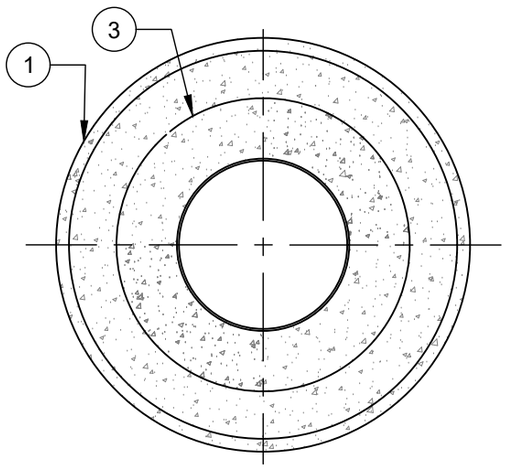
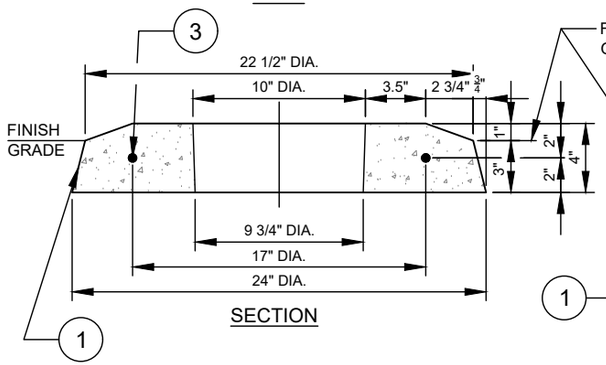
TYPE A - GRADE RING
PRECAST ONLY

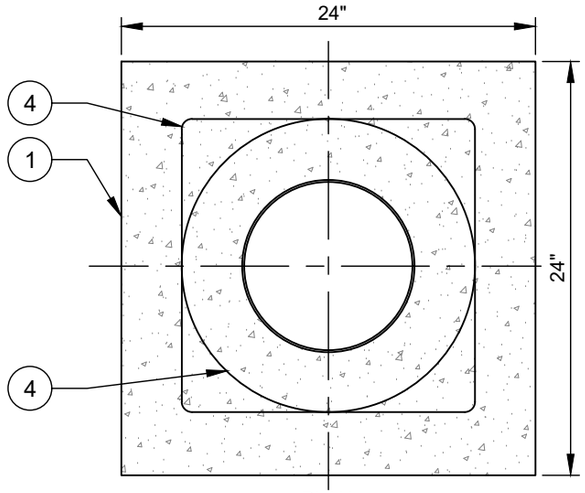


PLAN

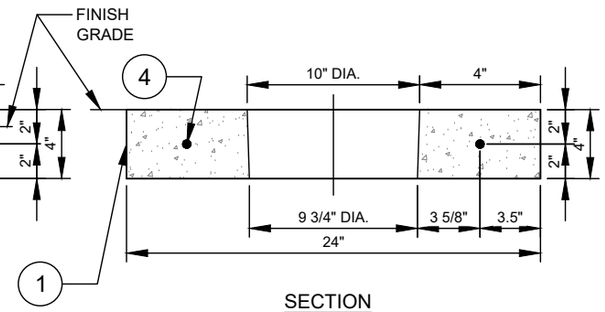


SECTION

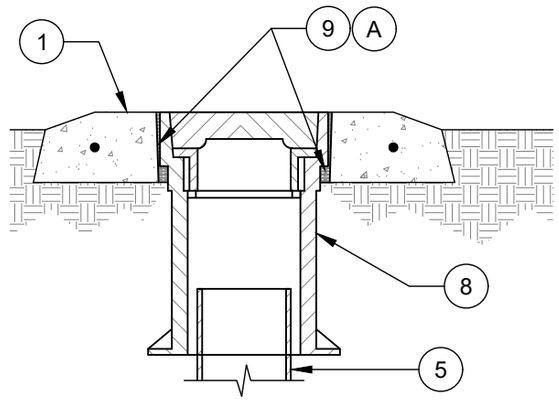
TYPE B - GRADE RING
PRECAST OR CAST IN PLACE



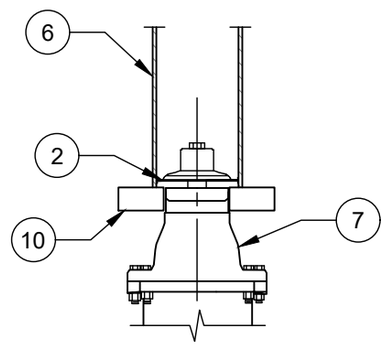
PLAN



SECTION



INSTALLATION DETAIL ONE
SECTION VIEW



INSTALLATION DETAIL TWO
SECTION VIEW

NO.	DESCRIPTION:
1.	CONCRETE GRADE RING.
2.	PLASTIC VALVE CENTERING DISK (EX: PLASTIC POSI-CAP VALVE BOX ALIGNER DISK) REQUIRED TO KEEP VALVE BOX ALIGNED DURING BACK FILLING. REQUIRED FOR ALL VALVES.
3.	#4 REBAR – 17" DIAMETER.
4.	#4 REBAR – LENGTH = 68", OR (ALTERNATE -17" DIAMETER).
5.	VALVE BOX BOTTOM SECTION.
6.	6" DIAMETER C900 PVC PIPE.
7.	GATE VALVE – 12" OR SMALLER.
8.	TOP SECTION OF VALVE BOX.
9.	FILL ANNULAR SPACE WITH NON SHRINK GROUT.
10.	CONCRETE SUPPORT BRICK - 2 EACH.

NOTES:

A. FOR PRECAST GRADE RINGS – FILL VOID BETWEEN GRADE RING AND CAST IRON VALVE BOX TOP SECTION WITH NON-SHRINK GROUT.
B. FOR CAST-IN-PLACE GRADE RINGS – TOP SECTION OF CAST IRON VALVE BOX SHALL BE CAST IN THE CONCRETE.
C. TYPE A GRADE RINGS SHALL BE REQUIRED ON ROAD SHOULDERS WITHOUT CURB.
D. FOR INSTALLATION DETAIL TWO – ONLY ONE VALVE BOX ASSEMBLY (NO. 5 OR NO. 6) SHALL BE REQUIRED. VALVE BOX ASSEMBLY SHALL NOT REST ON THE VALVE, AND SHALL BE CENTERED ON THE VALVE OPERATING NUT AS SHOWN.
E. TOP SECTION/LID SHALL BE FLUSH WITH GRADE RING TO AVOID TRIPPING HAZARD.
F. FOR LOCATIONS WHERE A STANDARD PRECAST GRADE RING DOES NOT FIT, IT CANNOT BE CUT TO FIT AND A CAST IN PLACE CONCRETE PAD MUST BE POURED IN PLACE.

DESIGN REQUIREMENTS:

a. CONCRETE – f'c = 4,000 PSI (PRECAST), OR 3,600 PSI (CAST-IN-PLACE).
b. STEEL REINFORCEMENT – REBARS – GRADE 60 (60,000 PSI) – ASTM A-615, OR WELDED WIRE FABRIC – ASTM A-185.

CHARLOTTE WATER

CHARLOTTE WATER
A CITY OF CHARLOTTE DEPARTMENT
STANDARD DETAILS
WATER

VALVE BOX - CONCRETE GRADE RINGS (12" AND SMALLER VALVES - ONLY) (2" AIR RELEASES AND BLOW OFFS)

NO SCALE

VERSION
1.0

DATE
04/2024

DETAIL
10.1.5