum average in-plane shear along a plane that crosses the longitudinal reinforcement zone

stream reinforcement loads are reported for the critical element requiring the largest area of steel for transverse reinforcement within the zone. The stream fond and face in the same load combination for each direction is reported for the critical element. (5) The

ne shear remainment is the summation of the required shear reinforcement in the horizonial direction and the required shear reinforcement in the vertical direction កាល

(6) For certain areas of the structure, the standard element post-processing methods were too conservative. For such cases, detailed manual design was performed and the design forces de nined by the detailed manual design are provided in the table

(9) The long forcement shown is required to be lied

(10) The reported threes are from the FEM analysis. The provided longautinal reinforcement includes additional reinforcement required due to manual one-way design calculations

(11) The reported axis and in-plane forces are from the FEM analysis. The reported flexural forces are from manual one-way design calculations

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Table 3H.3-5 Summary of Structural Steel Design

		Elevat	tion 35'-0" Floor Steel Beams		
Location ⁶	Figure Number	Size ^{2,3,4}	Safety Margin = Capacity/Demand	Max. Moment (kip-ft)	Governing Load Combination ⁵
		W10X54	2.0	81.7	D+L
Elevation 35'-0" Formwork		W14X193	1.5	565.8	D+L
Steel Bedilis	3H.3-39	W14X283	1.8	700.4	0+L
	1 3H.3-40	W14x82	1.5	629.5	D-L+E'
Elevation 35'-0" Composite	3H.3-42	W36x210	1.3	577.4	Construction
Steel Beams		W36x231	1.2	4540.4	D+L+E'
		W36x262	1.1	5511.0	D+L+E'

		F	Roof Truss Member	3	
Location	Figure Number	Size ^{2,3,4}	Safety Margin = Capacity/Demand	Max. Axial Load ¹ (kip)	Governing Load Combination
North-South Spanning Truss Top Chord Member		W14X120	1.6 1.6	705.0 -952.0	0-L+E' D+L+E'
North-South Spanning Truss Bottom Chord Member		W14X311	1.4 4.3	2161.0 -908.0	D+L+E' 0+E'
North-South Spanning Truss Outer Diagonal Members		W12X136	1.4 4.5	910.0 -329.0	D+L-E' D+E'
North-South Spanning Truss Outer Vertical Members	3H.3-43 3H.3-44	2L8X8X1	2.6 1.3	241.0 -667.0	D+E' D+L+E'
North-South Spanning Truss Inner Diagonal Members		2L8X6X3/4LLBB	1.4 3.7	284.0 -139.0	D+L+E' D-E'
North-South Spanning Truss Inner Vertical Members		2L5X5X1/2	2.0 1.3	91.0 -185.0	0+E' D+L+E'
North-South Spanning Truss Lateral Bracing Members		2L8X4X1LLBB	1.1 1.1	386.0 -316.0	D+L+E' D+L+E'
East-West Spanning Truss Top Chord Member		2L5X5X1/2	3.8 1.9	47.0 -152.0	0.9D+E' D+L+E'
East-West Spanning Truss Bottom Chord Member		2L8X4X1LLBB	1.4 7.1	316.0 -94.0	D+L≁E' 0.9D+E'
East-West Spanning Truss Outer Diagonal Members		L8X8X7/2	1.3 8.3	208.0 -51.0	D+L+E' 0.9D+E'
East-West Spanning Truss Outer Vertical Members	3H.3-43 3H.3-45	L6X6X1/2	3.3 1.3	35.0 -143.0	D+L+E' D+L+E'
East-West Spanning Truss Inner Diagonal Members		L4X4X3/8	4.3 11.1	14.0 -7.0	D+L+E' _0.9D+E'
East-West Spanning Truss Inner Vertical Members		L6X6X1/2	5.0 2.9	23.0 -63.0	0.9D+E' D+L+E'
East-West Spanning Truss Lateral Bracing Members		L5X5X3/8	3.8 2.6	18.0 -21.0	D+L+E' D+L+E'

			Roof Purlins			
Location	Figure Number	Sizetaa	Safety Margin = Capacity/Demand	Max. Axial Load ¹ (kip)	Max. Moment ⁷ (kip-ft)	Governing Load Combination ⁵
North-South Spanning Roof Purlins		W12X210	1.3	-1299.3	-13.2	0+L+E'
East-West Spanning Roof Purlins		W8X67	1.8	-269.6	-2.5.	O+L+E'

Notes:

es:

Positive axial load is tension and negative axial load is compression.
W-shapes : ASTM A572 Gr. 50 (Fy = 50ksi)
Angles and Double Angles : ASTM A35 Gr. 36 (Fy = 36ksi)
Member sizes reported are based on analysis results. Actual member sizes used will have the same or greater capacity, but size and shape may vary based on connection design requirements.
E₉ is the design basis earthquake load (1/2 SSE). E' is the II/I earthquake load (SSE).

6. The steel beams located between column lines W1-W7 and WA-WE are required for concrete formwork only. Once the concrete cures,

The scele beams to take obside the other in the scele beams of the scele bea

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Table 3H.6-11: Results of DGFOS Vault Concrete Design

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<u> </u>	1	1 1		د	- 6		1 [Longitudinal	Reinforcement	Design Loads						······································	<u></u>	1	Γ
- Second	-	8	to u	cemen out Numb	mber	E C	1 E	Axial and Flexue	Loads		In-Plane Shear Load	ts	Longitudinal Reinforcement			Transverse Shear Design Loads ⁽⁶⁾			Transverse Shear	Demoster
LOCH	Thick	Ea	Direc	Roinfor Lay Drawing	Reinfor Zone Nu	M audr Foro	а в	Load Combination	Axial ⁽⁴⁾ (kips / ft)	Flexure ⁽⁴⁾ (ft-kips / ft)	Load Combination	in-plane ^(S) Shear (kips / ft)	Provided (in ¹ /ft)	Load Combination	Horizont Transverse Shear Force (kip / ft)	al Section Corresponding Axial Force (kip / ft)	Vertica Transverse Shear Force (kip / ft)	al Section Corresponding Axial Force (kip / ft)	(in ² /tt ²)	neumins
<u> </u>						MTCM	244	0+f+L+H+E	. 34	-71										
					ź	MCCM	2275	Ũ+F+L+H*€	-73	-184	D+F+L+H+F	24	112			-				
					7	MIMAT	223	0+F+L+H +E	1	-374										
						LEMAC	243	0+F+1+H+E	-15	-412										
						MTCM	2280	D+F+L+H+E	55	-220										1
			BOURE	5-142	ž	MCCM	34	0+F+L+H+E	-52	- 39	D+F+L+H+E	24	4/52		-		-			
			- VCH	ž	â	MMAT	S Ð	0+F+L+H+E	5	-748	-									
						MOJAC	80	D+F+L+H+E	-1	-748										
						MICM	344	0+F+L+H+E'	32	-341										
					1	MCCM	354	0+F+L+H+E	-66	-610	D+F+1+H+E	24	9.35			-				
					. "	MMAT	383	0+F+L+H'+E'	5	-1293										
		ar Site				MRMAC	323	G+F+L+H +E	-11	DEST-				,	· · · ·					<u> </u>
		ž				MICH	2524	0+f+1+H+E	32	40 41	<i>:</i>									
					1.44.	58,428	767	0,5,1,5,2	-114		0+F+L+H+E	27	3.02			-	-			
						Marian	115	0+1+L+n *C		510										
				•		MICL		0+F+L+H+E	39	52										
			2		MCCM	231	0+F+L+H+E	-147		-										
		Verfici	1-8+1	2.41	MAIAT	35	0+F+L+H+E	24	-418	0-F+L+H+E	27	4.53								
						MMAC	28	140+14+121+121+122	- 452	- 683	-									
						MICH	19	Q+F+L+H+E	41	-123		1					······································			
-						MCCM	117	1.0+14+12+12+12+124	-123	-432										
d ei 8					*	MMAT	344	8+F+L+H+E	22	-286	D+E+L+H+E	27	6.24				-		-	
						MERAC	- 22	D+F+L+H+E	-36	-1131	-	1								
						MICM	253	Ð+F+L+H+E	23	195										
					ž	MCCM	2259	0+F+L+H+E	-82	138	0.5.1.H.F	1 24	315							
					44	MMAT	239	0+F+1+M+E	8	385				-		:				
						MMAC	28	0+F+L+H+E	-22	445										
				· ·		METÇIA	2399	0+F+L+H+E	82	512										
					Ŧ	MCCM	354	\$+F+L+H+E	-83	853	D+F+L+H+E	24	4点	-		-				
					Ň	MDIAT	\$10	0+F+L+H+E	11	748										
			fat nort	11		MERAC	353	0+F+L+H+E	-74	940										ļ
			2	ě		MICH	40	0+F+L+H+E		635										
		etite v			Ŧ	MCCM	772	0+F+L+H+E	-86	321	Ð+F+L+H+E	24	6.24	-						
		2				MIMAT	40	0+F+L+H+E	40	\$13 (0)5	-					-				
				•		MEMAC	378	0+F+1+H+E	- 34	1215		+	+					1		
						MTCM	346	0+F+L+H4E	73	035	-									
					≜ .Hd.	ADUAT		0+F+L+M+E		440	D>F+L+H+E	24	7.9			-				(5)
		1				MBALC	~~~~	Ü+F+€+M+E D+F+1→M→E	+ *	1431										
						мтсм	340	0+F+1+H+E	51	850										
		1	_	2		MCCM	194	0+F+1+H+E	-191	675	4									
			Vertici	3H&-1-	1.44	MELAT	eı	0+F+L+H+E	13	1001	0+F+L+H+E	27	8.34		-		-			
	Veente 344.041		MMAC	230	D+F+L+H «E	-15	1102	1				<u></u>								
L		1	1	1			1		1	1			4		· · · · · · · · · · · · · · · · · · ·					

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	Т			= ¥	**				Longiturfinal	Reinforcement	Design Loads				· · · · · · · · ·		······································			
5	1	3	i i i i i i i i i i i i i i i i i i i		mbor	u d	Ę	Axial and Flexur	Loads		In-Plane Shear Loan	5	Longitudinal Reinforcement			Transverse Shear Design Loads ¹⁹			Transverse Shear ⁽⁷⁾ Reinforcement Provided	Remarks
Loca	1 A E	4	8 5	Mintor Histor	na Nu	Forc	1	Load	Aziai (4)	Flexure ⁽⁴⁾	Load	in-plane ⁽⁵⁾	Provided (in ² /10)	Load	Horizont	al Section	Vertical	Section Corresponding Axial Force	(in²/ft²)	
	_			α ŏ	~ X			Combination	(kips / ft)	(ft-kips / ft)	Combination	(kips / ft)		Combination	(kip/ft)	(kip / ft)	(káp / h)	(kip / ft)		<u> </u>
						MITCH	2521	0+F+L+H+E		575										
					**	MCCM	25	0+F+L+H+E	-300	1143	0+F+L+H+E	19	2.35					•		
						MDAAT	383	0+F+L+H+E	67	975										
						MOMAC	243	D+F+L+H+E	-135	1200										
						мтся	370	0+F+1+8'-E'	112	1130										
					1.44	MCCM	117	0+F+L+H+E	-250	1284	0+F+1+H+E	27	ವಿಷ	-					•	
						5424241		0+F+L+H +E	21	1312										
		A Ede	Artes!	1.0	L	NEMAL	221	0+F+L+SF4E	-240	2130										+
i i	•			, e		MI (JAI				1170										
	1				1.4	1011-	21	0+r+t+a +t		12/4	0+F+L+H+E	17	H24				•	•	-	
						345441		0.5.1.2.5		2185										
						MTCM	•													· · · · ·
1						MCCM	213	Asfal aifaF	-289	2309						1				
					9-44	M0437					0+F+1+H+E	11	12.6	•	-		-		•	(5)
						MONAC	\$\$7	0+F+L+H+E	-248	2453										
			25 8		<u>ب</u>				· .		-	· .		D+F+L+H+E	172	-123	27	21	0.31 (5@127)	
			antine anti-Bu	1 PH						+			· · ·	D+F+L+H+E	125	13	112	5	0.30 (4:36")	1 .
			≚ਤੁਹ		Â		-			-										
						Mi ÇAS	323	0+F+L+51+E	-177											
			HIGTUG	H5-14	Ŧ	10117		0+F+1+H+E	21		0+F+L+H+E	40	3.12			-	-			(7)
			Ť			MIALC	53	DaFal all af												
	1				+	MICH		045414345	41	-15	· · · · · · · · · · · · · · · · · · ·									
						MCCM	555	0+F+L+H+E	-141	32										
					1.1	MAAAT	471	0+F+L+H+E	24	- अ	0+F+L+H+E	60	1.52	-		-	-	-		
						MMAC	511	0+F+L+H+E	-135	-115										
		S Jam		1		MTCM	554	0+F+L+H+E		0										
				7		MICCIM	554	0+F+L+H+E	-185	-45										
			ž	3HE-	ž	MEAAT	539	0+F+L+H+E	2	- 48	/ D+F+L+H+E	- eo	1.12			-	•	•		
2						MONAC	539	0+F+L+H-E	-85	-178										
800	~					MICH	558	0+F+L+H 4E	0	-12										
					-	MCCM	580	0+F+L+H-E	-152	-122	D+5+1+21-5	-	674		.		-			(5)
	1	1		1		MLAAT	526	0+F+L+H+E	3	-14	UT. FLTR TE	-		-						
						MAGAC	566	0+F+L+H+E	-104	-221					ļ					
						NTCM	350	0+F+L+H+E	13	4										
			ist var	148	¥	MICCM	523	0+F+1+H+E	-172	28	D+F+L+H+E	43	3.12			-	•			(P)
			1001	HE	2	MAJAT	558	D+F+L+H+E	3	67										
						NDAC	585	D+F+L+%F+E	-21	81	ļ									
		E.				MICH	554	D+F+L+H+E		24	4									
1			ercs.	150	ĸ	MCCM	565	D+F+L+H+E	-114	<u> </u>	0+F+L+H+E	e0	1.52			.	•		-	
			5	l F		MOAAT	58	0+F+L+H+E	71	24	{									
					+	NOVAC	565	D+F+L+H+E	-36	24										
			_	-		MTCM	650	D+F+L+H-E	3	-13	-									
t dat	~	197 83	nucente	18-151	Ŧ	MCCM	638				D+F+L+H+Wt	24	1.53		· ·			· ·	•	
°	State 1 ct and a ct a	2	¥	ř		MCAAT		0+F+L+H+W1	2		4									
1		1	1	1	1	L NOAAC	638	D+F+L+H+M	1 - 54	~						1		L	I	1.

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	-	1		- 8					Longitudinal	Reinforcement	t Design Loads									
-uo	100		5	Aumon Aumon	mbor	şã,	Ţ	Axial and Flexus	Loads		In Plane Shear Load	ts.	Longitudinal Reinforcement			Transverse Shear Design Loads ⁽⁴⁾			Transverse Shear ⁽⁷⁾	Demote
Local	The I	E.	0 Drae	the state	ne Nu	Force	19	Load	Axial (4)	Flexure ⁽⁴⁾	Load	in-plane ⁽²⁾	Provided (in ³ /10)	Load	Horizona Transverse Shear Force	al Section	Vertical	Section	(in ² /b ²)	FUELLINE R.S
				α δ	∝ s			Combination	(kips/ft)	(ft-käps / ft)	Combination	(kips/ft)		Combination	(kip/ft)	(kip / h)	(kip / ft)	(kip/ft)	ļ	<u> </u>
						MTCM	574	0+F+L+3f+E	7	-15	-									
			tront	18-151	Ŧ	MCCM	574	0+F+L+X+E	-	4	- D+F+L+H+M	24	3.12	-			•			
			£	Ā		NDAAT	574	0+F+L+H+E		-19	-									
	1					MOMAC	574	0+F+L+8 +E		-15		-								
1							3/3	D+F+L+R+R			-									
		Dig Yes			1.1.1	10417	545	0+F+L+H+E	-13	~	0+F+1+H+M	15	1.52							
		2	_			89410	577	0+F+1+H+F		- 3										
			PRUM	10-10		MTCM	574	0+F+L+H+E	38									1		
						MICOM	574	0+F+L+H+E	-84	-11										
	1	1			14	MOJAT	574	0+F+L+H+E	34	38	- D+F+L+H+%Ω	15	3.12	-			-			
						MOMAC	574	D+F+L+H+E	-3	-38	1									
				<u> </u>	-	MITCH	633	D+F+L+H+Wa	30	5										
					L .	MCCM	đ11	0+F+L+H+E	-50	1										
					L Ŧ	104AT	643	D+F+L+H+E	3	25	- 0+F+L+H+MC	24	12							
418	1		12	ŝ		MMAC	572	D+F+L+H+W	-2	31	1									
			202	348		рисл	574	0+F+1+H+E	5	e										
					l ≠	NCCM	574	D+F+L+H+At	-15	14	0+F+L+H-495	24	312							
	Tay koa			Â	TALOM	57	0+F+L•H+E	2	13											
1		P.Q.P				MEAAC	573	G+F+L+H+##	-	35				···· • ···						
		rar				MTCM	575	D+F+L+H+W	30	8	1									
					3	MCCM	575	0+F+L+H+E	-73	8		18	12			-				
					-	MEAAT	575	D+F+L+H+E	\$	21	4									
			ineal	3-154A		MARAC	53	0+F+L+H+M1	-45	24										
		1	3	Ā		MTCM	574	0+F+L+H+E	3	21	4									
					1	MCCM	574	D+F+L+H+M	-114	41	0+F+1+H+W	15	3.12	-		-		-	•	
						MEGAT	54	B+F+L+H+A		- <u>-</u>	4									
			85 0			M24AC	- 3 4	D+F+L+H+2	-114									· · · · · · · · · · · · · · · · · · ·		
			Transwirt (?korth-Stor 8 East Wee	316-154	1:1		-	-	-		-		•	0+F+L+H+E	-15	51	-33	9	\$44(3g6)	
						MICH	ea 0	6+F+L+H+12	#	-12	_									
			1 Corte	5.5	Ŧ	MCCM	626	D+F+L+H+#2	-47	e	- 0+F+1+H+3%	37	t.S				-			
1			2	1 H	-	MAAT	m	0+F+L+H+E	0	-23	-									
		v Bida	L			MMAC	763	D+F+L+H+E	-8	41										
		ž				MICH	729	D+F+L+H+412	8	\$	4									
			10	18-156	ž	MCCM	63	D+F+L+H+M	-63	2	0+F+L+H+E	19	1.52	-	-				-	
	Rood 8			â	_	MUAT	151	0+F+L+8F+E	- °	-17	-									
1000						MARC .	763	D+F+L+H+Wt	- 31	-12										
						NC 1221	107	0 + F + L + H + HI	-148	ت به	-									
			No.	51-9-H	Ŧ	MRADT	/G/	D+F+1+H+M	-145	10	D+F+L+H+M	37	1.52			· ·		·	-	
			1	"		Monarc.	770	D+F+1+H40		42	-									
		La EC	<u> </u>			мтам	711	D+F+L+H+Wa	27	0		+								1
	2	-	8	.	MCCM	732	D+F+L+H-Ma	-170	15	1										
		Alley	31.6-1	1	MEAAT	732	D+F+L+H+E	5	17	D+F+L+H+E	18	1.58	-		· ·		·	· ·		
		1			MONAC	697	D+F+L+H+W1	-43	43	1			-							
1	1		1	1	1	1					1		1			L	·			A

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	1			- 3	±£				Longitudinal	Reinforcement	Design Loads								1	1
rot a	1	8	tion	out Numb	mbor		ĮĮ	Axial and Flexur	مهما ا		In-Plane Shear Loan	ds .	Longitudinal Reinforcement			Transverse Shear Design Loads ¹⁴			Transverse Shear ⁽⁷⁾ Reinforcement Provided	Remarks
Loca	Thick I	ů.	Pres	wing .	Man Ne Nu	Maxtr Force	5	Load	Axial ^[4]	Flexure ⁽⁴⁾	Load	In-plane ⁽⁵⁾	Provided (in ¹ /10)	Load	Horizont	al Section	Vertical	Section	(in ² :ft ²)	
				A ar	~ S			Combination	(kips / ft)	(ft-kips/ft)	Combination	(kips/ft)		Combination	(hip/ft)	(kip / ft)	(kip / ft)	(kip / ft)		
						MICM	534	D+F+L+H+Wa	43	-7										
			TEL MONT	8-159	Ŧ	NCCM	639	0+F+L+H+Wa	-107	-30	D+F+L+H+M	2	1.50							
			2	Ā	-	MONAT	637	D+F+L+H+Va	2	45										
		21 St 00				MAAC	639	D+F+L+H+W1	-30	-74										
		ž			· ·	MICH	659	D+F+L+H+%	33	*										
			R.C.M.	18-160	1 1	MCCM	839	D+F+L+H+Wa		~	0+F+1+H+%	37	1.52		-	-	-			
			^	ñ		M26A3	•••	D+F+L+H+M		~										
pool 6	~				ļ	Masac	ea 	0+2+L+H+M	-33											
*			-	_		12103	013	D. F. L. U. W.									5 -			
			NOTUC	91-9H	141	Titede	- CC /		230		0+F+L+H+W2	2	1.55	•			•	-	•	
			ž					D+F+L+A+4	-		-									
1		a 604			ļ	MTCN1		D.E.I.1820					-		1					
		-	-			NECTH		D+F+I+H+Wa	-287	30	-			1						
			Versce	148-16	14	MOANT	650	D+F+L+H+W		17	Ð+F+L+H+M2	87	1.51	-					-	
						10480	658	D+F+L+H+M	-37	73	-									
					<u> </u>	MLC2N	575	0+F+L+H+E	115	33									-	
						NICOM	1044	D+F+L+H+E	-197	40	1									
				1 H	MEAAT	\$11	0+F+L+H+E	5	-23	- ∂ + ₹+\ +₩+€	e1	1.2	•		· ·	-	-			
						MRAAC	t059	0+F+L+H+E	-163	-300	1									
						MICH	1045	0+F+L+H+E	21	-50										
						MCCM	1052	D+F+L+H+E	-184	-554	1									
					H.	MD4AT	1015	0+F+L+H+E	2	-118	D+F+L+H+E'	61	422	-	-			-		
			1950	3		M044C	1073	0+F+L+H+E	-165	-594	1									
		Ì	197 197	34.6		MICH	561	D+F+L+H+E	150	-234										
					<u>-</u>	MCCM	1042	D+F+L+H+E	-223	-215				_						
					, F	MDAAT	1042	0+F+L+H+E	22	-398	0+F+L+R+C			-						
						MOARC	1041	0+F+L+H+E	-179	-725										
						MICM	•	•	-	•										
1	_	\$ide			ļ Ţ	MCCIM	t053	0+F+L+H+E	-192	-658	0+F+L+H+E	*	7.8							
×.		a de la de l			*	MIMAT	•	-	·	·										
		1				MOARC	1065	0+F+L+H+E	-195	-430										ļ
·]		1				MICH	798	0+F+L+H+E	76	-70	-									
		1			*	MCCM	t041	0+F+L+H+E	-189	-61	0+F+L+H+E	E	3.12	.			-			
					_	acuat	1052	0+F+L+H+E	'	-219	-									
1						MOAAC	1059	D+F+L+H+E	-54	-219								· · · · · · · · · · · · · · · · · · ·		
						MICM	730	0+F+L+H+E	157	-175										
			HC3	8-164	T.	MOOM	1023	0+F+L+H+E	-213	-61	- D+F+L+H+E	R .	452	.					-	
			1	Ă		M04XT	591	D+F+L+H+E	1		4									1
						M552C	804	D+F+L+if+E	-83	-467	<u> </u>								1	
						MTCM		0+F+L+H+E	51		4									
					3-4-1	MCOM	1014	0+F+L+H+E	-131	-43	- D+F+L+H+E	74	9.35			· ·			-	
						MALAT	\$20			-+65	4									
			i			MMAC	\$20	0+F+L+H+E		-488			1	1	1				I	L

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.

				± ž	2 S				Longitudinal	Reinforcement	Design Loads					B				
u la	t l	3	dion	Your Numt	umbor		E E	Axial and Flexu	re Loads		In-Plane Shear Loa	ids.	Longitudinal Reinforcement Provident		· · · · · ·	Iransverse Shear Design Loads"			Transverse Shear ⁽⁷⁾ Reinforcement Provided	Remarks
1001	this 2		Dia	Reinfor Drawing	Reinfor Zone Ni	For		Load Combination	Azial ⁽⁴⁾ (kips / ft)	Flexure ⁽⁴⁾ (ft-kips / ft)	Load Combination	bi-plane ⁽⁵⁾ Shear (kips / ft)	(in ¹ / ft)	Load Combination	Horizon Transverse Shear Force (kip / ft)	لعا Section Corresponding Axial Force (التب 1 ft)	Vertica Transverse Shear Force (hip / h)	d Section Corresponding Axial Force (kip / ft)	(m²±ສ້)	
						мтсм	529	0+F+1+H+E	33	-429										
					3	NCCM	\$23	0+F+L+H+E	-119	40	0+F+L+H+E	63	10.92					-		
1					÷	MONAT	538	0+F+L+H+E	1	-1217										
		- Bide	Noal	12		MAAAC	530	D+F+L+H+E	-54	-1224		_								
ļ		ž	3	1 A		MICH	344	0+F+L+X*E	23	-717										
1					Ļ.	MCCM	344	0+F+L+H+E	-112	-38	0+F+L+H+E	58	12.45	-						ertes
					-	MDAAT	583	0+F+L+if+E		-1227										
						Manar		0+F+L+H+E		-1231										
						HZ (C24		0+F+L+R+E	- 204	784										
	1				Ŧ	MALT	541	0+F+L+A =E		194	0+F+L+H+E	eı	3.12	-	•	•	-	-		
			9			MAAL	515	0+F+L+H+E	-123	350										ŀ
			UCION	1919		NTCH				<u> </u> .										
			-			MCCM	1049	0+F+L+H+E	-155	145									1	
					14-6	MOANT	+ -	•	· ·	<u> </u>	D+F+L+H+E	50	452	•				-		
ļ						MORE	514	0+F+L+H+E	-111	413										
				1		MICH	1025	0+F+L+H+E	75	24										
				1		MCCM	1039	D+F+L+H+E	-203	19	DELLERE		10							
					2	MC4AT	1058	0+F+L+H+E	5	169		-								
~						MARC	t014	0+F+L+H+E	-87	273										
Mail.	-					MTCM	758	0+F+L+H+E	138	58										
		9D.			4	MCCM	1017	0+F+L+H+E	-258	190	Ð+F+L+H+E	e2	4.55			-	-			
		1			A	MEAAT	510	0+F+L+H+E	1	300										
						MB64C	1025	0+F+L+H+E		450			1.	· .						
						MCT2M	1042	D+F+L+H+iX	74	68 										
1			Mrine at		1×1	MCCM	1042 	D+F+L+H+E	-211	39 #51	D+F+L+H+E	70	6.24			-				
				â		AGA1	550	0+F+L+H+E		600	-									
						MITCH N	50	0+F+C+R+E		255		_	+							
						MITTM	51	0+F+L+H+E	-75	354	-									
					*	MMAT	553	D+F+L+H+E	7	755	0+F+L+H+E	58	7.8			-		-		
				1		MONAC	556	0+F+L+H+E	-3	755	-									
						MICH	· ·	-	· ·	-	· ·	-								
					÷	MCCM	544	0+F+L+H+E	-112	4							_	-		6163
					2	MMAAT	•	•			0+++L+H+C	20	L(40			-	-			\$-\$0,;
						POWC	923	0+F+L+H+E	-72	115]									
			1		5	•				·	•	-	-	D+F+L+H+E	B	-1	÷	-:::>	022(4@12)	5
			- Horizon	6	1		1.	•				-	•	D+F+L+H+E	5	1	-203	-183	031 (5 g 127)	
		•	AVerse	346-1	5		•			-	•	-	•	0+F+L+H+E	50	83	-129	144	G80 (4007)	
			ire.		ŧ	· ·	·	-		•	-	· ·		D+F+L+H+E	-209	-	1	-13	1.24(505)	
		1				MICH	1124	0+F+L+H Æ	115	-35										
. <u>.</u>		977	is up	5	±	мссм	1307	0+F+L+H+E	-173	-239	0.5.1.1.W.F	60	312						-	
×.	*	New	HORE	a He	1	MOART	1193	0+F+L+S'+E	5	-198	U+F+L+R+C	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~								
1						MONAC	1301	D+F+L+H+E	-163	-368							l		<u> </u>	

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		1	r	- b	<u>– 5</u>				Longitudinal	Reinforcement	Design Loads		1							<u> </u>
5	10		Ę	Numb	mber	şā,	Ţ	Axial and Flexy	ne Loads		In-Plane Shear Loa	ds.	Longitudinal Reinforcement			Transverse Shear Design Loads ⁽⁴⁾			Transverse Shear ⁽⁷⁾ Reinforcement Provider	Remarks
9	1 E	L H	Direc	wing.	no Nu	Force	E le r	Load	Axial ^[4]	Flexure ⁽⁴⁾	Load	in-plane (5)	Provided (in ¹ / ft)	Load	Horizon	tal Section Corresponding Arial Force	Vertica Transverse Shear Force	Section	(m²:tt²)	
				a S	* A			Combination	(lúps / ft)	(ft-kips/ft)	Combination	(kips / ft)		Combination	(kāp / ft)	(käp / ht)	(kip / ft)	(kip / ft)		+
						MCTM	1278	0+F+L+H+E	30	-114										
					Ŧ	MCCM	1308	0+F+L+H+E	-183	+22+	0+3+1+H+E	80	4.52				-	-	-	
				1		MCAAT	t285	0+F+L+H +E	3		4									
					ļ	MR42C	1300	0+F+L+H+E	-104											
			_			MICH		0+F+L+d+E	- HS		-									
1			SUGED	14-16	1 H	NO.17	1250	0+F+L+R+E			9+F+L+H+€	e0	6.24		•	· ·				
			f	-		1000	1280	0+5+1+5	-137	.23	1									
			1			мпсм													_	
						NCOM	1305	0+F+L+H+E	-192	-923	-									
					, T	MOJAT			· ·		0+F+L+H+E	4	7.9	· ·		· ·			-	
						MANAC	1311	D+F+L+H-E	-194	-248	1									
						MICH	t 191	0+F+L+H+E	73	-83	· · · · · · · · · · · · · · · · · · ·		1							
					L	NECCM	1293	0+F+L+H+E	-194	43										
					ž	M04A7	1288	0+F+L+H+E	2	-835	- 0+F+U+H+E	53	10				-		-	
		3		1		MAAC	1297	D+F+L+H+E	-53	-245	1								_	
		17				мтсы	1189	0+F+L+H+E	153	-530										
			1	NCCM	1281	D+F+L+H+E	-210	43			459						-			
			, A	MOART	1108	D+F+L+H+E	3	-415												
		1		MERIAC	1181	0+F+L+H+E	-96	-405												
				MITCH	1173	0+F+1+H+E	5	-439												
1			5	169	5	MICCHA	1272	D+F+1+H+E	-129	-55	0+F+L+H+E	77	938							
3			3	ž	à	MLAAT	1185	0+F+L+H+E	2	463	_									
1						MAAC	1185	0+F+L+H+E	-45	-463										
						MICH	1157	0+F+L+H+E		422	-									
			1		¥.	MCCZM	1157	0+F+L+H+E	-118	-44	- D+F+L+H+E	eı	1092		-		-	•		
						MMAT	1149	0+F+L+H+E	6	-1222	4									
						MAAAC	1149	D+F+L+H+E	-55	-1225										
						MICH	1141	0+F+L+H+E	21	-/20	-									
					7-7-	MOOM	1141	D+F+L+H+E		- 35	0+F+L+H+E	54	\$2.45							(5)((3)
						BELLAI	1111	0+F+L+7+E			-									
						MITCH	1133	0+F+1+H+E	135	12			-		-		· · · · · · · · · · · · · · · · · · ·		1	1
1				1		NOTM	1108	0+F+L+H+F	-391	295	-	1								
				1	Ī	MMAT	1273	D+F+L+H+E		23	0+F+L+H+E	60	3.12	· ·	-			-	-	
			1 2	2		MARC	1104	D+F+L+H+E	-134	373	-									
			IOF 201	THBHE		мтсм	.	•		· ·						· · · · · · · · · · · · · · · · · · ·				
1		±	–			MCC24	1194	D+F+L+H+E	-187	250	1									
		1.4				MOAAT	·	-	· ·	<u>†</u> .	- 0+F+L+H+E	50	4.59	•		•			· ·	
						MD42C	1175	D+F+L+H-E	-111	439	1									
				+	1	MICH	1282	0+F+L+H-E	78	74										
			3	E	ب ا	NCCM	1281	D+F+L+H+E	-201	19			117	.		.				
			23	- CHE	ž	MMAT	1293	0+F+L+H+E	5	201		*								
						MMAC	1272	0+F+L+H+E	-81	257										

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	Acreass (11)	2		vcement yout g Number (1)	ircement lumber ⁽²⁾	ámum cas ⁶ 1	ment	Longitudinal Reinforcement Design Loads					Longitudinal	Transporce Shear Design Lost(⁶)						
stion			5 to					Axial and Flexure Loads In-Plane Shear Loads				b	Reinforcement Provided						Transverse Shear ⁽⁷⁾ Reinforcement Provided	Remarks
Ĕ	Thic		튭	Rainto Le Drawing	Reinfo Zone N	A P	, and a second s	Load Combination	Axial ⁽⁴⁾ (kips / ft)	Flexure ⁽⁴⁾ (ft-kips / ft)	Load Combination	kips / ft)	(m ¹) ft)	Load Combination	Horizont Transverse Shear Force (kip / ft)	al Section Corresponding Axial Force (kip / ft)	Vertica Transverse Shear Force (kip / ft)	Corresponding Axial Force (kip / ft)	(in²/tt²)	
		, ra soa	Vences	346-171		MICH	1189	D+F+L+H+E	¥2	59	0+F+L+H+E			-					-	
					3	MCCM	1269	0+F+1+H+E	-250	179		\$3	452							
					ñ	MDIAT	1297	0+F+1+H+E	2	471										
	-					MMAC	1297	D+F+L+H+E	-67	482										
	1				P.N.P.	мтсм	1280	D+F+L+H+E	72	148	0+F+L+H+E'	65		-			-	-	•	
						MCCM	1290	D+F+L+H+E	-t\$9	79			6.24							
						MMAT	1181	D+F+L+H+E	3	857										
O JRA M						NDAAC	1181	0+F+L+H-E	-34	867										
	-					MTCM	1152	0+F+1+9 +E	8	255	0+F+L+H+E	54	7.8	-	-		-	-	-	
						MCCM	1120	0+F+L+ST+E	-72	351										
						MMAT	1145	D+F+L+H+E	7	754										
						MMAC	1145	D+F+L+∺f+E	-28	754					<u></u>				i	
					9.44	MITCM	·	-	· ·	· ·	0+5+1+H+E								-	
						MCCM	1141	D+F+L+H+E	-110	50		54	1245							(8),(13)
						MMAT	·	-	·											
						MEMAC	1117	0+F+L+H+E	-67	114		ļ								
			l'i rana wera e (+100120122) & Varticari	3118-172	5	•	·	-	•	· ·	•	· ·		D+F+L+H-E	6	0		· -£3	020(4 0 (2))	1
					5	·	•	•		·	-	· .	· ·	D+F+L+H+E	-174	20	22	-75	031(5@12")	-
					5	·	•	•	•	-	-	· ·	•	D+F+L+H+E	-171	20	-2	3	0.30 (4@6")	4
					1	-		•	•	-	-	-	•	D+F+L+H+E	-239	-10	-1	-12	1.24(5@8')	
¢ III M			Hore crist	3(4-173		MICM	259	D+F+L+H+20	e	4	D+F+L+H→W:		1.52		-	-	-	-	-	
					3.441	MCCM	žš	D+F+L+H+W2	-05	4										
						MMAT	358	0+F+L+H+E	1	-35										
						MMAC	992	0+F+1+H+E	-12	-62										ļ
						MICH	1012	0+F+L+∺+%2	42	\$	0+F+L+H+M≥	58	3.12	-	-				-	
						MCCM	1019	D+F+L+H+₩a	-73	7										
						MMAT	1015	D+F+L+H+E	23	-77										
						MMAC	1035	0+F+L+3f+E	-38	-121					· · · · · · · · · · · · · · · · · · ·					
					1++;;	METCOM	1030	D+F+L+H+Wa	- 53	-15	D+F+L+H⊀%	58	4.發	-					-	
						MCCM	1030	0+F+L+H-E	-168											
						MRAAT	1030	D+F+L+H+E		-45										
	~	er (Jule				MMAC	1030	D+F+L+H+E	-18	-25										
		ž				MITCH	993	D+F+L+H+Wt	45	*	Ð+F+L+∺I+Mt		1.51	-	-			-	-	
					1	ž MCCM	974	D+F+L+H+Wt	-81	-1		47								
						MMAT	1033	0+F+L+H+E	=====	-61										l
					ļ	ADAAC	1033	D+F+L+H+E	-3		D+F+L+H4W:			-	- -	-		-		
			/encel			MTCM	1035	0+F+L+H+E	57	4										
				13-174	7~4	MCCM	1012	D+F+L+H+E	-118			47	3.12							
				*		MOAAT	1031	D+F+L+H+E												ļ
1				1		MMAC	1031	U+F+L+H+E	-80		D+F+L+H4M			-						
1				· ·		MICM	1030	0.5.1.07.5	104	-#2										· ·
					344	8044T	1030		-200			45	6.24							
						Magar	1030	0++++++++++++++++++++++++++++++++++++++		-179	-									
						REMARC.	6030	U+F+L+R+E	-101	1			L							L

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	1			- 8	- R				Longitudina	Reinforcemen	t Design Loads					-				
-uo	1	8	ud t	Aunta Conner	unber 1	şā.	E S	Axial and Flexu	e Loads		In-Plane Shear Load	ts .	Longitudinal Reinforcement			Transverse Shear Design Loads ⁽⁴⁾			Transverse Shear ⁽⁷⁾	Page arter
Local	195	Ľ.	Direc		N at a	Force	Elen	Load	Axial ⁴⁹	Flexure ⁽⁴⁾	Load	in-plane ⁽⁵⁾	Provided (in²) ft)	Load	Horizon	tal Section	Vertica	Section	(in ² /ft ²)	
				a c	23			Combination	(hips / ft)	(ft-kips / ft)	Combination	(kips/ft)		Combination	(kip / ft)	(kip / ft)	(kip/ft)	(kip / ft)		
						MITCH	1032	0+F+1+H+E	31	17										
					Ŧ	MCCM	265	D+F+L+H+W	-131	18	0+F+1+H+M	58	15							
					-	MAKAT	955	D+F+L+H+Wat	ŝ	49	_									
1			Emai	5113		MOMAC	333	D+F+L+H+W2	-41	63								1	1	
			ş	346		MTCM	:030	D+F+L+H+%	3	9										
					Ŧ	MCCM	1030	0+F+L+H+E	-100	29	0+F+L+H+W2	58	3.12							
				1	Â	MDAAT	1013	D+F+L+H+E	2	37										
		1				MOJAC	1000	0+F+L+H+E	~	e.										
:		2				MICM	8 2	0+F+1+H+€	49	4										
× ×					7	NCOM	ସେ	C+F+L+H+200	-130	7	0+F+L+H+M	47	1.55							
			•		-	MOMAT	1009	D+F+L+H =E	'	13										
			a a a a a a a a a a a a a a a a a a a	1764		MASAC	985	D+F+L+H+22	-35	8										
			3	HE		MICH	1035	0+F+L+St+E	*	*	-									
1					ų.	NICCM	1030	0+F+L+H+E	-236	2	0+F+L+H+W:	45	312			-		-		
					, a	MD4AT	1023	0+F+L+H+E	<u>«</u>	1	4									
						MEMAC	1008	0+F+L+H+E	-187	27										
	r		PLOAD LOAD	1941	5	•	•	•	•	·		· ·	· .	D+F+L+H+E	-31	13	-14	4	243357	
			T T T	316	5	· ·	.							D+F+L+X+E	43	114	-55	-2	124 (5.867)	
		1		1		MTCM	\$233	0+F+L+H+E	ž	-31										
					7	MOCM	1215	0+F+L+∺+¥02	*	4	0+F+1+H+10		158	-						
1					3	MOJAT	t201	0+F+L+H+E	4	43										
						MANAC	1201	0+F+l+H+E	-15	-70										
						. МІТСЯМ	1248	0+F+1+H+E	•	43										
			TELUCO	111	1 ž	MCCM	1248	D+F+L+H+201	-86		0+F+L+H+Wt	59	3.12						-	
			ž	346		MAAT	1255	0+F+L+H+E	12	-75										
						MMAC	1197	0+F+L+H+E	-38	48										
					1	MITCM	1257	0+F+L+H+E	74	-62	_									
					ž	MCCM	1257	0+F+1+H+E	-155	-1 0	0+F+L+H+W	59	4.53							
					ŕ	MMAT	1257	0+F+L+H+E	54	\$										
		v Sais		ļ		MMAC	1257	0+F+L+H •E	-11	-28										
		Ž				MTCM	1252	0+F+L+H+E	3	*	4									
2					Ţ,	MCCM	1243	D+F+L+H+Wa		-1	0+F+L+H+M:	38	1.5	-			· ·		· ·	1
₹					-	MOMAT	1234	0+F+L+H+E	3	-61	-									
						MOMAC	1234	0+F+L+H+E												-
						MITCM	1259	0+F+L+H+E	- 13	8	-									
1			ereca.	10-178	3.VL	MCCM	1259	0+F+1+H-E	-145		0+F+L+H+472	38	3.12	•				-	· ·	
		1		†		804AT	1245	0+F+1+H+E	11		4									
		1				MOMAC	1245	U+F+1+H+E		- ELE -										+
l '						MTCM	1257	0+F+1+H+E		-758	4									
1		1			3.41		1454	0.5.4.52 P			D+F+L+H+Wt	35	6.24					-	· ·	
		1				atidAi bothC	120/	0+F+L+3+E		-130	4									
					+	10004	1254	0+F+L+R+E	-13						1		<u> </u>			
						MIC21	1233		.170	10	4									
		A BIG	LINE LINE	H6-17	Ŧ	SPLAT	1200				0+F+L+H+W	S	1.58	-	· ·	· ·	-		-	
			Ť	, "		102541	1204	<u>р.г.ц.на</u>			4									
		1	1	1	1	BESSAL:	1232	U+F+L+R+61		60	1	1 .			1				1	

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Table 3H.6-11: Results of DGFOS Vault Concrete Design (Continued)

			T	- 3	u fi		T		Longitudina	Reinforcement	Design Loads					-				
lo		8	ton.	Numb Numb	mbor	5	Ţ	Axial and Flam	re Loads	-	In-Plane Shear Load	5	Longitudinal Reinforcement			Transverse Shear Design Loads ⁽⁴⁾			Transverse Shear ⁽⁷⁾	Remarks
Local	Thick	- <u>-</u>	Direc	Rainfore Layer frawing	Reinfon Zone Nu	M audir Forci	E E	Load Combination	Axial ⁽⁴⁾ Drins / ft)	Flexure ⁽⁴⁾	Load Combination	in-plane ⁽⁵⁾ Shear	Provided (in ¹ / ft)	Load Combination	Horizont Transverse Shear Force	Corresponding Axial Force	Vertica Transverse Shear Force	A Section Corresponding Axial Force	(ln ² /ft ²)	
						мтсм	1257	D+F+L+H+W	51	1	· · · · ·	(kips / ft)			(10497713)	(1000)/11()	(kap) inj	(and) (c)	1	1
			ā	g		мссм	1257	0+F+1+Sf+E	-155	25										
			Jorna	1416	1H-2	MONAT	t199	0+F+1+H-E	0	40	D+F+L+H+W	59	3.12	•	•				· ·	
						MOMAC	1198	D+F+L+H-E	5	48										
			<u> </u>	+		MICH	1281	D+F+L+H-E	1	4							· · · ·			
						NCCM	1344	0+F+L+H+2	-120	5	1									
		1. 1. 1.			N.	MOAAT	1235	0+F+L+H+E	1	20	D+F+L+H+₩t	36	133	-	•		•			
A line	-		4	v g		MOAAC	1285	D+F+L+H+M	-47	eş.										ļ
1			And	11-9H	<u> </u>	MTCM	1125	D+F+1+H+E		3		1		· · · · · · · · · · · · · · · · · · ·				1		
						MCCM	1257	0+F+L+H+E	-191	4										
			1		3	MAAT	1199	8+F+L+H+E	5	1	0+F+1+H+%	38	3.2							
						MOMAC	1259	D+F+L+H+E	-140	27	· ·									
				- 5	2	-	·	-	·	•	-	-	-	D+F+L+H+E	31	129	1Č	3	G.44 (3@87)	
			Tant	1	24		•	•			•			D+F+L+H+E	32	112	57	-12	0.90 (4267)	
						MICM	221	D+F+L+H+W2	£	7			1							
			R.	Ē		MCCM	239	D+F+L+H+22	-85	-1	0.5.3.829		15	_						
			101		Ĩ	804AT	921	D+F+1+H+2	34	-44		-		-						
		19				MOAAC	247	D+F+L+H+20	2	-55]									
		3				MTCM	244	D+F+L+H+300	5	4										
			10	28	1	MCCM	209	D+F+L+H+M	-34	-25	0+F+1+H+W	6	15						-	
			A A	3145	1	MUAAT	35	D+F+L+H+W	3	-35										
Ξ						MOAAC	307	D+F+L+H+Wat	-50	-33										
Wat						MICH	234	D+F+L+H+₩	31	5										
			151 UCZ	8	Ŧ	MCCM	907	D+F+L+H+Wa	-210	2	- Ð+F+1,+H+%t	65	1.52						-	
			191	3HE	2	MCAAT	947	D+F+L+H+W2	5	ų										
		19				MAAC	935 1	D+F+L+H+Wa	- 3	62										
		Ĕ				MTCAI	244	D+F+1,+H+22	-34	+	4									
			yca	5.184	¥.	MCCM	927	0+F+L+H+M1	-134	23	D+F+1+H+W	43	1.58		-					
			Š	¥ ا	-	MEANT	335	D+F+L+H+M1	<u> </u>	68	-									
					<u> </u>	MMAC	207	D+F+L+H+¥2	-73	<u>~~</u>										
		1			1	MTCM	H37	0+F+L+%+E	*	-#29	-									
				1.	Ĭ	MCCM	1345	0+F+1+H+E	-129	-379	0+F+L+X+E	102	3.12	-			· .	· ·	·	
						MMAT	1342	D+F+L+H+E	¥	-218	4									
						HOAAC	1432	Ũ+⊁+Ì+Я*Ë	-159	474										
				_		MTCM	· ·	- 0.5-1.97.57	· ·		-									
			thent	H6.18	144	MULAN ADUT	H-33	0++++++++++++++++++++++++++++++++++++++	-140	~~~	0+F+L+H+E	65	4.53				•	•		ŀ
			1 ž	- P		MMAI	-				-									
	-	AAT Did	1			80040	1949	D+F+L+71+E	-120											
1		Ž				MOOM	1341	0+F+t+3f+F			4									
					3.84	MALAT	1445	D+F+L+H+E		-228	- D+F+L+H+E	102	7.8	· ·				-	· ·	
						NEVAC	1337	D+F+L+H+E			4									
				+		METCH	1432	D+F+L+H+E	51	41		+								
			_	8		MCCM	1440	D+F+L+H+E	-150	-75	1									
				3H&-11	- ¹	MIAAT	1365	0+F+L+H+E	4	-22	D+F+L+H+E	150	3.12							
						MOMAC	1373	0+F+L+H+E	- 3	-230	4									
1	1	1	1	F	1	1		I		1	1	_	1	L	L		L			

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r	1								Lonoitudinal	Reinforcement	Design Loads				//0011			·····	1	
5	188		Log	Aumb	mber	şā,	E	Axial and Flexum	Loads		In-Plane Shear Load	5	Longitudinal Reinforcement			Transverse Shear Design Loads ⁽⁴⁾			Transverse Shear ⁽⁷⁾	Barranter
Pocer	Thickn	3	Direct	inforc Lava	inforc 30 Nut	Force	8 8 8	Load	Azial ⁽⁴⁾	Flexure (4)	Load	to-plane (5)	Provided (in ² /ft)	Load	Horizon	al Section	Vertica	al Section	Renforcement Provided (in ² /ft ²)	NEIGHTRS
	-		_	en de la constante de la const	er S	_		Combination	(kips / ft)	(ft-kips / ft)	Combination	Shear (kips / ft)		Combination	(láp / ft)	(láp / ft)	(kip / ft)	(kip / ft)		ļ
						MTCM	1439	0+F+L+H+E	125	47										
					3	MCCM	1439	0+F+L+if+E	-210	-27	0+F+1+H+E	120	4.53							
					Â	MONAT	1415	D+F+L+H+E	10	-300										
						MAAAC	1415	D+F+L+H +E	-43	-200										
						MCCM	1439	0+F+L+H+E	124	-118	3									
		r Side	it car	Q-130	77	MCCM	1435	0+F+L+H =E	-270	-22	D+F+1+H+E	\$00	6.24	-						
		2	3	Ä	"	MDAAT	1408	0+F+L+H+E	41	-502										
						MOMAC	1408	0+F+L+H+E	-12	-52		-							<u></u>	
						ытсы	1382	0+F+L+H+E		-642										
					11	MCCM	1398	0+F+L+H+E		-4/	0+F+L+H+E	80	7.8		-	-				
						MEAAT	1374	0+F+L+H+E	<u>~</u>	-/14										
						MMAR	1328	D+F+L+H+E	-1			<u> </u>							<u> </u>	
	4		-			10.00	1341	0+F+L+R+E	-194	44							1			
			1U07E0	BI-BH	¥	ASUCAN MONIT	1343	DAFALAKAF	-104	80	D+F+L+H+E	- 92	3.12			-	· ·	•	-	
2			, ž	-		MONTE:	1399	DAFALAH	-170	339										
× III	-		1			MICM	1343	0+F+L+H+E	22	57										
						MCCM	1335	0+F+L+H+E	-201	11										
1					1-44	MOAAT	H23	0+F+L+H+E	3	194	0+F+1+H+E	- 22	3.12		· ·		· ·			
						MBAAC	1423	D+F+L+H+E	-109	212										
		3.				MICH	\$430	D+F+L+H+E	134	43										
	1			5		MCCM	1433	0+F+L+H+E	-270	42										
			Anno.	3146-1	N.	MOART	1385	0+F+L+H+E	50	339	0+F+L+H+E	20	4.52	•	-					
						MBAAC	1400	D+F+L+H+E	-10	334										
						MITCH	1383	D+F+L+H+E	73	275										
						MCCM	1391	D+F+L+H 4E	-62	70	0.5.1.9.5									
				1	2	NDIAT	1394	D+F+L+H+E	66	356		~								
						MOAAC	1365	1.4D + 1.4F +1.7L + 1.7H + 1.7W	-1	235										
			ucal.		E	-			-	· ·		·	-	0+F+L+H+E	a	23	-57	-136	020(40tr)	
			1946L	101-021	1	-			· ·		-	-		0+F+L+H+E	7	1	-109	-122	031 (5@12')	
			fra	, â	5	· ·		· ·	· ·			-	· ·	D+F+L+H+E	8	য	174	-139	0.80 (4@67)	
1						METCAL	1874	D+F+L+H+Wt	2	-17										
					, L	NCCM	1953	D+F+L+H+E	-200	-412	1	-					_	_		
					l Ŧ	MEMAT	1873	0+F+L+H+E	0	42	0+F+L+H+E	82	4.12							
1		1				MMAC	1953	D+F+L+H+E	-200	-#2	1									
						MICH	1872	0+F+L+H-E	25	-15										
				1	÷	мсси	1942	0+F+L+H+E	-200	-597	0+F+1+H+E	105	459						.	
1			1		Ä	MEMAT	1972	D+F+L+H+E	5	-199										
2	_	5146	E Mil	8		MONAC	1958	D+F+L+H+E	-189	-613										
×		a de la de l	1 an	He		MICH	1871	D+F+L+H+E	33	-48	1									
1			1	1	Ŧ	NCCM	1925	D+F+L+H+E	-192	-737	D+F+L+H+E	105	6.24					-		
				1	ŕ	MEAT	1884	D+F+L+H+E	11	-354	4	1			1	1				
				1	L	NOWAC	1912	0+F+L+H+E	-120	-705										
						ытсы	. ·		+ ·	· ·	-									
					Ŧ	MCCM	1954	D+F+L+H+E	-202	-531	0+F+1+H+E	80	7.8	-			· ·	-		
			1		'	HOMAT	<u> ·</u>	· · · · · · · · · · · · · · · · · · ·	· ·	· ·	4									
			1	1	1	MMAC	1965	D+F+L+H+E	-190	-425				I		<u></u>	L	<u> </u>	l <u> </u>	

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1 1				15 X I			1 1		Longitudinal	Rentorcement	Design Loads					6				
Log	50 ÷	5	tion	cemer out Numb	cemer inthor	E 6	L F	Axial and Flexar	Loads		In-Plane Shear Load	5	Longitudinal Reinforcement			Transverse Shear Design Loads ⁽⁴⁾			Transverse Shear ⁽⁷⁾ Reinforcement Provided	Remarks
L.oca	Thick	a l	Ofrec	to the second	elutar ne Nu	Rend	1	Load	Axial (4)	Flexure ⁽⁴⁾	Load	in-plane ⁽⁵⁾	Provided (in²/ ft)	Load	Herizont Transverse Shear Force	al Section Corresponding Axial Force	Vertica Transverse Shear Force	al Section Corresponding Axial Force	(m²/カカ*)	
				۳ã	≪ %		 	Combination	(kips / ft)	(ft.+cipes/ft)	Combination	(kips / ft)		Combination	(kip/ft)	(kip/ft)	(Rúp / ft)	(http://tt)		
						MTCM	1871	D+F+L+H+Wa	72	37										
					N ¹	MCCM	1913	0+F+L+H+E	-195	-110	9-7-1-8+E	121	3.12							
						MEAT	1899	0+F+L+H+E	3	-174										
						MONAC	1399	0+F+L+H+E	-63	-174										
						мтсм	1957	D+F+L+H+E	155	-74										
		ar Bidi	HU B	161-191	1.12	MCCM	1857	0+F+L+H+E	-280		0+F+L+H+E	ध्य	459	-						
		2	>	ñ		1624A T	1980	U+F+L+H+E												
						MEMAC	1950	0.5.1 9.5												
						12:04	1304	0.5.1.2.5		5										
					3.4.4	ND41	1000	0+5+1+8+6	51		0+F+L+H+E	77	9.30	•	•	· ·	· ·	-		
							1900	0.5.1.2.5												
						MINTAL MITTAL	1001	0.5.(.¥.E	37	157		+								
						MOTIN	1045	0.5.1.2 E	-198		2									
					Ŧ	MMAT	1583	0+F+L+H+E	4	205	Ð+F+L+H +€	12	312	•	•	-				
2			ā			MARC .	1984	D+F+L+H+E	-150	414										
N N	-		NOLPO			MICM	1532	0+F+1+H+E	8	105		+							1	
			Ŧ			MCCM	1904	0+F+L+Sf+E	-112	C11										
					T T	MOAAT	1532	D+F+L+H-E	8	115	0+F-L+H+E	5	4.50 K	-			· ·	-		
						MRAAC	1906	0+F+L+H-E	-109	334										
		1		<u> </u>		NTCM	t\$37	D+F+L+H+E	5	8		1								
						MCCM	1535	0+F+L+H+E	-201	3										
					P-1	MEMAT	1537	D+F+L+H+E	5	173	0+F+L+H+E	101 1	3.12	•	•	-	•			
			7	8		MINAC	1997	0+F+L+H+E	-119	200										
			win	316.1		MICH	1957	D+F+L+H+E	141	17										
					L _	MCCM	1857	D+F+L+H+E	-260	4)										
					2	MEANT	1922	D+F+L+H +E	-60	338	D+F+L+H+E	511	*54	-					-	
					1	MOAAC	6161	0+F+L+H+E	-1	327										
			toat		1	-		•			-			D+F+L+H+E	-73	15	-	-21	027(4612)	
1		.	averae at aver	5 A	5				· · ·	· ·		· ·		D+F+L+H+E	5	2	107	-127	03160127	1
			arzent	ä	<u> </u>		+		+ .	1 .		· .		D-F+L+H+E	1	48	-178	-138	0.50 (4057)	1
			÷_		<u> </u>	MTCH	1475	DeFelaHatt												+
						MCCM	15/R	D+F+1+H+E	-119		{									
					Ē	MOART	1501	D+F+L+H+E	4		0+F+L+H+%%	29	1.52	•	-	-	-	· ·		
			-			MMAC	1509	0+F+L+H+E		- 37	1									
			101101	1.614		MICH	1853	0+F+L+X-E	32	44							<u> </u>			1
			-			MCCM	1428	0+F+L+H+E	-154	- 34	1									
					1472	MD4AT	1853	D+F+t+H+E	7		D+F+L+H+7%	29	3.12	•	·	-				
<u> </u>						MOMAC	1052	0+F+L+H+E	-127	-81	1	1								
Mail	~				+	MITCIM	1501	D+F+L+H+Wat	42	*		1								
					_	мссм	1857	D+F+L+H+Wa	-71	-1	1									
					1	MMAT	1559	D+F+L+H+Wh	R	-42	0+F+L+H+WC	30	1.53	-		• .				
			3	¥.	1	NOMAC	1817	D+F+L+H+Wt	-1	-32	1									
			Varie	19HE		MTCM	1495	0+F+L+H+E	22	-23										
					L	MCCM	1496	D+F+L+H+E	-114	-11	1									
					2.	MDAAT	1544	Ð+F+L+H+E	2	-50	0+F+L+H4%2	39	3.12							
						MMAC	1496	D+F+L+H+E	-38	~*	1									

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	T		· · · · ·	- 2			T		Longitudina	Reinforcement	Design Loads		[
5	8		La La	emen tumbe	nber ¹²	şã,	l s l	Axial and Flexur	Loads		In-Plane Shear Loa	ds	Longitudinal Reinforcement			Transverse Shear Design Loads ⁽⁴⁾			Transverse Shear	Remarks
Locat	Thicks 1	3	Direct	ing h	te Nur	M audin Force		Load	Arial ⁴⁴	Flexure (4)	لعما	In-plane (5)	Provided (in²/ ft)	Load	Horizon	zi Section	Vertica Transverse Chave Examp	Section	(In ² /th ²)	
			-	Dres C	R Xo	_		Combination	(kips / ft)	(ft-kips/ft)	Combination	Shear (kips/ft)		Combination	(kip/ft)	(kip / ft)	(kip / ft)	(kip/ft)		<u> </u>
	1					MTCM	1852	D+F+L+ff+€	113	-34										
	1	1 Side	2	8	۲. در	MCCM	1654	0+F+L+H+E	-157	-10	0+F+L+H+E	35	4.52	-				.		
		ž	3	1	ń	MINAT	1852	0+F+L+H+E	ទ	-74	ļ									1
						MOMAC	1852	0+F+L+H+E	-5-	-74										
						MICH	1825	0+F+L+H+E	S.	20										
					Ŧ	MCCM	1503	D+F+L+H+W2	-174	29	Ð+F+L+H+₩	28	1.5				-			
					-	MEAAT	1829	0+F+L+H+E	*	*										
			150070	6-197		MOAAC	1543	D+F+L+H+W1	-73	55										1
			£	ā		MITCH	1498	0+F+L+H+E	3	40	4									
					Ŧ	MCCM	1498	0+F+L+H+E	-150	10.	0+F+L+H+02	28	3.12	-	-			· ·		
1						MOAAT	1652	0+F+L+H+E	30		4									
S S		803 A				80.440	1852	0+F+L+H+E	-10											
		•				NI CAN	1004	D.F.L.WW	-106								4			
1					1.44	MD45T	1509	0+F+1+H+F	-100		- B+F+L+H+₩	39	1.51			-				
						10/20	1000	DaEalaHaE	-51	30	-									
			Wittig	110-18		MITCH	1053	D+F+L+H+E		2										
1						MCCM	1852	D+F+L+H+E	-221											
					244	MONAT	1652	D+F+L+H+E	1	28	D+F+1+H4%	39	1.12			•	•			
						MAAAC	1652	D+F+L+H+E	-221	56										
			123	8	5		<u> </u> .			· ·		· ·		D+F+L+H+=	-22	<u> </u>	13	tC	644(205)	
		•		1916	1		+.	•	<u> </u>	· ·	· ·	· ·	•	D+F+L+H+E	40	312	të	-22	0.30 (4267)]
					<u> </u>	MTCM	1506	D+F+L+H+\\	65	4										
					_	MCCM	1940	D+F+L+H+Wa	-40	2			1.00							
					1	MAAAT	1833	D+F+L+H+E	0	-50	0+r+L+H+C		1.35	-		-				
				300		MMAC	1893	D+F+L+H+E	-14	-63										
			- Anna-	3116-		MITCH	1689	D+F+L+H+E	21	č										
					2	MCCM	1689	0+F+L+H+E	-33	43	DATA HAF	28	3.12				-	-		
					Â	MAAT	1345	0+F+L+H+E	12	-85										
		40.1				MMAC	1345	0+F+L+H+E	3	-82										
		1				MITCH	1703	D+F+L+H+E	5	-15										
1					۲,	MICCIM	1796	D+F+L+H+Ma	-107	-13	D+F+1+H+Nt	34	1.56							
					1 2	MONAT	1770	0+F+L+H+E	3		1									
2			10.01	1-201		MEMAC	1796	0+F+L+H+E	-11	-44										
Ň			\$	3		MITCH	:689	D+F+L+H+Wt	*	- 28	4									
ļ		1			¢.	biccm	1889	0+F+L+H+E	-05	\$	D+F+1+H+W	34	3.12					-	· ·	
		1			1	MOAAT	1689	0+F+L+H+E	6		4									
	1			ļ		MMAC	1089	0+F+L+H+E	-1				· · ·							
		1				MTCM	1943	D+F+L+H+Wt	24	<u> </u>	4									
					Ŧ	MCCM	1896	D+F+L+H+Wt	-124	20	- D+F+L+H+E	28	1.55	· ·		· ·		· ·	· ·	
			_	-		MMAT	1741	D+F+L+H+E	3		4									
		3	Eamla	18-202	<u> </u>	MMAC	1784	0+F+L+H+WA	-80	 									+	
		- E	1 2	, ÷		MICM	1059	0.5.1.17.5			-		1							
			1		Ŧ	MCCM	1/13	0+F+L+H+C		12	Ð+F+L+H+E	28	3.12	· ·	· ·	-	· ·	-		
			1					D.E.I.I.F.F		34	4									
1						NDAAC	1714	U+F+L+H+E						.l				<u> </u>	1	~~

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			[~ 홍	# <u>%</u>				Longitudina	Reinforcement	t Design Loads							······································		
e e		. 3	102	out Numt	Ceme	e a	Į	Axial and Flexu	re Loads		In-Plane Shear Loa	ds	Longitudinal Reinforcement			Transverse Shear Design Loads ¹⁴			Transverse Shear ⁽⁷⁾	Remarks
Log	Thick		Q	Rainfor Lay Drawing	Reinfor Zone Ni	Maxi		Load Combination	Axial ^[4] (kips / ft)	Flexure ⁽⁴⁾ (ft-kips / ft)	Load Combination	In-plane ⁽³⁾ Shear (kips / ft)	(m²/ft)	Load Combination	Horizon Transverse Shear Force (kip / ft)	tal Section Corresponding Axial Force (http / ft)	Vertica Transverse Shear Force (الله / ft)	al Section Corresponding Axial Force (kip / ft)	(in ² /ft ²)	
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		t t t	104	VCDZ		MOARC	1898	D+F+L+H+Wz	-3	75										
=		14	3	÷.		MCUM	1702	0+F+L+H+E	22	8										
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			204	1 A		METCOM	1455	0+F+L+H+E	13	-2										
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		e e				MICM	145:	D+F+L+H+Wa	32		-									
				1	1.41	MCCM		D+F+L+H+Wt	-110		D+F+L+H+M	35	1.58		-	-	-	· ·		
						MAAT	1452	U+F+L+H+¥2		18	-									
1			(erice)	16.201		MMAAC	1491	D+F+L+H+Wt	-60	79	<u> </u>								<u> </u>	<u> </u>
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					2.4.1	MULM	14/5	D.E.I. U.M.	-138	30	D+F+L+H+W:	35	1.12	-					-	
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			1	1	1	MAAC	1475	U+F+L+H+M		. 41				l		1	L		L	L

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				1	: 3	цŝ,				Longitudinal	Reinforcement	Design Loads					Terrangen Chara Davier Land (6)				
tion		3	La			at mbe		ti e	Axial and Flexur	e Loads		In-Place Shear Load	5	Reinforcement			transverse snear besign Loads			Transverse Shear ⁽⁷⁾ Reinforcement Provided	Remarks
2	물루	1 E	Ž		52~	ē ž	20					44	In-plane ⁽⁵⁾	Provided	Land	Horizont	al Section	Vertic	al Section	(m²/カ²¹)	
د	F				Draw	Kon K	2 -	-	Combination	Axial (Vips / ft)	(ft-kips / ft)	Combination	Shear (kips / ft)	(at 1 st)	Combination	Transverse Shear Force (kip / ft)	Corresponding Axial Force (hip / ft)	Transverse Shear Force (kip / ft)	Corresponding Axial Force (kip / ft)		
Wall 16	~		Transierse Fransierse	Vartesi)	3++&-208	Ŀ	•		-	-		-	-	-	-	-	-		-	1.24(5@87)	Transverse shear reinforcement provided due to tomado missie impact evaluation.

(1) The reinforcement layout drawings show the variant scales and back by drawing scales on finite element analysis results. Actual provided reinforcement and the zones with higher reinforcement may be exercised beyond their reported boundaries. The dimensions in the reinforcement analysis results. Actual provided reinforcement langth any scaled the SAP200 shell elements, which are modeled at the correction of the scales and stats. Therefore, the reinforcement drawings dimensions do not match actual building dimensions of the SAP200 shell elements, which are modeled at the correction of the walls and stats. Therefore, the reinforcement drawings dimensions do not match actual building dimensions.

(2) Each relationsement layout classing is divided into relationsement zones. The relationsement zones anning convertion is as follows: "if" = horizontal, "I" = brightediral nelationsement, For slabs, vertical corresponds to X-axis and horizontal corresponds to X-axis as shown on Figure 3H-0-140.

(3) The maximum tension (MICAI) and compression (MICAI) and compression (MICAI) axial forces are provided with the corresponding moment from the same load combination. The maximum moment that has a corresponding tension (MMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment that has a corresponding compression (AMAT) in the same load combination and the maximum moment (AMAT) in the same load combination and

(4) Negative axial load is compression and positive axial load is tension. Negative moment applies tension to the top face of the shell element and positive moment applies tension to the top face of the shell element and positive moment is provided on both faces, the moment is provided on both faces, the moment is shown as absolute value. The axial and fexural loads reported in the table are the average of the 2 node pairs that form the 4 edges of the ortical rectangular shell element. If the 2 node pairs on the shell element edges parallel to the relative exert element edges parallel to the relative exert element edges parallel to the relative exist. The axial and fexural loads reported in the table are the average of the 2 node pairs that form the 4 edges parallel to the relative exist. The axial and fexural loads reported in the table are the average of the 2 node pairs that for edges perpendicular to the relative exist. If the 2 node pairs on the shell element edges perpendicular to the relative exist.

(5) The reported in-plane shear is the maximum average in-plane shear along a plane that crosses the longitudinal reinforcement zone.

(8) The surveyers shau reinforcement hauts are reported for the orbical element requiring the largest area of steel for surveyers existicarement within the zone. The shaur force and the corresponding shall have in the same load combination for each direction is reported for the orbical element.

(7) The reported transverse shear reinforcement is the summation of the required shear reinforcement in the horizontal direction, and the required shear reinforcement in the vertical direction.

(8) For certain areas of the structure, the standard element post-processing methods were too conservative. For such cases, detailed manual design was performed and the design forces detainined by the detailed manual design are provided in the table.

(9) The reported brows are from the FBM analysis. The provided longitudinal reinforcement includes additional reinforcement required due to manual one-way design calculations.

(10) The longitudinal reinforcement shown is required to be fied.

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FIGURE 3H,3-8; NORTH WALL LOOKING SOUTH HORIZONTAL REINFORCEMENT ZONES NEAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 36 of 145



FIGURE 3H,3-9; NORTH WALL LOOKING SOUTH VERTICAL REINFORCEMENT ZONES NEAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 37 of 145

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FIGURE 3H,3-10; NORTH WALL LOOKING SOUTH HORIZONTAL REINFORCEMENT ZONES FAR SIDE FACE

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FIGURE 3H,3-11; NORTH WALL LOOKING SOUTH VERTICAL REINFORCEMENT ZONES FAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 39 of 145 -



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FIGURE 3H,3-12: NORTH WALL LOOKING SOUTH TRANSVERSE REINFORCEMENT ZONES

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FIGURE 3H,3-13; SOUTH WALL LOOKING NORTH HORIZONTAL REINFORCEMENT ZONES NEAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 41 of 145



FIGURE 3H,3-14; SOUTH WALL LOOKING NORTH VERTICAL REINFORCEMENT ZONES NEAR SIDE FACE

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FIGURE 3H,3-15; SOUTH WALL LOOKING NORTH HORIZONTAL REINFORCEMENT ZONES FAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 43 of 145



FIGURE 3H,3-16; SOUTH WALL LOOKING NORTH VERTICAL REINFORCEMENT ZONES FAR SIDE FACE

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FIGURE 3H.3-17: SOUTH WALL LOOKING NORTH TRANSVERSE REINFORCEMENT ZONES U7-C-NINA-NRC-110138 Attachment 2 Page 45 of 145

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FIGURE 3H.3-18; EAST WALL LOOKING WEST HORIZONTAL REINFORCEMENT ZONES NEAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 46 of 145



FIGURE 3H,3-19; EAST WALL LOOKING WEST VERTICAL REINFORCEMENT ZONES NEAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 47 of 145



FIGURE 3H,3-20; EAST WALL LOOKING WEST HORIZONTAL REINFORCEMENT ZONES FAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 48 of 145



FIGURE 3H,3-21; EAST WALL LOOKING WEST VERTICAL REINFORCEMENT ZONES FAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 49 of 145

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FIGURE 3H,3-22; EAST WALL LOOKING WEST TRANSVERSE REINFORCEMENT ZONES

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FIGURE 3H,3-23; WEST WALL LOOKING EAST HORIZONTAL REINFORCEMENT ZONES, NEAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 51 of 145

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5'-6"



FIGURE 3H,3-24; WEST WALL LOOKING EAST VERTICAL REINFORCEMENT ZONES NEAR SIDE FACE

9-V-L

41'-8"

14'-0" 3'-11"

13'-9"

18'-9"

25'-0"

8'-0'

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FIGURE 3H,3-25; WEST WALL LOOKING EAST HORIZONTAL REINFORCEMENT ZONES FAR SIDE FACE

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FIGURE 3H,3-26; WEST WALL LOOKING EAST VERTICAL REINFORCEMENT ZONES FAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 54 of 145



FIGURE 3H,3-27; WEST WALL LOOKING EAST TRANSVERSE REINFORCEMENT ZONES U7-C-NINA-NRC-110138 Attachment 2 Page 55 of 145

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FIGURE 3H,3-28; BASEMAT LOOKING DOWN EAST-WEST REINFORCEMENT ZONES NEAR SIDE FACE

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FIGURE 3H,3-30; EASEMAT LOOKING DOWN EAST-WEST REINFORCEMENT ZONES FAR SIDE FACE

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FIGURE 3H.3-31; BASEMAT LOOKING DOWN NORTH-SOUTH REINFORCEMENT ZONES FAR SIDE FACE

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FIGURE 3H,3-32; BASEMAT LOOKING DOWN TRANSVERSE REINFORCEMENT ZONES

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FIGURE 3H, 3-33; ELEVATION 35 LOOKING DOWN EAST-WEST REINFORCEMENT ZONES NEAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 61 of 145



FIGURE 3H,3-34; ELEVATION 35 LOOKING DOWN NORTH-SOUTH REINFORCEMENT ZONES NEAR SIDE FACE

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FIGURE 3H, 3-35; ELEVATION 35 LOOKING DOWN EAST-WEST REINFORCEMENT ZONES FAR SIDE FACE

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FIGURE 3H, 3-36; ELEVATION 35 LOOKING DOWN NORTH-SOUTH REINFORCEMENT ZONES FAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 64 of 145


FIGURE 3H.3-37a: ELEVATION 35 LOOKING DOWN TRANSVERSE REINFORCEMENT ZONES

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FIGURE 3H, 3-38; ELEVATION 95 LOOKING DOWN EAST-WEST REINFORCEMENT ZONES NEAR SIDE FACE

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213'-11"

1-1/4

FIGURE 3H,3-39; ELEVATION 95 LOOKING DOWN NORTH-SOUTH REINFORCEMENT ZONES NEAR SIDE FACE

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FIGURE 3H,3-41; ELEVATION 95 LOOKING DOWN NORTH-SOUTH REINFORCEMENT ZONES FAR SIDE FACE U7-C-NINA-NRC-110138 Attachment 2 Page 69 of 145

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FIGURE 3H.3-46 EL 35'-0' STEEL LAYOUT BETWEEN COLUMN LINES W5-W8 AND WC-WE

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FIGURE DILI-48. EVPICAL EAST-NEST SPANING ROLF TRUSS BETWEEN COLUMN LINES V7-VB (ELEVATION VIEW)

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Figure 3H.6-142: Slab 1 Looking Down Horizontal Reinforcement Zones

Near Side Face

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Figure 3H.6-143: Slab 1 Looking Down Vertical Reinforcement Zones

Near Side Face

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Figure 3H.6-144: Slab 1 Looking Down Horizontal Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 77 of 145



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Figure 3H.6-146: Slab 1 Looking Down

Transverse Reinforcement Zones

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Figure 3H.6-147: Roof 2 Looking Down Horizontal Reinforcement Zones Near Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 80 of 145



Figure 3H.6-148: Roof 2 Looking Down Vertical Reinforcement Zones Near Side Face

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Figure 3H.6-149: Roof 2 Looking Down Horizontal Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 82 of 145 2



Figure 3H.6-150: Roof 2 Looking Down Vertical Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 83 of 145 7



Flgure 3H.6-151: Slab 3 Looking Down Horizontal Reinforcement Zones Near Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 84 of 145



Figure 3H.6-152: Slab 3 Looking Down Vertical Reinforcement Zones Near Side Face

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Figure 3H.6-153: Slab 3 Looking Down Horizontal Reinforcement Zones Far Side Face

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Figure 3H.6-154A: Slab 3 Looking Down Vertical Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 87 of 145



Figure 3H.6-154B: Slab 3 Looking Down Transverse Reinforcement Zones

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1-H-L 14'-0"

> Figure 3H.6-155: Roof 5 Looking Down Horizontal Reinforcement Zones Near Side Face

32'-0"

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Figure 3H.6-156: Roof 5 Looking Down Vertical Reinforcement Zones Near Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 90 of 145 1



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Figure 3H.6-157: Roof 5 Looking Down Horizontal Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 91 of 145 2



Figure 3H.6-158: Roof 5 Looking Down Vertical Reinforcement Zones Far Side Face

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Figure 3H.6-159: Roof 6 Looking Down Horizontal Reinforcement Zones Near Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 93 of 145

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Figure 3H.6-160: Roof 6 Looking Down Vertical Reinforcement Zones Near Side Face

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Figure 3H.6-161: Roof 6 Looking Down Horizontal Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 95 of 145 1



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Figure 3H.6-162: Roof 6 Looking Down Vertical Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 96 of 145



Figure 3H.6-163: Wall 7 Looking From Outside Horizontal Reinforcement Zones Near Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 97 of 145

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Figure 3H.6-164: Wall 7 Looking From Outside Vertical Reinforcement Zones Near Side Face

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Figure 3H.6-165: Wall 7 Looking From Outside Horizontal Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 99 of 145





Figure 3H.6-166: Wall 7 Looking From Outside Vertical Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 100 of 145


Figure 3H.6-167: Wall 7 Looking From Outside

Transverse Reinforcement Zones

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Figure 3H.6-168: Wall 8 Looking From Outside Horizontal Reinforcement Zones Near Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 102 of 145



Figure 3H.6-169: Wall 8 Looking From Outside Vertical Reinforcement Zones Near Side Face

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Figure 3H.6-170: Wall 8 Looking From Outside Horizontal Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 104 of 145



Figure 3H.6-171: Wall 8 Looking From Outside Vertical Reinforcement Zones Far Side Face

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Figure 3H.6-172: Wall 8 Looking From Outside Transverse Reinforcement Zones

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Figure 3H.6-173: Wall 9 Looking From Outside Horizontal Reinforcement Zones Near Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 107 of 145 1



Figure 3H.6-174: Wall 9 Looking From Outside Vertical Reinforcement Zones Near Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 108 of 145

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Figure 3H.6-175: Wall 9 Looking From Outside Horizontal Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 109 of 145 .

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Figure 3H.6-176A: Wall 9 Looking From Outside Vertical Reinforcement Zones Far Side Face

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Figure 3H.6-176B: Wall 9 Looking From Outside Transverse Reinforcement Zones

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Figure 3H.6-177: Wall 10 Looking From Outside Horizontal Reinforcement Zones Near Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 112 of 145



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Figure 3H.6-179: Wall 10 Looking From Outside Horizontal Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 114 of 145

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Figure 3H.6-180A: Wall 10 Looking From Outside Vertical Reinforcement Zones Far Side Face

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Figure 3H.6-180B: Wall 10 Looking From Outside Transverse Reinforcement Zones

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Figure 3H.6-181: Wall 11 Looking From Outside Horizontal Reinforcement Zones Near Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 117 of 145

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Figure 3H.6-182: Wall 11 Looking From Outside Vertical Reinforcement Zones Near Side Face

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Figure 3H.6-183: Wall 11 Looking From Outside Horizontal Reinforcement Zones Far Side Face

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Figure 3H.6-184: Wall 11 Looking From Outside Vertical Reinforcement Zones Far Side Face

6'-0" -

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Far Side Fa

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Figure 3H.6-185: Wall 12 Looking From Outside Horizontal Reinforcement Zones Near Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 121 of 145



Figure 3H.6-186: Wall 12 Looking From Outside Vertical Reinforcement Zones Near Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 122 of 145



Figure 3H.6-187: Wall 12 Looking From Outside Horizontal Reinforcement Zones Far Side Face

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Figure 3H.6-188: Wall 12 Looking From Outside Vertical Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 124 of 145



Figure 3H.6-189: Wall 12 Looking From Outside Transverse Reinforcement Zones U7-C-NINA-NRC-110138 Attachment 2 Page 125 of 145



Figure 3H.6-190: Wall 13 Looking From Outside Horizontal Reinforcement Zones Near Side Face

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1-V-L 32'-0" 4'-

Flgure 3H.6-191: Wall 13 Looking From Outside Vertical Reinforcement Zones Near Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 127 of 145



Figure 3H.6-192 Wall 13 Looking From Outside Horizontal Reinforcement Zones Far Side Face

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Figure 3H.6-193: Wall 13 Looking From Outside Vertical Reinforcement Zones Far Side Face

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Figure 3H.6-194: Wall 13 Looking From Outside Transverse Reinforcement Zones

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Figure 3H.6-195: Wall 14 Looking From Outside Horizontal Reinforcement Zones Near Side Face

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Figure 3H.6-196: Wall 14 Looking From Outside Vertical Reinforcement Zones Near Side Face

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Figure 3H.6-197: Wall 14 Looking From Outside Horizontal Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 133 of 145



Figure 3H.6-198: Wall 14 Looking From Outside Vertical Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 134 of 145



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Figure 3H.6-199: Wall 14 Looking From Outside Transverse Reinforcement Zones

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Figure 3H.6-200: Wall 15 Looking From Outside Horizontal Reinforcement Zones

Near Side Face




Figure 3H.6-201: Wall 15 Looking From Outside Vertical Reinforcement Zones Near Side Face

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Figure 3H.6-202: Wall 15 Looking From Outside Horizontal Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 138 of 145



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Figure 3H.6-203A: Wall 15 Looking From Outside Vertical Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 139 of 145





Figure 3H.6-203B: Wall 15 Looking From Outside Transverse Reinforcement Zones U7-C-NINA-NRC-110138 Attachment 2 Page 140 of 145



Near Side Face

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Figure 3H.6-205: Wall 16 Looking From Outside Vertical Reinforcement Zones

Near Side Face

2-V-L

1-V-L

2-V-L

10'-0"

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4'-0"

7'-0"

4'-0"

7

15'-0"

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Figure 3H.6-206: Wall 16 Looking From Outside Horizontal Reinforcement Zones Far Side Face U7-C-NINA-NRC-110138 Attachment 2 Page 143 of 145

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Far Side Face

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Figure 3H.6-208: Wall 16 Looking From Outside Transverse Reinforcement Zones U7-C-NINA-NRC-110138 Attachment 2 Page 145 of 145

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