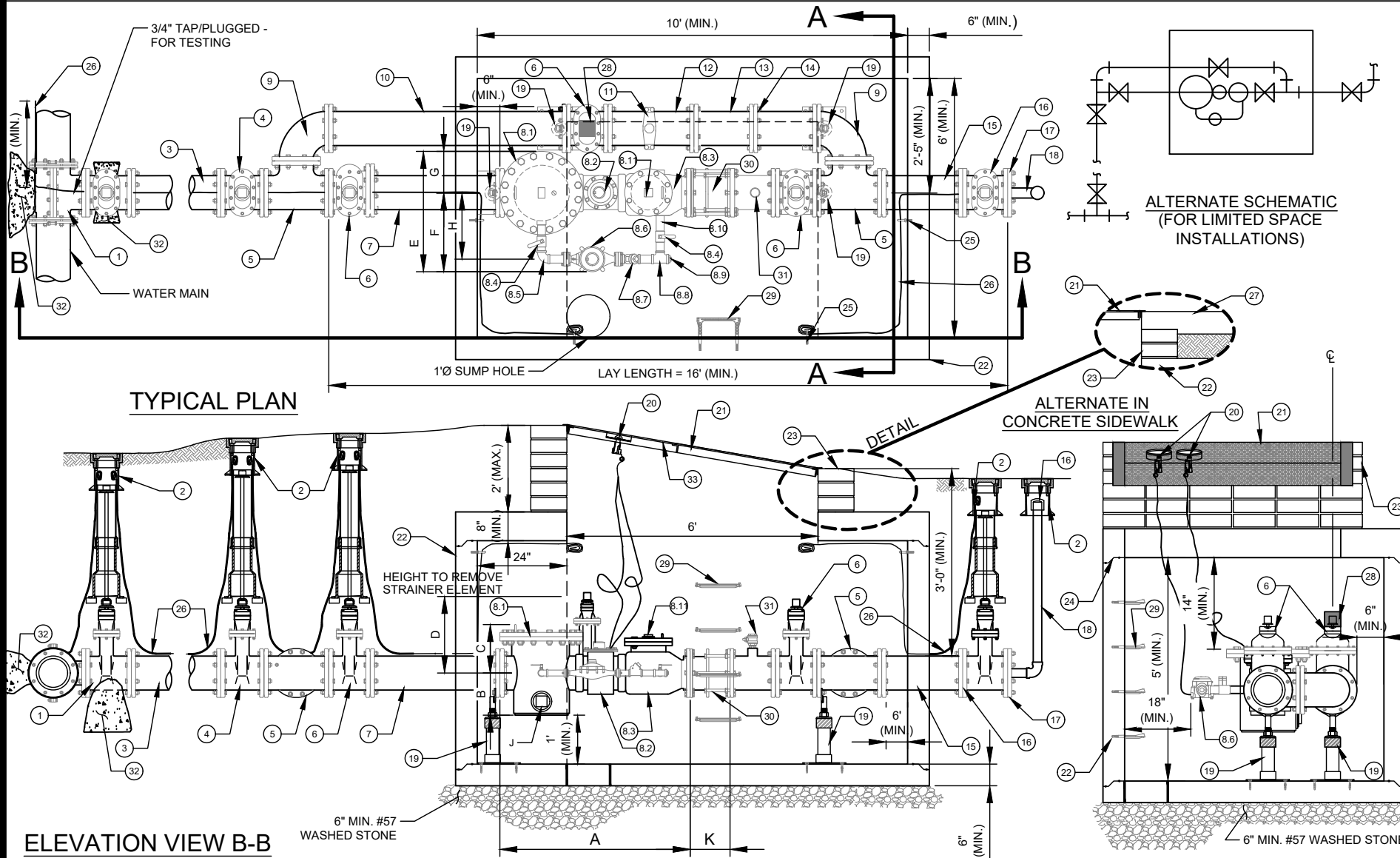


NOTES:

- 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.



- | NO. | DESCRIPTION: |
|-------|--|
| 1. | 8" OUTLET TAPPING SLEEVE AND 8" FL X MJ TAPPING VALVE ON EXISTING MAIN. 8" MJ OUTLET TEE, 8" FOSTER ADAPTOR AND 8" MJ GATE VALVE ON NEW MAIN. |
| 2. | STANDARD VALVE BOX ASSEMBLY (TYPICAL) - ALL VALVES. |
| 3. | 8" DUCTILE IRON PIPE - RESTRAINED. |
| 4. | 8" MJ X FL DUCTILE IRON ADAPTER ON SHORT SIDE SERVICE (NOT SHOWN), 8" MJ X FL GATE VALVE ON LONG SIDE SERVICE (SHOWN). |
| 5. | 8" ALL FLANGE DUCTILE IRON TEE. |
| 6. | 8" ALL FLANGE GATE VALVE. |
| 7. | 8" ALL FLANGE DUCTILE IRON PIPE SPOOL - L = 36" (MIN.) (SPECIAL CLASS 53). |
| 8. | 8" FMCT METER ASSEMBLY (FLANGE X FLANGE) |
| 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. | 8" DUCTILE IRON 90° BEND FLANGE X FLANGE. |
| 10. | 8" DUCTILE IRON PIPE - FLANGE X FLANGE SPOOL - L = 87.5" (MIN.) (SPECIAL CLASS 53). |
| 11. | 8" X 1 1/2" SERVICE SADDLE WITH 1 1/2" BALL CORPORATION STOP - CC - TAPER THREAD. |
| 12. | 8" DUCTILE IRON PIPE - FLANGE X PE - L = 20" (MIN.) (SPECIAL CLASS 53). |
| 13. | 8" MECHANICAL JOINT DUCTILE IRON LONG PATTERN SOLID SLEEVE WITH RESTRAINED JOINT. |
| 14. | 8" DUCTILE IRON PIPE - FLANGE X PE - L = 14" (MIN.) (SPECIAL CLASS 53). |
| 15. | 8" DUCTILE IRON PIPE - FLANGE X PE - L = 30" (MIN.) (SPECIAL CLASS 53). |
| 16. | 8" MECHANICAL JOINT (RJ) GATE VALVE - OPEN LEFT AT PROPERTY LINE. |
| 17. | 8" MECHANICAL JOINT PLUG WITH 2" TAP (FNPT). |
| 18. | 2" TEMPORARY BLOW OFF ASSEMBLY (GALV. STEEL (SCH 80) - END WITH THREADED COUPLING). |
| 19. | GALV. STEEL OR S.S. ADJUSTABLE FLANGE PIPE SUPPORTS (NUMBER REQUIRED = 4) (WITH STAINLESS STEEL ADHESIVE ANCHORS). |
| 20. | AMR TRANSMITTERS. |
| 21. | 5' X 6' ACCESS DOOR - SEE STD. DETAIL. |
| 22. | PRECAST REINFORCED CONCRETE VAULT - 10' 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" DIAMETER 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. | 8" 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. | 8" 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. |

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

METER SIZE	A	B	C	D	E	F	G	H	J	K
8"	53"	11 13/16"	13 29/64"	25 7/8"	34 1/4"	21 3/4"	12 1/2"	17"	3"	SMITH-BLAIR = 9" ROMAC = 9"

CHARLOTTE WATER
 A CITY OF CHARLOTTE DEPARTMENT
 STANDARD DETAILS
 WATER METERS
 8-INCH FIRE METER COMPOUND TYPE (FMCT)
 WATER METER AND PRECAST CONCRETE VAULT
 NO SCALE
 VERSION 1.0
 DATE 04/2024
 DETAIL 15.4.10