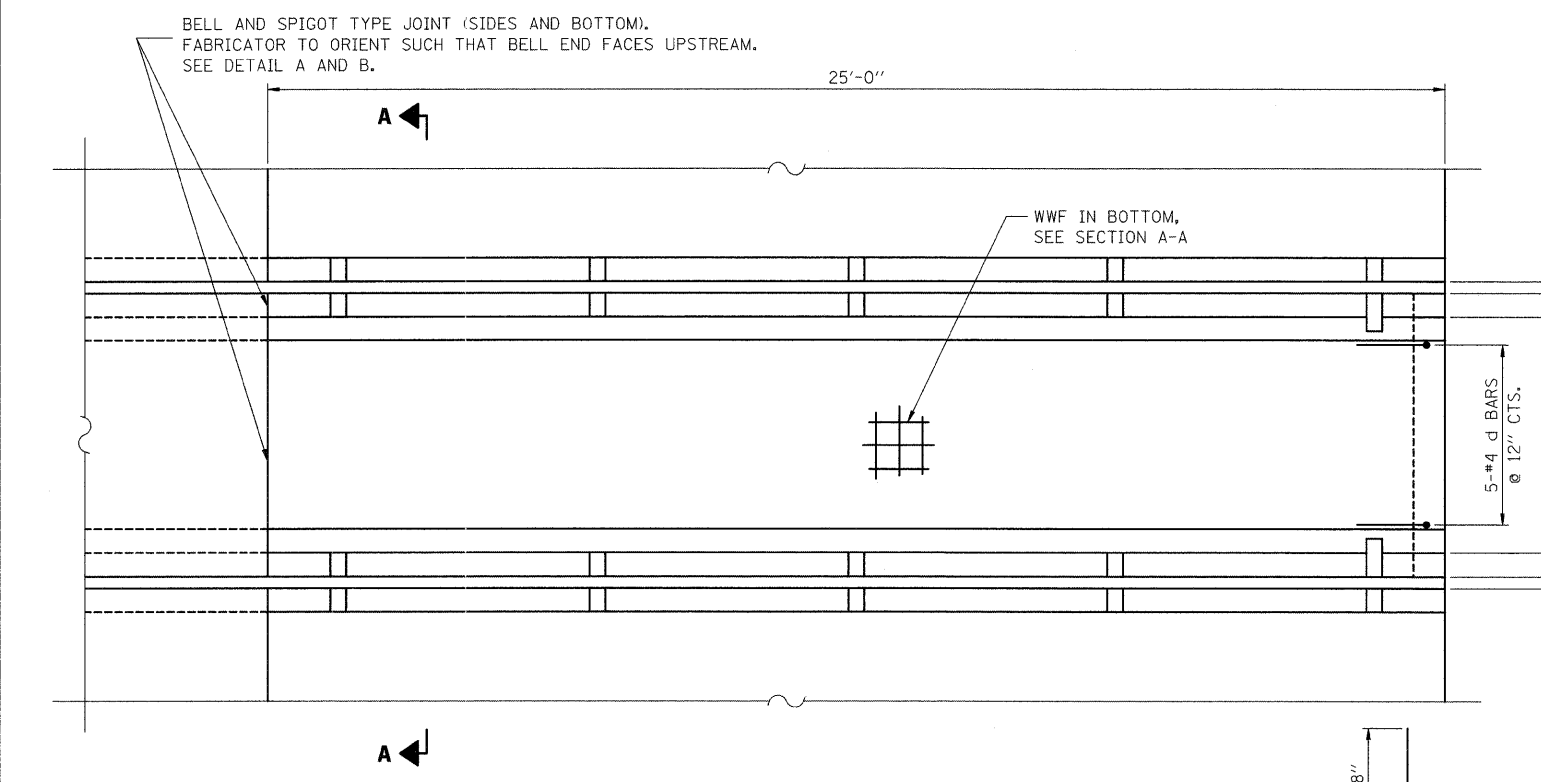
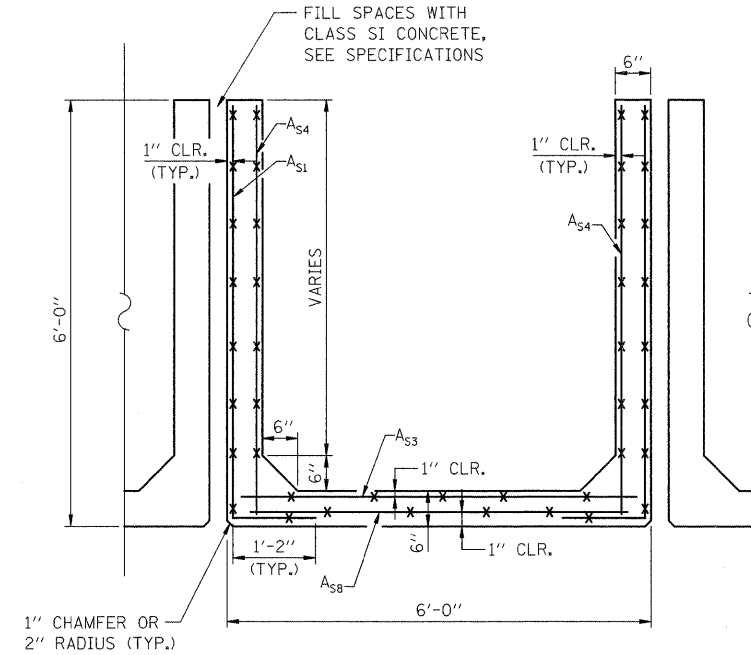


INLET/OUTLET ELEVATION
(3 END SECTIONS, EACH END 6 TOTAL)



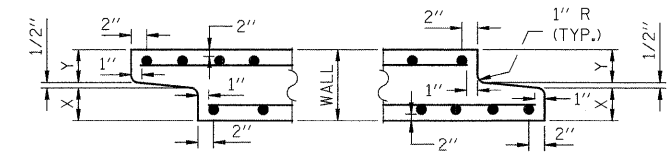
INLET/OUTLET PLAN
(3 END SECTIONS, EACH END 6 TOTAL)

BAR d



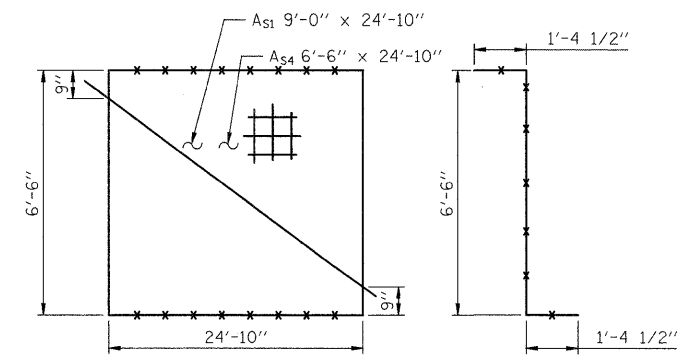
SECTION A-A
NOTE TO SCALE

MINIMUM AREA OF STEEL FOR A_{s1} , A_{s3} , A_{s4} , AND A_{s8} SHALL BE 0.16 IN²/FT EACH WAY. ACCEPTABLE PATTERNS INCLUDE:
WWF 3x3 D4xD4 OR WWF 6x6 D8xD8.



DETAIL A NOTE TO SCALE (TYP. INLET END)
DETAIL B NOTE TO SCALE (TYP. OUTLET END)

NOTE: INLET AND OUTLET ENDS SHALL BE COMPATIBLE



CUTTING DIAGRAM
 A_{s1}
 A_{s4}
BENDING DIAGRAM
 A_{s1} ONLY

**** GRATED CULVERT EXTENSION, NO. 1 BILL OF MATERIAL FOR EACH SECTION**

BAR NO.	NO.	SIZE	LENGTH	SHAPE
d	5	#4	5'-4"	┌
h	3	#6	5'-8"	—
WWF 3x3 D4xD4 OR WWF 6x6 D8xD8				
PIECE	AREA		WEIGHT	
A_{s1}	9'-0" x 24'-10"		245	
A_{s3}	5'-8" x 24'-10"		155	
A_{s4}	6'-6" x 24'-10"		180	
A_{s8}	5'-8" x 24'-10"		155	
ITEM	UNIT	QUANTITY		
REINFORCEMENT BARS	POUND	80		
WWF	POUND	735		
CONCRETE	C.Y.	5.8		

** QUANTITIES GIVEN ARE FOR EACH END SECTION AND ARE GIVEN FOR INFORMATIONAL PURPOSES ONLY. MATERIALS WILL ALL BE PAID FOR UNDER "GRATED CULVERT EXTENSION, NO. 1"

GENERAL NOTES

REINFORCEMENT AND CLEAR COVER SHOWN ARE INTENDED FOR A PRECAST GRATED CULVERT EXTENSION, NO. 1 USING 5000 PSI MINIMUM CONCRETE STRENGTH. THERE SHALL NOT BE AN OPTION TO CAST IN PLACE.

REINFORCEMENT SHOWN HAS BEEN DETERMINED ADEQUATE FOR IN-SERVICE LOADS. FABRICATOR SHALL ADD ANY REINFORCEMENT NEEDED TO PREVENT DAMAGE DUE TO STRIPPING OF FORM WORK, HOISTING, OR SHIPPING.

FABRICATOR SHALL DETERMINE LOCATION(S) OF JOINTS (IF NEEDED) AND 2" DIAMETER HOLES FOR LIFTING DEVICES. IF JOINTS ARE NEEDED THEY SHALL BE VERTICAL, BELL AND SPIGOT JOINTS AS SHOWN ON THIS DRAWING. LONGITUDINAL BARS SHALL BE TERMINATED EITHER SIDE OF JOINT AS SHOWN ON THE DETAIL. COST OF FORMING THE JOINTS AND CUTTING LONGITUDINAL BARS SHALL BE INCLUDED UNDER THE PAY ITEM "GRATED CULVERT EXTENSION, NO.1".

WWF SHALL CONFORM TO ASTM A497.

GRATED CULVERT EXTENSIONS, NO. 1 SHALL BE CONSTRUCTED ACCORDING TO THE REQUIREMENTS OF SECTION 540 OF THE STANDARD SPECIFICATIONS EXCEPT AS MODIFIED HEREIN.

TYPICAL BOX CULVERT SECTION DIMENSIONS, MATERIALS, AND REINFORCEMENT DETAILS FOR GRATED CULVERT EXTENSIONS, NO. 1 SHALL BE ACCORDING TO THE REQUIREMENTS OF AASHTO M 259 OR M 273 AS REQUIRED FOR THE DESIGN OF THE PORTION OF THE CULVERT WITHIN THE LIMITS OF PRECAST CONCRETE BOX CULVERTS EXCEPT AS MODIFIED HEREIN.

CLASS SI CONCRETE MAY BE USED FOR CONSTRUCTION OF THE TOEWALL.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GR. 60 (IL MODIFIED). SEE SPECIAL PROVISIONS.

