ENCLOSURE 1

ATTACHMENT B

BFN Unit 2

ASME Section XI
ISI Program Plan

Third Interval

Component and Component
Support Drawings

BFN Unit, 2 Component and Component Support Drawings

2-ISI-0032-C, Sheet 1
2-ISI-0041-C, Sheets 1 and 2
2-ISI-0079-C, Sheets 1 and 2
2-ISI-0105-C, Sheets 1 and 2
2-ISI-0130-C, Sheets 1 thru 3
2-ISI-0131-C, Sheet 1
2-ISI-0133-C, Sheet 1
2-ISI-0145-C, Sheets 1 thru 3
2-ISI-0274-C, Sheets 1 thru 3
2-ISI-0275-C, Sheet 1
2-ISI-0276-C, Sheet 1
2-ISI-0277-C, Sheet 1
2-ISI-0278-C, Sheets 1 and 2
2-ISI-0279-C, Sheets 1 thru 4
2-ISI-0280-C, Sheet 1
ISI-0310-B, Sheet 1
2-ISI-0324-C, Sheets 1 thru 13
ISI-0368-C, Sheets 1 thru 15
2-ISI-0379-C, Sheet 1
3-ISI-0390-C, Sheets 1 thru 3
1-ISI-0391-C, Sheet 1
2-ISI-0412-C, Sheets 1 thru 9
ISI-0415-C, Sheets 1 and 2

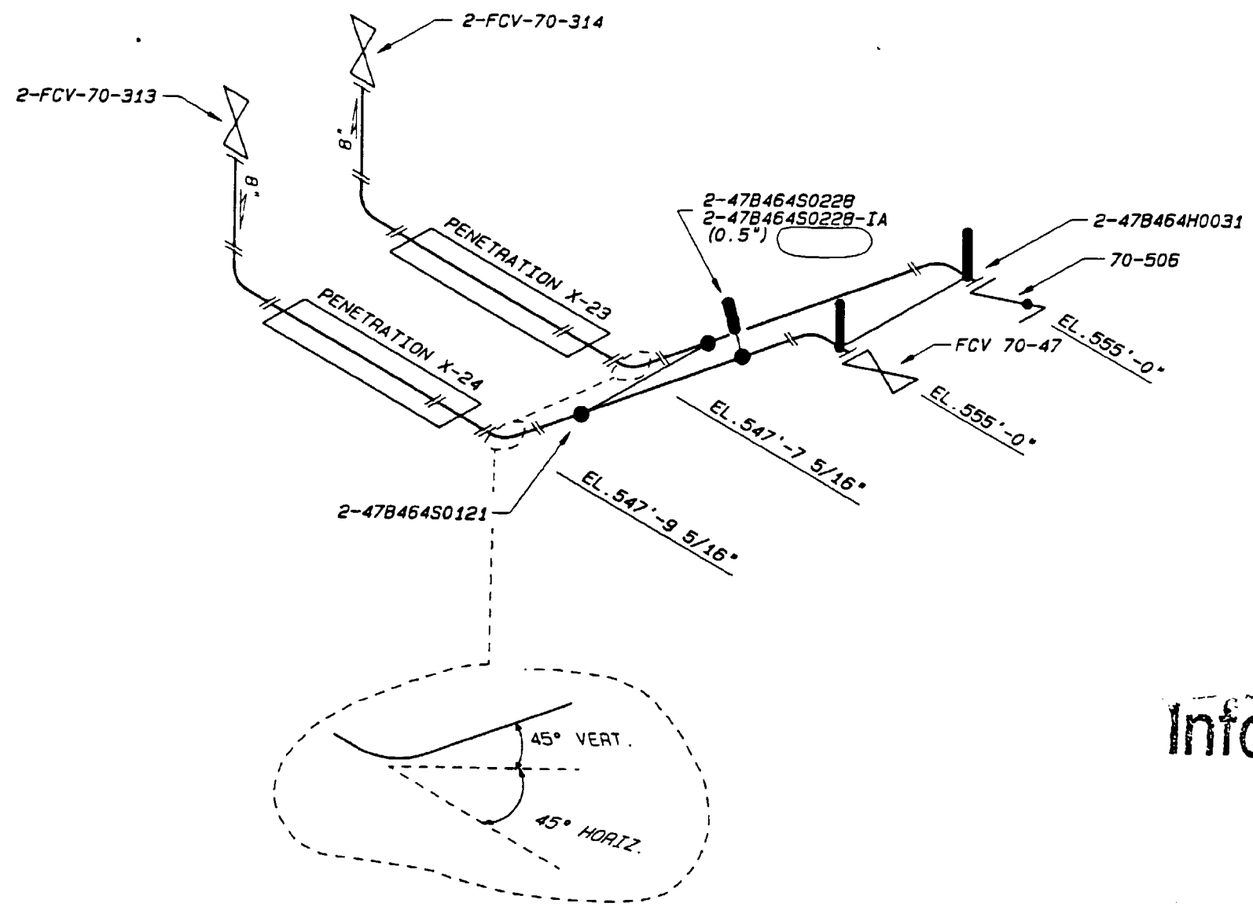
REFERENCE DRAWINGS:

47N2054
47W464-H SERIES
47W2464-200 THRU 203
47B2464-11, 18, 31, 41

LEGEND:

- RIGID HANGER
- MECHANICAL SNUBBER
- RIGID STRUT

ASME CC-2 (EQUIVALENT)



Information Only

000	CCD/ADMIN	RGP	RLD	HEH	
ISSUED TO CREATE CCD. SUPERSEDES A/D 1S1-0032-C-1 R005 AND TO DEPICT AS-CONSTRUCTED STATUS PER RIMS MEMO R21 000821 002 (ADMINISTRATIVE REVISION)					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT #2
CLOSED COOLING WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: KEV	SUBMITTED	APPROVED	SCALE: NTS	
DATE:	DATE:	DATE:	SHEET 01 OF 01 SHEET(S)	
CHECKED:		GLB	DRAWING NO.	REV
DATE:			2-1S1-0032-C	000

ALL A/D HISTORY RESEARCHED TO R000

CAD MAINTAINED DRAWING

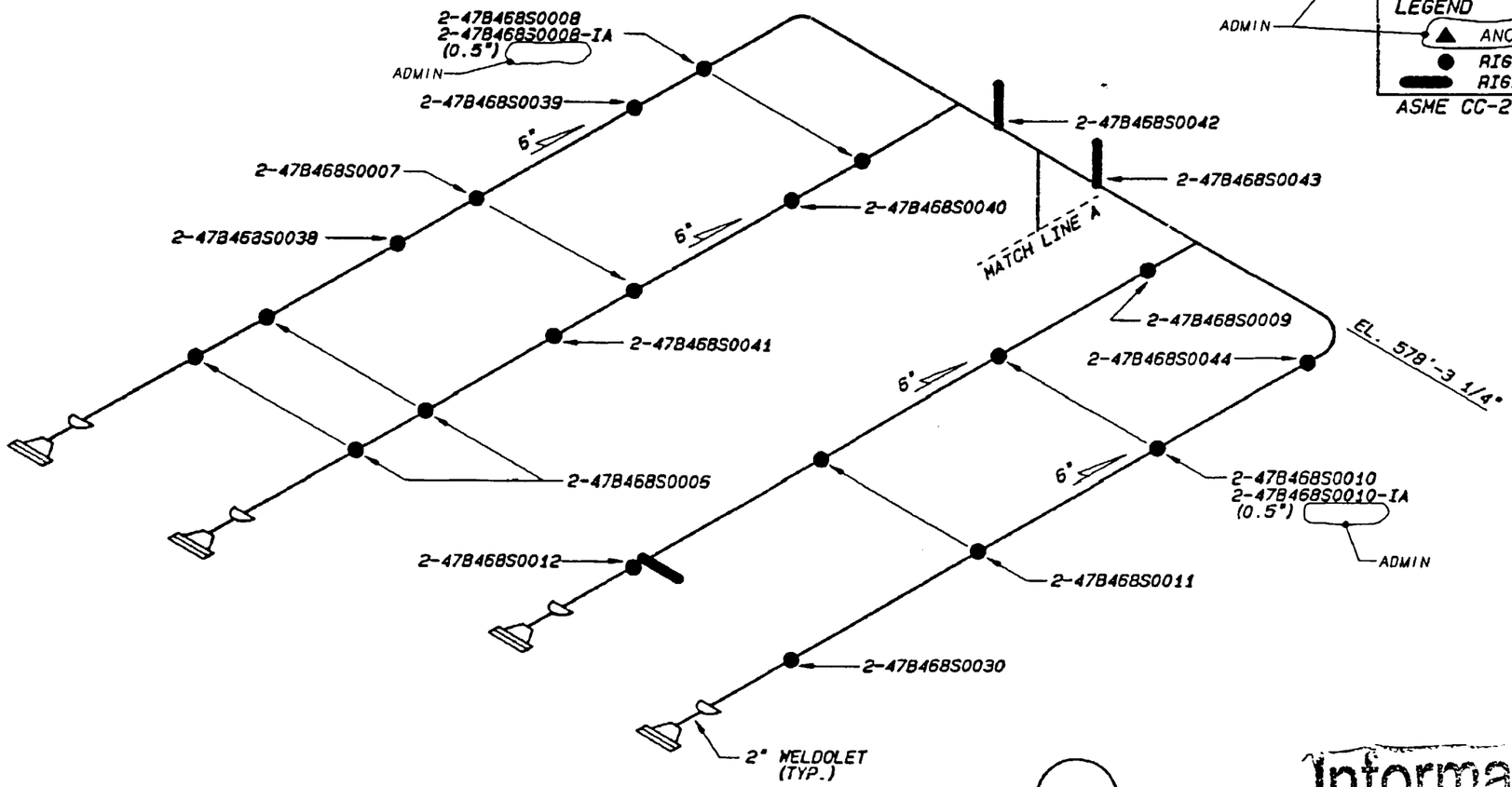
CCD

CALCULATION BRANCH/PROJECT IDENTIFIER:
CD-Q2085-890156

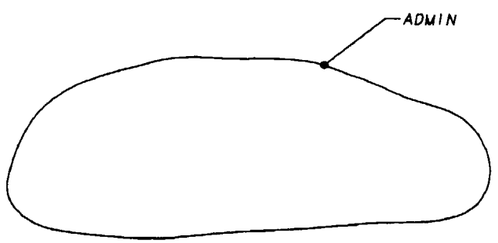
REFERENCE DRAWINGS
47W2468 SERIES
ISI-0040-C (SH. 1) WELD MAP

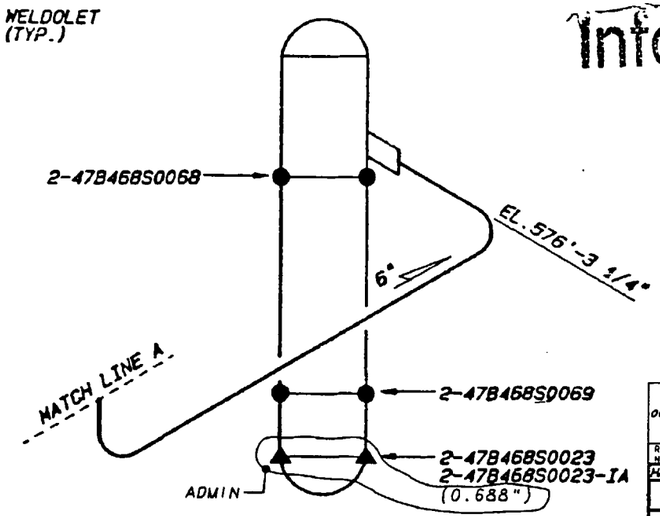
LEGEND
ANCHOR
RIGID HANGER
RIGID STRUT

ASME CC-2 (EQUIVALENT)



EAST HEADER





SCRAM DISCHARGE INSTRUMENT VOLUME TANK

Information Only

REV NO	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	1 APPD	2 APPD	3 APPD	ISSD
	CCD ADMIN		BGC		N/A		N/A	N/A		
000	ISSUED TO CREATE CCD, SUPERSEDES A/D 1SI-0041-C-1 R4 AND TO DEPICT AS-CONSTRUCTED STATUS PER A/D R0 THRU R3; RIMS MEMO R92 960424 864 (ADMINISTRATIVE REVISION)									

HARDWARE: TEK 4129 | SOFTWARE: TEKNICAD | 8" FLOPPY: BF-3

TENNESSEE VALLEY AUTHORITY

S BROWNS FERRY NUCLEAR PLANT
UNIT #2

CONTROL ROD DRIVE SCRAM DISCHARGE SYSTEM
SUPPORT LOCATIONS

DRAWN KEV	SUBMITTED	APPROVED	SCALE NTS
DATE	DATE	DATE	SHEET 01 OF 02 SHEET(S)
CHECKED JTI		GLB	DRAWING NO. 2-1SI-0041-C
DATE			REV 000

CCD

PROCAD

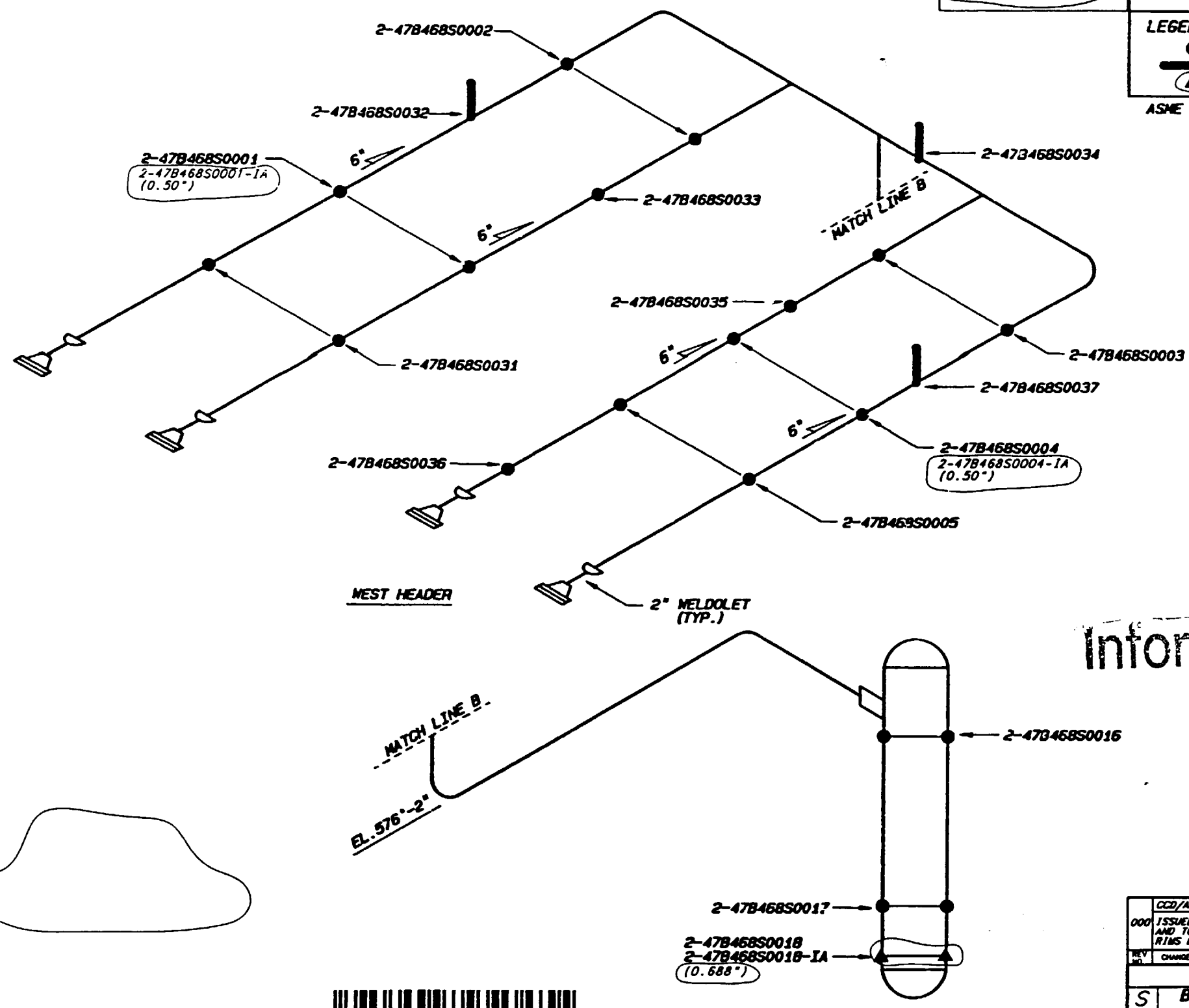
ALL A/D HISTORY RESEARCHED AT R000

CALCULATION BRANCH/ PROJECT IDENTIFIER: CD-Q2085-890156

REFERENCE DRAWINGS: 47W2468 SERIES

LEGEND:
- RIGID HANGER
- RIGID STRUT
- ANCHOR

ASME CC-2 (EQUIVALENT)



Information Only

0005160896
BFND DRAWINGS
CC 2 2-ISI-0041-C
000002
073196 000

PCADAM

ALL A/D HISTORY RESEARCHED AT R000

REV NO.	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	1 APPD	2 APPD	3 APPD	ISSD
000	CCD/ADMIN 7-3-96 KML JFA N/A RLD N/A N/A RLD HLW ISSUED TO CREATE CCD. SUPERSEDES A/D ISI-0041-C-2 R5 AND TO DEPICT AS-CONSTRUCTED STATUS PER A/D R0 THRU R4; RIMS MEMO R92 960424 864 (ADMINISTRATIVE REVISION)									

TENNESSEE VALLEY AUTHORITY

S BROWNS FERRY NUCLEAR PLANT
UNIT #2

CONTROL ROD DRIVE SCRAM DISCHARGE SYSTEM
SUPPORT LOCATIONS

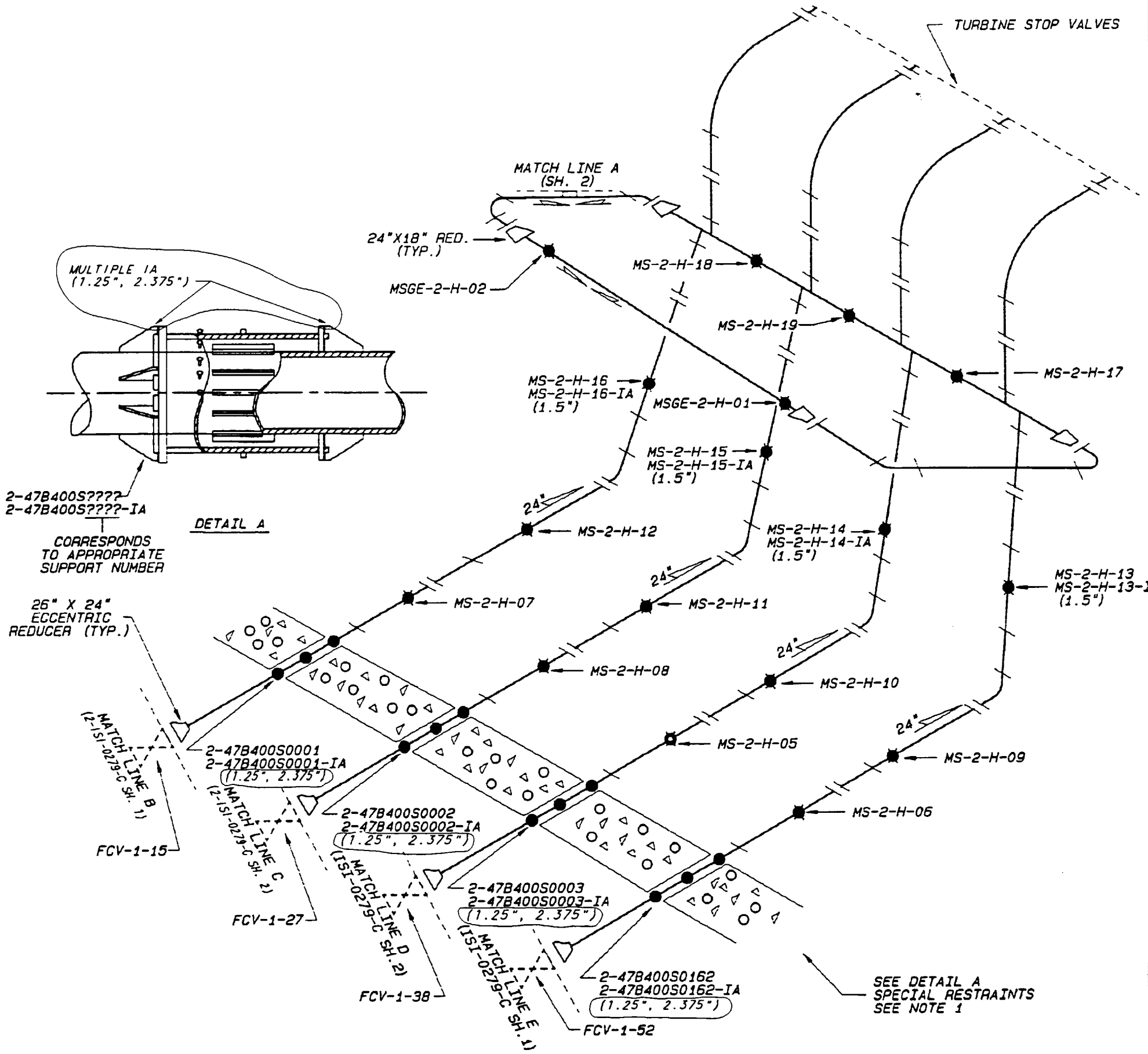
DRAWN REV	SUBMITTED	APPROVED	SCALE NTS
DATE 9-1-88	DATE	DATE	SHEET 02 OF 02 SHEET(S)
CHECKED JTL	EDC	GLB	DRAWING NO. 2-ISI-0041-C REV 000
DATE			

CCD

REFERENCE DRAWINGS
BP-201-5
47W400 SH. 1 & 5
MSG-0021-C (SH. 1) WELD MAP

LEGEND
● RIGID HANGER
✱ VARIABLE SUPPORT

ASME CC-2 (EQUIVALENT)



Information Only

REV NO	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	1 APPD	2 APPD	3 APPD	ISSD
	CCD ADMIN		RDL		N/A		N/A	N/A		
000	ISSUED TO CREATE CCD SUPERSEDES AS-DESIGNED 1SI-0079-C-1 R6 AND TO DEPICT AS CONSTRUCTED STATUS PER RIMS MEMO R14 970423 304; A/D R0-R5									

S TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT #2
MAINSTEAM SYSTEM
SUPPORT LOCATIONS

DRAWN:	SUBMITTED	APPROVED	SCALE: NTS
DATE:	DATE:	DATE:	SHEET 1 OF 2 SHEET(S)
CHECKED:		GLB	DRAWING NO. 2-1SI-0079-C REV 000
DATE:			

CCD

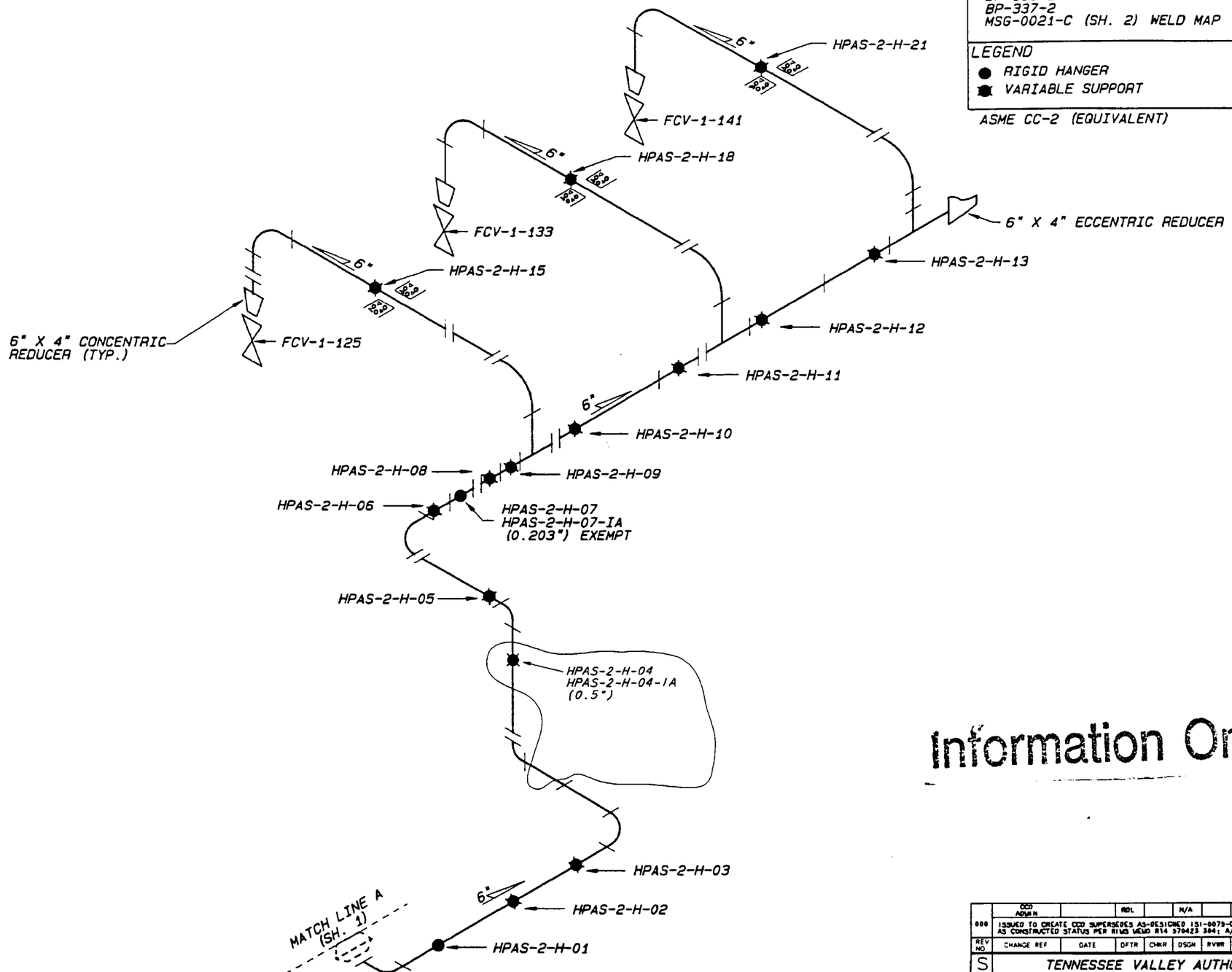
PCADAM

ALL A/D HISTORY RESEARCHED AT R000

REFERENCE DRAWINGS
47W400 SH. 1 & 5
BP-336-2
BP-337-2
MSG-0021-C (SH. 2) WELD MAP

LEGEND
● RIGID HANGER
✱ VARIABLE SUPPORT

ASME CC-2 (EQUIVALENT)



Information Only

REV NO	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	1 APPD	2 APPD	3 APPD	ISSD
	CCD ADMIN		RDL		N/A		N/A	N/A		
000	ISSUED TO CREATE CCD SUPERSEDES AS-DESIGNED 1S1-0079-C-2 R5 AND TO DEPICT AS CONSTRUCTED STATUS PER RIMS MEMO R14 970423 304; A/D R0-R4									

S TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT #2
MAINSTEAM SYSTEM
SUPPORT LOCATIONS

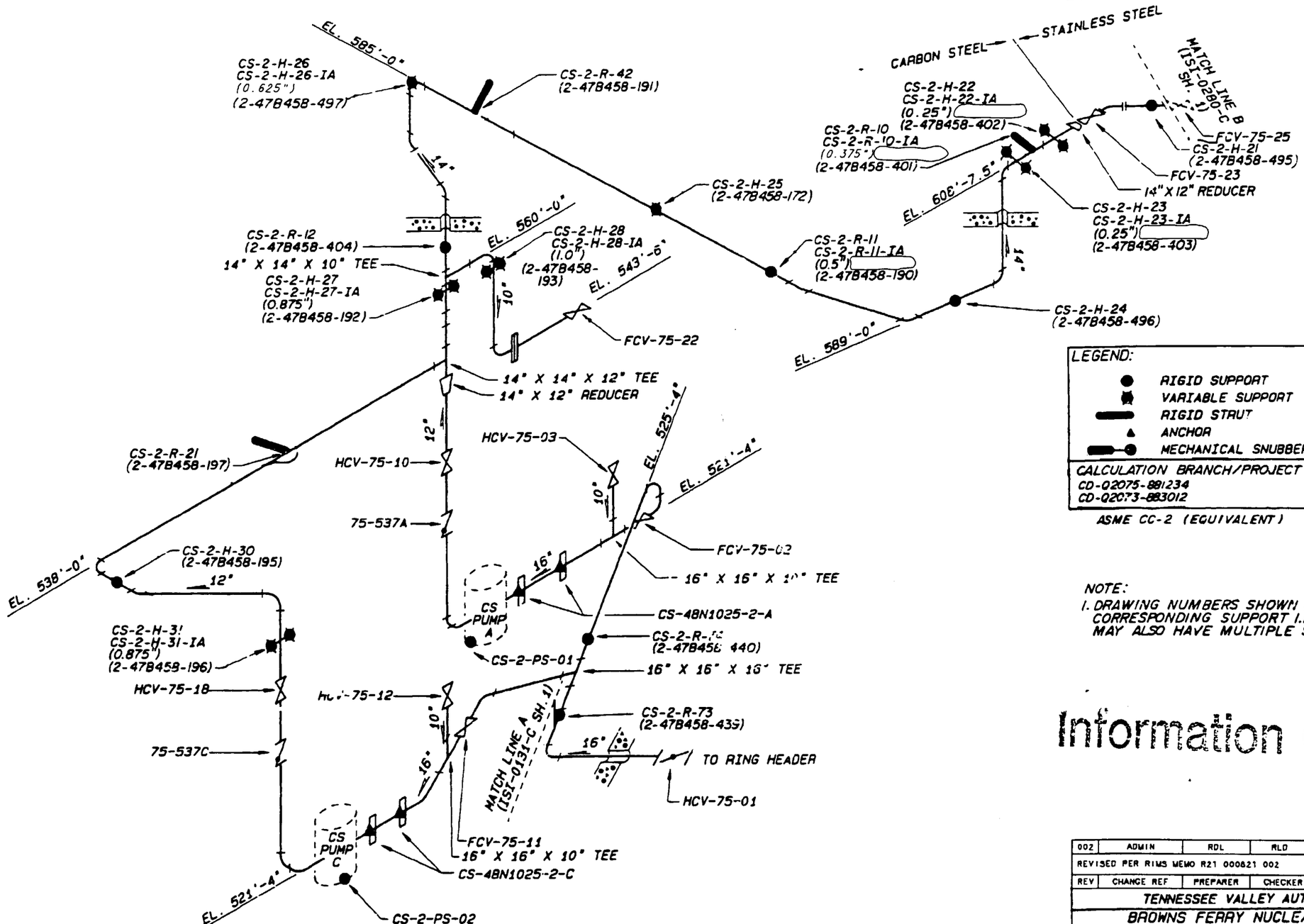
DRAWN: KEV	SUBMITTED	APPROVED	SCALE: NTS
DATE: 12-15-83	DATE:	DATE:	SHEET 2 OF 2 SHEET(S)
CHECKED: JTL		GLB	DRAWING NO. 2-1S1-0079-C REV 000
DATE:			

CCD

PCADAM

ALL A/D HISTORY RESEARCHED AT R000

REFERENCE DRAWINGS
47W458 SERIES
47W458-H SERIES
ISI-0103-C (SH. 1) WELD MAP



LEGEND:

- RIGID SUPPORT
- VARIABLE SUPPORT
- RIGID STRUT
- ANCHOR
- MECHANICAL SNUBBER

CALCULATION BRANCH/PROJECT IDENTIFIERS:
CD-02075-881234
CD-02073-883012

ASME CC-2 (EQUIVALENT)

NOTE:
1. DRAWING NUMBERS SHOWN IN ( ) WITH CORRESPONDING SUPPORT I.D. DRAWING MAY ALSO HAVE MULTIPLE SHEETS.

Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
002	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
CORE SPRAY SYSTEM
SUPPORT LOCATIONS

DRAWN: KEV	SUBMITTED	APPROVED	SCALE: NTS
DATE: 4-26-84	DATE:	DATE:	SHEET 1 OF 2 SHEET(S)
CHECKED: JTL		GL.B	DRAWING NO. 2-ISI-0103-C REV 002
DATE:			

CCD

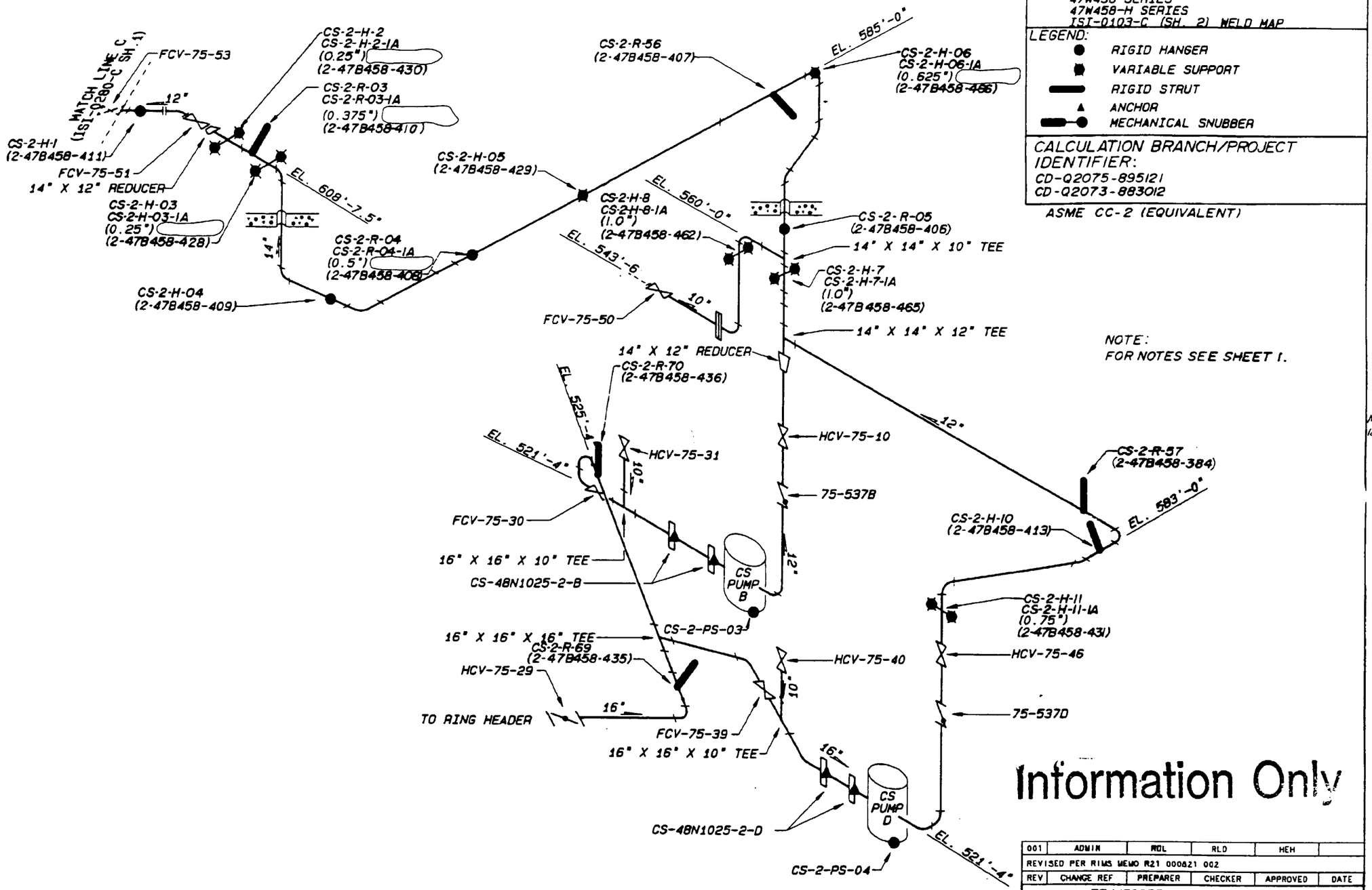
CAD MAINTAINED DRAWING

REFERENCE DRAWINGS:
47W458 SERIES
47W458-H SERIES
ISI-0103-C (SH. 2) WELD MAP

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- RIGID STRUT
- ANCHOR
- MECHANICAL SNUBBER

CALCULATION BRANCH/PROJECT IDENTIFIER:
CD-Q2075-895121
CD-Q2073-883012

ASME CC-2 (EQUIVALENT)



NOTE:
FOR NOTES SEE SHEET 1.

Information Only

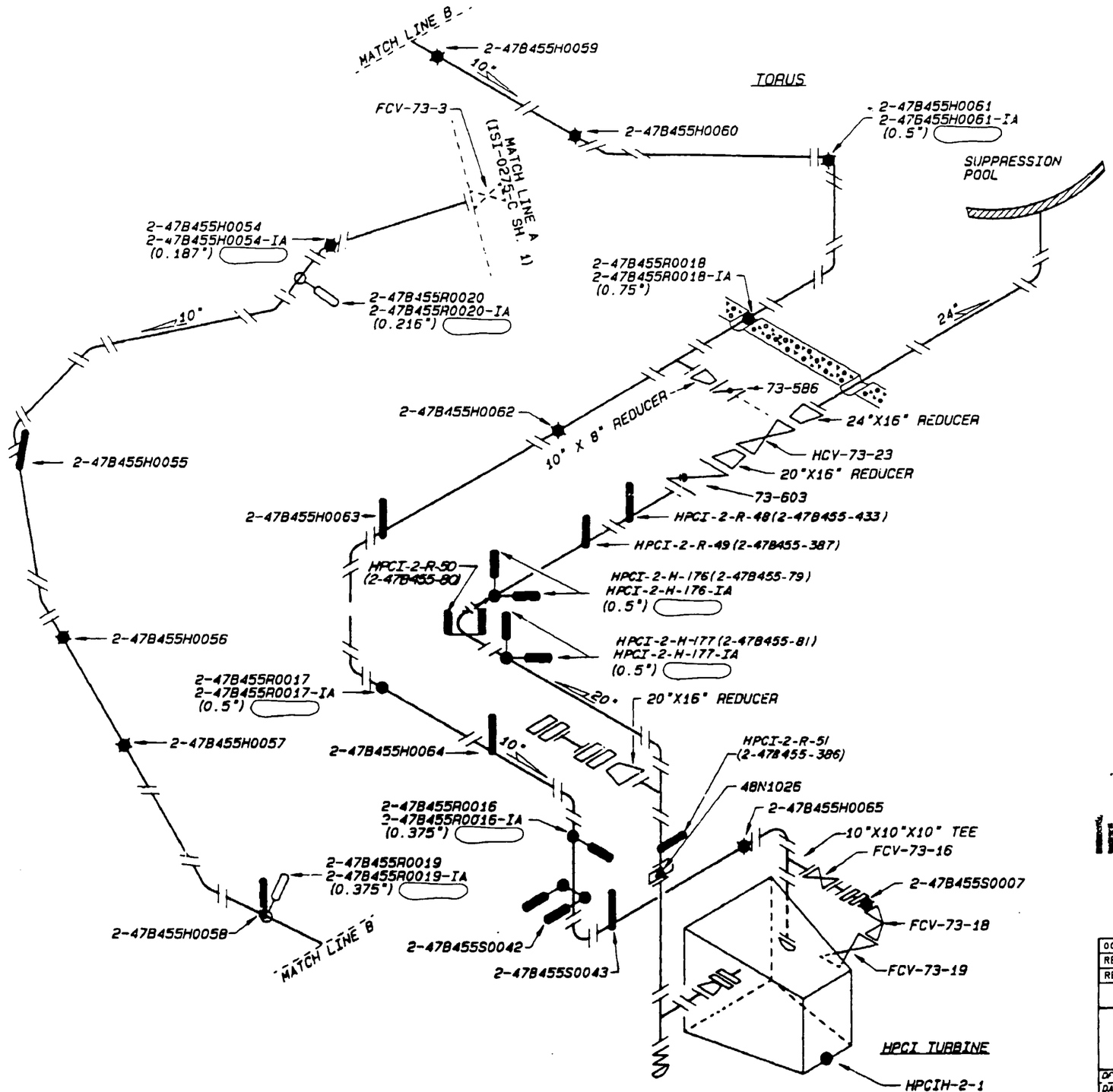
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
001	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
CORE SPRAY SYSTEM
SUPPORT LOCATIONS

DRAWN: REV	SUBMITTED	APPROVED	SCALE: NTS
DATE: 4-26-84	DATE:	DATE:	SHEET 2 OF 2 SHEET(S)
CHECKED: JTL		GLB	DRAWING NO. 2-ISI-0105-C REV 001
DATE:			CCD

CAD MAINTAINED DRAWING



REFERENCE DRAWINGS
47W455-H-6,7,203
ISI-0128-C (SH.1) WELD MAP

LEGEND
- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- MECHANICAL SNUBBER
- ANCHOR
- RIGID STRUT

CALCULATION/BRANCH PROJECT IDENTIFIER:
CD-02073-88990

ASME CC-2 (EQUIVALENT)

NOTE
1. SUPPORT DRAWING NUMBERS SHOWN IN "( )". DRAWING MAY HAVE MULTIPLE SHEET NUMBERS.

Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
001	ADMIN	RGP	RLD	HEH	
REVISED PER RIMS MEMO R21 000621 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT # 2
HIGH PRESSURE COOLANT INJECTION SYSTEM
SUPPPORT LOCATIONS

DRAWN: KEV	SUBMITTED	APPROVED	SCALE: NTS
DATE: 4-19-84	DATE:	DATE:	SHEET 01 OF 03 SHEET(S)
CHECKED: JTL		GLB	DRAWING NO. / REV
DATE:			2-ISI-0130-C / 001

CCD

CAD MAINTAINED DRAWING

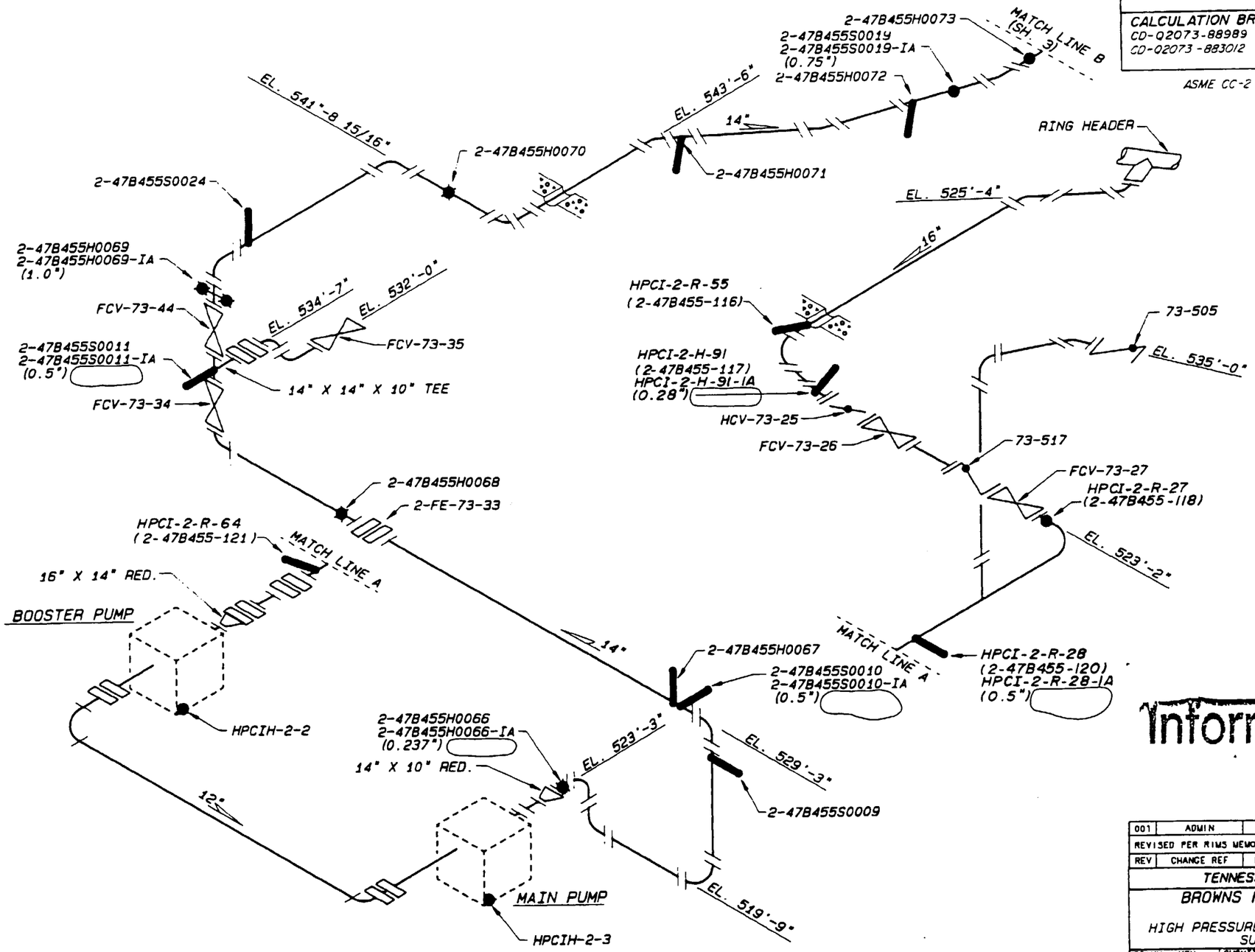
ALL A/D HISTORY RESEARCHED TO R000

REFERENCE DRAWINGS
47W455-H SERIES
ISI-0128-C (SH. 2) WELD MAP

LEGEND
- RIGID HANGER
- VARIABLE SUPPORT
- RIGID STRUT

CALCULATION BRANCH / PROJECT IDENTIFIERS:
CD-Q2073-88989
CD-Q2073-883012

ASME CC-2 (EQUIVALENT)



Information Only

001	ADMIN	RDL	RCH	HEH	
REVISED PER RIMS MEMO R21 000621 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT # 2
HIGH PRESSURE COOLANT INJECTION SYSTEM
SUPPORT LOCATIONS

DRAWN KEV	SUBMITTED	APPROVED	SCALE: NTS
DATE 4-20-84	DATE	DATE GLB	SHEET 02 OF 03 SHEET(S)
CHECKED JTL			DRAWING NO. 2-ISI-0130-C REV 001
DATE			

CAD MAINTAINED DRAWING

CCD

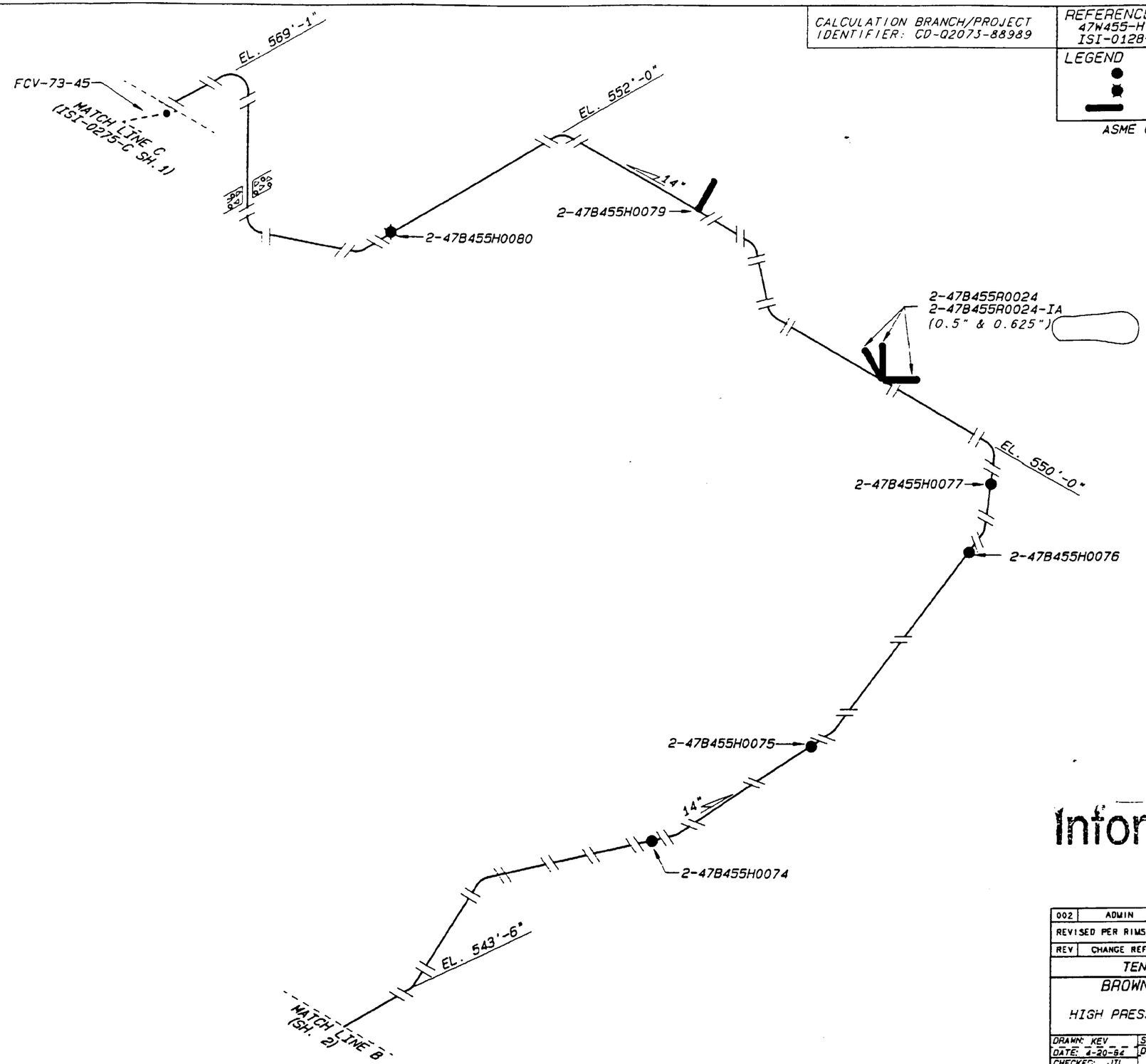
ALL A/D HISTORY RESEARCHED @ R000

CALCULATION BRANCH/PROJECT IDENTIFIER: CD-Q2073-88989

REFERENCE DRAWINGS
47W455-H
ISI-0128-C (SH. 3) WELD MAP

LEGEND
- RIGID HANGER
- VARIABLE SUPPORT
- RIGID STRUT

ASME CC-2 (EQUIVALENT)



Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
002	ADMIN	RDL	RLD	HEH	

REVISED PER RIMS MEMO R21 000621 002

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT # 2
HIGH PRESSURE COOLANT INJECTION SYSTEM
SUPPORT LOCATIONS

DRAWN: KEV	SUBMITTED	APPROVED	SCALE: NTS
DATE: 4-20-94	DATE:	DATE:	SHEET 03 OF 03 SHEET (S)
CHECKED: JTL		GLB	DRAWING NO. 2-1S1-0130-C — REV 002
DATE:			

CAD MAINTAINED DRAWING

CCD

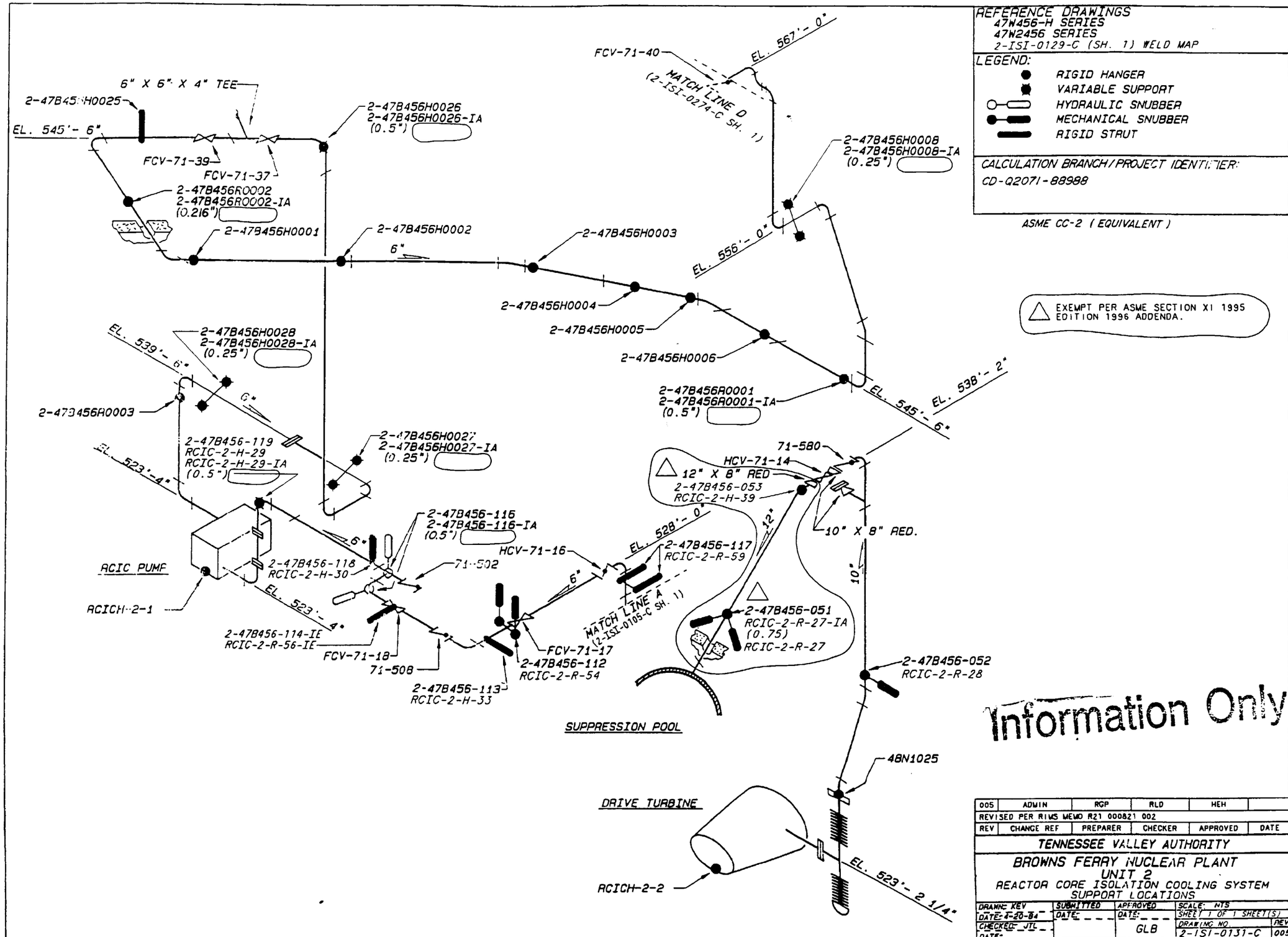
ALL A/D HISTORY RESEARCHED AT R000

REFERENCE DRAWINGS
47W456-H SERIES
47W2456 SERIES
2-ISI-0129-C (SH. 1) WELD MAP

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- MECHANICAL SNUBBER
- RIGID STRUT

CALCULATION BRANCH/PROJECT IDENTIFIER:
CD-Q2071-88988

ASME CC-2 (EQUIVALENT)



Information Only

005	ADMIN	RGP	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

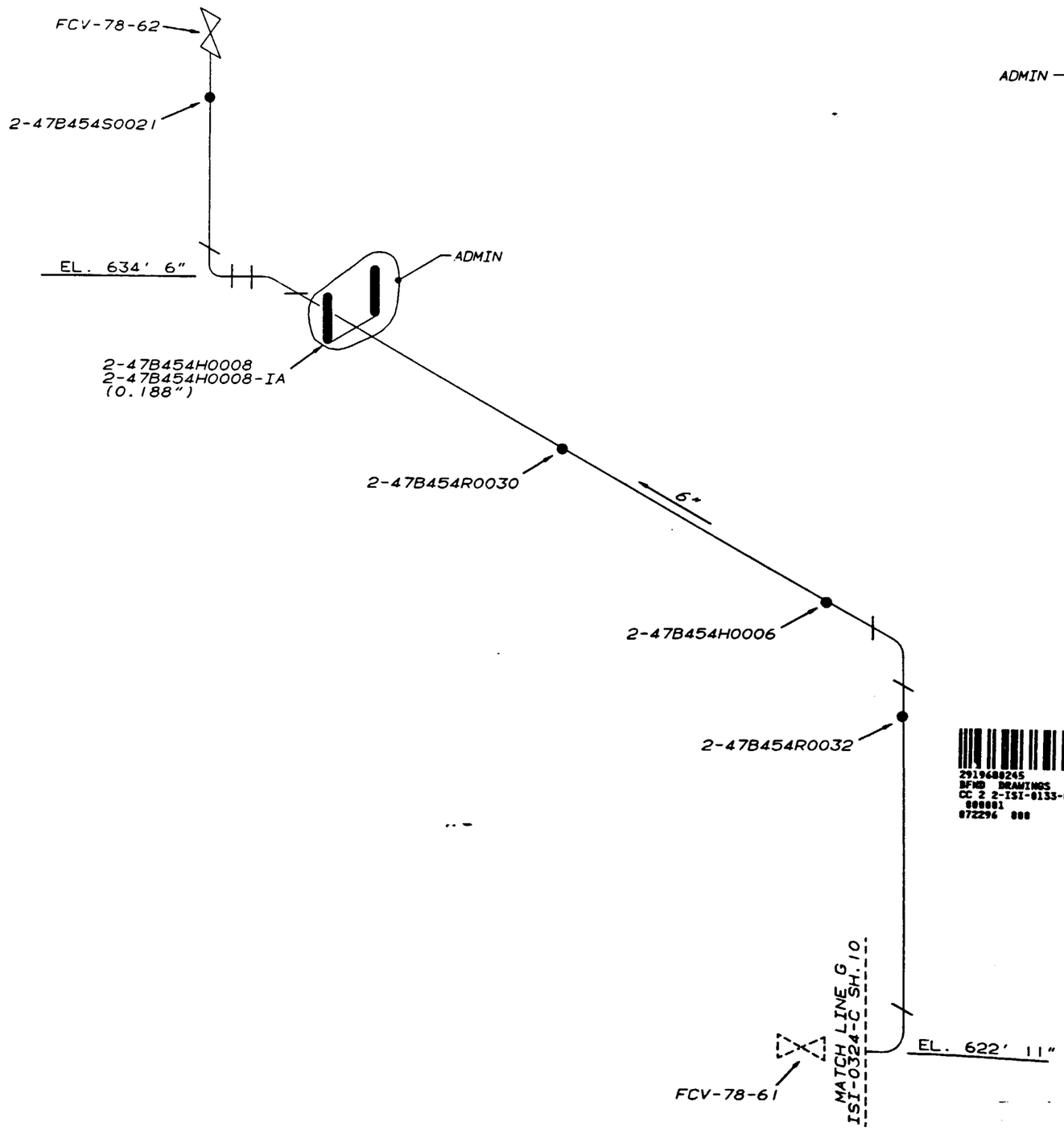
BROWNS FERRY NUCLEAR PLANT
UNIT 2
REACTOR CORE ISOLATION COOLING SYSTEM
SUPPORT LOCATIONS

DRAWN: KEV	SUBMITTED	APPROVED	SCALE: NTS
DATE: 4-20-84	DATE:	DATE:	SHEET 1 OF 1 SHEET(S)
CHECKED: JTL		GLB	DRAWING NO. 2-ISI-0131-C — REV 005
DATE:			

ALL A/D HISTORY RESEARCHED @ R000

CAD MAINTAINED DRAWING

CCD



LEGEND

● RIGID SUPPORT

▬ RIGID STRUT

ADMIN — CALCULATION BRANCH/PROJECT IDENTIFIER: CD-02078-881002

ASME CC-3 (EQUIVALENT)

2919680245
BFMD DRAWINGS
CC 2 2-ISI-0133-C
000001
072296 000

Information Only

000	CCD/ADMIN	7-22-96	VEN	JK	N/A	RLD	N/A	N/A	RGD		
	ISSUED TO CREATE CCD. SUPERSEDES AS-DESIGNED ISI-0133-C-1 R6 AND TO DEPICT AS-CONSTRUCTED STATUS PER A/D R0 THRU R7. RDMS MEMO R92 960516 070 (ADMINISTRATIVE REVISION)										
REV	CHANGE REF	DATE	DFTR	CHKR	DSGN	DWGR	APPD	APPD	APPD	ISSD	

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
FUEL POOL COOLING SYSTEM
SUPPORT LOCATIONS

S

DRAWN: KEV	DATE: 12-15-83	SCALE: NTS	CADAM/ISIOMP
CHECKED: JTL	APPROVED: GLB	SHEET 1 OF 1	REV
SUBMITTED:		2-ISI-0133-C	000

CCD

CADAM

ALL A/D HISTORY RESEARCHED AT R000

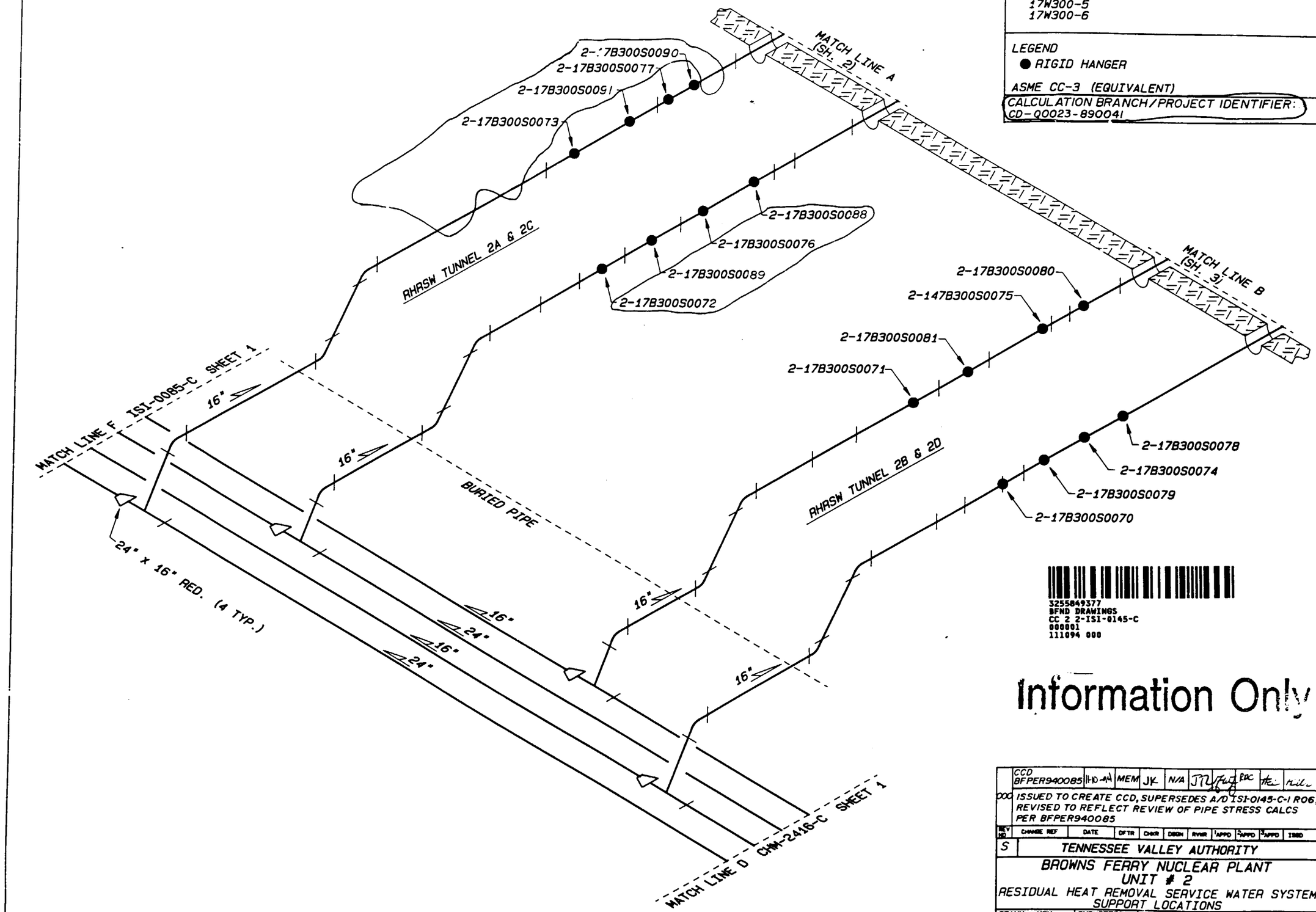
COMMENT=
GROUP=AA67 SUBGRP=BFCAD7 SCALE= 1.0000 DRAWID=HGI81-0133-C-1 0000 LAST FILE=96192 16 23
DATE= 7/10/96 TIME=16 23 ACCESS=HOME PWT=
CODEN ID=BFCAD7
LOT= 1

REFERENCE DRAWINGS
17W300-5
17W300-6

LEGEND
● RIGID HANGER

ASME CC-3 (EQUIVALENT)

CALCULATION BRANCH/PROJECT IDENTIFIER:
CD-Q0023-890041



3255849377
BFND DRAWINGS
CC 2 2-ISI-0145-C
000001
111094 000

Information Only

REV NO	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	1APPD	2APPD	3APPD	ISSD
000	CCD BFPER940085	11-10-94	MEM	JK	N/A	JTL		RDC		

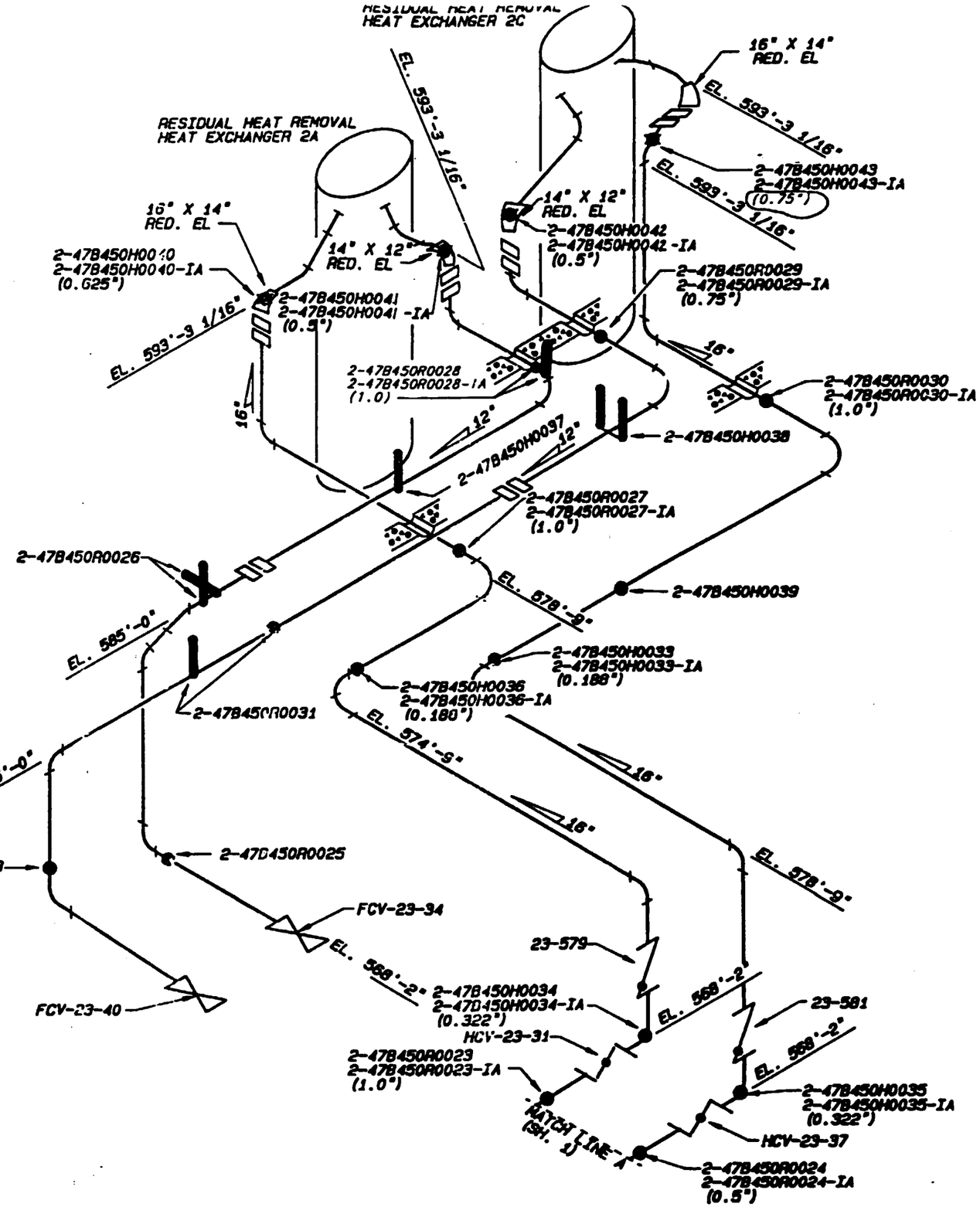
000 ISSUED TO CREATE CCD, SUPERSEDES A/D ISI-0145-C-1 R06; REVISED TO REFLECT REVIEW OF PIPE STRESS CALCS PER BFPER940085

S TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT # 2
RESIDUAL HEAT REMOVAL SERVICE WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: KEV	SUBMITTED	APPROVED	SCALE: NTS
DATE: 3-10-94	DATE:	DATE:	SHEET 01 OF 03 SHEET(S)
CHECKED: JTL		GLB	DRAWING NO. 2-ISI-0145-C
DATE:			REV 000

CCD



REFERENCE DRAWINGS

2-47E450-2
0-47N450-4

LEGEND

- RIGID HANGER
- VARIABLE SUPPORT
- RIGID STRUT

CALCULATION BRANCH / PROJECT IDENTIFIER

CD-02023-891361
CD-02023-891362
CD-02023-891363

ASME CC-3 (EQUIVALENT)

Information Only

002	ADMIN	RDL	WCH	RLO	12-9-99
REVISED PER RIMS MEMO R21 991201 003					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT # 2
RESIDUAL HEAT REMOVAL SERVICE WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: REV	SUBMITTED	APPROVED	SCALE: NTS
DATE: 3-3-94	DATE:	DATE:	SHEET 2 OF 3 SHEETS
REVIEWED: JTL		GLB	DRAWING NO. 2-IST-0045-C REV 002
DATE:			

CCD

PCADAM

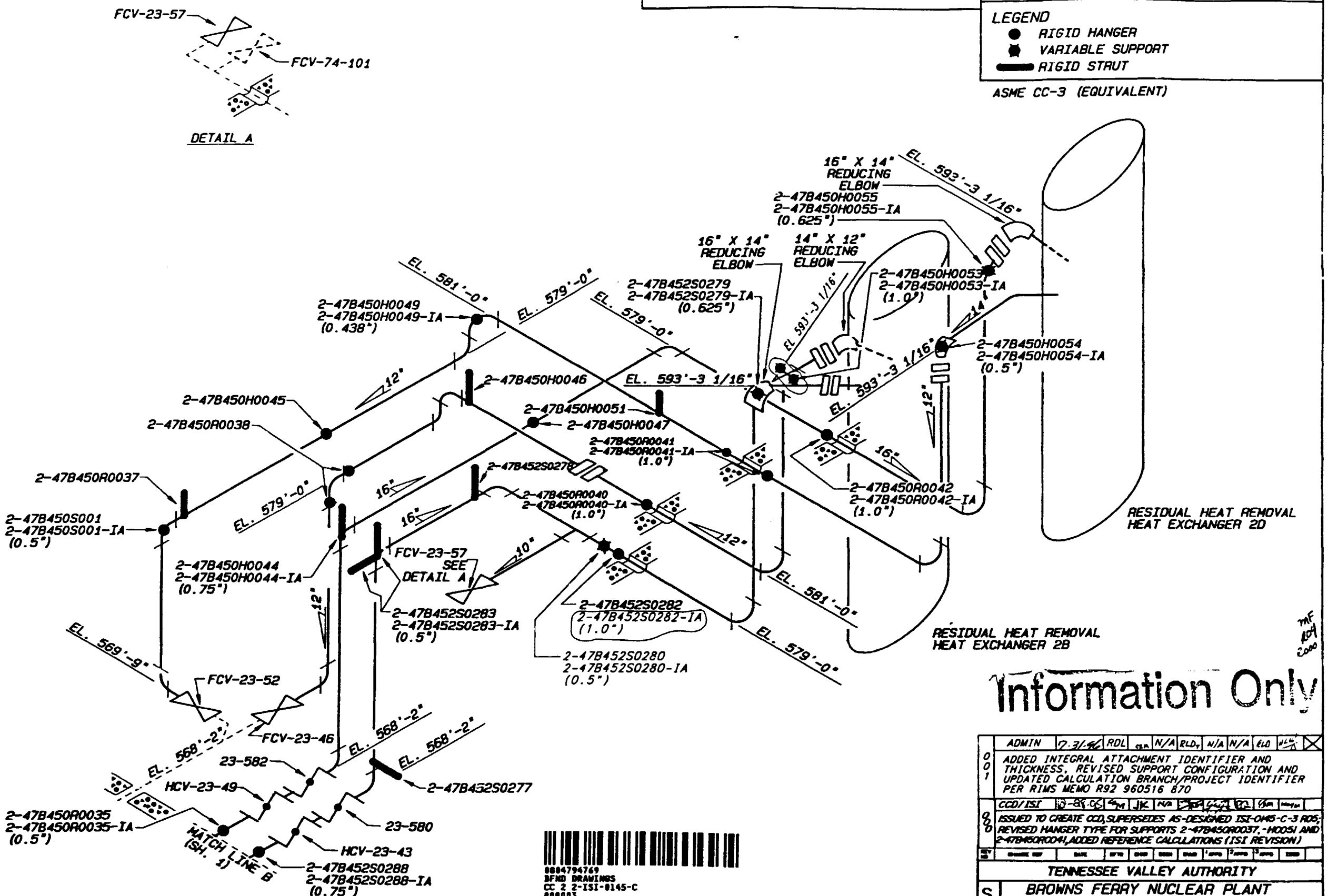
ALL A/D HISTORY RESEARCHED @ R000

CALCULATION BRANCH / PROJECT IDENTIFIERS:
CD-02023-880976
CD-02023-891348

REFERENCE DRAWINGS
2-47E450-2
0-47W450-4

LEGEND
- RIGID HANGER
- VARIABLE SUPPORT
- RIGID STRUT

ASME CC-3 (EQUIVALENT)



Information Only

001	ADMIN	7-31-96	RDL		N/A	RLD	N/A	N/A	ELD		
	ADDED INTEGRAL ATTACHMENT IDENTIFIER AND THICKNESS, REVISED SUPPORT CONFIGURATION AND UPDATED CALCULATION BRANCH/PROJECT IDENTIFIER PER RIMS MEMO R92 960516 870										
000	CCD/ISI	10-8-96			JK	N/A					
	ISSUED TO CREATE CCD, SUPERSEDES AS-DESIGNED ISI-0145-C-3 R05; REVISED HANGER TYPE FOR SUPPORTS 2-47B450R0037, -H0051 AND 2-47B450R0041, ADDED REFERENCE CALCULATIONS (ISI REVISION)										

TENNESSEE VALLEY AUTHORITY

S

BROWNS FERRY NUCLEAR PLANT
UNIT # 2
RESIDUAL HEAT REMOVAL SERVICE WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: KEV	SUBMITTED	APPROVED	SCALE: NTS
DATE: 3-12-94	DATE:	DATE:	SHEET 3 OF 3 SHEET(S)
CHECKED: JL		GLB	DRAWING NO. 2-ISI-0145-C
DATE:			REV 001

0004794769
BFND DRAWINGS
CC 2 2-ISI-0145-C
000003
073196 001

PCADAM

ALL A/D HISTORY RESEARCHED @ R000

CCD

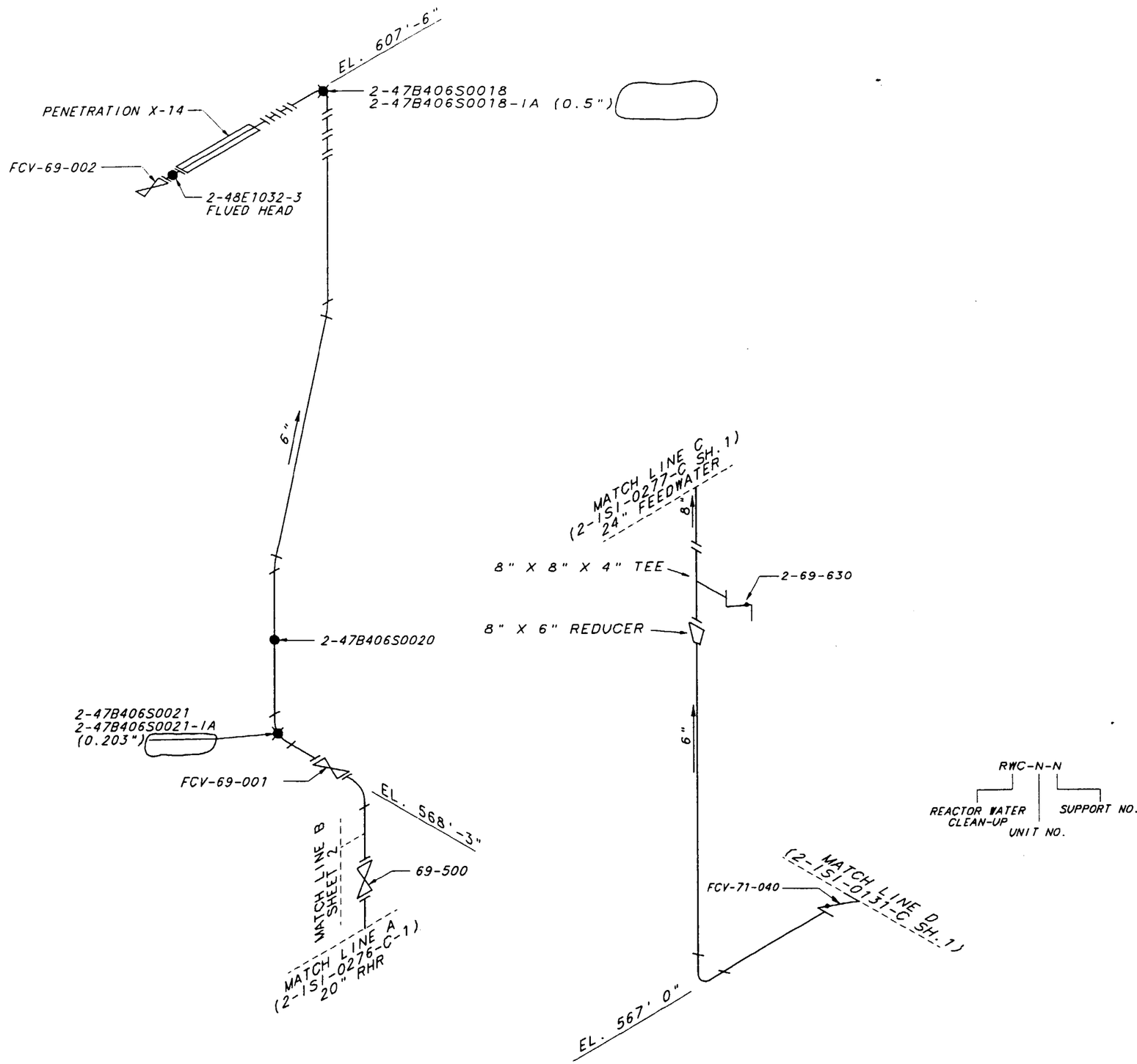
REFERENCE DRAWINGS:
TVA 47W335-14
TVA 47W335-17
TVA 47K1778
2-1SI-0272-C (SH. 1) WELD MAP

NOTE:
THIS DRAWING SUPERSEDES CHM-2082-C (ALL SHEETS)

LEGEND:
- VARIABLE SUPPORT
- RIGID HANGER
- HYDRAULIC SNUBBER
- RIGID STRUT

CALCULATION BRANCH/PROJECT IDENTIFIER:
CD-Q2069 - 900011
CD-Q2071 - 880988

ASME CC-1 (EQUIVALENT)



Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
003	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
REACTOR WATER CLEAN UP, RCIC, AND CRD
HYDRAULIC RETURN LINE, SUPPORT IDENTIFICATION

DRAWN: PHB	DATE: 6-13-88	SCALE: NTS	CADAM/1SICMP
CHECKED: JES	APPROVED: GLB	SHEET 01 OF 03	REV
SUBMITTED: EDC		2-1SI-0274-C	003

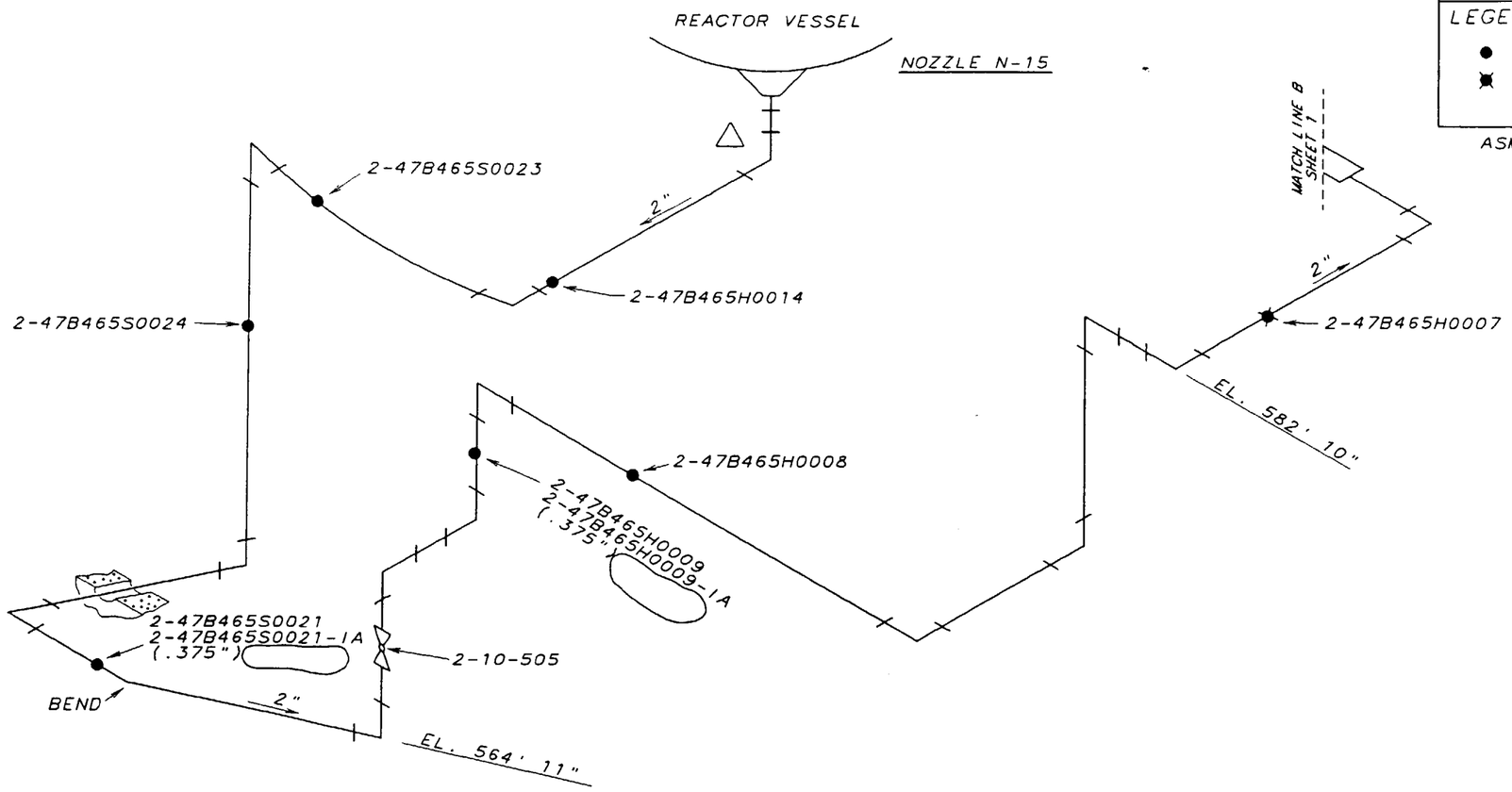
CCD

CAD MAINTAINED DRAWING

REFERENCE DRAWINGS:
47W465 SERIES PIPING DWG
47W465 H SERIES SUPPORT DWG
47B465 SERIES SUPPORT DWG.
47A465 SERIES SUPPORT DWG.
2-47E817-1 FLOW DIAGRAM

LEGEND:
● RIGID HANGER
✱ VARIABLE SUPPORT

ASME CC-1 (EQUIVALENT)



Information Only

△ EXEMPT PER DNE CALCULATION (MD-Q0999-950033) RIMS MEMO R14 950829 109

001	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
REACTOR WATER CLEAN UP, RCIC, AND CRD HYDR. RETURN LINE SUPPLRT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE:	DATE: 9-20-91	DATE: 9-24-91	SHEET 02 OF 03 SHEET(S)
CHECKED: JAA	JES	GLB	DRAWING NO. / REV.
DATE: 9-20-91			2-1S1-0274-C / 000

CAD MAINTAINED DRAWING

CCD

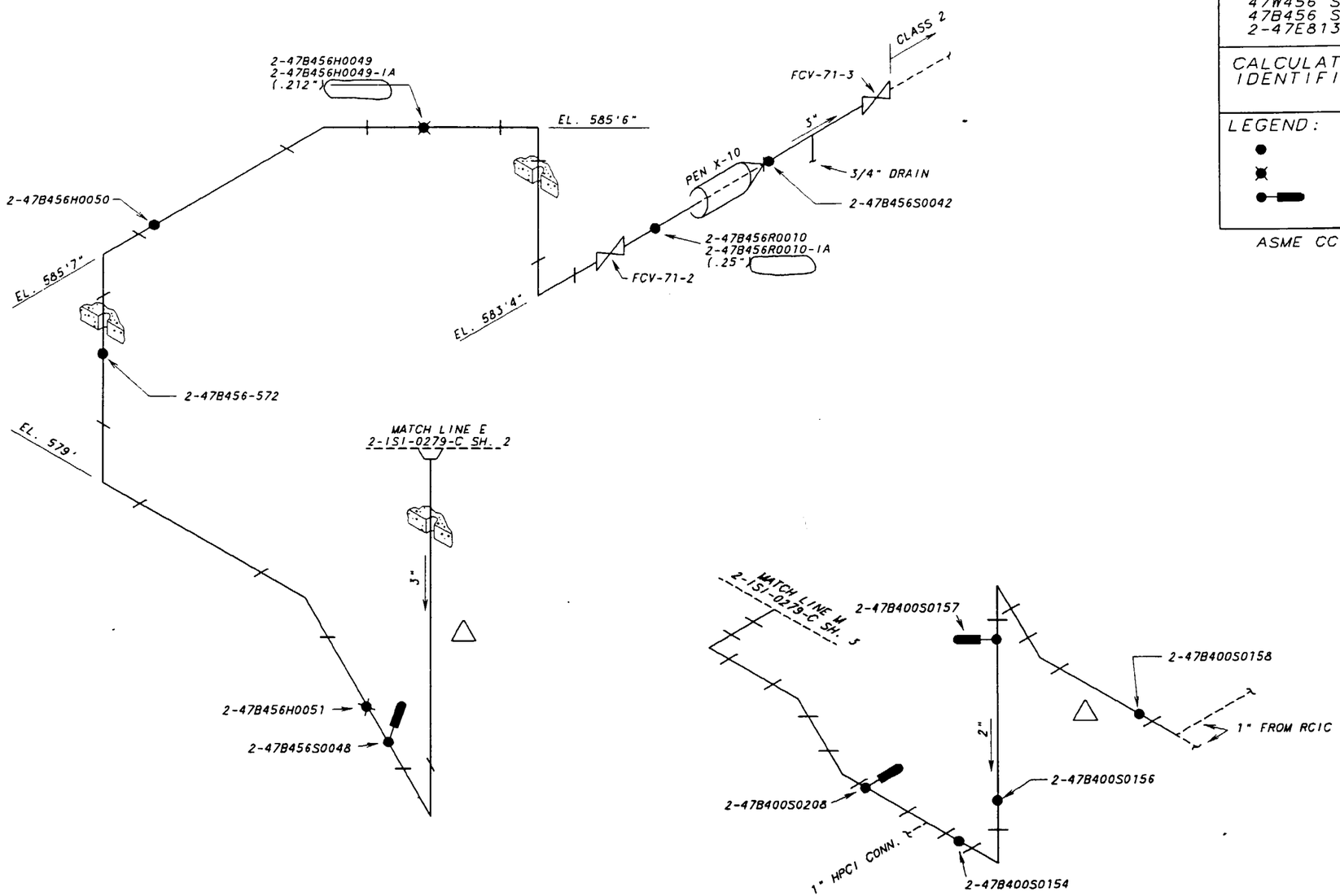
ALL A/D HISTORY RESEARCHED AT R000

REFERENCE DRAWINGS:
47W456 SERIES
47B456 SERIES
2-47E813-1 FLOW DIAGRAM

CALCULATION BRANCH/PROJECT IDENTIFIERS: CD-Q2001-880973
CD-Q2071-880987

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- MECHANICAL SNUBBER

ASME CC-1 (EQUIVALENT)



Information Only

△ EXEMPT PER DNE CALCULATION (MD-0-0999-950033) RIMS MEMO R14 950829 109

002	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
REACTOR CORE ISOLATION COOLING
SYSTEM SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE:	DATE: 9-20-91	DATE: 9-24-91	SHEET 03 OF 03 SHEET(S)
CHECKED: JAA	JES	GLB	DRAWING NO. 2-1S1-0274-C REV. R002
DATE: 9-20-91			CCD

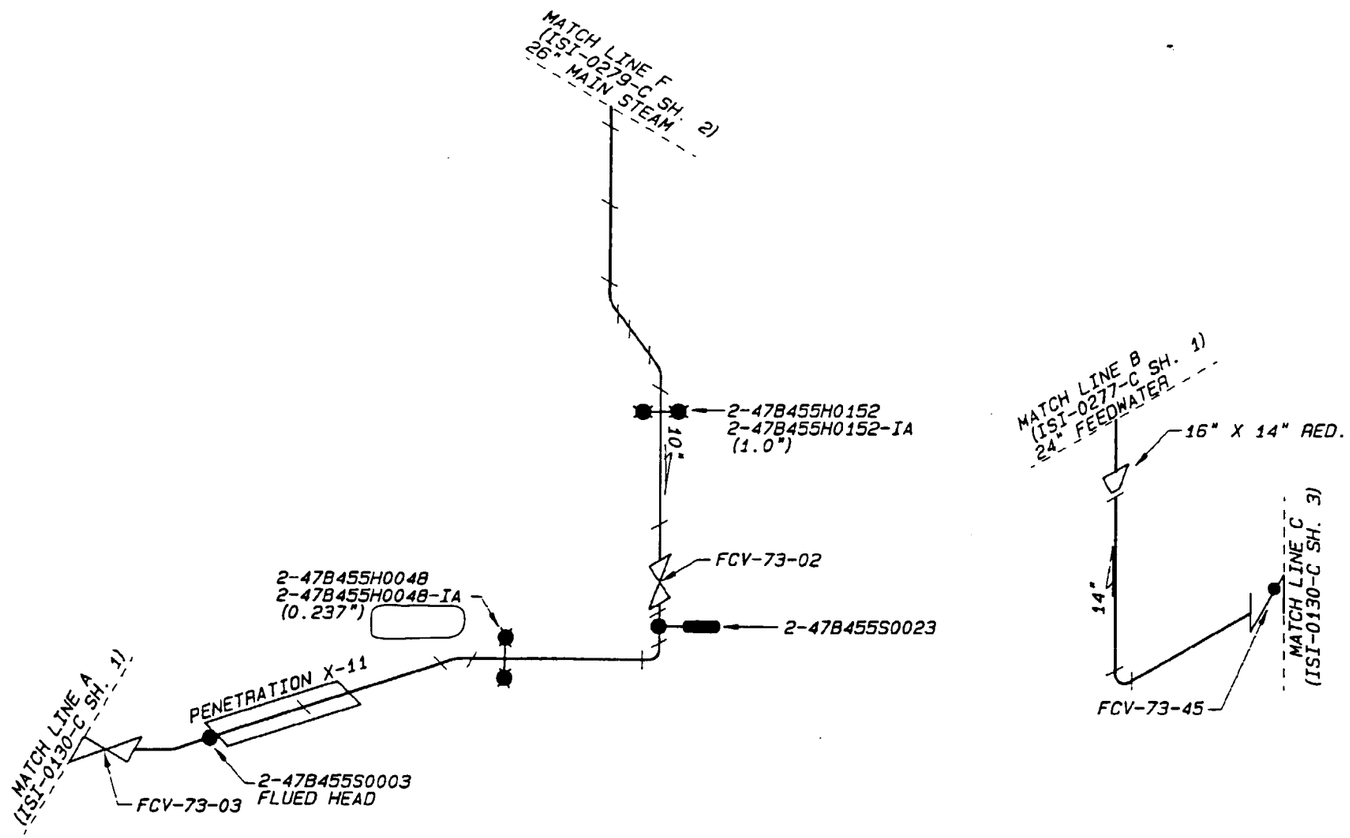
ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

REFERENCE DRAWINGS
47W455-4
ISI-0273-C (SH. 1) WELD MAP
NOTE: THIS DRAWING SUPERCEDES CHM-2083-C ALL SHEETS.

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- MECHANICAL SNUBBER

ASME CC-1 (EQUIVALENT)



Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
000	CCD/ADMIN	RCP	RLD	HEH	

ISSUED TO CREATE CCD, SUPERSEDES A/D ISI-0275-C-1 R005 AND TO DEPICT AS-CONSTRUCTED STATUS PER RIMS MEMO R21 000821 002 (ADMINISTRATIVE REVISION)

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
HIGH PRESSURE COOLANT INJECTION
SUPPORT LOCATIONS

DRAWN: APG	SUBMITTED	APPROVED	SCALE: NTS
DATE: 6-17-87	DATE: 6-14-90	DATE: 6-14-90	SHEET 01 OF 01 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. / REV
DATE: 6-13-90			2-ISI-0275-C / 000

ALL A/D HISTORY RESEARCHED TO R000

CAD MAINTAINED DRAWING

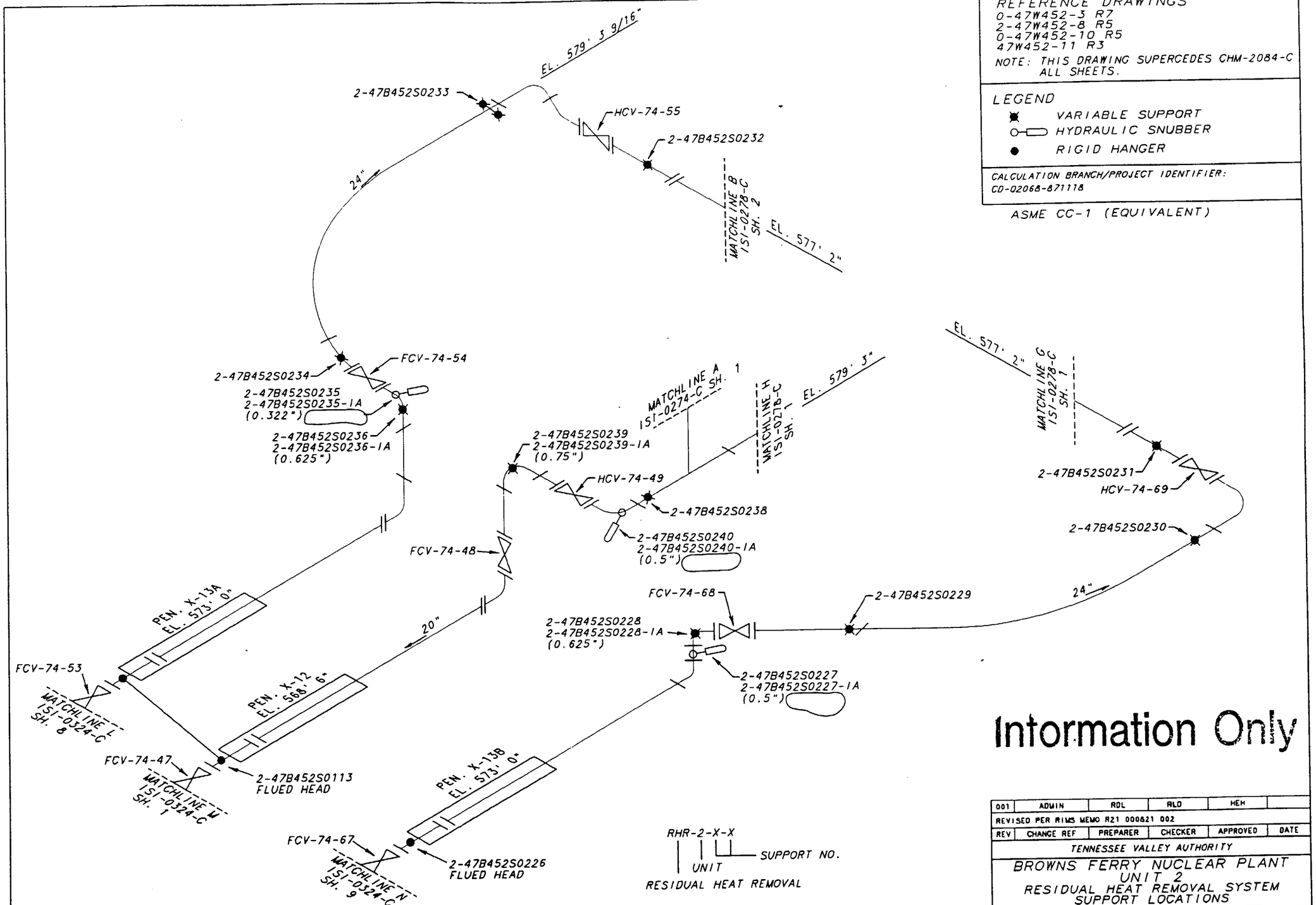
CCD

REFERENCE DRAWINGS
0-47W452-3 R7
2-47W452-8 R5
0-47W452-10 R5
47W452-11 R3
NOTE: THIS DRAWING SUPERCEDES CHM-2084-C ALL SHEETS.

LEGEND
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- RIGID HANGER

CALCULATION BRANCH/PROJECT IDENTIFIER:
CD-02068-871118

ASME CC-1 (EQUIVALENT)



Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
001	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000621 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: RPC	SUBMITTED	APPROVED	SCALE NTS
DATE: 10-16-87	DATE 6-17-88	DATE 6-17-88	SHEET 01 OF 01 SHEET(S)
CHECKED: 6-16-88	EDC	RWE	DRAWING NO. 2-1S1-0276-C REV. 001
DATE: JES			

CAD MAINTAINED DRAWING

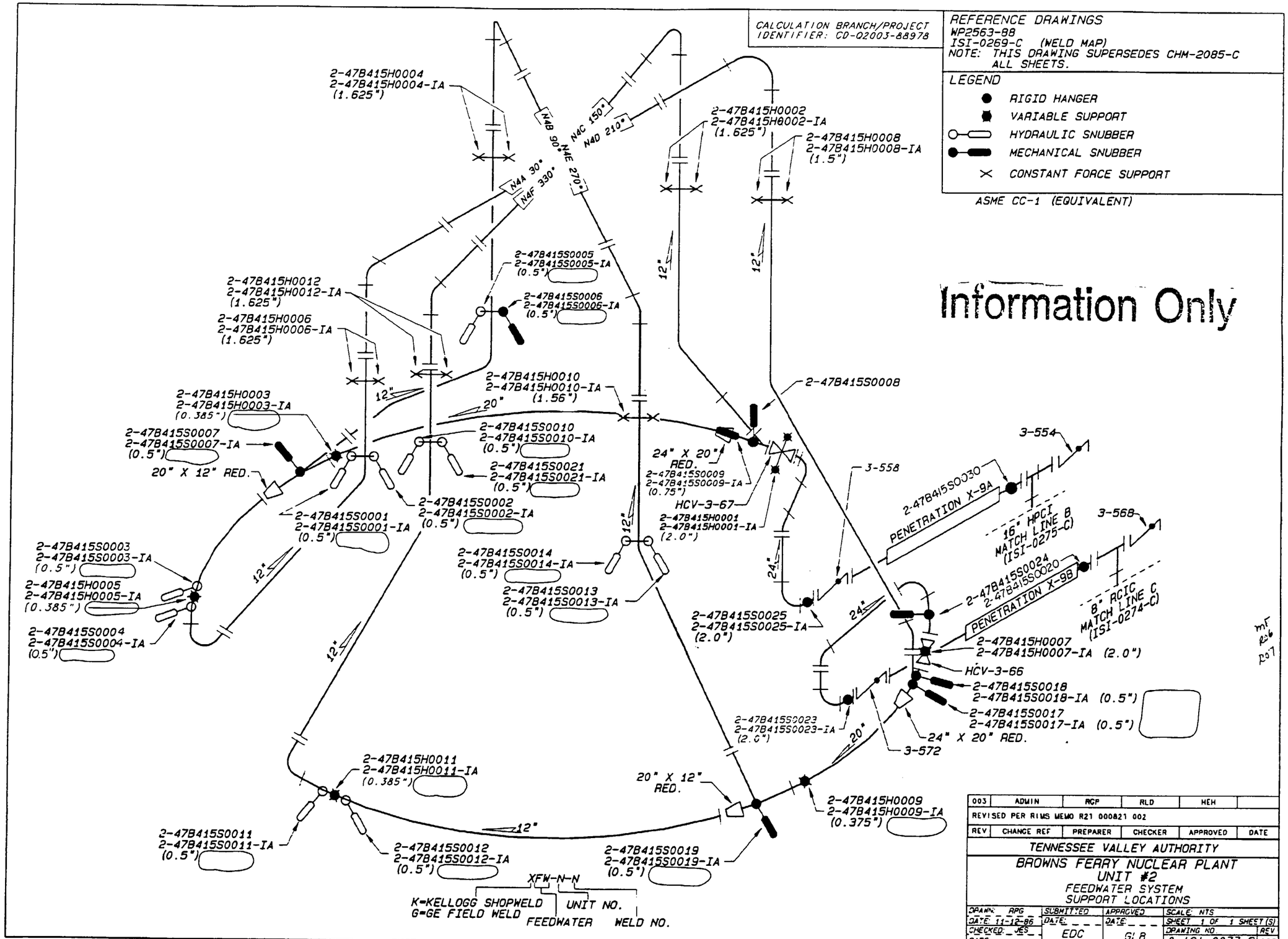
CCD

CALCULATION BRANCH/PROJECT IDENTIFIER: CD-02003-88978

REFERENCE DRAWINGS
WP2563-88
ISI-0269-C (WELD MAP)
NOTE: THIS DRAWING SUPERSEDES CHM-2085-C ALL SHEETS.

LEGEND
- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- MECHANICAL SNUBBER
- CONSTANT FORCE SUPPORT

ASME CC-1 (EQUIVALENT)



Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
003	ADMIN	RGP	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT #2
FEEDWATER SYSTEM
SUPPORT LOCATIONS

DRAWN: RPG	SUBMITTED	APPROVED	SCALE: NTS
DATE: 11-12-86	DATE:	DATE:	SHEET 1 OF 1 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. 2-ISI-0277-C REV 003
DATE:			

ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

CCD

REFERENCE DRAWINGS:

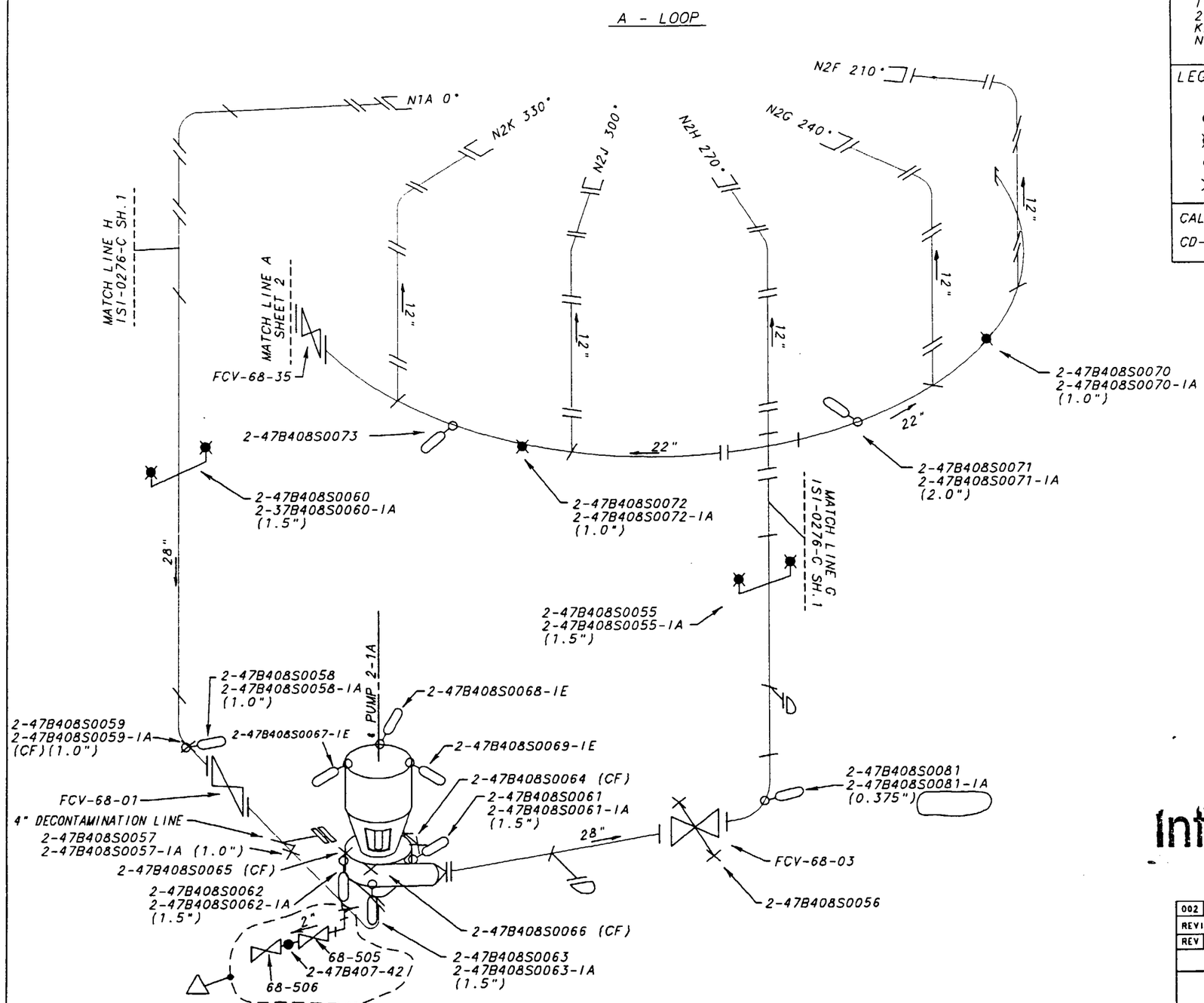
2-47W2408-8,9 (S.E. REPLACEMENT)
GE 769E963 (S.E. REPLACEMENT)
TVA 47K1544-2
2-153F754
KELLOGG BF 2-180
NOTE: THIS DRAWING SUPERSEDES CHM-2068-C ALL SHEETS

LEGEND:

- ● RIGID HANGER
- ✱ VARIABLE SUPPORT
- ○—⬭ HYDRAULIC SNUBBER
- × CONSTANT FORCE SUPPORT (CF)

CALCULATION BRANCH/PROJECT IDENTIFIER:
CD-Q2068-871118

ASME CC-1 (EQUIVALENT)



△ EXEMPT PER DNE CALCULATION (MD-Q0999-950033) RIMS MEMO R14 950829 109

Information Only

002	ADMIN	RDL	WCH	HEH	
REVISED PER RIMS MEMO R21 000821 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RECIRCULATION SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE: 9-22-87	DATE 6-10-88	DATE 6-13-88	SHEET 1 OF 2 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. / REV.
DATE: 6-10-88			2-1S1-0278-C / 002

CAD MAINTAINED DRAWING

CCD

ALL A/D HISTORY RESEARCHED AT R000

CLCUALTION BRANCH/PROJECT IDENTIFIER: CD-Q2068-871118

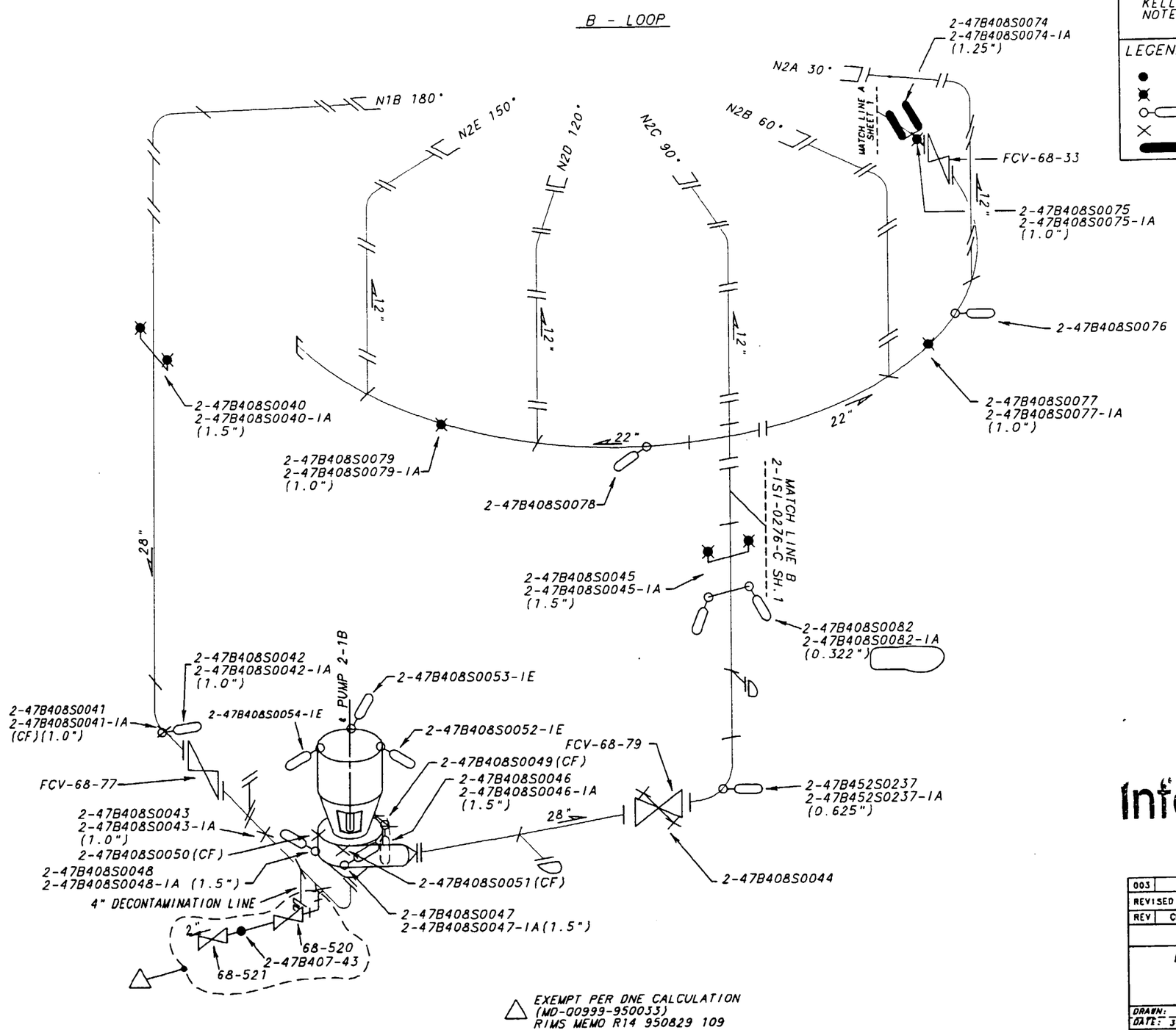
REFERENCE DRAWINGS:

TVA 47K1544-2
GE 2-153F754
KELLOGG BF 2-180
NOTE: THIS DRAWING SUPERSEDES CHM-2068-C ALL SHEETS

LEGEND:

- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- CONSTANT FORCE SUPPORT (CF)
- RIGID STRUT

ASME CC-1 (EQUIVALENT)



△ EXEMPT PER DNE CALCULATION (MD-00999-950033) RIMS MEMO R14 950829 109

Information Only

003	ADMIN	RDL	WCH	HEH	
REVISED PER RIMS MEMO R21 000821 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RECIRCULATION SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE: 3-28-89	DATE 5-10-89	DATE 5-11-89	SHEET 2 OF 2 SHEET(S)
CHECKED: JES DATE: 5-8-89	EDC	GLB	DRAWING NO. 2-1S1-0278-C REV. R003

CCD

ALL A/D HISTORY RESEARCHED AT R001

CAD MAINTAINED DRAWING

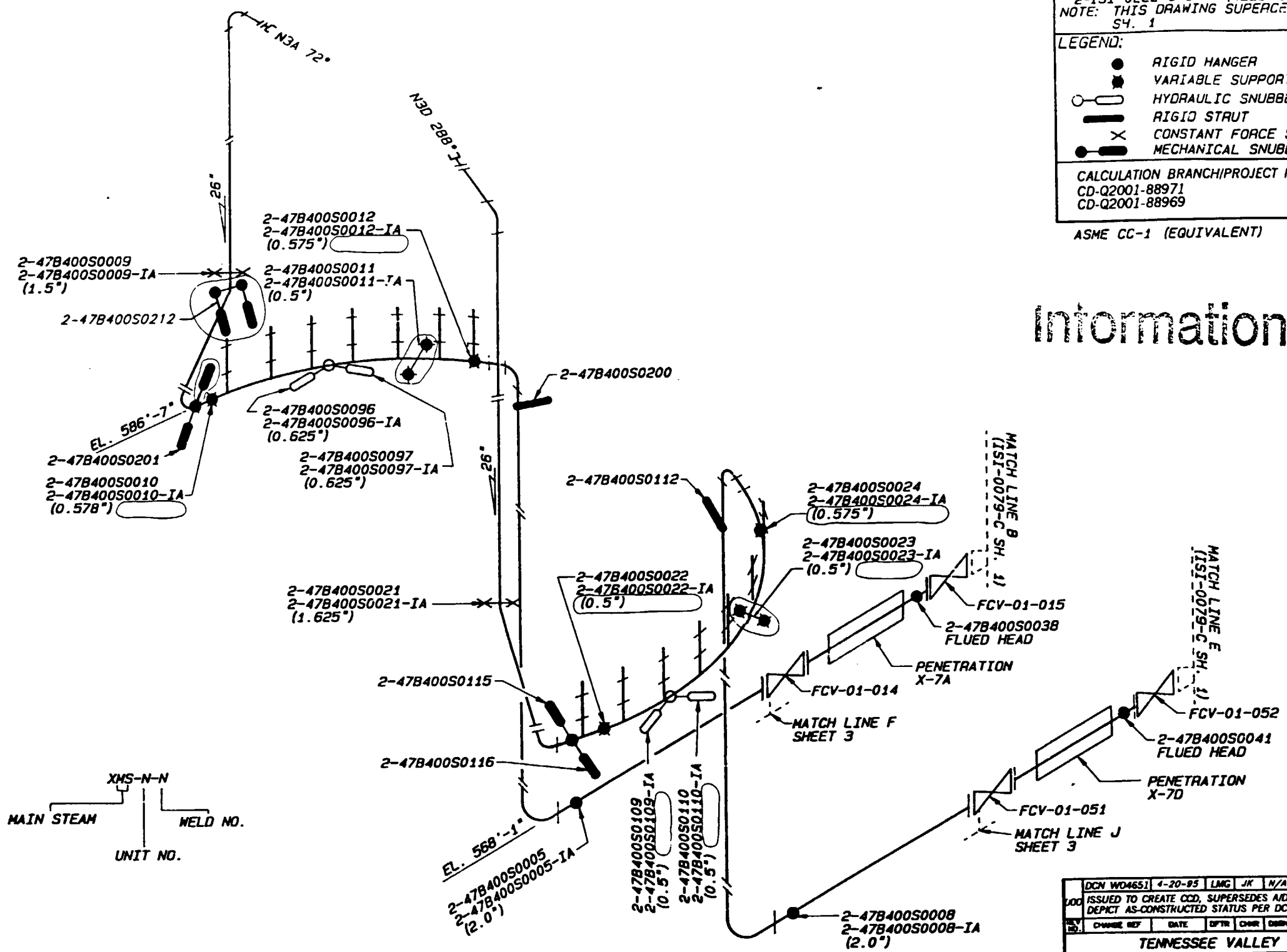
REFERENCE DRAWINGS:
GE 729E401-1
0-729E401-2
2-ISI-0222-C-1 (WELD LOCATIONS)
NOTE: THIS DRAWING SUPERCEDES CHM-2087-C SH. 1

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- RIGID STRUT
- CONSTANT FORCE SUPPORT
- MECHANICAL SNUBBER

CALCULATION BRANCH/PROJECT IDENTIFIERS:
CD-Q2001-88971
CD-Q2001-88969

ASME CC-1 (EQUIVALENT)

Information Only



REV. NO.	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	1 APPD	2 APPD	3 APPD	4 APPD	ISSD
001	ADMIN	7-24-96	RML	WAL	N/A	ELD	N/A	N/A	ELD		
	REVISED TO REFLECT SUPPORT CONFIGURATION AND ATTACHMENT THICKNESS PER RIMS MEMO R92 960524 882 (ADMINISTRATIVE REVISION)										

REV. NO.	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	1 APPD	2 APPD	3 APPD	4 APPD	ISSD
000	DCN W04651	4-20-95	LMG	JK	N/A	VH	FWF	JRG			
	ISSUED TO CREATE CCD, SUPERSEDES A/D ISI-0279-C-1 R06 AND TO DEPICT AS-CONSTRUCTED STATUS PER DCN W04651										

TENNESSEE VALLEY AUTHORITY

S

BROWNS FERRY NUCLEAR PLANT
UNIT 2
MAIN STEAM SYSTEM SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 12-16-88	DATE:	DATE:	SHEET 01 OF 04 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. 2-ISI-0279-C
DATE:			

CCD R001

ALL A/D HISTORY RESEARCHED @ R000

PCADAM

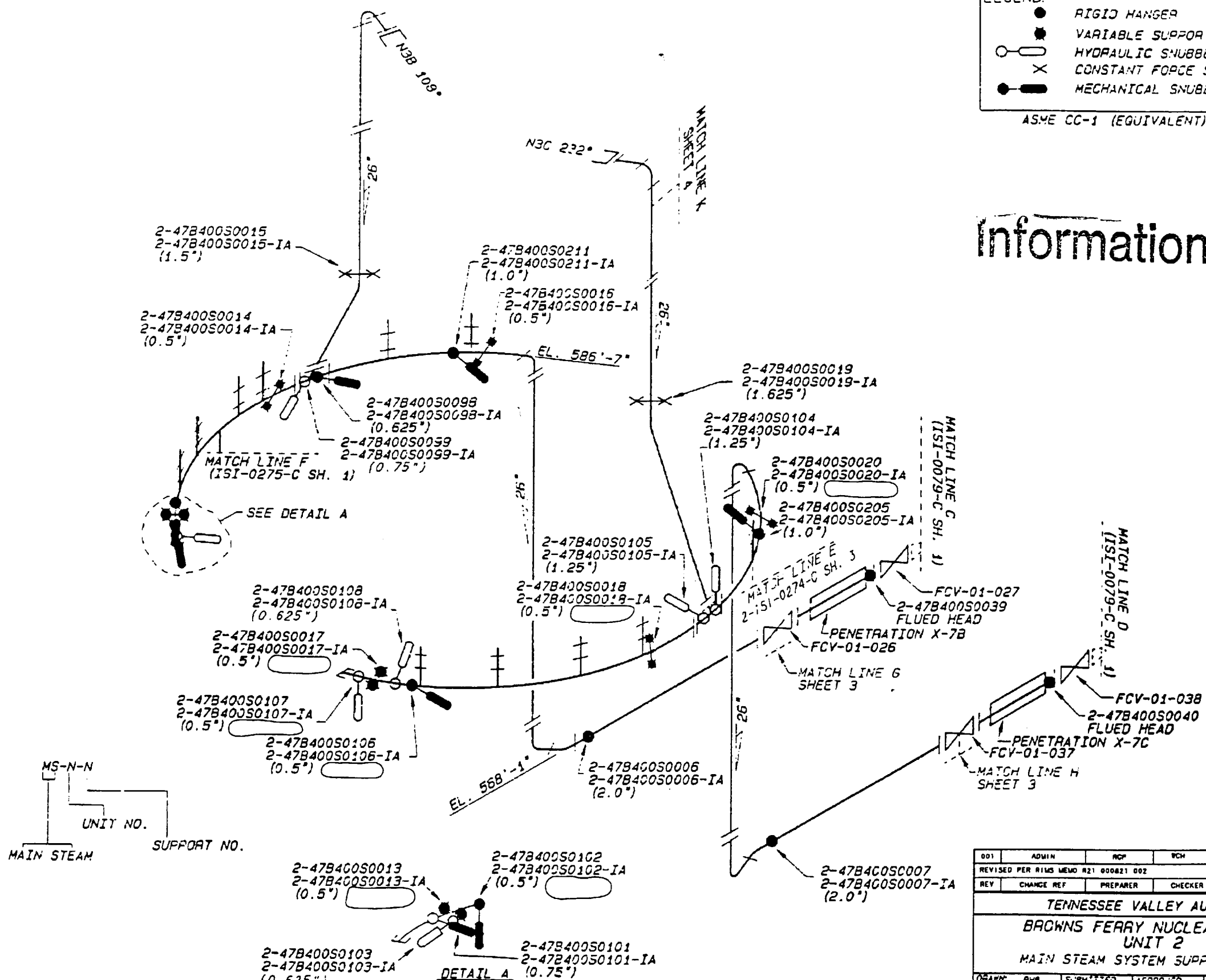
CALCULATION BRANCH/PROJECT IDENTIFIERS: CD-Q2001-88972
CD-Q2001-88970

REFERENCE DRAWINGS:
GE 729E401 SH. 1 & 2
ISI-0222-C SH. 2 (WELD MAP)
NOTE: THIS DRAWING SUPERCEDES CHM-2087-C SH. 2

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- CONSTANT FORCE SUPPORT
- MECHANICAL SNUBBER

ASME CC-1 (EQUIVALENT)

Information Only



REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
001	ADMIN	RCF	RCH	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
MAIN STEAM SYSTEM SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 9-24-97	DATE 6-14-88	DATE 6-14-88	SHEET 02 OF 04 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. 2-ISI-0279-C
DATE: 6-14-88			REV 000

CCD R001

CAD MAINTAINED DRAWING

ALL A/D HISTORY RESEARCHED TO R000

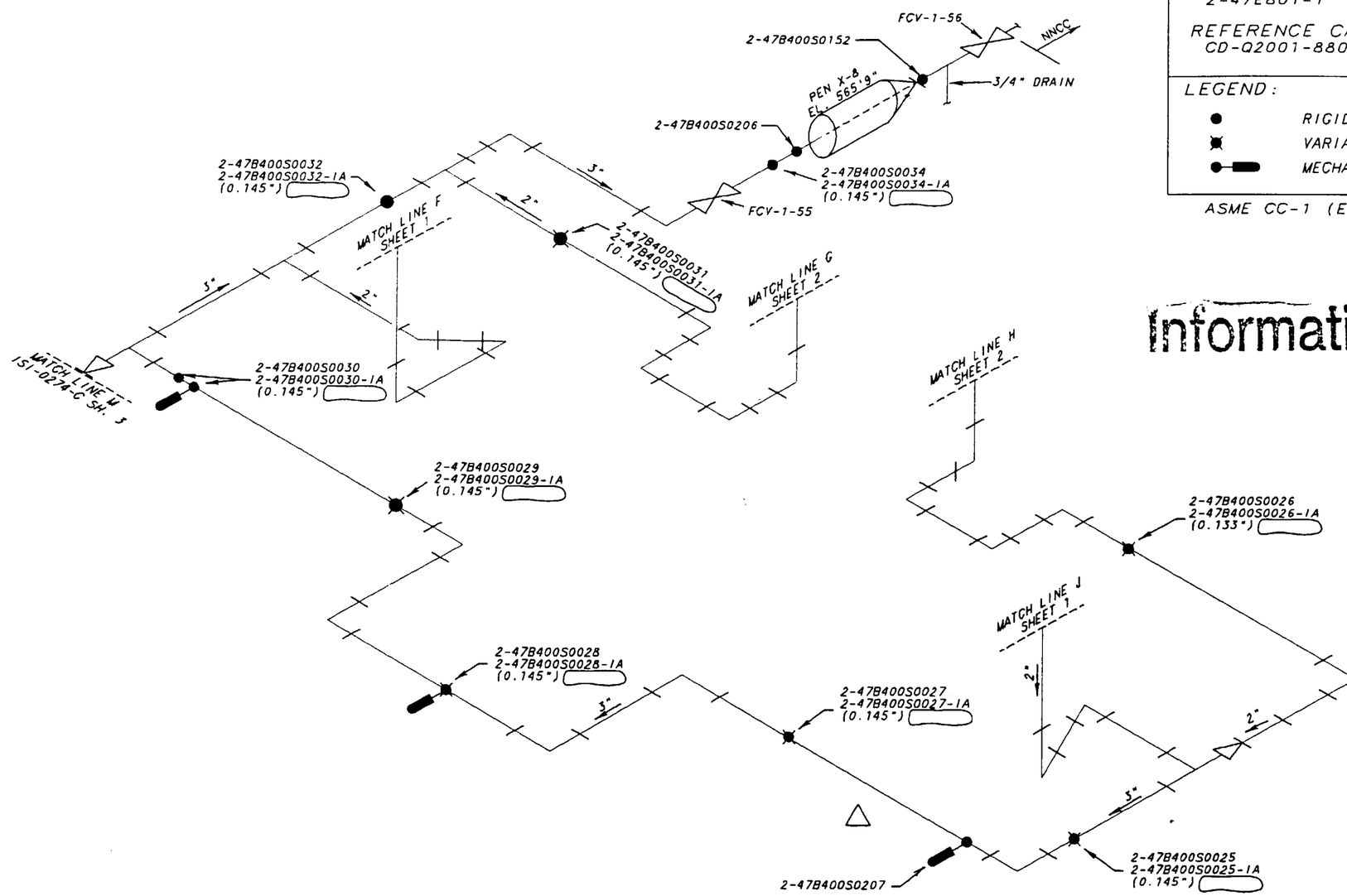
REFERENCE DRAWINGS:
47W400 SERIES
47B400 SERIES
2-47E801-1

REFERENCE CALC:
CD-Q2001-880973

LEGEND:

- ● RIGID HANGER
- ✖ VARIABLE SUPPORT
- ●▬ MECHANICAL SNUBBER

ASME CC-1 (EQUIVALENT)



Information Only

△ EXEMPT PER DNE CALCULATION
(MD-00999-950033)
RIMS MEMO R14 950829 109

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
002	ADMIN	RGP	WCH	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
MAIN STEAM SYSTEM
DRAIN SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE: 9-6-91	DATE: 9-20-91	DATE: 9-29-91	SHEET 03 OF 04 SHEET(S)
CHECKED: JAA	JES	GLB	DRAWING NO. / REV.
DATE: 9-20-91			2-1S1-0279-C / 002

ALL A/D HISTORY RESEARCHED TO R000

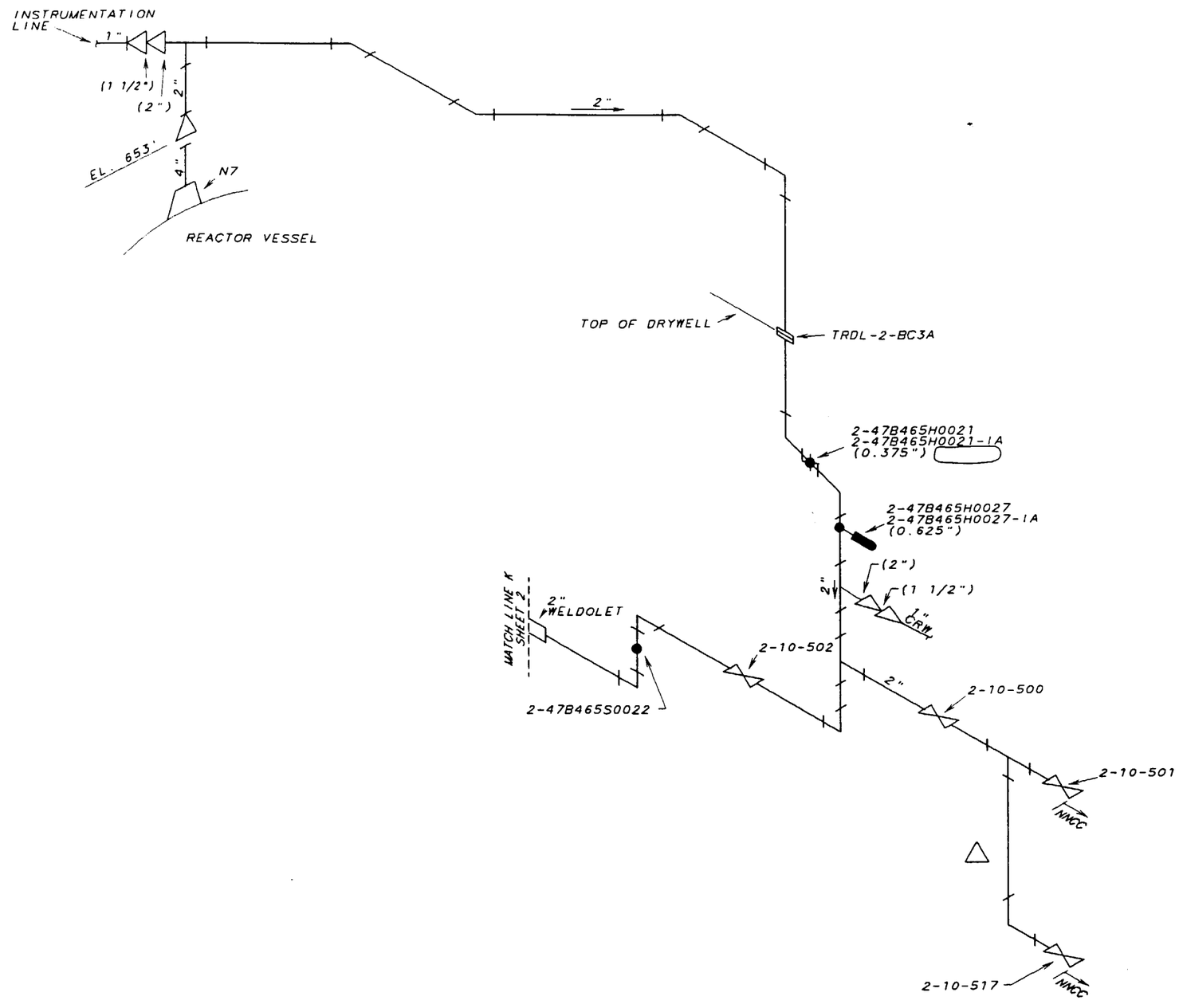
CAD MAINTAINED DRAWING

CCD

REFERENCE DRAWINGS:
47W465 SERIES PIPING DWG
47W465 H SERIES SUPPORT DWG
47B465 SERIES SUPPORT DWG.
47A465 SERIES SUPPORT DWG.
2-47E817-1 FLOW DIAGRAM

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- MECHANICAL SNUBBER

ASME CC-1 (EQUIVALENT)



Information Only

△ EXEMPT PER DNE CALCULATION (MD-Q0999-950033) RIMS MEMO R14 950829 109

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
002	ADMIN	RGP	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
MAIN STEAM SYSTEM
INSTRUMENTATION SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE: 9-6-91	DATE: 9-20-91	DATE: 9-29-91	SHEET 04 OF 04 SHEET(S)
CHECKED: JAA	JES	GLB	DRAWING NO. 2-1SI-0279-C / REV. 001
DATE: 9-20-91			

ALL A/D HISTORY RESEARCHED TO R000

CAD MAINTAINED DRAWING

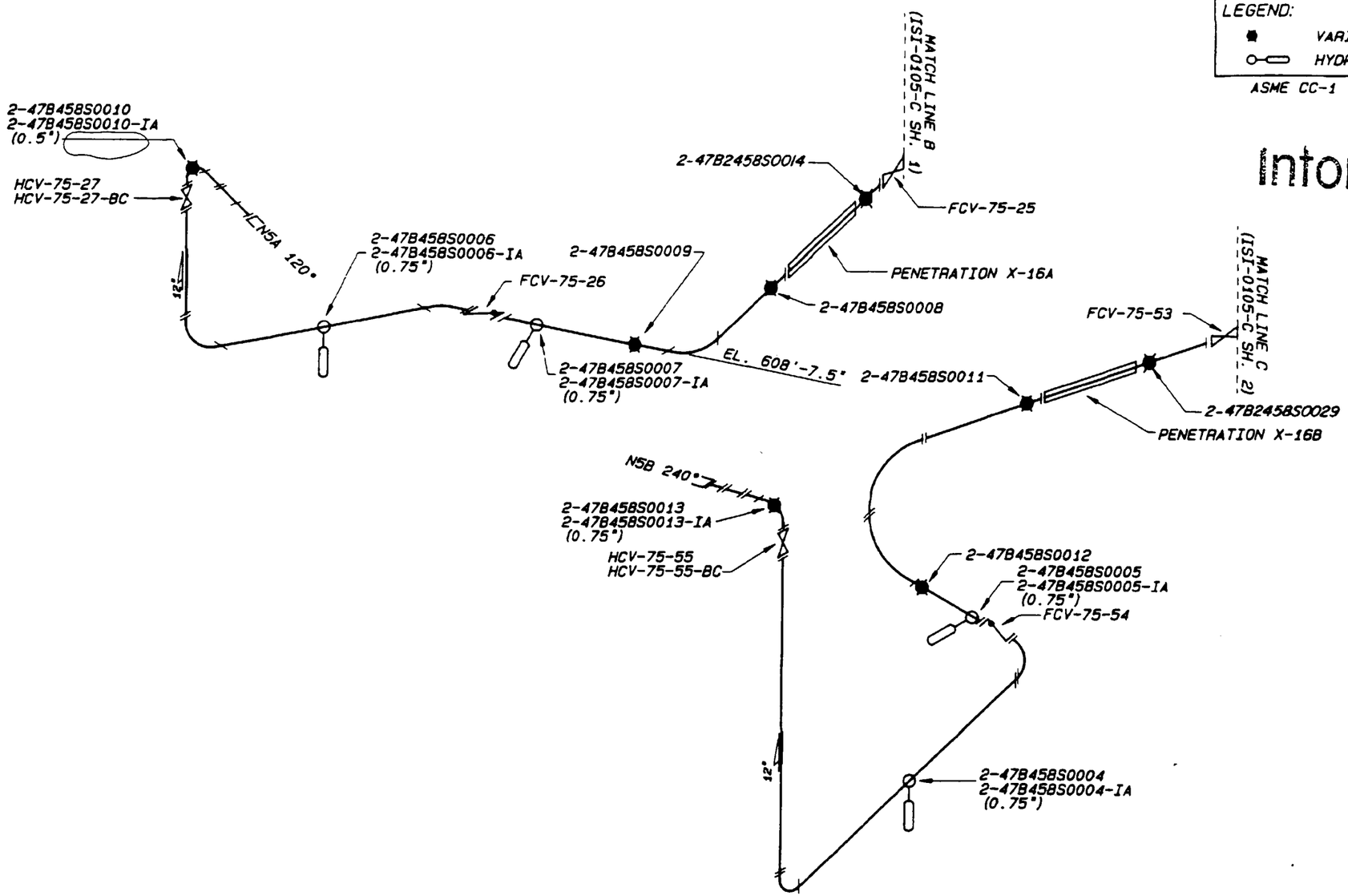
CCD

REFERENCE DRAWINGS:
47W458-1R8
ISI-0271-C (SH. 1) WELD MAP
NOTE: THIS DRAWING SUPERCEDES CHM-2089-C ALL SHEETS.

LEGEND:
VARIABLE SUPPORT
HYDRAULIC STRUT

ASME CC-1 (EQUIVALENT)

Information Only



CS - N - N

CORE SPRAY — UNIT NO. — SUPPORT NO.

CAD MAINTAINED DRAWING

001	ADMIN	RDL	WCH	HEH	
REVISED PER RIMS MEMO R21 000821 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

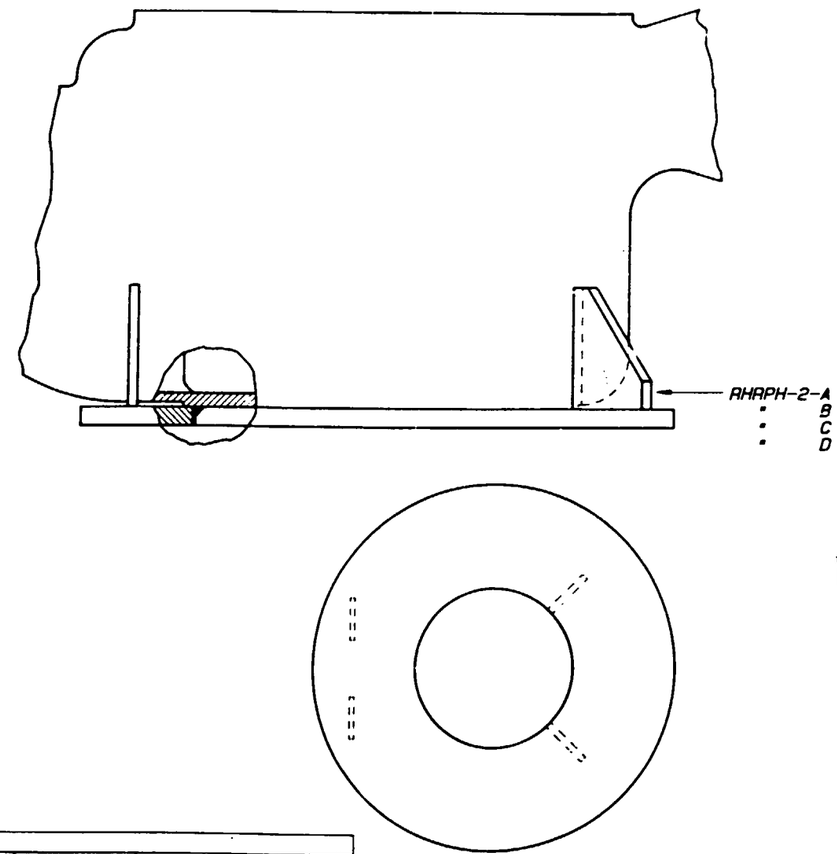
BROWNS FERRY NUCLEAR PLANT
UNIT 2
CORE SPRAY SYSTEM
SUPPORT LOCATIONS

DRAWN: PMB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 8-25-87	DATE:	DATE:	SHEET 1 OF 1 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. / REV
DATE:			2-ISI-0280-C / 001

ALL A/D HISTORY RESEARCHED AT R000

CCD

REFERENCE DRAWINGS:
THIS DRAWING SUPERCEDES ISI-0022-B
FOR UNIT 2 ONLY.
ASME CC-2 (EQUIVALENT)



Information Only

REV.	BY	DATE	DESCRIPTION	CK'D	SUB.	APP

TENNESSEE VALLEY AUTHORITY
DIVISION OF NUCLEAR ENGINEERING

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL PUMP SUPPORT

DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 6-10-88	DATE: 6/10/88	DATE: 6/13/88	SHEET 1 OF 1 SHEET(S)
CHECKED: GCS	EJC		DRAWING NO. ISI-0310-B — REV 00
DATE: 6-10-88			

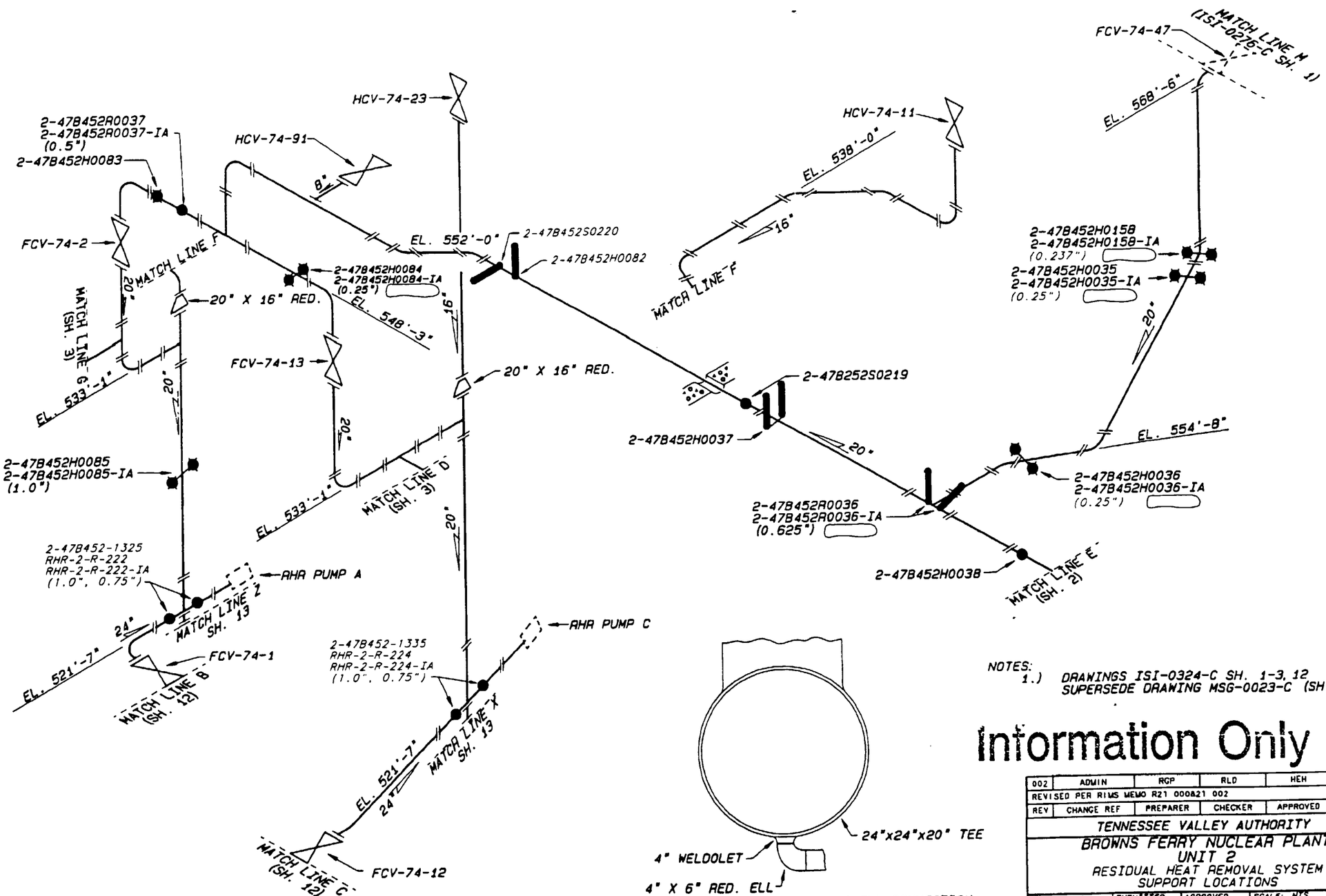
REV	00		
HARDWARE	TEKTRONIX 4129		
SOFTWARE	TEKNICAD 8.2		
FLOPPY OR TAPE #	FLOPPY 08F4		

CALCULATION BRANCH/PROJECT IDENTIFIER: CD-Q2073-883012

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- RIGID STRUT

ASME CC-2 (EQUIVALENT)

REFERENCE DRAWINGS:
47W452 SERIES
47W335-4
MSG-0018-C (SH. 1) WELD MAP
THIS DRAWING SUPERSEDES MSG-0023-C SH.
(SEE NOTE 1)



DETAIL OF 4" X 6" REDUCING ELL CONNECTION

NOTES:
1.) DRAWINGS ISI-0324-C SH. 1-3, 12 SUPERSEDE DRAWING MSG-0023-C (SH. 1)

Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
002	ADMIN	RGP	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: PMB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 6-8-88	DATE: 6-8-88	DATE: 6-9-88	SHEET 1 OF 13 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. 2-ISI-0324-C
DATE: 6-8-88			REV 002

CCD

ALL A/D HISTORY RESEARCHED TO R000

CAD MAINTAINED DRAWING

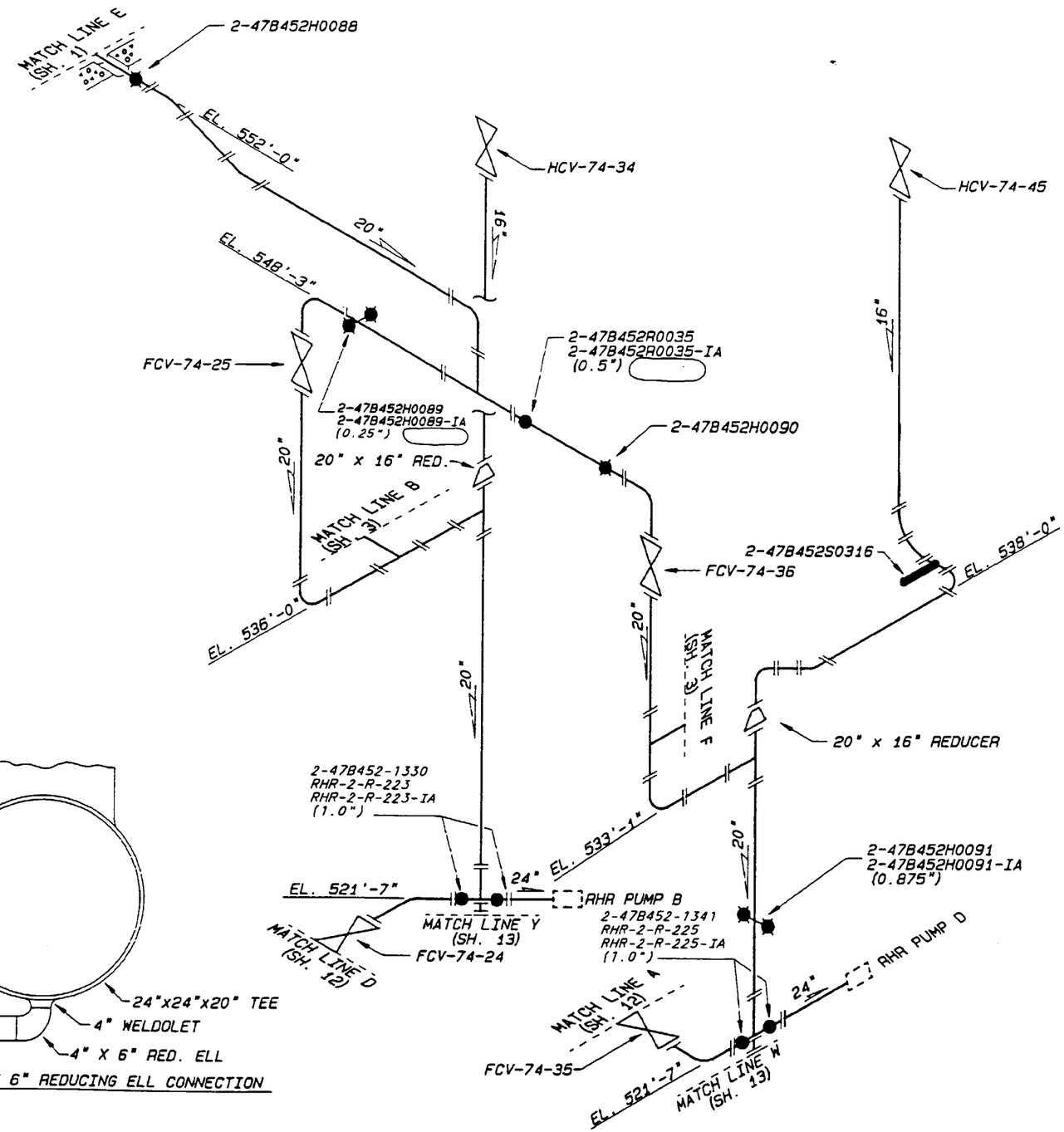
NOTES:
1. DRAWINGS ISI-0324-C SH. 1-3, 12 MAKE UP SUPERCEDED DRAWING MSG-0023-C (SH. 1)

REFERENCE DRAWINGS
47W452 SERIES
47W335-4
MSG-0018-C (SH. 2)
THIS DRAWING SUPERCEDES MSG-0023-C SH. 1 (SEE NOTE 1)

LEGEND
- RIGID SUPPORT
- VARIABLE SUPPORT
- RIGID STRUT

CALCULATION BRANCH/PROJECT IDENTIFIER: CD-02073-883012

ASME CC-2 (EQUIVALENT)



DETAIL OF 4" X 6" REDUCING ELL CONNECTION

Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
001	ADMIN	RGP	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: PHS	SUBMITTED	APPROVED	SCALE: NTS
DATE: 6-8-88	DATE: 6-9-88	DATE: 6-9-88	SHEET 2 OF 13 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. / REV
DATE: 6-8-88			2-ISI-0324-C / 001

ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

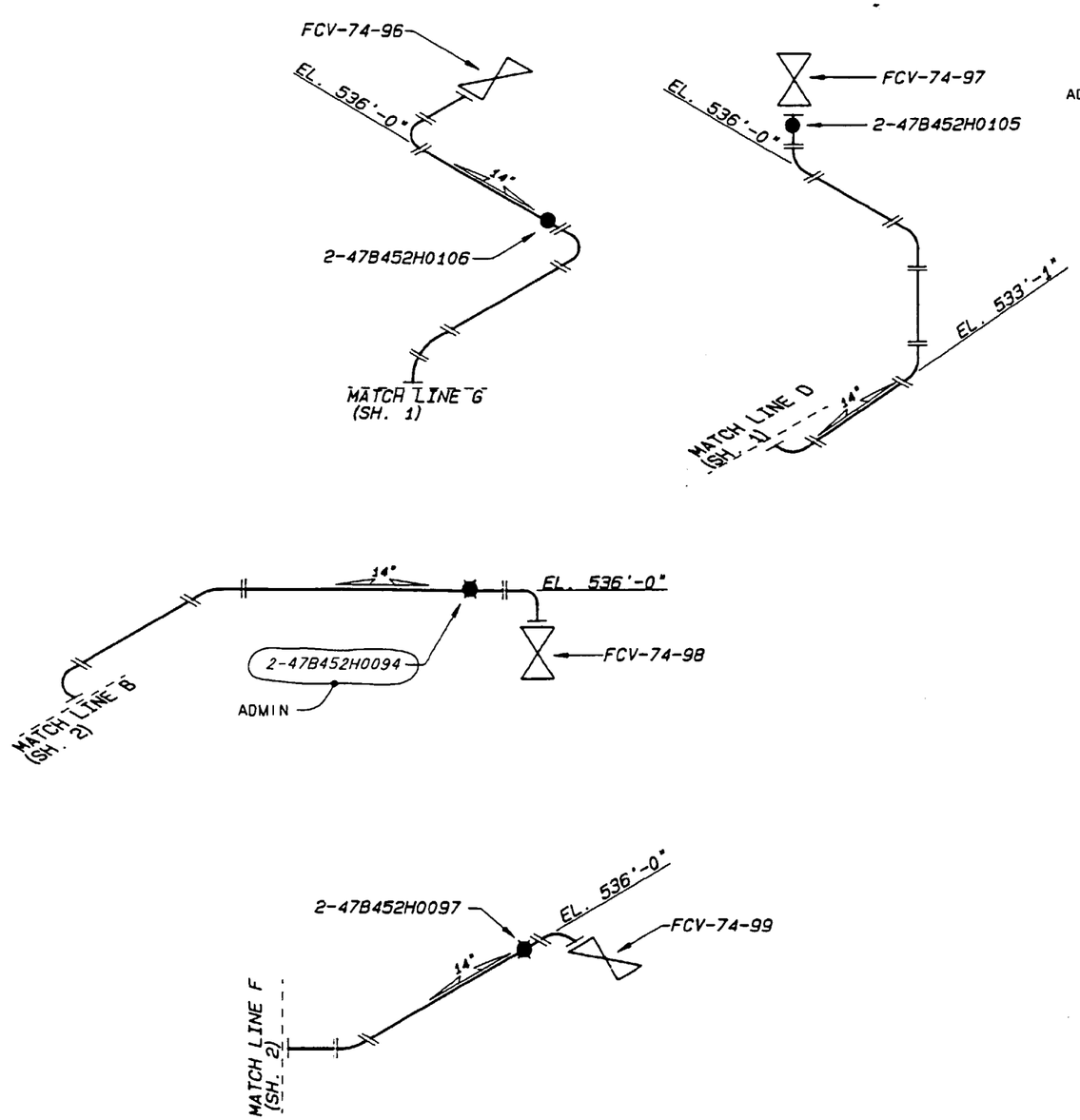
CCD

REFERENCE DRAWINGS
47W452 SERIES
47W335-4
MSG-0018-C (SH. 3) WELD MAP
THIS DRAWING SUPERCEDES MSG-0023-C SH. 1
(SEE NOTE 1)

LEGEND:
● RIGID HANGER
✱ VARIABLE SUPPORT

ADMIN — CALCULATION BRANCH/PROJECT IDENTIFIER: CD-02074-880992

ASME CC-2 (EQUIVALENT)



Information Only

NOTE:
1. DRAWINGS 2-1S1-0324-C-3, 1S1-0324-C SH. 1,2,12 MAKE UP SUPERCEDED DRAWING MSG-0023-C (SH. 1).

REV NO	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	1 APPD	2 APPD	3 APPD	ISSD
000	CCD ADMIN		RDL		N/A		N/A	N/A		
	ISSUED TO CREATE CCD, SUPERSEDES A/D 1S1-0324-C-3 R3 AND TO DEPICT AS-CONSTRUCTED STATUS PER A/D R0, R1, R2; RIMS MEMO R32 860169 001 (ADMINISTRATIVE REVISION)									

HARDWARE: TEK 4129 SOFTWARE: TEKNICAD 8" FLOPPY: BF-14

TENNESSEE VALLEY AUTHORITY

S

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 5-8-88	DATE: 6-8-88	DATE: 6-9-88	SHEET 3 OF 13 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. 2-1S1-0324-C — REV 000
DATE: 6-8-88			

CCD

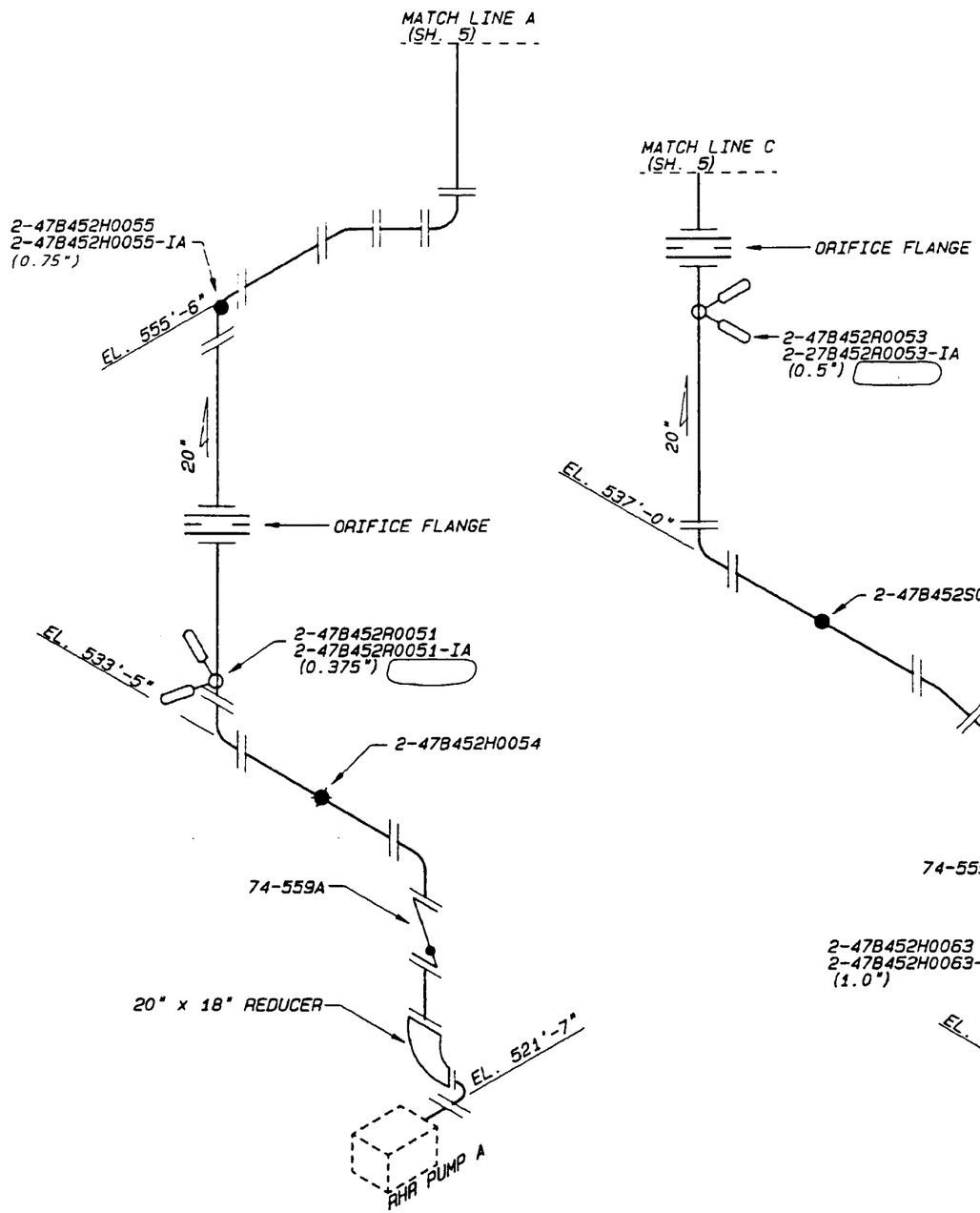
PCADAM

ALL A/D HISTORY RESEARCHED AT R000

REFERENCE DRAWINGS
47W452 SERIES
47W335-7
MSG-0018-C (SH. 4) WELD MAP
THIS DRAWING SUPERCEDES MSG-0023-C SH.2
(SEE NOTE 1)

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER

ASME CC-2 (EQUIVALENT)



NOTES:
1.) DRAWINGS ISI-0324-C SH. 4-7 MAKE UP SUPERCEDED DRAWING MSG-0023-C (SH. 2)

Information Only

001	ADMIN	RGP	RLO	HEH	
REVISED PER RIMS MEMO R21 000821 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 6-3-88	DATE: 6-8-88	DATE: 6-9-88	SHEET 4 OF 13 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. 2-ISI-0324-C
DATE: 6-8-88			REV 001

ALL A/D HISTORY RESEARCHED TO R000

CAD MAINTAINED DRAWING

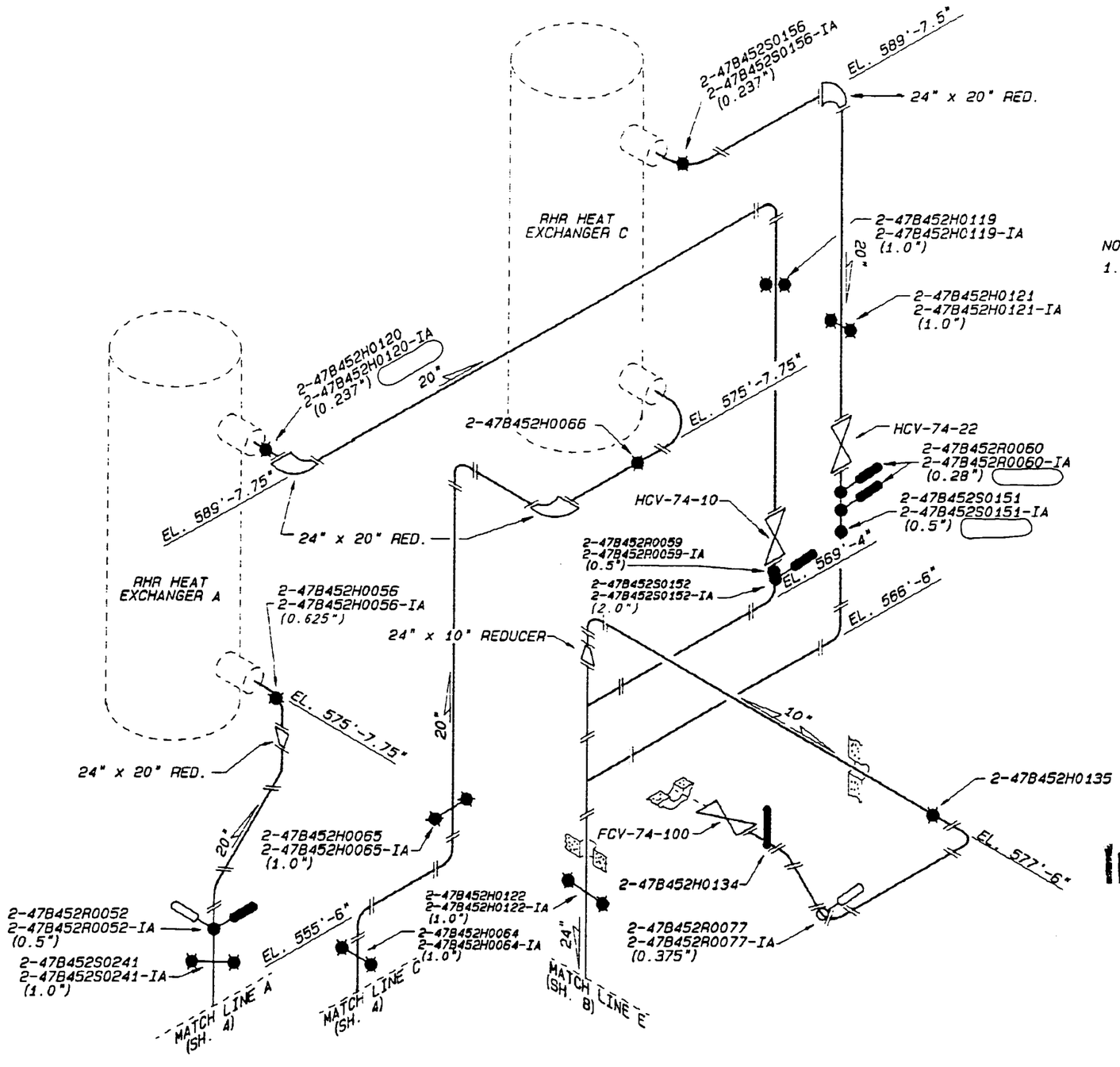
CCD

REFERENCE DRAWINGS
47W452 SERIES
47W335-7
MSG-0018-C (SH. 5) WELD MAP
THIS DRAWING SUPERSEDES MSG-0023-C SH.2
(SEE NOTE 1)

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- MECHANICAL SNUBBER
- RIGID STRUT

ASME CC-2 (EQUIVALENT)

NOTES:
1.) DRAWINGS ISI-0324-C SH. 4-7 MAKE UP SUPERCEDED DRAWING MSG-0023-C (SH. 2)



Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
001	ADMIN	RCP	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: PHS	SUBMITTED	APPROVED	SCALE: NTS
DATE	DATE:	DATE:	SHEET 5 OF 13 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. 2-ISI-0324-C REV 001
DATE:			

ALL A/D HISTORY RESEARCHED TO R000

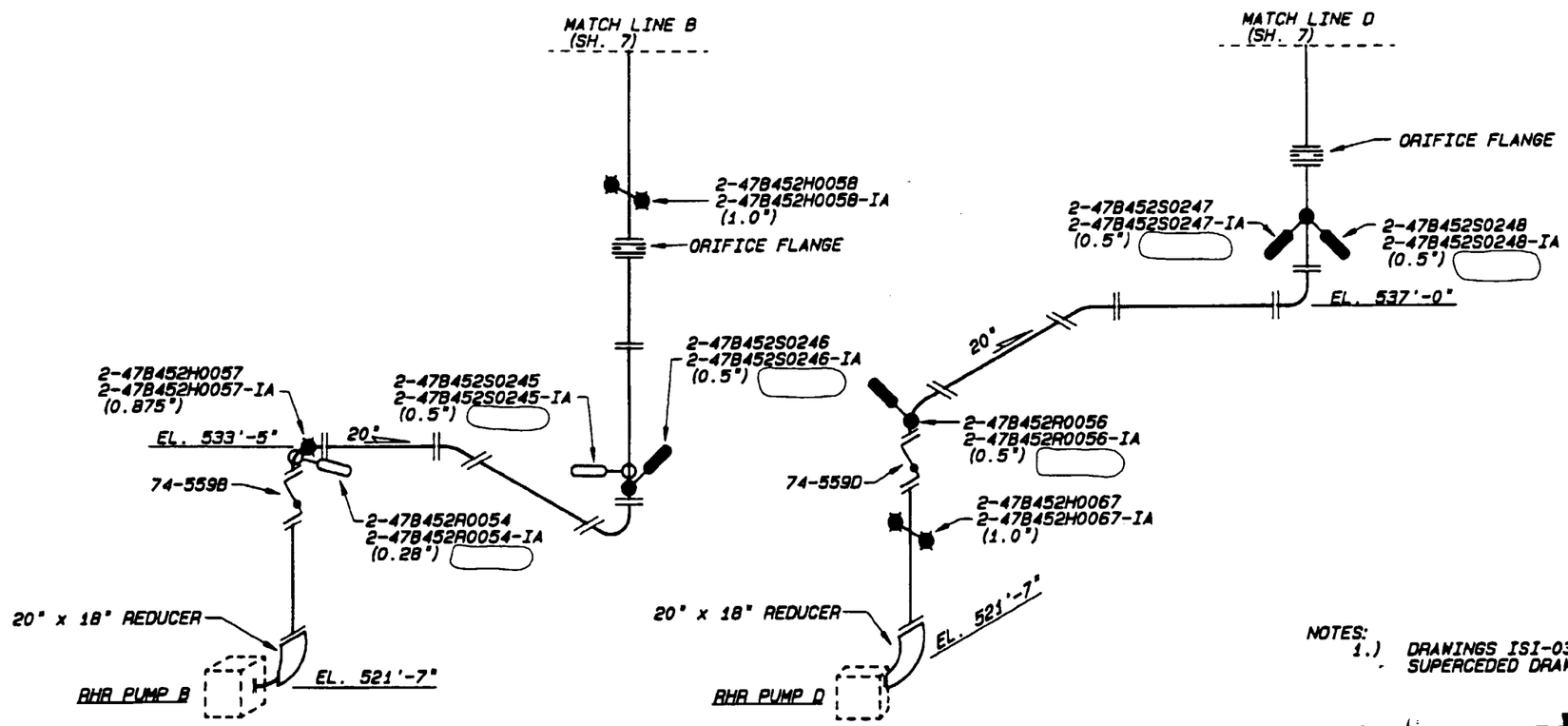
CAD MAINTAINED DRAWING

CCD

REFERENCE DRAWINGS
47W453 SERIES
47W335-7
MSG-0018-C (SH. 6) WELD MAP
THIS DRAWING SUPERCEDES MSG-0023-C SH.2
(SEE NOTE 1)

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- MECHANICAL SNUBBER

ASME CC-2 (EQUIVALENT)



MF
R03

NOTES:
1.) DRAWINGS ISI-0324-C SH. 4-7 MAKE UP SUPERCEDED DRAWING MSG-0023-C (SH. 2)

Information Only

000	ADMIN	RGP	RLD	HEH	
ISSUED TO CREATE CCD. SUPERSEDES A/D ISI-0324-C-6 R004 AND TO DEPICT AS-CONSTRUCTED STATUS PER RIMS MEMO R21 000821 002 (ADMINISTRATIVE REVISION)					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: MB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 6-8-88	DATE: 6-8-88	DATE: 6-8-88	SHEET 6 OF 13 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. 2-ISI-0324-C / REV 000
DATE: 6-8-88			

ALL A/D HISTORY RESEARCHED TO R000

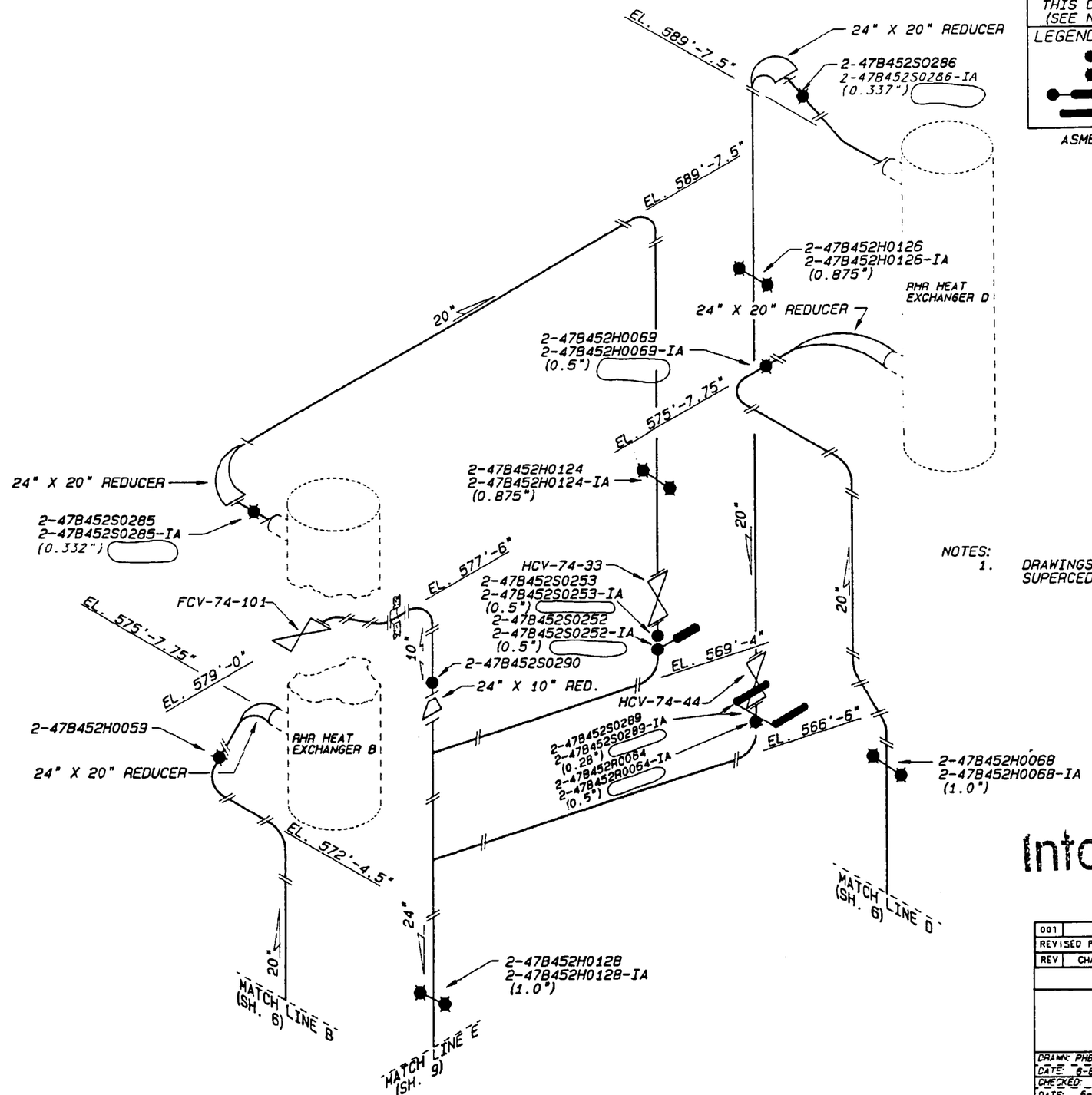
CAD MAINTAINED DRAWING

CCD

REFERENCE DRAWINGS
47W452 SERIES
47W335-7
MSG-0018-C (SH. 7) WELD MAP
THIS DRAWING SUPERCEDES MSG-0023-C SH. 2
(SEE NOTE 1)

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- MECHANICAL SNUBBER
- RIGID STRUT

ASME CC-2 (EQUIVALENT)



NOTES:
1. DRAWINGS ISI-0324-C SH. 4-7 MAKE UP SUPERCEDED DRAWING MSG-0023-C (SH. 2)

Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
001	ADMIN	RGP	RLD	HEH	
REVISED PER RIMS MEMO R21 000621 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 6-8-88	DATE: 6-8-88	DATE: 6-9-88	SHEET 7 OF 13 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. 2-ISI-0324-C
DATE: 6-8-88			REV 001

ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

CCD

NOTES:

1. DRAWINGS ISI-0324-C CH. 8 AND 9 MAKE UP SUPERSEDED DRAWING MSG-0023-C (SH. 3)
2. POSSIBLE EXCESSIVE GRIND SPOT BELOW RHR-2-H-7 (RS) @ 7:00
3. DRAWING NUMBERS PROVIDED IN PARENTHESIS. DRAWING MAY HAVE MULTIPLE SHEETS.

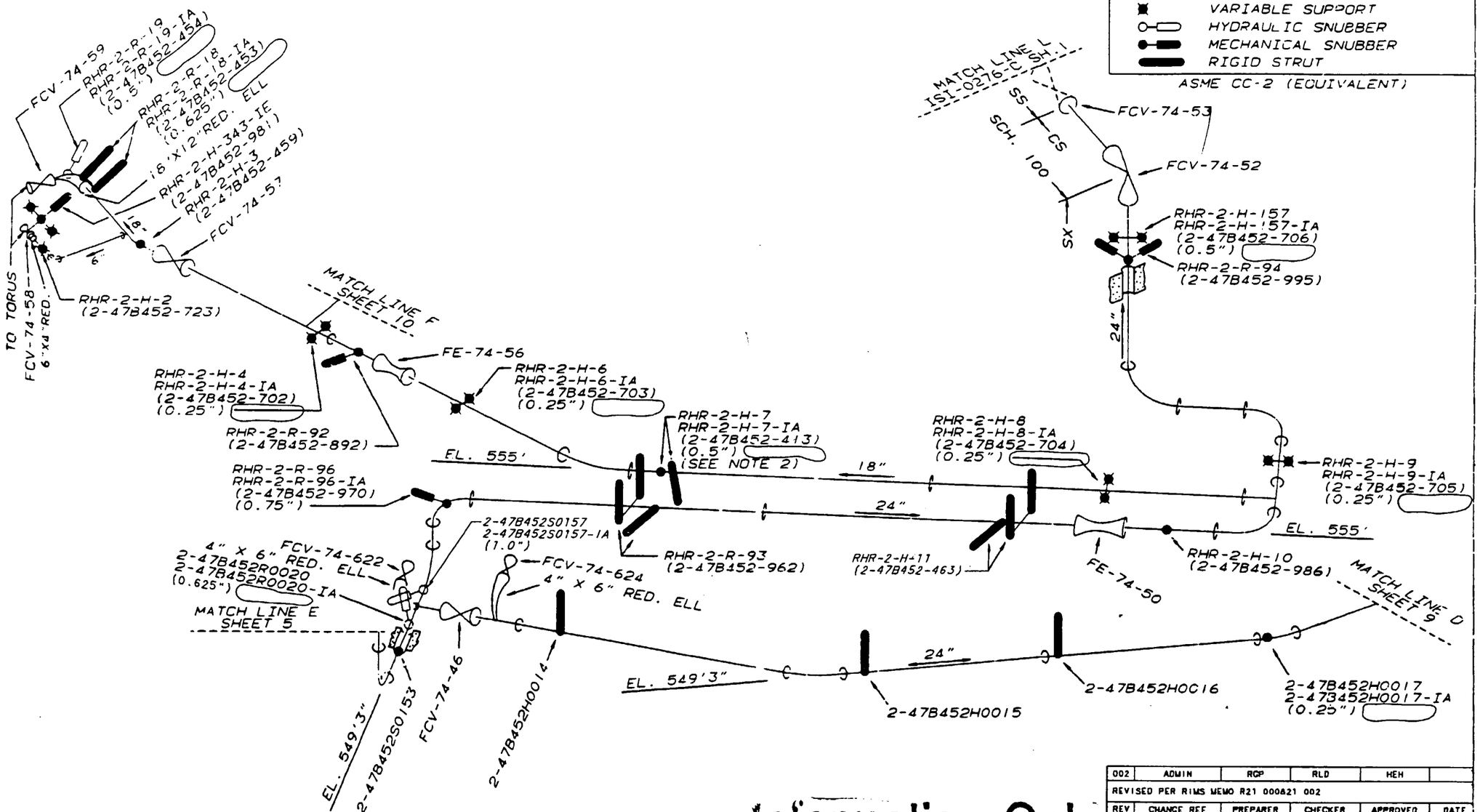
CALCULATION BRANCH/PROJECT IDENTIFIER: CD-02074-880991
CD-02074-870644

REFERENCE DRAWINGS
47W452-221
47W335-6
WP2563-88
MSG-0018-C (SH.8) WELD MAP

THIS DRAWING SUPERSEDES MSG-0023-C SH.3 (SEE NOTE 1)

LEGEND
- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- MECHANICAL SNUBBER
- RIGID STRUT

ASME CC-2 (EQUIVALENT)



Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
002	ADMIN	RGP	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE:	DATE:	DATE:	SHEET 08 OF 13 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. 2-ISI-0324-C REV. 002
DATE:			

CAD MAINTAINED DRAWING

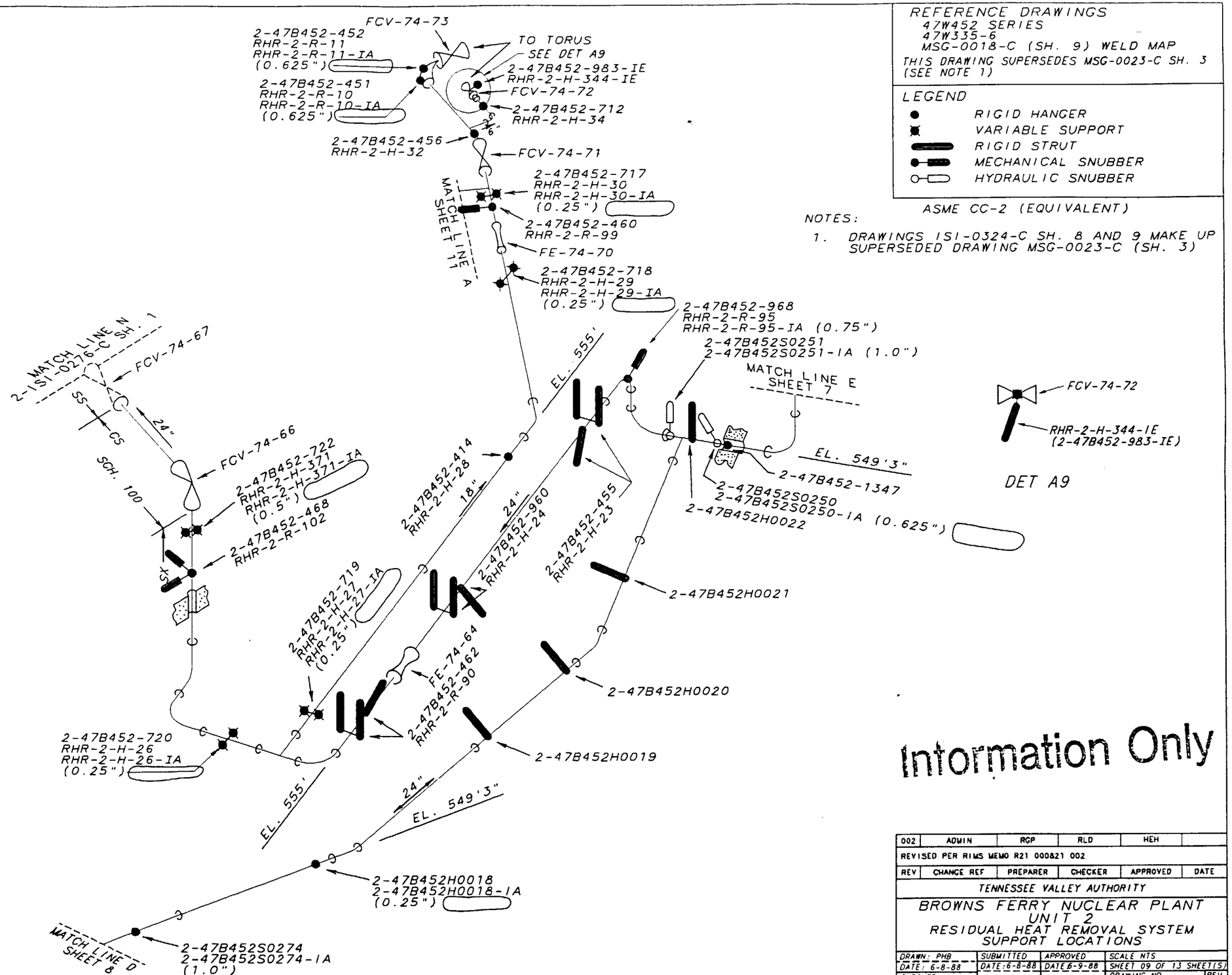
CCD

REFERENCE DRAWINGS
47W452 SERIES
47W335-6
MSG-0018-C (SH. 9) WELD MAP
THIS DRAWING SUPERSEDES MSG-0023-C SH. 3 (SEE NOTE 1)

LEGEND
- RIGID HANGER
- VARIABLE SUPPORT
- RIGID STRUT
- MECHANICAL SNUBBER
- HYDRAULIC SNUBBER

ASME CC-2 (EQUIVALENT)

NOTES:
1. DRAWINGS 1S1-0324-C SH. 8 AND 9 MAKE UP SUPERSEDED DRAWING MSG-0023-C (SH. 3)



Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
002	ADMIN	RGP	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE: 6-8-88	DATE: 6-8-88	DATE 6-9-88	SHEET 09 OF 13 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. 2-1S1-0324-C REV. 002
DATE: 6-8-88			

ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

CCD

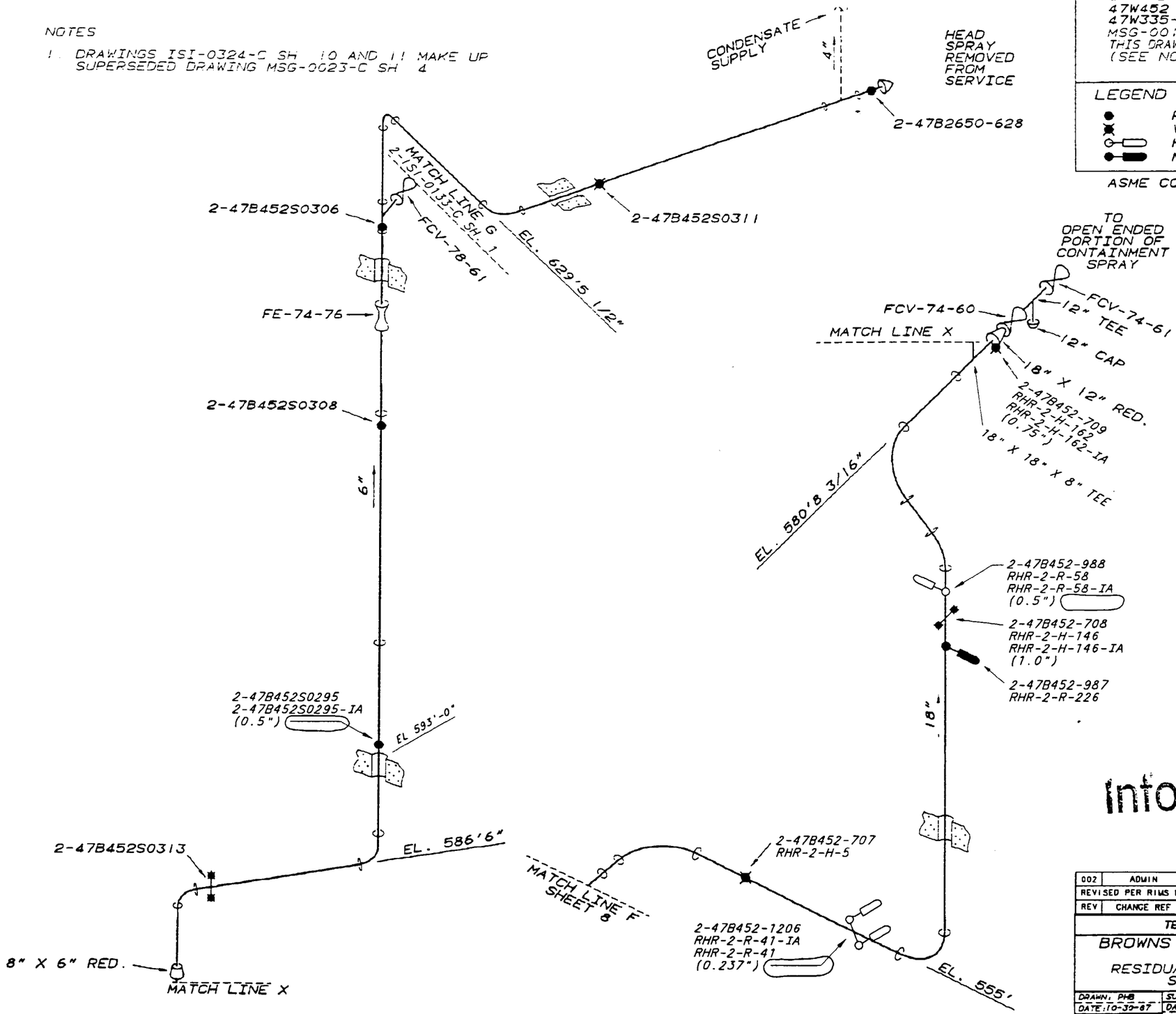
NOTES

1. DRAWINGS ISI-0324-C SH 10 AND 11 MAKE UP SUPERSEDED DRAWING MSG-0023-C SH 4

REFERENCE DRAWINGS
47W452 SERIES
47W335-8
MSG-0018-C (SH 10) WELD MAP
THIS DRAWING SUPERSEDES MSG-0023-C SH 4
(SEE NOTE 1)

LEGEND
- RIGID HANGER
- VARIABLE SUPPORT
- HYDRAULIC SNUBBER
- MECHANICAL SNUBBER

ASME CC-2 (EQUIVALENT)



Information Only

002	ADMIN	RGP	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE: 10-30-87	DATE: 6-8-88	DATE: 6-9-88	SHEET 10 OF 13 SHEET(S)
CHECKED: VES	EDC	GLB	DRAWING NO. / REV.
DATE: 6-8-88			2-ISI-0324-C 002

ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

CCD

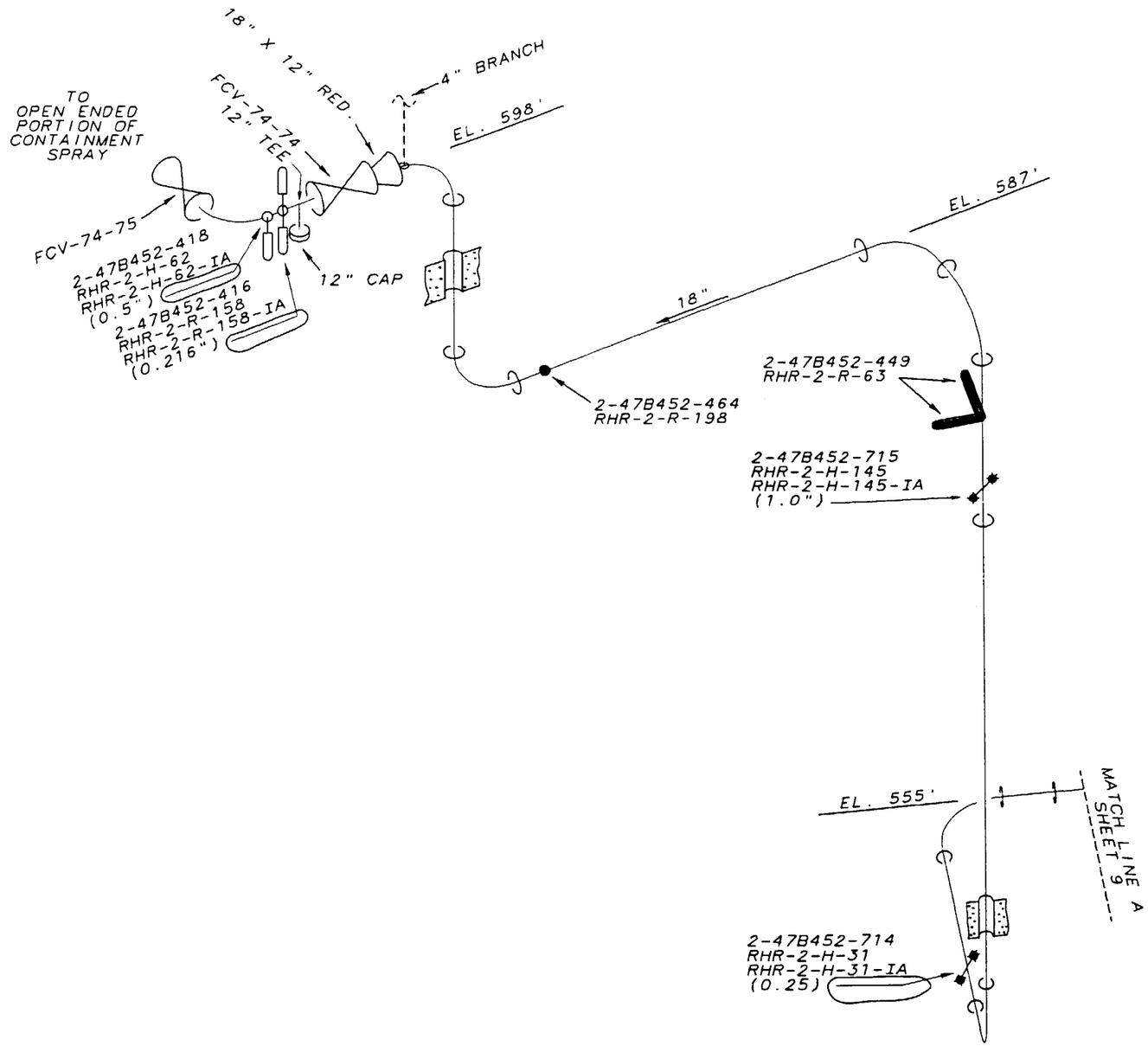
NOTES:

1. DRAWINGS 1SI-0324-C SH. 10 AND 11 MAKE UP SUPERSEDED DRAWING MSG-0023-C (SH. 4)

REFERENCE DRAWINGS
47W452 SERIES
47W335-8
MSG-0018-C (SH. 11) WELD MAP
THIS DRAWING SUPERSEDES MSG-0023-C SH. 4 (SEE NOTE 1)

MATERIAL SPECIFICATIONS
12" X 0.375" NOM. WALL (XS) CS
18" X 0.500" NOM. WALL (STD) CS

ASME CC-2 (EQUIVALENT)



Information Only

002	ADMIN	RGP	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS	
DATE: 10-27-87	DATE: 8-8-88	DATE: 8-9-88	SHEET 11 OF 13 SHEET(S)	
CHECKED: JES	EDC	GLB	DRAWING NO.	REV.
DATE: 8-8-88			2-1SI-0324-C	002

CCD

ALL A/D HISTORY RESEARCHED AT R000

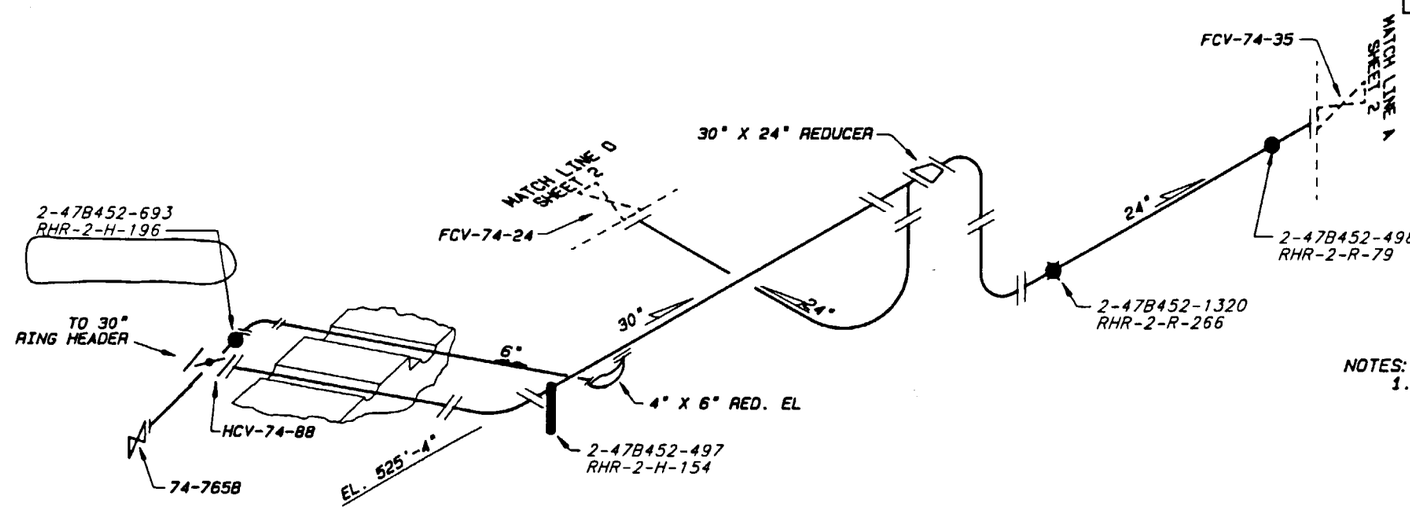
CAD MAINTAINED DRAWING

CALCULATION BRANCH/PROJECT IDENTIFIER: CD-Q2073-883012

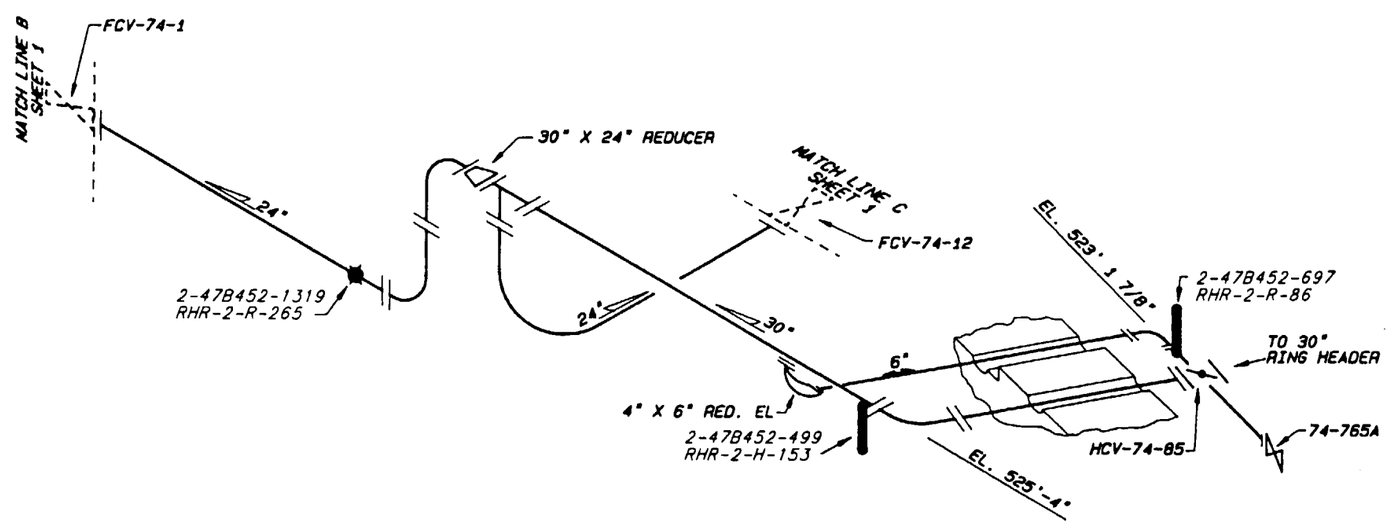
REFERENCE DRAWINGS:
47W403-203
47W403-205
MSG-0018-C (SH. 12) WELD MAP
THIS DRAWING SUPERSEDES MSG-0023-C SH. 1 (SEE NOTE 1)

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- RIGID STRUT
- MECHANICAL SNUBBER

ASME CC-2 (EQUIVALENT)



NOTES:
1.) DRAWINGS ISI-0324-C SH. 1-3, 12 SUPERSEDE DRAWING MSG-0023-C (SH. 1)



Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
001	ADMIN	RDL	WCH	RLO	12-9-99
REVISED PER RIMS MEMO R21 991201 003					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT #2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: RPG	SUBMITTED	APPROVED	SCALE: NTS
DATE: 10-1-88	DATE: 6-10-88	DATE: 6-13-88	SHEET 12 OF 13 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. 2-ISI-0324-C
DATE: 6-10-88			REV 001

CCD

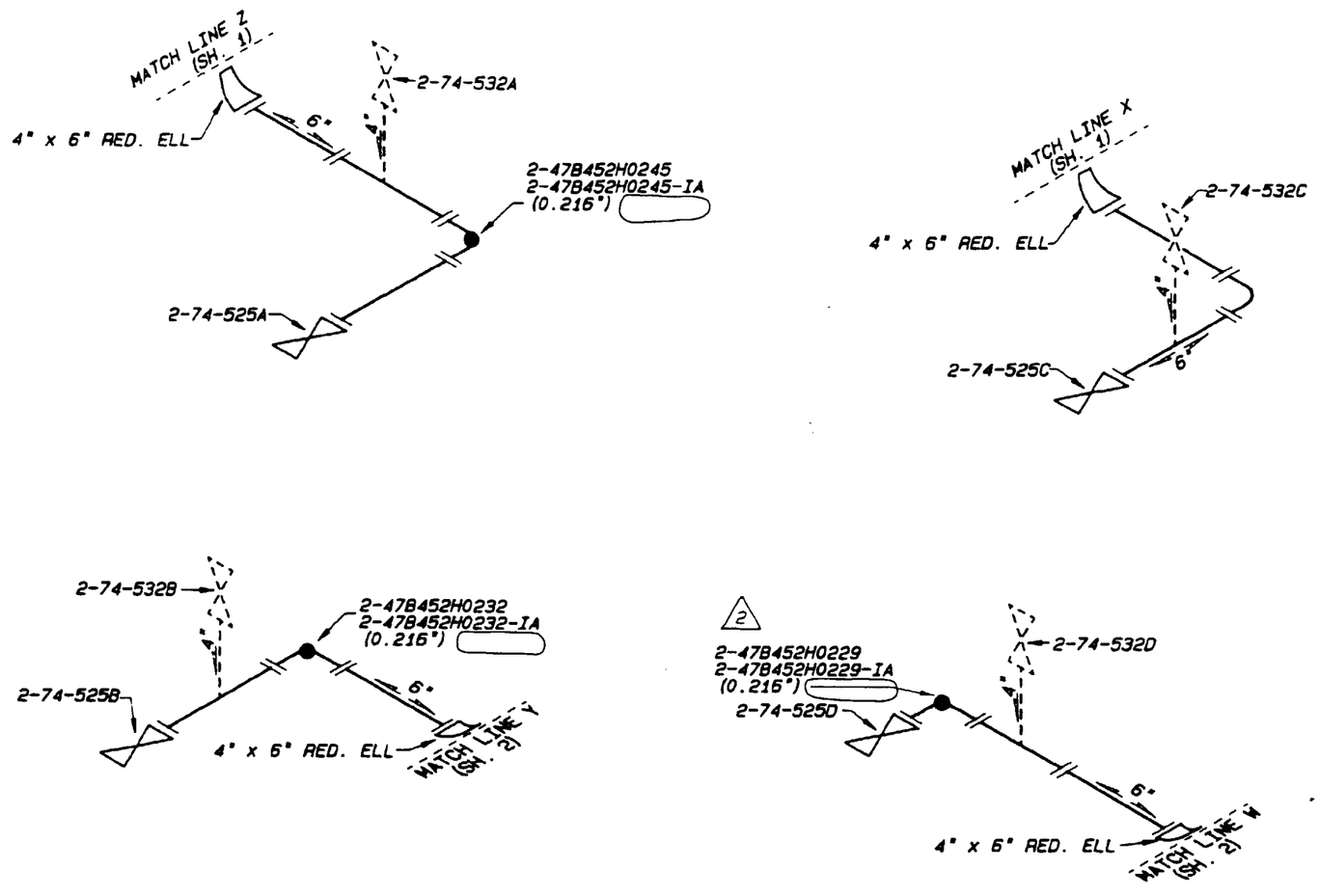
PCADAM

ALL A/D HISTORY RESEARCHED AT R000

REFERENCE DRAWINGS
47W452 SERIES
47W335-4

LEGEND:
● RIGID HANGER

ASME CC-2 (EQUIVALENT)



Information Only

000	ADMIN	RGP	RLD	HEH	
ISSUED TO CREATE CCD. SUPERSEDES A/D 1S1-0324-C-13 R003 AND TO DEPICT AS-CONSTRUCTED STATUS PER RIMS MEMO R21 000821 002 (ADMINISTRATIVE REVISION)					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
RESIDUAL HEAT REMOVAL SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 12-17-90	DATE: 4-8-91	DATE: 4-11-91	SHEET 13 OF 13 SHEETS
CHECKED: JAA	JES	GLB	DRAWING NO. 2-1S1-0324-C — REV 000
DATE: 4-5-91			

ALL A/D HISTORY RESEARCHED TO R000

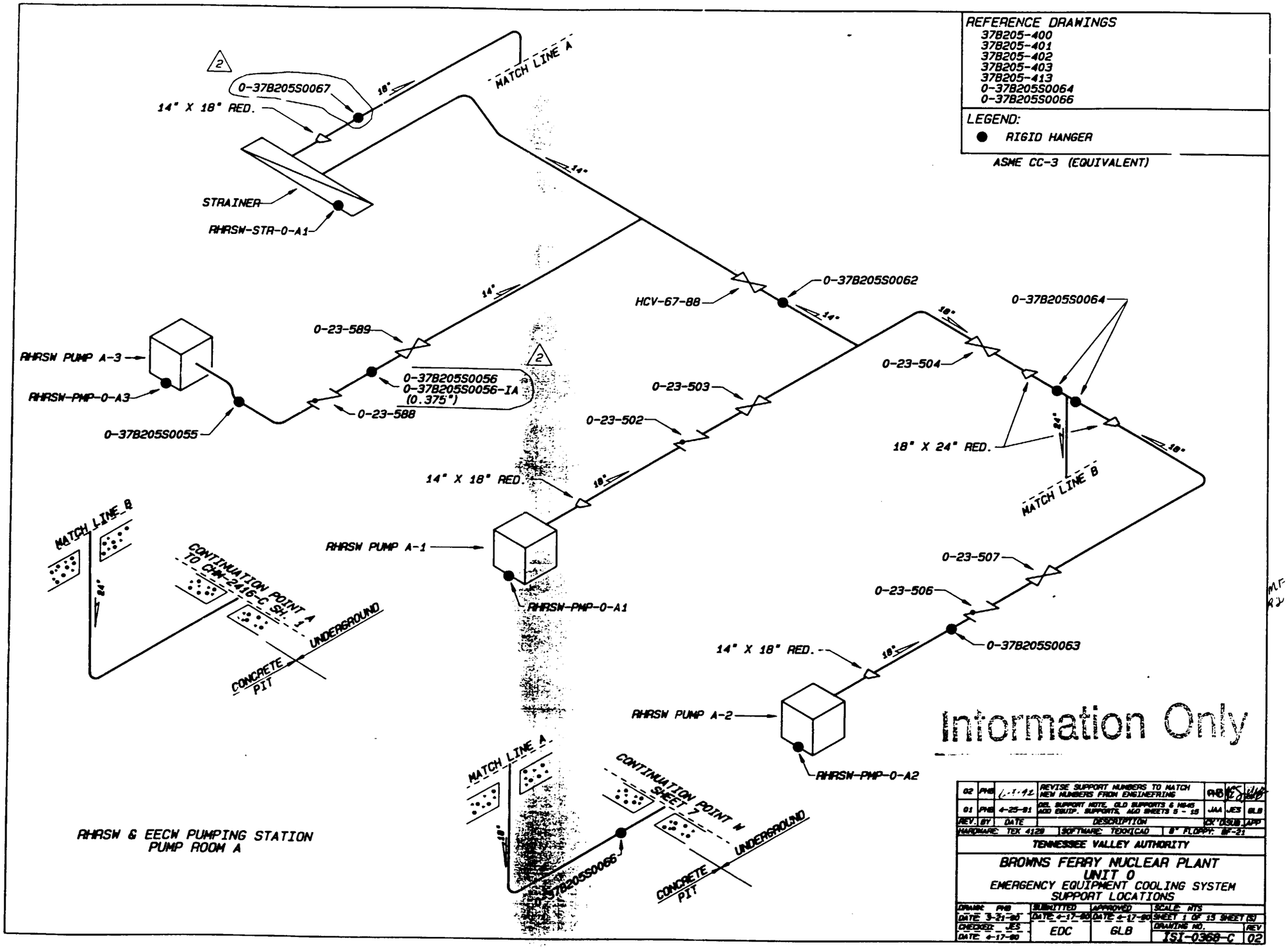
CAD MAINTAINED DRAWING

CCD

REFERENCE DRAWINGS
37B205-400
37B205-401
37B205-402
37B205-403
37B205-413
0-37B205S0064
0-37B205S0066

LEGEND:
● RIGID HANGER

ASME CC-3 (EQUIVALENT)



Information Only

RHRSW & EECW PUMPING STATION
PUMP ROOM A

REV.	BY	DATE	DESCRIPTION	CK'D	DSGN	APP
02	PHB	6-1-92	REVISE SUPPORT NUMBERS TO MATCH NEW NUMBERS FROM ENGINEERING	PHB	JCS	GLB
01	PHB	4-25-91	DEL SUPPORT NOTE, OLD SUPPORTS & HGRS ADD EQUIP. SUPPORTS, ADD SHEETS 8 - 15	JAA	JES	GLB

HARDWARE: TEX 4120 | SOFTWARE: TEXNICAD | 8" FLOPPY: BF-21

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 0
EMERGENCY EQUIPMENT COOLING SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 3-21-90	DATE: 4-17-90	DATE: 4-17-90	SHEET 1 OF 15 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. ISI-0368-C
DATE: 4-17-90			REV 02

Information Only

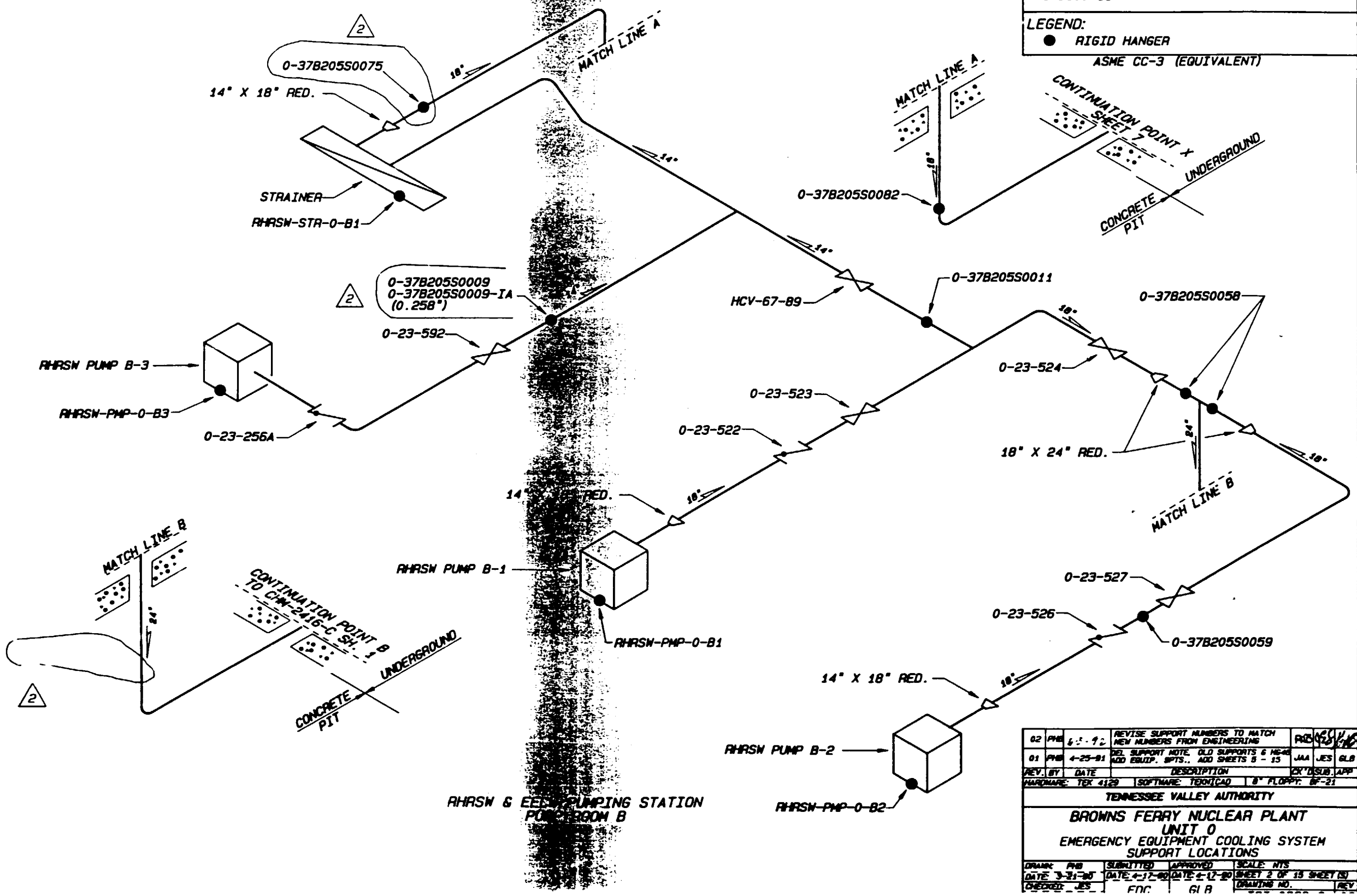
REFERENCE DRAWINGS

37B205-417
37B205-428
0-37B205S0011
0-37B205S0058
0-37B205S0059
0-37B205S0082
17B300-11

LEGEND:

● RIGID HANGER

ASME CC-3 (EQUIVALENT)



RHRSW & EECW PUMPING STATION
PUMP ROOM B

REV.	BY	DATE	DESCRIPTION	CK'D	SUB.	APP
02	PHB	6-3-92	REVISE SUPPORT NUMBERS TO MATCH NEW NUMBERS FROM ENGINEERING	RRD	MCV	VMC
01	PHB	4-25-91	DEL. SUPPORT NOTE. OLD SUPPORTS 6 HG-46 ADD EQUIP. NPTS.. ADD SHEETS 5 - 15	JAA	JES	GLB

HARDWARE: TEX 4129 SOFTWARE: TEDMICAD 8" FLOPPY: BF-21

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 0
EMERGENCY EQUIPMENT COOLING SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 3-31-90	DATE: 4-17-90	DATE: 4-17-90	SHEET 2 OF 15 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. REV

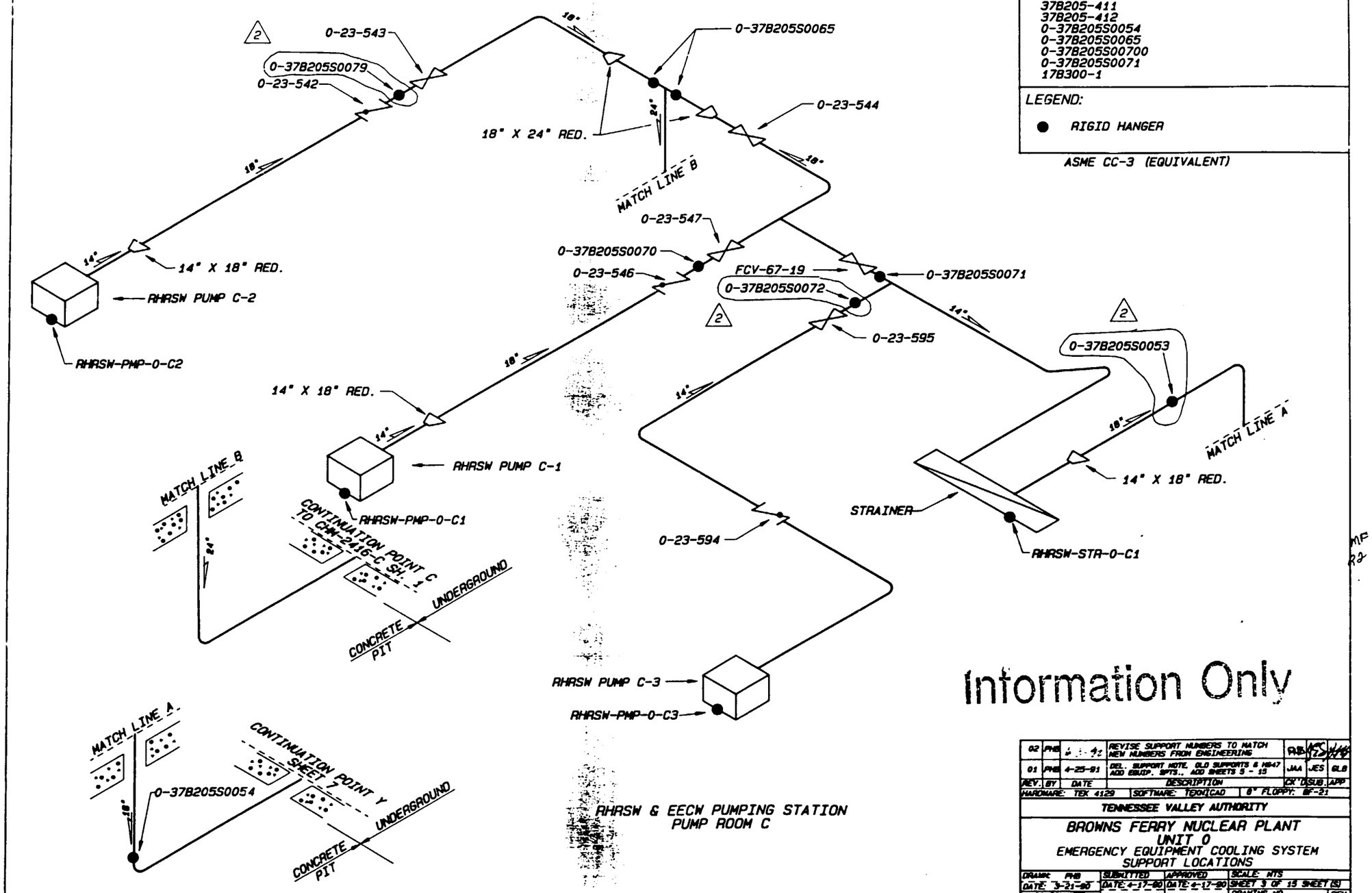
REFERENCE DRAWINGS

37B205-406
37B205-40737B205-408
47B205-408
37B205-409
37B205-410
37B205-411
37B205-412
0-37B205S0054
0-37B205S0065
0-37B205S00700
0-37B205S0071
17B300-1

LEGEND:

● RIGID HANGER

ASME CC-3 (EQUIVALENT)



Information Only

RHRSW & EECW PUMPING STATION
PUMP ROOM C

REV.	BY	DATE	DESCRIPTION	CK'D	SUB.	APP
02	PHB	[illegible]	REVISE SUPPORT NUMBERS TO MATCH NEW NUMBERS FROM ENGINEERING	PHB	JES	[illegible]
01	PHB	4-25-91	DEL. SUPPORT NOTE. OLD SUPPORTS & HS47 ADD EQUIP. SPTS., ADD SHEETS 3 - 15	JAA	JES	GLB

HARDWARE: TEX 4129 | SOFTWARE: TEXNICAD | 8" FLOPPY: BF-21

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 0
EMERGENCY EQUIPMENT COOLING SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 3-21-90	DATE: 4-17-90	DATE: 4-17-90	SHEET 3 OF 15 SHEET(S)
CHECKED: JES	EDC	GLB	DRAWING NO. ISI-0368-C
DATE: 4-17-90			REV 02

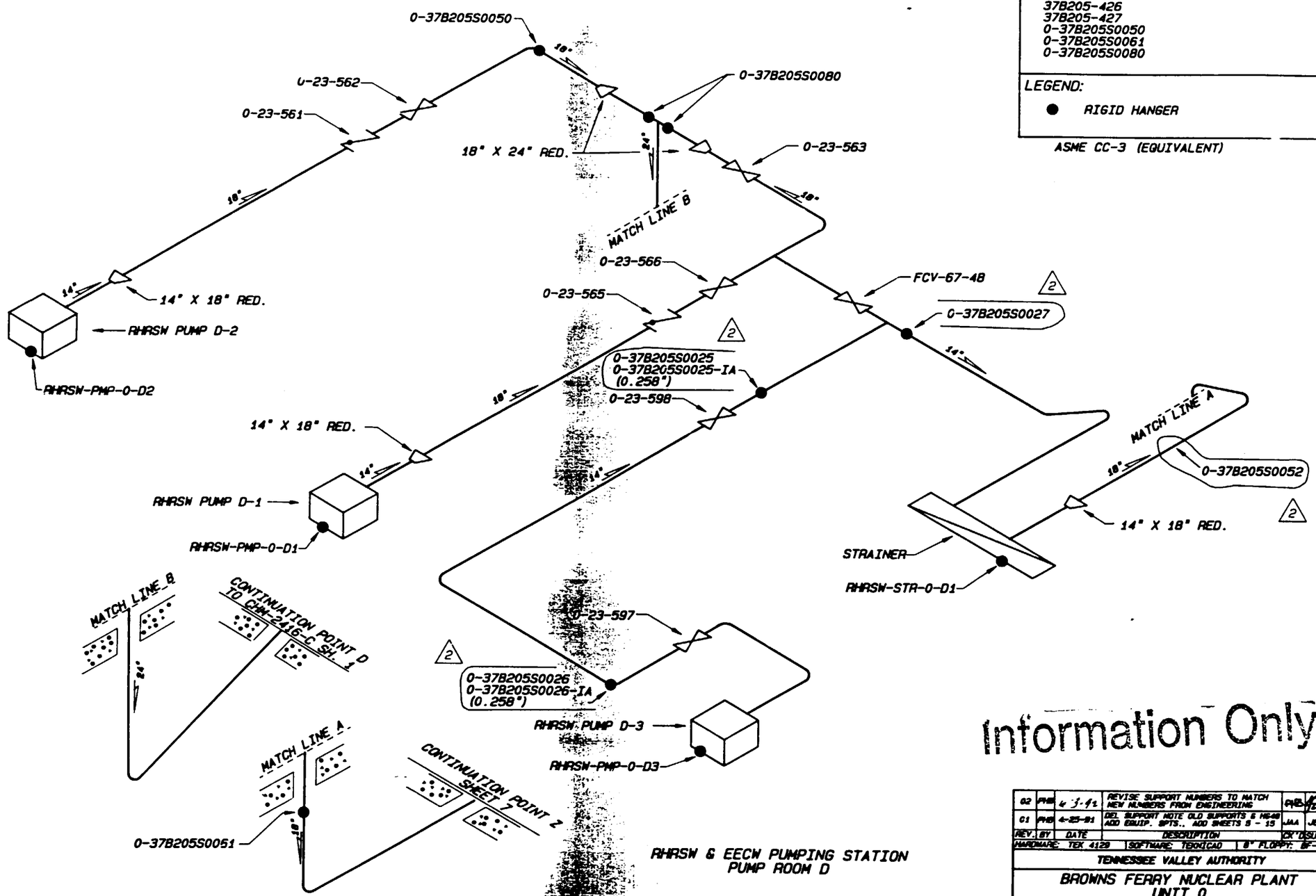
REFERENCE DRAWINGS

37B205-421
37B205-424
37B205-426
37B205-427
0-37B205S0050
0-37B205S0061
0-37B205S0080

LEGEND:

● RIGID HANGER

ASME CC-3 (EQUIVALENT)



Information Only

RHRSW & EECW PUMPING STATION
PUMP ROOM D

REV.	BY	DATE	DESCRIPTION	CK'D	DSIG	APP
G2	PHB	4-3-92	REVISE SUPPORT NUMBERS TO MATCH NEW NUMBERS FROM ENGINEERING	PHB	JEC	GLB
C1	PHB	4-25-91	DEL. SUPPORT NOTE OLD SUPPORTS & HG-49 ADD EQUIP. SPTS., ADD SHEETS 9 - 15	JAA	JES	GLB

HARDWARE: TEK 4129 | SOFTWARE: TECHICAD | 8" FLOPPY: BF-21

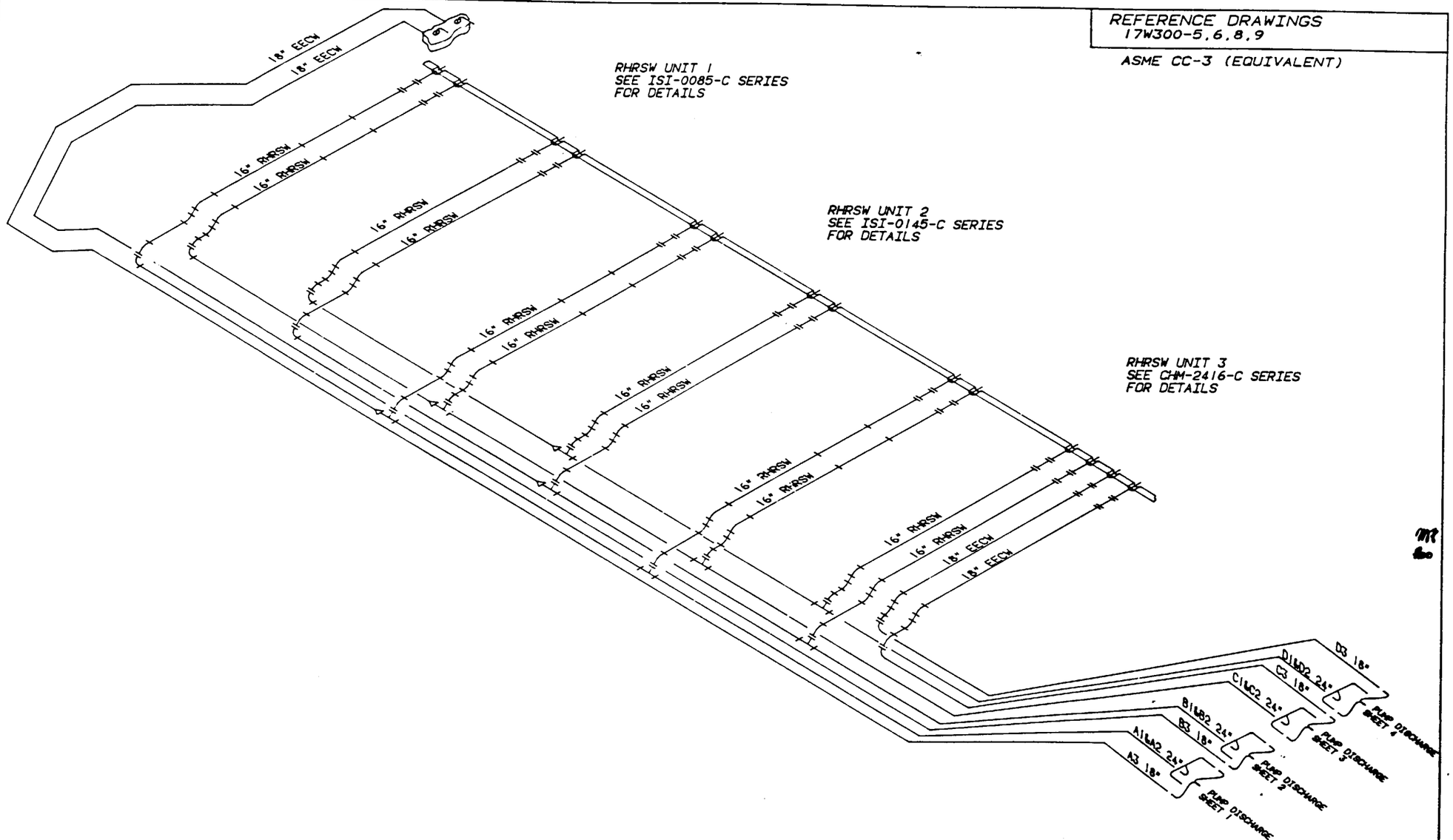
TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 0
EMERGENCY EQUIPMENT COOLING SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 3-31-90	DATE: 4-17-90	DATE: 4-17-90	SHEET 4 OF 15 SHEET (S)
CHECKED: JES	EDC	GLB	DRAWING NO. ISI-0368-C
DATE: 4-17-90			REV 02

REFERENCE DRAWINGS
17W300-5,6,8,9

ASME CC-3 (EQUIVALENT)



RHR AND EECW PUMP DISCHARGE

GENERAL ISOMETRIC

Information Only

REV.	BY	DATE	DESCRIPTION	CK'D	SUB	APP

HARDWARE: IBM 5085 | SOFTWARE: CADAM | USER: ISICHP

TENNESSEE VALLEY AUTHORITY

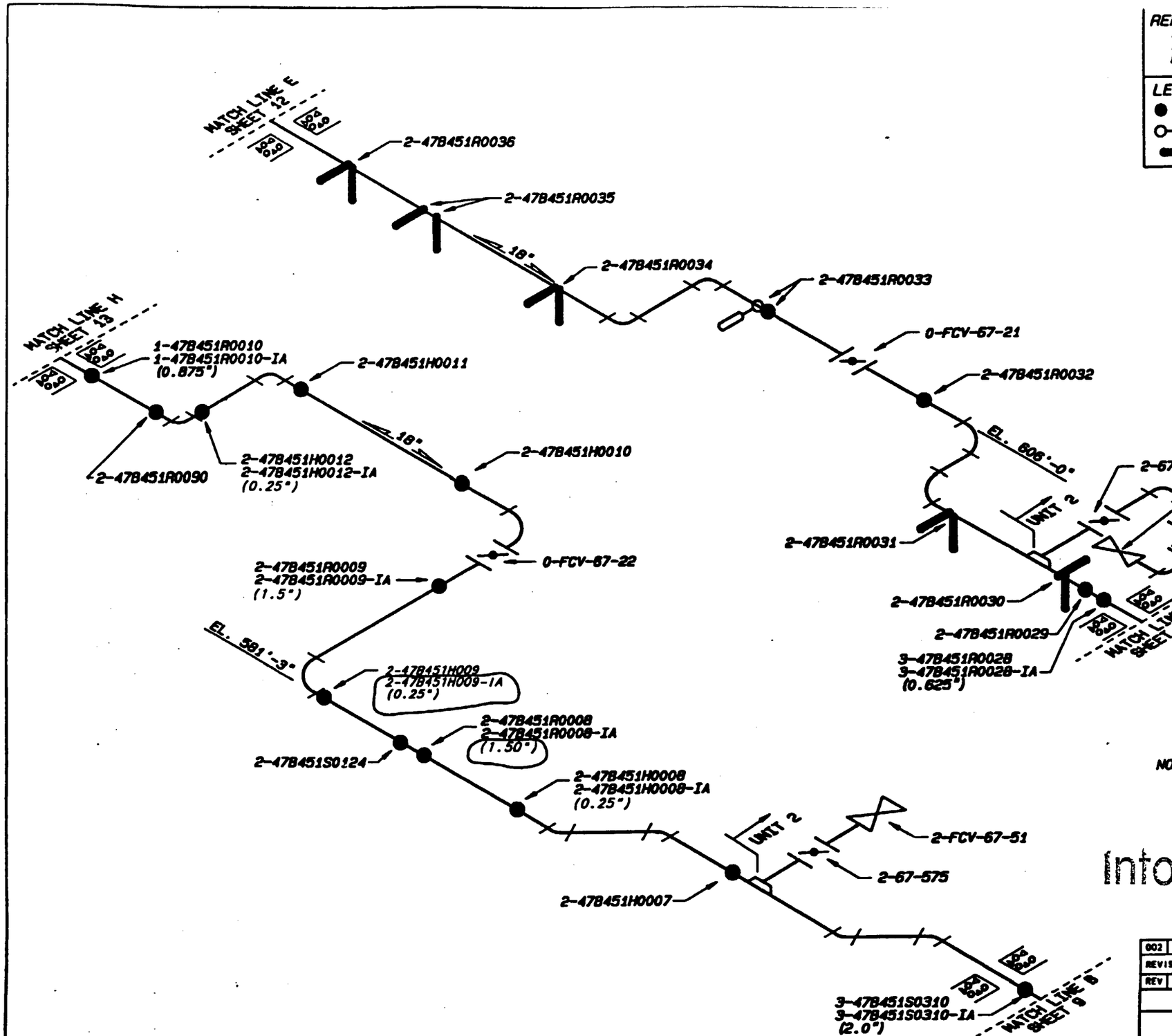
BROWNS FERRY NUCLEAR PLANT
UNIT 0
EMERGENCY EQUIPMENT COOLING SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE: 4-16-91	DATE: 4-25-91	DATE: 4-26-91	SHEET 5 OF 15 SHEET(S)
CHECKED:			DRAWING NO. / REV.
DATE: 4-29-91			ISI-0368-C / 00

REFERENCE DRAWINGS
47W451-H5
47W451-H7
NOTE: THIS DRAWING SUPERCEDES ISI-0132-C ALL SHEETS.

LEGEND
- RIGID HANGER
- HYDRAULIC SNUBBER
- RIGID STRUT

ASME CC-3 (EQUIVALENT)



NOTE:

1: THIS DRAWING SUPERSEDES ISI-0240-C SH. 1 REV. 4

Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DAT
002	ADMIN	RDL	WCH	RLB	12-9-
REVISED PER RIMS MEMO R21 991201 003					

TENNESSEE VALLEY AUTHORITY

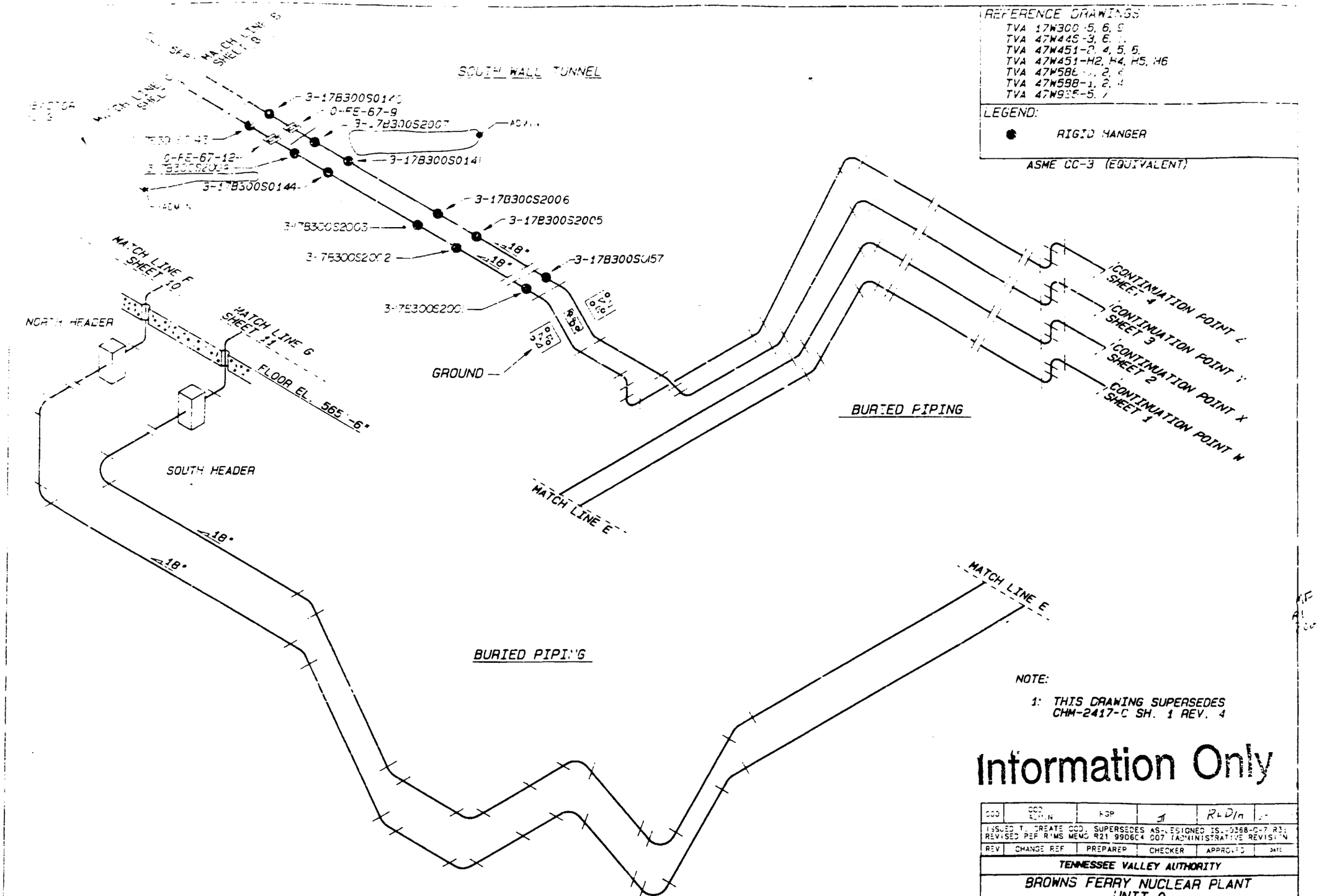
BROWNS FERRY NUCLEAR PLANT
UNIT 0 & 2
EMERGENCY EQUIPMENT COOLING WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: RWB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 2-15-87	DATE: 4-10-91	DATE: 4-10-91	SHEET 6 OF 18 SHEET
REVIEWED: MAA	JCB	GLB	DRAWING NO.
DATE: 4-10-91			0-1S1-0368-C

REFERENCE DRAWINGS
TVA 17W300-5, 6, 9
TVA 47W449-3, 6, 1
TVA 47W451-2, 4, 5, 6
TVA 47W451-H2, H4, H5, H6
TVA 47W588-1, 2, 3
TVA 47W588-1, 2, 4
TVA 47W935-5, 7

LEGEND:
● RIGID HANGER

ASME CC-3 (EQUIVALENT)



NOTE:

1: THIS DRAWING SUPERSEDES CHM-2417-C SH. 1 REV. 4

Information Only

CCD	CCD ISSUED	RGP		RLD/m	
ISSUED TO CREATE CCD. SUPERSEDES AS-DESIGNED IS-0368-C-7 R3. REVISED PER RIMS MEMO R21 990604 007 (ADMINISTRATIVE REVISION)					
REV	CHANGE REF	PREPARED	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 0
EMERGENCY EQUIPMENT COOLING WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: PAB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 4-25-91	DATE: 4-25-91	DATE: 4-26-91	SHEET 7 OF 15 SHEET(S)
CHECKED: JAA	JES	GLB	DRAWING NO. / REV
DATE: 4-26-91			0-TCT-0368-C-00

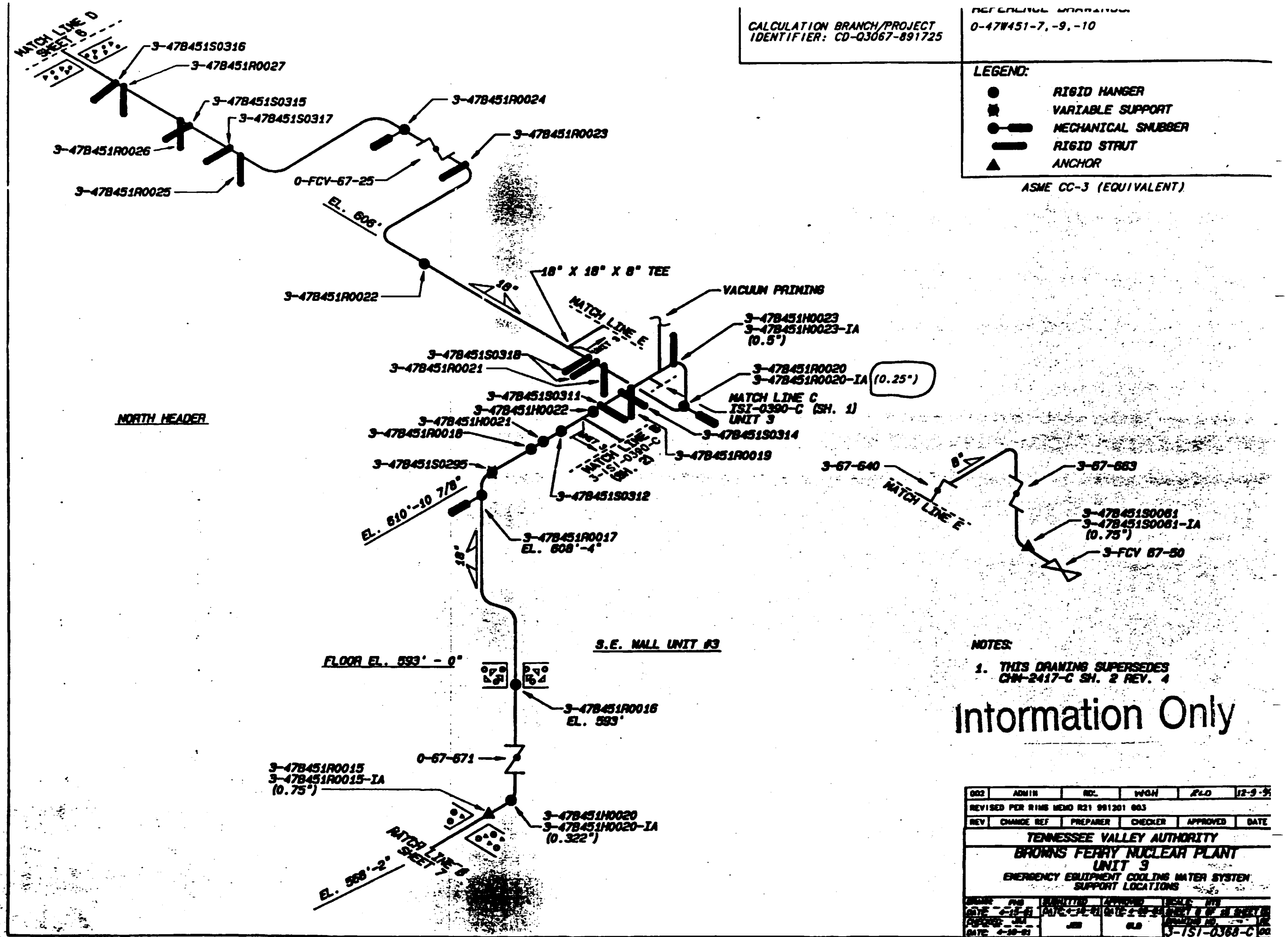
CCD

CALCULATION BRANCH/PROJECT IDENTIFIER: CD-Q3067-891725

REFERENCE DRAWINGS
0-47W451-7,-9,-10

LEGEND:
- RIGID HANGER
- VARIABLE SUPPORT
- MECHANICAL SNUBBER
- RIGID STRUT
- ANCHOR

ASME CC-3 (EQUIVALENT)



NOTES:

1. THIS DRAWING SUPERSEDES CHW-2417-C SH. 2 REV. 4

Information Only

002	ADMIN	REV.	WGH	PLD	12-9-9
REVISED PER RIMS MEMO R21 991201 003					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT
UNIT 3
EMERGENCY EQUIPMENT COOLING WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: PLD DATE: 4-15-91 | SUBMITTED: DATE: 4-24-91 | APPROVED: DATE: 2-19-91 | SCALE: NTS | SHEET 8 OF 11 SHEETS
APPROVED: JBB DATE: 4-30-91 | JBB | PLD | DRAWING NO. 3-1S1-0368-C | REV 002

PCADAM

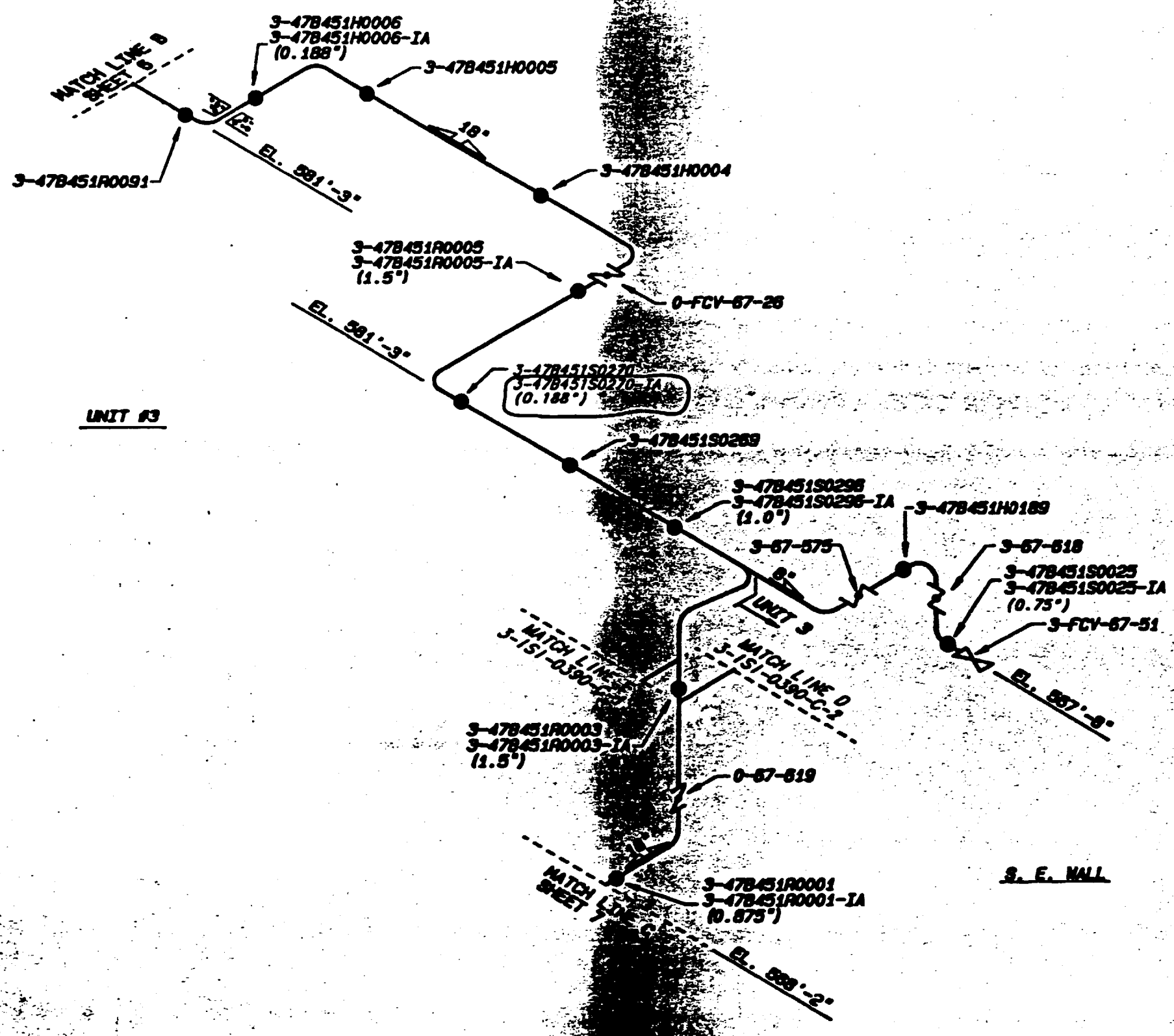
ALL A/D HISTORY RESEARCHED AT R000

CCD

REFERENCE DRAWINGS:
0-47W451-8

LEGEND:
● RIGID HANGER

ASME CC-3 (EQUIVALENT)



NOTES:

1. THIS DRAWING SUPERSEDES CDM-2417-C SH. 3 REV. 4

Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
001	ADMIN	RBL	WCH	RLB	12-9-99
REVISED PER RIMS MDNO 021 981301 003					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 0 & 3
EMERGENCY EQUIPMENT COOLING WATER SYSTEM
SUPPORT LOCATIONS

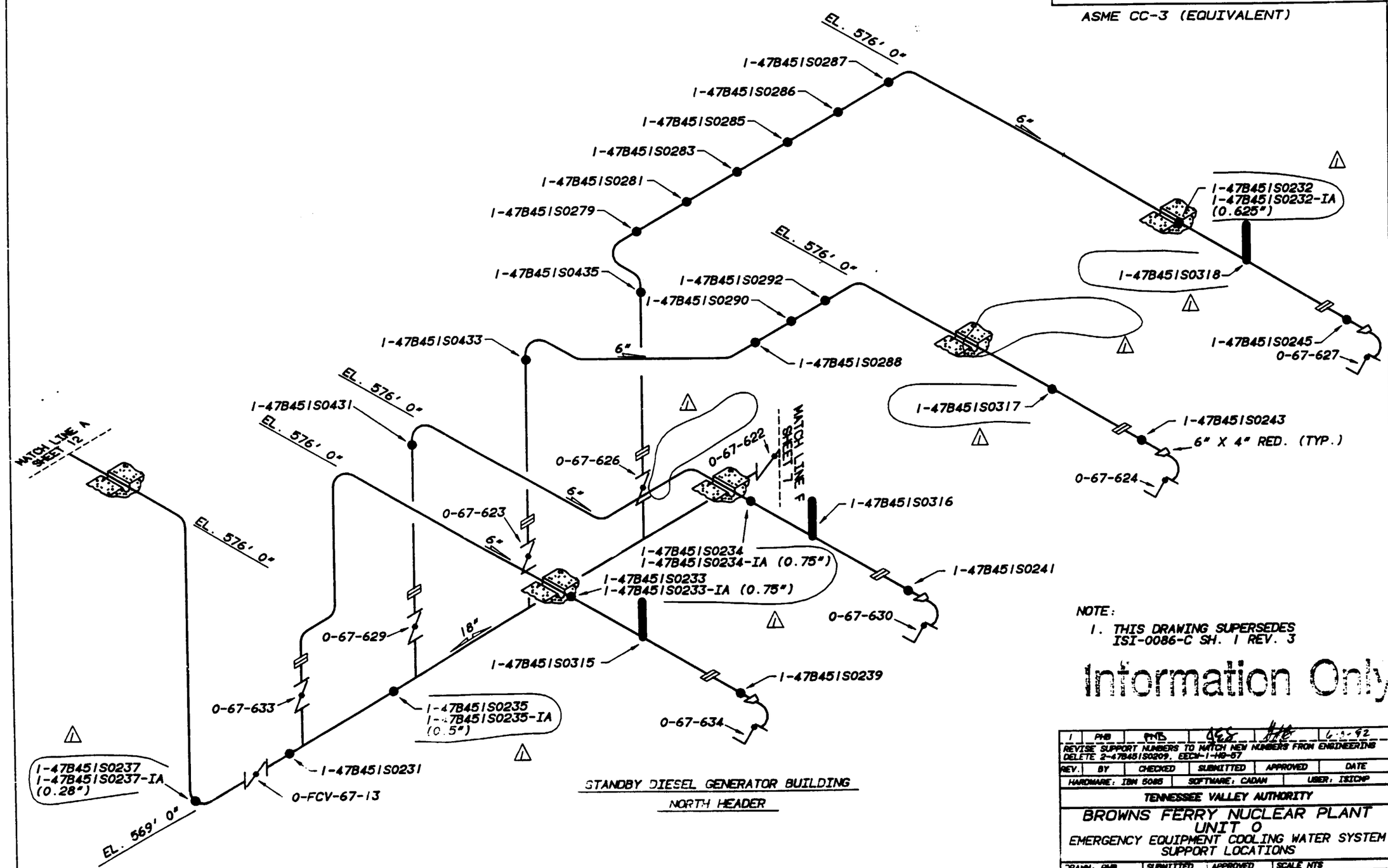
DRAWN: RGB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 2-25-97	DATE: 4-25-97	DATE: 4-25-97	SHEET 3 OF 13 SHEETS
PREPARED: 4-25-97 DATE: JAA	JBB	RLB	DRAWING NO. 0-1SI-0368-C REV 001

CCD

REFERENCE DRAWINGS
47W586 SERIES

LEGEND
● RIGID HANGER
▬ RIGID STRUT

ASME CC-3 (EQUIVALENT)



STANDBY DIESEL GENERATOR BUILDING

NORTH HEADER

NOTE:

1. THIS DRAWING SUPERSEDES ISI-0086-C SH. 1 REV. 3

Information Only

REV.	BY	CHECKED	SUBMITTED	APPROVED	DATE
1	PHB	PHB	GLB	JAA	6-5-92

REVISE SUPPORT NUMBERS TO MATCH NEW NUMBERS FROM ENGINEERING
DELETE 2-47B451S0209. EECN-1-HO-67

HARDWARE: IBM 5085 SOFTWARE: CADAM USER: ISICNP

TENNESSEE VALLEY AUTHORITY

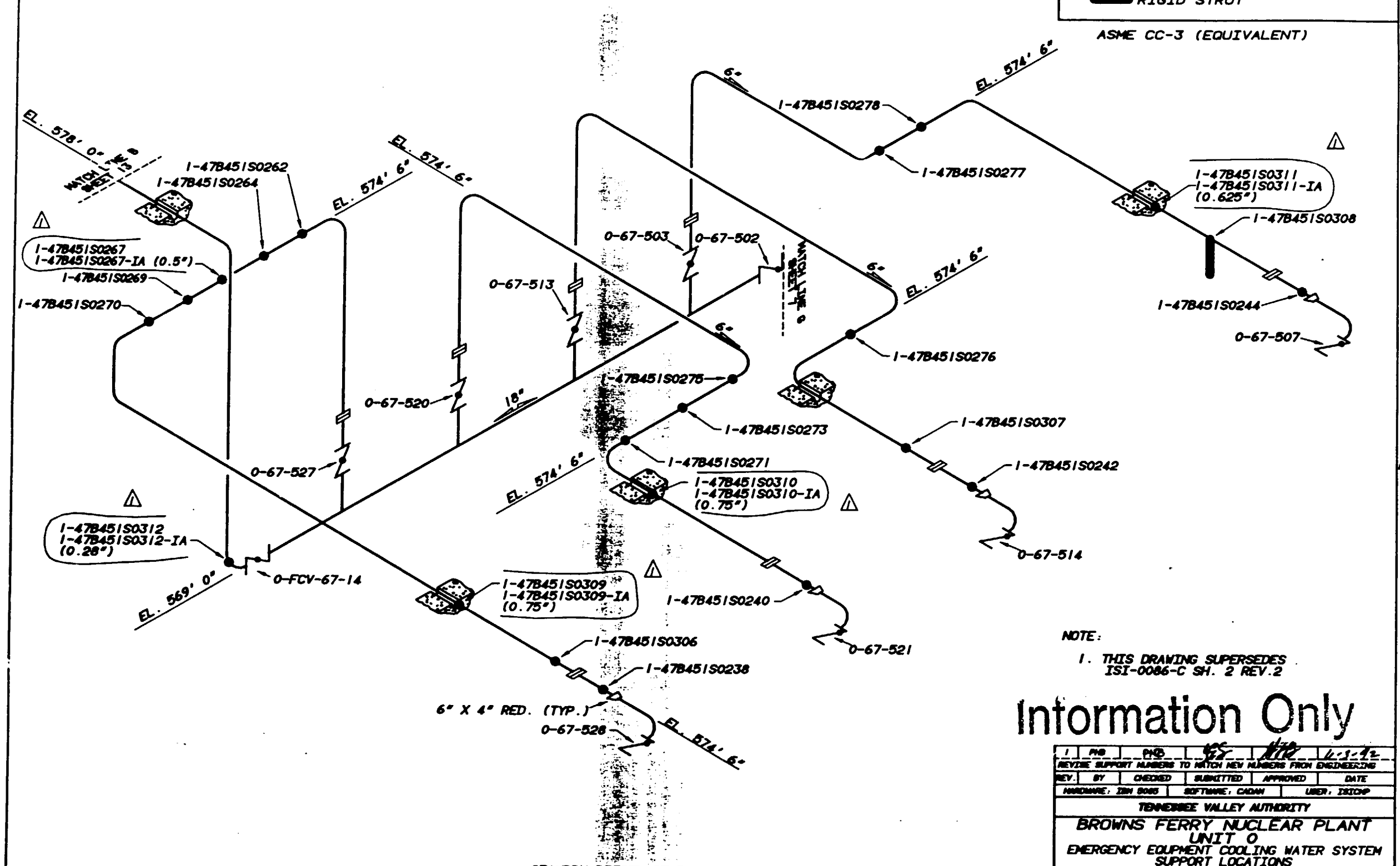
BROWNS FERRY NUCLEAR PLANT
UNIT 0
EMERGENCY EQUIPMENT COOLING WATER SYSTEM
SUPPORT LOCATIONS

	SUBMITTED	APPROVED	
DRAWN: PHB			SCALE NTS
DATE: 4-18-91	DATE: 4-18-91	DATE: 4-26-91	SHEET 10 OF 15 SHEET(S)
CHECKED: JAA	JES	GLB	DRAWING NO. ISI-0368-C
DATE: 4-18-91			REV. 01

REFERENCE DRAWINGS
47W586 SERIES

LEGEND
● RIGID HANGER
▬ RIGID STRUT

ASME CC-3 (EQUIVALENT)



STANDBY DIESEL GENERATOR BUILDING
SOUTH HEADER

NOTE:

1. THIS DRAWING SUPERSEDES ISI-0086-C SH. 2 REV.2

Information Only

REV.	BY	CHECKED	SUBMITTED	APPROVED	DATE
1	PHD	PHD			6-3-92
REVISE SUPPORT NUMBERS TO MATCH NEW NUMBERS FROM ENGINEERING					
HARDWARE: IBM 9065		SOFTWARE: CADAM		USER: ISICHP	

TENNESSEE VALLEY AUTHORITY

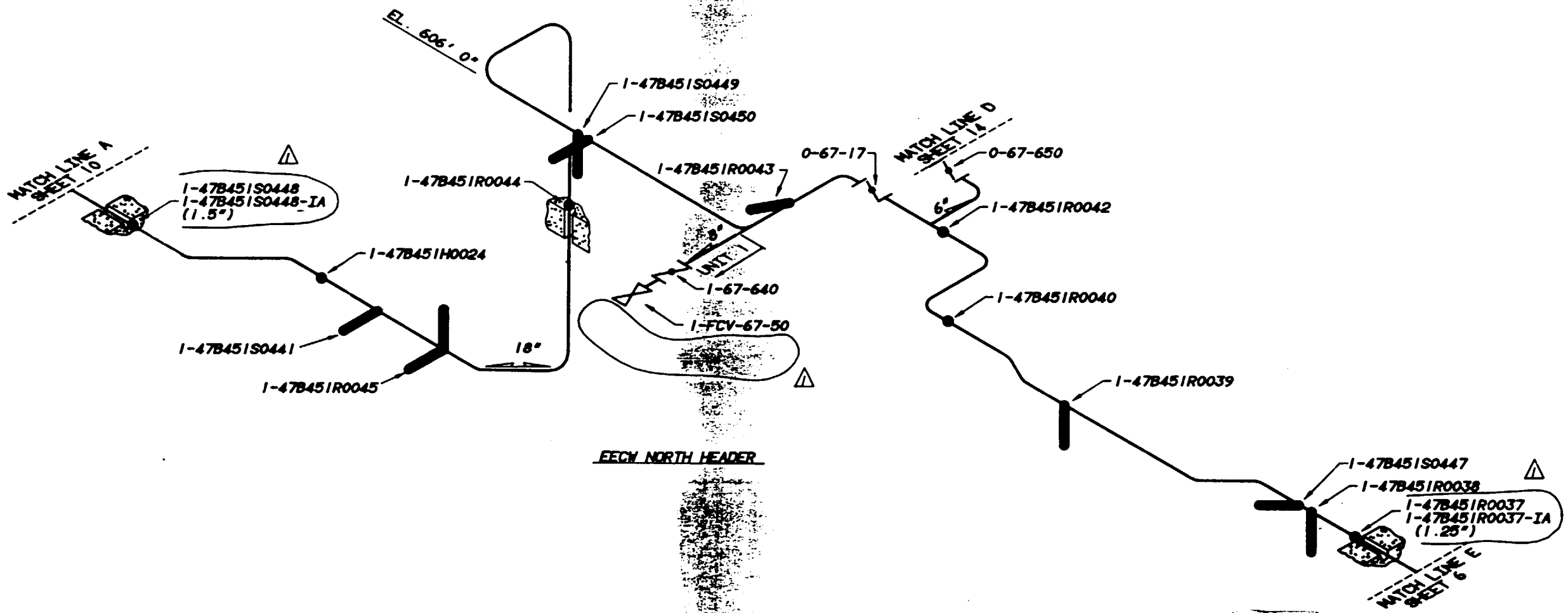
BROWNS FERRY NUCLEAR PLANT
UNIT 0
EMERGENCY EQUIPMENT COOLING WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: PHD	SUBMITTED	APPROVED	SCALE NTS
DATE: 4-18-91	DATE: 4-18-91	DATE: 5-28-91	SHEET 11 OF 18 SHEET(S)
CHECKED: JAA	JES	GLB	DRAWING NO. ISI-0368-C01 REV.
DATE: 2-16-91			

REFERENCE DRAWINGS
47W586 SERIES

LEGEND
● RIGID HANGER
▬ RIGID STRUT

ASME CC-3 (EQUIVALENT)



Information Only

NOTE:

1. THIS DRAWING SUPERSEDES ISI-0086-C SH. 3 REV. 2

REV.	BY	CHECKED	SUBMITTED	APPROVED	DATE
1	PHB	RHB	[illegible]	[illegible]	6-5-92

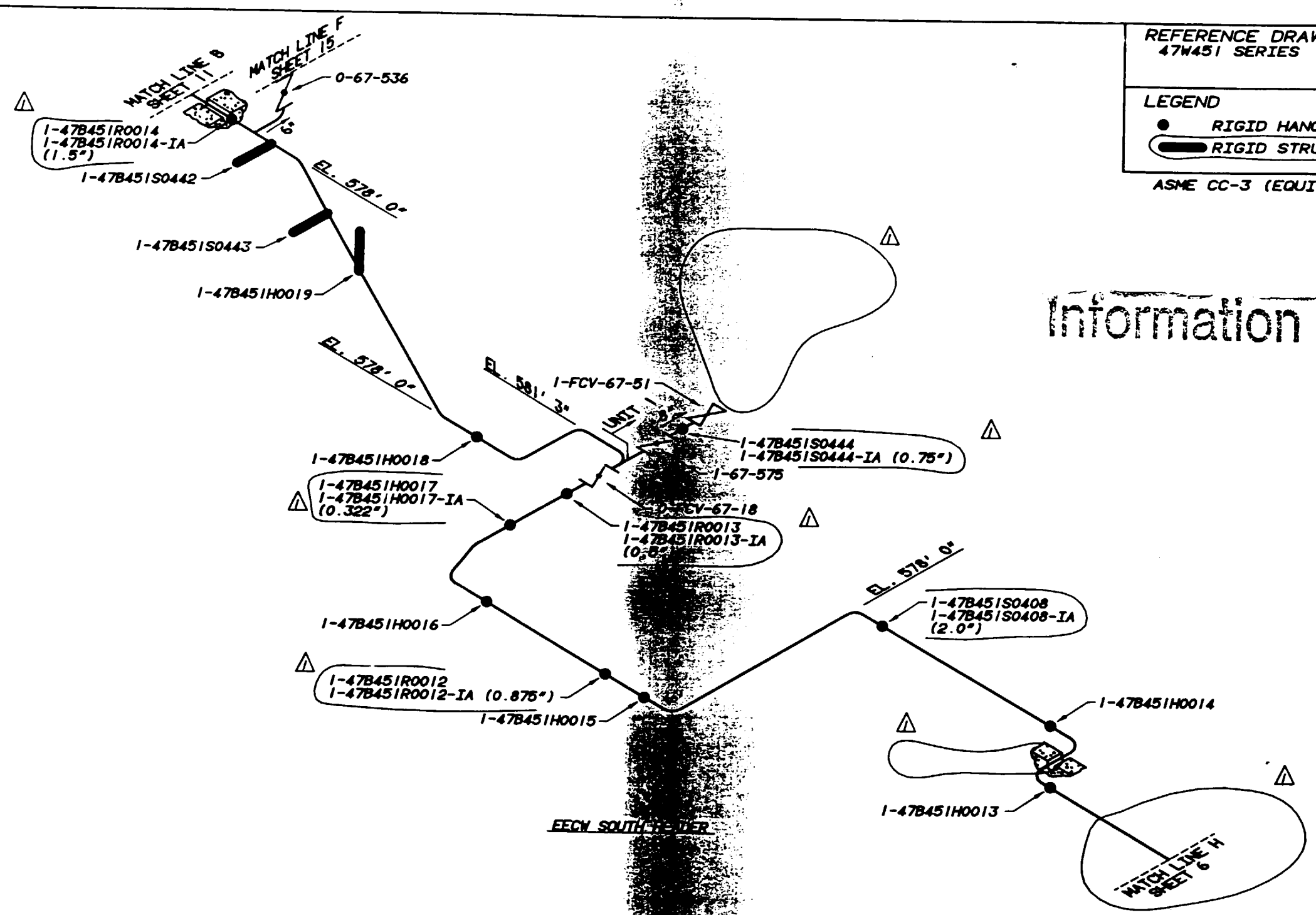
REVISE SUPPORT NUMBERS TO MATCH NEW NUMBERS FROM ENGINEERING
DELETE SUPPORT OUTSIDE BOUNDARY

HARDWARE: IBM 9065 SOFTWARE: CADAM USER: ISICHP

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 0 & 1
EMERGENCY EQUIPMENT COOLING WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE: 4-18-91	[illegible]	[illegible]	SHEET 12 OF 18 SHEET(S)
CHECKED: JBA	JBS	GLB	DRAWING NO. REV.
DATE: 4-18-91			ISI-0368-C01



REFERENCE DRAWINGS
47W451 SERIES

LEGEND
RIGID HANGER
RIGID STRUT

ASME CC-3 (EQUIVALENT)

Information Only

NOTE:

1. THIS DRAWING SUPERSEDES ISI-0086-C SH. 4 REV. 2

REV.	BY	CHECKED	SUBMITTED	APPROVED	DATE
1	PHB	PHB	GSK	[illegible]	6-3-92

REVISE SUPPORT NUMBER TO MATCH NEW NUMBER FROM ENGINEERING. CORRECT MATCH LINE H TO SHEET 6. ADD RIGID STRUT TO LEGEND. DELETE SUPPORT OUTSIDE BOUNDARY.

HARDWARE: IBM 8085 SOFTWARE: CADAM USER: IKICMP

TENNESSEE VALLEY AUTHORITY

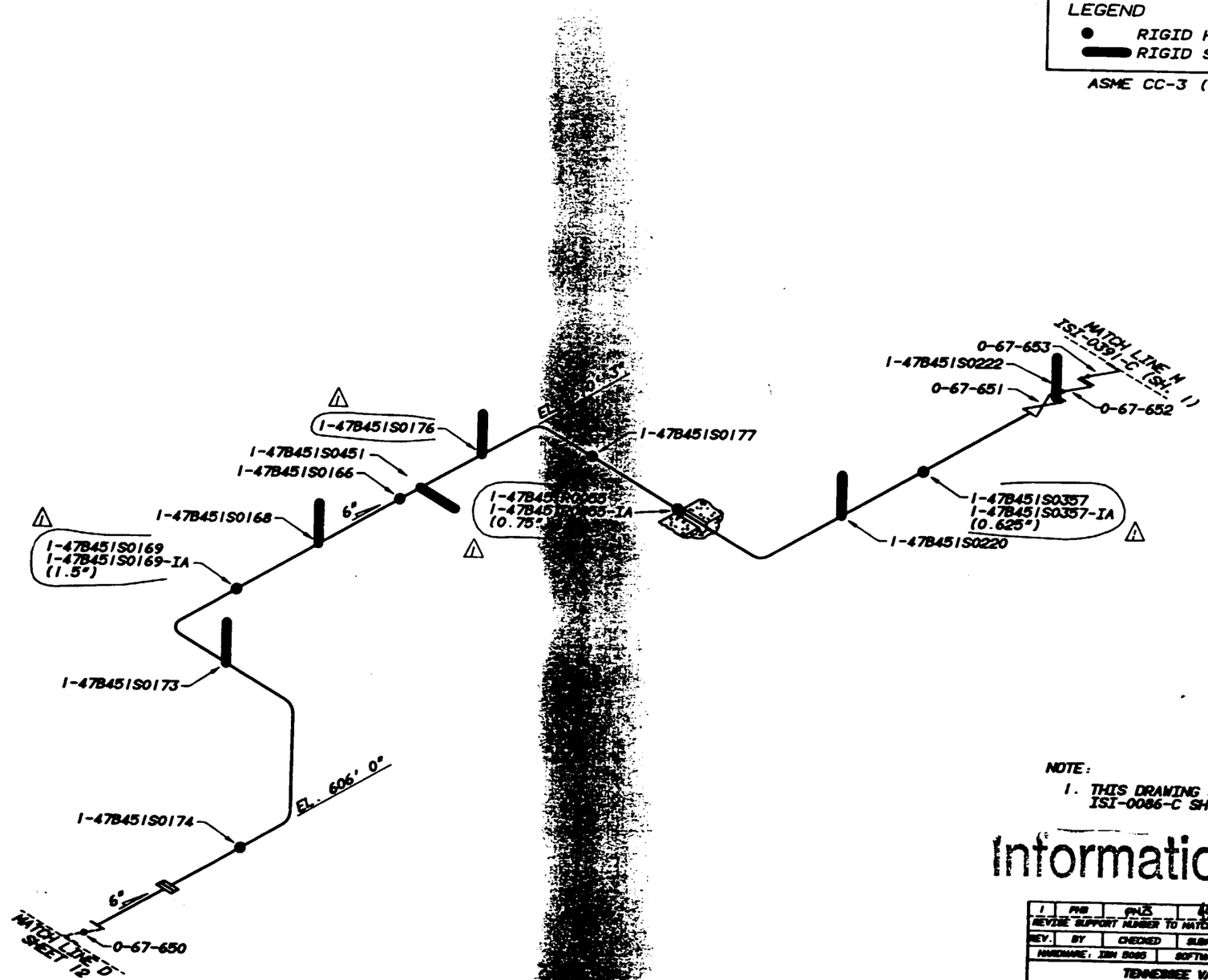
BROWNS FERRY NUCLEAR PLANT
UNIT 0 & 1
EMERGENCY EQUIPMENT COOLING WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE: 4-18-91	DATE: 4-18-91	DATE: 4-26-91	SHEET 13 OF 18 SHEET(S)
CHECKED: JAA	JES	GLB	DRAWING NO. ISI-0368-C01 REV. 1
DATE: 4-18-91			

REFERENCE DRAWINGS
47W586 SERIES

LEGEND
● RIGID HANGER
▬ RIGID STRUT

ASME CC-3 (EQUIVALENT)



NOTE:

1. THIS DRAWING SUPERSEDES ISI-0086-C SH. 6 REV. 1

Information Only

REV.	BY	CHECKED	SUBMITTED	APPROVED	DATE
1	PAB	PAB	[illegible]	[illegible]	1-9-92
REVISE SUPPORT NUMBER TO MATCH NEW NUMBER FROM ENGINEERING					
HARDWARE: IBM 3083		SOFTWARE: CADAM		USER: ISICMP	

TENNESSEE VALLEY AUTHORITY

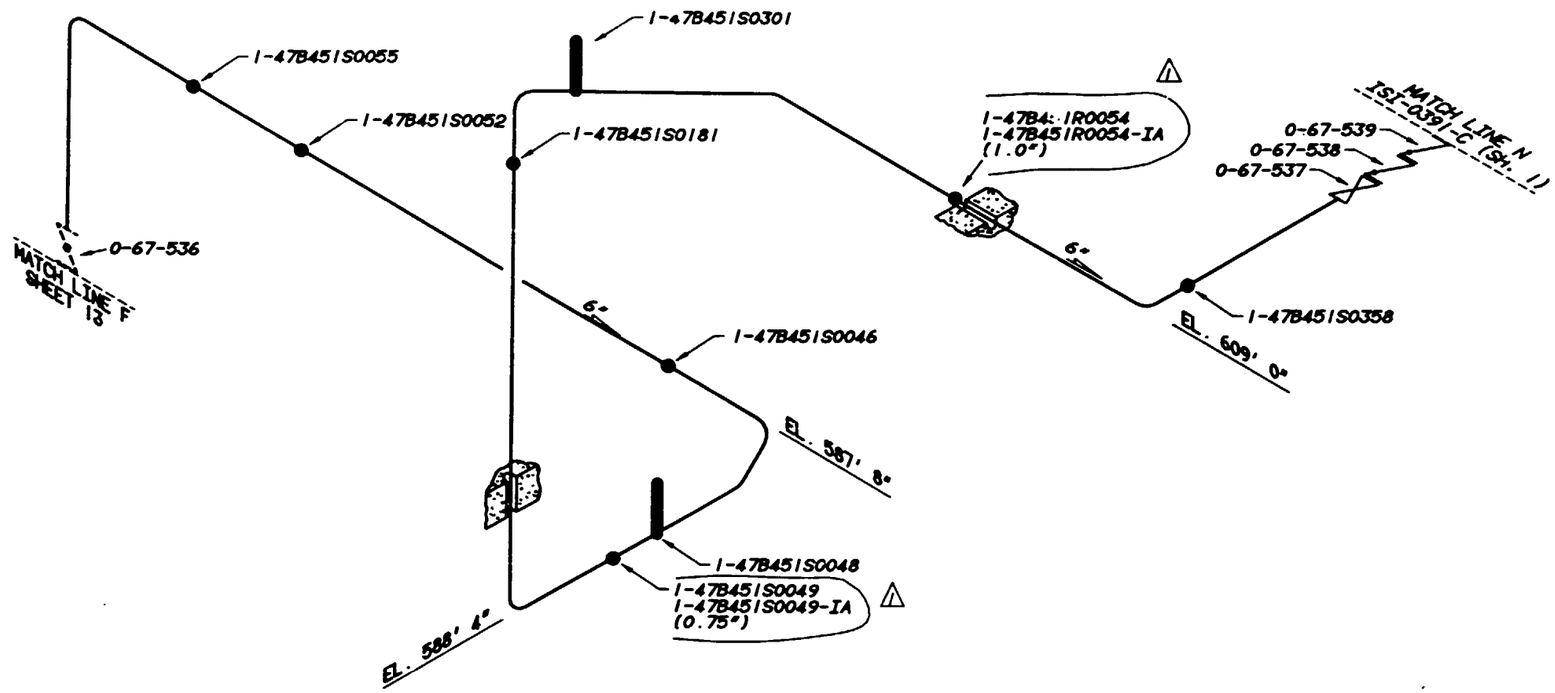
BROWNS FERRY NUCLEAR PLANT
UNIT 0
EMERGENCY EQUIPMENT COOLING WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: PAB	SUBMITTED	APPROVED	SCALE NTS
DATE: 2-18-91	DATE: 4-18-91	DATE: 4-18-91	SHEET 14 OF 18 SHEET(S)
CHECKED: JAA	JBS	GLB	DRAWING NO. REV.
DATE: 4-18-91			ISI-0368-C 01

REFERENCE DRAWINGS
47W451 SERIES
47W935 SERIES

LEGEND
● RIGID HANGER
▬ RIGID STRUT

ASME CC-3 (EQUIVALENT)



NOTE:

1. THIS DRAWING SUPERSEDES ISI-0086-C SH. 7 REV. 1

Information Only

REV.	BY	CHECKED	SUBMITTED	APPROVED	DATE
1	PHB	PHB	[illegible]	[illegible]	6-3-92
REVISE SUPPORT NUMBERS TO MATCH NEW NUMBERS FROM ENGINEERING					

HARDWARE: IBM 5085 SOFTWARE: CADAM USER: ISICHP

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 0
EMERGENCY EQUIPMENT COOLING WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE: 4-17-91	DATE: 4-18-91	DATE: 4-18-91	SHEET 15 OF 18 SHEET(S)
CHECKED: JAA	JEB	GLB	DRAWING NO. / REV.
DATE: 4-18-91			ISI-0368-C / 01

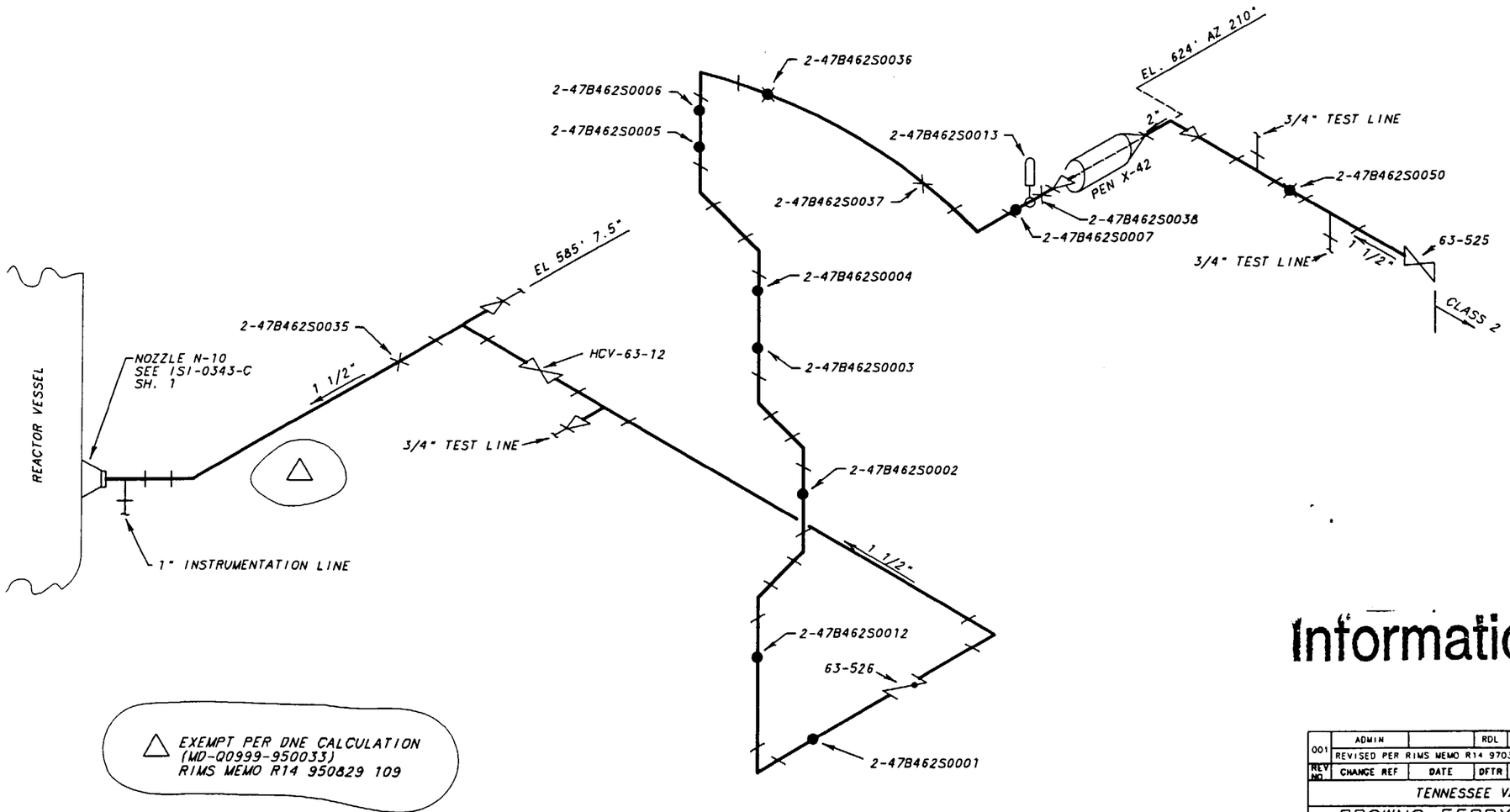
REFERENCE DRAWINGS:
47W462 SERIES
47B462 SERIES
2-47E854-1

CALCULATION BRANCH/PROJECT IDENTIFIERS: CD-Q2063-880980

LEGEND:

- ● RIGID HANGER
- ✱ VARIABLE SUPPORT
- ○—▭ HYDRAULIC SNUBBER
- X CONSTANT FORCE SUPPORT

ASME CC-1 (EQUIVALENT)



△ EXEMPT PER DNE CALCULATION (MD-Q0999-950033) RIMS MEMO R14 950829 109

Information Only

REV NO	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	1APPD	2APPD	3APPD	ISSD
001	ADMIN		RDL		N/A		N/A	N/A		
	REVISED PER RIMS MEMO R14 970320 301, R14 970320 306									

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
S STANDBY LIQUID CONTROL
1" TO 3" SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE: 9-6-91	DATE: 9-20-91	DATE: 9-29-91	SHEET 01 OF 01 SHEET(S)
CHECKED: JAA	JES	GLB	DRAWING NO. 2-1S1-0379-C
DATE: 9-20-91			REV. R001

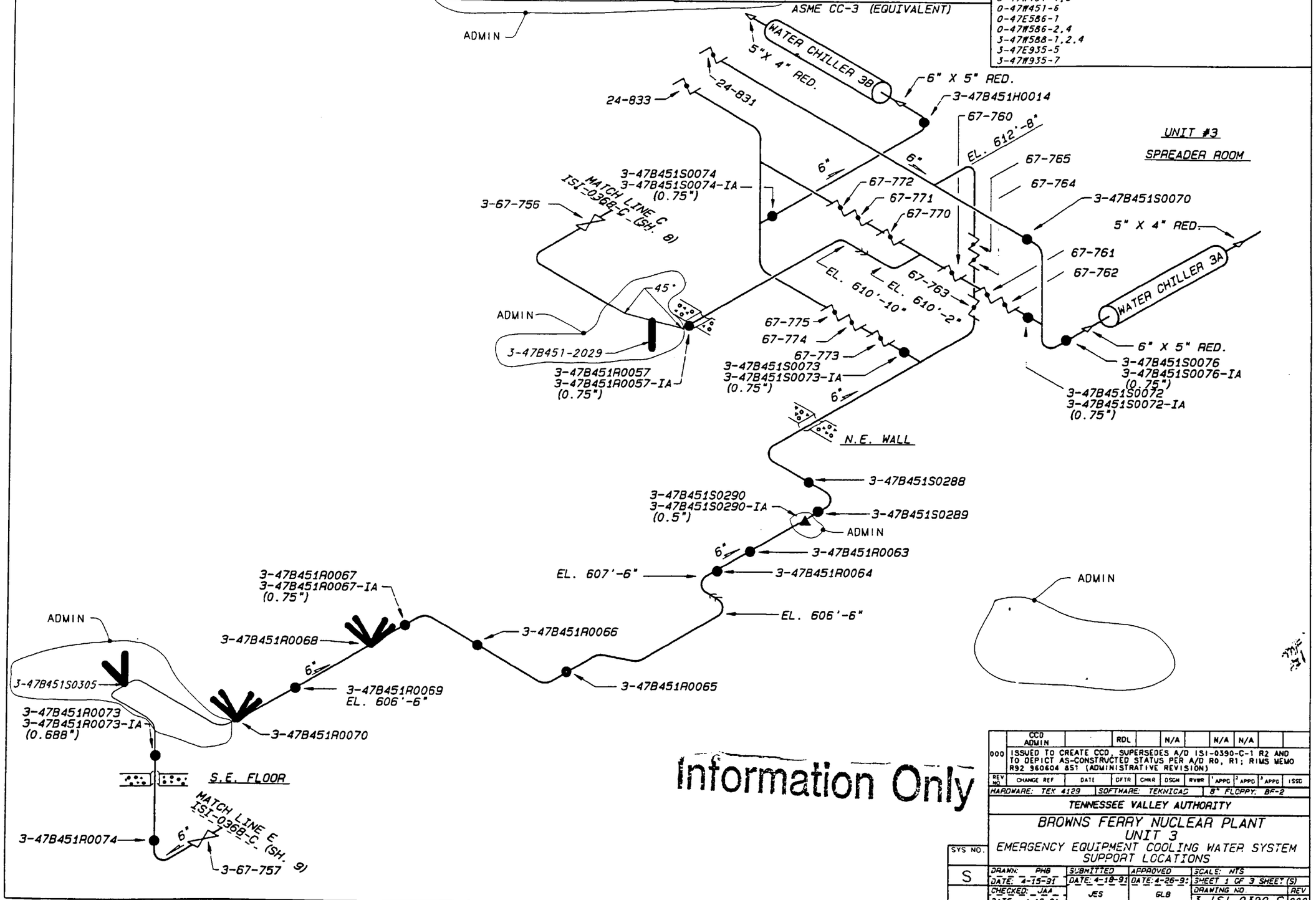
CCD

PCADAM

CALCULATION BRANCH/PROJECT IDENTIFIERS: CD-Q3067-891725
CD-Q3067-891724

LEGEND
RIGID HANGER
RIGID STRUT
ANCHOR

REFERENCE DRAWINGS
0-17W300-5,6,9
0-47W446-3,6,12
0-47E451-2
3-47W451-4,5
0-47W451-6
0-47E586-1
0-47W586-2,4
3-47W588-1,2,4
3-47E935-5
3-47W935-7



Information Only

REV NO.	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	1 APPD	2 APPD	3 APPD	ISSD
000	CCD ADMIN		RDL		N/A		N/A	N/A		
	ISSUED TO CREATE CCD. SUPERSEDES A/D ISI-0390-C-1 R2 AND TO DEPICT AS-CONSTRUCTED STATUS PER A/D R0, R1; RIMS MEMO R92 960604 851 (ADMINISTRATIVE REVISION)									

HARDWARE: TEK 4129 | SOFTWARE: TEKNICAD | 8" FLOPPY: BF-2

TENNESSEE VALLEY AUTHORITY

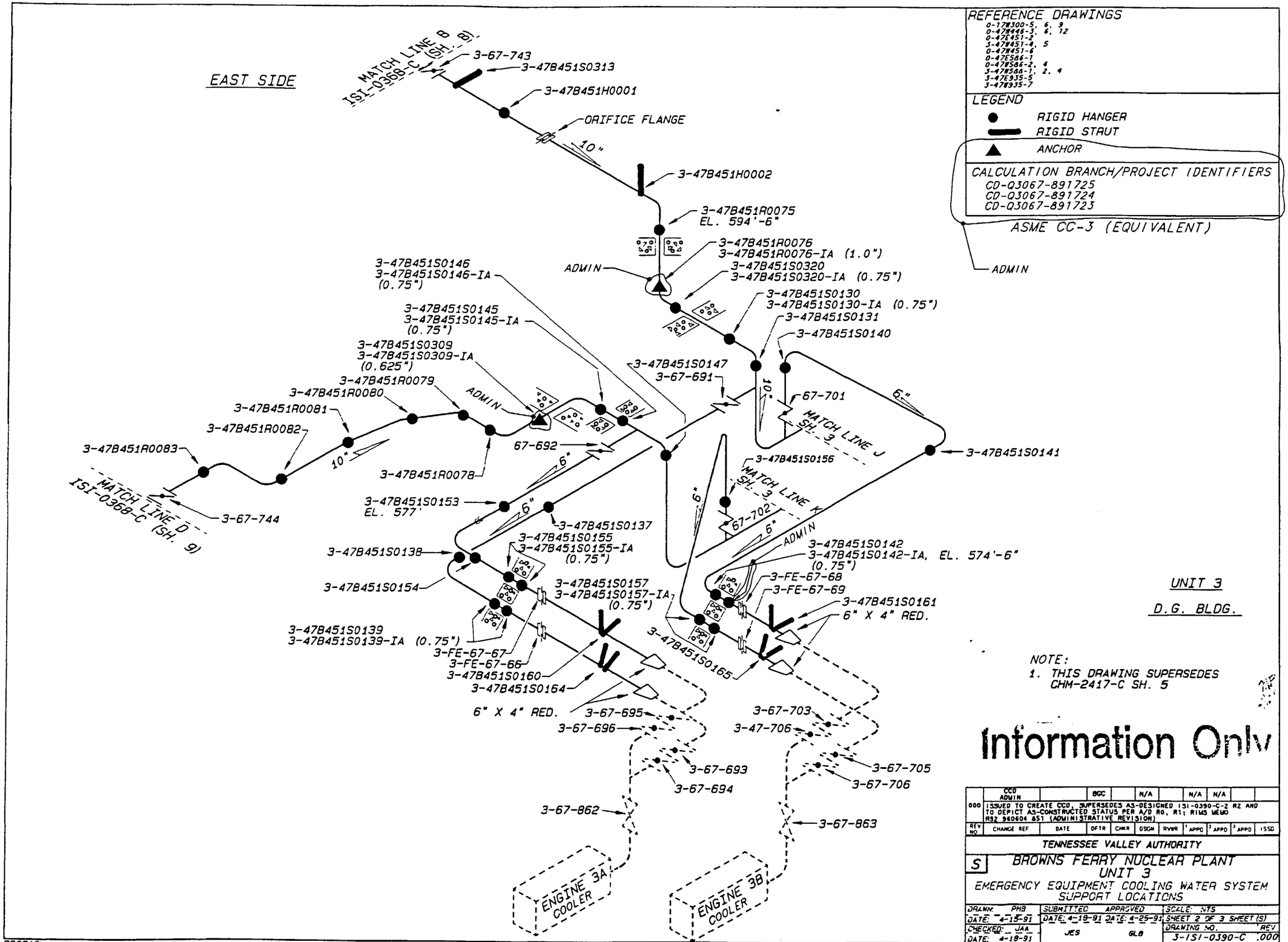
BROWNS FERRY NUCLEAR PLANT
UNIT 3
EMERGENCY EQUIPMENT COOLING WATER SYSTEM
SUPPORT LOCATIONS

SYS NO.	DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS
S	DATE: 4-15-91	DATE: 4-18-91	DATE: 4-26-91	SHEET 1 OF 3 SHEET(S)
	CHECKED: JAA	JES	GLB	DRAWING NO. 3-ISI-0390-C REV 000
	DATE: 4-18-91			

CCD

PCADAM

ALL A/D HISTORY RESEARCHED AT R000



REV NO	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	1 APPD	2 APPD	3 APPD	ISSD
	CCD ADMIN		BGC		N/A		N/A	N/A		
000	ISSUED TO CREATE CCD, SUPERSEDES AS-DESIGNED ISI-0390-C-Z R2 AND TO DEPICT AS-CONSTRUCTED STATUS PER A/D R0, R1; RIMS MEMO R92 960604 851 (ADMINISTRATIVE REVISION)									

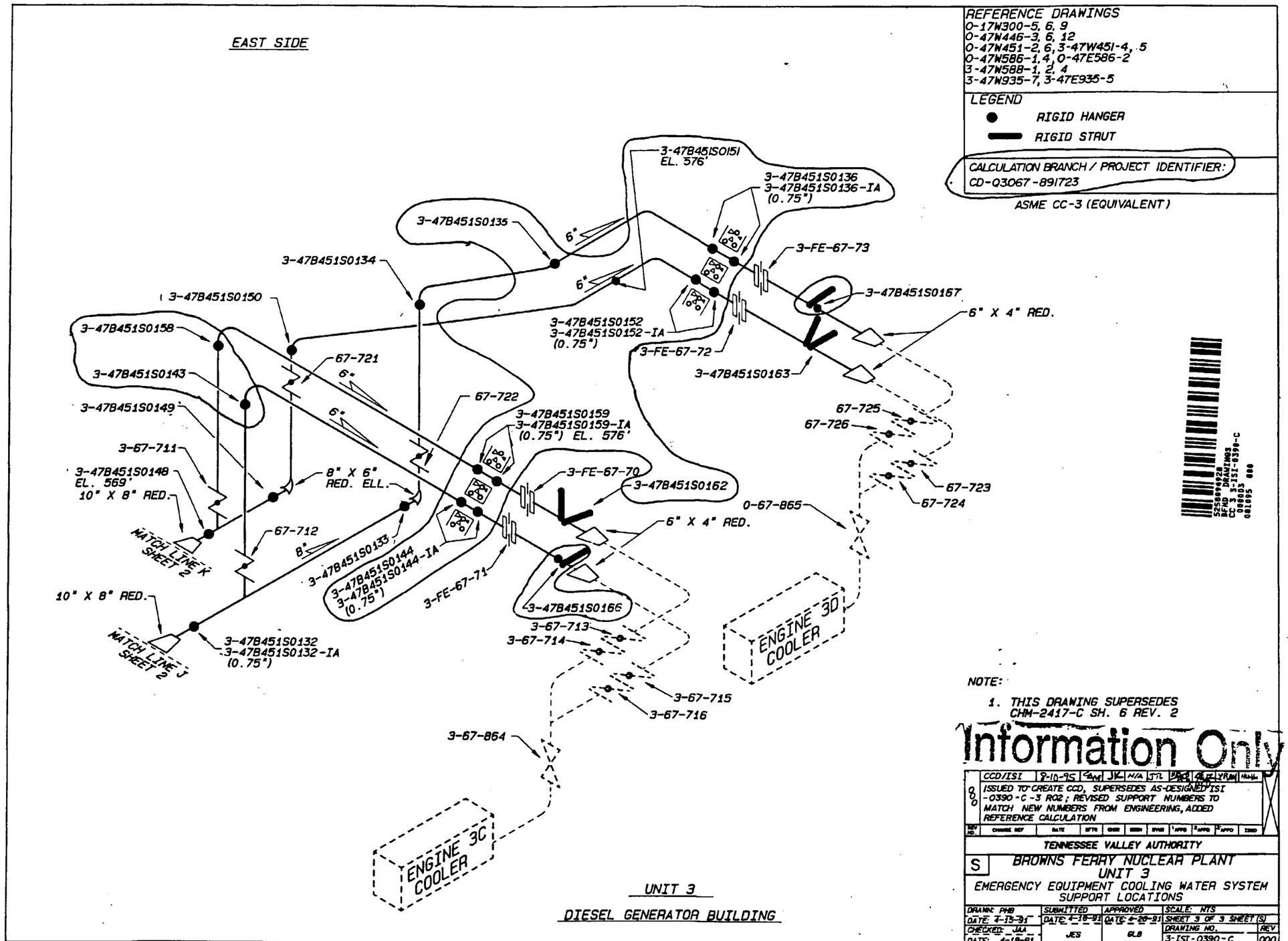
TENNESSEE VALLEY AUTHORITY

S

BROWNS FERRY NUCLEAR PLANT
UNIT 3
EMERGENCY EQUIPMENT COOLING WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE: NTS
DATE: 4-15-91	DATE: 4-18-91	DATE: 4-25-91	SHEET 2 OF 3 SHEET(S)
CHECKED: JAA	JES	GLB	DRAWING NO. 3-ISI-0390-C
DATE: 4-18-91			REV .000

CCD



REFERENCE DRAWINGS
0-17W300-5, 6, 9
0-47W446-3, 6, 12
0-47W451-2, 6, 3-47W451-4, 5
0-47W586-1, 4, 0-47E586-2
3-47W588-1, 2, 4
3-47W935-7, 3-47E935-5

LEGEND
● RIGID HANGER
▬ RIGID STRUT

CALCULATION BRANCH / PROJECT IDENTIFIER:
CD-Q3067-891723

ASME CC-3 (EQUIVALENT)

NOTE:

1. THIS DRAWING SUPERSEDES CHM-2417-C SH. 6 REV. 2

Information Only

REV NO.	CHANGE REF	DATE	DFTR	CHKR	ENGR	SYNR	1 APPR	2 APPR	3 APPR	ISSUED
00	CCD/ISI ISSUED TO CREATE CCD, SUPERSEDES AS-DESIGNED ISI-0390-C-3 R02; REVISED SUPPORT NUMBERS TO MATCH NEW NUMBERS FROM ENGINEERING, ADDED REFERENCE CALCULATION	8-10-95	SAM	JK	N/A	JTL	PAB	JLE	YRM	Non-Info

TENNESSEE VALLEY AUTHORITY

S

BROWNS FERRY NUCLEAR PLANT
UNIT 3
EMERGENCY EQUIPMENT COOLING WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB DATE: 2-13-91	SUBMITTED DATE: 4-18-91	APPROVED DATE: 4-20-91	SCALE: NTS
CHECKED: JAA DATE: 4-18-91	JES	GLB	SHEET 3 OF 3 SHEET(S)
			DRAWING NO. 3-ISI-0390-C
			REV 000

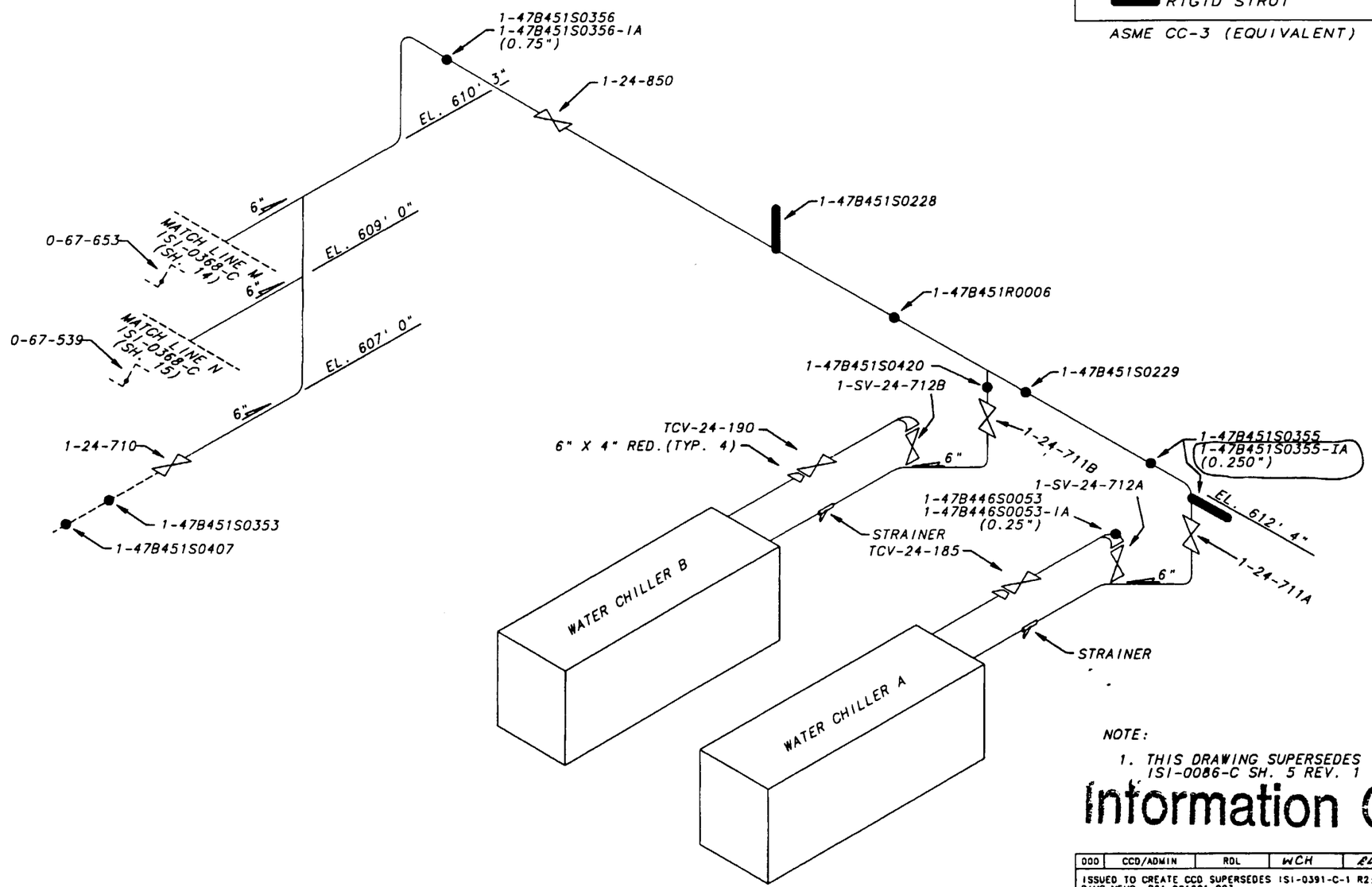
CCD

ALL A/D HISTORY RESEARCHED @ R000

REFERENCE DRAWINGS
47W935 SERIES
47W451-202 R1

LEGEND
● RIGID HANGER
▬ RIGID STRUT

ASME CC-3 (EQUIVALENT)



NOTE:

1. THIS DRAWING SUPERSEDES ISI-0086-C SH. 5 REV. 1

Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
000	CCD/ADMIN	RDL	WCH	RLD	12-9-99

ISSUED TO CREATE CCD SUPERSEDES ISI-0391-C-1 R2; REVISED PER RIMS MEMO R21 991201 003

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 1
RAW COOLING WATER SYSTEM
SUPPORT LOCATIONS

DRAWN: PHB	SUBMITTED	APPROVED	SCALE NTS
DATE: 4-25-91	DATE 4-25-91	DATE: 4-26-91	SHEET 1 OF 1 SHEET
CHECKED: JAA	JES	GLB	DRAWING NO. / REV.
DATE: 4-26-91			1-ISI-0391-C / 000

CCD

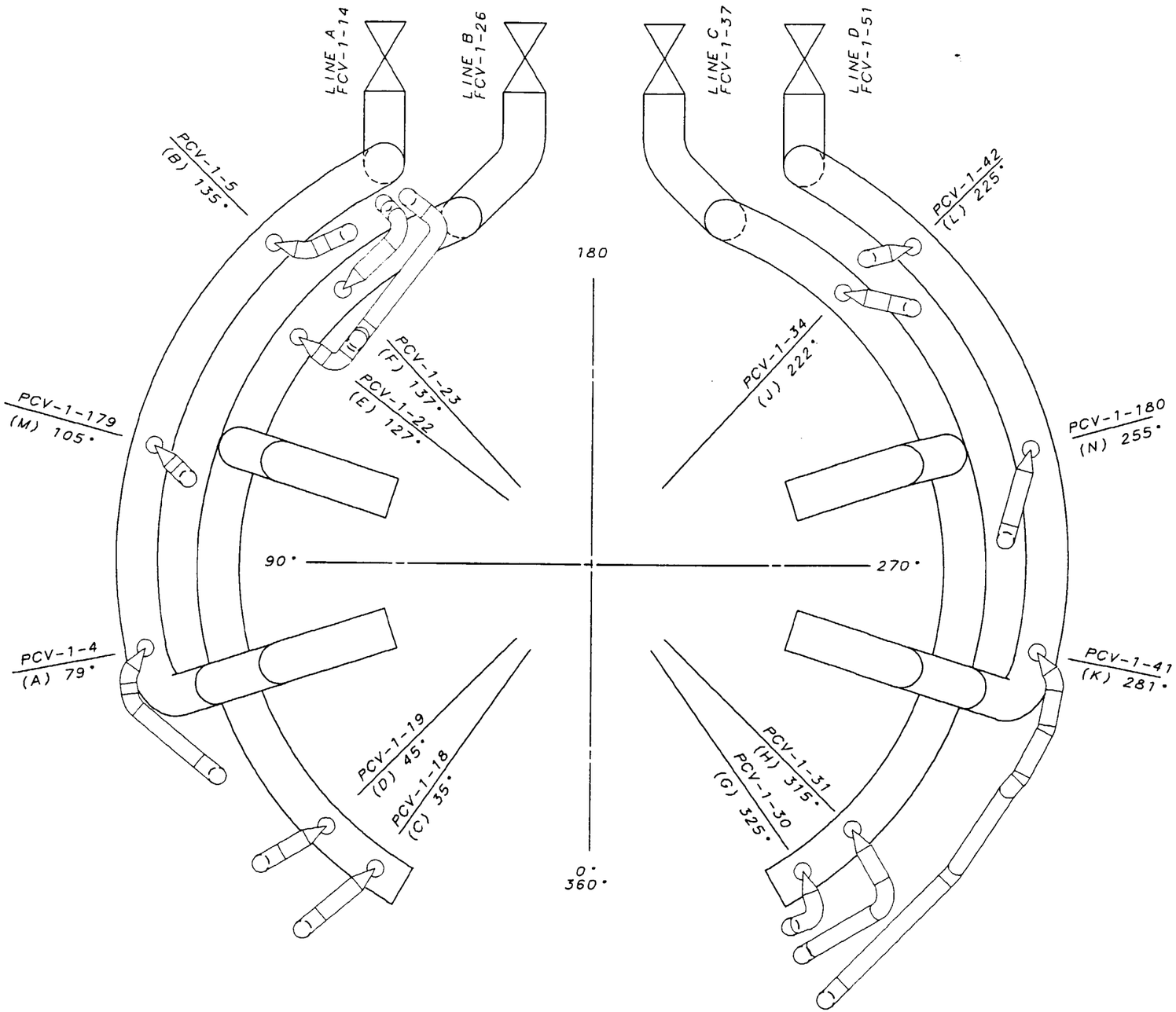
PCADAM

ALL A/D HISTORY RESEARCHED AT R000

REFERENCE DRAWINGS
47W401 SERIES

ASME CC-2 (EQUIVALENT)

NOTE:
1. COMPONENTS EXEMPT PER ASME XI 1995 EDITION, 1996 ADDENDA, IWC-1222(d).



Information Only

001	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
MAIN STEAM RELIEF VALVE SYSTEM
VENT PIPING SUPPORT LOCATIONS

DRAWN: PHB	DATE: 7/1/92	SCALE: NTS	CADAM/ISICUP
CHECKED: PHB	APPROVED: CLS	SHEET 01 OF 09	REV
SUBMITTED: JES		2-ISI-0412-C	001

ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

CCD

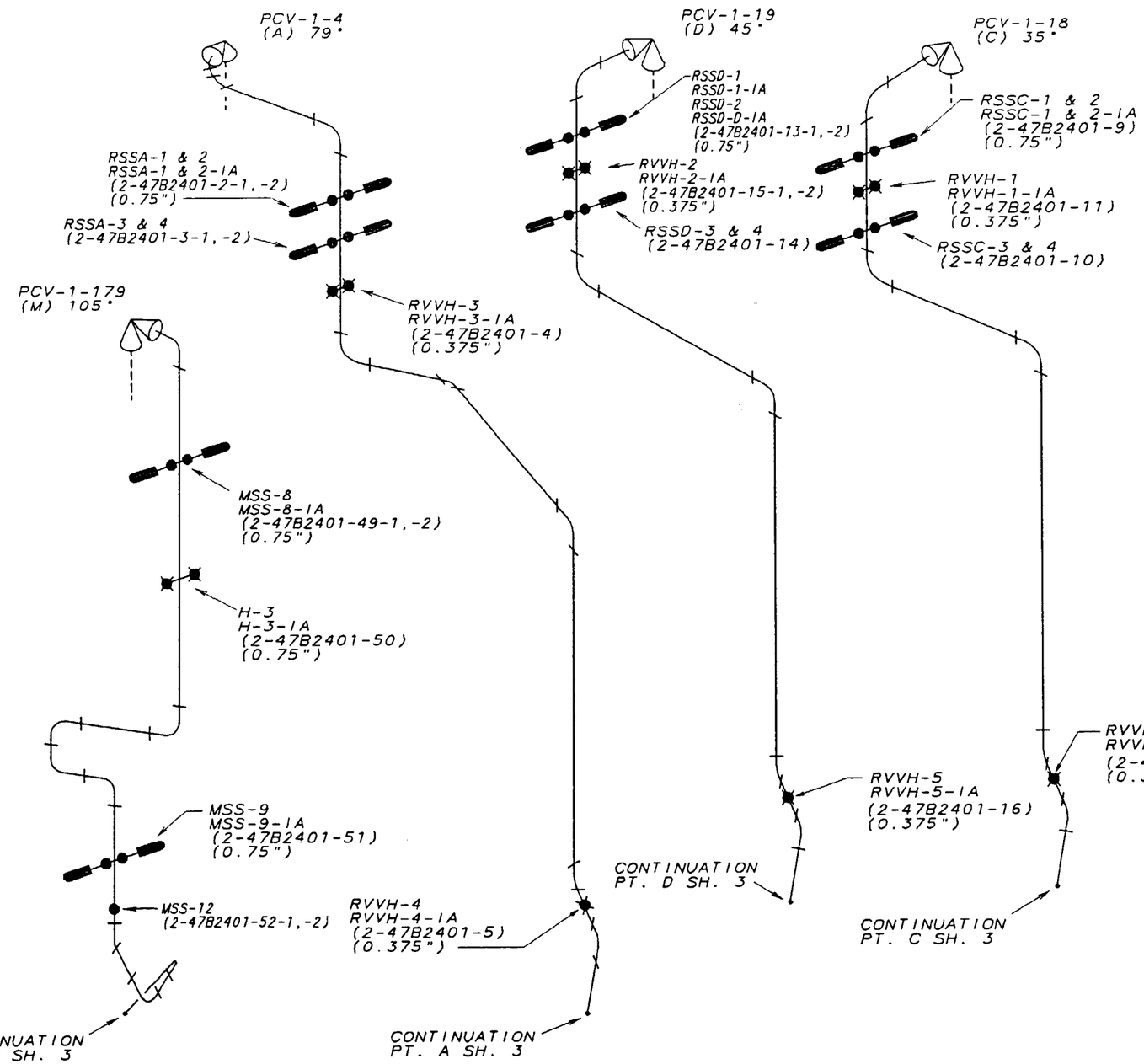
REFERENCE DRAWINGS
47W401 SERIES

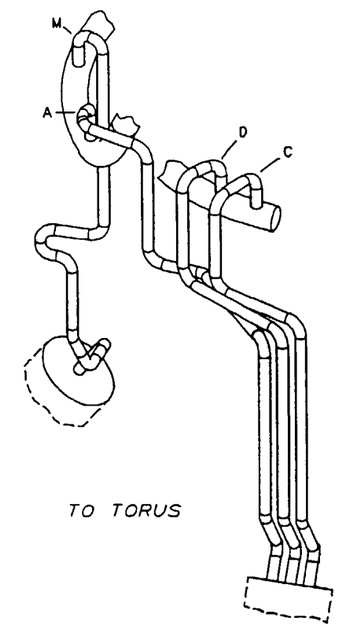
LEGEND

VARIABLE SUPPORT
MECHANICAL SNUBBER

ASME CC-2 (EQUIVALENT)

NOTE:
1. COMPONENTS EXEMPT PER ASME XI 1995 EDITION, 1996 ADDENDA, IWC-1222(d).





Information Only

003	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
MAIN STEAM RELIEF VALVE SYSTEM
VENT PIPING SUPPORT LOCATIONS

DRAWN: PHB	DATE: 7-1-92	SCALE: NTS	CADAM/ISICUP
CHECKED: PHB	APPROVED: GLB	SHEET 02 OF 09	REV
SUBMITTED: JES		2-ISI-0412-C	003

ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

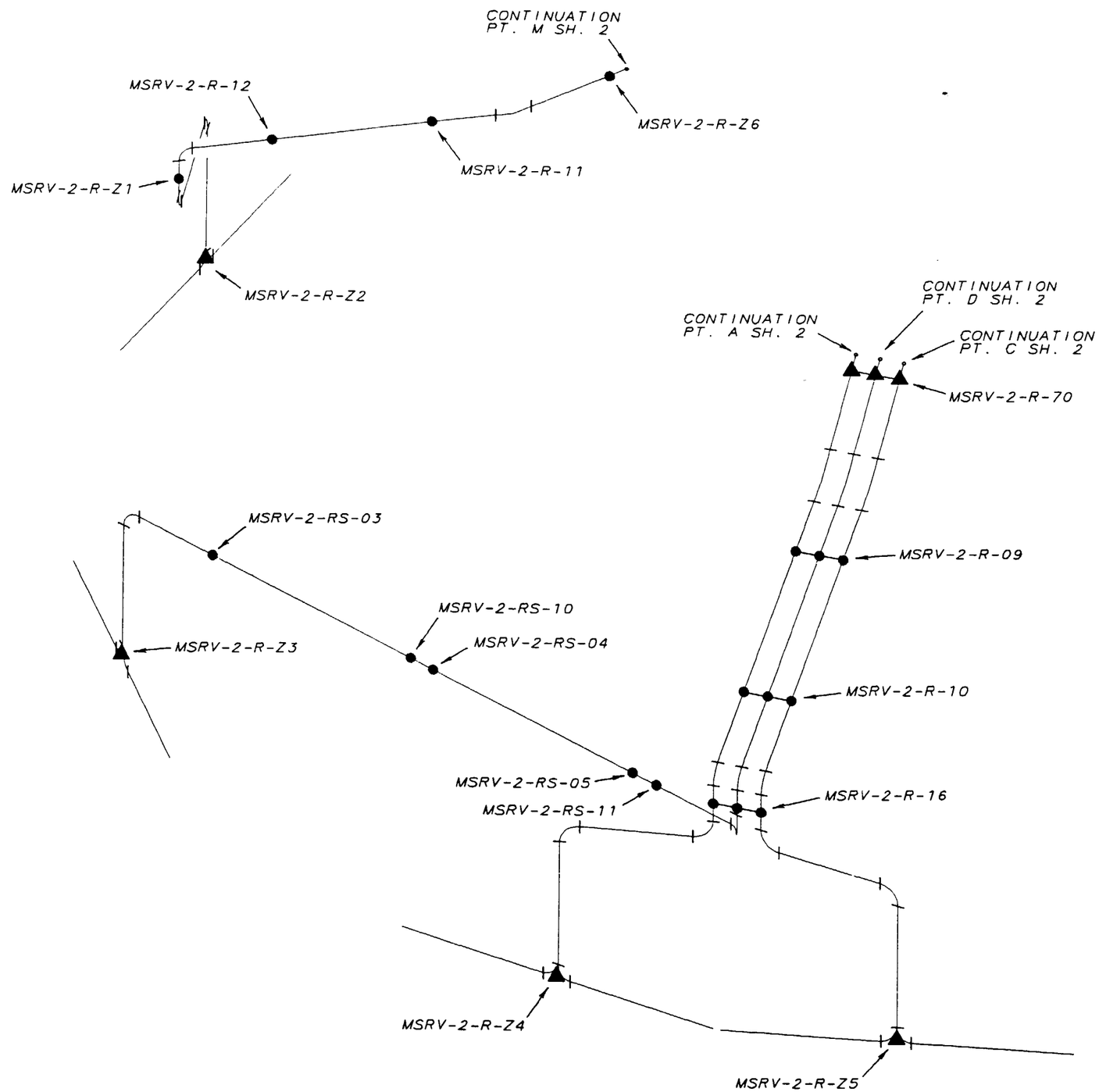
CCD

REFERENCE DRAWINGS
47W401 SERIES

LEGEND
● RIGID SUPPORT
▲ ANCHOR

ASME CC-2 (EQUIVALENT)

NOTE:
1. COMPONENTS EXEMPT PER ASME XI 1995 EDITION, 1996 ADDENDA, IWC-1222(d).



Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
001	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
MAIN STEAM RELIEF VALVE SYSTEM
VENT PIPING SUPPORT LOCATIONS

DRAWN: PHB	DATE: 7-1-92	SCALE: NTS	CADAM/ISICUP
CHECKED: PHB	APPROVED: GLB	SHEET 03 OF 09	REV
SUBMITTED: JES		2-ISI-0412-C	001

ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

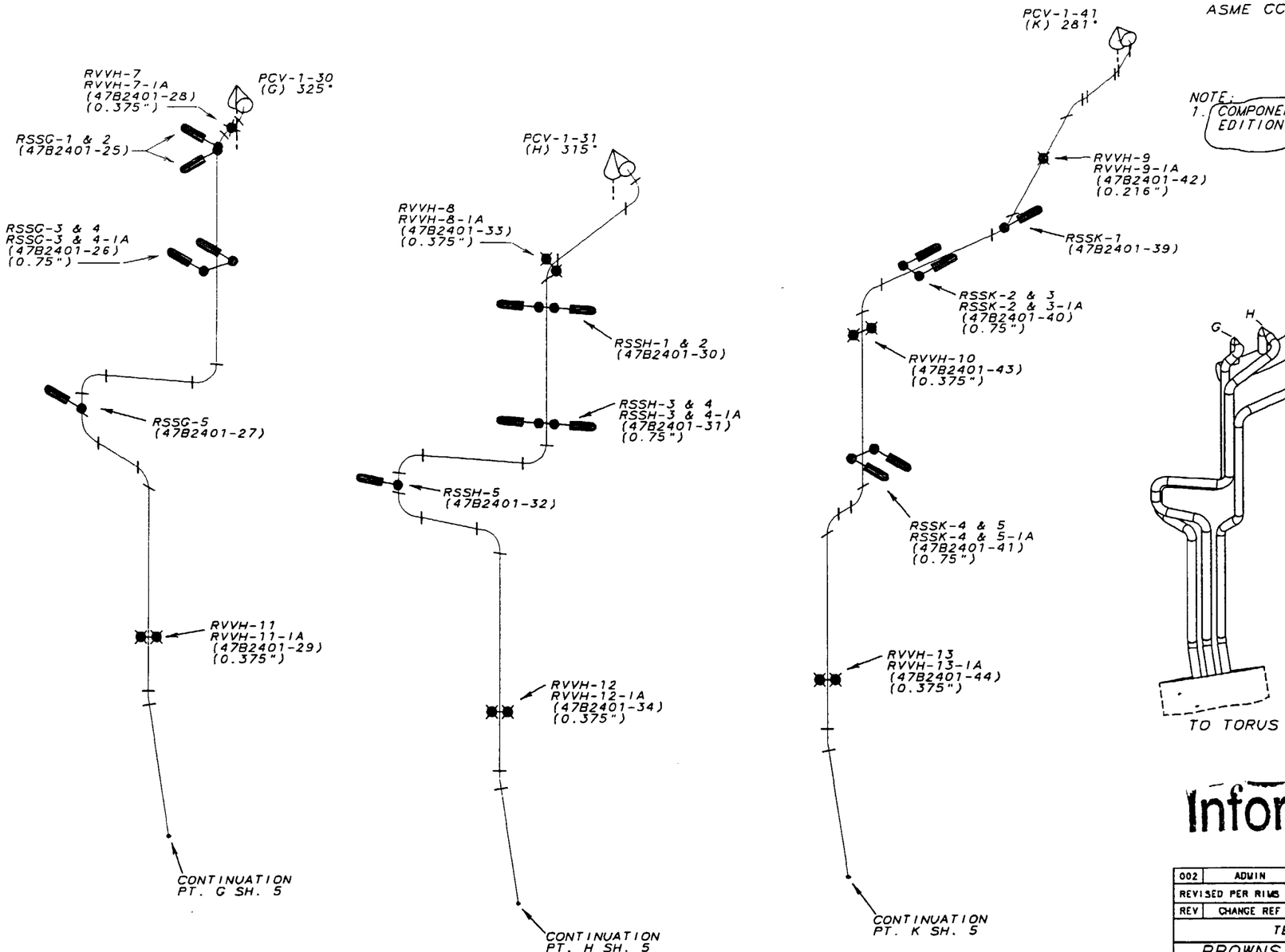
CCD

REFERENCE DRAWINGS
47W401 SERIES

LEGEND
VARIABLE SUPPORT
MECHANICAL SNUBBER

ASME CC-2 (EQUIVALENT)

NOTE:
1. COMPONENTS EXEMPT PER ASME XI 1995 EDITION, 1996 ADDENDA, IWC-1222(d).



Information Only

002	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
MAIN STEAM RELIEF VALVE SYSTEM
VENT PIPING SUPPORT LOCATIONS

DRAWN: PHB	DATE: 7-1-92	SCALE: NTS	CADAM/ISICMP
CHECKED: PHB	APPROVED: GLB	SHEET 04 OF 09	REV
SUBMITTED: JES		2-ISI-0412-C	002

ALL A/D HISTORY RESEARCHED • R000

CAD MAINTAINED DRAWING

CCD

REFERENCE DRAWINGS
47W401 SERIES

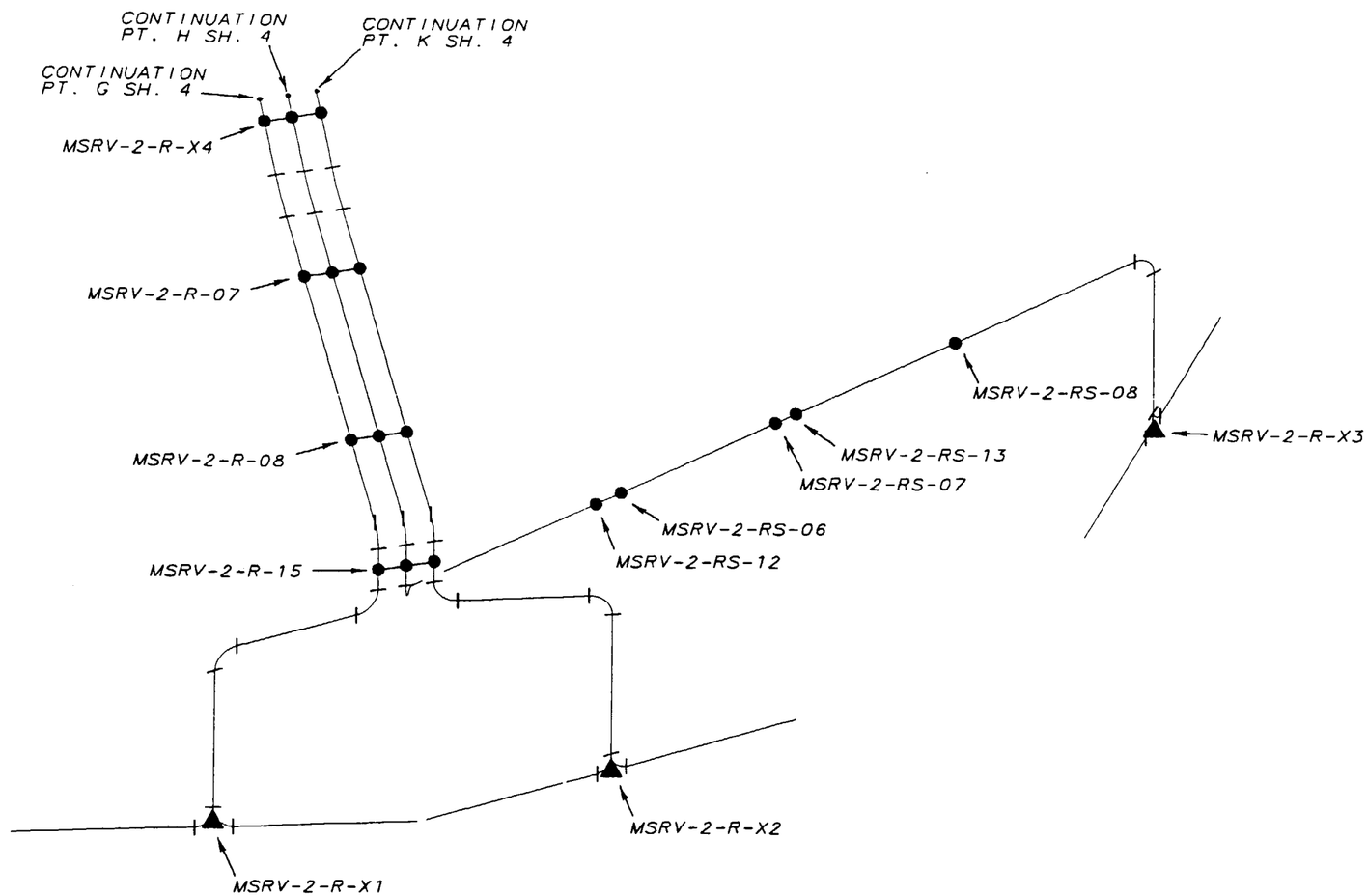
LEGEND

● RIGID SUPPORT

▲ ANCHOR

ASME CC-2 (EQUIVALENT)

NOTE:
1. COMPONENTS EXEMPT PER ASME XI 1995 EDITION, 1996 ADDENDA, IWC-1222(d).



Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
001	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
MAIN STEAM RELIEF VALVE SYSTEM
VENT PIPING SUPPORT LOCATIONS

DRAWN: PHB	DATE:	SCALE: NTS	CADAM/ISICMP
CHECKED: PHB	APPROVED: GLB	SHEET 05 OF 09	REV
SUBMITTED: JES		2-ISI-0412-C	001

ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

CCD

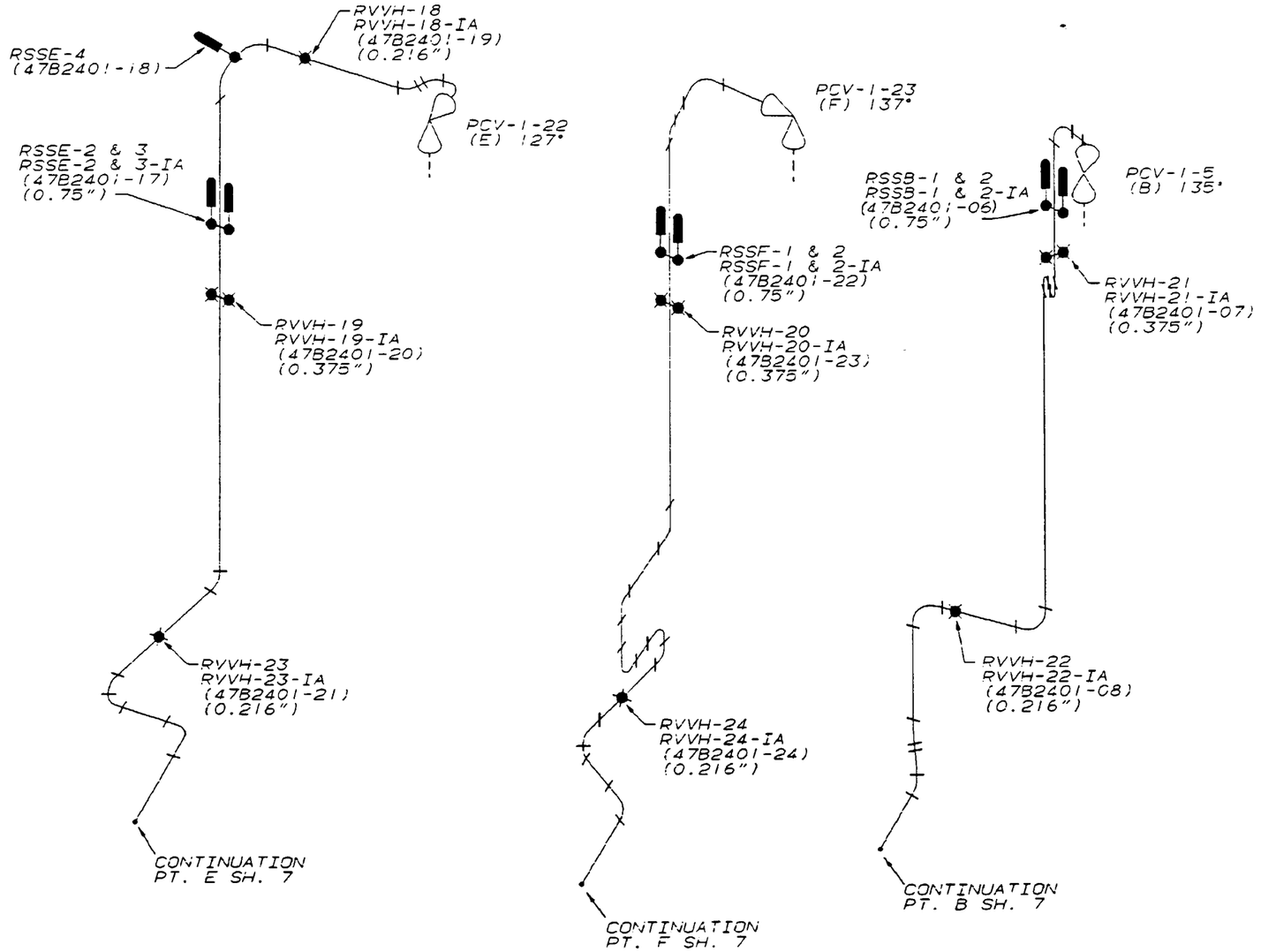
REFERENCE DRAWINGS
47W401 SERIES

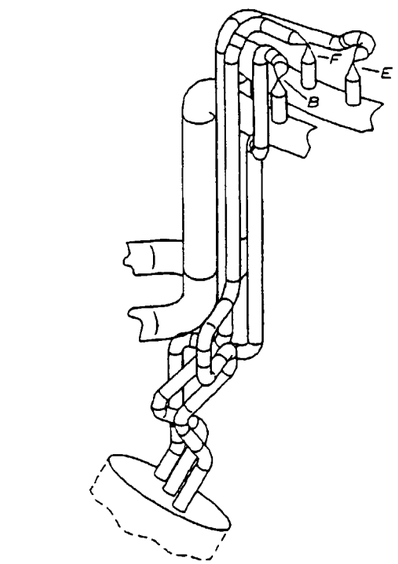
LEGEND

VARIABLE SUPPORT
MECHANICAL SNUBBER

ASME CC-2 (EQUIVALENT)

NOTE:
1. COMPONENTS EXEMPT PER ASME XI 1995 EDITION, 1996 ADDENDA, IWC-1222(d).





TO TORUS

Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
002	ADWIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
MAIN STEAM RELIEF VALVE SYSTEM
VENT PIPING SUPPORT LOCATIONS

DRAWN: PHB	DATE: 7-1-92	SCALE: NTS	CADAM/ISICMP
CHECKED: RB	APPROVED: GLB	SHEET 06 OF 09	REV
SUBMITTED: JES		2-ISI-0412-C	002
		CCD	

ALL A/C HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

REFERENCE DRAWINGS
47W401 SERIES

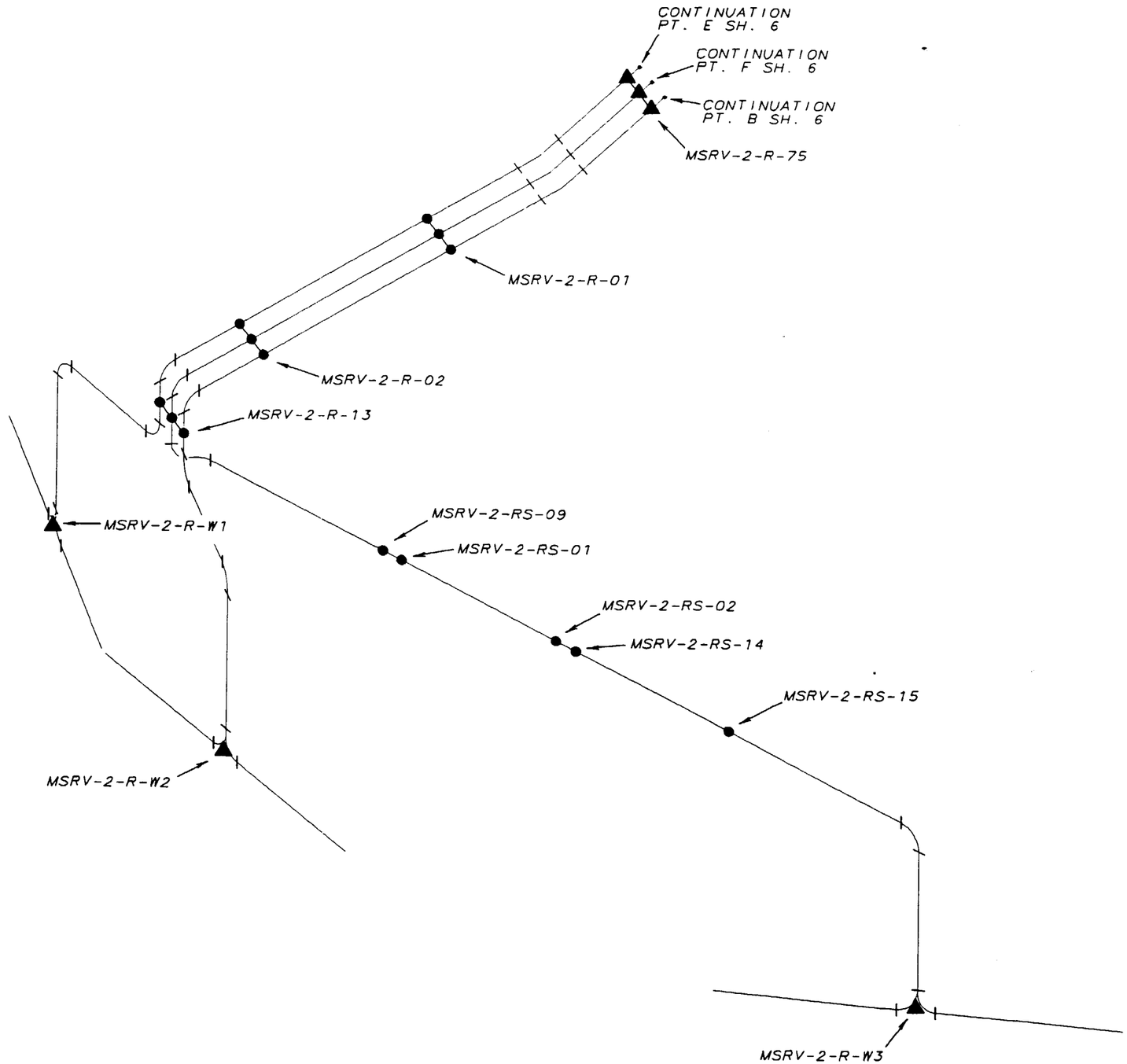
LEGEND

● RIGID SUPPORT

▲ ANCHOR

ASME CC-2 (EQUIVALENT)

NOTE:
1. COMPONENTS EXEMPT PER ASME XI 1995 EDITION, 1996 ADDENDA, IWC-1222(d).



Information Only

001	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000821 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
MAIN STEAM RELIEF VALVE SYSTEM
VENT PIPING SUPPORT LOCATIONS

DRAWN: PHB	DATE:	SCALE: NTS	CADAM/ISICMP
CHECKED: PHB	APPROVED: GLB	SHEET 07 OF 09	REV
SUBMITTED: JES		2-ISI-0412-C	001

ALL A/D HISTORY RESEARCHED AT R000

CAD MAINTAINED DRAWING

CCD

REFERENCE DRAWINGS
47W401 SERIES

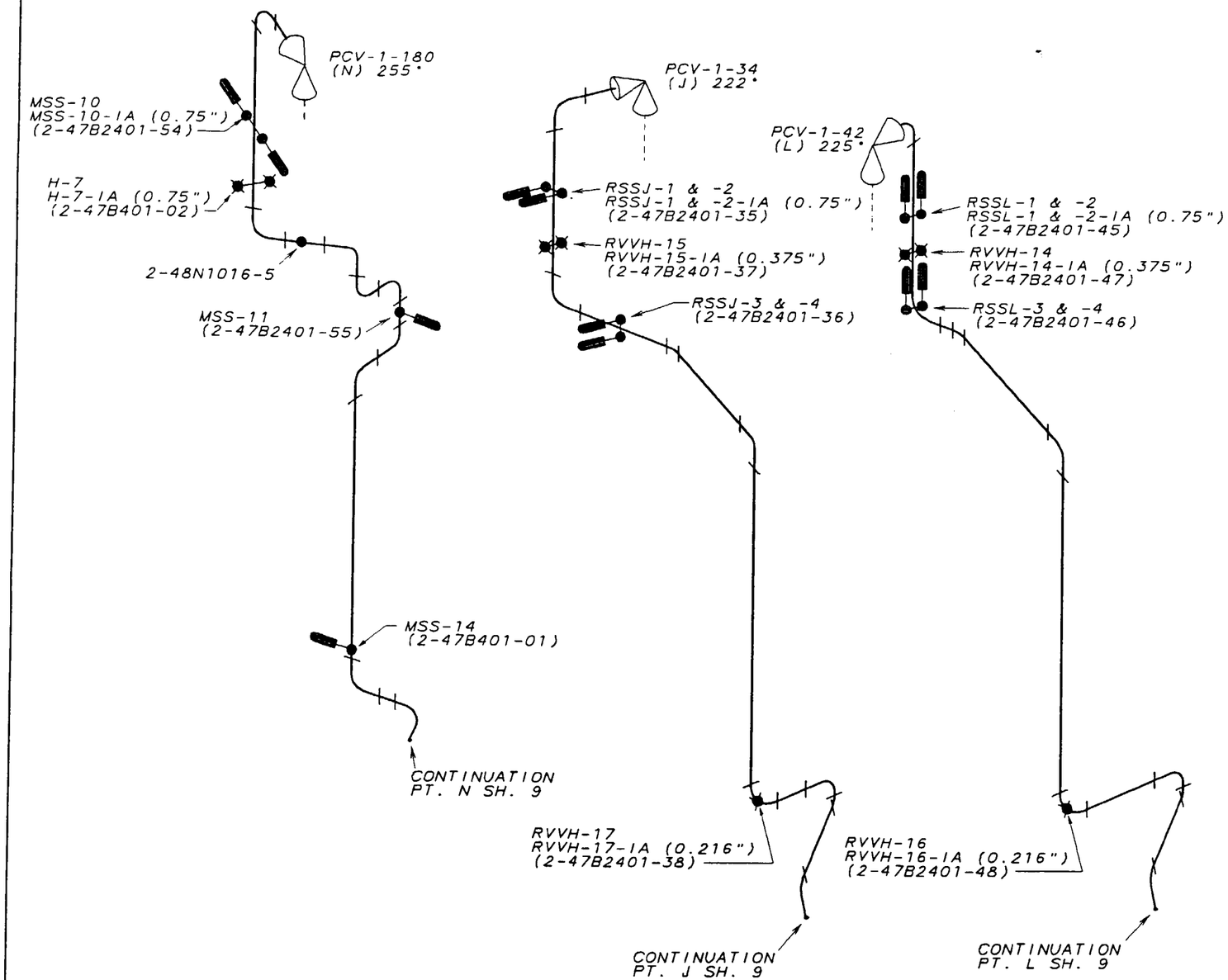
LEGEND

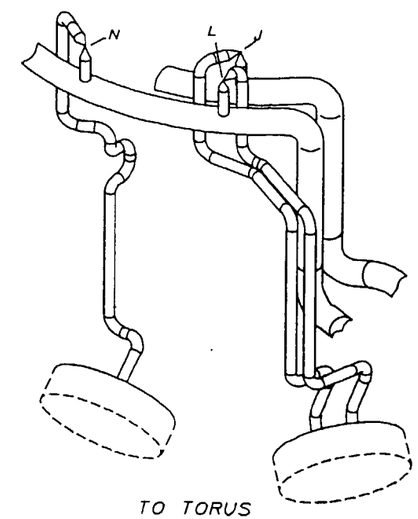
- ● RIGID SUPPORT
- ✱ VARIABLE SUPPORT
- ●—▬ MECHANICAL SNUBBER

CALCULATION BRANCH/PROJECT IDENTIFIER:
CD-02010-895439

ASME CC-2 (EQUIVALENT)

NOTE:
1. COMPONENTS EXEMPT PER ASME XI 1995 EDITION, 1996 ADDENDA, IWC-1222(d).





Information Only

003	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000621 002					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

TENNESSEE VALLEY AUTHORITY

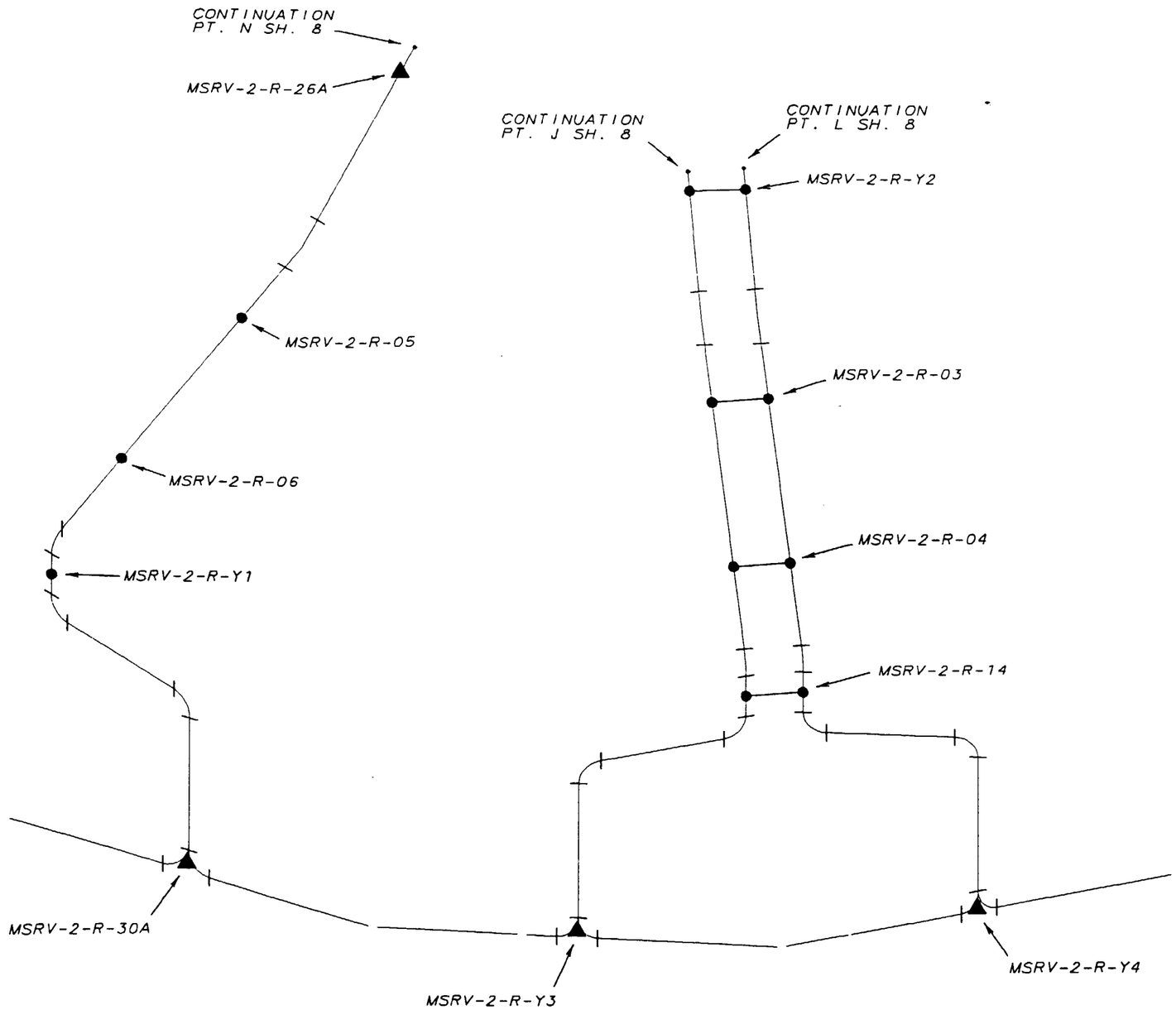
BROWNS FERRY NUCLEAR PLANT
UNIT 2
MAINSTEAM RELIEF VALVE SYSTEM
VENT PIPING SUPPORT LOCATIONS

DRAWN: PHB	DATE: 7-1-92	SCALE: NTS	CADAM/ISICMP
CHECKED: PHB	APPROVED:	SHEET 08 OF 09	REV
SUBMITTED: JES	GLB	2-ISI-0412-C	003

CAD MAINTAINED DRAWING

CCD

ALL A/D HISTORY RESEARCHED AT R001



REFERENCE DRAWINGS
47W401 SERIES

LEGEND
● RIGID SUPPORT
▲ ANCHOR

ASME CC-2 (EQUIVALENT)

NOTE:
1. COMPONENTS EXEMPT PER ASME XI 1995 EDITION, 1996 ADDENDA, IWC-1222(d).

Information Only

REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE
001	ADMIN	RDL	RLD	HEH	
REVISED PER RIMS MEMO R21 000621 002					

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
MAIN STEAM RELIEF VALVE SYSTEM
VENT PIPING SUPPORT LOCATIONS

DRAWN: PHB	DATE:	SCALE: NTS	CADAM/ISICLIP
CHECKED: PHB	APPROVED:	SHEET 09 OF 09	REV
SUBMITTED: JES	GLB	2-ISI-0412-C	001

CAD MAINTAINED DRAWING

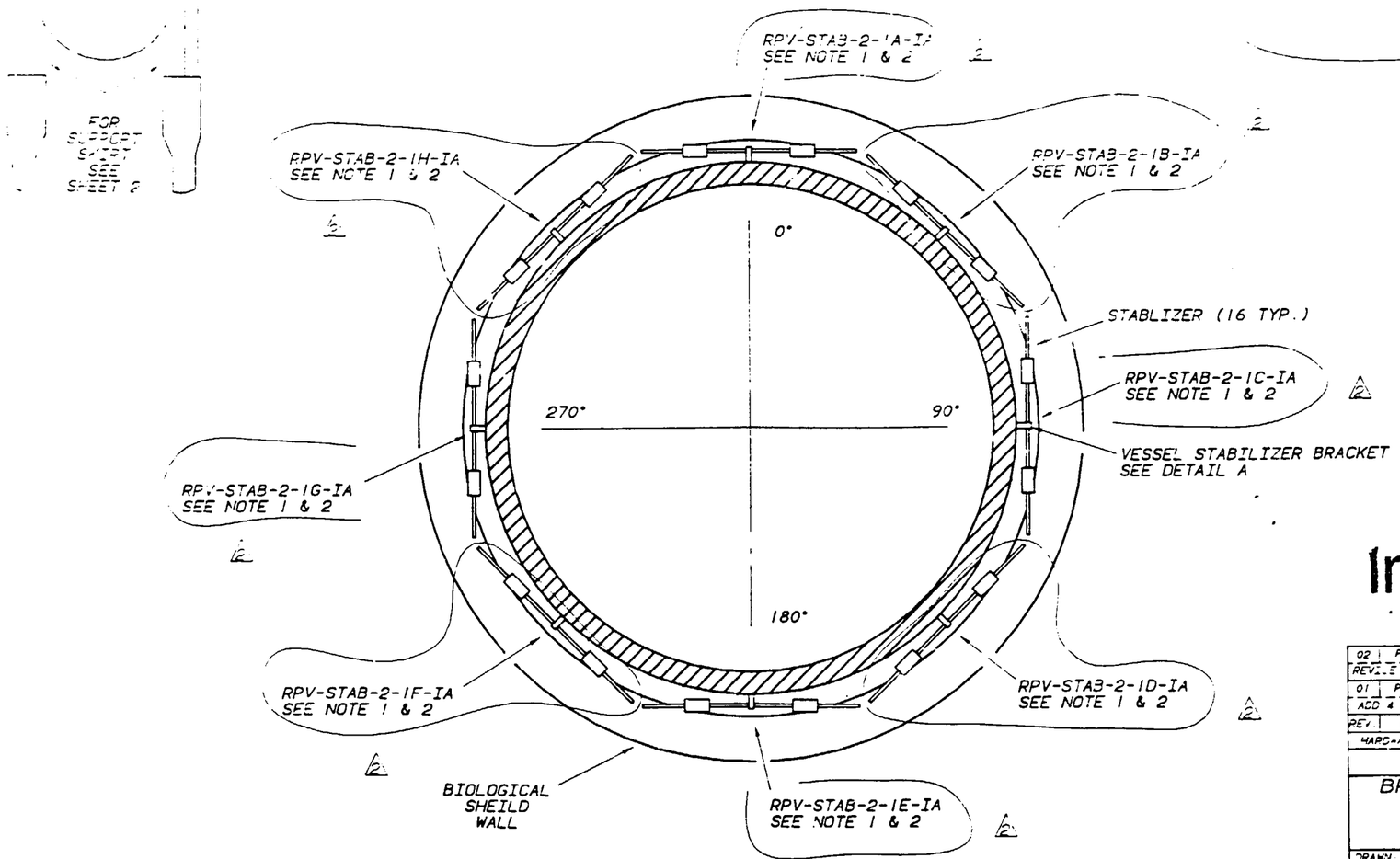
CCD

ALL A/D HISTORY RESEARCHED AT R000

NOTE:

1. THE RPV STABILIZER IS CONSIDERED ONE SUPPORT (RPV-STAB-2-1) FOR PURPOSES OF ISI SCHEDULING.
2. LETTERS A THROUGH H ARE ASSIGNED FOR INTEGRAL ATTACHMENT EXAMINATION RECORD PURPOSES ONLY.

DETAIL A



Information Only

02	PHB	RWD	GLB	RME	02/17/93
REVISE SUPPORT NUMBERS, REVISE NOTE SPECIFYING ALL ONE SUPPORT					
01	PHB	JCG	GLB	RME	2-11-93
ADD 4 STABILIZERS, CHANGE STAB. NUMBERING, REV NOTATION					
REV	BY	CHECKED	SUBMITTED	APPROVED	DATE
HARDWARE: IBM 5085		SOFTWARE: CADAM		USER: ISICMP	

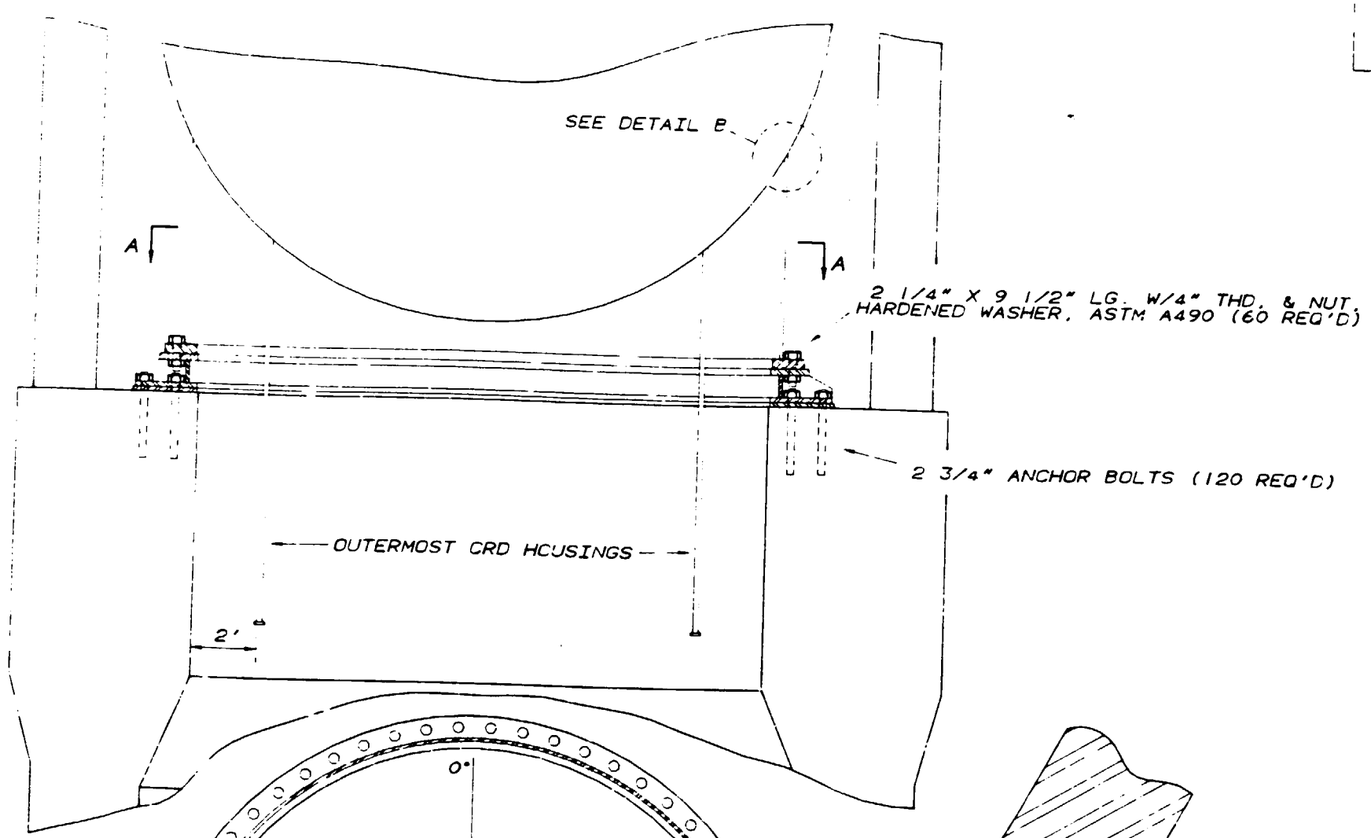
TENNESSEE VALLEY AUTHORITY

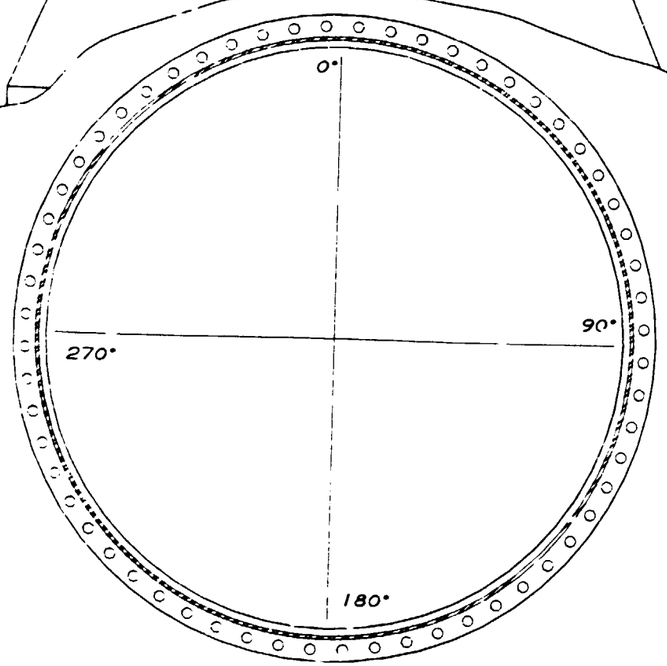
BROWNS FERRY NUCLEAR PLANT
UNIT 2
REACTOR VESSEL
VESSEL SUPPORTS

DRAWN PHB	SUBMITTED	APPROVED	SCALE NTS
DATE	DATE	DATE 6-3-92	SHEET 1 OF 2 SHEETS
CHECKED RPS	JES	GLB	DRAWING NO. ISI-0415-C02
DATE			REV.

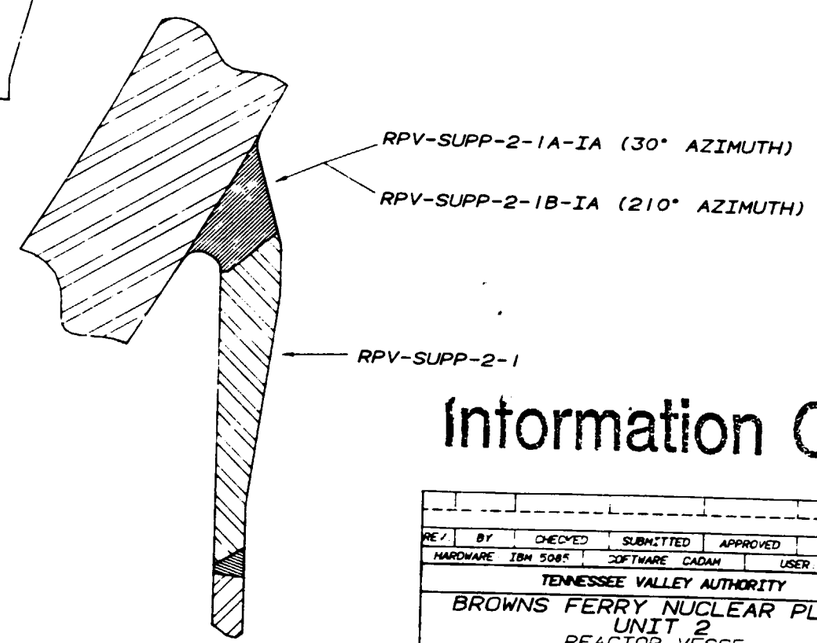
REFERENCE DRAWINGS
CFL17:.002 FIG. 4
131850E

ASME CC-1 (EQUIVALENT)





SECTION A-A



DETAIL B
VESSEL TO SKIRT WELD

Information Only

REV	BY	CHECKED	SUBMITTED	APPROVED	DATE
HARDWARE	IBM 5085	SOFTWARE	CADAM	USER	ISICMP

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT
UNIT 2
REACTOR VESSEL
VESSEL SUPPORTS

DRAWN PHB	SUBMITTED	APPROVED	SCALE NTS
DATE	DATE	DATE	SHEET 2 OF 2 SHEET(S)
CHECKED			DRAWING NO. / REV
DATE			ISI-0415-C00