

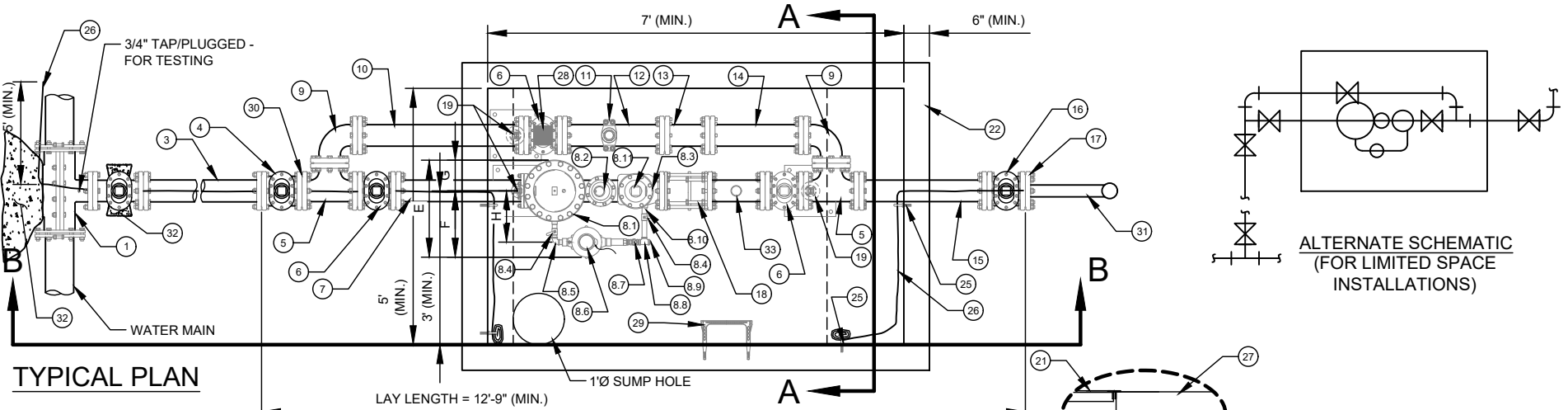
**NOTES:**

- 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 4,000 PSI COMPRESSIVE STRENGTH.
- F. DESIGN SHALL CONFORM TO ASTM C858 - SPECIFICATIONS FOR "UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURE".

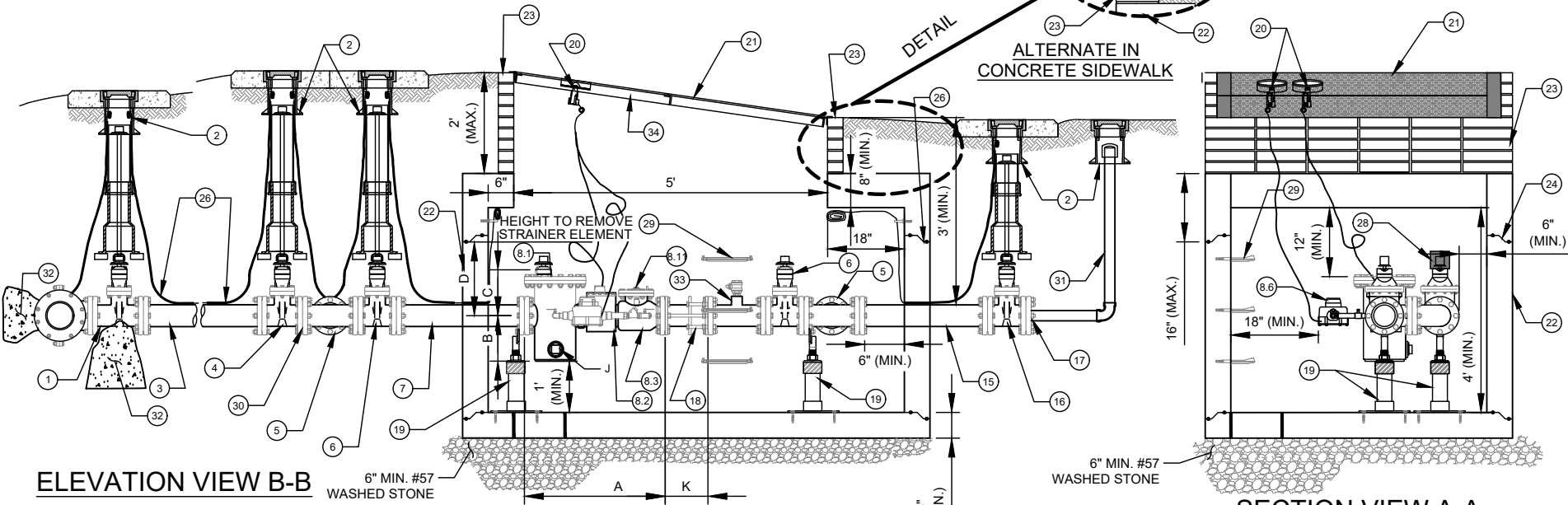
- G. STEEL REINFORCING DESIGN SHALL CONFORM TO ASTM C857.
- H. REBARS SHALL BE GRADE 60 PER ASTM A615.
- I. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- J. DIAGONAL REINFORCING SHALL BE ADDED AT ALL OPENINGS.
- K. PIPE PENETRATIONS SHALL BE SEALED WITH FLEXIBLE CONNECTORS (MANHOLE BOOTS) OR WITH 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. 4" - TAPPING SLEEVE AND 4" FL X MJ TAPPING VALVE ON EXISTING MAIN. 4" MJ OUTLET TEE, 4" FOSTER ADAPTOR, 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" X 1"
  - 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 REQUIRED) - (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. 4" DISMANTLING JOINT (RESTRAINED) - ROMAC DJ400 - LL = 7" TO 9", SET TO 8", OR SMITH-BLAIR #975 - 8" TO 10", SET TO 9". - FL X FL - (L = 8" OR 9" - EXTENDED) SMITH BLAIR #975 OR ROMAC #DJ400 WITH STAINLESS STEEL TIE RODS/HARDWARE.
19. GALV. STEEL OR S.S. ADJUSTABLE FLANGE PIPE SUPPORTS (NUMBER REQUIRED = 3) (WITH STAINLESS STEEL ADHESIVE ANCHORS).
20. AMR TRANSMITTERS.
21. 5' X 5' ACCESS DOOR - SEE STD. DETAIL.
22. PRECAST REINFORCED CONCRETE VAULT - 8' X 5' X 4' (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. ISOLATION FLANGE KIT REQUIRED WITH ALL CATHODIC PROTECTED MAINS, AND ALL MAINS 30-INCH AND LARGER.
30. 2" TEMPORARY BLOW OFF ASSEMBLY (GALV. STEEL (SCH 80)).
31. CONCRETE THRUST BLOCKING - 3,600 PSI.
32. 4" 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.
33. ATTACH ENGRAVED LABEL WITH PREMISE NUMBER, TO UNDERSIDE OF DOOR, NEAR THE LIFTING HANDLE



**TYPICAL PLAN**



**ELEVATION VIEW B-B**

**SECTION VIEW A-A**

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 = 9" ROMAC = 8"