



**BELLA VISTA WATER DISTRICT**

11368 E. STILLWATER WAY • REDDING, CALIFORNIA 96003-9510  
TELEPHONE (530) 241-1085 • FAX (530) 241-8354



Bella Vista Water District  
Construction Standards

Adopted: July 27, 2009  
Revised: August 23, 2010

## Bella Vista Water District – Construction Standards

The Bella Vista Water District has adopted the City of Redding Construction Standards with the specific exceptions listed below.

1. Substitute “Bella Vista Water District” for all references to the “Water Utility” and substitute “District Engineer” for “City Engineer” wherever they appear in the Construction Standards.
2. Where references are made to AWWA Standards delete all of the specific year references. All products shall comply with the most recent version of the applicable AWWA Standard.

### 3. **Std. 400.00 – WATER SYSTEM MATERIALS**

#### **Item No. 1 – PIPE & FITTINGS**

**SERVICES:** Delete entire note and replace with the following:

“All 1-inch & 2-inch services shall be SDR 9, 200 psi, copper tube size (CTS) polyethylene with stainless steel sleeves or for 2-inch services only Schedule 40 PVC using brass compression couplings at all joints and bends. No copper or galvanized pipe will be allowed.”

**MAINS:** Modify as follows:

Minimum size shall be 6-inches;

6-inch, 8-inch, 10-inch & 12-inch mains shall be AWWA C900 PVC Class 235, SDR 18 or AWWA C151 (Class 50) DIP.

16-inch & 18-inch mains shall be AWWA C905 PVC Class 200, DR21 or AWWA C151 (Class 50) DIP

**NOTES:**

**Note B** - Bolts for all fittings and valves shall be ASTM A193 Grade B7

**Note H** – Modify as follows: delete “Minimum size water service 3/4”.” and replace with “Minimum size water service shall be 1-inch.”

**Note K** – Delete entire note and replace with the following: “New polyethylene water services 1-inch and 2-inch shall be a continuous run of pipe with no 3-part unions. The maximum length service shall be 60 feet.

**Note L** – Delete all references to 3/4-inch taps. The minimum tap size shall be 1-inch.

**Note M** – Delete the following text “consistent with the size and material requirements listed above (no soldered joints)” and replace with the following: “brass.”

**FITTINGS:**

Fittings for ¾” through 2” – Delete entire note and replace with the following: “Fittings for 1-inch through 2-inch shall be brass compression (Ford, Jones, or Mueller)”

**Item No. 2 – VALVES**

**BLOWOFF VALVES:** Delete entire note and replace with the following: Shall be McDonald style. Blowoff valves placed in cul-de-sacs shall be placed in the street a minimum of 11’ from the face of the curb.

**COMBINATION AIR VALVE – (CAV) –** Delete entire note and replace with the following: “CAV shall be APCO No, 143C or Crispin UL-10, CAV double orifice single body with bronze trim and SS float.”

**Item 3. SADDLES** – Delete entire note and replace with the following:

“For DIP & PVC water mains with taps 1-inch through 3-inch use:  
Ford 202BS, 202B, or FC202; Jones J969 or J979; or Mueller BR2B, BR2S, or DE25.

**Notes:** Retain Note A and Delete Note B under SADDLES

**Item 5. FIRE HYDRANTS** – Modify Note C as follows: Fire hydrants within the Bella Vista Water District service area shall be painted high visibility Federal Safety Yellow meeting OSHA specification 1910.144 and ANSI specification 253.1 from the breakaway flange up.

**Item 6. METER BOXES AND VAULTS** – Delete entire table and replace with the following table:

**METER BOXES AND VAULTS**

METER SIZE	NOTE	BOX SIZE MINIMUM I.D.	BOX / VAULT #			
			COOK CONCRETE	CHRISTY	ARMORCAST	DFW Plastics
5/8" and 3/4"	(A)	10" x 23.5"	---	---	---	DFWB16C
1"	(A)	10" x 23.5"	---	---	---	DFWB16C
1 1/2"	(A)	13 1/4" X 24"	---	---	P6001868X12	D1324-12
2"	(A)	17" X 30"	---	---	P6001534X12	---
3"	(B)	30" X 48"	B4.0	B48	A6001430PCX12	---
4"	(B)	30" X 60"	B5.0	B52	A6001460AX_MT	---
6"	(B)	48" X 78"	V4.0 6.5	R37P	A6001448AX_MT	---
8"	(B)	54" X 102"	V4.5 8.5	---	---	---
LARGER THAN 8"	(C)	---	---	---	---	---
MULTIPLE METER BANKS	(F)	---	---	---	---	---

**Item 7. TRAFFIC VALVE BOX AND EXTENSIONS** – Delete Cook Concrete Box # VB10T.

**Item 8. BLOWOFF BOXES** – Delete Cook Concrete Box # VB10T.

**Item 9. COMBINATION AIR VALVE (CAV) ENCLOSURE/BOX** – Delete Cook Concrete Box # B2.0 and B3.0.

**Item 11. BACKFLOW DEVICE ASSEMBLY BOXES, VAULTS AND ENCLOSURES** –

Delete Cook Concrete Box # B4.0.

Note A – delete reference to 3/4" valves and replace with 1-inch.

**Item 12. LOCATING WIRE AND WARNING TAPE** –

Wire - Delete entire note and replace with the following:

Bella Vista Water District – Construction Standards

Locator wire shall be installed over all waterlines. Locator wire shall be #10-1 solid insulated copper wire (UF), in a continuous strand, placed on top of the pipe and secured with tape. Locator wire shall be brought to the surface at all valve risers and where valves are more than 660 feet apart at the edge of the right-of-way at 660 feet maximum on center in Brooks No. 1-SP, or equal, valve boxes.

After all trench backfill operations are complete, the District shall pay for and conduct the locatability test to confirm that the wire is continuous. The Contractor shall be responsible for all costs to confirm, locate and repair any breaks in the location wire identified in the locatability test. In addition, the Contractor shall reimburse the District for all costs to retest repaired sections of the wire. The Contractor is advised to use care in the installation and backfilling operations to prevent damage to the wire.

**4. Std. 400.60 – VALVE OPERATION** – ~~Delete the entire text of this City standard and replace with the following:~~ Operating Main Line Water Valves within the Bella Vista Water District will be by District personnel only. The District will handle the notification of the customers to be affected by any outage. The shutdown shall last no longer than 4 hours. To schedule the shutdown the contractor shall provide the District at least 48 hours notice before the required shutdown. The contact number for the Bella Vista Water District is 530-241-1085 (during work hours and after hours).

**5. Std. 401.00 – WATER SERVICE CONNECTION** – Delete all references to Double Service connections. All services shall be tapped 0° from the horizontal

**6. Std. 401.20 – WATER SERVICE CONNECTION (Meter & Bypass Detail 3” Services & Larger)** – The 3” and larger RWGV shall be lockable.

**7. Std. 402.00 – LOCATING WIRE & WARNING TAPE** – Delete Note 3 and replace with the following: “3. Locating wire shall be taped to the top of the pipe at a minimum of one location per length of pipe.

**8. Std. 422.01 – TYP. FIRE SERVICES CASE I** – For all dedicated fire sprinkler services an approved RPPDA type backflow device shall be installed at the point of connection (P.O.C.) at the property line. The backflow device and the fire service line downstream of the backflow device shall be the responsibility of the property owner.

**9. Std. 422.02 – TYP. FIRE SERVICES CASE II** – For all fire hydrants outside of the public right-of-way an approved RPPDA backflow device shall be installed at the point of connection (P.O.C.) at the property line. The backflow device, fire service line and hydrants downstream of the point of connection shall be the responsibility of the property owner. In cases where the hydrants are clearly visible from the public right-of-way and cross contamination risks are minimal a SCDC may be installed in lieu of an RPPDA based on the review and approval of the District’s Engineer

**10. Std. 422.03 – NON-TYPICAL FIRE SERVICES CASE III** – Delete this drawing in its entirety. This type of fire service is not allowed within the Bella Vista Water District water system

**11. Std. 422.30 – NON-TYPICAL FIRE SERVICES 1”, 1½” and 2”** – For all dedicated 1”, 1½” and 2” fire sprinkler services an approved RPPDA type backflow device shall be installed at the point of connection (P.O.C.) at the property line. The backflow device and the fire service line downstream of the backflow device shall be the responsibility of the property owner

**12. Std. 422.31 – RESIDENTIAL FIRE SERVICE** –

Delete all references to dual services.

Delete Note 4 in its entirety and replace with the following: Meters for residential fire services shall be UL rated for domestic fire sprinkler service. Meter charges will be the current fees in effect for fire service meters and connection fees shall be the current fees in effect for the size of the meter installed

**13. Std. 422.32 – REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY, INTERNAL – ALTERNATE LOCATION** – Delete this drawing in its entirety. This type of service is not allowed within the Bella Vista Water District water system.

**14. Std. 431.10 – REDUCED PRESSURE PRINCIPLE DEVICE (RPP)** – Delete note on the Above Ground Installation saying “Pipe between main and backflow device shall be brass, D.I. or copper.”

**15. Std. 450.00 – TYPICAL BLOW-OFF INSTALLATION** – Delete City of Redding Standard 450.00 and replace with BVWD “Typical Installation – Blowoff Assembly.”

**16. Std. 480.00 – BACTERIOLOGICAL SAMPLING STATION** – Delete the following from note #5: “No concrete collar required for installation in unpaved finished surface.”

Note: The City of Redding’s Construction Standards can be found on the City of Redding’s web site <http://www.ci.redding.ca.us/>; at the following location: <http://ci.redding.ca.us/transeng/engineering/pwstdsearch.cfm> then “Search by Section” and select from one of the following: Streets, Storm Drains, Sewers, Water, Electric, Miscellaneous, and Grading/Erosion to view the applicable standards.