

# East Wenatchee Water District Supplemental Provisions to the 2012 WSDOT/APWA Standard Specifications

## 1-01 DEFINITIONS and TERMS

### 1-01.3 Definitions

*This section is supplemented with the following*

**Deleted Section:** This section of the Standard Specifications does not apply to this project.

**Equal to:** that the 'equal' product be the same or better than the product named in function, performance, reliability, quality, and general configuration. Determination of equality in reference to the project design requirements will be made by the Owner.

**New Section:** This section does not appear in the Standard Specifications.

**Owner:** The East Wenatchee Water District

**Replacement Section:** Portions of the Standard Specification section are replaced as described herein.

**Supplemental Section:** The Standard Specification is to be used in its entirety with the addition of the information provided herein.

### 1-04.11 Final Cleanup

*This section is supplemented with the following*

All areas impacted by the work shall be restored to at least original condition, unless specifically identified otherwise in the plans or specifications. All costs are incidental.

## 1-05 CONTROL OF WORK

### 1-05.19 As-Built Drawings

*The following section is new.*

Prior to acceptance by the District, the Contractor shall deliver a complete set of acceptable "As-Constructed" records to the Owner. Drawings shall be made on clean, unmarked prints for this project in accordance with the following standards:

The Contractor shall provide "as-built" information on all items and work shown on the plans showing details of the finished product including dimensions, locations, outlines, changes, etc. The information must be in sufficient detail to allow the Owner's personnel to locate, maintain, and operate the finished product and its various components.

The Contractor shall also show size, horizontal and vertical locations of all existing utilities encountered during construction

## 1-06 CONTROL OF MATERIAL

### 1-06.1 Approval of Materials Prior To Use

*This section is replaced with the following*

All materials to be used in the project shall be submitted to the Owner for approval prior to use. Submittal data for each item shall contain sufficient information on each item to determine if it is in compliance with the contract requirements. Information shall contain, at a minimum (as applicable):

- Material description
- Referenced specification section or plan sheet callout
- Brand name
- Model number
- Options and Accessories
- Applicable standards or codes (AWWA, ANSI, ASTM, UL, etc)
- Limitations or conditions of use
- Working Pressure and Test Pressure ratings
- Test and Performance data
- Manufacturer's warranty

Submittals that do not meet the requirement of the project plans and specifications, or that do not provide sufficient information for a full review will be returned to the Contractor for re-submittal. Provide **1** set of submittal information to the District office.

Submittal information shall be provided for all materials installed on the project, including but not limited to the following:

<ul style="list-style-type: none"><li>• Ductile iron pipe</li><li>• Ductile iron flanged fittings</li><li>• Ductile iron mech-joint fittings</li><li>• Flange gaskets</li><li>• Restraint systems</li><li>• Isolation valves</li><li>• Fire hydrants</li><li>• Blow offs</li><li>• Control valves</li><li>• Air valves</li><li>• Valve boxes, lids and accessories</li><li>• Couplings and adapters</li><li>• Tapping tees</li></ul>	<ul style="list-style-type: none"><li>• Meter setters</li><li>• Curb stops and corp stops</li><li>• Copper and brass pipe</li><li>• Service brass fittings</li><li>• Service saddles</li><li>• Poly pipe</li><li>• Flow meters</li><li>• Stainless steel pipe</li><li>• Meter boxes and lids</li><li>• Vaults, lids and hatches</li><li>• Casing pipe</li><li>• Casing runners and seals</li><li>• Pressure gauges</li></ul>
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The Owner may, at their discretion, inspect any and all materials. Should the Owner

deem any materials defective or not compliant with the design documents, such materials shall be replaced by the Contractor at his expense.

Electronic (email) submittals are acceptable.

## **1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC**

### **1-07.17 Utilities and Similar Facilities**

*This section is supplemented with the following*

The Contractor should expect to find live private irrigation systems along the project alignment. The Contractor should contact adjacent property owners to determine locations of existing systems within the construction area. Should any irrigation systems be damaged during construction, they shall be repaired by the end of that working day by the Contractor. The Contractor shall have a dewatering pump available at all times to clear the trench should an irrigation line be damaged.

## **1-08 PROSECUTION AND PROGRESS**

### **1-08.4 Notice to Proceed and Prosecution of the Work**

*The section is supplemented as follows:*

The existing water mains and appurtenances are to remain live through construction except for temporary outages to make connections. All existing mains and appurtenances being replaced shall be abandoned or removed by the Contractor by the end of the project.

No customer may be out of water service for longer than 8-hours at a time. The outage may only occur between 8:00 am and 5:00 pm.

## **2-07 WATERING**

### **2-07.2 Watering for Compaction**

*This is a new section.*

Contractor shall provide watering as necessary to achieve optimal moisture content for compaction. If requested by the Contractor, the Water District may provide a hydrant meter setup for construction water. The maximum flow rate allowed from this meter may be restricted at the District's discretion. The Contractor is responsible for protection of the hydrant meter assembly from theft, vandalism, damage, and freezing.

## 2-09 STRUCTURE EXCAVATION

### 2-09.4 Measurement

*The third paragraph currently reads:*

For all pipes, . . . , the Structure excavation quantity will be calculated based on the following trench widths:

. . .

For pipes 15-inches and under, trench width = I.D. + 30-inches.

For pipes 18-inches and over, trench width = (1.5 x I.D.) + 18-inches.

. . .

*This paragraph is replaced with the following:*

Measurement for pay items related to trench width below subgrade (including removal and replacement of unsuitable material; rock excavation; etc.) shall not exceed a maximum width = pipe O.D. + 36 inches when no shoring or speed shoring is used, or pipe O.D. + 48 inches when box shoring is used.

The measurement for pay items related to the trench width from subgrade to the surface (including crushed surfacing; commercial HMA; paint restoration; etc.) shall not exceed a maximum width = pipe O.D. + 60 inches.

## 7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

### 7-08.3(4) Plugging Existing Pipe

*This section is supplemented with the following:*

All existing non-functional pipes 3-inch and larger, regardless of original purpose, cut or broken during the course of construction shall be plugged.

## 7-09 WATER MAINS

### 7-09.3(1) Construction Requirements - General

*This section is supplemented with the following:*

The Contractor shall be required to patch all trenches installed within the existing pavement with Commercial Hot Mix Asphalt to the depth as shown in the plans. Trench patches shall be installed no later than the second Friday following excavation for trenches parallel to the road, and no later than two days following excavation for trenches crossing the road and across intersections.

On trenches parallel to the roadway, the Contractor shall provide and maintain crushed surfacing base course to a smooth and level grade with the existing pavement until patching is complete.

On trenches crossing the roadway or intersections, the Contractor shall provide and maintain asphalt hot or cold mix until final patching is complete.

Temporary patching, regardless of material used, shall be incidental to the project cost. No additional payment will be made.

### **7-09.3(5) Grade and Alignment**

*Replace the first sentence of the third paragraph with the following:*

The depth of trenching for the water main shall be as shown on the Water District standard trench detail, unless superseded by dimension callouts on the plan or profile drawings.

*This section is supplemented with the following*

Contractor shall pothole ahead of pipe-laying a sufficient distance at utility crossings and where noted on the plans to allow room to make vertical adjustments as necessary to avoid existing utilities. If the area potholed is in a travelled area and will be reopened to traffic more than one day in advance of pipelaying through the zone, the hole shall be patched with hot or cold mix, the cost of which shall be incidental.

### **7-09.3(7) Trench Excavation**

*The third sentence of the second paragraph is replaced with the following:*

Trench shall be excavated to a sufficient width to allow for pipe installation, compaction equipment, and shoring when necessary.

### **7-09.3(9) Bedding the Pipe**

*Replace the first two sentences with the following:*

See Water District Standard Trench Detail. District Inspector shall determine if native materials are acceptable for use as bedding. Bedding shall meet the following gradation or as approved by the District Inspector.

<b>Sieve Size</b>	<b>% Passing by weight</b>
5/8" square	50-100
U.S. No. 4	20-80
U.S. No. 40	3-24
U.S. No. 200	10.0 max
Sand equivalent	35 min

Bedding for restrained joint pipe must be a well graded cohesive material with fines. Rounded gravels are not acceptable.

### **7-09.3(10) Backfilling Trenches**

*This section is supplemented with the following:*

Trenches shall be backfilled to current working surface. If working surface requires reestablishment of traffic prior to final restoration, Contractor shall confirm with the

transportation agency what method of temporary patching is acceptable. Road crossings and intersections must be patched with hot or cold mix asphalt. If temporary crushed rock surfacing is approved by the agency for longitudinal trenching, the upper trench section shall be backfilled with a minimum of 6" depth crushed rock as necessary for traffic.

### **7-09.3(15)A Laying Pipe on Curves-Ductile Iron Pipe**

*Replace the last sentence of the first paragraph with the following:*

The amount of deflection at each pipe joint when pipe is laid on a horizontal or vertical curve shall not exceed 3 degrees per joint (11 inches over 18 feet) or the manufacturer's printed recommended deflections, whichever is less.

### **7-09.3(19)A Connections to Existing Mains**

Delete paragraph three, plastic film wrap of couplings is not required.

*Supplement the fourth paragraph with the following:*

Connections to existing mains may only be performed on Tuesdays, Wednesdays or Thursdays unless permission is otherwise obtained from the District. Connections shall not be performed on District recognized holidays.

Flanged Epoxy Adapters shown on the plans are a FLxPE steel spool, epoxy or powder coated inside and out. Steel pipe is to be nominal O.D. size (e.g. 6" = 6.0" O.D.). Coating shall be NSF61 approved.

### **7-09.3(21) Concrete Thrust Blocking**

*This section is supplemented with the following:*

Precast concrete blocking is allowed. The surface area of the block must be no less than shown in the District's Standard Detail for horizontal thrust blocking. Blocks shall be ecology-block style or as fabricated by H2 Precast using their EWWD specifications.

### **7-09.3(22) Blowoff Assemblies**

*Supplement this section with the following:*

Temporary (construction) blowoff assemblies shall be provided as shown on the plans and as required for testing and flushing.

### **7-09.3(23) Hydrostatic Pressure Test**

*Replace the first sentence with the following:*

All water mains and appurtenances (hydrants, service lines, etc) shall be tested in sections of convenient length, under a hydrostatic pressure equal to 250 psi, unless otherwise directed by the District Inspector.

*Supplement this section as follows:*

The following test method will be used unless otherwise directed by the District Inspector. Length of time for test will be 60 minutes or at the discretion of the District Inspector. Pressure drop shall not exceed 5 psi during a 60 minute period, regardless of water loss quantity. District Inspector shall have the authority to require more stringent criteria if he determines that field conditions warrant such measures. Valve clusters shall be assembled outside of the trench and pressure tested separately prior to installation. All valves which will be installed on or adjacent to existing water mains shall be pre-tested on both sides of the closed valve seat with zero pressure loss. Failing valves shall be replaced at the Contractor's expense.

Pressure gauges shall be in good working order and scaled appropriately for the test. Scale range shall not exceed 160% of the test pressure. For example, for a 250 psi test, the gauge scale shall not exceed  $1.6 \times 250 = 400$  psi. The District has the right to reject any gauges that are suspect in their accuracy.

Sections of pipe that cannot be pressure tested, such as connections to the existing system, shall be left exposed for a visual inspection under system pressure.

### 7-09.3(24) Disinfection of Water Mains

*Supplement this section as follows:*

Local testing laboratories are not open on Fridays, therefore samples cannot be submitted on Fridays. Contractor shall schedule the work accordingly

### 7-09.3(24)A Flushing

*Supplement this section as follows:*

If the existing water system cannot provide the required flow capacity, the contractor shall supply the source of water or shall "pig" the main. All costs shall be incidental. The following table shows minimum exit port sizes for flushing, assuming at least 40 psi is available on the supply side.

Main size	Flow at 2.5 fps	Blowoff size	Hydrant ports
8"	400 gpm	2"	(1) 2.5"
12"	900 gpm	(2) 2", or (1) 3"	(2) 2.5"
16"	1600 gpm	(4) 2", or (2) 3", or (1) 4"	(2) 2.5" or (1) 4"

### 7-09.3(25) Abandonment of Terminated Water Facilities

*The following section is new.*

All water mains, hydrants, valves, valve boxes, meter boxes and services terminated during the course of the project shall be removed and/or abandoned in accordance with East Wenatchee Water District Standard Detail W-15.

## **7-12 VALVES FOR WATER MAINS**

### **7-12.3(1) Installation of Valve Marker Post**

*Replace this section in its entirety.*

Where required by the inspector, to be expected when valves are outside of paved areas, a valve marker post shall be furnished and installed with each valve. Refer to the District Standard Detail.

## **7-14 HYDRANTS**

Throughout this section, replace the words “Standard Plans” with “Water District Standard Details”.

### **7-14.1 Description**

*This section is supplemented with the following:*

Refer to Water District Standard Detail for additional requirements.

### **7-14.3(1) Setting Hydrants (Supplemental Section)**

*This section is supplemented with the following:*

Contractor shall verify required hydrant bury depth for each individual hydrant location prior to ordering hydrants. Bury depth may vary along the project based on topography and water main depth.

### **7-14.3(2) Hydrant Connections**

*This section is supplemented with the following:*

Refer to Water District Standard Detail if the distance between the auxiliary valve and hydrant is more than 16 feet, thereby requiring more than one stick of pipe.

### **7-14.3(2)C Hydrant Guard Post**

*The first sentence is replaced with the following:*

Hydrant guard posts shall be constructed at the locations shown on the plans or as directed by the District Inspector.

### **7-14.3(4) Moving Existing Hydrants**

*Replace this section in its entirety.*

Existing hydrants shall not be reused on this project unless specifically shown otherwise on the plans.



### **7-14.3(5) Reconnecting Existing Hydrants**

*Replace this section in its entirety.*

Existing hydrants shall not be reused on this project unless specifically shown otherwise on the plans.

## **7-15 SERVICE CONNECTIONS**

### **7-15.2 Materials**

*Replace this section in its entirety.*

Refer to Water District Standard Details for construction materials.

### **7-15.3 Construction Requirements**

*Replace the first two sentences with the following:*

All service connections to water mains shall be made using saddles as shown on the District Standard Details. Direct taps are not allowed.

*Replace the first sentence of the second paragraph with the following:*

The depth of trenching for service connection piping shall provide a minimum of 3.5 feet of cover over the top of the pipe.

*Replace the first sentence of the fourth paragraph with the following:*

All existing service connections along the project route shall be reconnected to the new main, unless specifically identified otherwise on the plans or directed otherwise by the District Inspector.

*This section is supplemented with the following:*

Restore all disturbed surfaces to original conditions or better, including that on private property. Landscaping shall be restored to original condition.

## **9-06 STRUCTURAL STEEL AND RELATED MATERIALS**

### **9-06.20 Utility Vault Hatch**

*This section is new:*

Vault hatches shall be aluminum or galvanized steel frame and door(s), H20 rated with the following components: diamond plate surface; spring assist opening;

stainless steel hinges and hardware; recessed padlock hasp with cover; channel frame for water collection; frame drain connection; slam lock with un-keyed interior operator to prevent accidental entrapment; full open clear space with no intermediate bracing; door hold-open locking arm or 180 degree swing. Provide hold-open locking arm and welded handhold rungs on bottom of door if shown on plans. Any aluminum in contact with concrete shall be coated with an appropriate corrosion protective coating prior to installation. Hatches, locks and operators shall operate freely with no binding. Plumb hatch frame drain to vault drain using Sch 40 PVC, secured to walls and ceiling.

## **9-30 WATER DISTRIBUTION MATERIALS**

### **9-30.1 Pipe**

*This section is supplemented with the following:*

Only domestic made ductile iron and steel pipe are allowed. Pipe and fittings larger than 2 inch shall be of Ductile Iron construction, unless otherwise shown on the plans or details.

#### **9-30.1(1) Ductile Iron Pipe**

*This section is supplemented with the following:*

All pipe shall have a wall thickness at least equal to Class 50 unless a higher Class is shown on the plans or details. Pipe for fire hydrant runs shall have a wall thickness at least equal to Class 52.

#### **9-30.1(4)B Steel Pipe (4 Inches and under)**

*Replace this section in its entirety.*

Steel pipe 4 inches in diameter and smaller shall be per ASTM A53, be hot-dip galvanized inside and out, and wrapped with factory installed protective tar sheeting or District approved coating.

#### **9-30.2(1) Fittings - Ductile Iron Pipe**

*This section is supplemented with the following:*

All gaskets for flanged fittings shall be ring type. Full face type gaskets are not allowed. Gaskets must be minimum 1/8" thick. Only domestic made ductile iron fittings are allowed.

#### **9-30.2(6) Restrained Joints**

*Replace the first sentence with the following:*

Refer to Water District Standard Detail for acceptable restrained joint systems. Bolted systems are not allowed.

### **9-30.3(4) Valve Boxes**

*This section is supplemented with the following:*

Refer to Water District Standard Detail for additional requirements.

### **9-30.3(5) Valve Marker Posts**

*Replace this section in its entirety.*

Refer to Water District Standard Detail.

### **9-30.3(6) Valve Stem Extensions**

*This section is supplemented with the following:*

Refer to Water District Standard Detail for additional requirements.

### **9-30.3(7) Combination Air Release/Vacuum Valves**

*This section is supplemented with the following:*

Refer to Water District Standard Detail for additional requirements.

### **9-30.3(8) Tapping Sleeve and Valve Assembly**

*Replace the last three sentences with the following.*

Valves shall meet the requirements of AWWA C509 or C515. Tapping valves shall be of the same type as other valves on the project. Sleeves shall be stainless steel unless specifically called out otherwise on the plans.

### **9-30.6(1) Saddles**

*Replace this section in its entirety.*

Refer to Water District Standard Details.

### **9-30.6(3)B Polyethylene Tubing**

*Replace this third paragraph with the following.*

Tubing used for 2 inch and smaller shall be SDR9 CTS (copper tube size).

### **9-30.6(4) Service Fittings**

*This section is supplemented with the following:*

Fittings for polyethylene tubing shall utilize Ford Grip-Tite, Mueller 110, or approved equal. Pack-joints are not allowed.

### **9-30.6(5) Meter Setters**

*Replace this section in its entirety.*

Refer to Water District Standard Details.

**9-30.6(7) Meter Boxes**

*Replace this section in its entirety.*

Refer to Water District Standard Details.