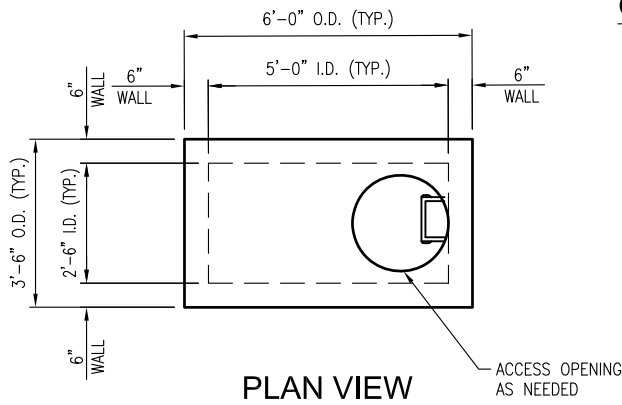


## GENERAL DESIGN NOTES:

1. STRENGTH DESIGN METHOD IN ACCORDANCE WITH (I.A.W.) ACI 318.
2. APPLICABLE DESIGN DOCUMENTS (CURRENT EDITIONS):
  - NCDOT STANDARD DRAWING # 840.45 (WAFFLE/NON - TRAFFIC RATED) OR # 840.46(SOLID / TRAFFIC RATED).
  - 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 C913 STANDARD SPECIFICATION FOR PRECAST CONCRETE & WATER & WASTEWATER STRUCTURES.
3. MAX DEPTH TO INVERT OF PRECAST (I.E. FLOOR) = 15' FOR SOLID BASE & 10' FOR WAFFLE BASE.
4. GWT ASSUMED BELOW INVERT OF PRECAST.
5. LATERAL DESIGN PRESSURES (AS APPLICABLE TO DESIGN):
  - EQUIV DRY SOIL FLUID PRESSURE = 47 PCF.
  - EQUIV SATURATED SOIL FLUID PRESSURE = 85 PCF.
  - LIVE LOAD SURCHARGE = 80 PSF.
7. DESIGN CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS = 4,000 PSI (MIN).
8. REINFORCEMENT:
  - CARBON-STEEL DEFORMED BARS: ASTM A615,  $f_y = 60$ KSI (MIN).
  - WELDED WIRE REINFORCEMENT (DEFORMED): ASTM A1064  $f_y = 70$  KSI (MIN).
9. COPOLYMER POLY PROPYLENE STEEL REINFORCED STEPS I.A.W ASTM C478 SPACED 16" O.C.
10. PRECAST BASE AND RISER SECTIONS MAY BE USED FOR THE FOLLOWING DOT STANDARDS AS NOTED ON NCDOT STANDARD DRAWING:
  - WAFFLE BOX (NCDOT#840.45): 840.01, 840.20, 8940.04, 840.05, 840.11, 840.12, 840.14, 840.15, 840.17, 840.18, 840.19, 840.26, 840.27, 840.28, 840.28, 840.31, 840.32 & 840.41.
  - SOLID BOX (NCDOT #840.46): 840.04, 840.05, 840.14, 840.31, 840.32, 840.34, 840.35, 840.36, & 840.41.
  - MIN 4" BEAM FOR OPENINGS IN WALL & 6" BEAM FOR CORNER HOLES PER NC DOT.
11. LIFT LOOPS, PINS OR UTILITY ANCHORS PROVIDED FOR HANDLING. CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING OLDCASTLE PRECAST, INC. LIFTING INSTRUCTIONS AS SHOWN ON BACK OF SHIPPING TICKET.



**PLAN VIEW**

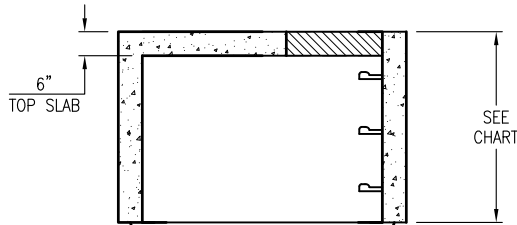
### TOP SLAB

THICKNESS	WEIGHT (lbs)
6"	1,878
8"	2,403



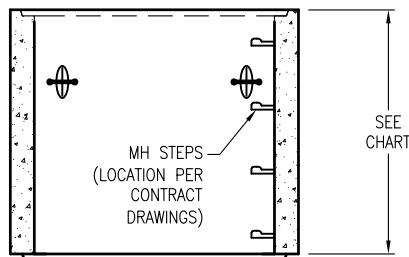
### RETURN TOP

HEIGHT	WEIGHT (lbs)
1.5'	2,918
2.5'	4,193
3.5'	5,468
4.5'	6,743



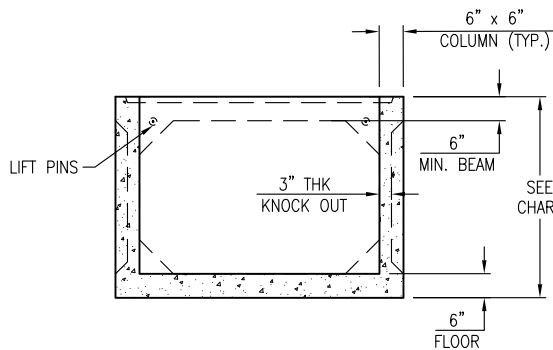
### RISER SECTION

HEIGHT	WEIGHT (lbs)
0.67'	841
1.33'	1,682
2.67'	3,391
4.00'	5,087



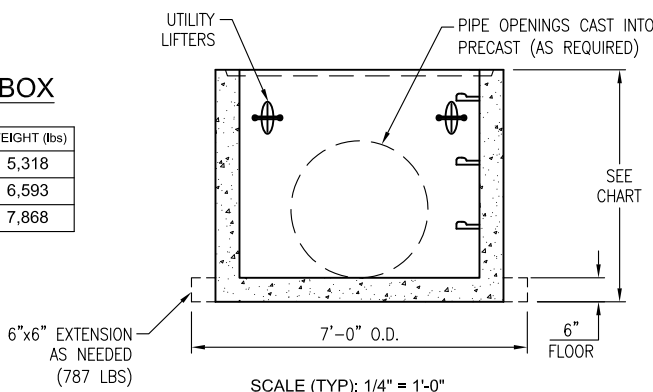
### WAFFLE BOX

HEIGHT	WEIGHT (lbs)
3.5'	4,255
4.5'	5,005
5.5'	5,755



### SOLID BOX

HEIGHT	WEIGHT (lbs)
3.5'	5,318
4.5'	6,593
5.5'	7,868



**\*\*THIS MUST BE FILLED OUT BEFORE MANUFACTURING BEGINS\*\***

APPROVED W/ NO EXCEPTIONS TAKEN:

APPROVED AS NOTED:

REVISED AND RESUBMIT:

SIGNATURE

DATE



**Oldcastle Precast**<sup>®</sup>  
 1431 PRODUCT RD, FLOUQUAY VARINA, NC  
 OFFICE 919-552-2252, FAX 844-866-7476  
 NC ENGINEERING LICENSE #F-1002

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**30"x60" DRAINAGE BOX**  
 SUBMITTAL LAYOUT

CUSTOMER

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
08/07/17		PPS			
DRAWING NUMBER				REVISION	SHEET
30x60 DRAINAGE BOXES				REV DATE	1 OF 1