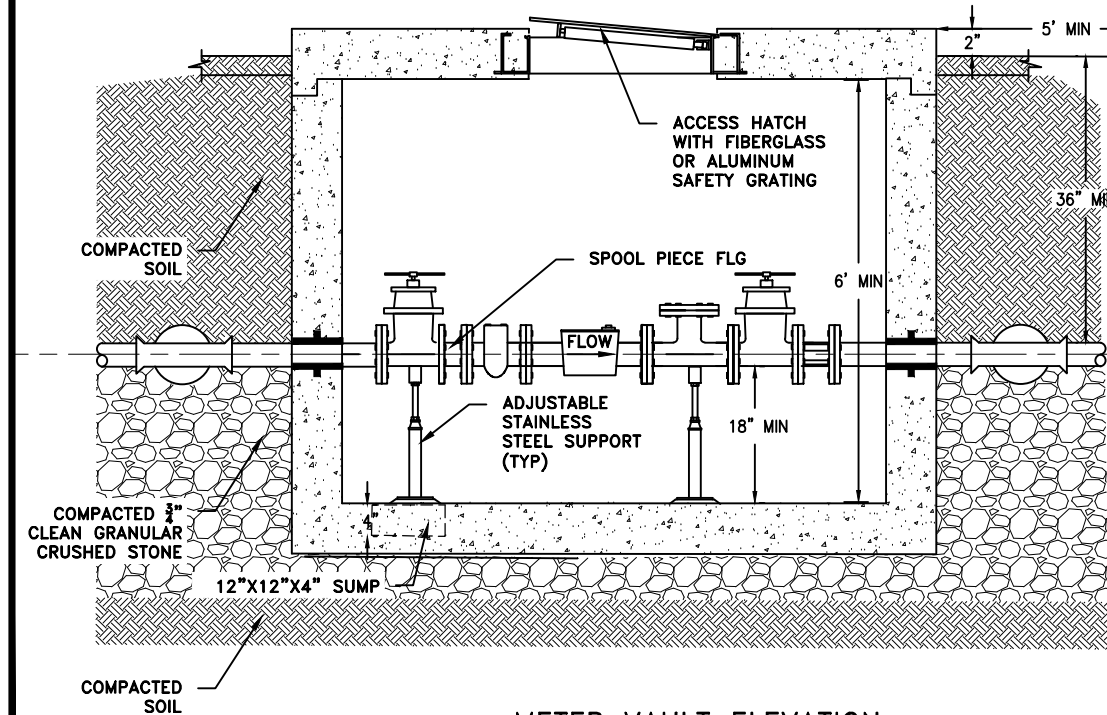


METER VAULT PLAN

METER SIZE	METER VAULT DIMENSIONS			
	A	B	C	D
3"	10'-6"	6'-0"	4'-0"	8"
4"	12'-0"	6'-6"	4'-0"	8"
6"	14'-0"	8'-0"	4'-0"	8"
8"	14'-6"	8'-6"	4'-0"	8"
10"	17'-0"	10'-6"	4'-0"	8"
>10"	CONTACT AMERICAN WATER			

STRUCTURE

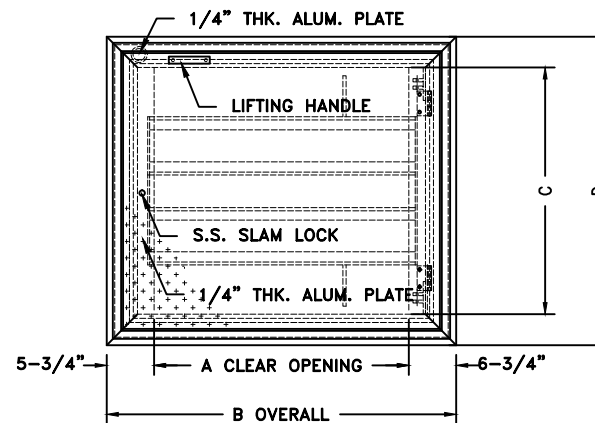


METER VAULT ELEVATION

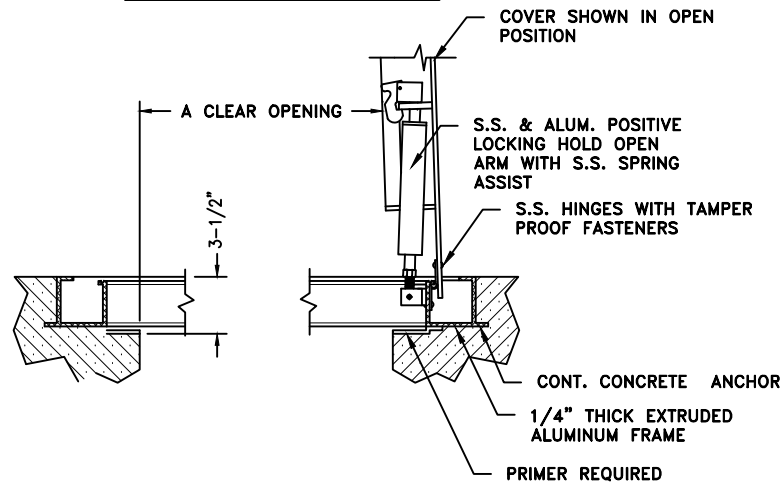
ACCESS HATCH NOTES:

1. PROVIDE AN H1W SERIES (SINGLE LEAF) ACCESS FRAME AND COVER, AS MANUFACTURED BY HALLIDAY PRODUCTS, OR APPROVED EQUAL.
2. FRAME AND COVER SHALL HAVE A 1/4" THICK, ONE-PIECE, MILL FINISH, EXTRUDED ALUMINUM CHANNEL FRAME, INCORPORATING A CONTINUOUS CONCRETE ANCHOR. A 1-1/2" DRAINAGE COUPLING SHALL BE LOCATED IN THE FRONT LEFT CORNER OF THE CHANNEL FRAME. THE INSIDE OF THE FRAME SHALL HAVE A DOOR-SUPPORT LEDGE ON TWO (2) SIDES.
3. FRAME, SUPPORT ANGLES AND LEDGE SHALL BE SUPPORTED BY A FULL BED OF 4000 PSI CONCRETE.
4. THE DOOR PANEL SHALL BE 1/4" ALUMINUM DIAMOND PLATE, REINFORCED TO WITHSTAND A LIVE LOAD OF 300 LBS/FT<sup>2</sup>.
5. DOOR SHALL OPEN TO 90-DEGREES AND AUTOMATICALLY LOCK WITH A STAINLESS STEEL HOLD OPEN ARM WITH ALUMINUM RELEASE HANDLE.
6. FOR EASE OF OPERATION, DOOR SHALL INCORPORATE ENCLOSED STAINLESS STEEL COMPRESSION SPRING ASSISTS. DOOR SHALL CLOSE FLUSH WITH THE FRAME.
7. HINGES AND ALL FASTENING HARDWARE SHALL BE STAINLESS STEEL.
8. UNIT SHALL LOCK WITH STAINLESS STEEL SLAM LOCK WITH REMOVABLE KEY AND HAVE A NON-CORROSIVE HANDLE.
9. UNIT SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIAL AND/OR WORKMANSHIP FOR A PERIOD OF 10 YEARS.

MODEL NO.	ACCESS HATCH DIMENSIONS				UNIT WT.
	A	B	C	D	
H1W3030	30"	42-1/2"	30"	37-1/2"	104 LBS



ACCESS HATCH PLAN



ACCESS HATCH PROFILE

CONCRETE STRUCTURE NOTES:

1. PRECAST CONCRETE METER VAULT SHALL BE DESIGNED FOR THE FOLLOWING CONDITIONS STATED BELOW (1.1 THROUGH 1.5). SUBMIT CALCULATIONS TO AMERICAN WATER FOR REVIEW. ALL CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE CONSTRUCTION IS TO TAKE PLACE.
  - 1.1. STRUCTURE FILLED TO TOP WITH NO EXTERNAL SOIL PRESSURE.
  - 1.2. STRUCTURE EMPTY WITH SOIL BACKFILL TO FINISHED GRADE. ASSUME SOIL DRY DENSITY AT 95 LBS/C.F. ASSUME SOIL SATURATED TO FINISHED GRADE.
  - 1.3. STRUCTURE SHALL NOT FLOAT WITH SATURATED SOIL TO FINISHED GRADE. ASSUME SOIL LOAD ON CONCRETE LIP AT 32 LBS/C.F. A SAFETY FACTOR OF 1.5 SHALL BE PROVIDED IN THE FLOATATION CALCULATIONS.
  - 1.4. SOIL BEARING PRESSURE OF 2,500 PSF.
  - 1.5. EFFECTS OF ALL VERTICAL LOADS ANTICIPATED ON THE FINISHED STRUCTURE SHALL BE INCLUDED IN THE ANALYSIS AND DESIGN. LOADING FROM PIPING AND EQUIPMENT, HOIST, SUPERSTRUCTURES, SNOW, H-20 LIVE LOAD, AND ACTUAL DEPTH OF SOIL COVER SHALL BE INCLUDED.
2. ALL CONCRETE ANCHORS AND HARDWARE SHALL BE STAINLESS STEEL.
3. PROVIDE COMMON KEYED LOCKS FOR ALL HATCHES, PANELS, DOORS AND QUICK DISCONNECT CAPS ASSOCIATED WITH THIS PROJECT.
4. ALL STRUCTURES SHALL BE WATERTIGHT AND SHALL BE TESTED FOR WATER TIGHTNESS BY FILLING PRECAST STRUCTURE WITH WATER PRIOR TO BACK FILLING. AN ACCEPTABLE LEAKAGE IS DEFINED AS A LOSS OF LESS THAN 1/2" IN 24 HOURS AND NO VISIBLE LEAKS. REPAIR OF LEAKS IS REQUIRED USING METHODS APPROVED BY AMERICAN WATER.
5. DUAL SEAL II GASKETS DISTRIBUTED BY DUAL SEAL CORP., OR APPROVED EQUAL, SHALL MEET ASTM C923 REQUIREMENTS.
6. JOINTS IN STRUCTURE SHALL BE SEALED WITH BITUMEN CONSEAL CS-102-B JOINT SEALANT MATERIAL MANUFACTURED BY CONCRETE SEALANTS, INC AND MEET FEDERAL SPECIFICATION SS-S-00210 (210-A).
7. CONCRETE STRUCTURES SHALL MEET THE REQUIREMENTS OF ASTM C478. DESIGN SHALL FOLLOW ACI 318-95 USING LOAD FACTOR DESIGN.
8. CONCRETE: f<sub>c</sub> = 4,000 PSI AT 28 DAYS. TYPE III CEMENT. AIR ENTRAINMENT 7% ± 2%. ASTM C33 NO. 57 OR NO. 67 COARSE AGGREGATE.
9. REINFORCEMENT: WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. BAR REINFORCEMENT SHALL BE GRADE 60, CONFORMING TO ASTM A615.
10. VERTICAL BAR REINFORCEMENT REQUIRED BETWEEN BASE SLAB AND FIRST VERTICAL SECTION OF STRUCTURE.

WATER METER NOTES:

1. ALL PIPE AND FITTINGS TO BE THE SAME SIZE AS THE METER. REDUCERS ARE PERMITTED ONLY WITH PRIOR AUTHORIZATION FROM AMERICAN WATER.
2. ADJUST SPOOL PIECE TO PROVIDE MANUFACTURER RECOMMENDED STRAIGHT RUN OF PIPE UPSTREAM AND DOWNSTREAM OF THE METER, OR AS DIRECTED BY AW PROJECT MANAGER.
3. ALL PIPING BETWEEN THE TEES UPSTREAM AND DOWNSTREAM OF THE METER SHALL BE DUCTILE IRON PIPE.
4. NEWLY CONSTRUCTED WATER LINES SHALL BE DISINFECTED IN ACCORDANCE WITH AMERICAN WATER STANDARD SPECIFICATIONS.
5. TRACER WIRE REQUIRED FROM EXISTING WATER MAIN TO METER VAULT.
6. ROUND METER VAULTS MAY BE SUBSTITUTED AS AN ALTERNATE TO THE DEPICTED RECTANGULAR BOX. MINIMUM CLEARANCES SHALL STILL BE PROVIDED.
7. PROVIDE BYPASS LINE WHEN DIRECTED BY AW PROJECT MANAGER. THRUST BLOCKS REQUIRED ON ALL BYPASS LINE FITTINGS.
8. WATER METERS 3" AND GREATER SHALL BE NEPTUNE HP TURBINE METERS WITH NEPTUNE MODEL R9001 PIT STYLE MIU C/W 6-FEET OF ANTENNA WIRE AND TRICON "S" REGISTER. NO SUBSTITUTIONS WILL BE ACCEPTED.
9. FOR WATER METER APPLICATIONS LARGER THAN 10", DESIGN ENGINEER SHALL COORDINATE WITH AMERICAN WATER.
10. AWG#18 3-STRAND WIRE SHALL CONNECT TRICON "S" REGISTER TO BTR BOX LOCATED BY GOVERNMENT. CONDUIT SHALL BE WATERTIGHT 1" PVC UNDERGROUND AND RIGID ABOVE GROUND.
11. PROVIDE ADDITIONAL PIPE SUPPORTS AS REQUIRED.
12. INSTALL A FLANGED COUPLING ADAPTER IN THE VAULT.

REVISIONS		AMERICAN WATER MILITARY SERVICES GROUP CIVIL 3" AND LARGER METER VAULT DETAIL - FORT HOOD
REVISED	4/25/2011	
REVISED	7/23/2012	
6/13	- MSG EDITS	
7/14	- MSG EDITS	
1/16	- MSG EDITS	
DRAWN BY J. HIGGINS PROJECT ENGR PDK APPROVED		AMERICAN WATER M.S.G. 1 WATER STREET CAMDEN, NJ 08102
DATE 05-03-2010 PROJECT N/A		★ AMERICAN WATER.
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES		USE DIMENSIONS ONLY SCALE N.T.S.
FINAL		MSG-W-09-FH