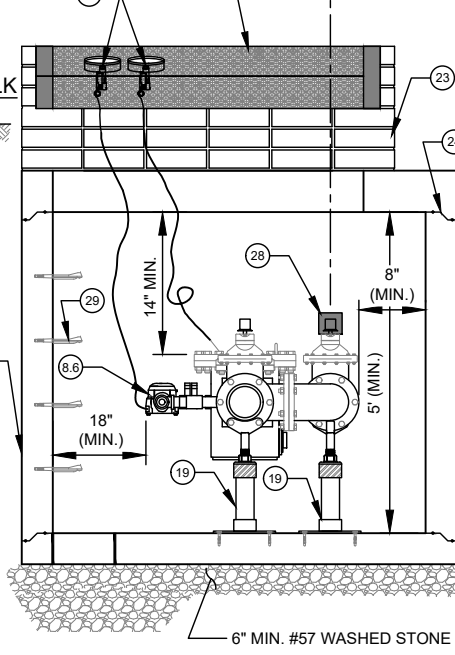
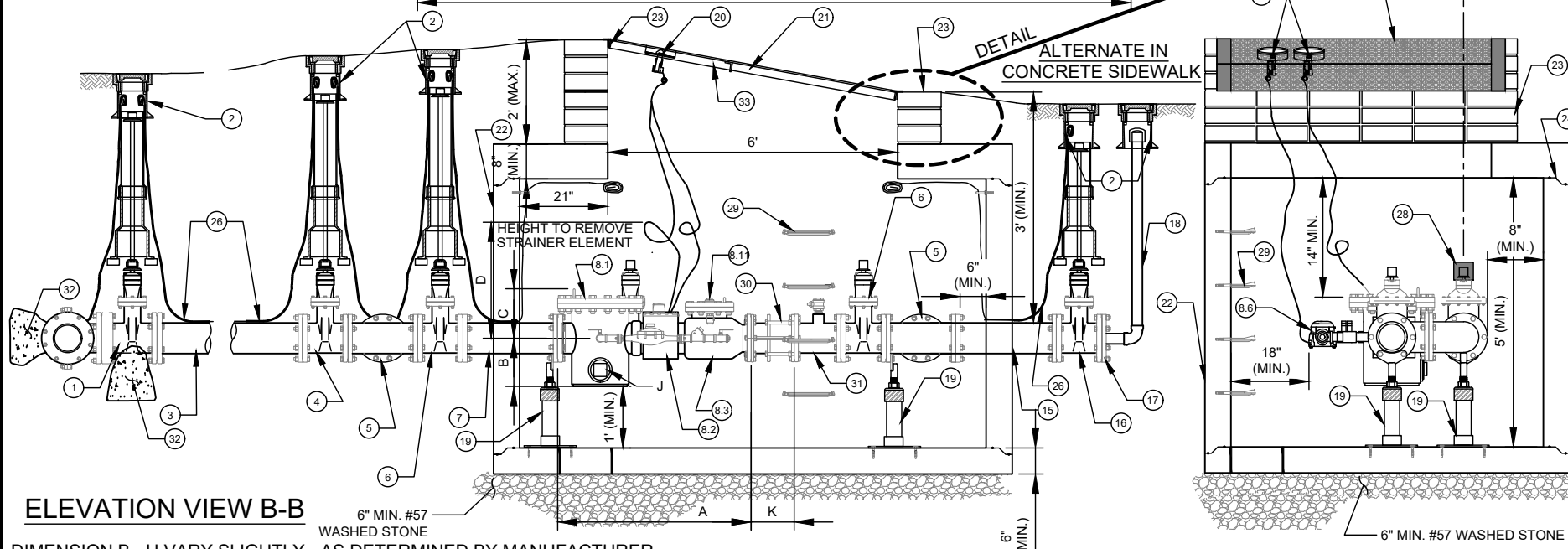
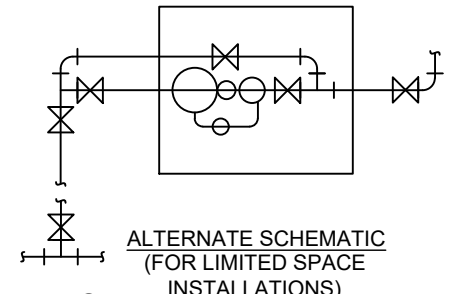
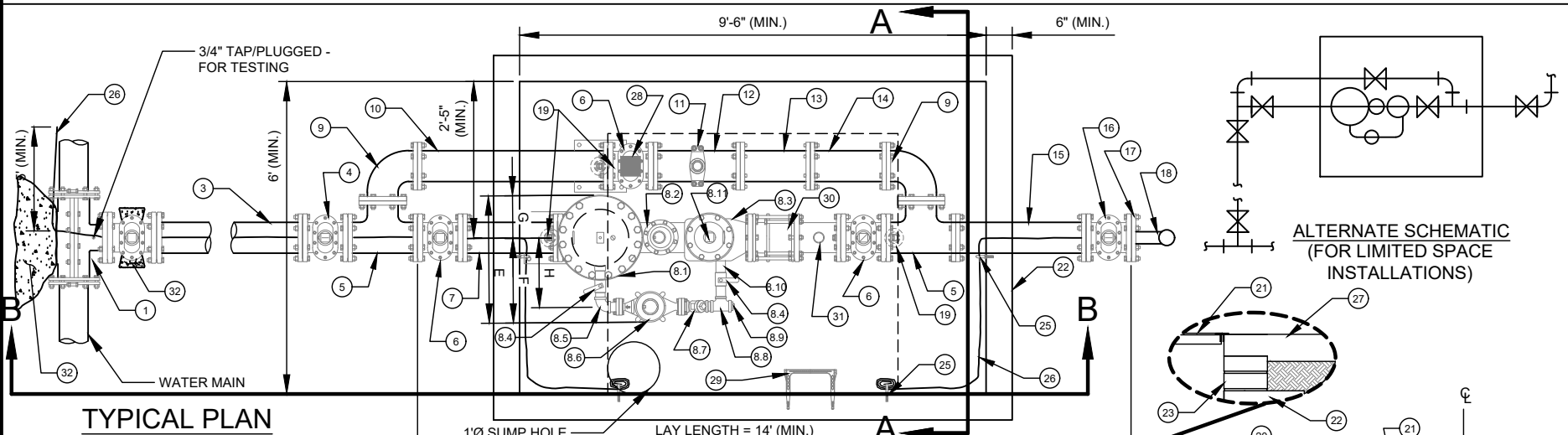


**NOTES:**

- A. ALL FLANGE HARDWARE (BOLT/WASHER/NUT) SHALL BE STAINLESS STEEL - TYPE 304 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 4,000 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" 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.
- O. PRECAST VAULT COMPONENTS SHALL HAVE MARKINGS PER ASTM C478 REQUIREMENTS.



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

METER SIZE	A	B	C	D	E	F	G	H	J	K
6"	45"	11 1/16"	11 3/8"	21 1/4"	29"	19 1/2"	9 1/2"	16"	3"	SMITH-BLAIR = 9" ROMAC = 9"

- | NO.   | DESCRIPTION:   |
|-------|--|
| 1.    | 6" TAPPING SLEEVE AND 6" FL X MJ TAPPING VALVE ON EXISTING MAIN. 6" MJ OUTLET TEE, 6" FOSTER ADAPTOR, (OR SWIVEL TEE) AND 6" MJ GATE VALVE ON NEW MAIN.        |
| 2.    | STANDARD VALVE BOX ASSEMBLY (TYPICAL) - ALL VALVES.  |
| 3.    | 6" DUCTILE IRON PIPE - RESTRAINED.   |
| 4.    | 6" MJ X FL DUCTILE IRON ADAPTER ON SHORT SIDE SERVICE (NOT SHOWN), 6" MJ X FL GATE VALVE ON LONG SIDE SERVICE (SHOWN).   |
| 5.    | 6" ALL FLANGE DUCTILE IRON TEE.  |
| 6.    | 6" ALL FLANGE GATE VALVE.  |
| 7.    | 6" ALL FLANGE DUCTILE IRON PIPE SPOOL - L = 30" (MIN.) (SPECIAL CLASS 53).   |
| 8.    | 6" FMCT METER ASSEMBLY (FLANGE X FLANGE) - SHOWN AS 6" X 2", MAY ALSO BE 6" X 1 1/2" - AS DETERMINED BY MANUFACTURER.  |
| 8.1.  | STRAINER.  |
| 8.2.  | METER WITH AMR TRANSMITTER.  |
| 8.3.  | CHECK VALVE.   |
| 8.4.  | 2" BRASS BALL VALVE WITH HANDLE (FNPT X FNPT).   |
| 8.5.  | 2" BRASS 90° BEND (FNPT X FNPT).   |
| 8.6.  | 2" METER (2 BOLT METER FL - EACH END) WITH TRANSMITTER.  |
| 8.7.  | 2" BRONZE CHECK VALVE (FNPT X FNPT).   |
| 8.8.  | 2" BRONZE TEE (FNPT X FNPT X FNPT).  |
| 8.9.  | 2" BRONZE PLUG (MNPT).   |
| 8.10. | 2" RED BRASS PIPE NIPPLES (TYP. - AS REQUIRED) - (MNPT X MNPT).  |
| 8.11. | 2" (MIN.) SQUARE HEAD BRASS PLUG (MNPT).   |
| 9.    | 6" DUCTILE IRON 90° BEND FLANGE X FLANGE.  |
| 10.   | 6" DUCTILE IRON PIPE - FLANGE X FLANGE SPOOL - L = 64.5" (MIN.) (SPECIAL CLASS 53).  |
| 11.   | 6" X 1 1/2" SERVICE SADDLE WITH 1 1/2" BALL CORPORATION STOP - CC - TAPER THREAD.  |
| 12.   | 6" DUCTILE IRON PIPE - FLANGE X PE - L = 24" (MIN.) (SPECIAL CLASS 53).  |
| 13.   | 6" MECHANICAL JOINT DUCTILE IRON LONG PATTERN SOLID SLEEVE WITH RESTRAINED JOINT.  |
| 14.   | 6" DUCTILE IRON PIPE - FLANGE X PE - L = 18" (MIN.) (SPECIAL CLASS 53).  |
| 15.   | 6" DUCTILE IRON PIPE - FLANGE X PE - L = 30" (MIN.) (SPECIAL CLASS 53).  |
| 16.   | 6" MECHANICAL JOINT (RJ) GATE VALVE - OPEN LEFT AT PROPERTY LINE.  |
| 17.   | 6" MECHANICAL JOINT PLUG WITH 2" TAP (FNPT).   |
| 18.   | 2" TEMPORARY BLOW OFF ASSEMBLY (GALV. STEEL (SCH 80), RED BRASS (SCH 40), HDPE (DR9) OR DIP - END WITH THREADED COUPLING).                                     |
| 19.   | GALV. STEEL OR S.S. ADJUSTABLE FLANGE PIPE SUPPORTS (NUMBER REQUIRED = 3) (WITH STAINLESS STEEL ADHESIVE ANCHORS).   |
| 20.   | AMR TRANSMITTERS.  |
| 21.   | 6' X 5' ACCESS DOOR - SEE STD. DETAIL.   |
| 22.   | PRECAST REINFORCED CONCRETE VAULT - 9.5' X 6' X 5' (MIN.). SEE NOTES C AND D.  |
| 23.   | MINIMUM OF THREE STD. SOLID CONCRETE BRICK COURSES UNDER ACCESS DOOR FRAME - MAX. 2". JOINT REQUIRED AT FLAT TOP SECTION.                                      |
| 24.   | 3/8" DIA. GALV. STEEL EYE BOLT (EPOXY ADHESIVE ANCHOR) - TYPICAL.  |
| 25.   | 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).      |
| 26.   | CAST IN PLACE CONCRETE SIDEWALK - BRICKWORK SHALL NOT EXTEND TO SURFACE. ACCESS DOOR FRAME SHALL REST ON SIDEWALK.   |
| 27.   | VALVE LOCK AND WARNING TAG (FURNISHED BY CLTW) - LOCK VALVE CLOSED.  |
| 28.   | PLASTIC STEP - 12" O.C. VERTICAL SPACING.  |
| 29.   | 6" DISMANTLING JOINT (RESTRAINED) - ROMAC DJ400 - LL = 7.38" TO 9.38", SET TO 9" OR SMITH-BLAIR #975 - LL = 8" TO 10", SET TO 9".                              |
| 30.   | 6" EPOXY COATED/LINED STEEL FL X FL SPOOL WITH 2" FNPT TEST OUTLET - LL = 12" (MARS CO.) AND 2" BALL CORPORATION STOP WITH T-HEAD OPERATING NUT - MNPT X FNPT. |
| 31.   | CONCRETE THRUST BLOCKING - 3,600 PSI.  |
| 32.   | ATTACH ENGRAVED LABEL, WITH PREMISE NUMBER, TO UNDERSIDE OF DOOR, NEAR THE LIFTING HANDLE.   |
| 33.   |  |

**CHARLOTTE WATER**  
 A CITY OF CHARLOTTE DEPARTMENT  
 STANDARD DETAILS  
**WATER METERS**

**6-INCH FIRE METER COMPOUND TYPE (FMCT) WATER METER AND PRECAST CONCRETE VAULT**

**NO SCALE**  
 VERSION 1.0  
 DATE 04/2024  
 DETAIL 15.4.9