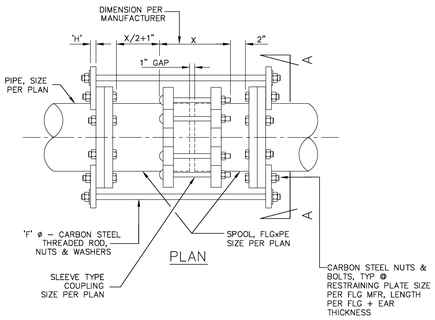
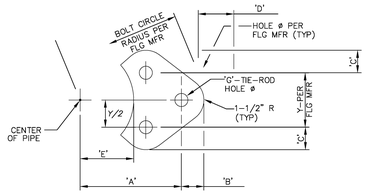
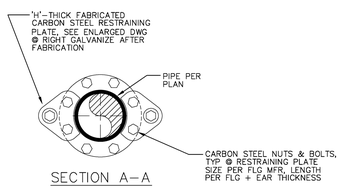


PLAN



ENLARGED RESTRAINING PLATE

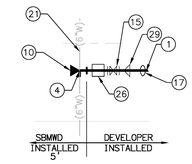


SECTION A–A

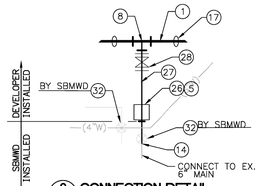
RESTRAINING PLATE DIMENSIONS									
PIPE SIZE	NO. RODS	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'
3"	2	5-1/8"	1-3/8"	1-3/8"	2-1/8"	2-1/4"	3/4"ø	3/4"ø	5/8"ø
4"	2	5-7/8"	1-3/8"	1-3/8"	2-7/16"	2-5/8"	3/4"ø	3/4"ø	5/8"ø
6"	2	6-3/4"	1-1/2"	1-1/2"	2-3/8"	3-5/8"	3/4"ø	7/8"ø	3/4"ø
8"	2	8"	1-1/2"	1-1/2"	2-1/2"	4-5/8"	3/4"ø	7/8"ø	3/4"ø
10"	2	9-3/8"	1-1/2"	1-1/2"	2-1/2"	5-7/8"	3/4"ø	7/8"ø	3/4"ø
12"	2	11"	1-1/2"	1-1/2"	2 13/16"	6-7/8"	7/8"ø	1"ø	7/8"ø

RESTRAINED FLEXIBLE COUPLING RESTRAINT

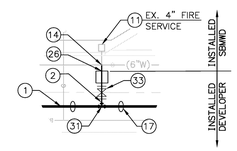
SCALE: N.T.S. STD DETAIL (W6.27) 17 CD3 C1



1 CONNECTION DETAIL
NOT TO SCALE



2 CONNECTION DETAIL
NOT TO SCALE



3 CONNECTION DETAIL
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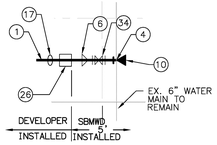
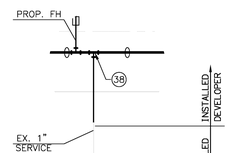


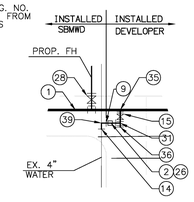
4 CONNECTION DETAIL
NOT TO SCALE

CONSTRUCTION NOTES:

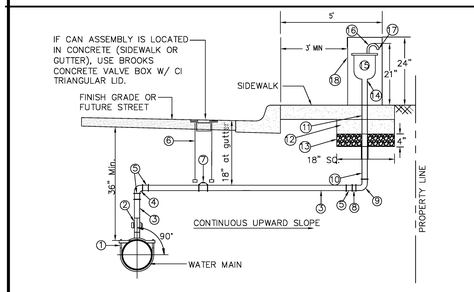
1. INSTALL 8" PRESSURE CLASS 350 C.M.L. POLYETHYLENE ENCASED D.I. PIPE PER SBMWD STANDARD SPECIFICATIONS
2. INSTALL 4" PRESSURE CLASS 350 C.M.L. POLYETHYLENE ENCASED D.I. PIPE FIRE SERVICE AND CONNECT TO EXIST. 4" FIRE SERVICE AFTER PROPOSED LINE IS IN SERVICE PER SBMWD STD DWG. NO. W1.14
4. HOT TAP BY SBMWD FORCES
5. INSTALL 6" MJ CAP
6. 8"MJ X 6"FL DI REDUCER
8. INSTALL 8"MJ X 8"MJ X 6"FL DI TEE
9. INSTALL 4" FL CAP
10. CONSTRUCT THRUST BLOCK PER SBMWD STD DWG. NO. W6.4A
11. PROTECT IN PLACE AS NOTED
14. INSTALL RESTRAINED FLEXIBLE COUPLING RESTRAINT PER SBMWD STD. DWG. NO. W6.27
15. INSTALL 8" FL X FL GATE VALVE PER SBMWD STD DWG. NOS. W3.1 & W3.3
17. INSTALL LINEAR JOINT RESTRAINT PER MANUFACTURERS SPECIFICATIONS AND SBMWD STD. DWG. 6.4 ON ALL JOINTS WITHIN MIN LENGTH SPECIFIED ON PLANS
21. EX. WATER MAIN TO BE REMOVED OR ABANDONED. IF ABANDONED SLURRY FILL AND CAP PER CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT STANDARDS AND SPECIFICATIONS
26. INSTALL 2" TEMPORARY CHLORINATION AND FLUSHING PORT PER SBMWD STD DWG. NO. W6.7. CHLORINATION AND FLUSHING PORT MAY NOT BE LOCATED MORE THAN 10' FROM THE EXISTING SYSTEM TAP LOCATION. REMOVE PLATES AND INSTALL BRASS PLUGS AFTER PERMISSION IS GIVEN BY SBMWD
27. INSTALL 6" PRESSURE CLASS 350 C.M.L. POLYETHYLENE ENCASED D.I. PIPE PER SBMWD STANDARD SPECIFICATIONS
28. INSTALL 6" FL X MJ GATE VALVE PER SBMWD STD DWG. NOS. W3.1 & W3.3
29. INSTALL 8" FL X MJ ADAPTER
31. INSTALL 8"MJ X 8"MJ X 4"FL DI TEE
32. REMOVE EXISTING VALVE
33. INSTALL 4" FL X MJ GATE VALVE PER SBMWD STD DWG. NOS. W3.1 & W3.3
34. INSTALL 6" FL X FL GATE VALVE PER SBMWD STD DWG. NOS. W3.1 & W3.3
35. INSTALL 8"FL X 8"FL X 8"FL DUCTILE IRON TEE
36. INSTALL 8" BLIND FLANGE
38. INSTALL 1" WATER SERVICE PER SBMWD STD DWG. NO. W1.1
39. INSTALL 4" MJ X MJ 90° DUCTILE IRON BEND



5 CONNECTION DETAIL
NOT TO SCALE



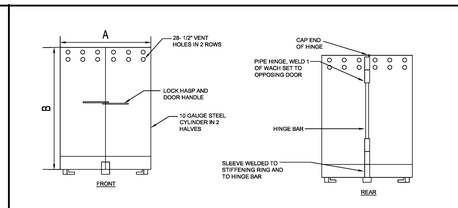
6 CONNECTION DETAIL
NOT TO SCALE



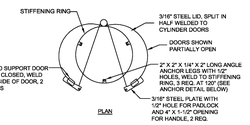
ITEM	QTY	DESCRIPTION
1	1 EA.	" X 2" DOUBLE STRAP SERVICE SADDLE OR 2" WELD-ON THREAD-O-LET.
2	1 EA.	2" BRONZE CORPORATION STOP (MU. H15023 OAE.).
3	__ L.F.	2" TYPE L HARD COPPER TUBING (SBMWD APPROVED U.S. MANUFACTURE)
4	1 EA.	2" BRASS COMPRESSION QUARTER BEND (OR BRASS THREADED BEND W/ C TO I ADAPTERS).
5	1 EA.	2" COPPER TO IRON ADAPTER. (COMPRESSION X MALE PIPE THREAD)
6	1 EA.	8" DIA. GATE CAN ASSEMBLY PER SBMWD STD. DWG. W3.3.
7	1 EA.	2" BALL CURB VALVE (MUELLER B-25209-3 OR FORD B44-777 OR JONES J-1949 (COMPRESSION X COMPRESSION)
8	1 EA.	INSULATOR COUPLING (FEMALE PIPE THREAD).
9	1 EA.	2" GALVANIZED QUARTER BEND-STREET (FEMALE PIPE THREAD X MALE PIPE THREAD).
10	__ L.F.	2" THREADED GALV. IRON PIPE.
11	10 IN.	TIGHT FITTING 3" FLEXIBLE VINYL SLEEVE OR WRAP W/ PIPE TAPE.
12		2,000 PSI CONCRETE: 2'-6" SQ. X 10" DEEP CONC. PAD (FORMED)
13		3/4" POORLY GRADED GRAVEL.
14	1 EA.	2" TO 1" GALV. REDUCER & 1" GALV. CLOSE NIPPLE (BOTH MAY BE OPTIONAL).
15	1 EA.	VALVE PER SPECIFICATION SECTION 2-06.
16	2 EA.	GALV. STRAIGHT ELBOW
17	1 EA.	SCREEN WITHIN ELBOW.
18	1 EA.	VALVE ASSEMBLY COVER PER STD. DWG. W7.6

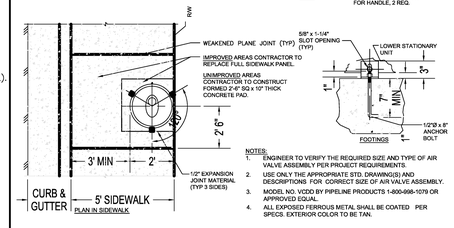
1" AND 2" AIR RELEASE VALVES, 2" VACUM VALVE, AND 2" COMBINATION VALVE

SCALE: N.T.S. STD DETAIL (W7.1) 18 CD3 C1



SIZING FOR AIR VALVE ASSEMBLY COVER		
VAVLE SIZE	A (DIAMETER)	B (HEIGHT)
1" & 2"	16"	24"
3", 4" & 6"	24"	36"
8"	30"	42"





NOTES:
1. ENGINEER TO VERIFY THE REQUIRED SIZE AND TYPE OF AIR VALVE ASSEMBLY PER PROJECT REQUIREMENTS.
2. USE ONLY THE APPROPRIATE STD. DRAWING(S) AND DESCRIPTIONS FOR CORRECT SIZE OF AIR VALVE ASSEMBLY.
3. MODEL NO. VCDD BY PIPELINE PRODUCTS 1-800-958-1079 OR APPROVED EQUAL.
4. ALL EXPOSED FERROUS METAL SHALL BE COATED PER SPECS. EXTERIOR COLOR TO BE TAN.

STEEL ENCLOSURE FOR AIR VALVE ASSEMBLY

SCALE: N.T.S. STD DETAIL (W7.6) 19 CD3 C1

GENERAL NOTES:

CURING COMPOUND SHALL BE SPRAYED UNIFORMLY ON ALL EXPOSED SURFACES PRIOR TO EVAPORATION OF SURFACE WATER.

EXPANSION JOINTS AT END OF RETURNS & STRUCTURES WEAKEND PLANE JOINTS EVERY 10 FT. OR AS INSTRUCTED.

NOTE
CONCRETE MUST BE AT LEAST 5.5 SACK MIX (520-C-2500) AND HOLD 2500 P.S.I. IN 28 DAYS.

TYPE "B" P.C.C. CURB & GUTTER

TYPE "C" P.C.C. CURB & GUTTER
(LOCAL STREETS WHEN APPROVED BY THE ENGINEER)

TYPICAL SECTION
ROLLED CURB
(ONLY FOR SPECIAL APPLICATIONS AS APPROVED BY THE CITY ENGINEER)

TYPE "A"
P.C.C. CURB

CITY OF SAN BERARDINO-PUBLIC WORKS DEPT.	APPROVED May 27 1982	STANDARD PLAN
TYPICAL SECTION- P.C.C. CURB & GUTTER	CITY ENGINEER	200

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UNDERGROUND SERVICE ALERT
CALL: TOLL FREE
1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER MARIA L. FRASER No. 56005 EXP. DATE 12/31/12 CIVIL STATE OF CALIFORNIA

Fraco Enterprises Inc
Engineering and Construction Services
12139 MOUNT VERNON AVE.
SUITE 210
GRAND TERRACE, CA 92313
PHONE: (909) 824-7230
FAX: (909) 824-7385

APPROVED BY: REGISTERED CIVIL ENGINEER No. 56005 DATE:

MARK	REVISIONS	APPROVED	DATE	APPROVED	DATE

DESIGNED BY: MIF DRAWN BY: JRN CHECKED BY: MIF DESIGN ENGINEER SBMWD ENGINEER

BENCHMARK:
CITY OF SAN BERNARDINO BM# G1-41, ELEVATION 1158.763 FT. BRASS DISK CSB G1-41, 41.25 FT. EAST & 30.0 FT SOUTH OF THE CENTERLINE P.I. OF MT. VERNON & 14TH ST. ; 9.75 FT. SOUTH OF THE SOUTH CURB LINE OF 14TH ST. ; 9.25 FT. EAST OF THE EAST CURB LINE OF MT. VERNON AVE. ; 2.0 FT EAST OF THE NORTH/SOUTH SIDEWALK ABOUT 0.2 FEET LOWER THEN THE PAVEMENT.
ELEVATION: 1158.763 FEET/ 353.1916 METERS

CITY OF SAN BERNARDINO
MUNICIPAL WATER DEPARTMENT
WATER IMPROVEMENT PLANS
DR. MILDRED D. HENRY ELEMENTARY SCHOOL
STANDARD AND CONSTRUCTION DETAILS

DRAWING SCALES: HORIZ: N/A VERT: N/A
C.O. NO.:
DWG CD3
SHEET 6 OF 6

C-DR. MILDRED HENRY D. ELEMENTARY SCHOOL-6-CD-CD3.DWG

100% SUBMITTAL

RE-BID #F09-02 ROOSEVELT II (HENRY) E.S. NEW CONSTRUCTION BID ISSUANCE SET 12/09/11