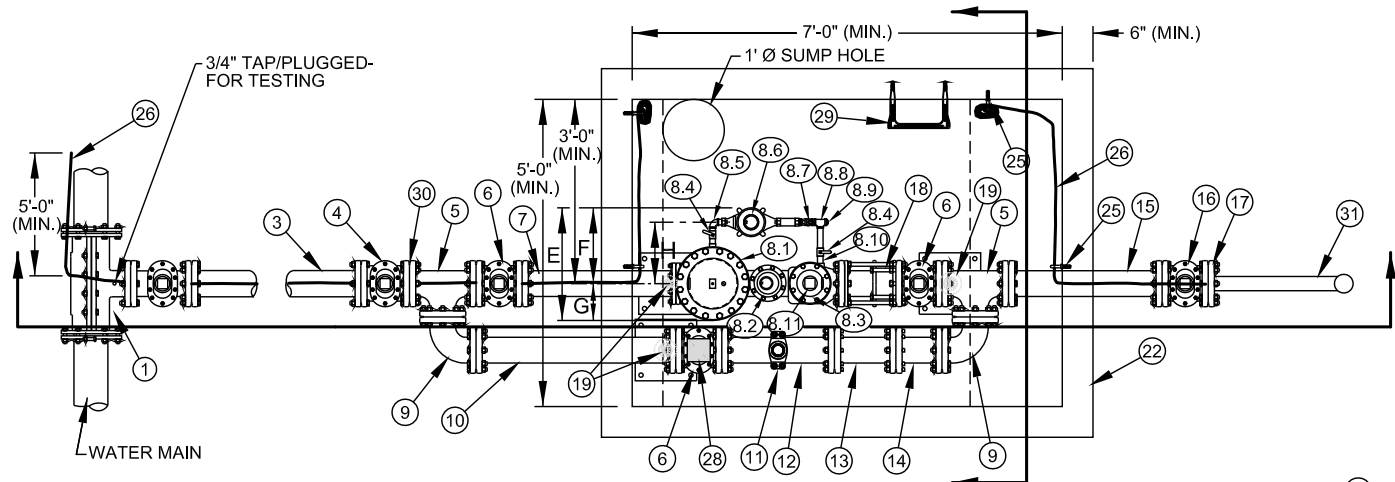
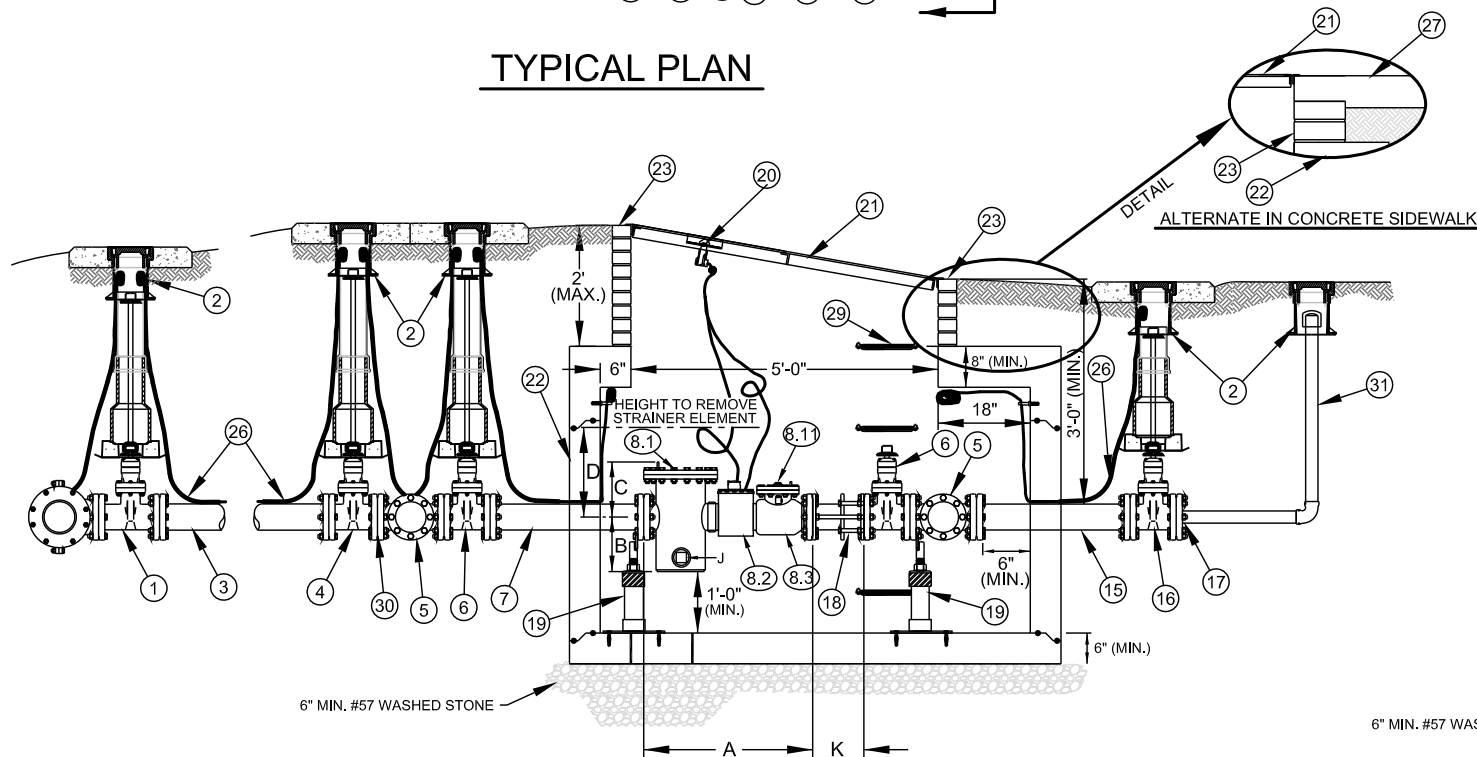


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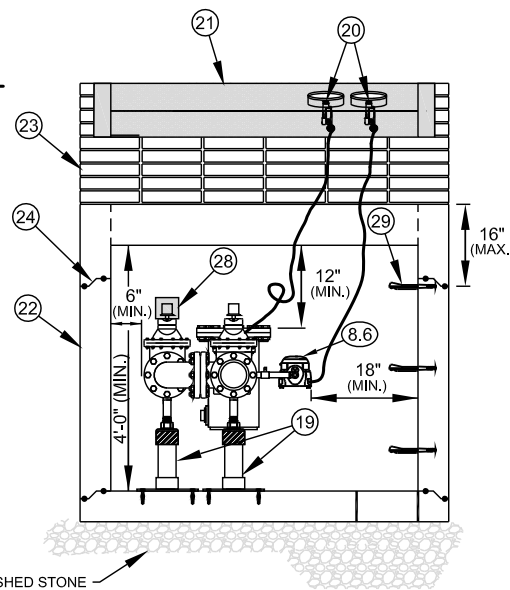
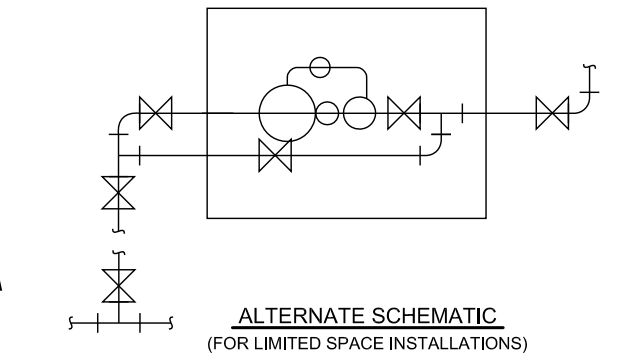
- A. ALL FLANGE HARDWARE (BOLT/WASHER/NUT) SHALL BE SERIES 300 STAINLESS STEEL (ASTM F 593 / F 594) - WITH ANTI-SEIZE COMPOUND.
- B. ALL PIPE SHALL BE RESTRAINED JOINT DUCTILE IRON FROM TAP TO PROPERTY LINE VALVE.
- C. METER CONFIGURATION AND LENGTH / WIDTH MAY VARY DUE TO BRAND - VERIFY DIMENSIONS TO DETERMINE MINIMUM VAULT SIZE.
- D. VAULT SHALL BE SIZED AS NEEDED FOR MINIMUM CLEARANCE AS SHOWN AND RATED FOR NCDOT HS-20 LOADING - SUBMIT SHOP DRAWINGS / P.E. SEALED FOR REVIEW.
- E. ALL CONCRETE SHALL BE MINIMUM 4000 PSI COMPRESSIVE STRENGTH.
- F. DESIGN SHALL CONFORM TO ASTM C858 - SPECIFICATIONS FOR "UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURE"
- G. STEEL REINFORCING DESIGN SHALL CONFORM TO ASTM C857
- H. REBARS SHALL BE GRADE 60 PER ASTM A615
- I. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185
- J. DIAGONAL REINFORCING SHALL BE ADDED AT ALL OPENINGS
- K. PIPE PENETRATIONS SHALL BE SEALED WITH FLEXIBLE CONNECTORS (MANHOLE BOOTS) OR WITH 8-INCHES OF BRICK & MORTAR (AND 1/2 INCH THICK CONSTRUCTION EXPANSION MATERIAL)
- L. FRAME TO BE FLUSH WITH GROUND OR CONCRETE SIDEWALK, GROUND SHALL SLOPE AWAY FROM VAULT.
- M. ALL JOINTS SHALL BE MADE WATERTIGHT USING 2 RINGS OF BUTYL RUBBER JOINT MASTIC.
- N. ALL VALVES SHALL BE OPEN RIGHT - CLOCKWISE, EXCEPT NO. 16



TYPICAL PLAN



TYPICAL ELEVATION



SECTION VIEW

DIMENSION B - H VARY SLIGHTLY - AS DETERMINED BY MANUFACTURER.

METER SIZE	A	B	C	D	E	F	G	H	J	K
4"	33"	10 5/8"	10 3/4"	17 1/2"	22"	15 1/4"	6 3/4"	12"	2"	SMITH-BLAIR = 10" ROMAC = 9"

NO. DESCRIPTION

- 1 4" - TAPPING SLEEVE AND 4" FL x MJ TAPPING VALVE ON EXISTING MAIN, 4" MECHANICAL JOINT OUTLET TEE AND 4" MJ GATE VALVE ON NEW MAIN
- 2 STANDARD VALVE BOX ASSEMBLY (TYPICAL) - ALL VALVES
- 3 4" DUCTILE IRON PIPE - RESTRAINED
- 4 4" MJ x FL DUCTILE IRON ADAPTER ON SHORT SIDE SERVICE (NOT SHOWN), 4" MJ x FL GATE VALVE ON LONG SIDE SERVICE (SHOWN)
- 5 4" ALL FLANGE DUCTILE IRON TEE
- 6 4" ALL FLANGE GATE VALVE
- 7 4" ALL FLANGE DUCTILE IRON PIPE SPOOL - L = 30" (MIN.) (SPECIAL CLASS 53)
- 8 4" FMCT METER ASSEMBLY (FLANGE x FLANGE) - 4" x1"
 - 8.1 STRAINER
 - 8.2 METER WITH AMR / TRANSMITTER
 - 8.3 CHECK VALVE
 - 8.4 1" BRASS BALL VALVE WITH HANDLE (FNPT x FNPT)
 - 8.5 1" BRASS 90° BEND (FNPT x FNPT)
 - 8.6 1" METER WITH AMR / TRANSMITTER
 - 8.7 1" BRONZE CHECK VALVE (FNPT x FNPT)
 - 8.8 1" BRONZE TEE (FNPT x FNPT x FNPT)
 - 8.9 1" BRONZE PLUG (MNPT)
 - 8.10 1" RED BRASS PIPE NIPPLES (TYP - AS REQ'D) - (MNPT x MNPT)
 - 8.11 2" (MIN.) SQUARE HEAD BRASS PLUG (MNPT)
- 9 4" DUCTILE IRON 90° BEND FLANGE x FLANGE
- 10 4" DUCTILE IRON PIPE - FLANGE x FLANGE SPOOL - L = 39" (MIN.) (SPECIAL CLASS 53)
- 11 4" x 1" SERVICE SADDLE WITH 1" BALL CORPORATION STOP - CC - TAPER THREAD
- 12 4" DUCTILE IRON PIPE - FLANGE x PE - L = 22" (MIN.) (SPECIAL CLASS 53)
- 13 4" MECHANICAL JOINT DUCTILE IRON LONG PATTERN SOLID SLEEVE WITH RESTRAINED JOINTS
- 14 4" DUCTILE IRON PIPE - FLANGE x PE - L = 20" (MIN.) (SPECIAL CLASS 53)
- 15 4" DUCTILE IRON PIPE - FLANGE x PE - L = 30" (MIN.) (SPECIAL CLASS 53)
- 16 4" MECHANICAL JOINT (RJ) GATE VALVE - OPEN LEFT AT PROPERTY LINE
- 17 4" MECHANICAL JOINT PLUG WITH 2" TAP (FNPT)
- 18 DISMANTLING JOINT - FL x FL - (L = 9" OR 10" - EXTENDED) - SMITH BLAIR #975 OR ROMAC #DJ400 WITH STAINLESS STEEL TIE RODS / HARDWARE.
- 19 GALV. STEEL OR S.S. ADJUSTABLE FLANGE PIPE SUPPORTS (NUMBER REQ'D = 3) (WITH STAINLESS STEEL ADHESIVE ANCHORS)
- 20 AMR TRANSMITTERS (ERT)
- 21 5 FT x 5 FT ACCESS DOOR - SEE STD. DETAIL
- 22 PRECAST REINFORCED CONCRETE VAULT - 7 FT x 5 FT x 4 FT (MIN.) SEE NOTES C AND D.
- 23 MINIMUM OF (3) STD. SOLID CONCRETE BRICK COURSES UNDER ACCESS DOOR FRAME - MAX. 2 FT.
- 24 JOINT REQUIRED AT FLAT TOP SECTION
- 25 3/8" DIA. GALV. STEEL EYE BOLT (EPOXY ADHESIVE ANCHOR) - TYPICAL
- 26 AWG #12 GAUGE SOLID COPPER TRACER WIRE - WITH BLUE INSULATION (30 MILS HDPE) TERMINATE WITH 24" EXCESS WIRE (COILED) AT EYE BOLT AND VALVE BOX (TYPICAL)
- 27 CAST IN PLACE CONCRETE SIDEWALK - BRICKWORK SHALL NOT EXTEND TO SURFACE. ACCESS DOOR FRAME SHALL REST ON SIDEWALK.
- 28 VALVE LOCK (FURNISHED BY CMUD) - LOCK VALVE CLOSED.
- 29 PLASTIC STEP - 12" OR 16" O.C. VERTICAL SPACING.
- 30 ISOLATION FLANGE KIT REQUIRED WITH ALL CATHODIC PROTECTED MAINS, AND ALL MAINS 30-INCH AND LARGER.
- 31 2" TEMPORARY BLOW OFF ASSEMBLY (GALV. STEEL (SCH 80), RED BRASS (SCH 40), HDPE (DR9) - END WITH THREADED COUPLING)

NO SCALE

STANDARD NO.

CCC

VERSION NO.

1.0

VERSION DATE

4.10.2012

4-INCH DOMESTIC / FIRE METER COMPOUND TYPE (FMCT)

WATER METER AND PRECAST CONCRETE VAULT

CHARLOTTE-MECKLENBURG UTILITIES

STANDARD DETAILS

WATER

