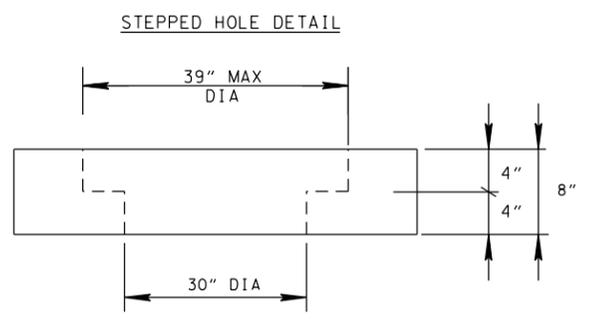
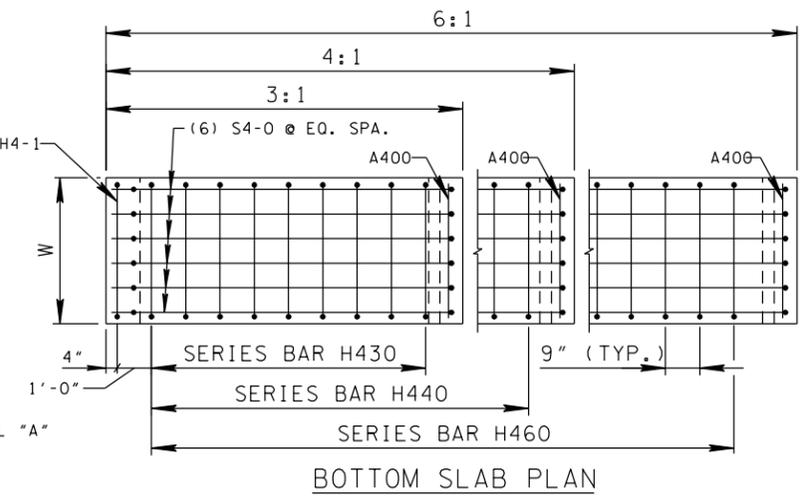
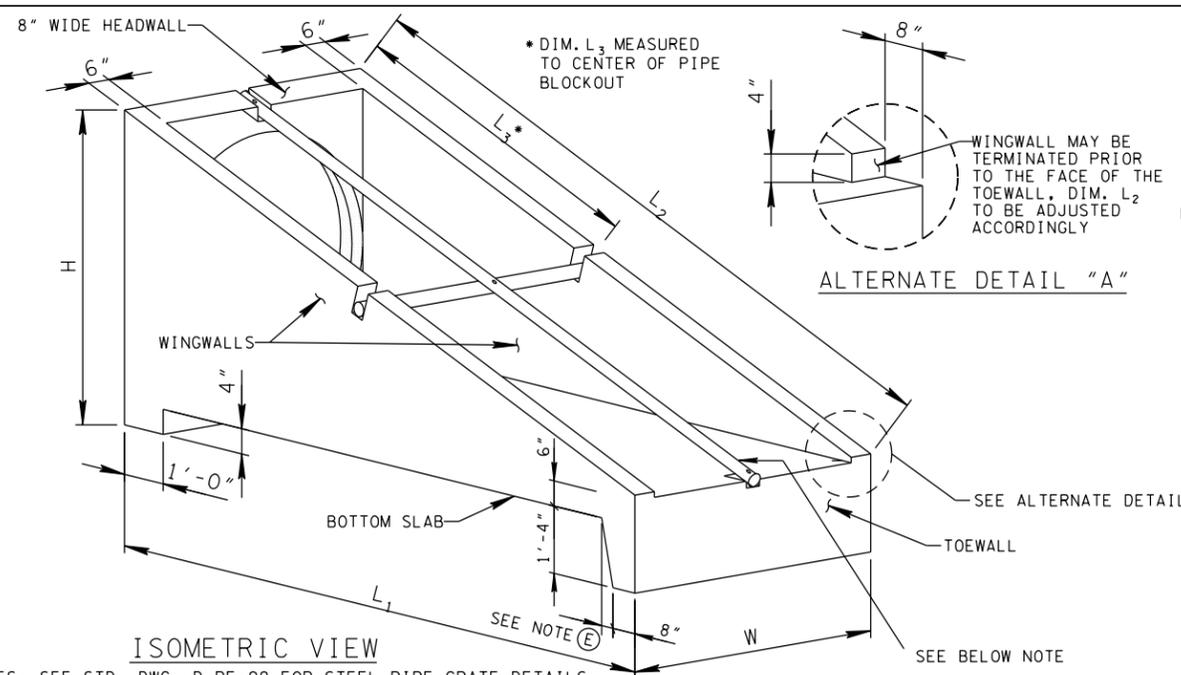
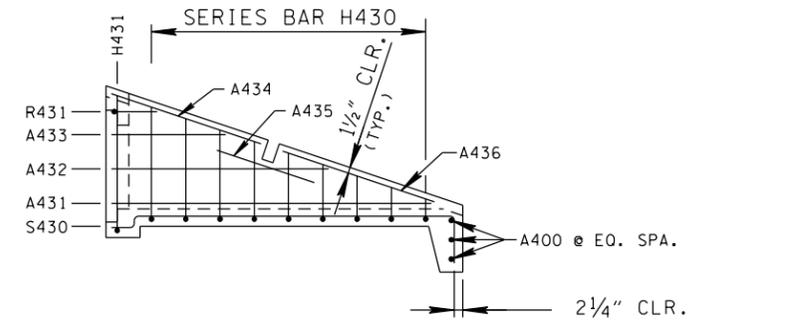
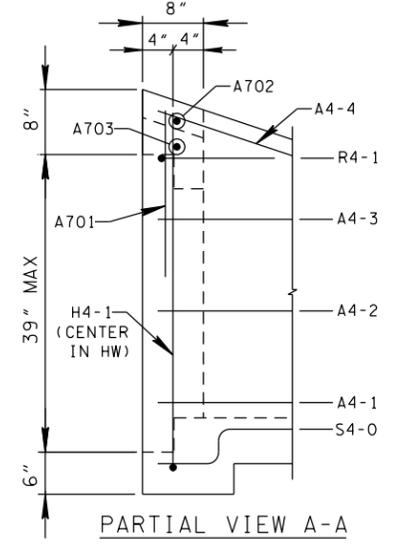
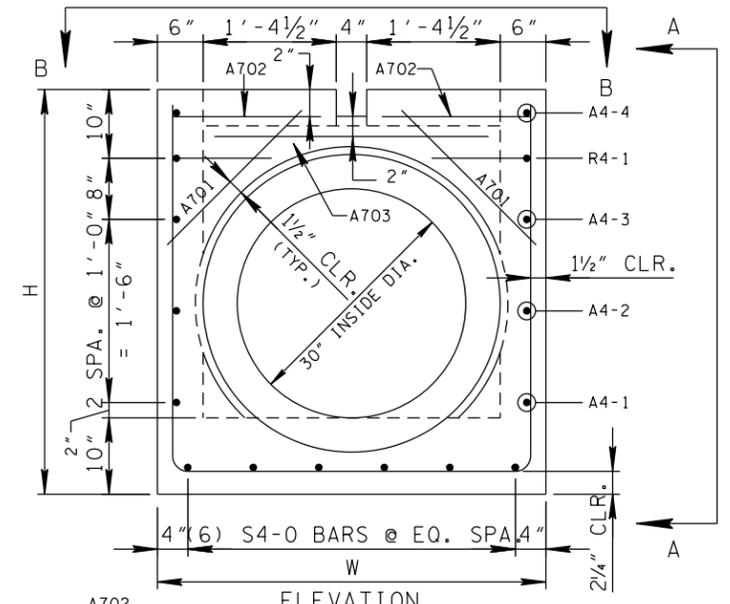


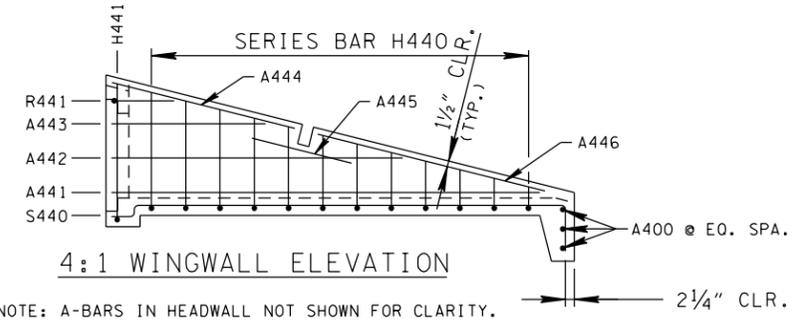
- REV. 6-14-13: REVISED NOTEG. ADDED NOTE (H) AND (I).
- REV. 1-6-15: REVISED HOLE OPENING SIZE. ADDED STEPPED HOLE DETAIL.
- REV. 1-21-16: REVISED GENERAL NOTE (E).



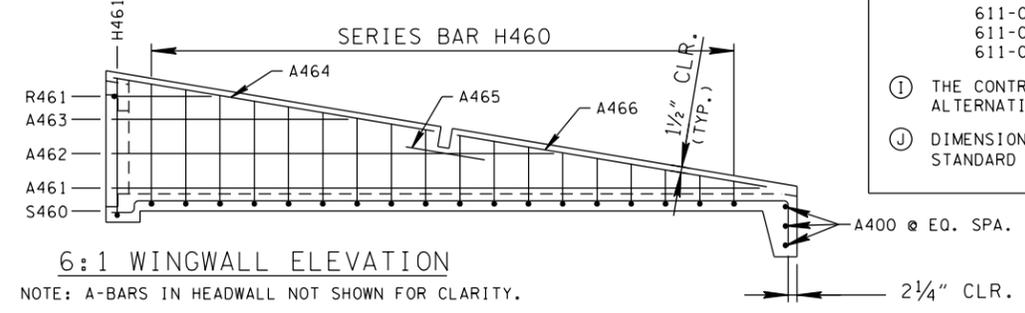
NOTES: SEE STD. DWG. D-PE-99 FOR STEEL PIPE GRATE DETAILS
 3/4\"/>



NOTE: A-BARS IN HEADWALL NOT SHOWN FOR CLARITY.



NOTE: A-BARS IN HEADWALL NOT SHOWN FOR CLARITY.



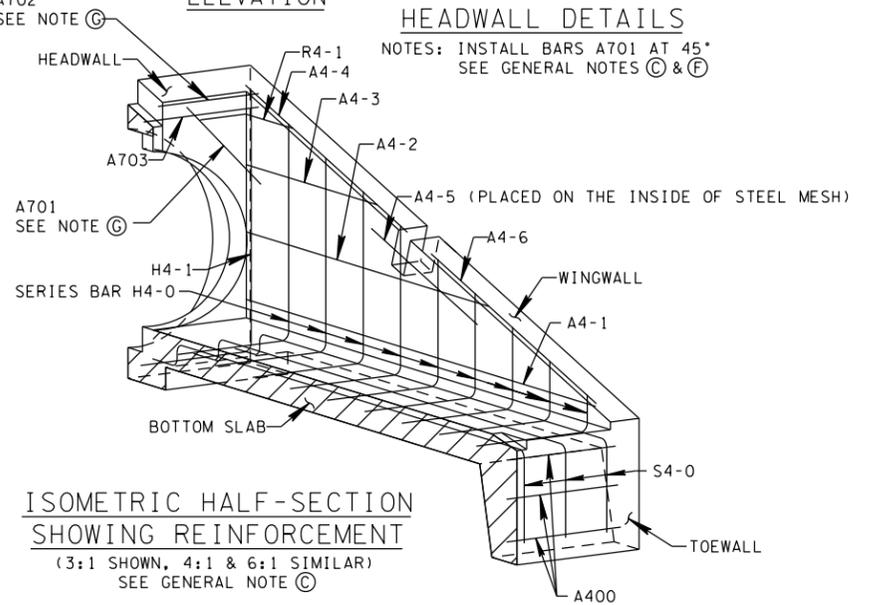
NOTE: A-BARS IN HEADWALL NOT SHOWN FOR CLARITY.

PARTIAL VIEW B-B
 SEE NOTE (F)

GENERAL NOTES

- (A) DRAWING TO BE USED FOR ALL CAST-IN-PLACE AND ALL PRECAST 18\"/>
- (B) SEE STD. DWG. D-PE-30B FOR BILL OF STEEL & PRECAST NOTES.
- (C) "-" IN BAR DESIGNATION REPRESENTS 3, 4 OR 6 FOR 3:1, 4:1 OR 6:1 SLOPES, RESPECTIVELY.
- (D) SPLICING OF REINFORCEMENT IS ACCEPTABLE PROVIDED THAT A MINIMUM 21\"/>
- (E) TOEWALL BACK SLOPE MAY BE CONSTRUCTED VARIABLE FROM VERTICAL UP TO 15°.
- (F) 90° STEPS ARE SHOWN ON THE STEPPED HOLE DETAIL, HOWEVER MINOR VARIATIONS OF THE TAPER ARE ACCEPTABLE.
- (G) OPTIONAL STEPPED HOLE OR HOLE FORMERS ARE ALLOWED PROVIDED THE AMOUNT OF COVER BETWEEN THE PIPE OPENING AND BARS A701 AND A702 IS THE SAME OR GREATER THAN SHOWN ON THIS DRAWING.
- (H) PAYMENT WILL BE MADE UNDER:
 - 611-07.60, 30\"/>
 - 611-07.61, 30\"/>
 - 611-07.62, 30\"/>
- (I) THE CONTRACTOR MAY BE ELECT TO SUBSTITUTE AN APPROVED ALTERNATIVE DESIGN.
- (J) DIMENSIONAL AND REINFORCING TOLERANCES WILL BE AS SHOWN IN STANDARD OPERATING PROCEDURE 9SOP) 5-3.

□ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.



SLOPE	DIMENSIONS AND QUANTITIES FOR ONE ENDWALL 30" PIPE									
	CONCRETE ENDWALL DIMENSIONS					STRUCTURAL STEEL PIPE DIMENSIONS		ESTIMATED QUANTITIES		
	H	L ₁	L ₂	L ₃	W	LG	WG	CLASS "A" CONC. CU. YD.	STEEL BAR REINF. LB.	STRUCTURAL STEEL LB.
3:1		10' - 5"	10' - 11 3/4"	5' - 2"		10' - 10 3/8"		1.84	174	114
4:1	4' - 5"	13' - 8"	14' - 1"	6' - 1"	4' - 1"	14' - 0 3/8"	4' - 1"	2.32	216	137
6:1		20' - 2"	20' - 5 3/8"	10' - 1"		20' - 4 3/8"		3.29	303	186

NOTE: SEE STD. DWG. D-PE-99 FOR STRUCTURAL STEEL PIPE DIMENSIONS LG & WG.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

30" CONCRETE ENDWALL
 CROSS DRAIN WITH
 STEEL PIPE GRATE
 (FOR 3:1, 4:1 & 6:1 SLOPES)

NOT TO SCALE 3-01-12 D-PE-30A

2/21/2016 8:26:56 AM
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