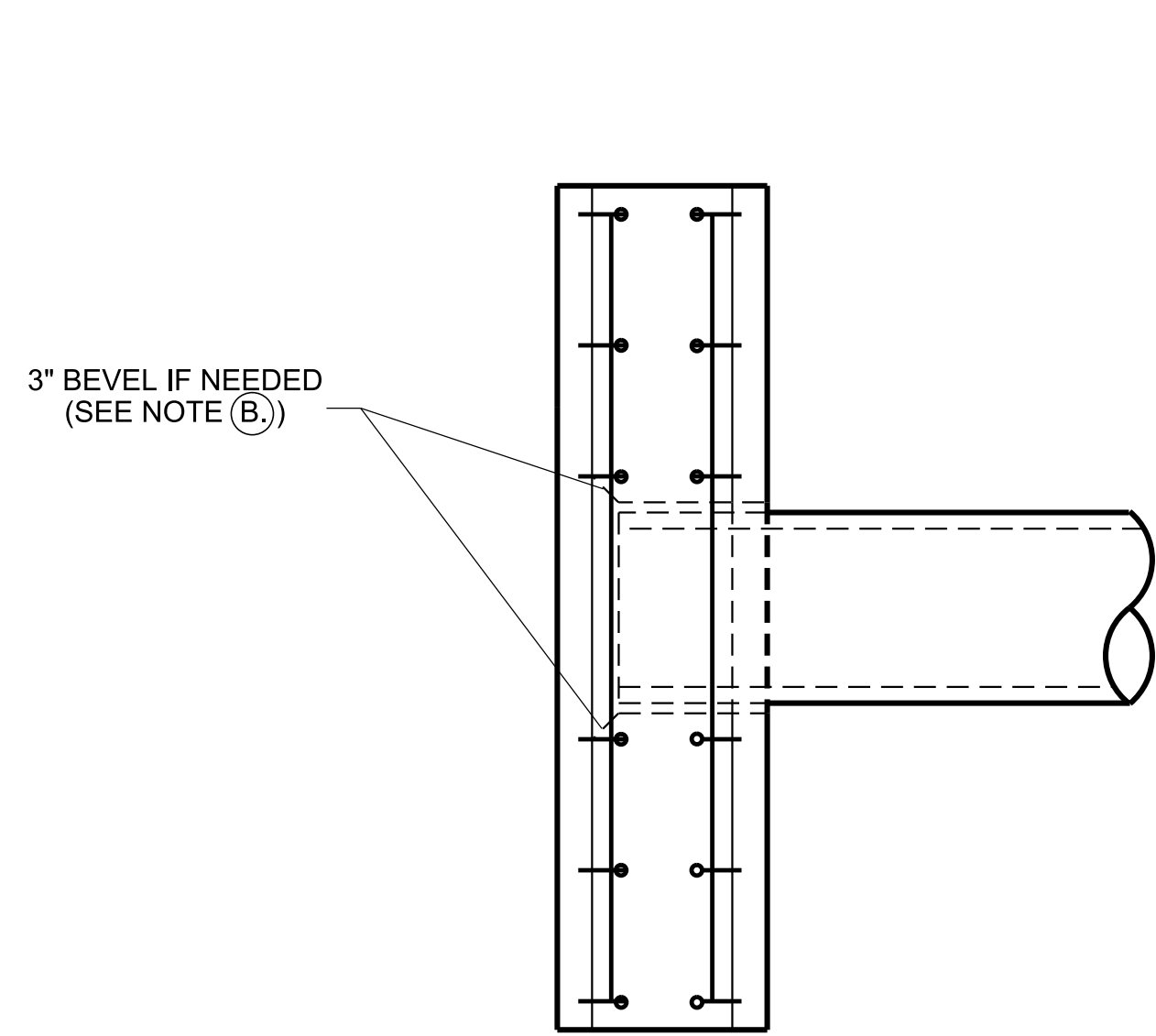
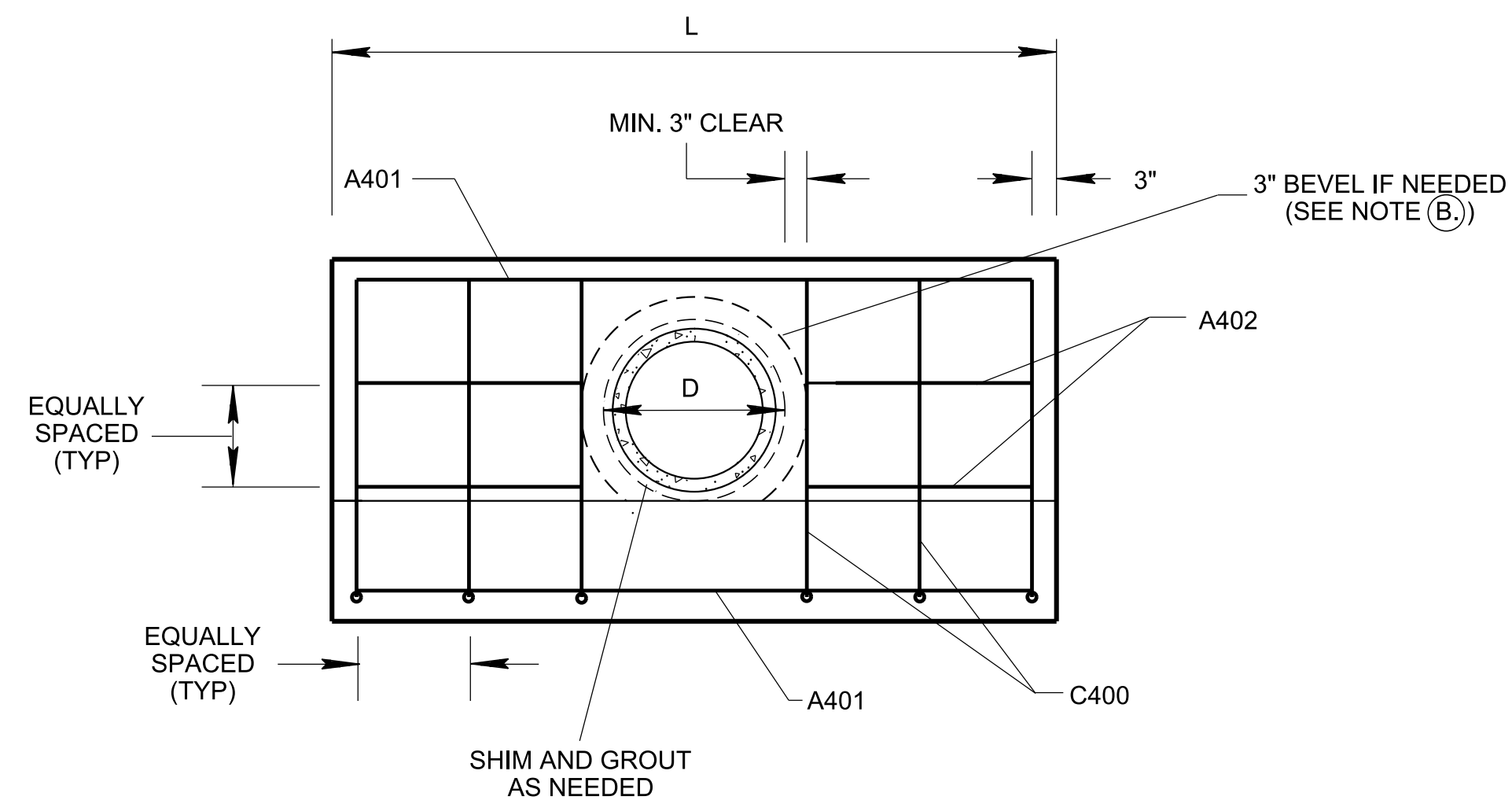


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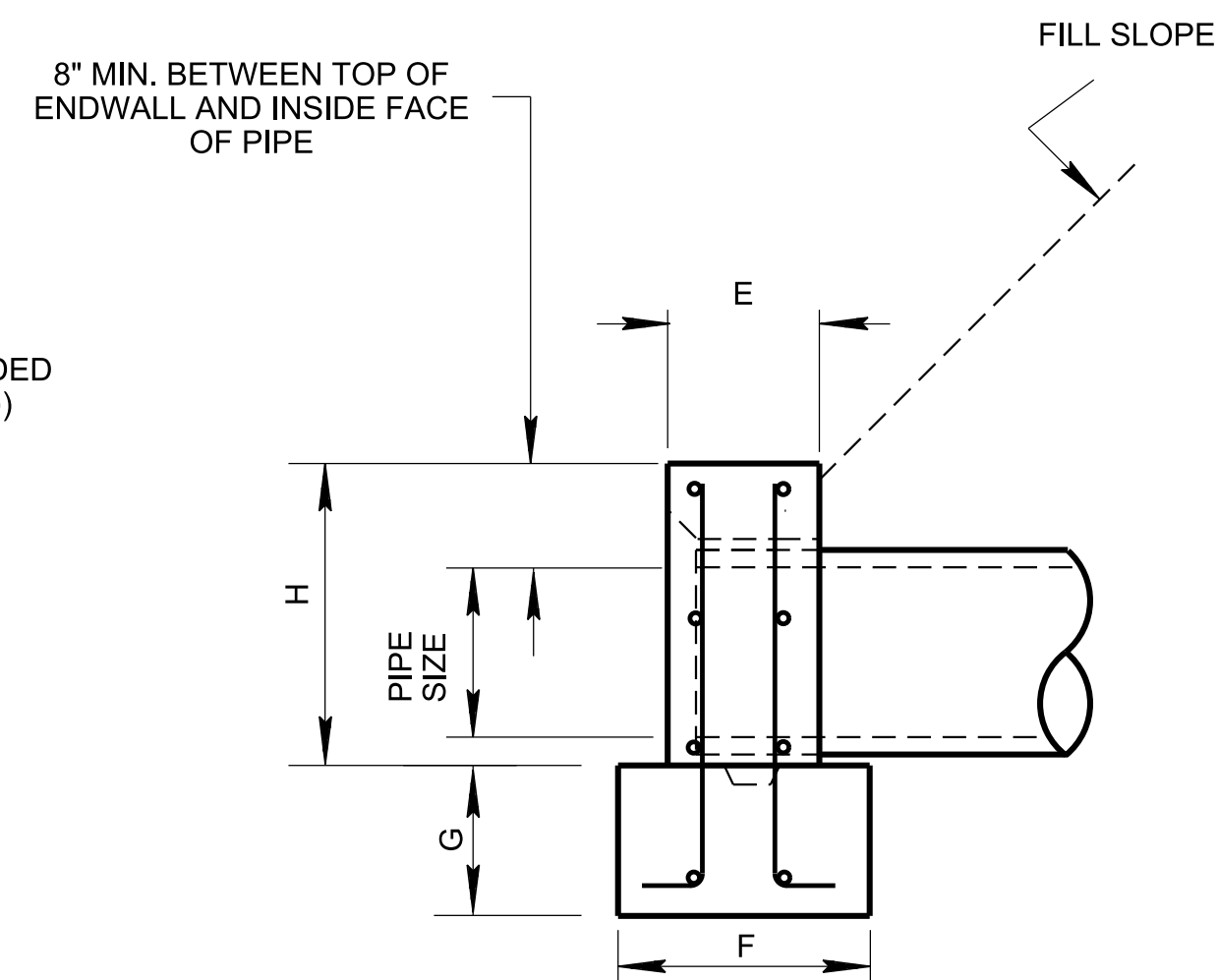
STRAIGHT TYPE CONCRETE ENDWALL



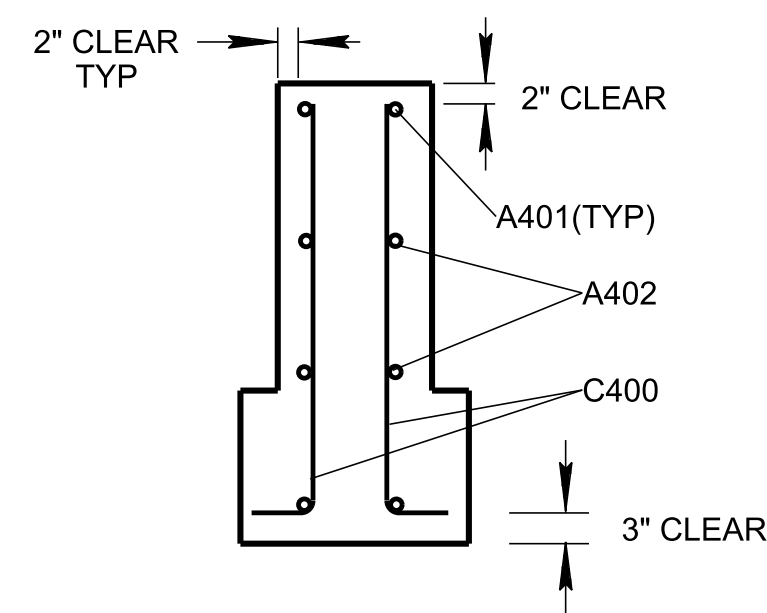
PLAN



FRONT ELEVATION VIEW



SIDE ELEVATION VIEW



REINFORCEMENT DETAILS

REINFORCING STEEL LEGEND	
	A400
	C400

DIMENSIONS AND ESTIMATED QUANTITIES FOR STRAIGHT CONCRETE ENDWALL								
PIPE SIZE	HOLE SIZE D	WALL			FOOTING		CONC. C.Y.	REINFORCING STEEL LB
		L	H	E	F	G		
18"	26"	6'-0"	2'-8"	1'-3"	2'-1"	1'-3"	1.0	45
24"	33"	8'-0"	3'-3"	1'-4"	2'-2"	1'-4"	1.5	70
30"	40"	10'-0"	3'-10"	1'-6"	2'-4"	1'-6"	2.0	93

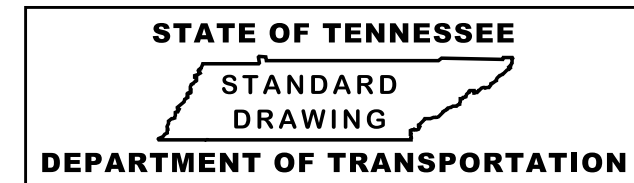
BILL OF STEEL														
BAR	18" PIPE				24" PIPE				30" PIPE					
	a	b	NUMBER	LENGTH	a	b	NUMBER	LENGTH	a	b	NUMBER	LENGTH		
A401	66	0	4	66	90	0	4	90	114	0	4	114		
A402	18.5	0	8	18.5	27	0	8	27	35.5	0	12	35.5		
C400	42	6	8	48	50	6	12	56	59	6	12	65		
TOTAL LENGTH				796 IN.	TOTAL LENGTH				1248 IN.	TOTAL LENGTH				1662 IN.
TOTAL LB.				45	TOTAL LB.				70	TOTAL LB.				93

NOT TO SCALE

GENERAL NOTES	
(A)	CONCRETE ENDWALL SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD CONSTRUCTION SPECIFICATIONS, SECTION 611, AND/OR SPECIAL PROVISIONS.
(B)	ALL STRAIGHT CONCRETE ENDWALLS ON THE INLET END OF THE PIPE AND AT 90° SKEW SHALL BE BEVELED AT 3" WITH A 45° ANGLE. BEVEL WILL NOT BE REQUIRED WHEN ENDWALL IS CONSTRUCTED ON THE "BELLED" END OF CONCRETE PIPE.
(C)	ENDWALL MAY BE MODIFIED TO ACCOMMODATE MULTIPLE PIPES WHEN MORE THAN ONE PIPE IS PROPOSED, THE DISTANCE FROM CENTER TO CENTER OF PIPE SHALL BE D + 1'-0".
(D)	PAYMENT FOR ENDWALLS WILL BE MADE AS FOLLOWS: ITEM 611-07.01 CLASS "A" CONCRETE (PIPE ENDWALLS) PER CUBIC YARD. ITEM 611-07.02 STEEL BAR REINFORCING (PIPE ENDWALLS) PER POUND.
(E)	SEE SECTION 6.04.3.3 IN THE TDOT ROADWAY DRAINAGE MANUAL FOR RIPRAP APRON REQUIREMENT.
(F)	PRECASTING IS ALLOWED.
(G)	PIPE OPENING TO BE BASED ON TYPE "B" WALL THICKNESS (AASHTO M170).
(H)	PIPE ENDWALLS FOR SLOPES STEEPER THAN 3:1 (PREVIOUSLY TYPE "U") WILL NOW USE TYPE "B" SEE STANDARD DRAWING D-PE-9.

- REV. 9-28-83: REDREW AND ADDED TABLE FOR STRAIGHT ENDWALL WHEN PIPE IS SKEWED.
- REV. 2-19-88: ADDED SAFETY ADJUSTMENTS "U" TYPE ENDWALL.
- REV. 1-19-94: REDREW AND REORGANIZED DRAWING. ELIMINATED TYPE "U" ENDWALL FOR 3:1 SLOPE.
- REV. 1-19-97: ADDED UNITS TO HEADING FOR TABLE FOR SKEWED PIPE.
- REV. 6-1-09: ADDED GENERAL NOTE (D).
- REV. 7-19-10: REMOVED GENERAL NOTE (D).
- REV. 1-15-13: ADDED REINFORCEMENT AND CHANGED NOTES. ADDED BILL OF STEEL. REMOVED "U" AND "L" TYPE ENDWALL.
- REV. 12-1-14: REVISED BAR DESIGNATION MINOR EDITING.
- REV. 4-23-15: REVISED DIMENSIONS AND ESTIMATED QUANTITIES FOR STRAIGHT CONCRETE ENDWALL.
- REV. 2-3-16: REVISED FRONT AND SIDE ELEVATION VIEW.
- REV. 10-10-16: REVISED 'H' DIMENSIONS IN TABLE AND REVISED BILL OF STEEL.
- REV. 06-28-19: REVISED SHEET NAME AND REDREW SHEET.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED



STRAIGHT CONCRETE ENDWALLS (PIPE SIZES 18" TO 30")