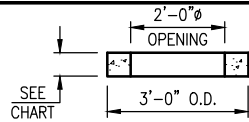


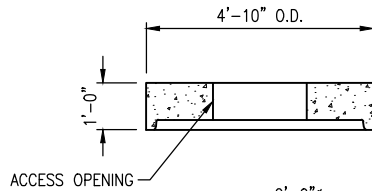
GRADE RING

HEIGHT	WEIGHT (lbs)
4"	200
6"	300



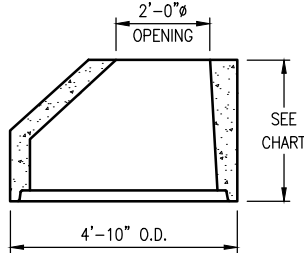
FLAT TOP

WT = 1,700 LBS.



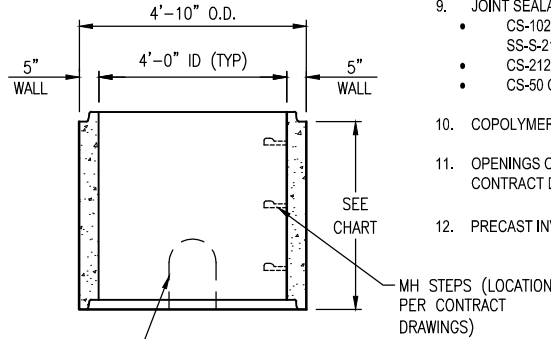
CONE

HEIGHT	WEIGHT (lbs)
2.00'	1680
3.00'	2520

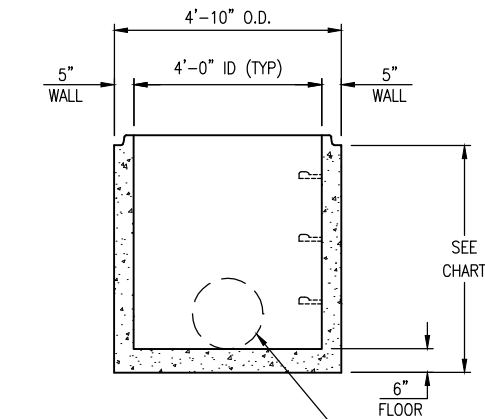


RISER SECTION

HEIGHT	WEIGHT (lbs)
1.00' RISER	875
1.33' RISER	1,165
2.00' RISER	1,750
2.67' RISER	2,350
3.00' RISER	2,625
4.00' RISER	3,500

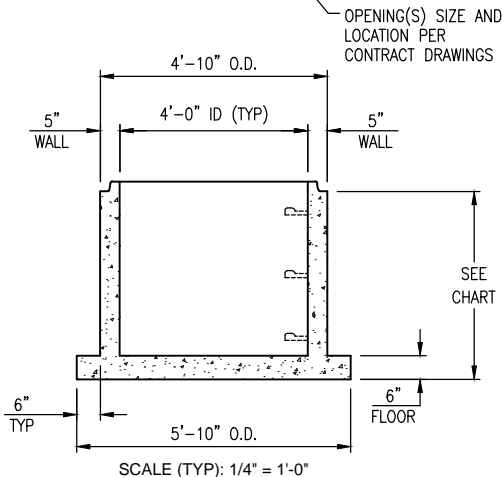


DOGHOUSE RISER SECTION



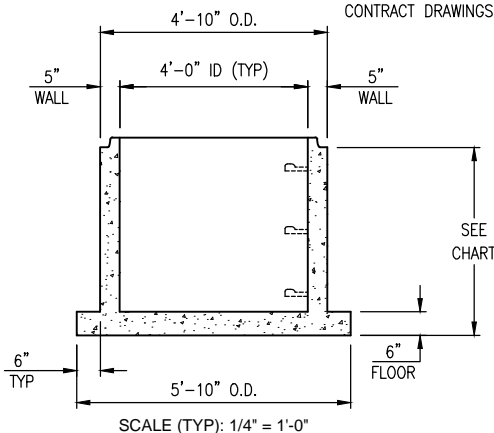
STANDARD BASE SECTION

HEIGHT	WEIGHT (lbs)
2.00' BASE	2,800
2.50' BASE	3,200
2.67' BASE	3,350
3.00' BASE	3,650
3.50' BASE	4,100
4.00' BASE	4,500



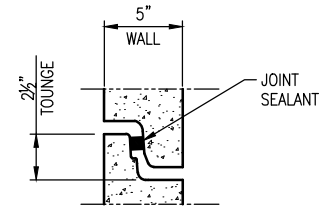
EXTENDED BASE SECTION

HEIGHT	WEIGHT (lbs)
2.00' BASE	3,450
2.50' BASE	3,850
2.67' BASE	4,000
3.00' BASE	4,300
3.50' BASE	4,750
4.00' BASE	5,150



GENERAL DESIGN NOTES:

- STRENGTH DESIGN METHOD IN ACCORDANCE WITH (I.A.W.) ACI 318.
- APPLICABLE DESIGN DOCUMENTS (CURRENT EDITIONS):
 - ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (MAIN DESIGN SPECIFICATION).
 - ASTM C890 STANDARD PRACTICE FOR MINIMUM STRUCTURAL LOADING FOR MONOLITHIC OR SECTIONAL PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES (LOADING SPECIFICATION).
 - ASTM C478 STANDARD SPECIFICATION FOR PRECAST MANHOLES (PRODUCT SPECIFICATION).
- PRECAST RATED FOR HS20-44 TRUCK LIVE LOAD W/ IMPACT I.A.W. ASTM C890.
- MAX DEPTH TO INVERT OF MANHOLE (I.E. FLOOR) = 30'.
- LATERAL DESIGN PRESSURES (AS APPLICABLE TO DESIGN):
 - EQUIV DRY SOIL FLUID PRESSURE = 47 PCF.
 - EQUIV SATURATED SOIL FLUID PRESSURE = 85 PCF.
 - HYDROSTATIC WATER PRESSURE = 62.4 PCF.
 - LIVE LOAD SURCHARGE = 80 PSF
- DESIGN CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS = 4,000 PSI (MIN).
- REINFORCEMENT:
 - CARBON-STEEL DEFORMED BARS: ASTM A615, $f_y = 60$ KSI (MIN).
 - WELDED WIRE REINFORCEMENT (PLAIN): ASTM A1064 $f_y = 65$ KSI (MIN).
 - WELDED WIRE REINFORCEMENT (DEFORMED): ASTM A1064 $f_y = 70$ KSI (MIN).
- JOINT SEALANT (PER CONTRACT SPECIFICATIONS):
 - CS-102 CONSEAL BUTYL RUBBER SEALANT (OR EQUIV.) I.A.W. ASTM C990 FED. SPEC. SS-S-210.
 - CS-212 CONSEAL EXTERIOR JOINT WRAP (OR EQUIV.) I.A.W. ASTM C877 AND ASTM C990.
 - CS-50 CONSEAL LIQUID BUTYL PRIMER (OR EQUIV.) AS NEEDED.
- COPOLYMER POLY PROPYLENE STEEL REINFORCED STEPS I.A.W. ASTM C478 SPACED 16" O.C.
- OPENINGS CAST OR CORED IN MANHOLE TO DEFLECTIONS AND ELEVATIONS SPECIFIED ON CONTRACT DRAWINGS MAX HOLE SIZE IS 42" (30" RCP).
- PRECAST INVERT PROVIDED UPON REQUEST: MIN $\frac{1}{4}$ " PER FT BENCH SLOPE FROM SPRINGLINE



JOINT DETAIL
SCALE: 1" = 1'-0"



1431 PRODUCT RD. FUGUAY VARINA, NC
OFFICE 919-852-2252, FAX 844-966-7476

NC ENGINEERING
LICENSE #F-1002

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4' DIAMETER MANHOLE

SUMBITTAL LAYOUT

CUSTOMER
STANDARD

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
6/15/17		PPS			
DRAWING NUMBER				REVISION	SHEET
4-MH-2017				REV DATE	1 OF 1