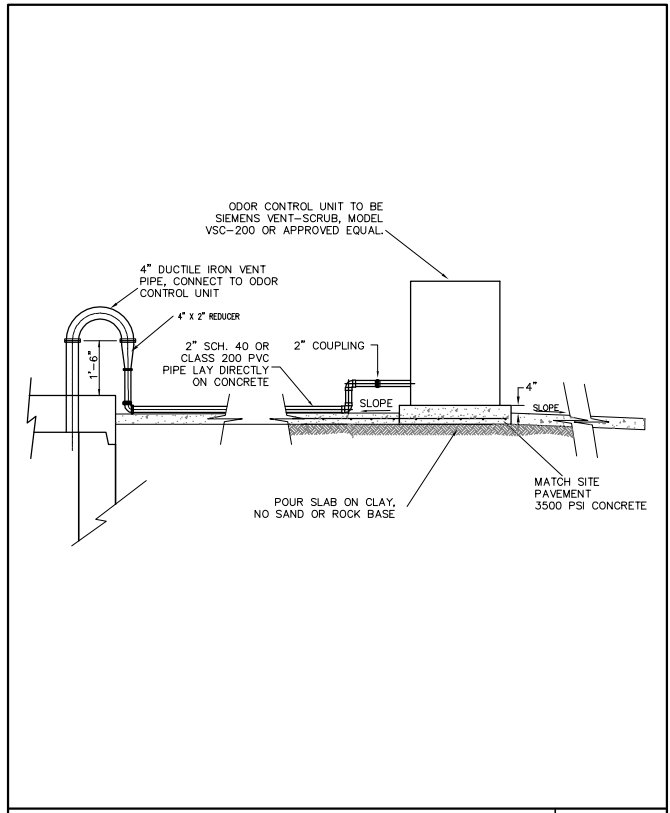


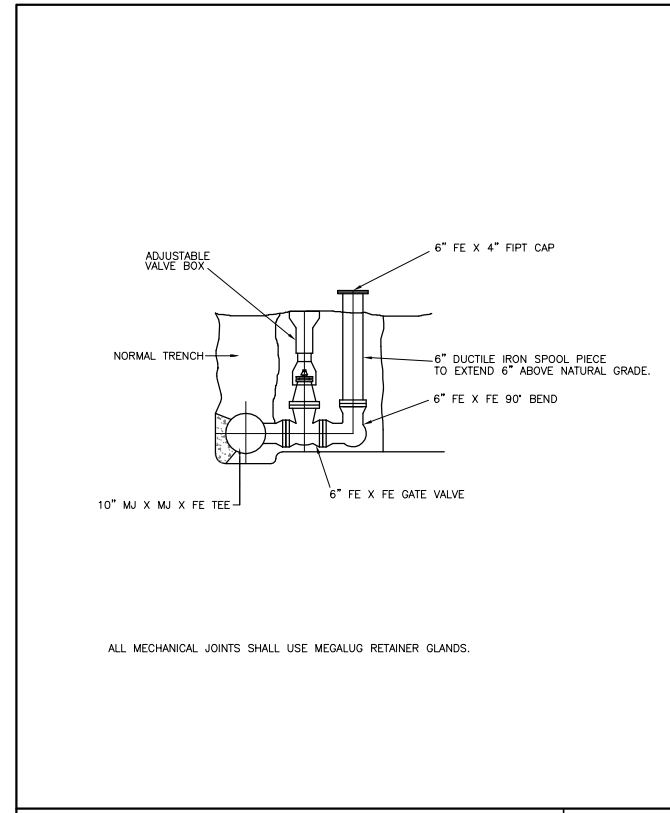
LIFT STATION WET WELL GROUTING

06 Feb 2018
FIG. S10



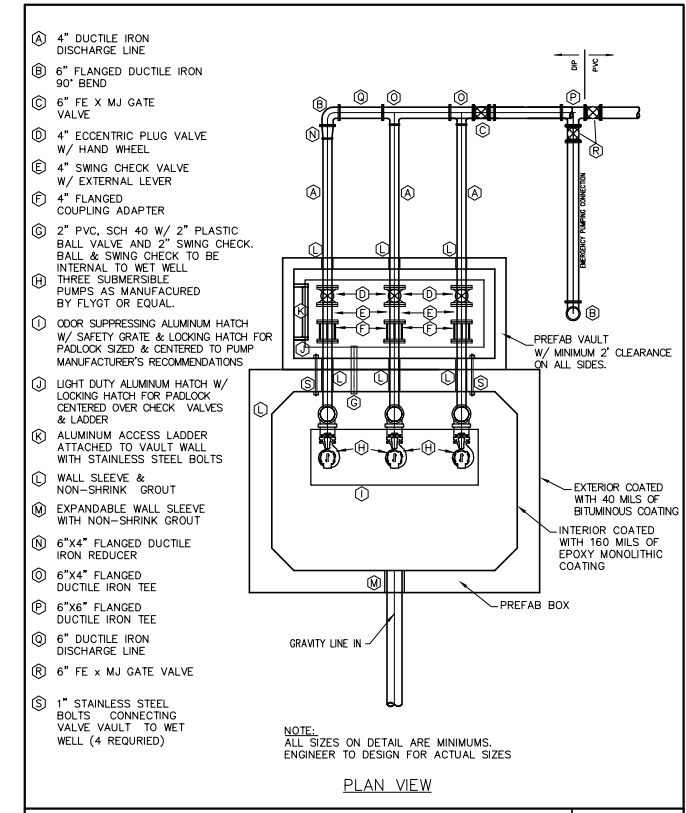
LIFT STATION ODOR CONTROL SYSTEM

06 Feb 2018
FIG. S11



EMERGENCY PUMPING CONNECTION

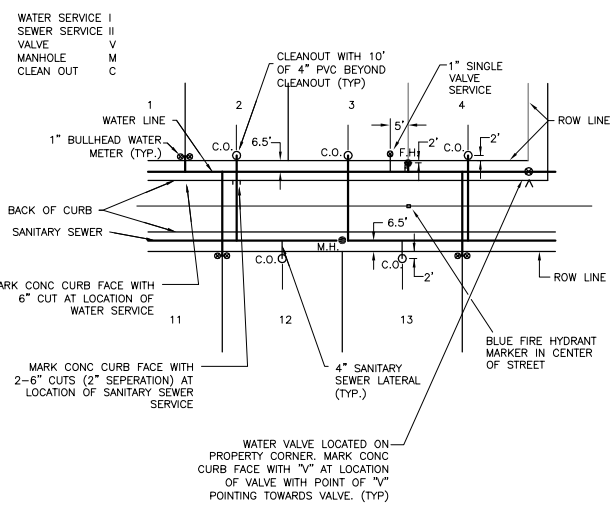
06 Feb 2018
FIG. S12



TYPICAL LIFT STATION CONFIGURATION

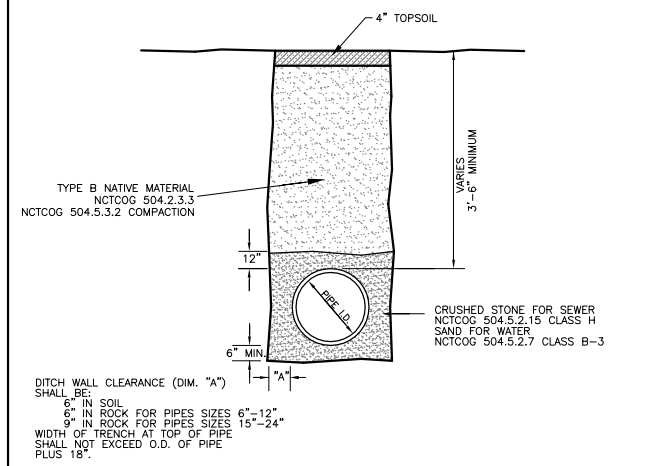
06 Feb 2018
FIG. S13

- NOTE:
- 4" PVC SANITARY SEWER SERVICE TO BE LOCATED AT CENTER OF LOT & 1" SINGLE WATER SERVICE TO BE LOCATED 5' FROM PROPERTY LINE WHERE BULLHEAD SERVICES ARE NOT APPLICABLE.
 - ALL WATER AND SEWER SERVICES WILL EXTEND TWO FEET (2') BEYOND PROPERTY LINE.
 - IN CURBED STREETS, THE LOCATION OF UTILITIES SHALL BE SHOWN BY NOTCHING THE CURB ADJACENT TO THE UTILITY AS FOLLOWS:
 - DEPENDING ON THE PROPOSED LOCATION OF WATER AND SEWER UTILITIES AND LOCATION/WIDTH OF SIDEWALKS, LCMUA MAY REQUIRE ALTERNATE LOCATIONS FOR WATER METERS.



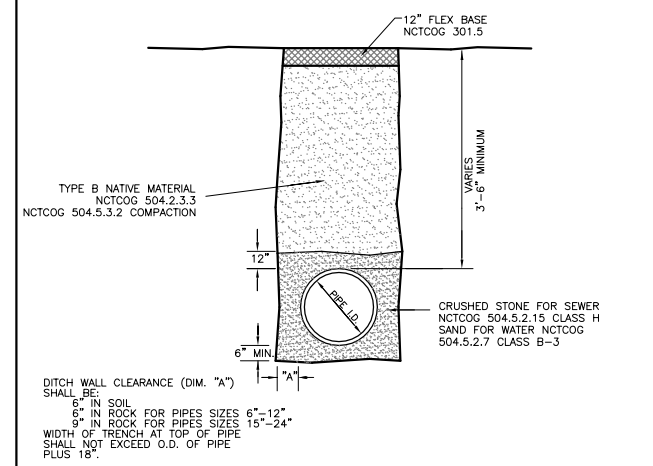
TYPICAL SERVICE LOCATION

17 Jan 2020
FIG. G1



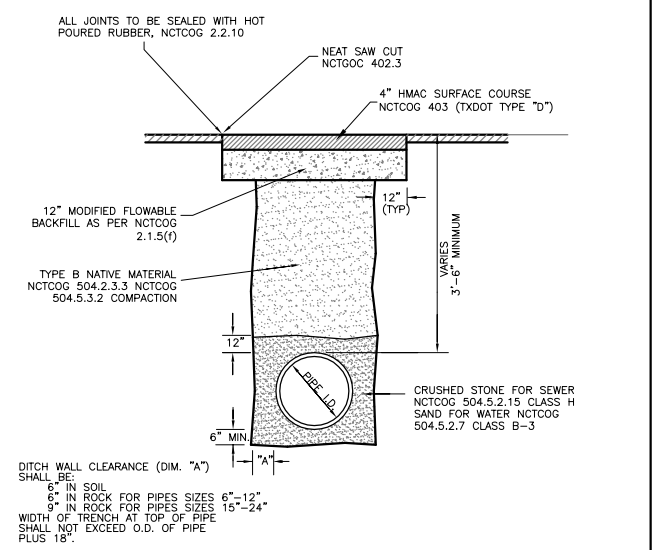
TRENCH IN UNPAVED AREAS

17 Jan 2020
FIG. G2



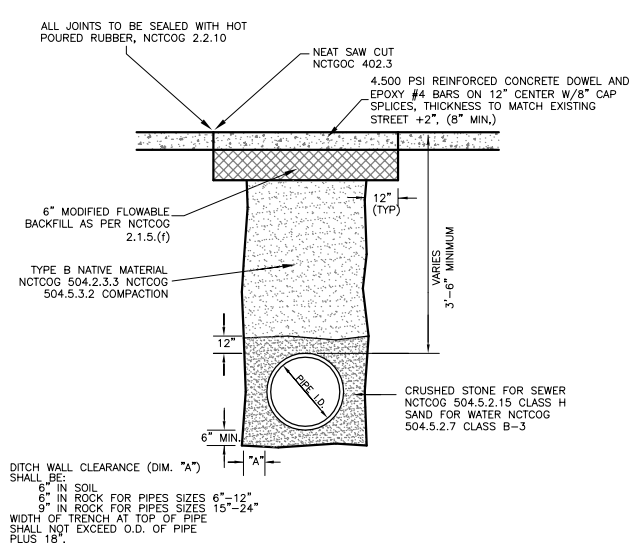
GRAVEL STREET REPAIR

25 Jan 2018
FIG. G3



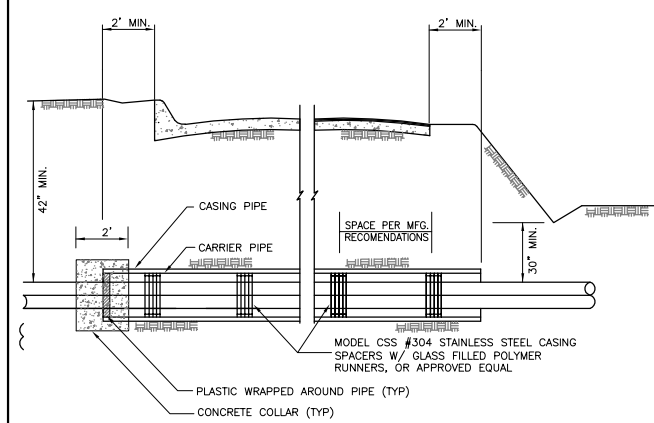
ASPHALT STREET REPAIR

17 Jan 2020
FIG. G4



CONCRETE PAVEMENT REPAIR

17 Jan 2020
FIG. G5



NOTES:

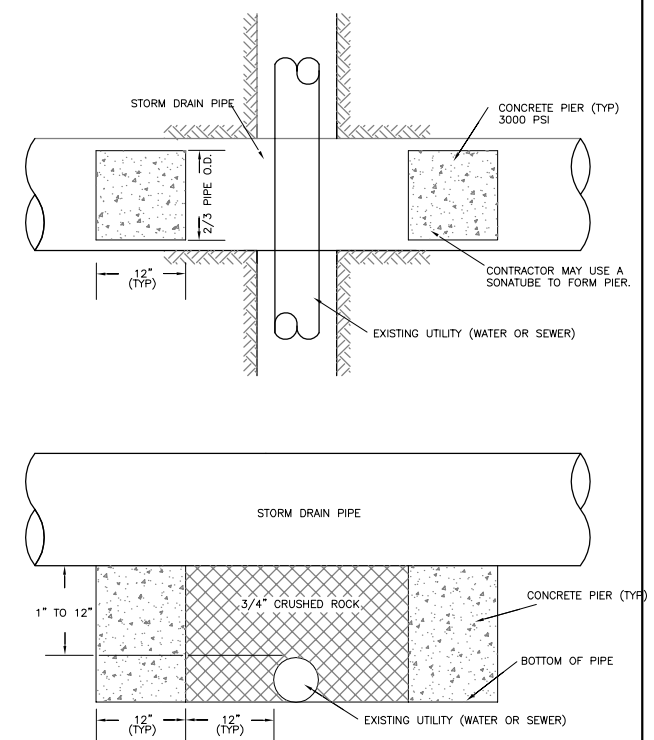
- CASING IN STATE RIGHT-OF-WAY SHALL BE AIR PRESSURE TESTED TO 5 PSIG FOR 10 MINUTES.
- BELL RESTRAINTS THROUGH CASING AND ±40 LF AT EACH END.
- ALL STREET CROSSINGS SHALL BE BY BORE OR IF WATERLINE IS CONSTRUCTED PRIOR TO STREET, OPEN CUT INSTALLATION PER THIS DETAIL SHALL BE REQUIRED.

CARRIER PIPE SIZE	STEEL CASING PIPE SIZE	CASING THICKNESS
4"	10"	1/4"
6"	12"	1/4"
8"	14"	1/4"
10"	16"	1/4"
12"	18"	1/4"
14"	20"	1/4"
16"	22"	5/16"

CARRIER PIPE IS AWWA C900 OR C905 PVC DR 18

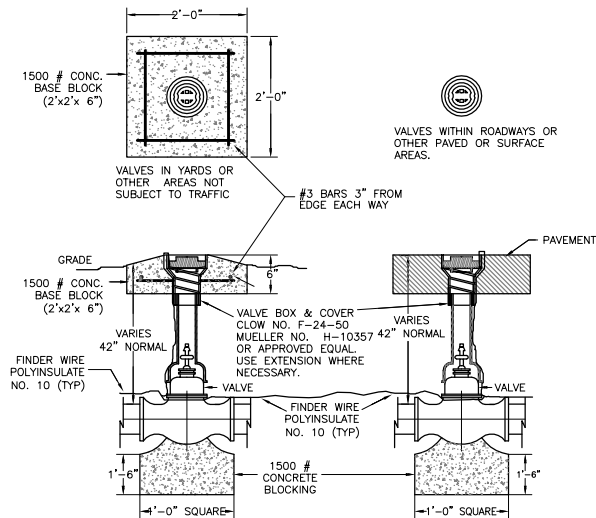
STREET BORE

17 Jan 2020
FIG. G6



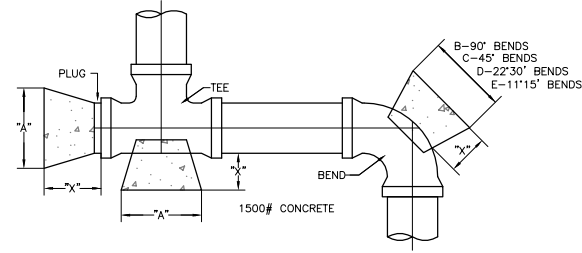
BRIDGING EXISTING UTILITIES

25 Jan 2018
FIG. G7



GATE VALVES & VALVE BOXES

17 Jan 2020
FIG. W1

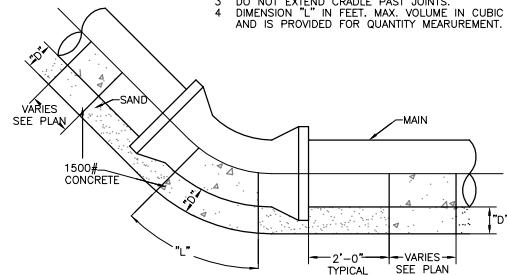


PIPE SIZE	"X" DIM.	PLUGS & TEES		90° BENDS		45° BENDS		22°/30° BENDS		11°/30° BENDS		
		"A" MIN. AREA VOL.	MAX. VOL.	"B" MIN. AREA VOL.	MAX. VOL.	"C" MIN. AREA VOL.	MAX. VOL.	"D" MIN. AREA VOL.	MAX. VOL.	"E" MIN. AREA VOL.	MAX. VOL.	
4"	1'-0"	.83	.05	1'-0"	.83	.05	1'-0"	.83	.05	1'-0"	.83	.05
6"	1'-0"	1.06	.06	1'-2"	1.50	.09	1'-0"	.83	.05	1'-0"	.83	.05
8"	1'-6"	1.89	.11	1'-6"	2.66	.15	1'-3"	1.44	.08	1'-0"	.83	.05
10"	1'-6"	2.95	.17	2'-0"	4.17	.24	1'-6"	2.26	.13	1'-3"	1.15	.07
12"	1'-6"	4.25	.24	2'-3"	6.00	.34	1'-9"	3.25	.18	1'-3"	1.65	.10
16"	2'-0"	7.34	.56	3'-0"	10.65	.79	2'-3"	5.76	.43	1'-8"	2.94	.22
18"	2'-0"	7.70	.57	3'-5"	10.89	.82	2'-6"	5.89	.44	1'-10"	3.01	.22
20"	2'-0"	7.86	.59	3'-9"	11.12	.84	2'-9"	6.01	.45	2'-0"	3.07	.23
24"	2'-0"	11.33	.84	4'-3"	16.00	1.20	3'-2"	8.65	.65	2'-6"	4.42	.23

THRUST BLOCKING

06 Feb 2018
FIG. W2

- NOTES: 1. CRADLE TO EXTEND FULL WIDTH OF TRENCH. SEE STANDARD CRADLE DETAIL.
2. THIS DETAIL APPLIES TO VERTICAL BEND WITH DOWNWARD THRUST REACTION. SEE ANCHOR BLOCK DETAILS FOR UPWARD THRUSTS.
3. DO NOT EXTEND CRADLE PAST JOINTS.
4. DIMENSION "L" IN FEET. MAX. VOLUME IN CUBIC YARDS AND IS PROVIDED FOR QUANTITY MEASUREMENT.

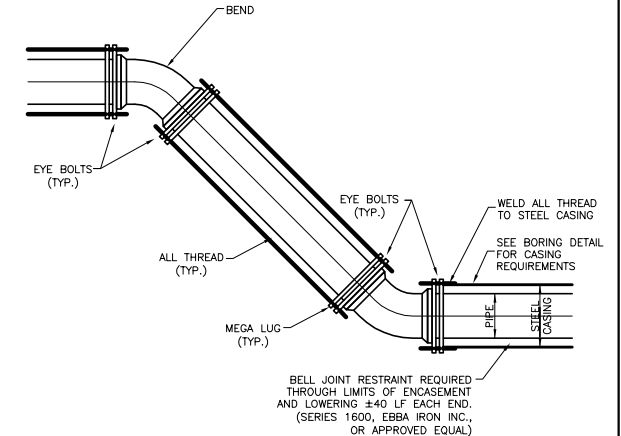


"D" IS 6" IN UNDISTURBED SOIL.

PIPE SIZE	11°-15°		22°-30°		45°		90°	
	L	MAX. VOL.	L	MAX. VOL.	L	MAX. VOL.	L	MAX. VOL.
6"	.42	.02	.45	0.02	.50	.02	1.00	.04
8"	.42	.02	.45	.02	.80	.04	1.40	.06
10"	.42	.03	.58	.03	1.15	.06	2.03	.11
12"	.42	.04	.73	.05	1.43	.09	2.53	.17
16"	.42	.08	.74	.14	1.48	.27	2.61	.48
18"	.66	.14	1.30	.28				
20"	.77	.18	1.53	.36				
18"	.88	.18	1.74	.37				
20"	1.03	.24	2.04	.48				
18"	1.05	.22	2.03	.43				
20"	1.20	.28	2.36	.56				

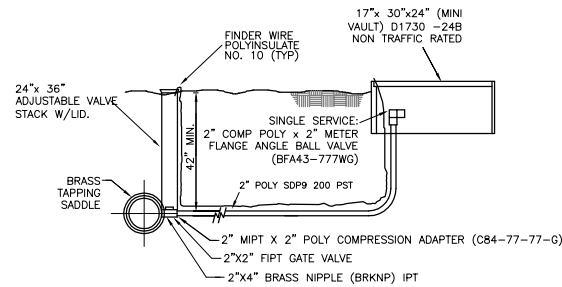
CONCRETE CRADLE AT VERTICAL BENDS

06 Feb 2018
FIG. W3



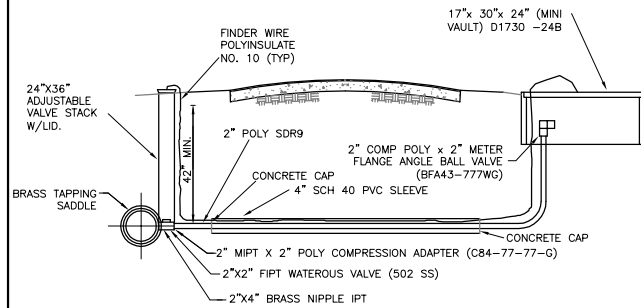
WATERLINE LOWERING JOINT RESTRAINT

17 Jan 2020
FIG. W4



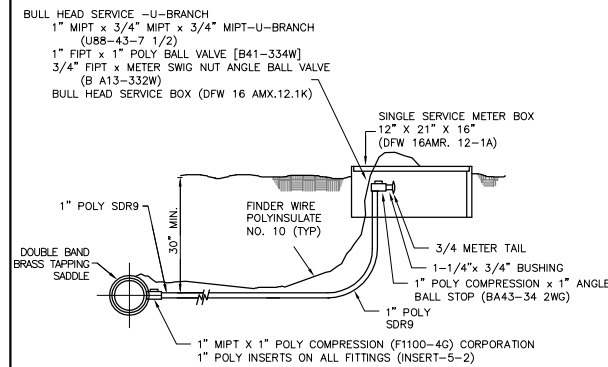
2" WATER SERVICE CONNECTION

30 Jan 2018
FIG. W5



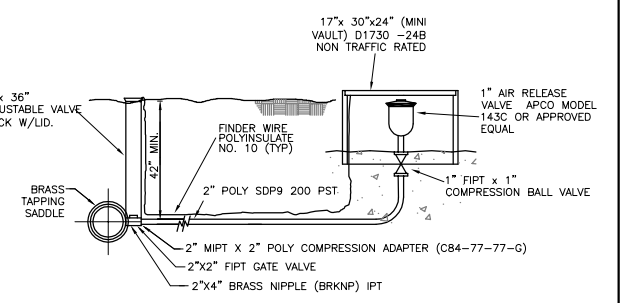
2" LONG WATER SERVICE/BLOWOFF

25 Jan 2018
FIG. W6



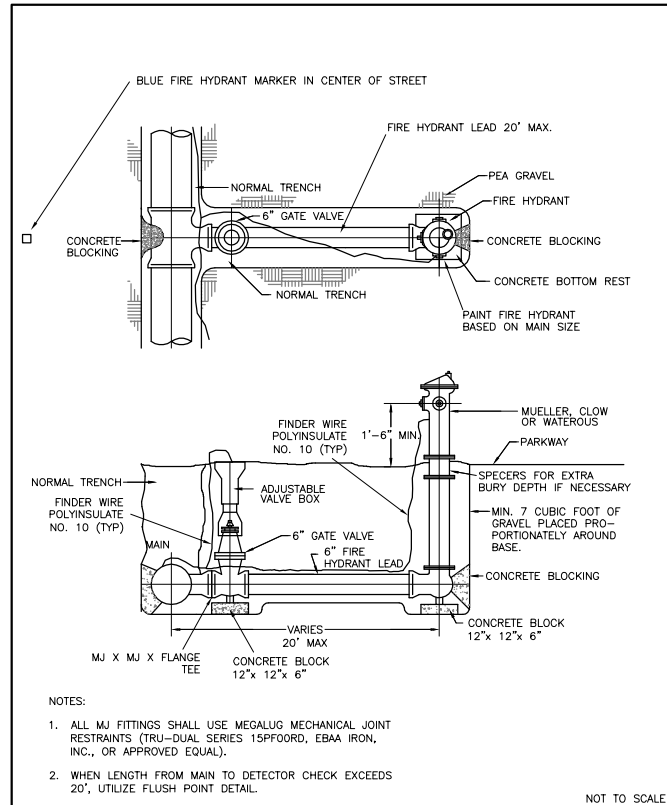
WATER METER SINGLE & BULL HEAD SERVICE CONNECTIONS

25 Jan 2018
FIG. W7

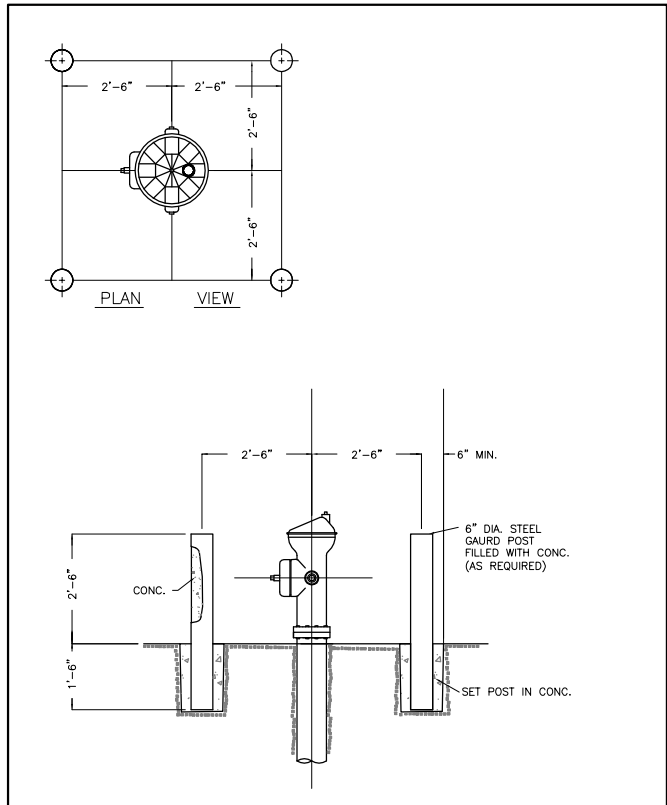


AIR RELEASE VALVE DETAIL

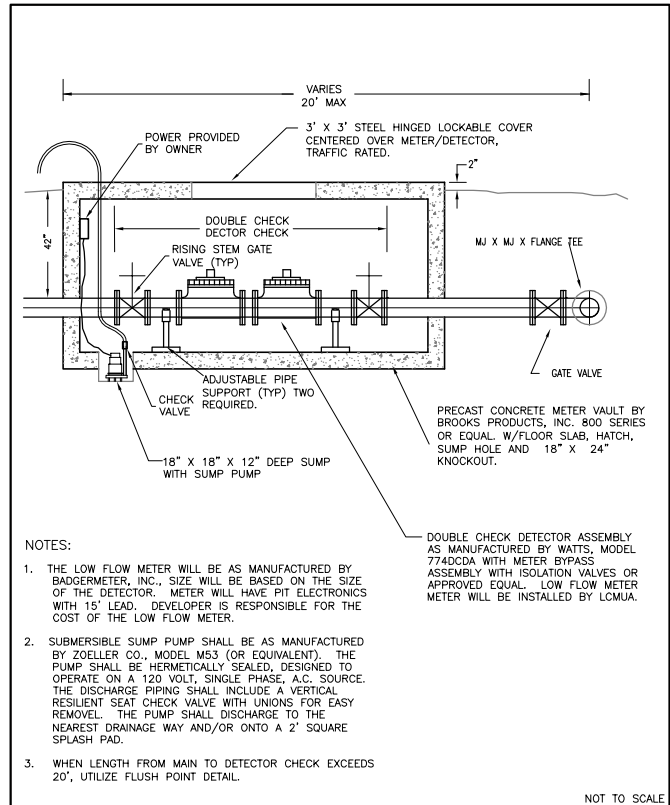
30 Jan 2018
FIG. W8



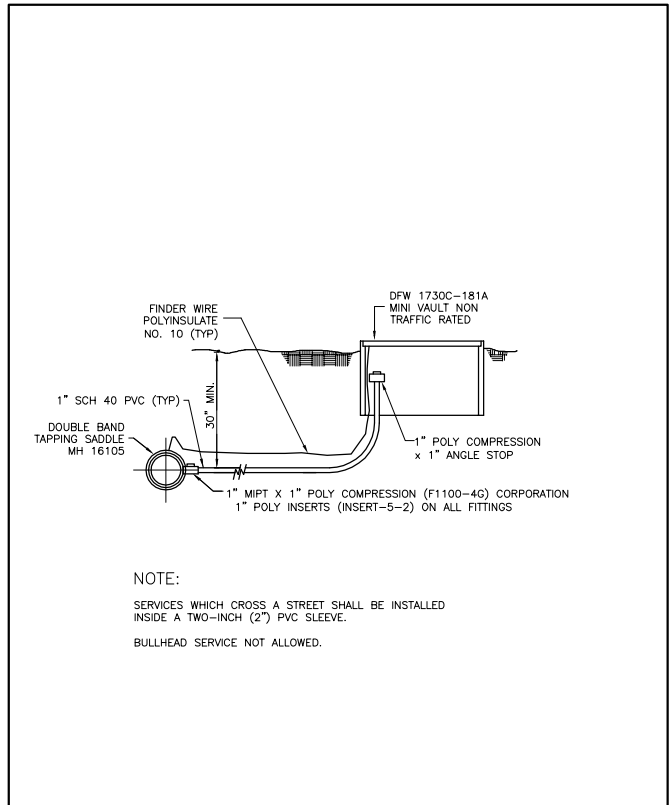
FIRE HYDRANT 17 Jan 2020
FIG. W9



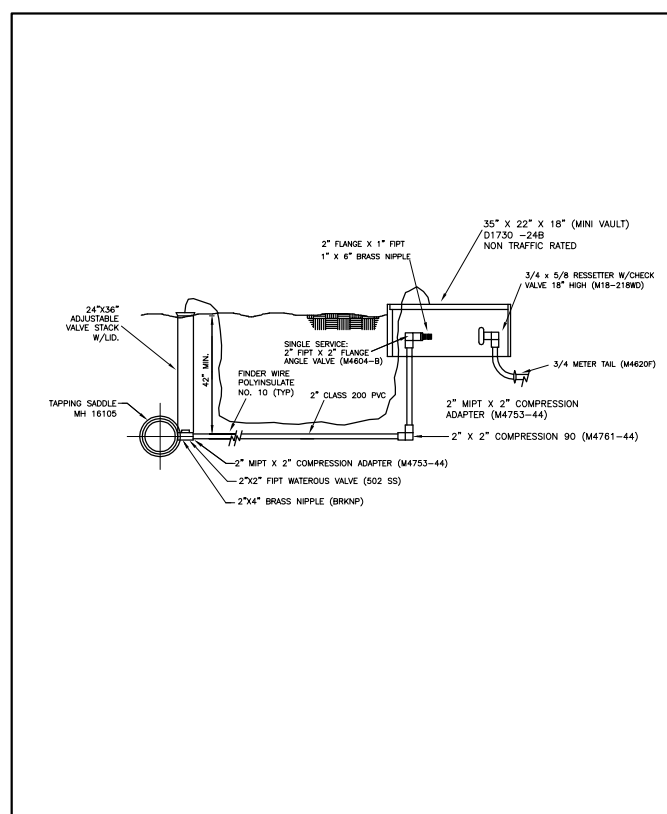
FIRE HYDRANT BARRICADE DETAIL 06 Feb 2018
FIG. W10



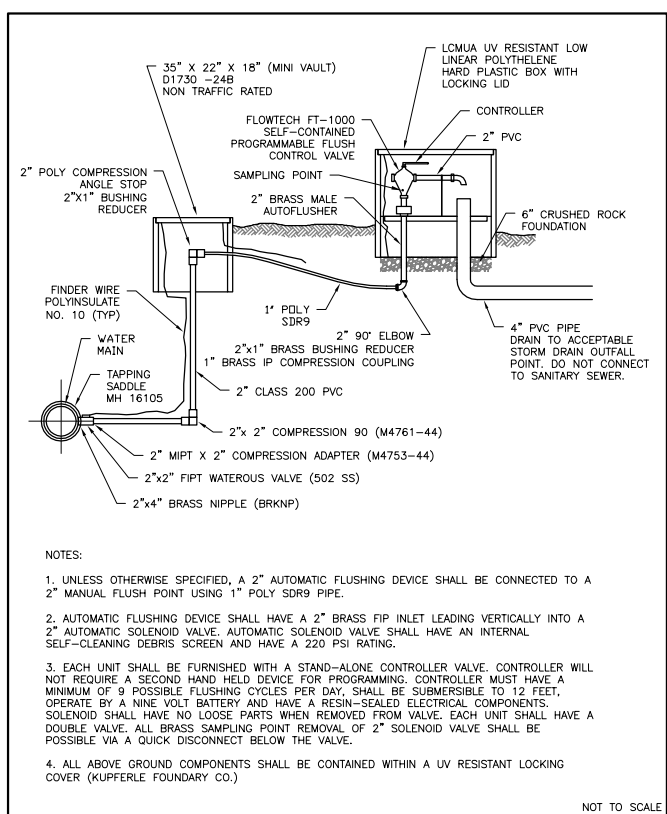
FIRE MAIN DOUBLE CHECK DETECTOR CHECK 28 AUG 2018
FIG. W11



1\"/>



2\"/>



AUTOMATIC FLUSH POINT 28 Aug 2018
FIG. W14