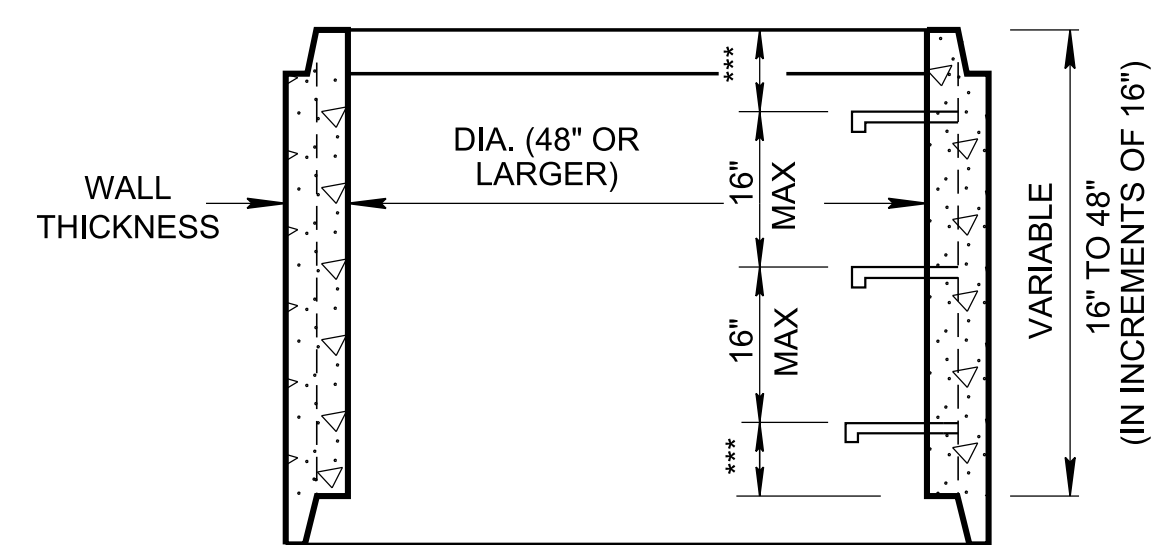


**STANDARD ECCENTRIC TOP MANHOLE**

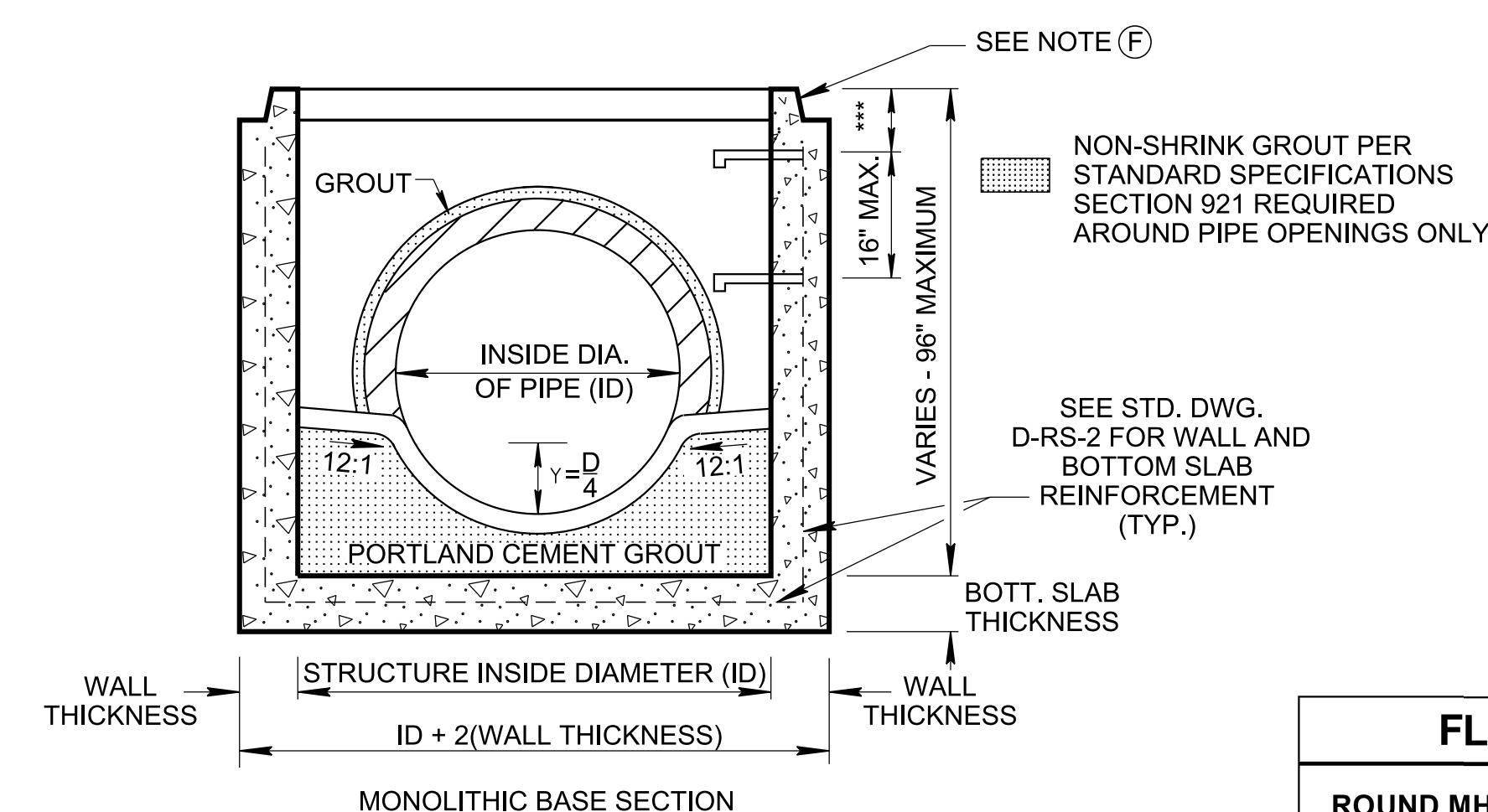
**STANDARD FLAT TOP MANHOLE**

**LID REINFORCING**

**MANHOLE CUTOUT LOCATION**

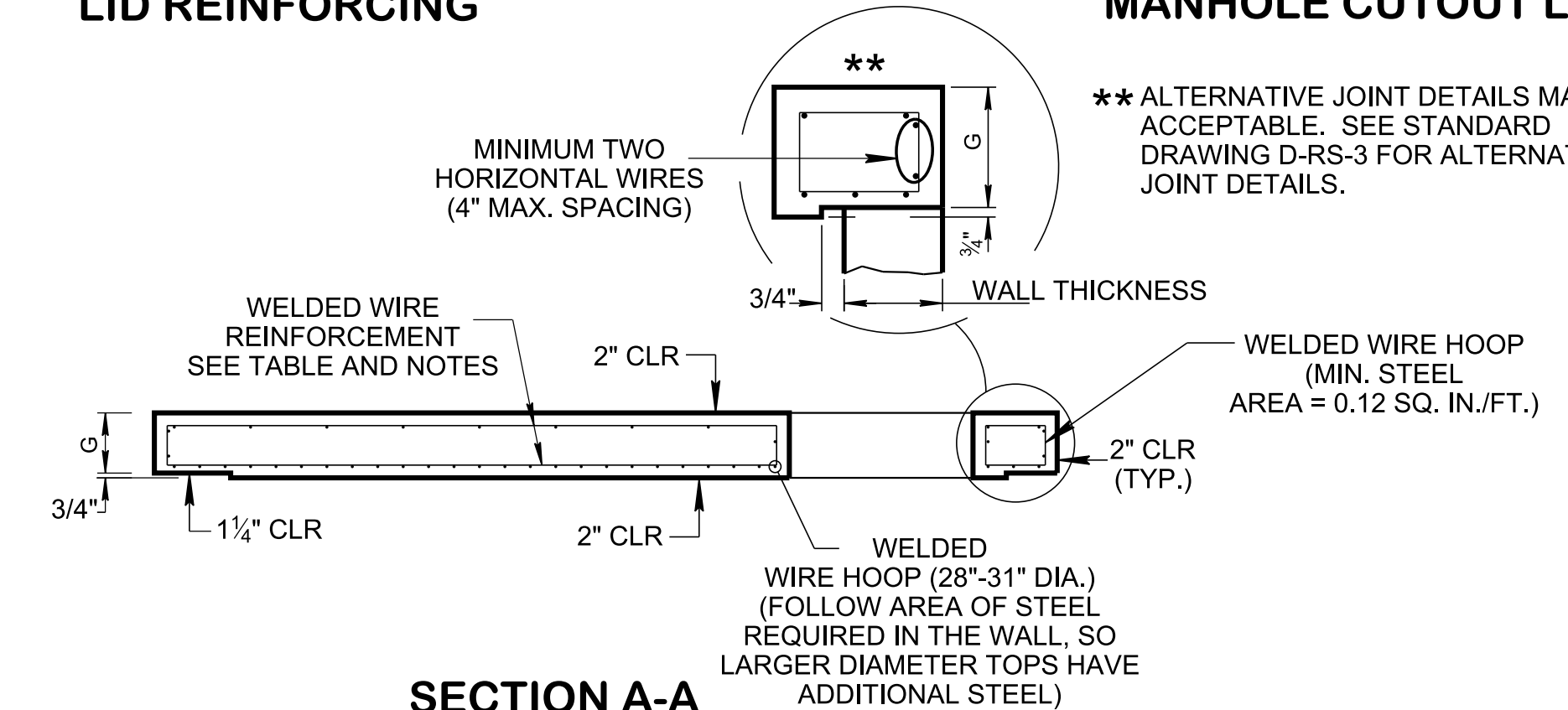


**STANDARD CONCRETE RISER SECTION**



**STANDARD CONCRETE BASE SECTION**

ROUND MANHOLE STRUCTURES DIMENSION					
ROUND MH STRUC. INSIDE DIA. (ID)	WALL THK.	BOTT. SLAB THK.	MAX. DEPTH OF STRUC.	MAX. INLET OR OUTLET CONC. PIPE SIZE STRAIGHT	MAX. INLET OR OUTLET CONC. PIPE SIZE AT 90°
48"	5"	6"	20"	30"	18"
60"	6"	8"	40"	36"	24"
72"	7"	8"	40"	48"	30"
84"	8"	8"	40"	60"	36"
96"	9"	8"	40"	66"	42"
108"	10"	12"	40"	72"	48"
120"	11"	12"	40"	78"	54"



**LID DETAILS FOR STANDARD FLAT TOP MANHOLES**

FLAT TOP MANHOLE LIDS DIMENSION & REINFORCEMENT							
ROUND MH STRUC. INSIDE DIA. (ID)	LID DIA.	G	MIN. STEEL AREA FOR LIDS				CUTOUT LOCATION (H)
			BOTTOM MAT WWR		TOP MAT WWR		
			STEEL AREA (SQ. INCH/ FT)	SPACING (4" MAX.) & SIZE	STEEL AREA (SQ. INCH/ FT)	SPACING (4" MAX.) & SIZE	
48"	4'-10"	8"	0.42	4x4-D14xD14	0.12	4X4-D4xD4	9"
60"	6'-0"	8"	0.49	4x4-D17xD17	0.12	4X4-D4xD4	15"
72"	7'-2"	9"	0.45	4x4-D15xD15	0.12	4X4-D4xD4	21"
84"	8'-4"	9"	0.49	4x4-D17xD17	0.12	4X4-D4xD4	27"
96"	9'-6"	10"	0.45	4x4-D15xD15	0.12	4X4-D4xD4	33"
108"	10'-8"	10"	0.47	4x4-D16xD16	0.12	4X4-D4xD4	39"
120"	11'-10"	10"	0.50	4x4-D17xD17	0.12	4X4-D4xD4	45"

ROUND MH STRUCTURES PAY ITEM NO. (PER EACH) (K)							
ROUND MH STRUC. INSIDE DIA. (ID)	> 4'-8' Depth	> 8'-12' Depth	> 12'-16' Depth	> 16'-20' Depth	> 20'-24' Depth	> 24'-28' Depth	(_) Depth
48"	611-62.01	611-62.02	611-62.03	611-62.04	N/A	N/A	N/A
60"	611-62.10	611-62.11	611-62.12	611-62.13	611-62.14	611-62.15	611-62.16
72"	611-62.20	611-62.21	611-62.22	611-62.23	611-62.24	611-62.25	611-62.26
84"	611-62.30	611-62.31	611-62.32	611-62.33	611-62.34	611-62.35	611-62.36
96"	611-62.40	611-62.41	611-62.42	611-62.43	611-62.44	611-62.45	611-62.46
108"	611-62.50	611-62.51	611-62.52	611-62.53	611-62.54	611-62.55	611-62.56
120"	611-62.60	611-62.61	611-62.62	611-62.63	611-62.64	611-62.65	611-62.66

- GENERAL NOTES**
- (A) THIS MANHOLE WILL CONFORM TO THE STANDARD DRAWING UNLESS OTHERWISE SHOWN OR DIRECTED BY THE ENGINEER TO MEET SPECIAL CONDITIONS. THERE WILL BE NO VARIATION FROM THE CONTRACT PRICE DUE TO SUCH CHANGES. IN ALL CASES IT MUST BE BUILT LARGE ENOUGH TO ACCOMMODATE INLET AND OUTLET PIPES.
  - (B) ALL PRECAST ELEMENTS TO MEET ASTM C478 (CURRENT EDITION) AND AASHTO M199 (CURRENT EDITION) AND AASHTO LRFD UNLESS SUPERSEDED BY THE STANDARD DRAWINGS.
  - (C) THE FOLLOWING MATERIAL PROPERTIES ARE REQUIRED FOR PRECAST STRUCTURES:  
 CONCRETE:  $f_c = 4,000$  POUNDS PER SQUARE INCH AT 28 DAYS.  
 WWR MEETING ASTM A1064,  $F_y = 70,000$  POUNDS PER SQUARE INCH. PLAIN OR DEFORMED WIRE MAY BE USED FOR BASE SECTIONS. DEFORMED WIRE SHALL BE USED FOR ALL LIDS.  
 AS AN ALTERNATIVE, REBAR MEETING ASTM A615 OR A706,  $F_y = 60,000$  POUNDS PER SQUARE INCH MAY BE USED.  
 ALL REINFORCING IS TO BE INSTALLED AS DETAILED. REFER TO STANDARD DRAWINGS D-MH-SERIES.
  - (D) REFER TO STANDARD DRAWING D-RS-1 FOR PRECAST ROUND STRUCTURES ADDITIONAL GENERAL NOTES.
  - (E) REFER TO STANDARD DRAWING D-RS-2 FOR ROUND STRUCTURES WALL AND BOTTOM SLAB REINFORCEMENT DETAILS.
  - (F) REFER TO STANDARD DRAWING D-RS-3 FOR PIPE CUT-OUT HOLES DETAILS, NON-MONOLITHIC BASE SECTION DETAILS AND ALTERNATIVE JOINT DETAILS.
  - (G) BOTTOM MAT OF WWR IN LIDS SHALL HAVE A MAXIMUM SPACING OF 4 INCHES IN EACH DIRECTION. IF REBAR IS USED, MAX. SPACING = 12" EACH DIRECTION.
  - (H) TOP MAT OF WWR SHALL HAVE A MINIMUM OF 0.12 SQ. INCH PER FT IN BOTH DIRECTIONS.
  - (I) THE COST OF CASTINGS FOR COVERS AND RIMS AND OF MANHOLE STEPS FOR BASE AND RISER SHALL BE INCLUDED IN THE PRICE BID FOR ROUND MANHOLE STRUCTURE. REFER TO STANDARD DRAWING D-MH-4 FOR MANHOLE CASTINGS AND STEPS DETAILS.
  - (J) THE COST OF FURNISHING AND PLACING CONCRETE, TO BE USED FOR THE FORMING OF INVERTS, TO BE INCLUDED IN THE PRICE BID FOR ROUND MANHOLE STRUCTURE.
  - (K) ROUND MANHOLE STRUCTURES PAYMENT DEPTH MEASUREMENT MADE FROM TOP OF GRATE TO THE BOTTOM SLAB. SEE TABLE FOR ITEM NUMBERS.

**NOTE:**  
 COST OF FURNISHING AND PLACING FOUNDATION FILL MATERIAL TO BE INCLUDED IN THE PRICE BID FOR ROUND MANHOLE STRUCTURE. FOUNDATION FILL MATERIAL SHALL BE IN CONFORMANCE WITH SECTION 204 OF THE TDOT STANDARD SPECIFICATIONS.

STATE OF TENNESSEE  
 STANDARD DRAWING  
 DEPARTMENT OF TRANSPORTATION

**PRECAST MANHOLE STRUCTURES (48" THRU 120")**