

## **9. Construction Activities**

**DIABLO WATER DISTRICT  
STANDARD SPECIFICATIONS AND DRAWINGS**

**CONSTRUCTION ACTIVITIES**

- I. Construction Sequence and Requirements
- II. Construction Submittal Checklist



## DIABLO WATER DISTRICT

### Sequence and Specifications to Work on DWD Facilities Including but Not Limited to the Following:

1. Before the start of a Job or Subdivision:
  - a) Agreement in place.
  - b) Insurance in place.
  - c) Contractor to be approved by DWD.
  - d) 4 sets fully signed plans and PDF copy.
  - e) Phone Numbers – day time & emergency (after hours):
    - 1) Foreman and/or Superintendent
    - 2) Safety Officer
    - 3) Any other needed to complete job.
  - f) Safety officer is on location at all times.
  - g) Cathodic soils test results.
  - h) Cathodic plans and design – if needed.
  - i) All submittals complete and approved
  - j) All materials checked on location by the contractor.
    - 1) After materials have been received and checked by the contractor, the contractor shall notify DWD representative that the proper materials have been delivered. DWD representative will inspect the same at earliest convenience.
  - k) Specification book, plans, and approved submittals shall be on location at all times.
  - l) Potholing completed in full
  - m) All services hand tapped (no power drills).
  - n) Joint Trench under or re-routed around water utilities, inform Inspector of any problems.

- o) Diablo Water District must receive a written request to work outside of Diablo Water District's regular work hours Monday through Thursday 7:00 a.m. to 4:30 p.m., and Friday 7:00 a.m. to 3:00 p.m., except for District observed holidays. Requests will be received no later than Wednesday @ 4:30 p.m. for work on Saturday – no holiday work or 3 day weekend work is allowed. Please e-mail your request to Wayne Weaver ([wweaver@diablowater.org](mailto:wweaver@diablowater.org)) and [developer@diablowater.org](mailto:developer@diablowater.org)). Tie-ins cannot occur at night without proper notification. District may choose to make tie-ins after hours so it does not interfere with businesses, etc.
2. Testing sequence after jumper is installed and tested.
    - a) 1<sup>st</sup> pressure test – before rock and after sufficient backfill (as determined by DWD employee).
    - b) 2<sup>nd</sup> pressure test – after rock (100%), curb & gutter & sidewalks poured, services cut down, boxes installed (on 2 x 4 rough redwood).
    - c) Final lift of paving shall occur after 2<sup>nd</sup> pressure test.
    - d) Bacteria testing (no coliforms and < 50 background). See Section 02675 of DWD Standard Specifications.
      - 1) Cl2 (50 ppm) in system min. of 24 hours – (best 48+ hours).
      - 2) Flush – (min. 24 hours set time after flush).
      - 3) Bacteria samples taken (approx. 24 hours before results are available).
      - 4) Bacteria sample testing shall include, but not limited to, total coliform, non-sheen bacteria, and heterotrophic plate count.
      - 5) Re-chlorinate and retest as needed till testing passes.
  3. After bacteria test passes:
    - a) Install meter(s) before any tie-ins are made or be in the process of installation.
    - b) Jumper and/or plates to be pulled within 14 days or new bacteria samples to be taken.
    - c) House services can now be connected.
    - d) Tamper tags to be installed by DWD.
    - e) Tie-in bacteria test will be taken.
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4. Before job acceptance:

- a) Job must be completed.
- b) Submit GIS location records of all new water line features, including cathodic protection features, per DWD General Requirements Section 1.06.
- c) As-built plan Mylars to DWD (suggest blue line as-builts first).
- d) Cathodic protection (if needed):
  - 1) Tested and certified by JDH Corrosion Consultants, Inc. at the expense of the Developer/Contractor.
  - 2) As-built Mylars (suggest blue lines first).

5. DWD will assess a time frame for all punch list items to be completed. If not completed at designated time, the District will do so or have done by others after contacting the bonding company.

DWD will increase the deposit to cover the estimated punch list items. The deposit shall be refunded if the punch list is completed to the District's satisfaction within the stated time frame.



Subdivision or Project: \_\_\_\_\_

PLEASE SKIP NUMBERS THAT DO NOT APPLY

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FOR THE LATEST UPDATES

Submittal Number	Specification Reference	Drawing Reference	Submittal Description	Date Received From	Returned Response	No Exceptions Taken	Make Corrections Noted- <i>No need to re-submit</i>	Amend & Resubmit	Rejected	Submittal Required but not Received
				Contractor	DWD					
1-A	02231-2.01.A	DWD 5	Bore and Jack Casing							
2-A	02231-2.01.D	DWD 5	Bore and Jack Insulators: Calpico Model W / Williamson M-2, stainless steel bands and hardware							
3-A	02512	DWD 6	Double Offset: Minimum I.D. shall be nominal Include Size							
4-A	02512	DWD 7	Single Offset: Minimum I.D. shall be nominal Include Size							
5-A	02610-2.01.A	--	Ductile Iron Pipe: U.S. Pipe / American Cast Iron / Clow Pacific States or Approved Equal							
6-A	02610-2.01.B	--	Flanged Coupling Adapters: Smith-Blair Type 913 with EPDM gaskets or Approved Equal							
7-A	02610-2.01.B	--	Sleeve/Mechanical Couplings for Ductile Iron Pipe: Dresser 38 or 138, EPDM gaskets							
8-A	02610-2.01.B&C 02620-2.02.F	--	Push on Ductile Iron Pipe Fittings: Sigma / Tyler / Star							
9-A	02610-2.01.B&C 02620-2.02.F	--	MJ Ductile Iron Pipe Fittings: Star / Sigma / Tyler							
10-A	02610-2.01.B&C 02620-2.02.F	--	Flanged Ductile Iron Pipe Fittings: Sigma / Tyler / Star							
11-A	02610-2.01.B.1	--	Locking Joints for Ductile Iron Pipe: Field Lok 350 by U.S. Pipe Fitting							
12-A	02620-2.02.G&I	--	C900 PVC Pipe: Vinyl Tech, Royal Group, or Northern Pipe Products C900 Fusible PVC Pipe: Aegion							

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				Contractor	DWD					
13-A	02620-2.03.A	DWD 1	No. 12 Copper Detection Wire: Solid with blue insulation							
14-A	02620-2.03.B	DWD 1	Plastic Warning Tape: Blue, minimum 6-inch							
15-A	02620-2.02.D.3	--	Sleeve/Mechanical Couplings for PVC Pipe: Hymax Coupling, Dresser 253, long style, EPDM gaskets							
16-A	02675	--	Disinfection and Dechlorination Test Plan							
17-A	02830-Part 2	DWD 14	Fence Materials							
18-A	15100-2.03.D	DWD 15 DWD 17	Gate Valves: Mueller with stainless steel trim and hardware							
19-A	15100-2.04. H & J	DWD 19	Butterfly Valves: Mueller Lineseal III Class 150B or Mueller Lineseal XP Class 250B, no equal certified with serial number, Interior with EPDM rubber seat							
20-A	15100-2.05.C	--	Ball Valves: Watts Series B-6000/Mueller B20200 Must be Lead Free							
21-A	15100-2.06.A	--	Insulating Fittings: Watts Regulator Co.							
22.1-A	15100-2.07.A	DWD 15	Fire Hydrants: Clow 960							
22.2-A	15100-2.07.D	DWD 15	Fire Hydrants: Two coats of Rust-oleum V7400 Safety Yellow							
22.2-A	15100-2.07.E	DWD 15	Fire Hydrants: NSF 61 Approved Lubricant							
23-A	15100-2.07.B	DWD 15	Hydrant Check Valve and Break Off Spool: Clow LB400							
24-A	15100-2.07.C	DWD 15	Ductile Iron Hydrant Bury: Sigma or South Bay							

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				Contractor	DWD					
25-A	15100-2.08.B	DWD 23 or DWD 20	ARV: Crispin UL10.1 / Apco 143C							
26-A	15100-2.08.B	DWD 20	ARV Screen: Christy 1" FPT #10 or DWD approved equal							
27-A	15100-2.08.B	DWD 23	Angle Valve for ARV: Mueller B-24258							
28-A	15100-2.08.B	DWD 23 or DWD 20	ARV Concrete Box and Lid: Christy N36 with extension							
29-A	15100-2.09	DWD 21	Blowoff Piping and Fittings: Brass for 2"							
30-A	15100-2.09.D	DWD 21	Angle Valve for Blowoff: Mueller B-24286 for 2"							
31-A	15100-2.10.A	--	Dielectric Unions and Flange Unions: EpcO Inc.							
32-A	15100-2.10.D	--	Flanged Coupling Adapters: Dresser Style 127 or 128 / Hymax / Baker, stainless steel hardware							
33-A	15100-2.10.E.4	--	MJ Joint Restraint: EBAA Iron Megalug							
34-A	15100-2.10.E.2	--	Pipe Restraining Clamp Assemblies: Stellar Corporation							
35-A	15100-2.10.F or 02610-2.01.B.2	--	Flange Gaskets: Garlock 3760-U							
36-A	15100-2.10.F	--	Stainless Steel Bolts and Nuts F-593C or D shall be stamped on head of bolt							
37-A	15100-2.10.F	--	Protective Tape Wrap: 10 Mil Tape							
38-A	15100-2.10.G	DWD 17	G5 Valve Boxes: Christy Include "Water" on lid							





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				Contractor	DWD					
39-A	15100-2.10.G	DWD 17	G12 Valve Boxes: Christy Include "CP Test" or "Water" on lid							
40-A	15100-2.10.H	--	Tapping Sleeves: Up to 18" - JCM 432, all stainless materials and hardware Over 18" - Contact DWD							
41-A	15400-2.01.A&B	DWD 8	Up to 1" Copper Service Piping: Type K Soft, Polycoated Mueller Streamline Over 1" Type K Soft Mueller Streamline							
42-A	--	--	Above 1" Copper Service Line Poly Wrap: Blue							
43-A	15400-2.01.C	DWD 8	Service Saddles for PVC Pipe:  Mueller, cc thread, bronze, wide band							
44-A	15400-2.01.C	DWD 8	Service Saddles for Ductile Iron Pipe: Mueller, cc thread, full circle stainless steel							
45.1-A	15400-2.02.A	DWD 8	5/8" - 1" Flow Meter: Sensus SR11 Low Lead flow meter (CF)							
45.2-A	15400-2.02.B	DWD 8	1-1/2" - 2" Flow Meter: Sensus Omni C2 flow meter (CF) with							
45.3-A	15400-2.02.C	DWD 8	3" & 4" Flow Meter Sensus Omni C2 flow meter (CF)							
46-A	15400-2.02.A 15400-2.02.B 15400-2.02.C	DWD 8	520M-FlexNet MTX Unit							
47-A	--	DWD 8	Straight Meter Coupling: Mueller H-10892 Meter coupling: H1089ON							
48-A	15400-2.03	DWD 8 DWD 9 DWD 10	Meter Boxes: Christy B-12, B-16, B-30, B-40, or B-44 Lid for B-12 Box: B12P Lid for B-16 Box: B16P Lid must read "WATER" Lid must incorporate FlexNet 520M							

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49-A	15400-2.03.B	DWD 8 DWD 20	1" Angle Meter Stops: Mueller B-24258							
50-A	15400-2.03.B	DWD 8	1-1/2" - 2" Angle Meter Stops: Mueller B-24276							
51-A	15400-2.04 or 16640-1.04.D	DWD 8 DWD C24	1" - 2" Corporation Stops: Mueller B-25008 Metalic water main-Muller insulated corp P# N35008							
52-A	15400-2.05.B	DWD 10	3/4" - 2" Double Check Valve: Febco LF850U (Must be Lead Free) 1/4" MIP 1/4" Flare Adapter Test Fitting							
53-A	15400-2.05.C	DWD 11	3/4" - 2" Reduced Pressure Backflow Preventer: Febco LF825YA RP with ball valves 1/4" MIP 1/4" Flare Adapter Test Fitting (Must be Lead Free)							
54-A	15400-2.05.C	--	Backflow Fittings: Must be Lead Free Brass							
55-A	15400-2.05.C	DWD 11	Backflow Cage & Freeze Cover sized for device & cage BPD1 Guardshack two-piece enclosure hinged, similar to Cage #GSM1 modified per DWD drawing on file with BPD1, powder coated Stainless Steel, Forest Green							
56-A	15400-2.05.C	DWD 12	2-1/2" - 10" Reduced Pressure Backflow Preventer: Febco LF880V N-shape w/Setter							
57-A	15400-2.05.D	DWD 13	2 1/2" - 10" Double Check Detector Valve: Febco LF876V N-shape w/Setter							
58-A	16640-1.03 to 1.05	--	Corrosion Control Design After Rough Grading							
59-A	16640-Part 2	DWD C1- DWD C29	Corrosion Control Products							
60-A	--	--	Bitumastic							