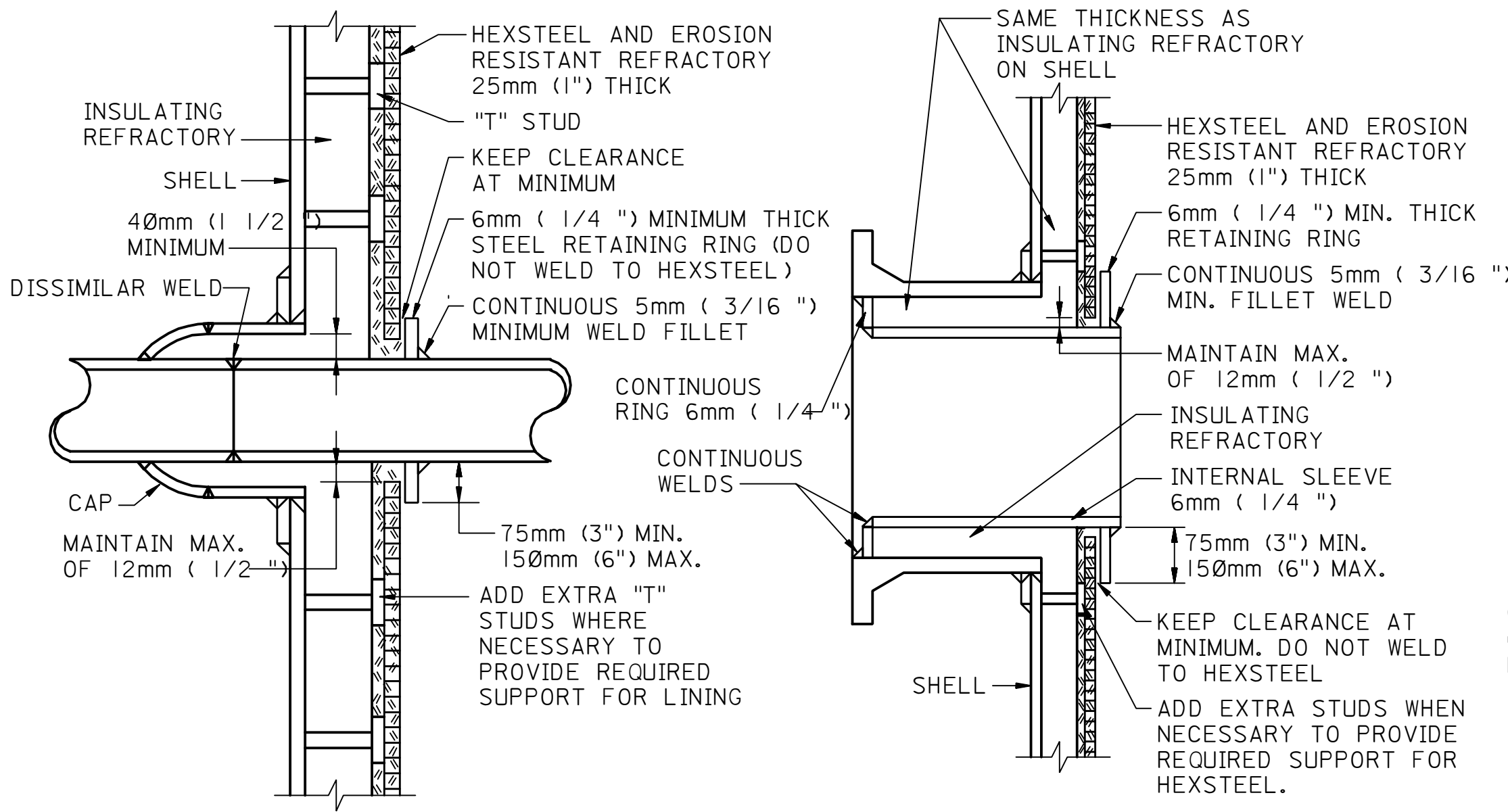
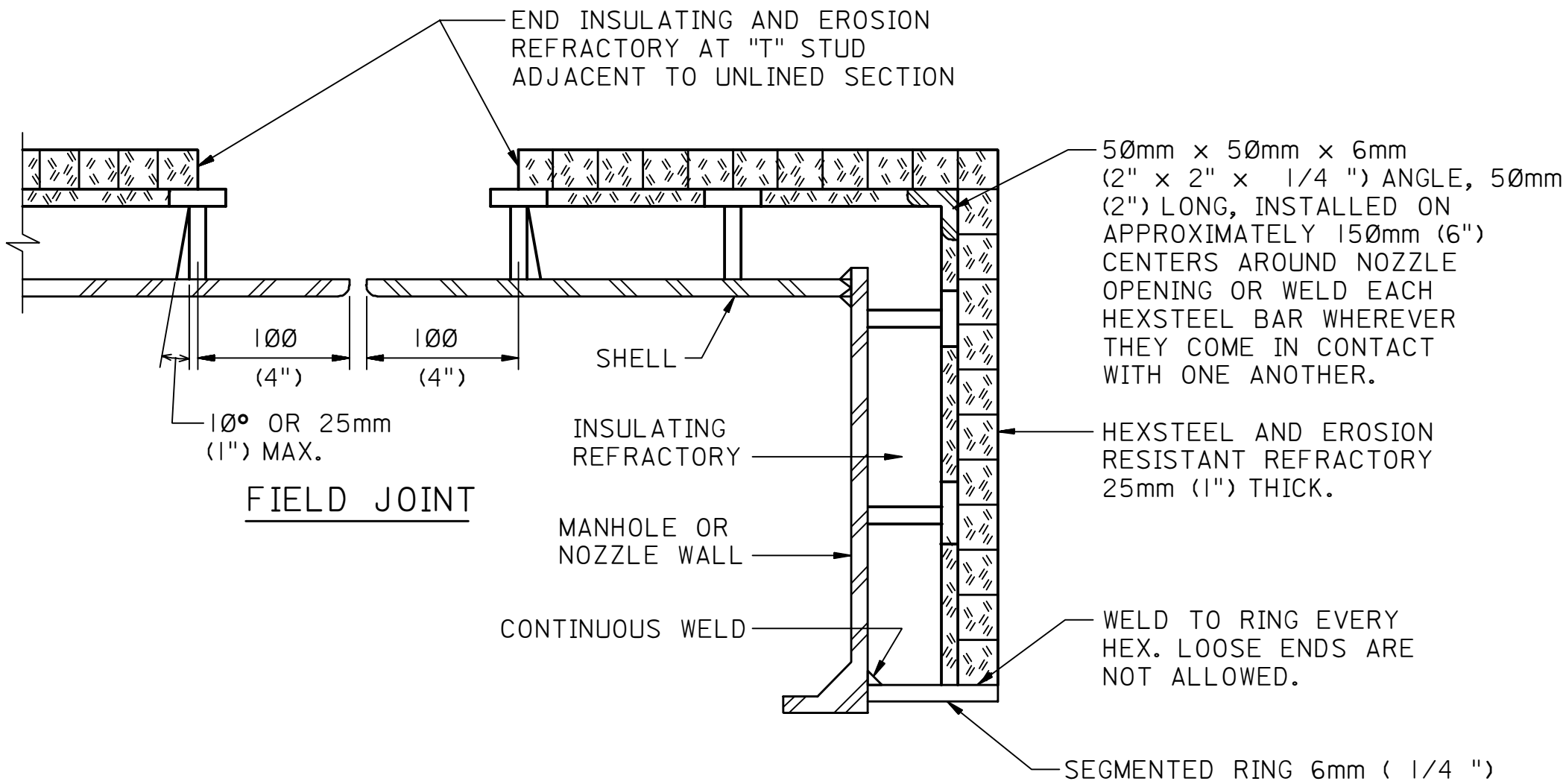


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PLANT NO.	INDEX	DRAWING NUMBER	REV. NO.	REV. NO.

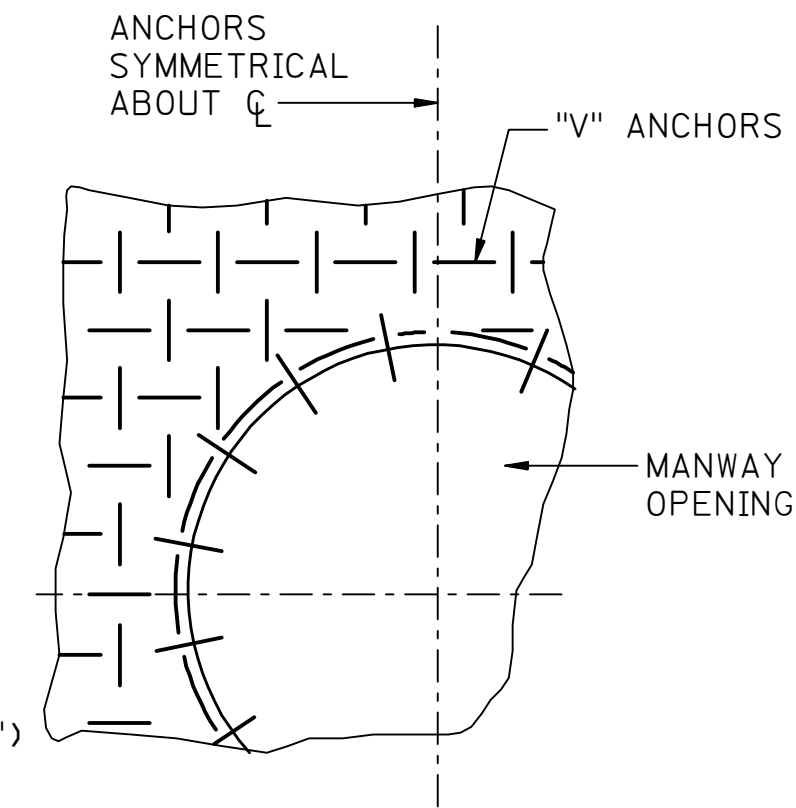


3" NOZZLE & LARGER

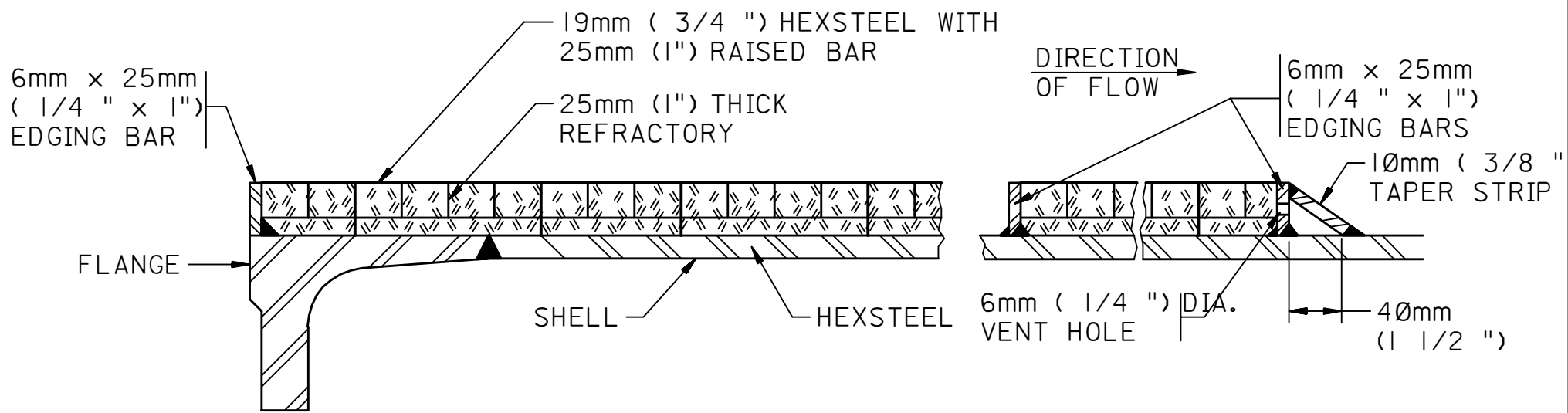
MANWAY WITH INTERNAL SLEEVE



NOZZLE LINED WITH HEXSTEEL

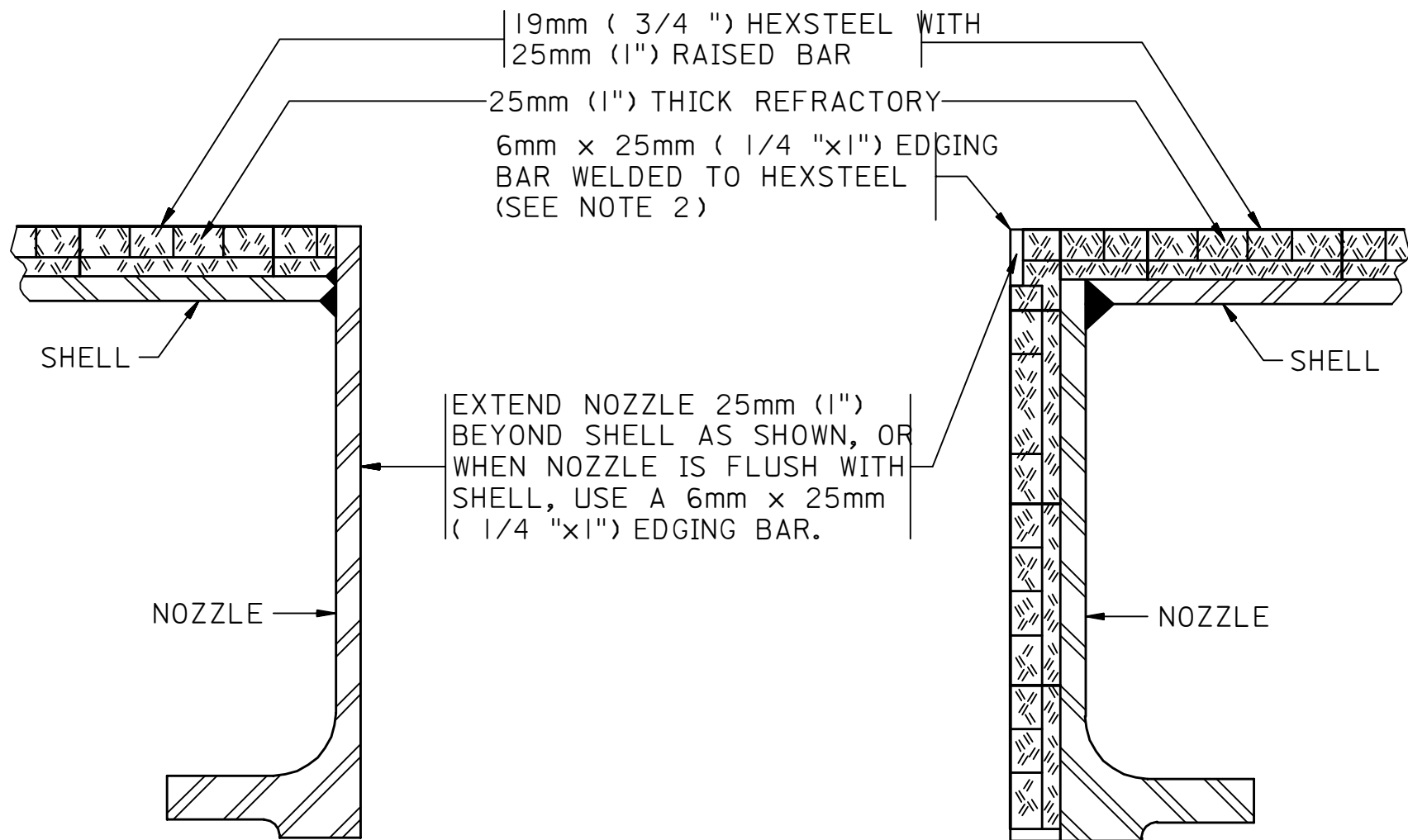


MANWAY SINGLE LAYER LINING DETAILS



FLANGE TERMINATION

LINER TERMINATION



UNLINED NOZZLE DETAIL

LINED NOZZLE DETAIL

- NOTES:
- DESIGN AND INSTALLATION TO BE IN ACCORDANCE WITH SAES-N-110 & N-120.
 - SPACES SHALL NOT BE MADE LESS THAN 1/2 HEX OR MORE THAN 1 1/2 HEX.
 - LOOSE ENDS OF HEXSTEEL ARE NOT ALLOWED.
 - REFRACTORY ANCHORS TO BE THE "V" TYPE. PROVIDE RUBBER OR PLASTIC CAPS 12mm (1/2 inch) LONG AND 0.8mm (0.03 inch) TO 1.3mm (0.05 inch) THICK ON THE TIP OF EACH ANCHOR LEG. CAPS TO BE INSTALLED PRIOR TO REFRACTORY INSTALLATION AND AFTER ANCHOR WELDING AND POST WELD HEAT TREATMENT REQUIREMENTS.

DRAWING RESPONSIBILITY:									
VESSEL STANDARDS COMMITTEE									
03	JAN96	ESSD RCR			REVISED NOTES.				
02	06-25-94	CAB			COMPLETELY REDRAWN ON "B" SIZE DWG.				
REV. NO.	DATE	BY	JO/EWO	DESCRIPTION			CHKD.	CERT.	APPD.
SAUDI ARABIAN OIL COMPANY									
DRAWN BY: <u>ESSD/RCR</u> CHECKED BY: _____ SCALE: <u>NONE</u>									
DATE STARTED: <u>09-11-93</u> DATE COMPLETED: <u>09-12-93</u>									
OPR'G. DEPT.: _____ ENG. DEPT.: _____									
APP'D FOR CONSTR. _____									
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED					CERTIFIED _____ BY: _____ DATE: _____				
SUPPORT DETAILS									
AT NOZZLES & MANWAYS									
FOR CASTABLE REFRACTORIES									
STD. DWG.									
PLANT NO.		INDEX		DRAWING NUMBER			SHT. NO.		REV. NO.
990		N		AB-036914			001		03