

UTILITY CONSTRUCTION

1" OR 3/4" SERVICE CONNECTION
(LONG SIDE - PLAN VIEW)

1" OR 3/4" SERVICE CONNECTION
(LONG SIDE - PROFILE VIEW)

ROAD WITH SIDE DITCH

1" OR 3/4" SERVICE CONNECTION
(SHORT SIDE)

DETAIL AT MAIN
(LONG SIDE)

DETAIL AT MAIN
(SHORT SIDE)

NO. DESCRIPTION

- 1 WATER MAIN
- 2 DOUBLE STRAP SERVICE SADDLE - CC (TAPER) THREAD OUTLET
- 3 BALL CORPORATION STOP - CC (TAPER) THREAD x CTS COMPRESSION
- 4 TYPE K COPPER TUBING OR SDR9 HDPE (POLY) TUBING WITH INSERT STIFFENERS
- 5 5/8" x 3/4" ANGLE BALL VALVE WITH LOCK WINGS - CTS COMPRESSION x YOKE STAR NUT
- 6 5/8" DUCTILE IRON YOKE BAR
- 7 5/8" METER ASSEMBLY (BY CMUD) WITH AMR TRANSMITTER
- 8 5/8" x 3/4" BRASS 90° YOKE STAR NUT x CTS COMPRESSION CONNECTOR
- 9 CONCRETE METER BOX - SEE STD. DETAILS
- 10 HOPE METER BOX LID WITH AMR TRANSMITTER BRACKET
- 11 AWG #12 GAUGE COPPER TRACER WIRE (THWN) - WITH BLUE INSULATION - TERMINATE IN METER BOX WITH 24" EXCESS WIRE (COILED)
- 12 SOLID STANDARD CONCRETE BRICKS - DIAGONAL AT CORNERS - 4 EACH.

NOTE:

- MIN. DISTANCE CENTER TO CENTER ON SERVICES OR TO BELLS OR SPIGOTS SHALL BE 3'-0" AS MEASURED ALONG THE MAIN.
- CENTER ANGLE BALL VALVE - 90° CONNECTOR (5) - (8) IN METER BOX.
- SHOWN AS 3/4" SERVICE, USE 1" COMPONENTS FOR 1" DOMESTIC WATER SERVICE.
- TRACER WIRE IS NOT REQUIRED WITH ALL COPPER TUBING SERVICE.
- WHEN METER BOX MUST BE PLACED IN CONCRETE, IT SHALL BE COMPLETELY IN, AND CENTERED IN CONCRETE PANEL, PER CDOT / NCDOT REQUIREMENTS.
- CMUD MAINTENANCE ENDS WITH 90° CONNECTOR (8).

NO SCALE

3/4" AND 1" DOMESTIC WATER SERVICE CONNECTION

CHARLOTTE-MECKLENBURG UTILITIES WATER

TYPE A - GRADE RING
PRECAST ONLY

TYPE B - GRADE RING
PRECAST OR CAST IN PLACE

TYPE I - FOOTING - TOP SECTION
PRECAST ONLY

TYPE II - FOOTING - BOTTOM SECTION
PRECAST ONLY

DESIGN REQUIREMENTS

- CONCRETE - f_c = 4000 PSI (PRECAST), OR 3600 PSI (CAST-IN-PLACE).
- STEEL REINFORCEMENT - REBARS - GRADE 60 (60,000 PSI) - ASTM A-615, OR WELDED WIRE FABRIC - ASTM A-185.
- NON WOVEN GEOTEXTILE FABRIC - CARTRIDGE MILLS WFA-401S, MIRAFI #140N, OR APPROVED EQUAL.

NOTES:

- FOR PRECAST GRADE RINGS - FILL VOID BETWEEN GRADE RING AND CAST IRON VALVE BOX TOP SECTION WITH NON-SHRINK GROUT.
- FOR CAST-IN-PLACE GRADE RINGS - TOP SECTION OF CAST IRON VALVE BOX SHALL BE CAST IN THE CONCRETE.
- TYPE A GRADE RINGS SHALL BE REQUIRED ON ROAD SHOULDERS WITHOUT CURB.
- TYPE I FOOTINGS SHALL BE REQUIRED IN NEW CONSTRUCTION WHEN THE CAST IRON VALVE BOX IS LOCATED DIRECTLY IN THE ASPHALT.
- TYPE II FOOTINGS SHALL BE REQUIRED AT ALL VALVE INSTALLATIONS.
- FOR INSTALLATION DETAIL TWO - ONLY ONE VALVE BOX ASSEMBLY (PART #8) SHALL BE REQUIRED. FOOTINGS SHALL NOT REST ON THE VALVE, AND SHALL BE CENTERED ON THE VALVE OPERATING NUT AS SHOWN.

NO. DESCRIPTION

- 1 CONCRETE GRADE RING.
- 2 CONCRETE FOOTING.
- 3 NON WOVEN GEOTEXTILE FABRIC x 2 EACH.
- 4 SLIT IN FABRIC - 8 INCHES LONG, ROTATE 90 DEGREES IN SECOND LAYER OF FABRIC.
- 5 #4 REBAR - 17-INCH DIAMETER.
- 6 #4 REBAR - LENGTH = 56 INCHES, OR (ALTERNATE - 14-INCH DIAMETER).
- 7 #4 REBAR - 12-INCH DIAMETER.
- 8 #4 REBAR - 6-INCH DIAMETER.
- 9 VALVE BOX ASSEMBLY - (SHOWN LEFT TO RIGHT) - VALVE BOX BOTTOM SECTION, OR 6-INCH DIAMETER C900 PVC PIPE, OR 6-INCH DIAMETER SDR 26 PVC PIPE.
- 10 VALVE - 12-INCH OR SMALLER.
- 11 TOP SECTION OF VALVE BOX.

INSTALLATION DETAIL ONE

INSTALLATION DETAIL TWO

NO SCALE

VALVE BOX - CONCRETE GRADE RINGS AND FOOTINGS (12" AND SMALLER VALVES - ONLY)

CHARLOTTE-MECKLENBURG UTILITIES WATER

1" OR 3/4" SERVICE CONNECTION
(SHORT SIDE - IN PAVEMENT)

METER BOX IN SIDEWALK
(REQUIRES PRIOR CMU APPROVAL)

METER DETAIL
(SIDE)

METER DETAIL
(END)

METER BOX IN SIDEWALK DETAIL
(REQUIRES PRIOR CMU APPROVAL)
(BOX SHALL BE SUPPORTED BY CONCRETE SIDEWALK - AS SHOWN)

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3/4" AND 1" DOMESTIC WATER SERVICE CONNECTION

CHARLOTTE-MECKLENBURG UTILITIES WATER

METER BOX BOX

PLAN VIEW

SECTION A-A

SECTION B-B

SECTION C-C RIB DETAIL

BOTTOM VIEW

REBARS

PLASTIC LID

IRON 40W MOUNT

IRON 60W MOUNT

NOTES:

- MATERIAL SHALL BE HIGH DENSITY POLYETHYLENE.
- LOAD RATING = HS20.
- COLOR SHALL BE CHARLOTTE GRAY.
- SHALL / MANUFACTURER: SOUTHEASTERN DISTRIBUTORS MODEL MB 16 - HD.

METER BOX BODY WEIGHT = 13.50 LBS.

LID WEIGHT - INCLUDING REBARS - 5.30 LBS.

NO SCALE

PLASTIC METER BOX AND LID FOR 3/4 - INCH DOMESTIC WATER SERVICE

CHARLOTTE-MECKLENBURG UTILITIES WATER

