



**NOTES:**

1. SEE CITY STD. DWG. 419 FOR ADDITIONAL REQUIREMENTS WHEN CROSSING UNDER SEWER LINES.
2. CONNECT TO EXISTING WATERLINE WITH FLEX COUPLINGS OR FLANGES WITH SLIP-ON FLANGE WELDED TO EXISTING STEEL PIPE, IF REQUIRED.
3. NEW DUCTILE IRON WATERLINE SHALL BE RESTRAINED MECHANICAL JOINTS ("MEGA-LUG" TYPE OR EQUAL) WITH A DOUBLE WRAP 8-MIL PURPLE POLYETHYLENE WRAP.
4. NUTS, BOLTS, AND WASHERS SHALL BE TYPE 316SS.
5. IF EXISTING WATERLINE IS ASBESTOS CEMENT PIPE (ACP), BACKFILL TRENCH UNDER ACP WITH ONE-SACK SLURRY.
6. PROVIDE ANCHOR BLOCKS OR ADDITIONAL THRUST RESTRAINTS AS REQUIRED. SUBMIT ENGINEERING CALCULATIONS.
7. CONCRETE THRUST BLOCK NOT REQUIRED IF PIPE IS SUFFICIENTLY RESTRAINED OUTSIDE OF WATER LINE UNDERCROSSING. PROVIDE ENGINEERING CALCULATIONS TO DEMONSTRATE RESTRAINT PROVIDED BY RESTRAINED JOINT PIPE.
8. SUPPORT EXISTING UTILITY EXPOSED IN TRENCH AS NECESSARY TO PROTECT IN PLACE.
9. IF CROSSING UNDER GAS LINE WITH CATHODIC PROTECTION, BOND JOINTS AND CONSTRUCT CP TEST STATION AS DIRECTED BY DWP GENERAL MANAGER OR DESIGNEE.
10. 11¼ AND 22½ DEGREE BENDS MAY BE USED WHERE FIELD CONDITIONS WARRANT THEIR USE PENDING APPROVAL BY DWP GENERAL MANAGER OR DESIGNEE.
11. AIR/VAC VALVE REQUIRED AT HIGH POINTS IN THE WATER SYSTEM.
12. ALL FITTINGS, PIPES, VALVES AND FIXTURES SHALL BE LEAD FREE IN COMPLIANCE WITH FEDERAL AND STATE LAWS.

**ITEM MATERIALS**

- |   |   |
|---|---|
| ① | AIR/VAC VALVE PER CITY STD. DWG. 413R. SEE NOTE 11.   |
| ② | DIP MJ 45-DEGREE BEND. SEE NOTE 10.   |
| ③ | DIP SPOOL.  |
| ④ | BLOWOFF HYDRANT AT LOW POINT PER CITY STD. DWG. 416R.   |
| ⑤ | CONCRETE THRUST BLOCK PER CITY STD. DWG. 401. SEE NOTE 7.   |
| ⑥ | FLEXIBLE PIPE TRANSITION COUPLING, REQUIRED BETWEEN DISSIMILAR PIPE MATERIALS. FUSION BONDED EPOXY COATING WITH STAINLESS STEEL HARDWARE. |
| ⑦ | MECHANICAL JOINT RETAINER GLAND, EBAA IRON MEGALUG SERIES 1100.   |
| ⑧ | CUT EXISTING CML&C STEEL PIPE AND WELD ON FLANGE.   |
| ⑨ | FLANGE INSULATING KIT PER CITY STD, DWG. 458.   |
| ⑩ | DI MJ x FLG ADAPTER.  |

NOT TO SCALE

**RECLAIMED WATER LINE CROSSING UNDER EXISTING UTILITY**

REVISION		
NO.	APPROVED	DATE
1	VRW	05/30/18

APPROVED:	5/31/2018
<i>Nelson D. Nelson</i>	DATE
NELSON D. NELSON, PE, PUBLIC WORKS DIRECTOR	5/31/2018
<i>Vernon R. Weisman</i>	DATE
VERNON R. WEISMAN, PE, DISTRICT ENGINEER	



CITY OF CORONA
STD 407R
SHEET 1 OF 1