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**Clackamas County**  
[www.clackamas.us](http://www.clackamas.us)



**DAN JOHNSON**  
DIRECTOR

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT  
DEVELOPMENT SERVICES BUILDING  
150 BEAVERCREEK ROAD OREGON CITY, OR 97045

March 19, 2026

BCC Agenda Date/Item: \_\_\_\_\_

Board of County Commissioners  
Clackamas County

**Approval of an Intergovernmental Agreement with Oak Lodge Water Services for the Oatfield Rd Jennings Ave Signal Rebuild Project. Agreement Value is \$187,214.25 for 14 months. Funding is through Oak Lodge Water Services. No County General Funds are involved.**

<b>Previous Board Action/Review</b>	11/07/24: Approval of a Contract with PBS Engineering and Environmental LLC for the Oatfield Rd Jennings Ave Signal Rebuild Project.		
<b>Performance Clackamas</b>	The project will build a strong infrastructure.		
<b>Counsel Review</b>	Yes	<b>Procurement Review</b>	Not Applicable
<b>Contact Person</b>	Robert Knorr, PM	<b>Contact Phone</b>	503-742-4680

**EXECUTIVE SUMMARY:** The Department of Transportation and Development (DTD) is utilizing Community Road Funds to replace the existing traffic signal system at the intersection of Oatfield Road and Jennings Avenue that has reached the end of its life span. With signal replacement, the existing sidewalks, ADA curb ramps, and pedestrian pushbuttons will be upgraded to current ADA standards. Additionally, the improvements include adding illumination and modifying both the existing retaining walls on the northeast and southeast corners of the intersection. Oak Lodge Water Services (OLWS) has existing waterlines that require upgrading and relocation along Oatfield Road. OLWS has separately contracted to complete the design of the waterline and related structures. To create efficiency in the construction of the project, OLWS and DTD desire to combine the construction of the County’s roadway and OLWS’s waterline project. Combining the projects provides for a shorter duration of the overall construction and puts the County in charge and in control of the overall work, which will be seamless when interacting with the public.

The Intergovernmental Agreement (IGA) commits OLWS to reimburse the County for costs associated with the actual cost of construction of OLWS’s facilities. OLWS will provide inspection services for construction of their own facilities. The engineer’s estimated construction cost of the waterline improvements is \$187,214.25, which includes a 15 percent

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contingency. If the bids are higher than expected, the IGA would only need to be amended in the future if costs are above the engineer's estimate within the contingency amount.

**RECOMMENDATION:** Staff respectfully recommends Board of County Commissioner's approval of an Intergovernmental Agreement between Clackamas County and Oak Lodge Water Services relating to the Oatfield Rd Jennings Ave Signal Rebuild Safety Work Project.

Respectfully submitted,

*Dan Johnson*

Dan Johnson  
Director of Transportation & Development

**INTERGOVERNMENTAL AGREEMENT  
BETWEEN OAK LODGE WATER SERVICES AND CLACKAMAS COUNTY  
RELATING TO THE OATFIELD RD JENNINGS AVE SIGNAL REBUILD SAFETY WORK PROJECT**

THIS INTERGOVERNMENTAL AGREEMENT (this "Agreement") is entered into between Oak Lodge Water Services, a domestic water district organized under ORS chapter 264 ("OLWS"), and Clackamas County, a political subdivision of the State of Oregon (the "County"), collectively referred to as the "Parties" and each a "Party."

**RECITALS**

- A. This Agreement is entered into pursuant to ORS 190.010, which confers authority on local governments to enter into agreements for the performance of any and all functions and activities that a party to the agreement, its officers or agencies, have authority to perform.
- B. The County is currently designing improvements to the intersection of SE Oatfield Road and SE Jennings Avenue in Jennings Lodge, Oregon (the "Road Project"). The Road Project will include reconstructing the intersection's traffic signal, adding illumination, and implementing other safety enhancements to address overrepresented crash types; installing new sidewalks, ADA-compliant curb ramps, and accessible pedestrian pushbuttons; modifying the existing retaining walls on the northeast and southeast corners of the intersection; and upgrading the stormwater system.
- C. OLWS is currently planning the installation of an 8-inch waterline through the same intersection (the "Water Project"). The Water Project will include the work identified in **Exhibit A** to this Agreement, which will occur within the area shown on **Exhibit B** to this Agreement.
- D. The Parties have determined it is in the public interest to cooperate in the planning and execution of the Road Project and the Water Project.

**AGREEMENT**

Now, therefore, based on the foregoing, the Parties agree as follows:

- 1. **Term.** This Agreement will become effective upon the last date of signature by a Party indicated below. Unless terminated earlier pursuant to Section 6 of this Agreement, this Agreement will expire upon the completion of each and every obligation of the Parties set forth in this Agreement, or by June 30, 2027, whichever is sooner.
- 2. **OLWS's Obligations.**
  - a. **Bid Documents.** OLWS will provide the County with final signed and stamped plans, special provisions, and a bid schedule in connection with the Water Project. OLWS will certify in writing that the plans, special provisions, and bid schedule

are satisfactory in all respects for purposes of procuring construction services in connection with the Water Project.

- b. Project Coordination. OLWS will coordinate design and construction requirements related to the Water Project, assist in developing bid items and quantities, and provide review of submittals and responses to requests for information from bidders and the selected construction contractor related to the Water Project. OLWS will be responsible for costs associated with such reviews and responses.
- c. Project Inspections and Testing. OLWS will provide inspection services for the Water Project concurrently with County inspection tasks for the Road Project. OLWS will track quantities for payment, make daily inspection notes, and provide copies of such notes to the County on a weekly basis. It is assumed that the Water Project will require a minimum of 4 weeks to complete and that an OLWS inspector will be present during construction of all critical components of the Water Project, subject to adjustment as required by on-site circumstances. OLWS will be responsible for costs associated with field inspections and material testing related to the Water Project.
- d. Payment Obligations. OLWS will reimburse the County for all costs associated with the work identified in **Exhibit A**, not to exceed the estimates identified in **Exhibit C** to this Agreement, as modified by any change orders approved in writing by OLWS. OLWS will also reimburse the County for all costs associated with the administration of the construction contracts associated with the Water Project, not to exceed Three Thousand Dollars (\$3,000). OLWS will pay the County within 30 days of receiving an invoice from the County.
- e. As-Built Drawings. OLWS will provide the County with as-built drawings of the Water Project to reflect changes made during construction, generated from contractor and inspector notes, in digital AutoCAD and PDF formats.

3. **County's Obligations.**

- a. Bid Documents. Before soliciting bids for construction of the Road Project or the Water Project, the County will incorporate the plans, special provisions, and bid schedule provided by OLWS in connection with the Water Project into the plans, special provisions, and bid schedule prepared by the County in connection with the Road Project, and the County will obtain OLWS's written certification that such incorporation is satisfactory in all respects for purposes of procuring construction services in connection with the Water Project, which certification shall not be unreasonably withheld.
- b. Project Management. The County will manage the Water Project and administer the associated construction contracts. The County will coordinate with OLWS on

any change orders requested by OLWS or by the construction contractor in connection with the Water Project, which shall not be approved without OLWS's written consent.

- c. Project Inspections. The County will provide OLWS with reasonable advance notice of all work requiring OLWS inspection services or the presence of an OLWS inspector.
- d. Invoice Obligations. The County will invoice OLWS within the first week following the last working day of each calendar month in which work is performed on the Water Project. The County will not invoice OLWS for any costs not identified in Section 2(d) of this Agreement.
- e. Transfer of Facilities. Upon completion of the Water Project, the County shall execute a Bill of Sale transferring ownership of all facilities related to the Water Project to OLWS. The Bill of Sale shall be in a form reasonably acceptable to both Parties and must include an assignment of any warranties and claims related to the Water Project facilities.

4. **Joint Obligations.**

- a. Project Inspections. The Parties will jointly participate in final walkthrough and generation of punch list items.
- b. Amendments. The Parties will cooperate to amend this Agreement, if necessary, to incorporate any changes to the work identified in **Exhibit A**, or the estimates identified in **Exhibit C**, as a result of the winning bid from the County's procurement process. The Parties may not unreasonably withhold their consent to amend this Agreement as provided in this subsection. The Parties need not amend this Agreement as provided in this subsection where they mutually agree that the winning bid is unacceptable. Bids for the work identified in **Exhibit A** that exceed the estimates identified in **Exhibit C** by 25% are deemed to be unacceptable unless OLWS agrees to proceed with those bids.

5. **Attachments. Exhibit A, Exhibit B, and Exhibit C** are attached and incorporated into this Agreement as if fully set forth herein.

6. **Termination.**

- a. The Parties, by mutual written agreement, may terminate this Agreement at any time.
- b. Either Party may terminate this Agreement in the event of a breach of the Agreement by the other. Prior to such termination, however, the Party seeking the termination shall give the other Party written notice of the breach and of the Party's intent to terminate. If the breaching Party has not entirely cured the

breach within thirty (30) days of deemed or actual receipt of the notice, then the Party giving notice may terminate the Agreement at any time thereafter by giving written notice of termination stating the effective date of the termination. If the default is of such a nature that it cannot be completely remedied within such thirty (30) day period, this provision shall be deemed complied with if the breaching Party begins correction of the default within the thirty (30) day period and thereafter proceeds with reasonable diligence and in good faith to effect the remedy as soon as practicable.

- c. Neither Party shall be deemed to have waived any breach of this Agreement by the other Party except by an express waiver in writing. An express written waiver as to one breach shall not be deemed a waiver as to any other breach not expressly identified, even though the other breach is of the same nature as the one waived.
- d. Termination of this Agreement shall not prejudice any rights or obligations accrued to the Parties prior to such termination.

7. **Indemnification.**

- a. Subject to the limits of the Oregon Constitution and the Oregon Tort Claims Act or successor statute, the County agrees to indemnify, save harmless, and defend OLWS, its officers, elected officials, agents, and employees, from and against all costs, losses, damages, claims, or actions, and all expenses incidental to the investigation and defense thereof (including legal and other professional fees), arising out of or based upon damages or injuries to person or property caused by the negligent or willful acts of the County, its officers, elected officials, owners, employees, agents, or subcontractors, or anyone the County has a right to control.
- b. Subject to the limits of the Oregon Constitution and the Oregon Tort Claims Act or successor statute, OLWS agrees to indemnify, save harmless, and defend the County, its officers, elected officials, agents, and employees, from and against all costs, losses, damages, claims, or actions, and all expenses incidental to the investigation and defense thereof (including legal and other professional fees), arising out of or based upon damages or injuries to persons or property caused by the negligent or willful acts of OLWS, its officers, elected officials, owners, employees, agents, or subcontractors, or anyone OLWS has a right to control.

8. **Party Contacts.**

- a. Aaron Janicke or his designee will act as liaison for OLWS for this Agreement.

**Contact Information:**

Aaron Janicke, PE, Public Works Director/District Engineer

Oak Lodge Water Services  
Planning & Engineering  
Technical Services Department  
14611 SE River Road  
Oak Grove, OR 97267  
O: (503) 353-4212, C: (503) 756-7629  
Email: aaron.janicke@olws.org

- b. Bob Knorr or his designee will act as liaison for the County for this Agreement.

**Contact Information:**

Bob Knorr, FE, Project Manager  
Clackamas County Transportation Engineering  
150 Beaver Creek Road  
Oregon City, OR 97045  
O: (503) 742-4680, C: (503) 349-4171  
Email: rknorr@clackamas.us

- c. Either Party may change its contact information, or its invoice or payment address, by giving prior written notice thereof to the other Party at its then-current notice address.

9. **General Provisions.**

- a. **Oregon Law and Forum.** This Agreement shall be construed according to the laws of the State of Oregon, without giving effect to the conflict of law provisions thereof.
- b. **Applicable Law.** The Parties shall comply in all ways with applicable local, state, and federal ordinances, statutes, laws, and regulations, including but not limited to public contracting requirements under ORS chapters 279A and 279C. The County shall ensure that construction contracts associated with the Water Project include all legally required provisions.
- c. **Dispute Resolution.** Except in the event of a breach as set forth in Section 6, the Parties shall attempt to informally resolve any dispute concerning a Party's performance or decision under this Agreement, or regarding the terms, conditions, or meaning of this Agreement. The complaining Party shall provide the other Party with written notice describing the dispute. Upon receipt of such notice, the Parties' respective liaisons identified in Section 8 shall attempt in good faith to resolve the dispute informally. If the dispute is not resolved with fourteen (14) days after delivery of the written notice, the Parties may mutually agree to participate in mediation administered by a neutral third party. If the dispute is not resolved through informal discussions or mediation, either Party may pursue any available legal or equitable remedies.

- d. **Non-Exclusive Rights and Remedies.** Except as otherwise provided herein, the rights and remedies expressly afforded under the provisions of this Agreement shall not be deemed exclusive and shall be in addition to and cumulative with any and all rights and remedies otherwise available at law or in equity. The exercise by either Party of any one or more of such remedies shall not preclude the exercise by it, at the same or different times, of any other remedies for the same default or breach, or for any other default or breach, by the other Party.
- e. **Record and Fiscal Control System.** All payroll and financial records pertaining in whole or in part to this Agreement shall be clearly identified and readily accessible. Such records and documents should be retained for a period of three (3) years after receipt of final payment under this Agreement; provided that any records and documents that are the subject of audit findings shall be retained for a longer time until such audit findings are resolved.
- f. **Access to Records.** Each Party shall have access to the other Party's books, documents, papers, and records which are directly pertinent to this Agreement for the purpose of making audit, examination, excerpts, and transcripts for a period of three (3) years after final payment. Copies of applicable records shall be made available upon request. The cost of such inspection shall be borne by the inspecting Party.
- g. **Debt Limitation.** This Agreement is expressly subject to the debt limitation of Oregon counties set forth in Article XI, section 10, of the Oregon Constitution, and is contingent upon the appropriation of funds.
- h. **Severability.** If any provision of this Agreement is found to be unconstitutional, illegal, or unenforceable, this Agreement nevertheless shall remain in full force and effect, and the offending provision shall be stricken. The court or other authorized body finding such provision unconstitutional, illegal, or unenforceable shall construe this Agreement without such provision to give effect, to the maximum extent possible, to the intentions of the Parties.
- i. **Integration, Amendment, and Waiver.** Except as otherwise set forth herein, this Agreement constitutes the entire agreement between the Parties on the matter of the Road Project and the Water Project. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this Agreement. No waiver, consent, modification, or change of terms of this Agreement shall bind either Party unless in writing and signed by both Parties and all necessary approvals have been obtained. Such waiver, consent, modification, or change, if made, shall be effective only in the specific instance and for the specific purpose given. The failure of either Party to enforce any provision of this Agreement shall not constitute a waiver by such Party of that or any other provision.

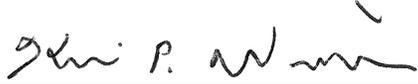
- j. **Interpretation.** The titles of the sections of this Agreement are inserted for convenience of reference only and shall be disregarded in construing or interpreting any of its provisions.
- k. **Independent Contractor.** Each Party shall be deemed an independent contractor for purposes of this Agreement. No representative, agent, employee, or contractor of one Party shall be deemed to be a representative, agent, employee, or contractor of the other Party for any purpose, except to the extent specifically provided herein. Nothing herein is intended, nor shall it be construed, to create between the Parties any relationship of principal and agent, partnership, joint venture, or any similar relationship, and each Party hereby specifically disclaims any such relationship.
- l. **No Third-Party Beneficiary.** Neither Party intends that this Agreement benefit, or create any right or cause of action in, or on behalf of, any person or entity other than the County or OLWS.
- m. **No Assignment.** Neither Party shall have the right to assign its interest in this Agreement (or any portion thereof) without the prior written consent of the other Party, which consent may be withheld for any reason. The benefits conferred by this Agreement, and the obligations assumed hereunder, shall inure to the benefit of and bind the successors to the Parties.
- n. **Nonwaiver of Government Rights.** By making this Agreement, the County is specifically not obligating itself or any other governmental entity with respect to any discretionary governmental action relating to the Road Project or the Water Project, or any associated development, operation, and use of the improvements to be constructed in connection therewith, including, but not limited to, condemnation, comprehensive planning, rezoning, variances, environmental clearances, or any other governmental approvals that are or may be required.
- o. **Counterparts.** This Agreement may be executed in any number of counterparts (electronic, facsimile, or otherwise), all of which, when taken together, shall constitute one agreement binding on all Parties, notwithstanding that all Parties are not signatories to the same counterpart. Each copy of this Agreement so executed shall constitute an original.
- p. **Authority.** Each Party represents that it has the authority to enter into this Agreement on its behalf, and the individual signatory for a Party represents that they have been authorized by that Party to execute and deliver this Agreement.
- q. **Necessary Acts.** Each Party shall execute and deliver to the others all such further instruments and documents as may be reasonably necessary to carry out this Agreement.

**IN WITNESS WHEREOF**, the Parties have executed this Agreement by the dates set forth beneath their names below.

Clackamas County

Oak Lodge Water Services

\_\_\_\_\_  
Craig Roberts  
Chair, Board of County Commissioners

  
\_\_\_\_\_  
Kevin Williams  
Chair, OLWS Board of Directors

\_\_\_\_\_  
Date

03/10/2026  
\_\_\_\_\_  
Date

## **EXHIBIT A**

### **SCOPE OF WORK**

The Water Project generally entails replacing existing water services with a new waterline. Specific elements of construction of the Water Project are detailed in the following construction plan sets.

# OATFIELD RD - JENNINGS AVE WATER MAIN REPLACEMENT

## CIVIL ENGINEERING CONSTRUCTION PLANS

### OWNER

OAK LODGE WATER SERVICES  
CONTACT: TESSIE PRENTICE, P.E.  
14496 SE RIVER ROAD  
OAK GROVE, OR 97267  
PH: (503) 353-4226

### ENGINEERING/SURVEYING FIRM

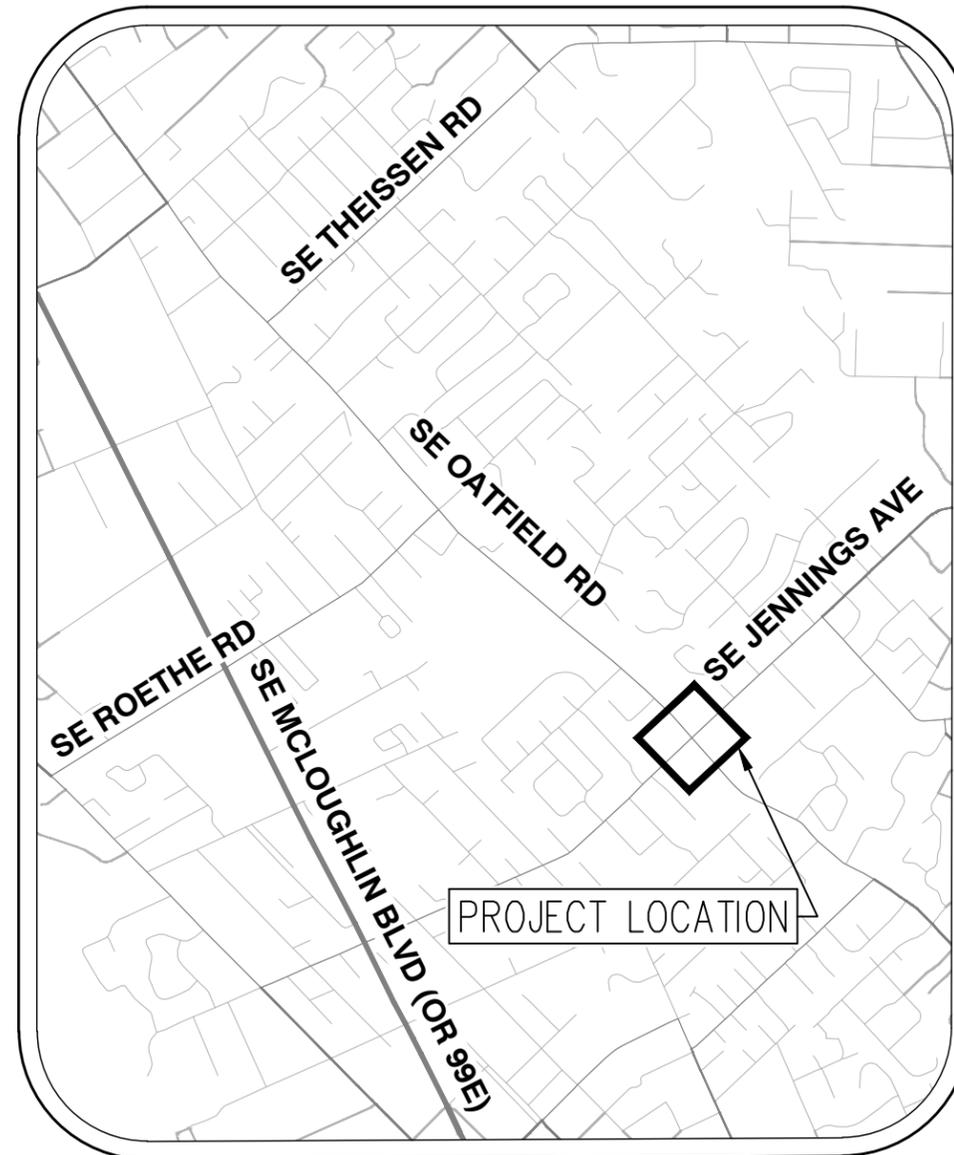
AKS ENGINEERING & FORESTRY, LLC  
CONTACT: DEZA IRVING, P.E.  
12965 SW HERMAN ROAD, SUITE 100  
TUALATIN, OR 97062  
PH: (503) 563-6151

### PROJECT LOCATION:

OAK LODGE WATER SERVICES  
SE OATFIELD ROAD AT SE JENNINGS AVENUE IN  
OAK GROVE, OREGON  
LATITUDE: 45°23'49.91"N;  
LONGITUDE: 122°36'1.95"W

### PROJECT PURPOSE:

INSTALL ±250 FEET OF 8" WATER MAIN TO REPLACE  
EXISTING WATER MAIN WITHIN PUBLIC RIGHT-OF-WAY.



**VICINITY MAP**

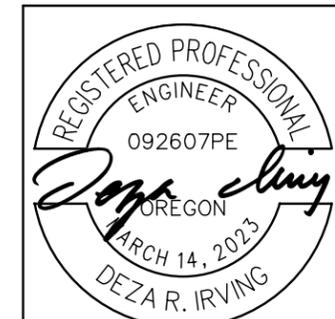
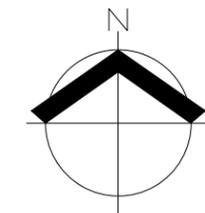
NOT TO SCALE

### ATTENTION EXCAVATORS:

OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS BUT NOT MORE THAN TEN BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 503-246-6699.



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RENEWS: JUNE 30, 2027



AKS ENGINEERING & FORESTRY, LLC  
12965 SW HERMAN RD, STE 100  
TUALATIN, OR 97062  
503.563.6151 WWW.AKS-ENG.COM  
ENGINEERING • SURVEYING • PLANNING • LANDSCAPE ARCHITECTURE

NO. REVISION

**OATFIELD RD - JENNINGS AVE**  
WATER MAIN REPLACEMENT  
OAK GROVE, OR

COVER SHEET WITH VICINITY MAP

DATE: 2/25/2026

DESIGNED BY: DRI

DRAWN BY: MSS/DIL

MANAGED BY: DRI

CHECKED BY: JPC

JOB NUMBER  
6799-20

SHEET

**W-00**

**GENERAL NOTES:**

1. THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE AND FOR INFORMATIONAL PURPOSES ONLY. HAVE ALL UTILITIES LOCATED BEFORE STARTING CONSTRUCTION. NOTIFY OLWS AND THE PROJECT ENGINEER OF ANY DISCREPANCIES BEFORE CONSTRUCTION. ADDITIONAL UNDERGROUND UTILITIES MAY EXIST. VERIFY LOCATION, SIZE, AND DEPTH OF EXISTING UTILITIES (POTHOLE BEFORE DIGGING IF NECESSARY). RECORD LOCATION OF EXISTING WATER MAINS AT CONNECTION POINTS ON "REDLINE DRAWINGS".
2. WHERE JOINT DEFLECTIONS ARE REQUIRED, DEFLECT JOINT PER MANUFACTURER'S RECOMMENDATION. MAXIMUM ALLOWED DEFLECTION AT ANY JOINT SHALL BE 3'.
3. ALL COUPLINGS AT CONNECTION POINTS SHALL BE ROMAC, OR APPROVED EQUIVALENT. FURNISH TRANSITION COUPLINGS AND GASKETS THAT FIT THE EXISTING WATER MAIN AS NEEDED.
4. INSTALL DROP-IN GASKETS BETWEEN FLG FITTINGS. PAINT ALL ZINC-COATED FLG BOLTS WITH UNDERCOAT.
5. INSTALL VALVES PER OLWS DWG NO 410, SHEET W-05.
6. INSTALL ±2-FT LONG PE PIPE SPOOL BETWEEN MJ FITTINGS.
7. INSTALL BLOWOFF ASSEMBLY PER OLWS DWG NO 413, SHEET W-07, AS NEEDED, FOR FILLING, FLUSHING, TESTING, AND DISINFECTING PROPOSED WATER MAIN BEFORE CONNECTIONS TO EXISTING WATER MAIN.

**WATER SYSTEM CONSTRUCTION NOTES:**

1. REFER TO OLWS STANDARD DRAWING NO 401 ON SHEET W-04 FOR WATER SYSTEM CONSTRUCTION NOTES.
2. THE CONTRACTOR SHALL COORDINATE WITH OLWS TO NOTIFY PROPERTY OWNERS OF WATER SYSTEM SHUTDOWN. AT A MINIMUM, NOTIFICATION MUST BE GIVEN AT THE FOLLOWING INTERVALS:
  - 1- MONTH INITIAL NOTIFICATION
  - 1-WEEK REMINDER
  - 48-HOUR REMINDER

**UTILITY CROSSING NOTE:**

EXISTING WATER MAIN ASSUMED TO BE IN CONFLICT WITH PROPOSED WATER MAIN (3 TO 3.5-FT OF COVER). POTHOLE EXISTING UTILITY CROSSINGS IN ADVANCE OF CONSTRUCTION. ADJUST PROPOSED WATER MAIN PROFILE AS NEEDED TO AVOID CONFLICT WHILE MAINTAINING A CONTINUOUSLY ASCENDING OR DESCENDING GRADE, AS APPLICABLE. IF RESULTING CLEARANCE BETWEEN CROSSING WATER MAINS IS 8" OR LESS, INSTALL CLSM BACKFILL PER DETAIL 1/W-09. NOTIFY OLWS AND ENGINEER IF RESULTING COVER OVER PROPOSED WATER MAIN MUST BE LESS THAN 3-FT. DO NOT PROCEED WITH INSTALLING THE PROPOSED WATER MAIN WITH SHALLOW COVER UNLESS APPROVED TO DO SO BY OLWS. IF CONFLICT CANNOT BE AVOIDED, COORDINATE WITH OLWS TO RELOCATE EXISTING WATER MAIN TO REMOVE CONFLICT.

**ABBREVIATIONS**

- DI = DUCTILE IRON
- DIP = DUCTILE IRON PIPE
- DWG = DRAWING
- FLG = FLANGE
- MJ = MECHANICAL JOINT
- OLWS = OAK LODGE WATER SERVICES
- PE = PLAIN END
- STD DWG = STANDARD DRAWING
- TVWD = TUALATIN VALLEY WATER DISTRICT

**LEGEND**

	EXISTING	PROPOSED		EXISTING	PROPOSED
DECIDUOUS TREE			STORM DRAIN CLEAN OUT		
CONIFEROUS TREE			STORM DRAIN CATCH BASIN		
FIRE HYDRANT			STORM DRAIN AREA DRAIN		
WATER METER			STORM DRAIN MANHOLE		
WATER VALVE			GAS METER		
SANITARY SEWER CLEAN OUT			GAS VALVE		
SANITARY SEWER MANHOLE			GUY WIRE ANCHOR		
SIGN			UTILITY POLE		
STREET LIGHT			POWER VAULT		
MAILBOX			POWER JUNCTION BOX		
			POWER PEDESTAL		
			COMMUNICATIONS VAULT		
			COMMUNICATIONS JUNCTION BOX		
			COMMUNICATIONS RISER		

	EXISTING	PROPOSED
RIGHT-OF-WAY LINE		
PROPERTY LINE		
CENTERLINE		
CURB		
EDGE OF PAVEMENT		
FENCE LINE		
GRAVEL EDGE		
POWER LINE		
OVERHEAD WIRE		
COMMUNICATIONS LINE		
FIBER OPTIC LINE		
GAS LINE		
STORM DRAIN LINE		
SANITARY SEWER LINE		
WATER LINE		
ABANDONED WATER MAIN		
EXISTING GROUND CONTOUR (2FT)		
EXISTING GROUND CONTOUR (10FT)		

DWG: 6799-20 C400 WAT\_JENNINGS | LAYOUT: W-01

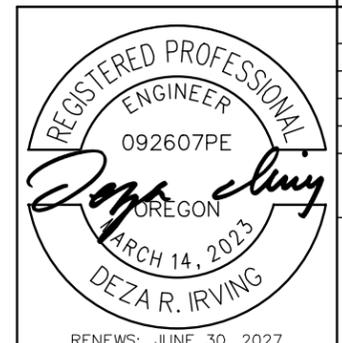


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NO.	REVISION

**OATFIELD RD - JENNINGS AVE**  
 WATER MAIN REPLACEMENT  
 OAK GROVE, OR

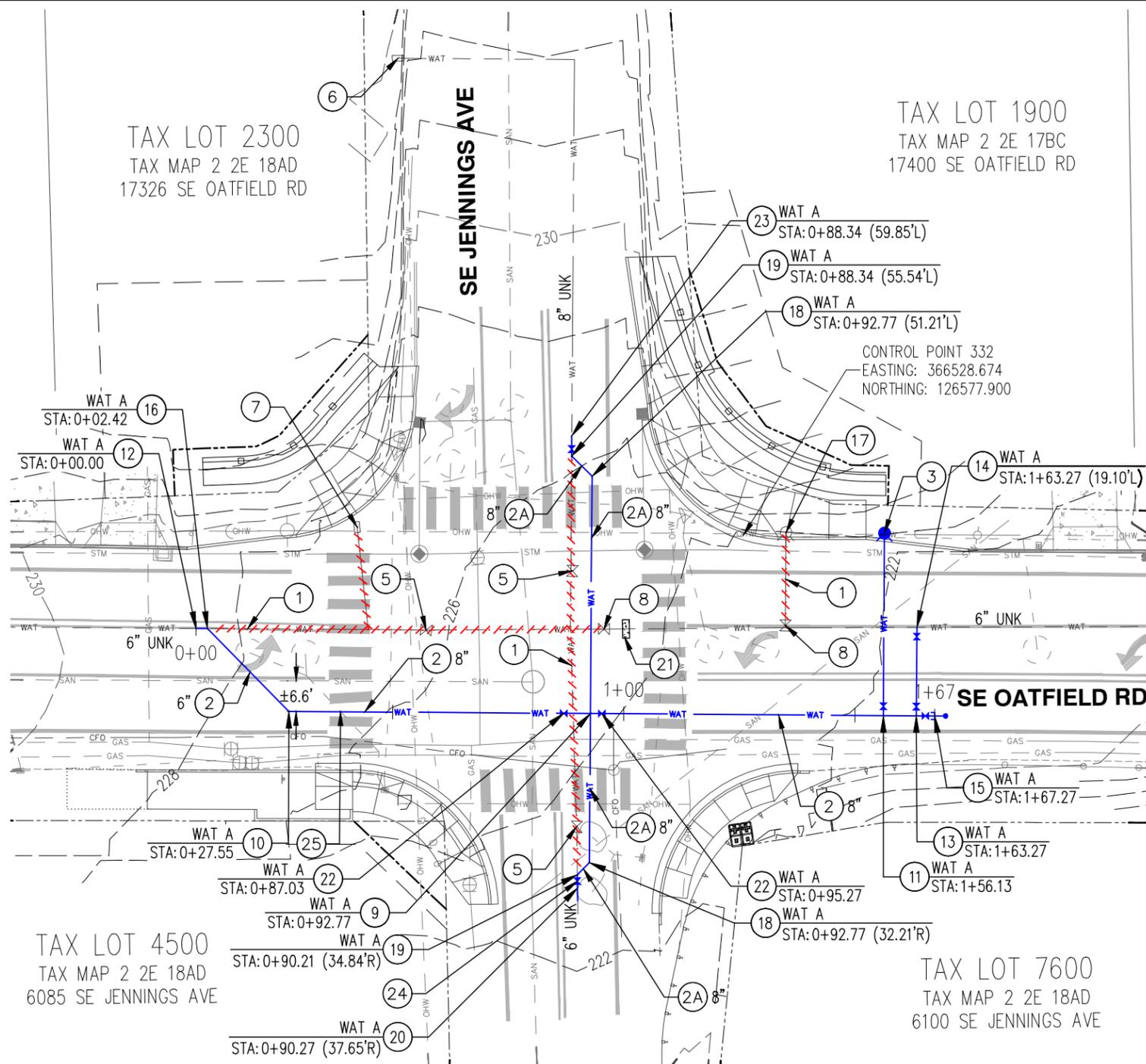
GENERAL CONSTRUCTION NOTES AND LEGEND



DATE: 2/25/2026
DESIGNED BY: DRI
DRAWN BY: MSS/DIL
MANAGED BY: DRI
CHECKED BY: JPC
JOB NUMBER 6799-20
SHEET <b>W-01</b>

RENEWS: JUNE 30, 2027

DWG: 6799-20 C400 WAT\_JENNINGS | LAYOUT: W-02

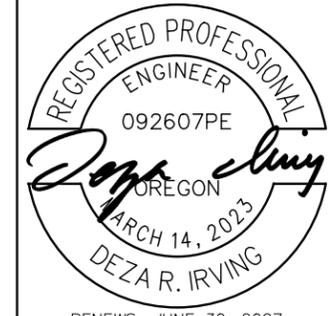
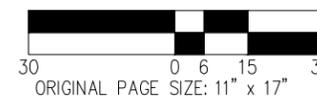


# WATER KEYED NOTES – W-02 AND W-03:

1. ABANDON IN PLACE EXISTING WATER MAIN UPON COMPLETION AND ACTIVATION OF NEW WATER MAIN. REMOVE EXISTING PIPE AND FITTINGS AS REQUIRED FOR CONSTRUCTION. CLOSE CUT ENDS OF PIPE TO BE ABANDONED IN PLACE PER DETAIL 2/W-10.
2. INSTALL DIP WATER MAIN (FULLY RESTRAINED, SIZE NOTED IN PLAN) WITH A MINIMUM OF 3.0-FT OF COVER. REFER TO PROFILE, SHEET W-03.
- 2A. INSTALL DIP WATER MAIN FOR SIDE STREET CONNECTION (FULLY RESTRAINED, SIZE NOTED IN PLAN) WITH A MINIMUM OF 3.0-FT OF COVER. DEFLECT PIPE VERTICALLY OR INSTALL VERTICAL BENDS AS NEEDED TO TIE-IN TO EXISTING WATER MAIN.
3. INSTALL FIRE HYDRANT ASSEMBLY PER OLWS DWG NO 411 AND 412, SHEET W-06.
4. DEFLECT JOINT AS NEEDED.
5. REMOVE EXISTING WATER VALVE AND VALVE BOX PER DETAIL 1/W-10.
6. OLWS TO INSTALL NEW WATER SERVICE TO SERVE 17326 SE OATFIELD RD BEFORE CLACKAMAS COUNTY PROJECT.
7. OLWS TO REMOVE EXISTING METER AND ABANDON IN-PLACE EXISTING WATER SERVICE BEFORE CLACKAMAS COUNTY PROJECT.
8. INSTALL MJ PLUG OR BLIND FLANGE, AS APPLICABLE, ON EXISTING WATER VALVE AFTER ACTIVATION OF NEW WATER MAIN.
9. INSTALL 8" DI MJ CROSS.
10. INSTALL 8" X 6" DI MJ REDUCER AND 6" DI MJ 45° BEND.
11. INSTALL 8" X 6" DI MJ X FLG TEE. INSTALL 6" DI FLG X MJ GATE VALVE ON THE EAST BRANCH OF THE TEE.
12. CONNECT TO EXISTING 6" WATER MAIN WITH 6" DI COUPLING (SHUTDOWN TIE-IN).
13. INSTALL 8" X 6" DI FLG TEE. INSTALL 8" DI FLG X MJ ADAPTER ON THE NORTH BRANCH OF THE TEE. INSTALL 6" DI FLG X MJ GATE VALVE ON THE EAST BRANCH OF THE TEE. INSTALL 8" DI FLG X MJ GATE VALVE ON THE SOUTH BRANCH OF THE TEE.
14. LIVE TAP EXISTING 6" WATER MAIN PER OLWS DWG NO 408, SHEET W-05, AND INSTALL 6" FLG X MJ VALVE ASSEMBLY.
15. INSTALL TEMPORARY BLOWOFF ASSEMBLY PER TVWD STD DETAIL 307, SHEET W-08.
16. INSTALL 6" DI MJ 45° BEND.
17. REMOVE AND SALVAGE FIRE HYDRANT. RETURN HYDRANT TO OLWS (14496 SE RIVER RD, OAK GROVE, OR 97267). CLOSE CUT END AND ABANDON IN PLACE HYDRANT LEAD PER DETAIL 2/W-10.
18. INSTALL 8" DI MJ 45° BEND.
19. INSTALL 8" DI MJ 45° BEND AND 8" DI MJ GATE VALVE.
20. CONNECT TO EXISTING 6" WATER MAIN WITH 8" X 6" DI MJ REDUCER AND 6" DI COUPLING (SHUTDOWN TIE-IN).
21. INSTALL STRADDLE BLOCK ON EXISTING WATER MAIN PER TVWD STD DWG NO 304, SHEET W-08. INSTALL TIE RODS TO CONNECT EXISTING VALVE TO THE STRADDLE BLOCK. ENSURE NO JOINTS BETWEEN STRADDLE BLOCK AND CONNECTION POINT. MINIMUM FIVE-DAY CURE REQUIRED BEFORE LOADING.
22. INSTALL 8" DI MJ GATE VALVE.
23. CONNECT TO EXISTING 8" WATER MAIN WITH 8" DI COUPLING (SHUTDOWN TIE-IN).
24. VALVE TO BE NORMALLY CLOSED AS BREAK BETWEEN PRESSURE ZONES, AFTER ACTIVATION OF NEW MAIN.
25. ENSURE RADAR DETECTION OF NORTH LEG OF THE INTERSECTION OF SE OATFIELD RD AND SE JENNINGS AVE IS OPERATIONAL BEFORE IMPACTING SIGNAL LOOPS TO INSTALL PROPOSED WATER MAIN.



SCALE: 1" = 30 FEET

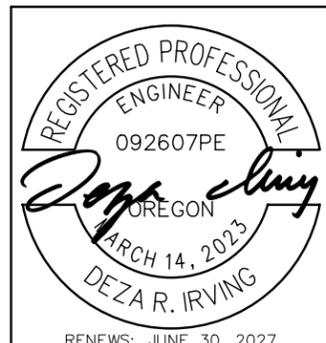
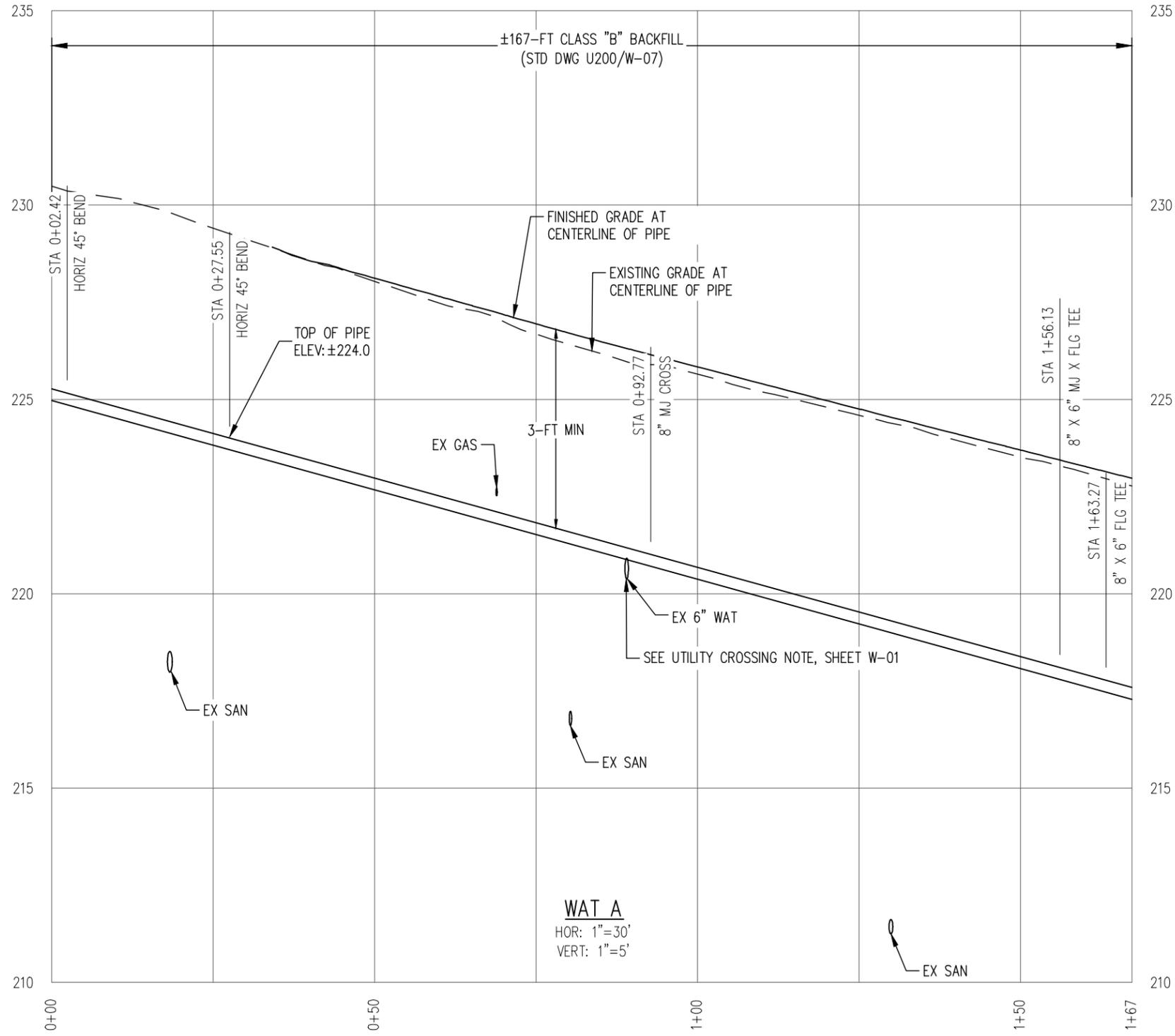


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NO.	REVISION

**OATFIELD RD - JENNINGS AVE**  
 WATER MAIN REPLACEMENT  
 OAK GROVE, OR  
 WAT A PLAN STA 0+00 TO 1+67

DATE: 2/25/2026
DESIGNED BY: DRI
DRAWN BY: MSS/DIL
MANAGED BY: DRI
CHECKED BY: JPC
JOB NUMBER 6799-20
SHEET <b>W-02</b>



DATE:	2/25/2026
DESIGNED BY:	DRI
DRAWN BY:	MSS/DIL
MANAGED BY:	DRI
CHECKED BY:	JPC
JOB NUMBER	6799-20
SHEET	W-03

**OATFIELD RD - JENNINGS AVE**  
 WATER MAIN REPLACEMENT  
 OAK GROVE, OR

WAT A PROFILE STA 0+00 TO 1+67

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**NOTES:**

- CONSTRUCTION OF IMPROVEMENTS SHALL BE IN ACCORDANCE WITH OAK LODGE WATER SERVICES (OLWS a.k.a. DISTRICT) DEVELOPER EXTENSION AGREEMENT (as applicable), DISTRICT STANDARD DETAILS AND THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, MOST CURRENT EDITION, AS ISSUED BY THE OR. STATE DEPT. OF TRANSPORTATION.
- A PRE-CONSTRUCTION CONFERENCE IS REQUIRED PRIOR TO CONSTRUCTION AND 48 HOURS ADVANCE NOTIFICATION OF THE LOCAL MUNICIPALITY, OLWS AND ALL AFFECTED UTILITY COMPANIES PRIOR TO THE ACTUAL START OF WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE PROVISIONS OF THE ROAD OPENING PERMIT AS ISSUED BY CLACKAMAS COUNTY.
- LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY, LOCATE AND PROTECT ALL UTILITIES WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING OR REPAIRING ANY UTILITIES DAMAGED DURING CONSTRUCTION. SHOW THESE UTILITIES ON THE AS-BUILTS. IF A UTILITY IS DAMAGED, CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANY IMMEDIATELY.
- ALL MAINS, SERVICES, VALVES, FITTINGS, AND OTHER APPURTENANCES MUST BE INSPECTED BY A DISTRICT REPRESENTATIVE BEFORE BURIAL.
- WATER MAIN TRENCH SECTION AND ALL EXCAVATED AREAS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE STANDARD DETAILS, WITH SECTION 01140.40 OF THE STANDARD SPECIFICATIONS, AND WITH CLACKAMAS COUNTY ROAD OPENING PERMIT. COMPACTION TESTING SHALL BE REQUIRED DURING BACKFILLING OPERATIONS WITHIN ALL ROADWAYS AND AT THE DISCRETION OF THE DISTRICT. IF TRENCH BACKFILL DOES NOT MEET COMPACTION REQUIREMENTS, CONTRACTOR SHALL EXCAVATE, RECOMPACT AND RETEST MATERIAL AT CONTRACTOR'S EXPENSE.
- RESTORATION OF DAMAGED ROAD SURFACING SHALL BE IN ACCORDANCE WITH CLACKAMAS COUNTY'S REQUIREMENTS. ALL OTHER AREAS SHALL BE RESTORED TO ORIGINAL CONDITION OR AS DIRECTED BY THE DISTRICT. THIS INCLUDES SHOULDERS, LANDSCAPING, WALLS, FENCES, DRIVEWAYS, AND OTHER IMPROVEMENTS.
- THE WATER MAIN SHALL BE INSTALLED WITH A MINIMUM OF 36" OF COVER. INSTALLATION OF MAIN WITH GREATER THAN 48" OF COVER SHALL BE ACCEPTABLE ONLY UNDER THE DIRECTION OF THE DISTRICT.
- ALL VALVES AND FITTINGS MUST BE MECHANICALLY RESTRAINED BY MEGALUG OR ROMAGRIP JOINT RESTRAINING GLANDS. ALL BELL AND SPIGOT JOINTS MUST BE RESTRAINED BY FIELD LOK GASKETS OR APPROVED EQUAL.
- A SANITARY GAP MUST BE PROVIDED BETWEEN THE EXISTING AND NEW WATER SYSTEMS. CONNECTION TO THE EXISTING WATER SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR ONLY AFTER COMPLETING OF AN ACCEPTABLE HYDROSTATIC PRESSURE TEST AND THE PIPELINE IS DISINFECTED AND RECEIPT OF APPROVAL OF WATER QUALITY TEST RESULTS FROM THE TESTING LAB.
- CONTRACTOR SHALL PERFORM PRESSURE TEST AT 180psi OR 1.5 TIMES THE NORMAL WORKING PRESSURE, WHICHEVER IS HIGHER, INCLUDING ON HYDRANTS AND SERVICE LINES. MAINLINE SHALL BE TESTED IN SECTIONS OF NO MORE THAN 1,500 FEET. PRESSURE SHALL BE MAINTAINED FOR 1 HOUR MINIMUM. ANY LEAKAGE IS UNACCEPTABLE.
- A PIPE PLUG SHALL BE USED ON EACH JOINT DURING INSTALLATION TO PROTECT AGAINST FLOODING OF THE PIPE.
- NO OTHER UTILITIES SHALL BE INSTALLED WITHIN 36" HORIZONTALLY OF ANY ACTIVE WATER LINE UNLESS OTHERWISE PRE-APPROVED BY THE DISTRICT.
- CONTRACTOR SHALL POthOLE A SUFFICIENT DISTANCE AHEAD TO VERIFY DEPTH OF ALL EXISTING WATER MAINS AND CROSSING UTILITIES PRIOR TO CONSTRUCTION AND CONNECTIONS AND TO ANTICIPATE ANY NECESSARY CHANGES IN FITTINGS OR ALIGNMENT.
- A PROPOSED CONSTRUCTION DRAWING MUST BE SUBMITTED TO THE DISTRICT BEFORE WATER SERVICE WILL BE PROVIDED.
- DEFLECTION AT PIPE AND FITTING JOINTS WILL BE ALLOWED UP TO 3.0" (11" OVER 18") OR AS RECOMMENDED BY MANUFACTURER, WHICHEVER IS LESS.
- CONTRACTOR SHALL ONLY DISPOSE OF WASTE MATERIAL AT SITES APPROVED BY CLACKAMAS COUNTY. STOCKPILE MATERIALS ONLY ON DISTRICT APPROVED SITES.
- HATCH NOTE:** ALL VAULT HATCHES 2'x2' OR LARGER SHALL BE HINGED, SPRING ASSIST OPENING, INCLUDE RECESSED PADLOCK HASP, DRAINABLE FRAME (C OR U CHANNEL WITH PIPE CONNECTION), H20 RATED MINIMUM, ALUMINUM OR GALVANIZED STEEL. IF HATCH WILL BE LOCATED IN A TRAVELED AREA (ROAD OR DRIVEWAY), SUBMIT MANUFACTURER'S STATEMENT THAT HATCH IS RATED FOR CONTINUOUS AND DELIBERATE H20 TRAFFIC SERVICE. HATCHES SHALL BE CAST INTO VAULT LID OR RISER.
- ALL PIPE 3" AND LARGER SHALL BE DUCTILE IRON (DI) MINIMUM CLASS 52 (12" AND SMALLER), EXCEPT WHERE TRENCH BACKFILL AND LOADING DICTATE A STRONGER CLASS PIPE OR IN AREAS WHERE PRESSURE EXCEEDS 150 PSI. ALL HYDRANT RUNS AND PIPING INSTALLED WITH MEGA-LUG TYPE JOINT RESTRAINTS SHALL BE DUCTILE IRON PIPE CLASS 52, NO EXCEPTIONS. PIPING INSTALLED WITHIN VAULTS OR OTHER EXPOSED AREAS SHALL BE DUCTILE IRON CLASS 53.
- CASINGS SHALL BE NEW STEEL, HDPE OR PVC; MATERIAL AND WALL THICKNESS AT THE DISCRETION OF THE DISTRICT. PIPE THROUGH CASINGS SHALL BE SUPPORTED WITH RUNNERS SPACED NO FARTHER THAN 8 FEET APART. RUNNERS SHALL BE MANUFACTURED PRODUCTS (PSI, CALPICO, OR APPROVED EQUAL), NO BLOCKS AND STRAPS. CASING ENDS SHALL BE CAPPED WITH MANUFACTURED CASING END SEALS.
- WATER MAINS AND SERVICES MUST BE INSTALLED A MINIMUM CLEAR DISTANCE OF 5 FEET HORIZONTALLY FROM SANITARY SEWERS.
- CONTRACTORS WORKING WITHIN THE RIGHT OF WAY OR ON EXISTING DISTRICT INFRASTRUCTURE SHALL BE LICENSED, BONDED AND HAVE EXPERIENCE INSTALLING PUBLIC DOMESTIC WATER SYSTEMS AND BE PREPARED TO PRESENT EXAMPLES OF 5 SUCH PROJECTS UPON REQUEST BY THE DISTRICT.

		<b>WATER SYSTEM CONSTRUCTION NOTES</b>		DRAWING NO. <b>401</b>																										
<b>WATER SYSTEM STANDARD DRAWING</b>		<table border="1"> <thead> <tr> <th>NO.</th> <th>REVISIONS</th> <th>DATE</th> <th>BY</th> <th>APPROVED</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>MSC NOTES</td> <td>02/18/2020</td> <td>HSD</td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		NO.	REVISIONS	DATE	BY	APPROVED	1	MSC NOTES	02/18/2020	HSD		2					3					4					DATE: 9/12/2017 SCALE: NTS	
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OATFIELD RD - JENNINGS AVE WATER MAIN REPLACEMENT OAK GROVE, OR		WATER CONSTRUCTION DETAILS	
NO. REVISION		DATE: 2/25/2026 DESIGNED BY: DRI DRAWN BY: MSS/DIL MANAGED BY: DRI CHECKED BY: JPC JOB NUMBER: 6799-20 SHEET:	
W-04		RENEWS: JUNE 30, 2027	

DWG: 6799-20 C000 DETAILS\_JENNINGS | LAYOUT: W-05

**STAINLESS STEEL MECHANICAL JOINT TAPPING SLEEVE WITH DROP-IN STAINLESS STEEL BOLTS AND NUTS, JCM 432 OR APPROVED EQUAL.**

**MJ WITH MEGALUG**

**GATE VALVE FL x MJ**

**EXISTING MAIN**

**CONCRETE THRUST BLOCK**

**LIVE TAP**

**MJ WITH MEGALUG, TYP**

**GATE VALVE FL x MJ**

**MJ x FL TEE**

**EXISTING MAIN**

**CUT-IN-TEE**

**MJ SLEEVE WITH MEGALUGS BOTH ENDS**

**EXISTING MAIN**

**NOTES:**

- TAPPING SLEEVE SHALL BE STAINLESS STEEL MECHANICAL SLEEVE.
- CONNECTIONS TO EXISTING MAIN SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE DISTRICT AND WILL NOT BE ALLOWED ON FRIDAYS, HOLIDAYS OR WEEKENDS. VALVES SHALL BE OPERATED BY DISTRICT ONLY.
- 11 MIL. PLASTIC OR CONSTRUCTION FABRIC SHALL BE WRAPPED AROUND PIPE AND FITTINGS BEFORE THRUST BLOCK IS POURED
- SUPPORT VALVE AND SLEEVE CONTINUOUSLY THROUGH INSTALLATION.
- TEST TAPPING SLEEVE PRIOR TO CUTTING EXISTING MAIN.

<b>OAK LODGE WATER SERVICES</b>		<b>TAPPING AND CUT-IN METHODS</b>		DRAWING NO. <b>408</b>	
NO.	REVISIONS	DATE	BY	APPROVED	DATE: 7/7/2017
1	BACKFILL REMOVED, SLEEVE MATERIAL TO SST	1/23/2020	HSD		SCALE: NTS
2					
3					
4				DISTRICT ENGINEER	

**INSTALLATIONS IN ROADWAY**

**INSTALLATIONS OUT OF ROADWAY**

**CAST IRON VALVE BOX, MODEL NO. 940 18" VALVE BOX, VBST940-18W**

**REPLACE AC 3" MIN DEPTH OR EXIST THICKNESS, WHICHEVER IS GREATER**

**6" MIN 12" MAX**

**INSTALL VALVE PLUMB AND VERTICAL. PRETEST CLUSTERS PRIOR TO INSTALLATION.**

**GATE OR BUTTERFLY VALVE (GATE VALVE SHOWN)**

**SET LID BETWEEN 0" LEVEL TO 1/4" BELOW FINISHED PAVING**

**ADJUST BOX TO MATCH GRADE**

**1'-6" x 1'-6" x 4" 3000 PSI CONC RESTING PAD**

**RESTORE GROUND SURFACE - SEE SPECIFICATIONS**

**WATERED AND COMPACTED 6" MIN 3/4"-0" CRUSHED ROCK, AROUND VALVE BOX AND BELOW VALVE**

**VALVE OPERATING NUT EXTENSION - SEE DETAIL**

**6" SCH. 40 PVC, LENGTH AS REQUIRED, INSTALL STRAIGHT TO PREVENT BINDING OF OPERATOR.**

**ISOLATION VALVE DETAIL**

**OPERATING NUT EXTENSION**

**ISOLATION VALVE NOTES:**

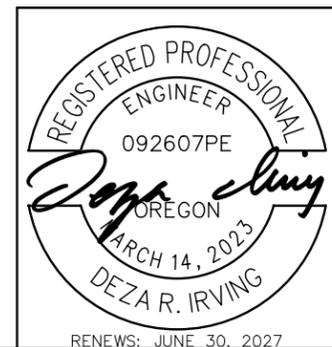
- VALVES SHALL BE INSTALLED AT NO MORE THAN 500 FT SPACING REGARDLESS OF MAIN SIZE.
- ISOLATION VALVES 2" AND LARGER ARE TO BE NRS RESILIENT SEATED GATE VALVES MEETING AWWA C509 OR C515. VALVES 14" AND LARGER SHALL BE BUTTERFLY VALVES MEETING AWWA C504.
- BACKFILL AROUND VALVE BOXES SHALL BE COMPACTED USING A JUMPING JACK.
- STAR PIPE PRODUCTS MODEL NUMBERS SHOWN. OWNER APPROVED EQUALS WILL BE ALLOWED.
- ALL VALVES SHALL BE SUPPLIED WITH VALVE BOX AND LID. LID SHALL HAVE RECESSED HANDLE.
- ALL VALVES THAT WILL BE PART OF A CUT-IN CONNECTION OR HOT TAP ON AN EXISTING MAIN SHALL BE PRE-PRESSURE TESTED ON BOTH SIDES OF THE SEAT PRIOR TO INSTALLATION.

**OPERATING NUT EXTENSION NOTES:**

- EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS 5 FEET OR DEEPER BELOW FINISHED GRADE. EXTENSIONS ARE TO BE A MINIMUM OF ONE (1) FOOT LONG, ONLY ONE EXTENSION PER VALVE. ALL EXTENSIONS ARE TO BE SIZED AS NOTED AND MADE OF STEEL TO ASTM A36 A40 A120.
- FOR EXTENSIONS LONGER THAN 4 FEET AND/OR VALVES LARGER THAN 12" DIAMETER, BAR SHALL BE 1/4" DIAMETER.

**OPERATING NUT EXTENSION DETAIL:** 1/3 TOTAL LENGTH, 2" SQUARE, 4.25" DIA., 3/8" MIN. THICKNESS, 1" DIA SOLID METAL STOCK, LENGTH AS REQUIRED, 3/8" MIN. THICKNESS, 3/8" SET SCREW, 2.25" INSIDE MEASUREMENT 2.25" DEPTH

<b>OAK LODGE WATER SERVICES</b>		<b>ISOLATION VALVE DETAILS</b>		DRAWING NO. <b>410</b>	
NO.	REVISIONS	DATE	BY	APPROVED	DATE: 9/12/2017
1	SPACING AND DEPTH REQ'D	05/18/2020	HSD		SCALE: NTS
2	SPACING AND DEPTH REQ'D	10/14/2020	HSD		
3	REVISED MANUFACTURER, EXTENSION REQ'D	7/25/2024	TAP		
4					



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**OATFIELD RD - JENNINGS AVE**  
WATER MAIN REPLACEMENT  
OAK GROVE, OR

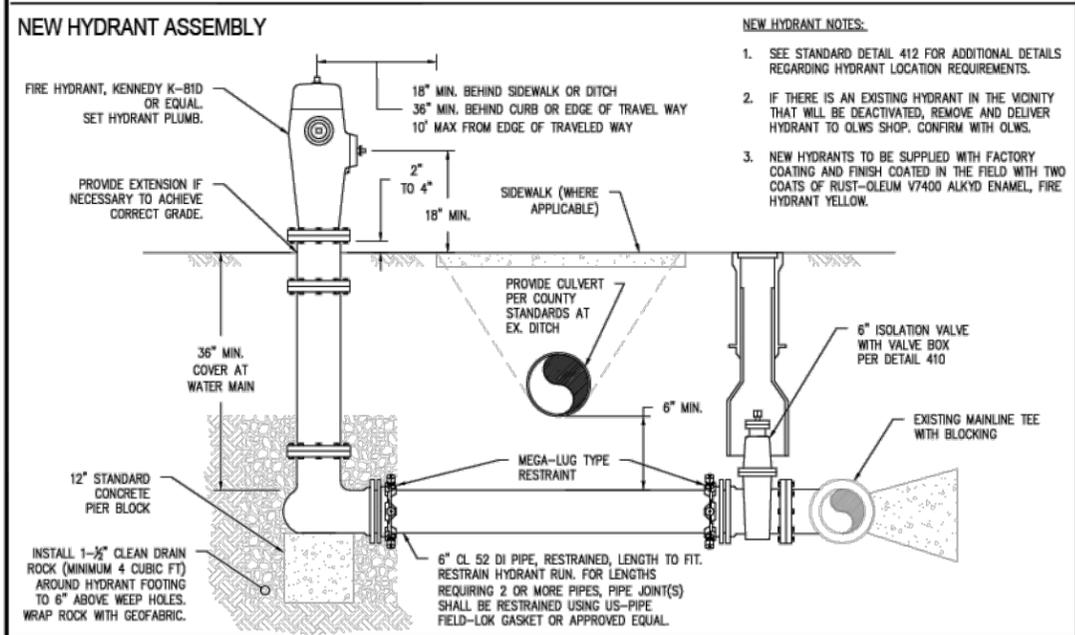
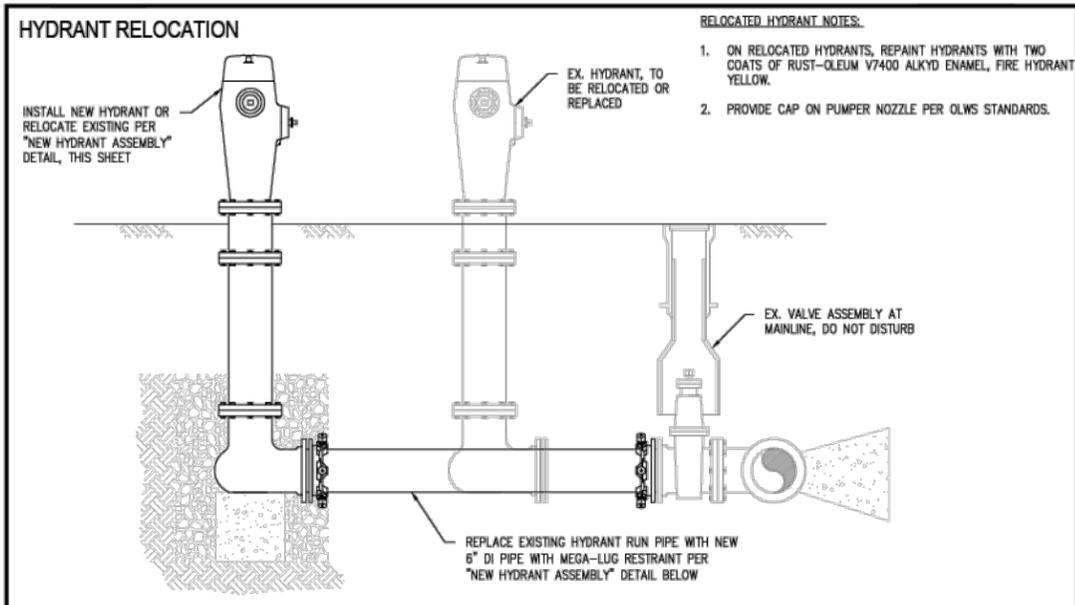
WATER CONSTRUCTION DETAILS

NO. REVISION

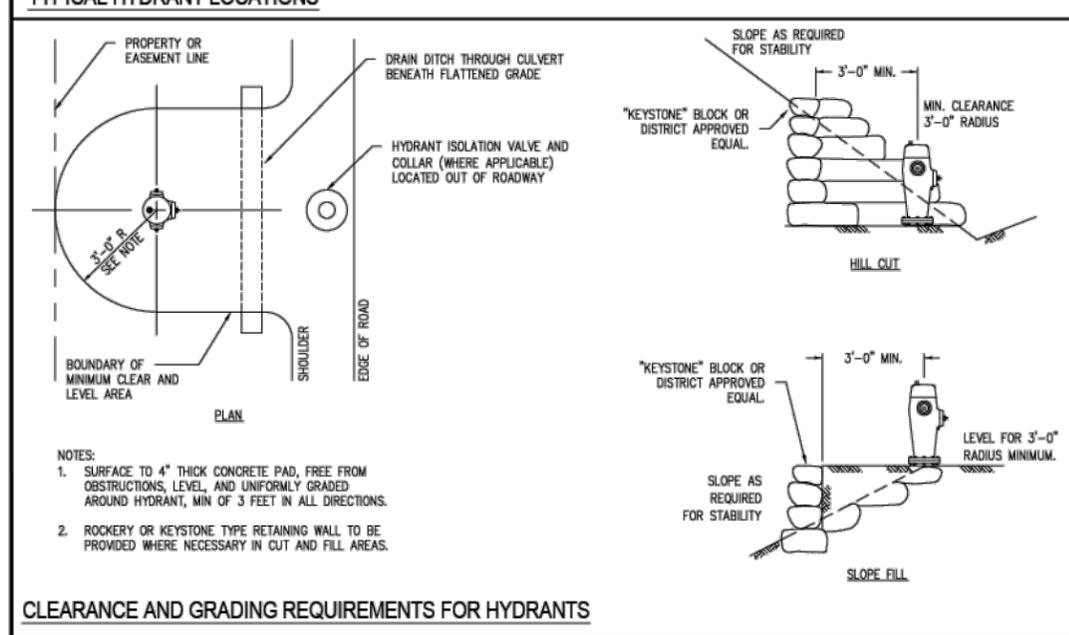
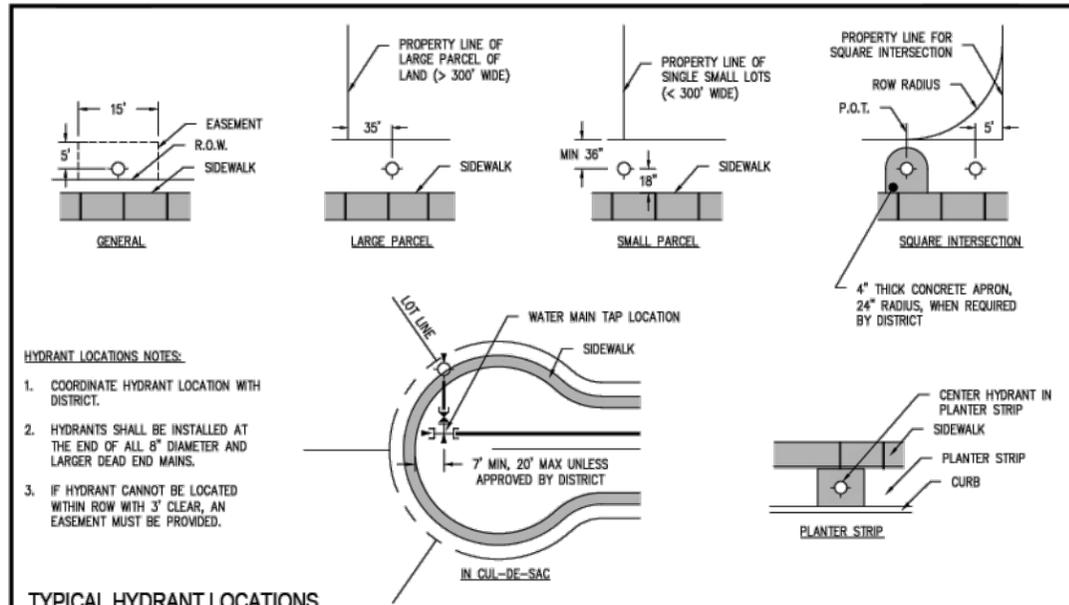
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DESIGNED BY: DRI  
DRAWN BY: MSS/DIL  
MANAGED BY: DRI  
CHECKED BY: JPC  
JOB NUMBER: 6799-20  
SHEET: W-05

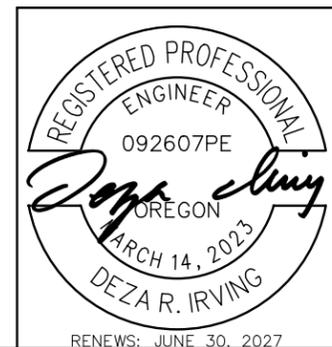
DWG: 6799-20 C000 DETAILS\_JENNINGS | LAYOUT: W-06



<b>OAK LODGE WATER SERVICES</b>		<b>FIRE HYDRANT ASSEMBLY</b>		DRAWING NO.
<b>WATER SYSTEM STANDARD DRAWING</b>				<b>411</b>
NO.	REVISIONS	DATE	BY	DATE: 9/12/2017
1	MINOR DRAIN ROCK AND BLOCK CHANGES	12/2/2020	HSD	SCALE: NTS
2	CHANGE TO FH MANUFACTURER	7/24/2024	TAP	
3				
4				



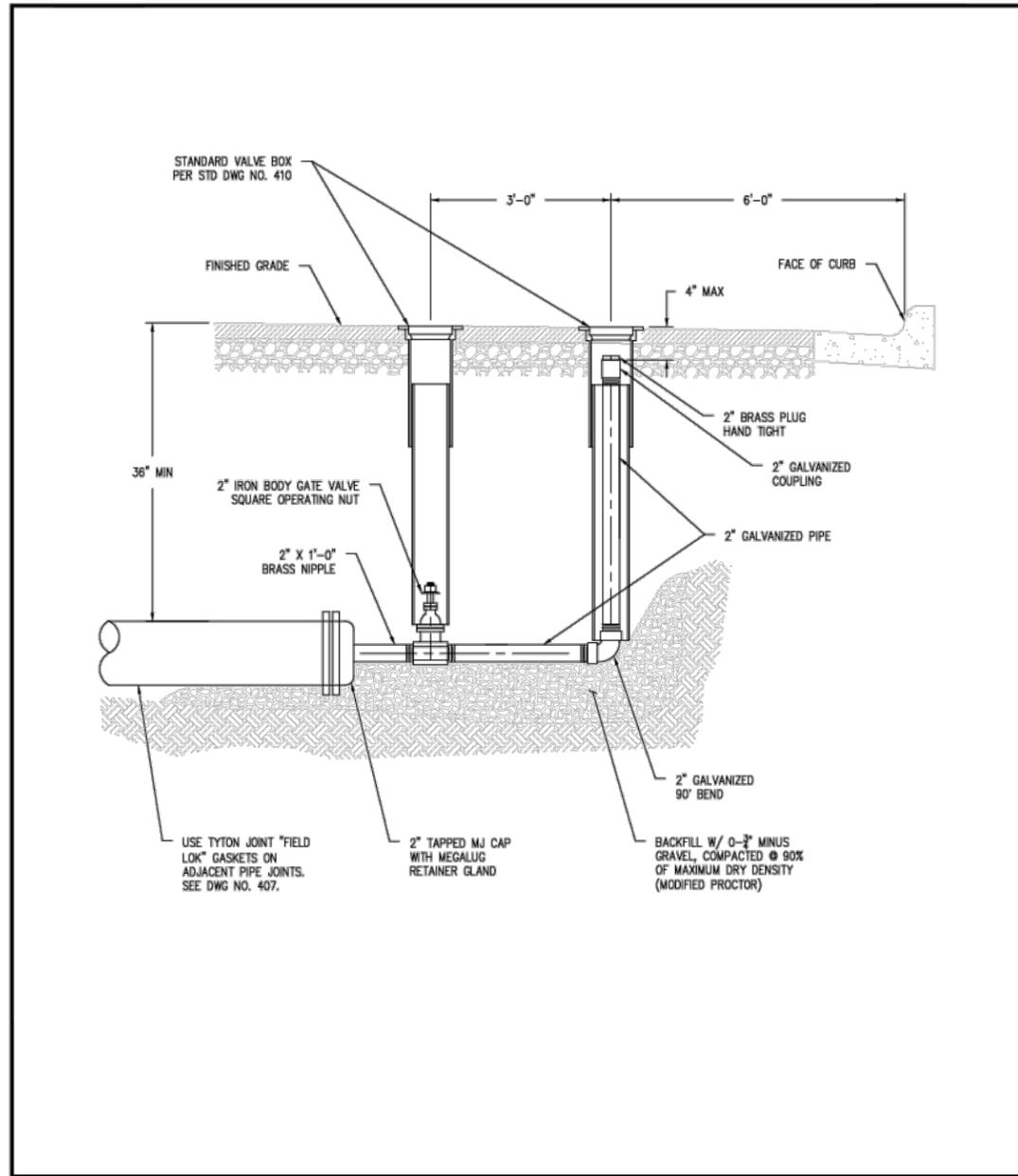
<b>OAK LODGE WATER SERVICES</b>		<b>FIRE HYDRANT LOCATIONS</b>		DRAWING NO.
<b>WATER SYSTEM STANDARD DRAWING</b>				<b>412</b>
NO.	REVISIONS	DATE	BY	DATE: 07/07/2017
1	REARRANGED AND ADDED HEADINGS	02/18/2020	HSD	SCALE: NTS
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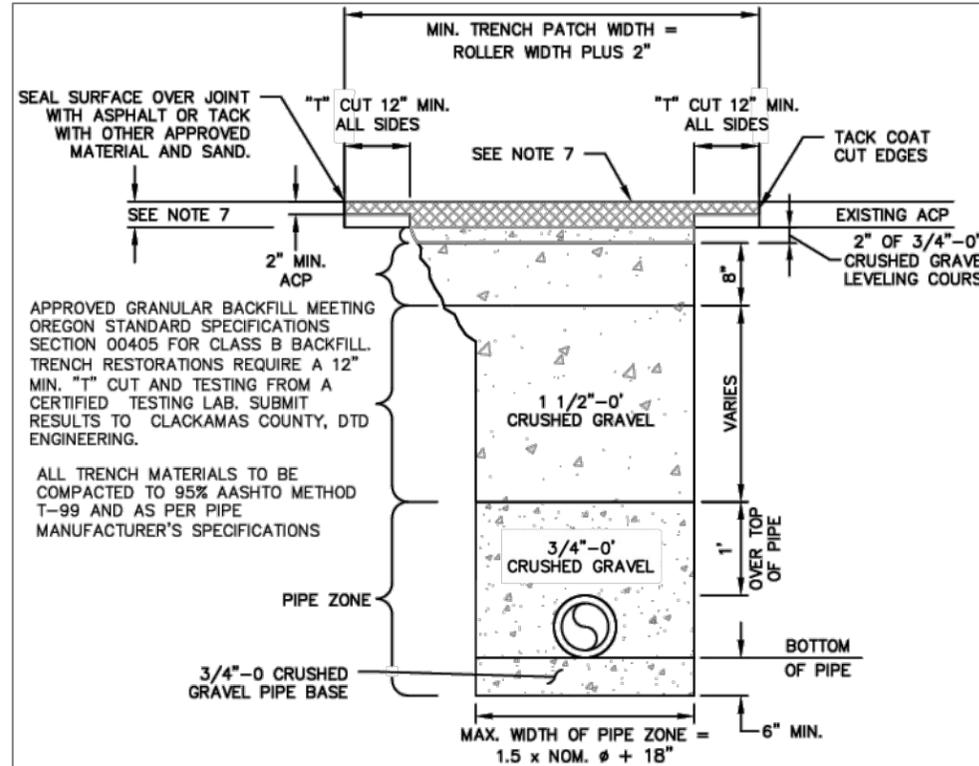
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NO. REVISION					
<b>OATFIELD RD - JENNINGS AVE</b>					
WATER MAIN REPLACEMENT OAK GROVE, OR					
WATER CONSTRUCTION DETAILS					
DATE: 2/25/2026					
DESIGNED BY: DRI					
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CHECKED BY: JPC					
JOB NUMBER 6799-20					
SHEET					
<b>W-06</b>					
RENEWS: JUNE 30, 2027					



		<b>BLOWOFF ASSEMBLY</b>		DRAWING NO. <h1>413</h1>																					
WATER SYSTEM STANDARD DRAWING		<table border="1"> <thead> <tr> <th>NO.</th> <th>REVISIONS</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		NO.	REVISIONS	DATE	BY	1				2				3				4				DATE: 09/12/2017 SCALE: NTS	
NO.	REVISIONS	DATE	BY																						
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1. THE USE OF U200 SHALL BE DETERMINED BY SECTION 710.8. THE USE OF CONTROL DENSITY FILL SHALL BE DETERMINED BY SECTION 710.8. WHEN USED, REFER TO STANDARD DRAWING U250A.
2. THE EXISTING ACP SHALL BE SAWCUT THROUGH ENTIRE ACP SECTION PRIOR TO EXCAVATION.
3. BACKFILL IN PIPE ZONE SHALL BE PLACED IN MAXIMUM 6" LIFTS AND COMPACTED.
4. TRENCH BACKFILL SHALL BE PLACED IN MAXIMUM 12" LIFTS TO 95% DENSITY.
5. SAWCUT EDGES TO BE TACKED WITH HOT LIQUID ASPHALT.
6. WORK RESULTING IN IRREGULAR TRENCH WIDTHS OR INCIDENTAL DAMAGE TO THE ROADWAY SURFACE WILL REQUIRE ANOTHER SAWCUT AND SUBSEQUENT REMOVAL OF ACP. THE SAWCUT LINE SHALL BE APPROVED BY CLACKAMAS COUNTY PRIOR TO THE PERMANENT ACP REPAIR.
7. RESTORE ACP SECTION WITH 4" OF HMA LEVEL 3, PG 64-22, 1/2" DENSE GRADED AGGREGATE OR AN EQUAL THICKNESS OF THAT REMOVED WHICHEVER IS GREATER. ASPHALTIC CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF OREGON STANDARD SPECIFICATIONS SEC. 00744.40. ACP TO BE PLACED IN LIFTS BETWEEN 2 INCHES AND 3 INCHES IN THICKNESS.
8. ACP JOINTS/SEAMS SHALL BE SEALED WITH HOT LIQUID ASPHALT, OR APPROVED EQUAL, AND SANDED.
9. CLACKAMAS COUNTY SHALL BE NOTIFIED FOR INSPECTION.
10. TRENCHES SHALL BE PROTECTED WITH STEEL PLATING CAPABLE OF CARRYING A MINIMUM OF H-20 LOADING. EACH PLATE SHALL BE SECURED IN PLACE WITH APPROACH RAMPS OF COLD MIX A.C. LIGHTED BARRICADES SHALL BE MOUNTED WITH BUMP AND CONSTRUCTION AHEAD SIGNS. REFLECTIVE SHEETING FOR NIGHT VISION SHALL BE PLACED AHEAD OF AND ADJACENT TO THE PLATING.
11. TRAFFIC SIGNAL DETECTOR LOOPS IN SIGNALIZED INTERSECTIONS, DAMAGED AS A RESULT OF WORK DONE UNDER THE PERMIT, SHALL BE REPLACED IN THEIR ENTIRETY. NO SPLICING OF TRAFFIC LOOPS IS ALLOWED. ANY TRAFFIC LOOP THAT IS TUNNELED UNDER WILL REQUIRE A FULL DEPTH TRENCH BACKFILL WITH FLUID 150 PSI MAXIMUM STRENGTH CDF (CONTROLLED DENSITY FILL) A MINIMUM WIDTH OF 18" ON EACH SIDE OF THE TRAFFIC LOOP WIRE. ANY TRAFFIC LOOP WORK DONE UNDER THIS PERMIT WILL BE WARRANTED FOR A PERIOD OF TWO YEARS FROM THE DATE OF SUCH WORK.
12. COMPLY WITH SMOOTHNESS REQUIREMENTS OF ODOT STANDARD SPECIFICATIONS.

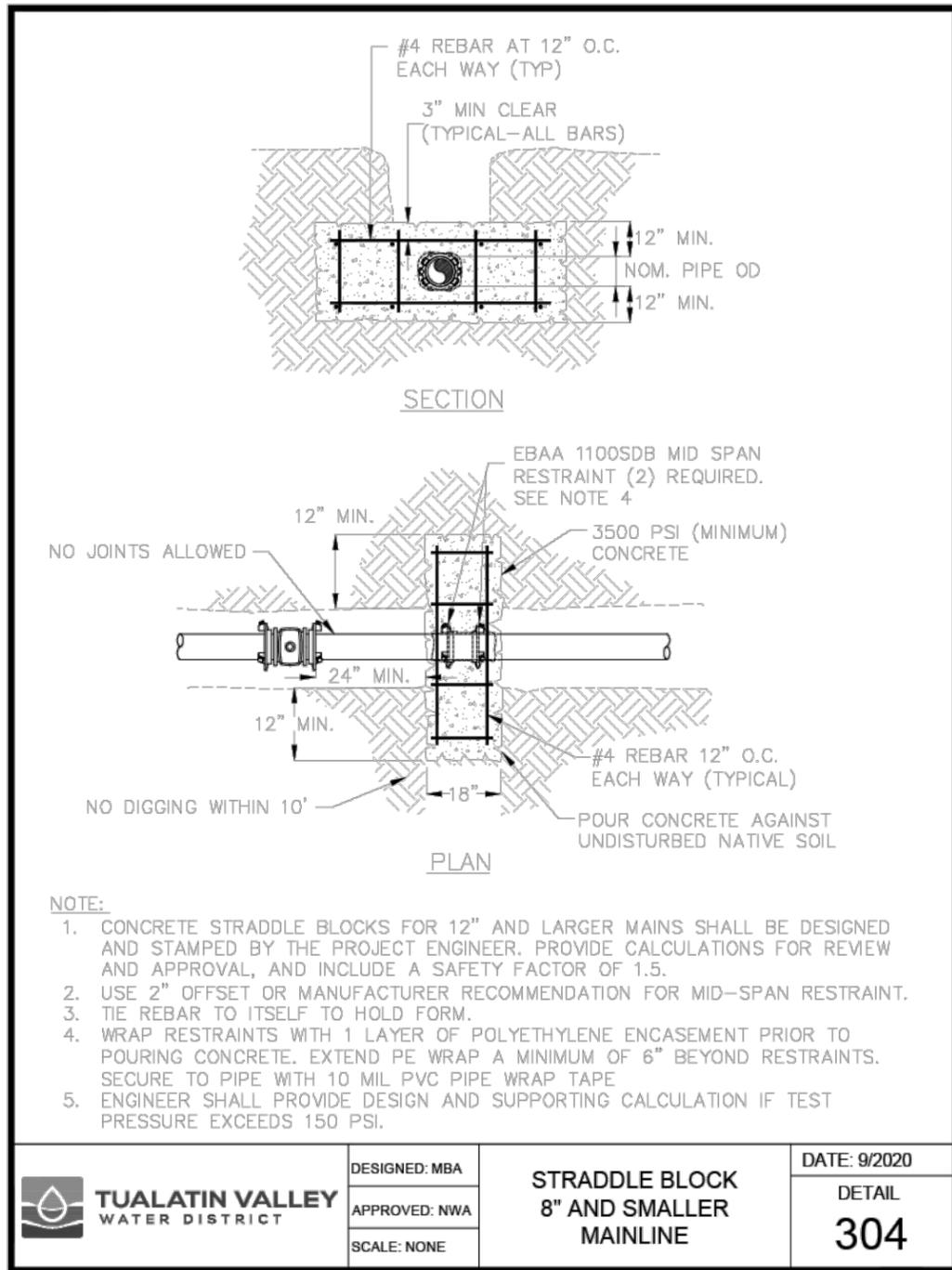
<table border="1"> <thead> <tr> <th>REVISION</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>TEE-CUT ADDED</td> <td>05/18/DC</td> <td></td> </tr> <tr> <td>TEE-CUT MOD.</td> <td>09/18/RM</td> <td></td> </tr> <tr> <td>REVISED</td> <td>12/19/AAR</td> <td></td> </tr> </tbody> </table>	REVISION	DATE	BY	TEE-CUT ADDED	05/18/DC		TEE-CUT MOD.	09/18/RM		REVISED	12/19/AAR		DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT 150 BEAVERCREEK ROAD OREGON CITY, OR 97045		APPROVAL DATE: 6/1/2020 SCALE: N.T.S. STANDARD TRENCH AND BACKFILL U200	STANDARD DRAWING
REVISION	DATE	BY														
TEE-CUT ADDED	05/18/DC															
TEE-CUT MOD.	09/18/RM															
REVISED	12/19/AAR															

DATE: 2/25/2026
DESIGNED BY: DRI
DRAWN BY: MSS/DIL
MANAGED BY: DRI
CHECKED BY: JPC
JOB NUMBER: 6799-20
SHEET: W-07

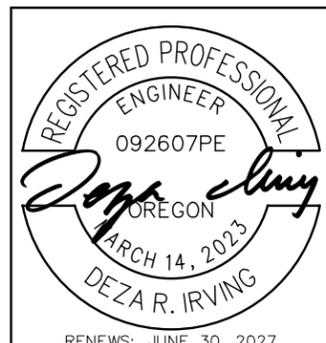
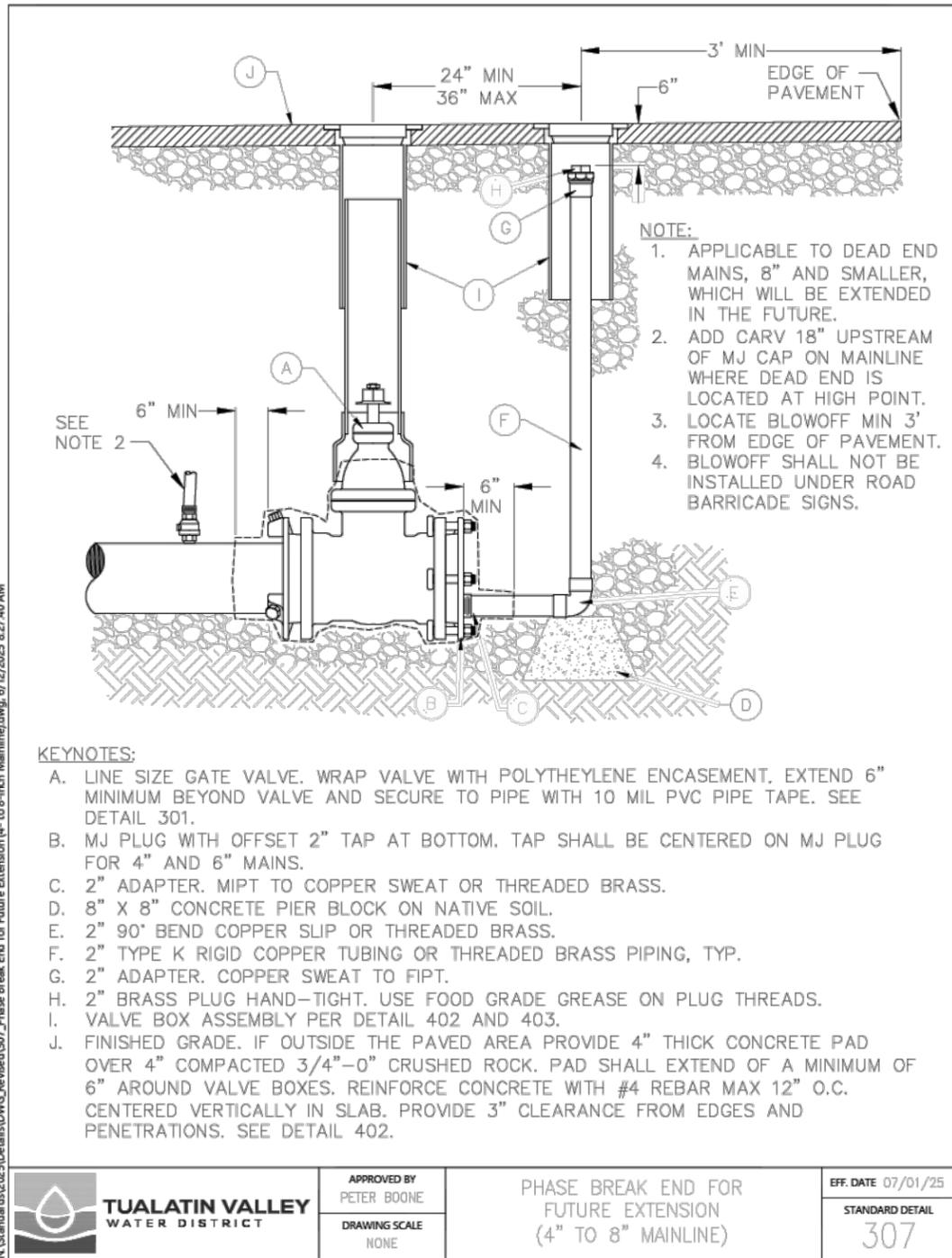
AKS ENGINEERING & FORESTRY, LLC  
 12965 SW HERMAN RD, STE 100  
 TUALATIN, OR 97062  
 503.563.6151 WWW.AKS-ENG.COM  
 ENGINEERING • SURVEYING • PLANNING • LANDSCAPE ARCHITECTURE

NO.	REVISION

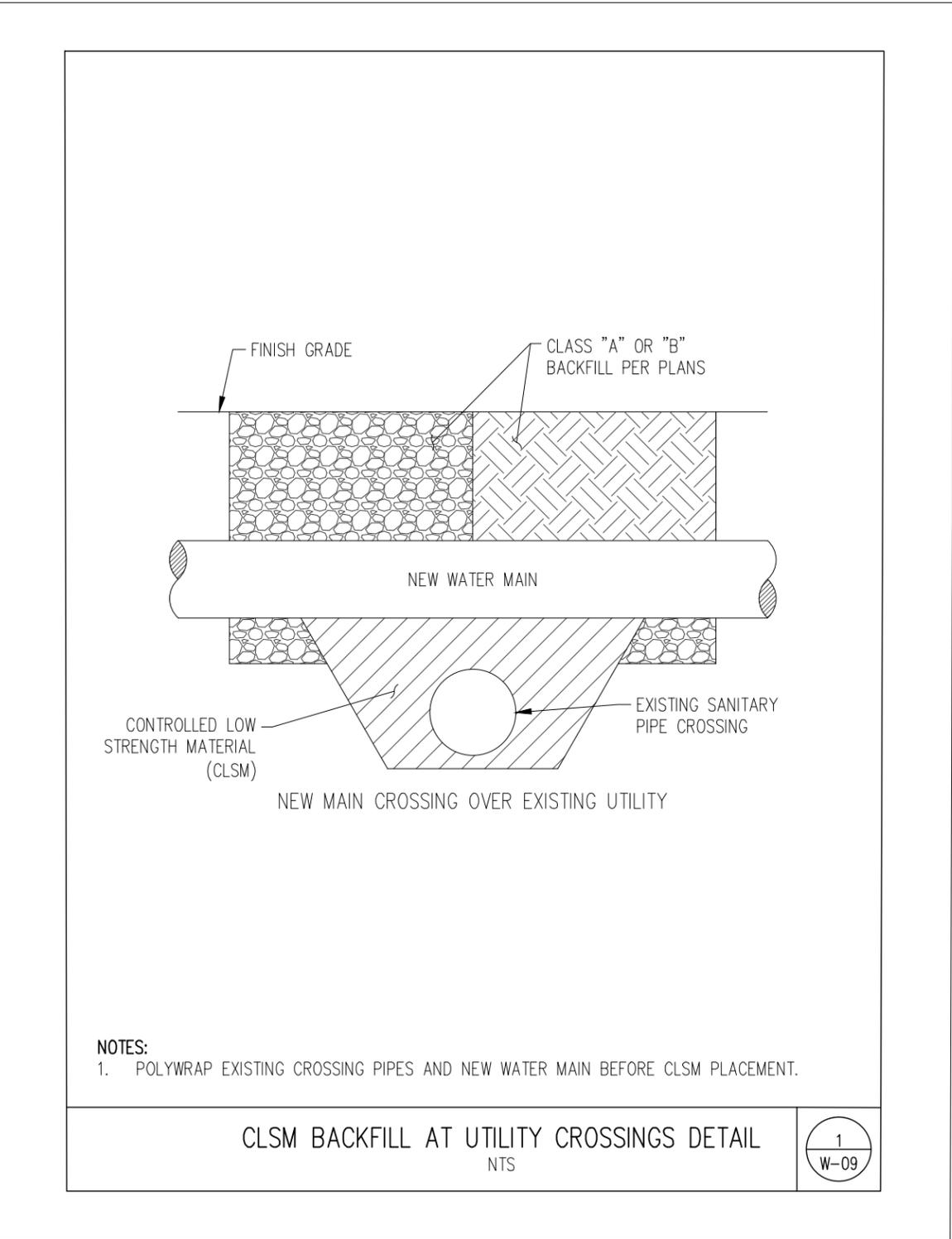
**OATFIELD RD - JENNINGS AVE**  
 WATER MAIN REPLACEMENT  
 OAK GROVE, OR  
 WATER CONSTRUCTION DETAILS



N:\Standards\2025\Details\DWG\_Revise\307\_Phase Break End for Future Extension (4- to 8-inch Mainline).dwg, 6/12/2025 8:27:40 AM

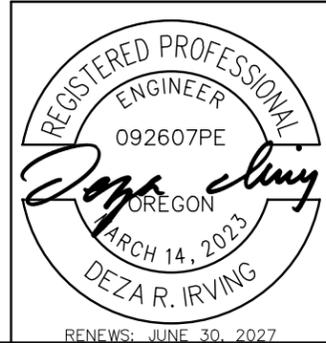


<p><b>AKS</b></p>	<p>AKS ENGINEERING &amp; FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM</p>	<p>ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE FORESTRY • PLANNING</p>
<p><b>OATFIELD RD - JENNINGS AVE</b></p> <p>WATER MAIN REPLACEMENT OAK GROVE, OR</p>	<p>NO. REVISION</p>	<p>WATER CONSTRUCTION DETAILS</p>
<p>DATE: 2/25/2026</p>	<p>DESIGNED BY: DRI</p> <p>DRAWN BY: MSS/DIL</p> <p>MANAGED BY: DRI</p> <p>CHECKED BY: JPC</p> <p>JOB NUMBER 6799-20</p> <p>SHEET</p>	<p><b>W-08</b></p>
<p>RENEWED: JUNE 30, 2027</p>		



CLSM BACKFILL AT UTILITY CROSSINGS DETAIL  
NTS

1  
W-09



**OATFIELD RD - JENNINGS AVE**  
WATER MAIN REPLACEMENT  
OAK GROVE, OR

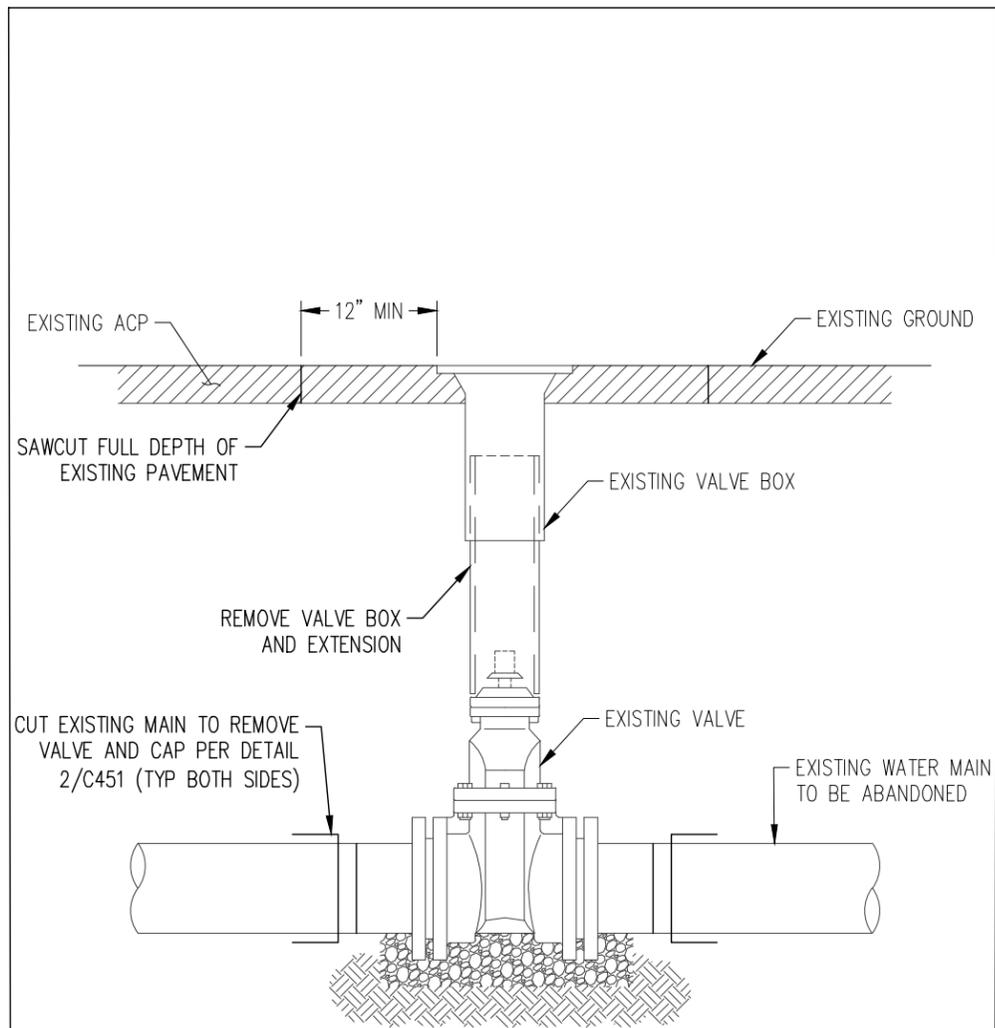
WATER CONSTRUCTION DETAILS

DATE:	2/25/2026
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MANAGED BY:	DRI
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JOB NUMBER	6799-20

SHEET  
**W-09**

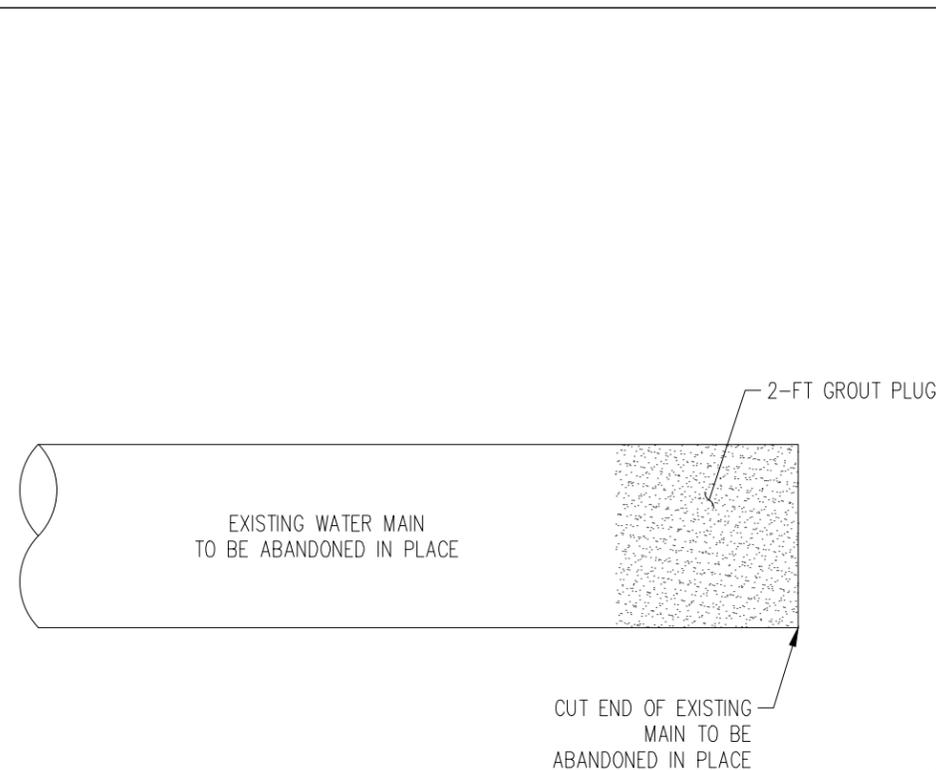
NO.	REVISION

**AKS**  
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REMOVE EXISTING VALVE DETAIL  
NTS

1  
W-10

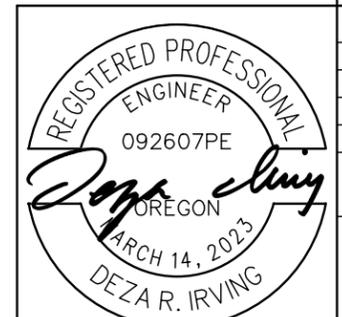


NOTES:

1. USE NON-SHRINK (NON-EPOXY) GROUT TO CREATE PLUG. PLACE NON-SHRINK GROUTS ONLY WITH THE USE OF A NON-EPOXY BONDING AGENT. USE A BONDING AGENT COMPATIBLE WITH THE GROUT USED.

CLOSE CUT ENDS OF PIPE DETAIL  
NTS

2  
W-10



RENEWS: JUNE 30, 2027



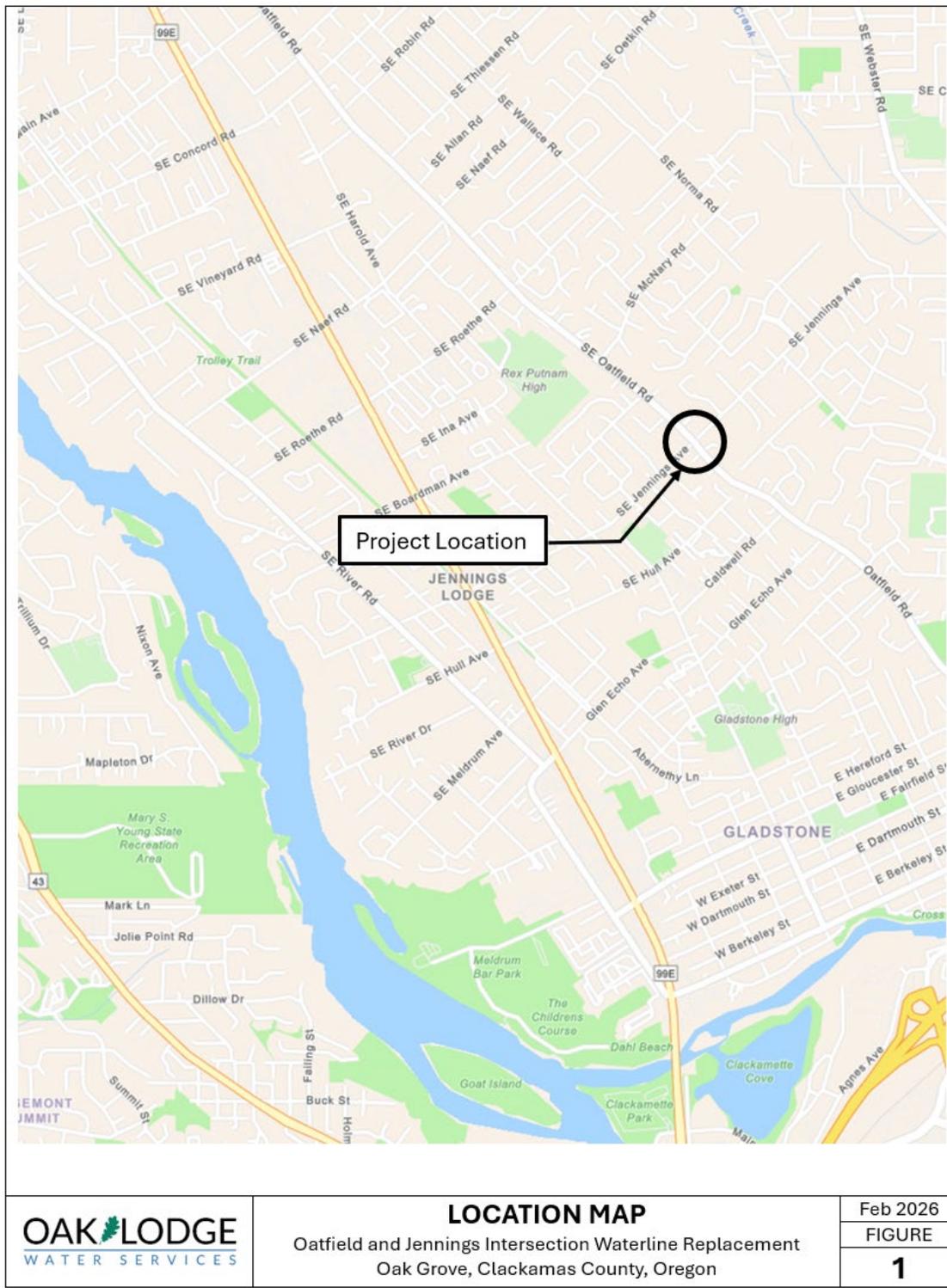
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WATER MAIN REPLACEMENT  
OAK GROVE, OR  
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SHEET <b>W-10</b>

**EXHIBIT B**  
**PROJECT AREA**



## EXHIBIT C

### ESTIMATED CONSTRUCTION COST

AKS ENGINEERING & FORESTRY, LLC  
 12965 SW Herman Rd, Suite 100  
 Tualatin, OR 97062  
 p: 503.563.6151 | f: 503.563.6152  
 www.aks-eng.com



#### OATFIELD RD - JENNINGS AVE WATER MAIN REPLACEMENT — 100% ENGINEER'S ESTIMATE (OLWS)

Project No.: 6799-20  
 Prepared By: MSS/DIL  
 Checked By: DRI  
 Date: 2/27/2026

SPEC	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
00200	TEMPORARY FEATURES AND APPURTENANCES				
00210	Mobilization (10%)	LS	1	\$ 14,800.00	\$ 14,800.00
00221	Temporary Work Zone Traffic Control, Complete (5%)	LS	1	\$ 7,100.00	\$ 7,100.00
00300	ROADWORK				
00305	Construction Survey Work	LS	1	\$ 7,000.00	\$ 7,000.00
00310	Removal of Valves	EACH	3	\$ 1,000.00	\$ 3,000.00
00310	Removal of Hydrants	EACH	1	\$ 1,650.00	\$ 1,650.00
	Cap Existing Water Main	EACH	12	\$ 600.00	\$ 7,200.00
00400	DRAINAGE AND SEWERS				
00405	Rock Excavation (If Needed)	CUYD	10	\$ 225.00	\$ 2,250.00
01100	WATER SUPPLY SYSTEMS				
01140	Blowoff Assembly, 2 Inch	EACH	1	\$ 2,010.00	\$ 2,010.00
01140	8 Inch Connection to 6 Inch Existing Main	EACH	2	\$ 4,650.00	\$ 9,300.00
01140	8 Inch Connection to 8 Inch Existing Main	EACH	1	\$ 4,850.00	\$ 4,850.00
01140	6 Inch Ductile Iron Pipe with Restrained Joints and Class "B" Backfill	FOOT	86	\$ 180.00	\$ 15,480.00
01140	8 Inch Ductile Iron Pipe with Restrained Joints and Class "B" Backfill	FOOT	243	\$ 190.00	\$ 46,170.00
01140	Ductile Iron Pipe Tees, 8 x 6 Inch	EACH	2	\$ 910.00	\$ 1,820.00
01140	Ductile Iron Pipe Cross, 8 Inch	EACH	1	\$ 1,450.00	\$ 1,450.00
01140	Ductile Iron Pipe Bend, 6 Inch, 45 Degrees	EACH	2	\$ 430.00	\$ 860.00
01140	Ductile Iron Pipe Bend, 8 Inch, 45 Degrees	EACH	4	\$ 530.00	\$ 2,120.00
01140	MJ Plug/Blind Flange on Existing Water Valve	EACH	2	\$ 640.00	\$ 1,280.00
	Straddle Block	EACH	1	\$ 3,550.00	\$ 3,550.00
01150	Resilient Wedge Gate Valve, 6 Inch	EACH	2	\$ 1,640.00	\$ 3,280.00
01150	Resilient Wedge Gate Valve, 8 Inch	EACH	5	\$ 2,375.00	\$ 11,875.00
01150	6 Inch Tapping Sleeve and 6 Inch Valve Assembly	EACH	1	\$ 8,000.00	\$ 8,000.00
01160	Fire Hydrant Assembly	EACH	1	\$ 7,750.00	\$ 7,750.00

Total	\$ 162,795.00
Contingency (15%)	\$ 24,419.25

<b>GRAND TOTAL</b>	<b>\$ 187,214.25</b>
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