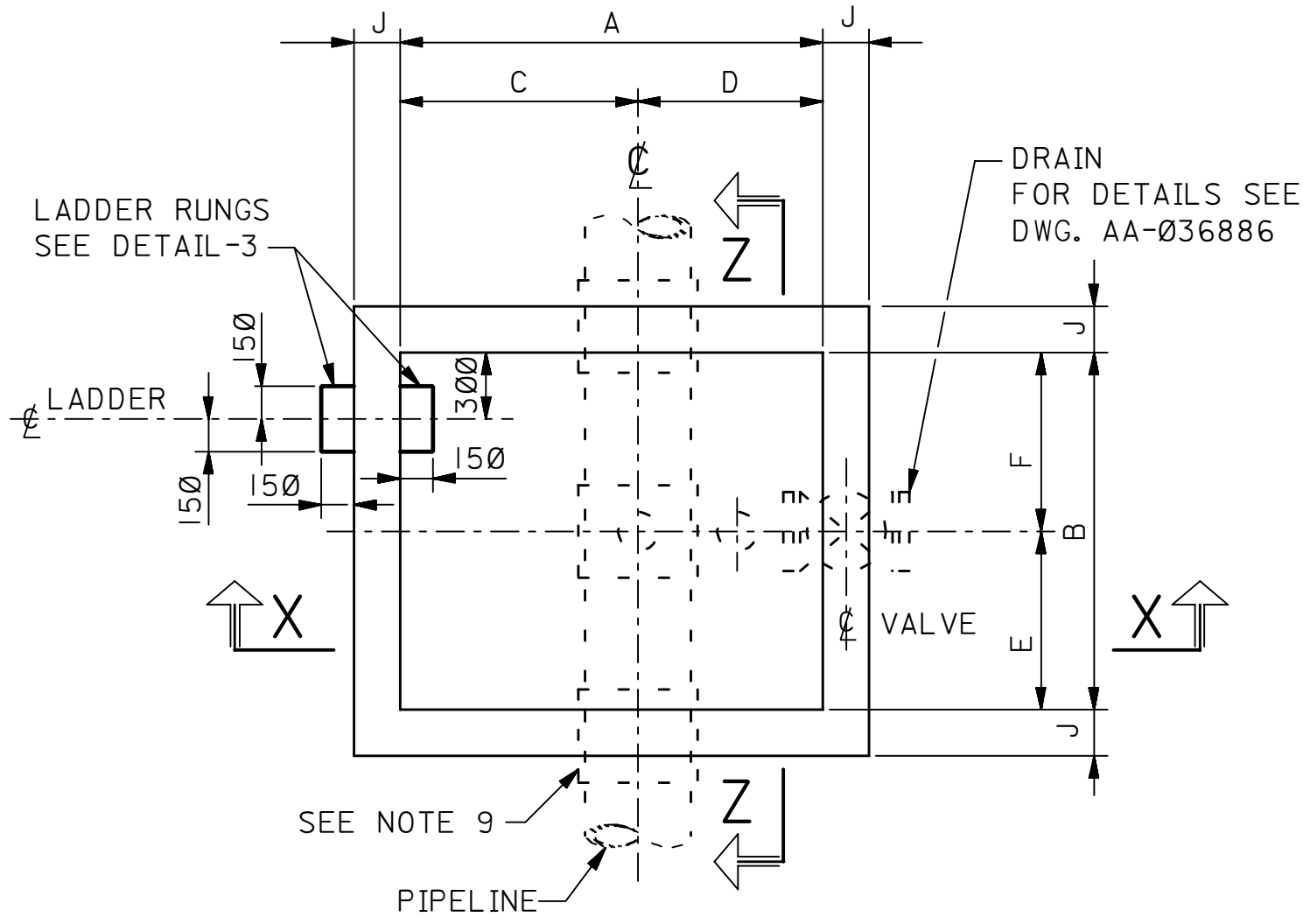


50	100	5936365	AA-036886	Q	066
REV. NO.	SHT. NO.	DRAWING NUMBER	INDEX	PLANT NO.	

TYPE I



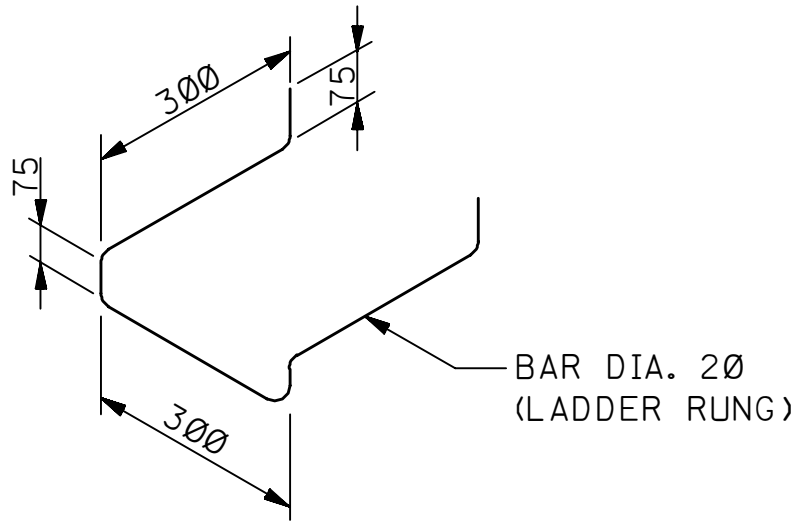
PLAN

VALVE BOX WITH 6" DRAIN

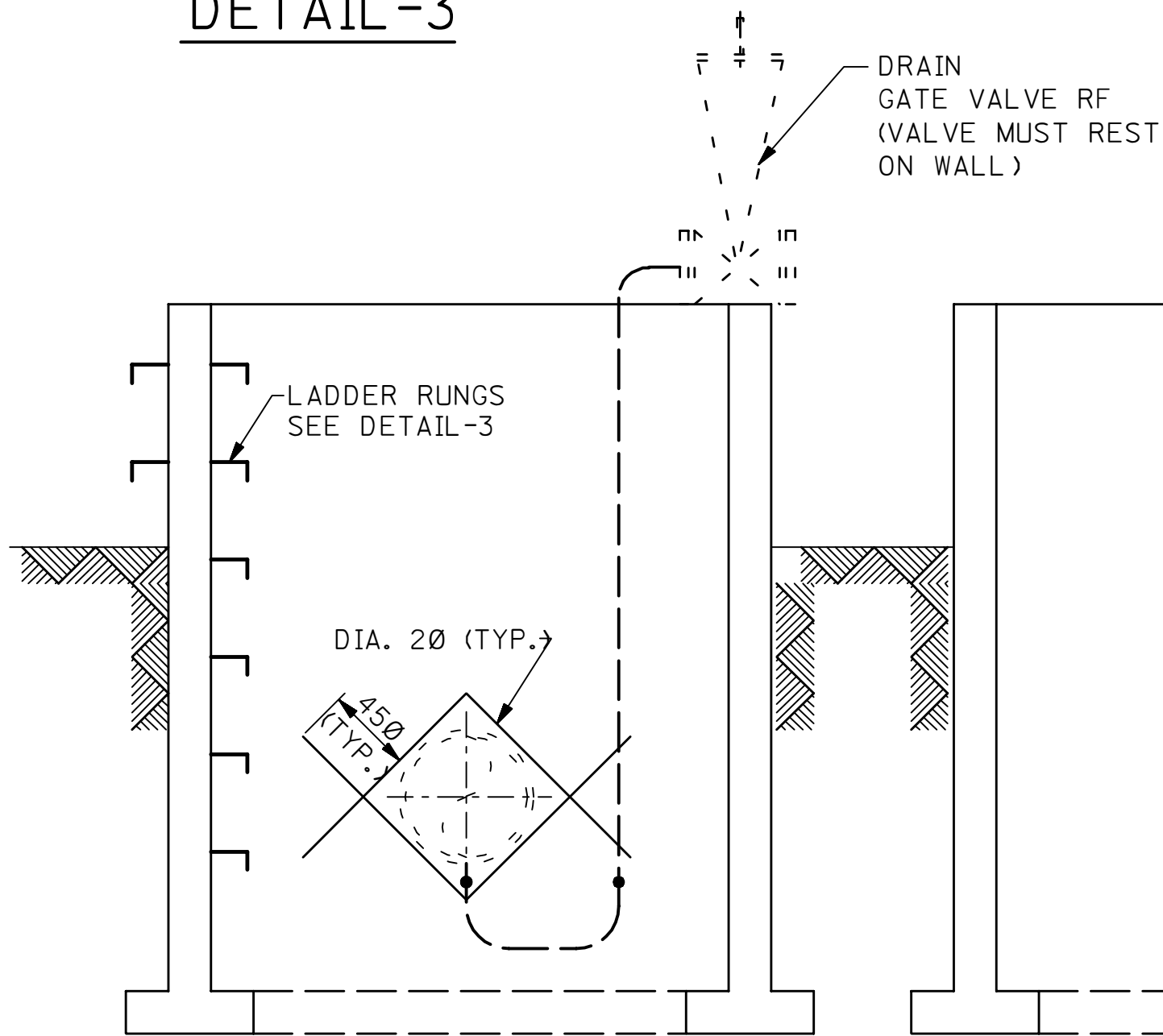
SUB TYPE	SIZE OF P/L	DIMENSION								REBAR DIA. @ C/C	
		A	B	C	D	E	F	H	J	L	M
A	20",22" & 24"	2050	1650	1025	1025	825	825	2750	200	DIA.12@300	DIA.12@300
B	30"	2050	1650	1000	1050	825	825	2750	200	DIA.12@300	DIA.12@300
C	36"	2250	1650	1125	1125	825	825	3350	200	DIA.12@300	DIA.12@300
D	42" & 48"	2450	1650	1250	1200	825	825	3350	200	DIA.12@300	DIA.12@300

VALVE BOX WITH 12" DRAIN

SUB TYPE	SIZE OF P/L	DIMENSION								REBAR DIA. @ C/C	
		A	B	C	D	E	F	H	J	L	M
AA	20",22" & 24"	2650	1850	1000	1650	925	925	3050	200	DIA.12@300	DIA.12@300
BB	30"	2650	1850	1000	1650	925	925	3050	200	DIA.12@300	DIA.12@300
CC	36"	2850	1850	1200	1650	925	925	3050	200	DIA.12@300	DIA.12@300
DD	42" & 48"	3050	1850	1450	1650	925	925	3650	200	DIA.16@300	DIA.12@225



DETAIL-3



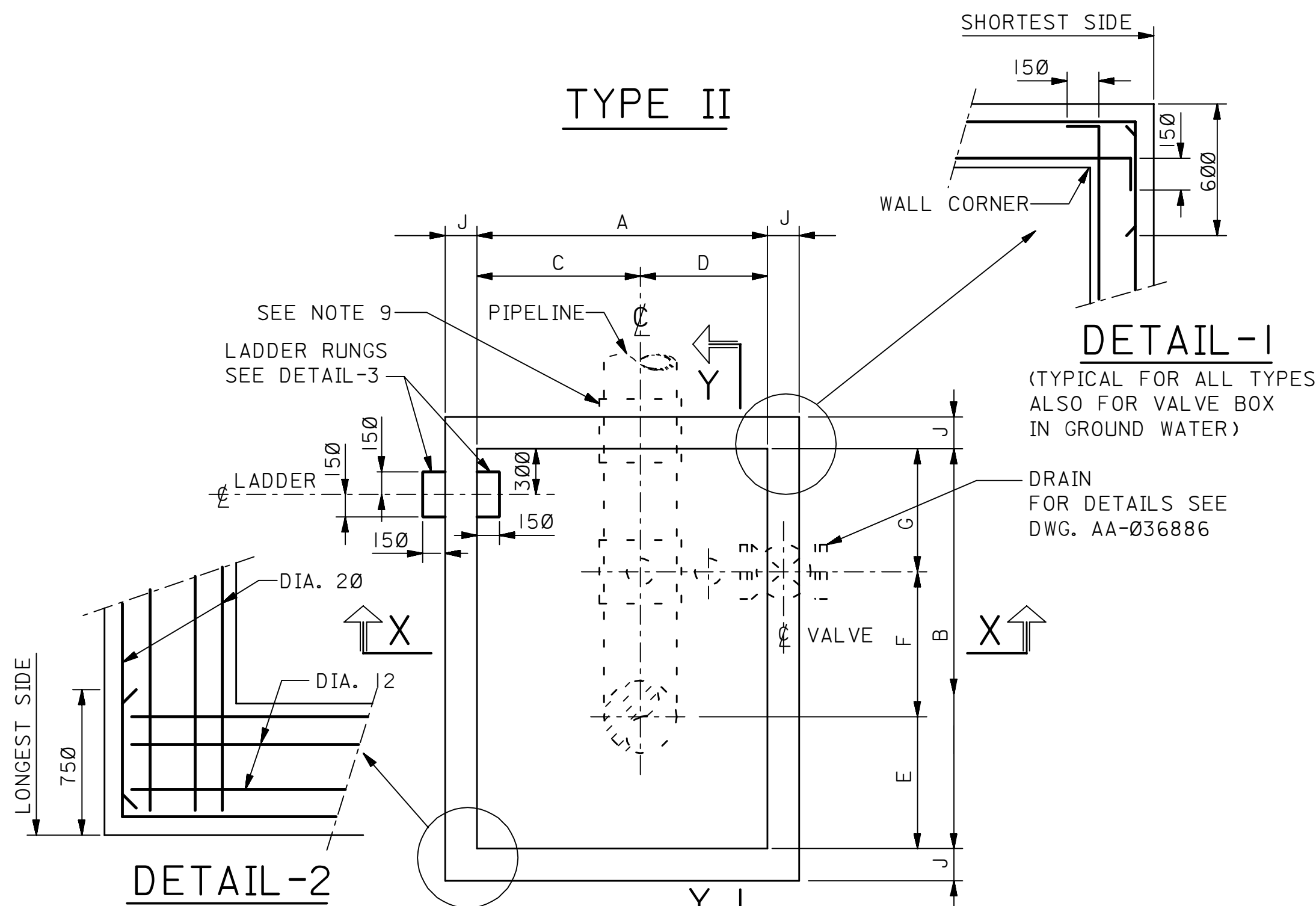
SECTION-XX

(FOR REBARS SEE DET.4)

SECTION-YY

(FOR REBARS SEE DET.4)

TYPE II



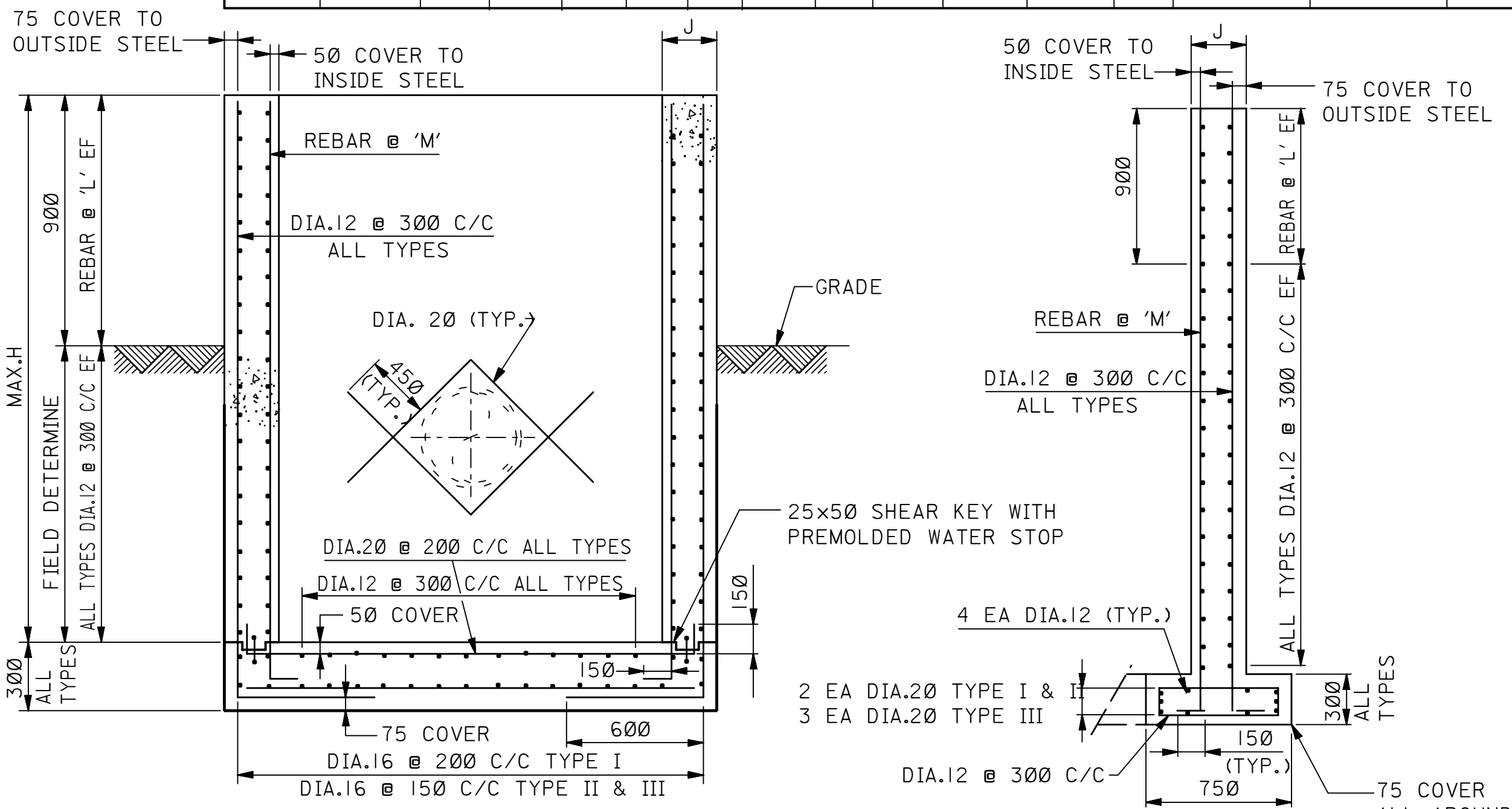
PLAN

VALVE BOX WITH 6" DRAIN

SUB TYPE	SIZE OF P/L	DIMENSION								REBAR DIA. C/C	
		A	B	C	D	E	F	G	H	J	M
A	20"	2050	2850	1025	1025	968	1067	815	2750	200	DIA.16@300
B	22"	2050	2850	1025	1025	892	1143	815	2750	200	DIA.16@300
C	24"	2050	3050	1025	1025	1016	1219	815	2750	200	DIA.16@300
D	30"	2050	3260	1000	1050	997	1448	815	2750	200	DIA.16@300
E	36"	2250	3660	1125	1125	1169	1676	815	3050	200	DIA.16@300
F	42"	2450	3870	1250	1200	1150	1905	815	3350	250	DIA.16@225
G	48"	2450	4270	1250	1200	1321	2134	815	3350	250	DIA.16@225

VALVE BOX WITH 12" DRAIN

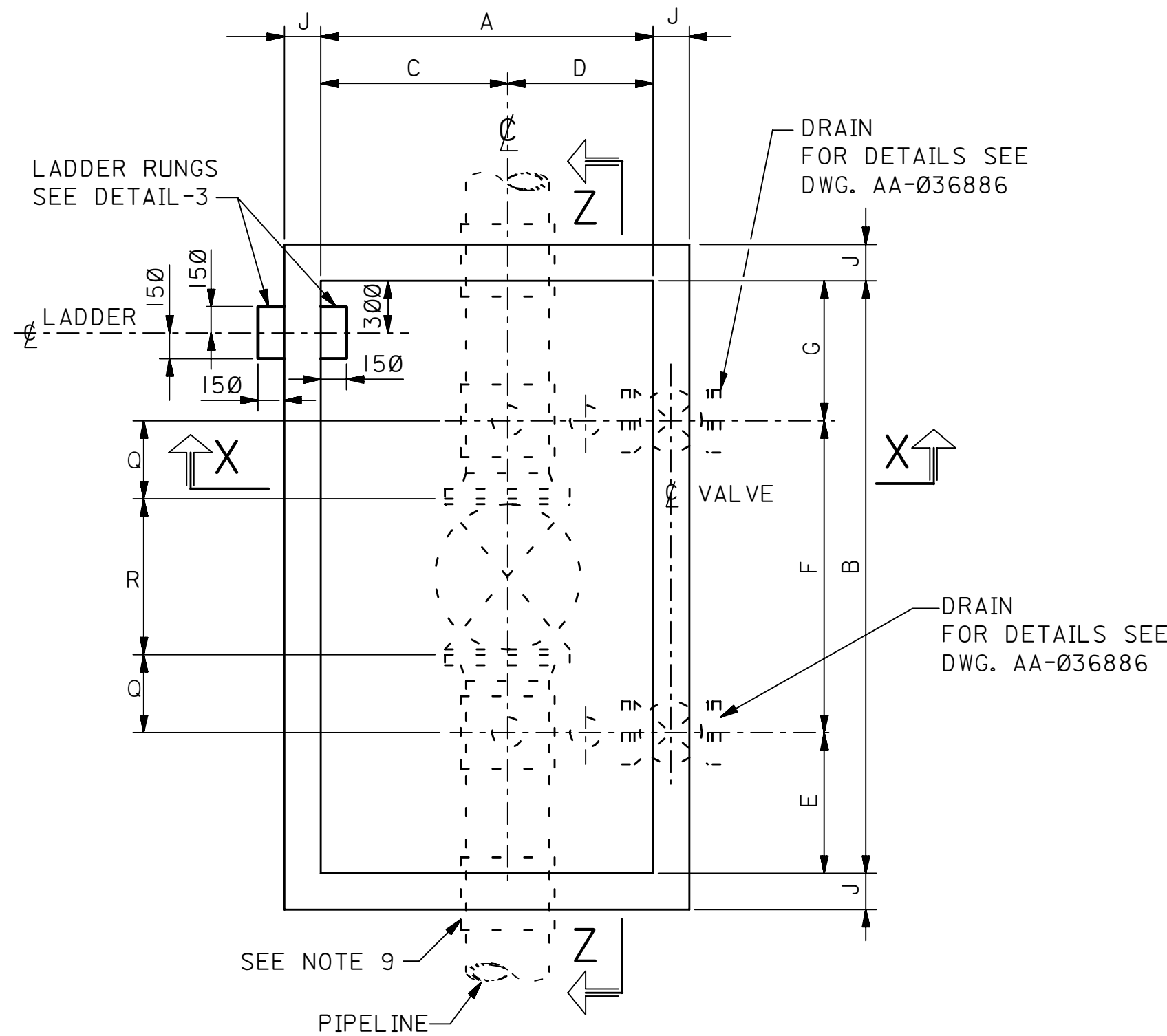
SUB TYPE	SIZE OF P/L	DIMENSION								REBAR DIA. C/C	
		A	B	C	D	E	F	G	H	J	M
AA	20"	2650	3050	1000	1650	916	1219	915	3050	200	DIA.16@300
BB	22"	2650	3260	1000	1650	1050	1295	915	3050	200	DIA.16@300
CC	24"	2650	3260	1000	1650	973	1372	915	3050	200	DIA.16@300
DD	30"	2650	3660	1000	1650	1145	1600	915	3050	200	DIA.16@300
EE	36"	2850	3860	1200	1650	1116	1829	915	3650	250	DIA.16@200
FF	42"	3050	4270	1400	1650	1298	2057	915	3650	250	DIA.16@200
GG	48"	3050	4460	1400	1650	1279	2286	915	3650	250	DIA.16@200



ALTERNATIVE SECTION X-X

(TYPICAL IN CASE OF GROUND WATER; SEE DETAIL-1)

TYPE III



PLAN

VALVE BOX WITH 6" DRAIN

SUB TYPE	SIZE OF P/L	DIMENSION											REBAR DIA. @ C/C	
		A	B	C	D	E	F	G	Q	R	H	J	L	M
A	20"	2050	3660	1025	1025	886	1959	815	483	991	2750	200	DIA.16@300	DIA.12@300
B	22"	2250	3770	1125	1125	894	2061	815	483	1092	2750	200	DIA.16@300	DIA.12@300
C	24"	2250	3820	1125	1125	894	2111	815	483	1143	2750	200	DIA.16@300	DIA.12@300
D	30"	2440	4170	1170	1270	888	2467	815	533	1397	2750	200	DIA.16@300	DIA.12@300
E	36"	2650	4500	1300	1350	888	2797	815	533	1727	3050	225	DIA.16@225	DIA.12@300
F	42"	2860	4930	1430	1430	886	3229	815	610	2007	3350	300	DIA.16@200	DIA.16@300
G	48"	2860	5210	1430	1430	887	3508	815	610	2246	3350	300	DIA.16@200	DIA.16@300

VALVE BOX WITH 12" DRAIN

SUB TYPE	SIZE OF P/L	DIMENSION										REBAR DIA. C/C			
		A	B	C	D	E	F	G	Q	R	H	J	L		M
AA	20"	2660	4120	1000	1660	941	2264	915	635	991	2750	200	DIA.16@300	DIA.12@300	
BB	22"	2850	4220	1200	1660	940	2365	915	635	1092	3050	225	DIA.16@300	DIA.12@300	
CC	24"	2850	4270	1200	1660	939	2416	915	635	1143	3050	225	DIA.16@300	DIA.12@300	
DD	30"	2850	4630	1200	1660	943	2772	915	686	1397	3050	225	DIA.16@300	DIA.12@300	
EE	36"	3050	4960	1400	1650	943	3102	915	686	1727	3350	300	DIA.16@200	DIA.16@300	
FF	42"	3050	5390	1400	1650	941	3534	915	762	2007	3350	300	DIA.16@200	DIA.16@300	
GG	48"	3360	5670	1600	1660	942	3813	915	762	2286	3650	300	DIA.16@200	DIA.16@300	

NOTES:

- CONCRETE TO BE MIXED, PLACED AND CURED TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 13.8 MPa AFTER 28 DAYS PER CONCRETE CONSTRUCTION SPECIFICATION AES-Q-1.
- REINFORCEMENT TO BE DEFORMED STEEL ASTM A-615-M GRADE 40 OR EQUIVALENT.
- LAP OF REBARS TO BE 40 DIAMETERS EXCEPT WHERE SHOWN OTHERWISE.
- PAINT LADDER RUNGS IN ACCORDANCE WITH ARAMCO PAINT MANUAL AES-H-1.
- IF VALVE BOX IS FOUNDED BELOW WATER TABLE SEE ALTERNATIVE SECTION X-X.
- WALLS BELOW WATER TABLE SHALL BE WATERPROOFED WITH EITHER OF THE FOLLOWING PRODUCTS:
 - APPLY 2 COATS OF COLD-APPLIED BITUMASTIC PER AES-H-1, APCS-10 (AMS 09-611-7201)
 - APPLY 2 COATS OF EXTRATITE FOUNDATION COATING (AMS 09-610-850) AFTER EXTRATITE CONCRETE PRIMER (AMS 09-708-080) PER MANUFACTURER'S INSTRUCTIONS.
- EXTERIOR SURFACES OF ALL METALS CAST INTO, ATTACHED TO, OR A PART OF THE CONCRETE STRUCTURE SHALL BE PAINTED PRIOR TO CASTING, ATTACHEMENT, OR PLACEMENT WITH COAL-TAR EPOXY PAINT PER AES-H-1, APCS-3.
- NO WHEEL LOADS ARE ALLOWED NEARER TO BOXES THAN THE DISTANCE FROM GRADE TO BOTTOM OF BOX.
- SLEEVE DIAMETER SHALL BE 100mm LARGER THAN PIPELINE SIZE. INSTALL A WILLIAMSON OR EQUAL TYPE INSULATOR BETWEEN SLEEVE AND PIPE.
- BOTTOM SLAB SHALL BE UNDERLAIN BY 0.15mm POLYETHYLENE SHEETING, WHICH SHALL BE LARGE ENOUGH TO BE LAPPED ABOVE THE FOUNDATION AND SEALED AGAINST THE STRUCTURE WALLS.
- ALL DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

REFERENCE DRAWINGS

DETAILS OF PIPELINE DRAINS AA-036886

REVISION NOTE-1

REDRAWN, REVISED & CONSOLIDATED SHEET 1 & 2 TO SHEET 001 METRIC VERSION ONLY. ADDED TYPICAL INSTALLATION DRAWING NON MANDATORY.

TYPICAL INSTALLATION DRAWING

05	03-10-86	MHJ MNL	SEE REVISION NOTE-1			
REV. NO.	DATE	BY	DESCRIPTION	CHKD.	CERT.	APPD.

SAUDI ARABIAN OIL COMPANY

DRAWN BY EVD CHECKED BY SCALE: NONE
DATE STARTED DATE COMPLETED
OPRG. DEPT. ENG. DEPT.
APPD. FOR CONST.

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED
CERTIFIED BY DATE

VALVE BOXES, POURED CONCRETE FOR PIPELINE BLOCK VALVE & DRAINS

STD. DWG.			METRIC	
PLANT NO.	INDEX	DRAWING NUMBER	SHT. NO.	REV. NO.
990	Q	AA-036365	001	05