

**East Wenatchee Water District**

WATER SYSTEM STANDARD DETAIL

**BACKFLOW PREVENTION ASSEMBLY**

DRAWING NO. W-13 SHEET NO. 25

**East Wenatchee Water District**

WATER SYSTEM STANDARD DETAIL

**BACKFLOW ASSEMBLY INSTALLATION**

DRAWING NO. W-25 SHEET NO. 26

**East Wenatchee Water District**

WATER SYSTEM STANDARD DETAIL

**CONNECTIONS TO EXISTING MAINS**

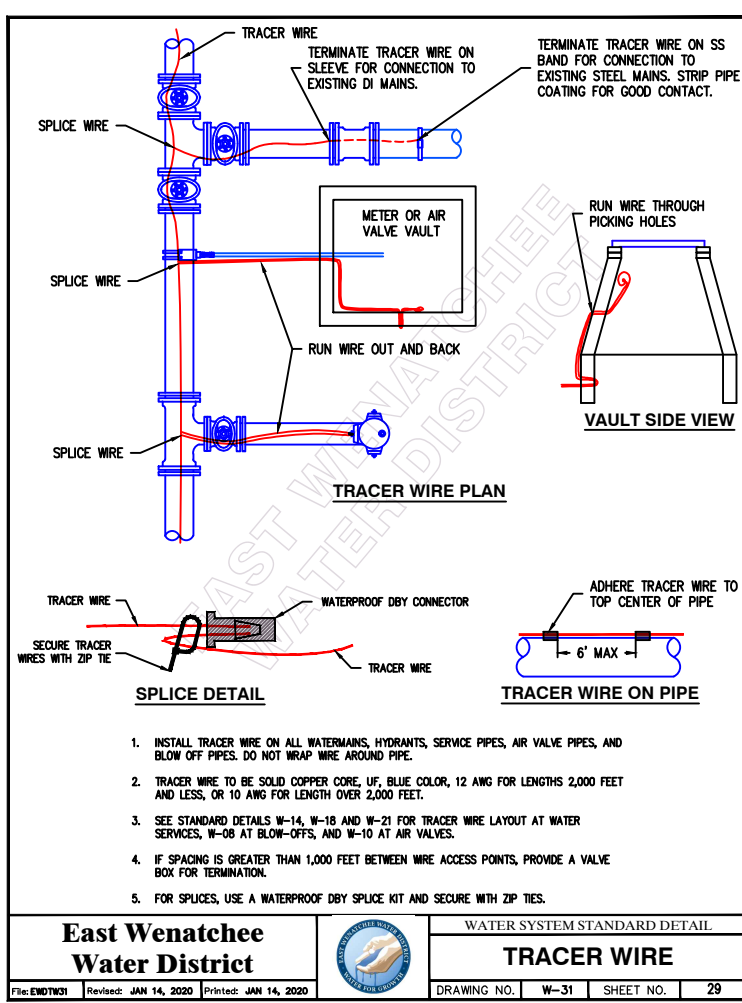
DRAWING NO. W-22 SHEET NO. 27

**East Wenatchee Water District**

WATER SYSTEM STANDARD DETAIL

**ABANDONMENT AND REMOVAL OF TERMINATED FACILITIES**

DRAWING NO. W-15 SHEET NO. 28



**REVISION HISTORY**

**JULY 2014**

- W-07 DEFINED MATERIAL FOR ALL TIE/SHACKLE RODS. UPDATED DETAILS (W02, W05, W17, W20, W24) TO REFERENCE BACK TO W-07 FOR ROD MATERIAL.
- W-10 ADDED TRACER WIRE TO SUPPLY LINE. ADDED #24 MESH SCREEN TO VENT.
- W-12 ADDED DETAIL FOR CURB STOP RISER PIPE.
- W-13 UPDATED BYPASS METER REGISTER MODEL.
- W-14 ADDED CONCRETE BLOCKING AND PT WOOD SHIM CALLOUT.
- CHANGED SERVICE LINE SIZE FOR 3/4" METER BASED ON WHICH SIDE OF THE STREET. ADDED FOR CONNECTION TO EXISTING SERVICE BE AT OR BEHIND ROW.
- W-17 CHANGED 1/2" AIR RELEASE VALVE TO 1" COMBINATION AIR VALVE, UPDATED PIPING. ADDED AIR VALVE TO BOTH SIDES OF PRV.
- ADDED NOTE TO ADDRESS THE LOCATION OF GAUGE & AIR VALVE.
- W-18 UPDATED FORD METER SETTER MODEL NUMBERS. ADDED A 3" LONG BRASS NIPPLE BETWEEN CURB STOP AND SETTER.
- W-19 UPDATED LINE WORK FOR AIR VALVE PER CHANGE TO W-17.
- W-20 REMOVED BASKET STRAINER.
- W-21 UPDATED FORD METER SETTER MODEL NUMBERS. ADDED 6" BRASS NIPPLE BETWEEN CURB STOP AND SETTER.
- W-22 CHANGED VALVE ON 2" AND SMALLER DETAIL TO CURB STOP, ADDED MINIMUM WALL THICKNESS TO FLANGED EPOXY ADAPTER. ADDED DETAIL FOR CONNECTION TO EXISTING 2" AND SMALLER DEAD END MAIN.
- W-24 REMOVED BASKET STRAINER.
- W-26 CREATED NEW DETAIL FOR COMMON LARGE VAULT INFORMATION.
- ADDED NOTE THAT ALL EXTERIOR THRUST BLOCKS ON LARGE VAULTS SHALL BE INSTALLED PRIOR TO THE PIPE. INSTALLED THROUGH THE VAULT BEING CUT OUT.
- ADDED A NOTE THAT REINFORCED THRUST BLOCKS SHALL BE FORMED USING WOOD FORMS NOT POURED DIRECTLY AGAINST SOIL.
- ADDED NOTE THAT REINFORCED THRUST BLOCKS SHALL BE CONSOLIDATED USING VIBRATION.
- W-29 ADDED NOTE THAT CUSTOMER SIDE CASINGS ARE ALWAYS REQUIRED.
- W-30 ADDED NOTE TO DELIVER SALVAGED VALVES WITHIN ONE WEEK AND UNDAMAGED.
- W-30 ADDED NOTE THAT RESTRAINTS AND AFFECTED PIPE MAY NOT BE REUSED ONCE ASSEMBLED.

**NOVEMBER 2014**

- W-20 REVISED METER LAY LENGTH AND MODEL FROM NEPTUNE TO SENSUS.
- W-24 REVISED METER LAY LENGTH AND MODEL FROM NEPTUNE TO SENSUS.
- W-30 ADDED NOTE FOR FLANGE GASKET AND BOLT MATERIALS.

**JUNE 2015**

- W-07 REMOVED ASTM A36 STEEL FROM TABLE HEADING.
- W-08 REVISED NOTE TO SEE DETAIL W29 FOR VAULT INSTALLATION REQUIREMENTS.
- W-10 REVISED NOTE TO SEE DETAIL W29 FOR VAULT INSTALLATION REQUIREMENTS.
- W-10 CHANGED VAULT LOCATION TO BE IN SIDEWALK.
- W-13 REVISED VAULT DRAINS TO CONFORM TO DETAIL W-26.
- W-15 REVISED FIRST PARAGRAPH.
- W-26 REVISED NOTE REGARDING PIPE LENGTHS TO ACCOMMODATE LONG VAULTS.
- W-26 ADDED REQUIREMENT OF 2 SUPPORTS FOR LADDER-UP EXTENSIONS.
- W-21 ADDED PRESSURE TESTING TO PE PIPE SERVICE CONNECTION.
- W-21 ADDED LENGTHS FOR BRASS NIPPLE BASED ON SINGLE OR DOUBLE SERVICE.
- W-23 ADDED PRESSURE TESTING TO PE PIPE SERVICE CONNECTION.
- W-29 CHANGED DETAIL TITLE TO "WATER SERVICE, AIR VALVE, BLOW OFF VAULT INSTALLATION PLACEMENT".
- W-29 ADDED PRESSURE TESTING TO PE PIPE SERVICE CONNECTION.
- W-29 CHANGED NOTE ON THE LIDS INSTALLATION WITHIN SIDEWALK DETAIL TO REQUIRE A FULL PANEL OF SIDEWALK AROUND VAULT WHEN SIDEWALK IMPROVEMENTS ARE DEFERRED.
- W-29 DETAIL NOTE CHANGES:
  - ADDED TO NOTE TO SET LID 2" ABOVE FINISHED GRADE IN LANDSCAPE AREAS.
  - ADDED NEW NOTE TO INSTALL MASTIC BETWEEN VAULT SECTIONS.
  - ADDED NEW NOTE REQUIRING A HMA APRON AROUND THE LID IN UNPAVED TRAVEL AREAS.
- W-30 RE-ADDED VAULT LID NOTE ACCIDENTALLY DELETED DURING 2014 REVISIONS.
- W-30 MOVED NOTE REGARDING SALVAGED EQUIPMENT TO DETAIL W-15.

**JUNE 2016**

- W-13 REVISED MINIMUM VAULT SIZE REQUIREMENTS
- W-14 REVISED SADDLE FIT RANGE
- W-18 ADDED MUELLER PRODUCT INFORMATION TO TABLE
- W-21 ADDED MUELLER PRODUCT INFORMATION TO TABLE
- W-30 ADDITIONAL SPACING REQUIREMENTS FOR CASING RUNNERS

**JANUARY 2017**

- W-01 REVISED WATER MAIN COVERAGE DEPTH NOTE
- W-01 REVISED THE THRUST RESTRAINT NOTE
- W-01 INCLUDED SETTERS AND TAILPIPE IN PRESSURE TEST NOTE
- W-01 INCLUDED OPEN END OF VALVES IN PIPE PLUG NOTE
- W-06 REMOVED DEADMAN THRUST BLOCK DETAIL
- W-07 REVISED ATTACHMENT DETAIL TO INCLUDE A WASHER AND DOUBLE NUT OR NYLOCK NUT
- W-10 CLARIFIED CMU BLOCK SIZE REQUIRED AND ELIMINATED CMU BLOCK UNDER CURB STOP
- W-10 CLARIFIED MATERIAL ALLOWED FOR CORP STOP BLOCKING.
- W-12 ADDED NOTE B AND ADDED PLAN VIEW OF BOX LID
- W-13 UPDATED NOTE 3 TO CLARIFY RESTRAINED PIPE REQUIREMENTS
- W-13 REMOVED THRUST BLOCKS AND SHACKLES
- W-13 CHANGED THE FCA TO A FLARJ ADAPTER
- W-13 ADDED DISMANTLING JOINT
- W-13 UPDATED VAULT MIN INTERIOR DIMENSION REQUIREMENTS TO MATCH NEW PIPE LAYOUT
- W-13 INCLUDED PERL IN TYPE OF METER ALLOWED
- W-15 INCLUDED AIR VALVE ASSEMBLIES IN WATER SERVICE SECTION TITLE
- W-19 REMOVED WALL COLLARS FROM DETAIL
- W-20 REMOVED EXTERIOR BLOCKS AND SHACKLES, ADDED NOTE 8, UPDATED FITTING NO. 2 FROM MJ TO RJ
- W-21 REMOVED NOTE 4 REGARDING MASTIC BETWEEN CHAMBER TOP AND BASE
- W-21 ADDED NOTE REGARDING PRESSURE TESTING SERVICE
- W-21 ADDED NOTE IN ELEVATION REGARDING REQUIRED ADAPTER IN 1" SETTERS
- W-24 REMOVED EXTERIOR BLOCKS AND SHACKLES, ADDED NOTE 8, UPDATED FITTING NO. 2 FROM MJ TO RJ WITH NO FCA OPTION
- W-26 REMOVED ALL WALL COLLARS
- W-26 UPDATED NOTE 2 TO HAVE THE DISTRICT DECIDE IF EXTERNAL BLOCKS ARE REQUIRED.
- W-26 CLARIFIED IN NOTE 3 TO NEATLY ROUTE DRAIN PIPING IN VAULT
- W-26 CREATED A NEW NOTE 7 ALLOWING THE DISTRICT TO REQUIRE INTERIOR PAINT
- W-26 UPDATED NOTE 8 (WAS PREVIOUSLY 7) TO REQUIRE EXTERIOR COAT ON GROUT PATCHES
- W-30 RELOCATED CASING NOTE TO CASING DETAIL, W-32
- W-30 UPDATED CONTRACTOR SHUTDOWN REQUIREMENT NOTE
- W-30 INCLUDED ASTM A307 GRADE 8 FOR FLANGE BOLTS
- W-31 NEW DETAIL CREATED FOR TRACER WIRE INSTALLATION
- W-32 NEW DETAIL CREATED FOR CASING PIPES

**SEPTEMBER 2017**

- W-01 RELOCATED DOMESTIC-MADE REQUIREMENT NOTE FROM NOTE 15 TO NOTE 1.
- W-01, W-30 SPLIT NOTE 15 INTO SEPARATE NOTES 1, 2, AND 17. RENUMBERED OTHER NOTES ACCORDINGLY.

**JUNE 2018**

- W-01 CLARIFIED CUSTOMER SIDE TAILPIPE IN PRESSURE TESTING NOTE.
- W-01 REVISED DOMESTIC MADE REQUIREMENT NOTE TO EXCLUDE CASING PIPES
- W-02 UPDATED THE APPROVED M&H MODEL NUMBERS
- W-02 ADDED TRACER WIRE TO ELEVATION VIEW
- W-03 ADDED NOTE TO TRENCH DETAIL ABOUT TRACER WIRE INSTALLATION.
- W-04 ADDED A ROW FOR SILT IN TABLE 2.
- W-07 ADDED ATTACHMENT DETAIL FOR SHACKLE PLATES
- W-07 ADDED ATTACHMENT DETAIL FOR THE TIE RODS IN THE GENERAL NOTES.

**JUNE 2018 (CONTINUED)**

- W-08 REVISED THE TRACER WIRE TO NOT WRAP AROUND THE PIPE.
- W-10 REVISED TRACER WIRE ROUTING.
- W-18 CREATED AN ISOMETRIC OF THE BLOW-OFF TEE.
- W-10 UPDATED THE MODEL NUMBERS FOR THE APCO AIR RELEASE/VACUUM VALVE.
- W-10 CALLED OUT THE LENGTH OF THE NIPPLE UNDERNEATH THE AIR RELEASE/VACUUM VALVE.
- W-12 ADDED TRACER WIRE TO ISOLATION VALVE DETAIL.
- W-12 UPDATED VALVE NOTE TO INCLUDE VALVES ON TEES.
- W-12 REVISED ISOLATION VALVE NOTE TO 4" AND LARGER.
- W-12 CLARIFIED PRE-PRESSURE TEST NOTE TO SAY CLOSED SEAT.
- W-12 ADDED TO MARKER POST NOTE TO INCLUDE WHEN VALVE IS IN GRAVEL AREA.
- W-13 ADDED 12" VALVE SIZE DATA TO THE VAULT MIN. INSIDE TABLE
- W-14 ADDED 1" MIN SIZE TO PE SERVICE PIPE
- W-16 REVISED TRACER WIRE TO NOT WRAP AROUND PIPE
- W-14 INCLUDED "WHEN TAPPING EXISTING MAIN" TO NOTE ABOUT TRACER WIRE CONNECTION.
- W-16 ADDED A FUSION BONDED POLYESTER COATING REQUIREMENT TO THE MECHANICAL JOINT RESTRAINTS
- W-16 UPDATED THE REQUIRED RESTRAINED LENGTHS FOR ALL FITTINGS
- W-17 ADDED A BELL ENDUCER ON THE GAUGE & AIR VALVE DETAIL
- W-17 ADDED A MAX TAP SIZE TABLE
- W-18 REVISED TRACER WIRE TO NOT WRAP AROUND PIPE
- W-18 ADDED DETAIL TO SHOW SERVICE LINE GOING UNDER CROSSING UTILITY
- W-18 ADDED 3" CASING TO ELEVATION DETAIL FOR SERVICE PIPE
- W-19 ADDED FLARJ ADAPTERS TO EACH END OF THE MAIN PIPE IN THE VAULT
- W-19 ADDED A SPOOL OF PIPE TO SEPARATE THE PRV'S AND MOVE THE LADDER
- W-19 REVISED ITEM NO. 4, REDUCING TEE, TO COME WITH A TAPPED BOSS
- W-20 ADDED A VALVE AND DRAIN ON THE BYPASS
- W-21 REVISED TRACER WIRE TO NOT WRAP AROUND PIPE
- W-21 UPDATED THE MUELLER MODEL NUMBER
- W-22 REVISED NOTES AND PIPING THAT WAS REDUNDANT TO DETAIL W-15
- W-22 UPDATED GENERAL NOTE 1 TO READ WATERMAIN INSTEAD OF BRANCH
- W-22 UPDATED COUPLING NOTE TO INCLUDE ROMAC 511 COUPLING OR EQUAL WITH A 7" CENTER RING LENGTH MINIMUM.
- W-24 ADDED A VALVE AND DRAIN ON THE BYPASS
- W-26 CLARIFIED NOTE ABOUT DRILLING 2" HOLE IN DOOR. ONLY IF VAULT HAS METER
- W-26 ADDED NOTE ABOUT A SPRAY UNDERCOAT TO THE GROUT PACK
- W-26 REVISED LADDER-UP TO BE SPRING LOADED AND INCLUDED APPROVED MATERIALS FOR THE LADDER
- W-29 ADDED REFERENCE TO RETAINING WALL DETAIL TO GENERAL NOTE 4.
- W-30 UPDATED THE DIMENSIONS FOR THE RECESSED HOLE FOR THE RADIO.
- W-30 ADDED NOTE STATING THE TYPE OF VALVES TO BE USED WHEN SMALLER THAN 4".
- W-31 UPDATED TRACER WIRE TO COME IN BETWEEN TWO PARTS OF VALVE BOX
- W-31 UPDATED DETAIL TO SHOW TRACER WIRE TERMINATING ON SLEEVE OR COUPLING
- W-31 REVISED THE WATERPROOF NUT TO A WATERPROOF DBY CONNECTOR
- W-31 REMOVED TRACER WIRE WRAPPING DETAIL
- W-31 ADDED GENERAL NOTE 6
- W-32 ADDED DETAIL FOR CASINGS LONGER THAN 20'
- W-32 INCLUDED A CROSS SECTION OF THE CROSS UTILITY FOR EACH CASING DETAIL.
- W-32 ADDED NOTE ABOUT CASING RUNNER SELECTION SIZE.
- W-32 ADDED NOTE LISTING CASING SIZE NEEDED FOR VARIOUS PUSH-ON JOINT DI CARRIER PIPE SIZES
- W-14, W-18, W-21, W-29 CHANGED SERVICE LINE DEPTH CALLOUT TO 48" COVER.

**JUNE 2018 (CONTINUED)**

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- W-14, W-18, W-21, W-29 CHANGED SERVICE LINE DEPTH CALLOUT TO 48" COVER.

**MARCH 2019**

- W-01 (NOTE 1) ADDED TO USE MOST CURRENT VERSION OF STANDARDS.
- W-01 (NOTE 13) ADDED TO PRETEST VALVES PRIOR TO INSTALLATION.
- W-13 ADDED MAXIMUM DRAIN PIPE LENGTH OF 20 FEET.
- W-16 ADDED MULTIPLIER FOR PVC PIPE. ADDED THAT SET-SCREW RESTRAINTS AND TYLER TUPRIG RESTRAINTS ARE NOT ALLOWED.
- W-25 ADDED MAXIMUM DRAIN PIPE LENGTH OF 20 FEET.
- W-30 (NOTE 23) ADDED COEFFICIENT OF FRICTION REQUIREMENT.
- W-31 REMOVED TRACER WIRE IN VALVE BOXES.

**JULY 2019**

- W-12 (NOTE 13) ADDED MAXIMUM GAUGE SCALE REQUIREMENT.
- W-29 CLARIFIED MAXIMUM 6" VERTICAL ADJUSTMENT.
- W-30 (NOTE 23) UPDATED LID/FRAME MODEL NUMBERS.
- W-30 (NOTE 29) ADDED NEW NOTE ABOUT DISTRICT LOANED EQUIPMENT.

**JANUARY 2020**

- W-02, W-14, W-18, W-21, W-31 REVISED TRACER WIRE CONFIGURATION
- W-04 REVISED PRECAST BLOCK CALLOUT LISTING AVAILABLE SIZES.
- W-12 SIGMA BOX TOPS NO LONGER ALLOWED DUE TO CLEARANCE ISSUES.
- W-12 REMOVED TRACER WIRE FROM VALVE BOX.
- W-12 ADDED VALVE BOX COLLAR.
- W-18 UPDATED METER SETTER MODEL NUMBERS.
- W-23 CHANGED HILLHOLDER WALLS FROM ROCKS TO PRECAST BLOCK.
- W-26 ADDED GAS SHOCK OPTION FOR HATCH.
- W-29 NOW GRAPHICALLY SHOWS LID ADJUSTMENT RISERS.

**East Wenatchee Water District**

WATER SYSTEM STANDARD DETAIL

**TRACER WIRE**

DRAWING NO. W-31 SHEET NO. 29

**East Wenatchee Water District**

WATER SYSTEM STANDARD DETAIL

**CONNECTIONS TO EXISTING MAINS**

DRAWING NO. W-22 SHEET NO. 27

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**ABANDONMENT AND REMOVAL OF TERMINATED FACILITIES**

DRAWING NO. W-15 SHEET NO. 28

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**BACKFLOW PREVENTION ASSEMBLY**

DRAWING NO. W-13 SHEET NO. 25

