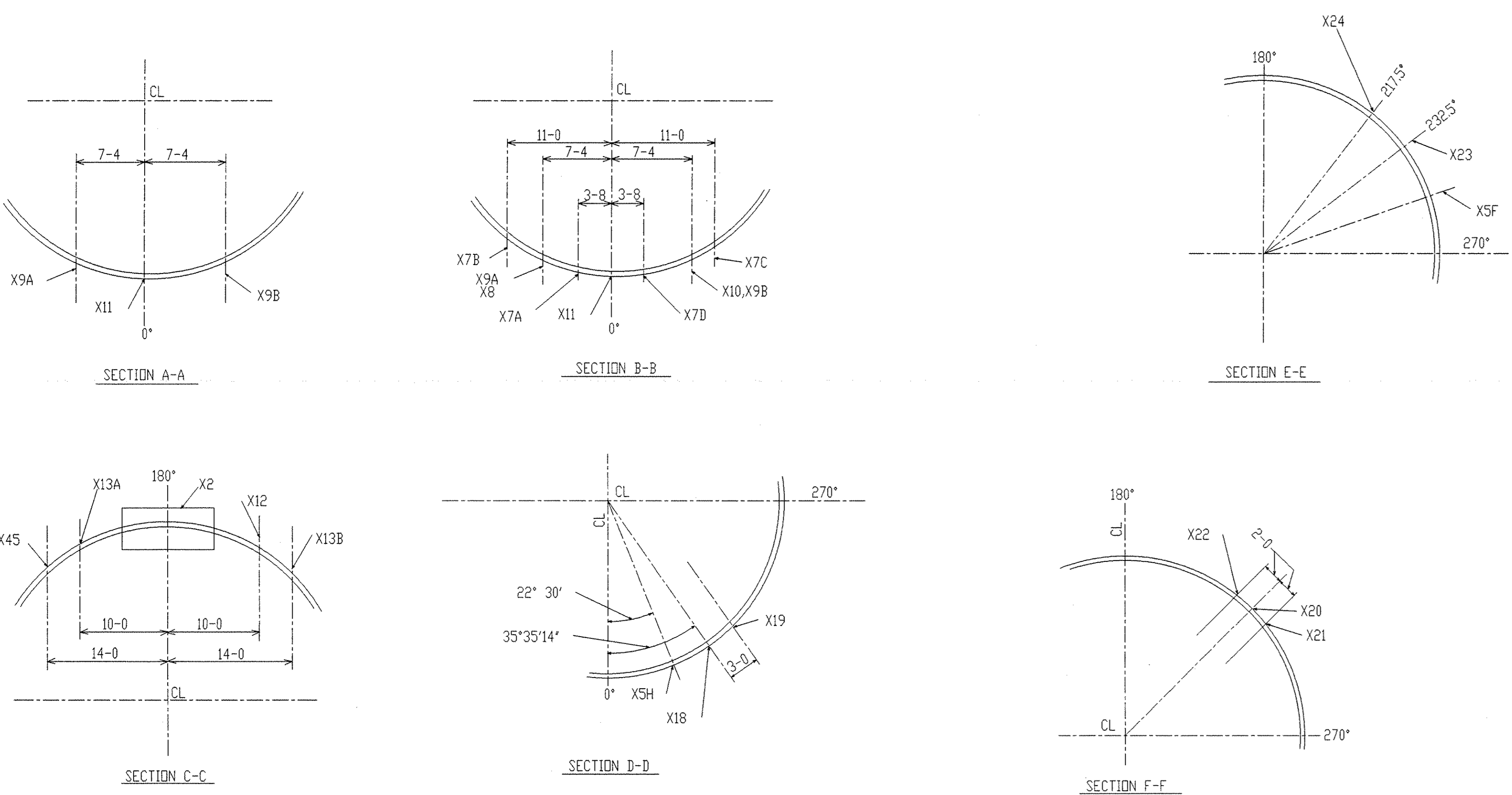
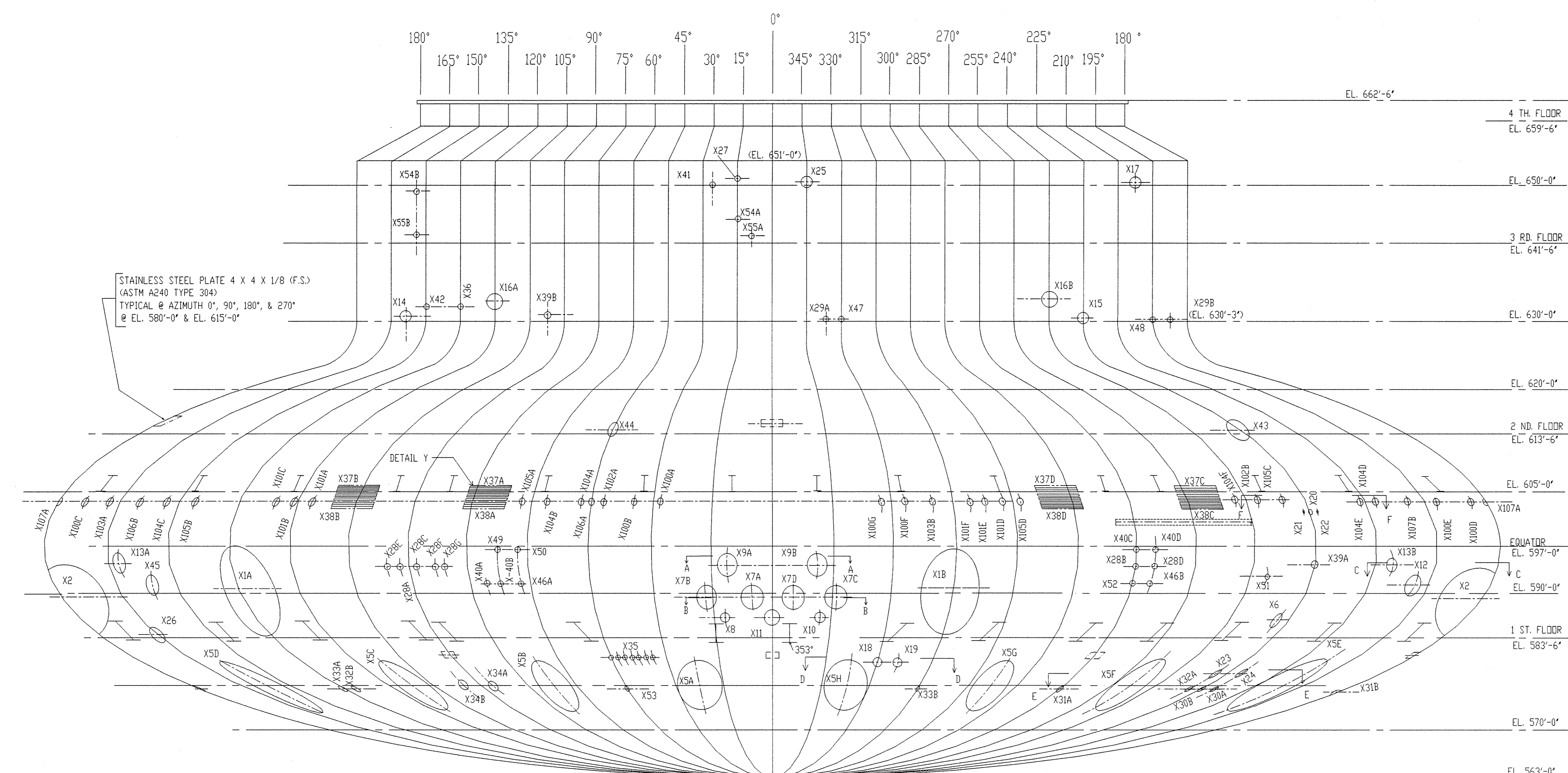


# DEVELOPED VIEW LOOKING WEST FROM OUTSIDE DRYWELL

**KEY OF RESPONSIBILITY**  
 S CONTAINMENT VESSEL CONTRACTOR  
 M MECHANICAL  
 C INSTRUMENTATION & CONTROL  
 E ELECTRICAL



**NOTES:**

- FOR PENETRATION TYPE 1 ASSEMBLY DETAILS REFER TO DRAWING M-2501 (DRYWELL PENETRATION ASSEMBLY TYPE 1)
- FOR PENETRATION TYPE 2 ASSEMBLY DETAILS REFER TO DRAWING M-2502 (DRYWELL PENETRATION ASSEMBLY TYPE 2)
- UNLESS OTHERWISE NOTED:  
 ALL INSTRUMENT PIS NUMBERS ARE PREFIXED T23  
 ALL VALVE AND EQUIPMENT PIS NUMBERS ARE PREFIXED T2300

## PENETRATION SCHEDULE

PENETRATION NUMBER	NO	SLEEVE	LOCATION	TYPE	LINE	DESCRIPTION	KEY	REMARKS	
PIS T2300	RECD	SIZE	ELEV. AZIMUTH		SIZE				
X001A	1	13-0 ID	590-4 135°			EQUIPMENT HATCH	S		
X001B	1	12-0 ID	590-4 315°			EQUIPMENT HATCH	S		
X002	1	10-2 ID	300 180°			PERSONNEL AIRLOCK	S		
X005A THRU X005H	8	7-1 ID	576-6 START 225°			CRD REMOVAL HATCH	S	SPACED 45° APART	
X006	1	24" ID	596-0 230°		6-0	VENT LINE	S		
X007A THRU X007D	4	12" ID	599-6 SECT B-B	1	26"	MAIN STEAM	M	SEE M-2161	
X008	1	15"	586-6 SECT B-B	1	2"	STEAM DRAIN	M		
X009A, X009B	2	40"	594-3 SECT A-A	1	24"	REACTOR FEEDWATER	M		
X010	1	18"	596-6 SECT B-B	1	4"	STEAM TO RCIC TURBINE	M		
X011	1	28"	586-6 SECT A-A	1	10"	STEAM TO HPCI TURBINE	M		
X012	1	36"	591-3 SECT C-C	1	20"	RHR SUPPLY	M		
X013A, X013B	2	34"	594-3 SECT C-C	1	24"	RHR RETURN	M		
X014	1	20"	630-9 197.5°	1	6"	SPARE	M		
X015	1	20"	630-9 225°	3	4"	H2 CONTROL DIV I	M		
X016A, X016B	2	28"	633-0 120°, 240°	1	12"	CORE SPRAY SYSTEM	M		
X017	1	20"	650-6 202.5°	1	6"	RHR RPV HEAD SPRAY	M		
X018	1	6"	432 579-0 SECT D-D	2	3"	DFDS DISCHARGE	M	SEE M-2502	
X019	1	6"	432 579-0 SECT D-D	2	3"	DEDS DISCHARGE	M		
X020	1	8"	500 602-0 SECT F-F	2	6"	SERVICE WATER	M		
X021	1	3"	300 602-0 SECT F-F	2	1"	SERVICE AIR	M		
X022	1	3"	300 602-0 SECT F-F	2	1"	NITROGEN SUPPLY	M		
X023	1	14"	750 578-6 SECT E-E	2	10"	RBCW SUPPLY	M		
X024	1	14"	750 578-6 SECT E-E	2	10"	RBCW RETURN	M		
X025	1	24"	125 650-6 345°	3	24"	VENT FROM DRYWELL	M	28" UP FROM DRYWELL	
X026	1	24"	125 650-0 15°	3	24"	VENT TO DRYWELL	M	SEE M-2501	
X027	1	10"	593 594-0	15°	5	SPARE	C		
X028A, X028B, X028C, X028D	4	10"	593 594-0 DET. 4 & 7	4	1"	JET PUMP INSTRUMENTATION	C	SEE I-2837-11	
X029A, X029B	2	10"	593 630-3 185°	4	1"	RPV INSTRUMENTATION	C		
X030A, X030B	2	10"	593 576-0 DET. 5	4	1"	RECIRC PUMP INSTRUMENTATION	C		
X031A	2	10"	593 576-0 270°	4	1"	SPARE	C		
X031B	2	10"	593 576-0 180°	4	1"	SPARE	C		
X032A, X032B	2	10"	593 576-0 DET. 3&5	4	1"	RPV INSTRUMENTATION	C		
X033A, X033B	2	10"	593 576-0 135°, 315°	4	1"	RPV INSTRUMENTATION	C		
X034A, X034B	2	14"	688 578-6 82.5°, 99°	2	10"	ECCW SUPPLY & RETURN	M	M-2161	
X035A AND X035G	2	1 1/2"	400 591-9	-	7	10"	TIP PENETRATION SPARE	C	I-2837-06, I-2837-09
X035B THRU X035F	5	1 1/2"	400 591-9	-	7	3/8"	TIP DRIVE	C	I-2837-06, I-2837-09
X036	1	10"	593 633-0 135°	2	4"	NITROGEN TO DRYWELL	M	SEE M-2501	
X037A THRU X037D	19	3	250 602-0	6	1"	CONTROL ROD DRIVE INSERT	S	FOR LOCATION OF DEVG. I-2113-16 FOR RECH.	
X038A THRU X038D	19	3	250 602-0	6	3/4"	CONTROL ROD DRIVE WITHDRAW	S	DETS. SEE M-2161	
X039A, X039B	2	12"	500 587-8 225°	3	12"	CONTAINMENT SPRAY SUPPLY	S		
X040A THRU X040D	4	10"	593 602-0 DET. 1&7	4	1"	RPV INSTRUMENTATION	C	SEE I-2837-11	
X041	1	6"	432 650-0 25°	2	1"	SPARE	C	6" CAP	
X042	1	6"	432 633-2 150°	2	2"	STAND BY LIO. CONTROL	M	SEE M-2161	
X043	1	30"	150 614-0 225°	1	6"	RVCU SUPPLY	M	30" SLOPE UP	
X044	1	26"	150 614-0 45°	3	4"	H2 CONTROL DIV. II	M	30" SLOPE UP	
X045	1	34"	200 591-3 SECT C-C	1	20"	SPARE	M	SEE M-2161	
X046A, X046B	2	10"	593 602-0 DET. 1&7	4	1"	MAIN STEAM FLOW	C	SEE I-2837-11	
X047	1	10"	593 630-3 330°	4	1"	REACTOR PROTECTION SYSTEM	C		
X048	1	10"	593 630-3 195°	4	1"	DRYING PROBER	C		
X049	1	10"	593 596-0 66.7°	4	1"	RECIRCULATION PUMP SEAL PURGE	C		
X050	1	10"	593 596-0 62.5°	4	1"	SPARE	C		
X051	1	10"	593 592-6 235°	4	1"	RECIRCULATION PUMP SEAL PURGE	C		
X052	1	10"	593 591-6 270°	4	1"	MAIN STEAM FLOW	C		
X053	1	10"	593 576-0 45°	4	1"	RPV INSTRUMENTATION	C		
X054A	1	10"	593 647-10 15°	4	1"	REACTOR LEVEL, PRESSURE	C	I-2837-06, I-2837-11	
X054B	1	10"	593 649-0 155°	4	1"	REACTOR LEVEL, PRESSURE	C		
X055A, X055B	2	10"	593 642-6	4	1"	REACTOR LEVEL, PRESSURE	C		
X100A	1	12"	688 603-6	8		NEUTRON MONITOR	E	SEE E-2831-08	
X100B	1	12"	688 603-6	8		LOW VOLTAGE SWITCHING/RPS	E		
X100C	1	12"	688 603-9	8		SPARE	E		
X100D	1	12"	688 603-9	8		LOW LEVEL SIGNAL VIBRATION TEST	E		
X100E	1	12"	688 604-0	8		SPARE	E		
X100F	1	12"	688 603-6	8		SPARE	E		
X100G	1	12"	688 603-9	8		NEUTRON MONITOR	E		
X101A	1	12"	688 603-3	8		RECIRC PUMP PWR SKV	E		
X101B	1	12"	688 603-3	8		RECIRC PUMP PWR SKV	E		
X101C	1	12"	688 603-3	8		RECIRC PUMP PWR SKV	E		
X101D	1	12"	688 603-3	8		RECIRC PUMP PWR SKV	E		
X101E	1	12"	688 603-3	8		RECIRC PUMP PWR SKV	E		
X101F	1	12"	688 603-3	8		RECIRC PUMP PWR SKV	E		
X102A	1	12"	688 603-6	8		NEUTRON MONITOR	E		
X102B	1	12"	688 603-3	8		LOW VOLTAGE SWITCHING/RPS	E		
X103A	1	12"	688 604-0	8		THERMOPLS & MISC. SIGN	E		
X103B	1	12"	688 603-9	8		NEUTRON MONITOR	E		
X104A	1	12"	688 603-6	8		CRD POSITION INDICATORS	E		
X104B	1	12"	688 603-6	8		CRD POSITION INDICATORS	E		
X104C	1	12"	688 604-0	8		CRD POSITION INDICATORS	E		
X104D	1	12"	688 604-0	8		CRD POSITION INDICATORS	E		
X104E	1	12"	688 603-9	8		CRD POSITION INDICATORS	E		
X104F	1	12"	688 603-9	8		CRD POSITION INDICATORS	E		
X105A	1	12"	688 603-6	8		LOW VOLTAGE PWR (480 V)	E		
X105B	1	12"	688 603-9	8		LOW VOLTAGE SWITCHING/RPS	E		
X105C	1	12"	688 603-9	8		LOW VOLTAGE SWITCHING/RPS	E		
X105D	1	12"	688 603-6	8		LOW VOLTAGE PWR (480 V)	E		
X106A	1	12"	688 604-0	8		SPARE	E		
X106B	1	12"	688 603-9	8		LOW LEVEL SIGNAL VIBRATION TEST	E		
X107A	1	12"	688 603-6	8		SPARE	E		
X107B	1	12"	688 604-0	8		THERMOCOUPLE	E		

- REFERENCE DRAWINGS**
- 1.
  - 2.
  3. A-2000, 2001, 2002-01, 2002-02, 2003-01, 2003-02 REACTOR BUILDING FLOOR PLANS
  4. C-2301, 2302, 2303, 2305 PRIMARY CONTAINMENT
  - 5.
  6. I-2837-06, I-2837-11 PENETRATIONS-INSTRUMENT SOURCE LINES
  7. E-2831-08 ELECTRICAL PENETRATIONS PLAN & SECTIONS.
  8. M-2161 MECHANICAL PENETRATION DETAIL
  9. I-2113-16 C.R.D. ROUTING & PENETRATION DETAILS
  10. CB&I DRWG. NO.2 EDISON FILE NO. B2-105.

**6C721-2304**  
LATEST REVISION

**NUCLEAR SAFETY RELATED**

THIS IS A MICROSTATION PRODUCED DRAWING. CHANGES OR REVISIONS MUST BE BROUGHT TO THE ATTENTION OF THE PLANT ENGINEERING DESIGN GROUP TO ENSURE THAT CONFIGURATION CONTROL IS MAINTAINED.

INC CODE		Detroit Edison		Fermi 2	
T		TITLE			
		PRIMARY CONTAINMENT PENETS DRYWELL			
OTHER REVISIONS:		APPROVED BY		DATE	
ADDED NOTES PER CARD 09-21031-02 REFERENCE L&S 10-02-05 REVISED DRAWING REFERENCES TO AGREE WITH ARMS FORMAT THESE ADMINISTRATIVE CHANGES PER PER-0015 FALL WITHIN THE SCOPE OF MES-09, STEP 3.1.2 (WITH NOTE)		CHECKED BY		DATE	
PREPARED BY: VJ ADLER		APPROVED BY:		DATE: 7-28-09	
DATE: 7/22/09		OTHER APPROVAL:		DATE:	
DRAWING NUMBER: 6C721-2304		DOCUMENT TYPE CODE: DDDACS		NUC OPS FILE NO: 1890	
DATE ISSUED TO: 7/31/09		REV: U		REV: U	