



**DAN JOHNSON**  
DIRECTOR

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

May 4, 2023

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

Board of County Commissioners  
Clackamas County

**Approval of an Intergovernmental Agreement with Clackamas River Water for the Redland Rd Turn Lanes at Ferguson and Bradley Improvement Project. Total value is \$348,698 until project completion. Funding through Clackamas River Water. No County General Funds are involved.**

<b>Previous Board Action/Review</b>	05/02/23: Discussion item at issues		
<b>Performance Clackamas</b>	1. Build a strong infrastructure.		
<b>Counsel Review</b>	Yes	<b>Procurement Review</b>	No
<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 add left turn lanes on Redland Road at Ferguson Road and Bradley Road. Clackamas River Water (CRW) has existing waterlines that require upgrading and relocation, and CRW separately contracted with the County’s design consultant to complete the design of the waterline and related structures. To create efficiency in the construction of the project, CRW and DTD desire to combine the construction of the County’s roadway and CRW’s waterline projects. Combining the projects provides for a shorter duration of the overall construction and put’s 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 CRW to reimburse the County for costs associated with the actual cost of construction of CRW’s facilities. CRW will provide inspection services for construction of their own facilities. The engineer’s estimated construction cost of the waterline improvements is \$348,698, which includes a 25 percent contingency. If the bids are a

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higher than expected, the IGA would only need to be amended in the future if costs are above the engineer's estimate and the contingency amount of \$348,698.

**RECOMMENDATION:** Staff respectfully recommends Board of County Commissioner's approval of the Intergovernmental Agreement with Clackamas River Water for the Redland Rd Turn Lanes at Ferguson and Bradley Improvement Project.

Respectfully submitted,

*Dan Johnson*

Dan Johnson  
Director of Transportation & Development

**INTERGOVERNMENTAL AGREEMENT BETWEEN  
CLACKAMAS RIVER WATER AND CLACKAMAS COUNTY DEPARTMENT OF  
TRANSPORTATION & DEVELOPMENT RELATING TO THE REDLAND RD TURN LANES AT  
FERGUSON AND BRADLEY IMPROVEMENT PROJECT**

THIS INTERGOVERNMENTAL AGREEMENT ("Agreement") is entered into between Clackamas River Water, a domestic water district organized under ORS chapter 264 ("CRW"), and Clackamas County, by and through its Department of Transportation & Development, a corporate body politic ("Agency"), 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 agreements, its officers or agencies have authority to perform.
- B. The Agency is currently completing design to construct improvements along Redland Road, a two-lane rural major arterial, lacking left-turn lanes at both Ferguson and Bradley Roads. The improvements include constructing designated turn lanes at its intersection with Ferguson and Bradley Roads and making other associated roadway, grading, stormwater management, and other safety improvements between the Ferguson and Bradley intersections.
- C. As part of the Agency's Redland Rd Turn Lanes at Ferguson and Bradley Improvement Project, the Agency will undertake the CRW Redland Road Waterline Project (the "Project") that will include the scope of work identified in **Exhibit A** to this Agreement, and which lies within the Redland Rd Turn Lanes at Ferguson and Bradley roadway in an area identified in **Exhibit B** to this Agreement (the "Project Area"). CRW is planning the Project to replace existing water services with a new waterline, fire hydrants and appurtenances within the Project Area as part of the Project.
- D. At the time this Agreement is executed, the Project will be limited to construction of the required water system upgrades as part of the Project.
- E. The Parties desire to provide the basis for a cooperative working relationship for the purpose of providing design and construction services as part of the Project.
- F. CRW and Agency have determined it is in the public interest to cooperate in the planning and execution of the Project.

## **AGREEMENT**

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

1. **Term.** This Agreement becomes effective as of the last date of signature by a Party indicated below. Unless terminated earlier pursuant to Section 5 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 December 31, 2024, whichever is sooner.
  
2. **CRW's Obligations.**
  - a. **Scope of Work.** CRW agrees to the scope of work set out in Exhibit A. Before the Agency solicits bids for construction of the improvements associated with the Project and Exhibit A, CRW will provide final signed and stamped plans, special provisions, and a bid schedule produced by CRW's consultant in connection with the Project. CRW will certify in writing that the design, special provisions, bid schedule, and associated plans provided by CRW are satisfactory in all respects for purposes of procuring construction services in connection therewith.
  
  - b. **Project Coordination.** CRW, shall coordinate design and construction requirements, assist in developing bid items and quantities, and assist the Agency when necessary to provide responses to requests for information from bidders and the selected construction contractor.
  
  - c. **Project Inspections and Testing.** CRW is responsible for costs associated with contractor submittal reviews, field inspection and material testing related to CRW's Scope of Work of the Project. CRW will provide inspection services for the Project concurrently with County inspection tasks, track quantities for payment, and provide daily inspection notes (copies provided to Agency on a weekly basis). It is assumed that the waterline improvements will require a minimum 6 weeks to complete, and that the inspector will be present 80% of this time. CRW will provide primary inspection of the CRW design and waterline components. CRW and Agency will jointly participate in final walkthrough and generation of punch list items. CRW will provide review of submittals and RFI's.
  
  - d. **Payment Obligations.** CRW will be responsible for all costs associated with the work identified in Exhibit A to this Agreement, not to exceed the amount specified in **Exhibit C**. CRW further agrees:

- i. To reimburse the Agency for administrative costs the Agency incurs in the administration of the Project, not to exceed One Thousand Dollars (\$1,000.00).
  - ii. To pay Agency within 30 days of the receipt of the Agency's invoice to CRW.
- e. CRW agrees to cooperate with the Agency to amend this Agreement, if necessary, to incorporate any changes to the Scope of Work in **Exhibit A**, or the engineer's estimate as shown in **Exhibit C** as a result of the winning bid from Agency's procurement process incorporating those design plans approved in writing by CRW for the construction of the required water system upgrades as part of the Project, or as a result of change orders approved by CRW during construction. CRW may not unreasonably withhold its consent to amend this Agreement as provided in this subsection except where Agency and CRW mutually agree that the winning bid is unacceptable. For purposes of this Agreement, the Parties agree that bids that exceed the CRW engineer's estimate as shown in **Exhibit C** by 25% for the work associated with the Project would be deemed to be unacceptable unless CRW agrees to proceed with those bids.

**3. Agency's Obligations.**

- a. Scope of Work. Before soliciting bids for construction of the improvements contemplated by the Project, Agency will incorporate the plans, special provisions, and bid schedule for the scope of work set out in **Exhibit A** into Agency's plans, special provisions, and bid schedule. Agency will obtain CRW's written certification of incorporation of the plans, special provisions, and bid schedule produced by Agency's consultant in connection with the Project, which approval shall not be withheld unreasonably.
- b. Management of the Project. The Agency will manage the Project, as set forth in **Exhibit A** of this Agreement, and administer the associated construction contracts. The Agency will coordinate with CRW on any change orders requested by CRW or by the construction contractor in connection with the Project, which shall not be approved without CRW's written consent.
- c. Project Professional and Project Cost. Agency has hired PBS to design its Project. CRW has separately hired PBS for its project design and shall be responsible for the Project construction costs, up to the amount set forth in **Exhibit C** to this Agreement.

d. Invoice Obligations. Agency will invoice CRW within the first week following the last working day of each calendar month in which work is performed on CRW's behalf. With the exception of the administrative costs described in Section 2(d)(i), Agency shall not invoice CRW, and CRW shall not be liable for, amounts in excess of the amount set forth in **Exhibit C**, unless the Parties amend this Agreement by modifying the scope of work set out in **Exhibit A**.

4. **Attachments.** The Parties understand and agree that **Exhibit A, Exhibit B, Exhibit C** and **Exhibit D** are attached and incorporated into this Agreement as if fully set forth herein.

5. **Termination.**

- a. CRW and Agency, by mutual written agreement, may terminate this Agreement at any time.
- b. Either CRW or Agency 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 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. CRW or Agency shall not 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 of any other breach not expressly identified, even though the other breach is of the same nature as that waived.
- d. Nothing herein shall prevent the Parties from meeting to mutually discuss the Project.
- e. Any termination of this Agreement shall not prejudice any rights or obligations accrued to the Parties prior to termination.

**6. Indemnification.**

- a. Subject to the limits of the Oregon Constitution and the Oregon Tort Claims Act or successor statute, the Agency agrees to indemnify, save harmless and defend CRW, 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 Agency or its officers, elected officials, owners, employees, agents or its subcontractors or anyone over which the Agency has a right to control.
  
- b. Subject to the limits of the Oregon Constitution and the Oregon Tort Claims Act or successor statute, CRW agrees to indemnify, save harmless and defend the Agency, 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 CRW or its officers, elected officials, owners, employees, agents, or its subcontractors or anyone over which CRW has a right to control.

**7. Party Contacts.**

- a. Joseph D. Eskew or his designee will act as liaison for CRW for the Project.

**Contact Information:**

Joseph D. Eskew  
Clackamas River Water  
16770 SE 82nd Drive  
Clackamas OR 97015  
O: (503)723-2565, C: (503)747-8520  
Email: jeskew@crwater.com

- b. Bob Knorr or his designee will act as liaison for Agency for the Project.

**Contact Information:**

Bob Knorr  
Clackamas County Transportation Engineering Department  
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 the Party contact information, or the invoice or payment addresses by giving prior written notice thereof to the other Party at its then current notice address.

**8. 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 hereto agree to comply in all ways with applicable local, state and federal ordinances, statutes, laws and regulations.
- c. **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.
- d. **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.
- e. **Access to Records.** The Parties acknowledge and agree that each Party shall have access to each 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.
- f. **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 funds being appropriated therefore. Any provisions herein which would conflict with law are deemed inoperative to that extent.

- g. **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 the intentions of the Parties.
- h. **Integration, Amendment and Waiver.** Except as otherwise set forth herein, this Agreement constitutes the entire agreement between the Parties on the matter of the 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.
- i. **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.
- j. **Independent Contractor.** Each of the Parties hereto 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.
- k. **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 Agency or CRW.
- l. **No Assignment.** No 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 of the Parties.

- m. **Nonwaiver of Government Rights.** Subject to the terms and conditions of this Agreement, by making this Agreement, the Agency is specifically not obligating itself, Clackamas County, or any other governmental entity with respect to any discretionary governmental action relating to the Project or any associated development, operation and use of the improvements to be constructed on the Project Area, including, but not limited to, condemnation, comprehensive planning, rezoning, variances, environmental clearances or any other governmental County approvals that are or may be required.
- n. **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 and original.
- o. **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 it has been authorized by that Party to execute and deliver this Agreement.
- p. **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 HEREOF**, the Parties have executed this Agreement by the date set forth opposite their names below.

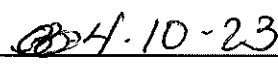
Clackamas County

Clackamas River Water

\_\_\_\_\_  
Name: Tootie Smith  
Title: County Board of Commissioners Chair

  
\_\_\_\_\_  
Name: Sherry French  
Title: CRW Board of Commissioners President

\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Date

## **EXHIBIT A**

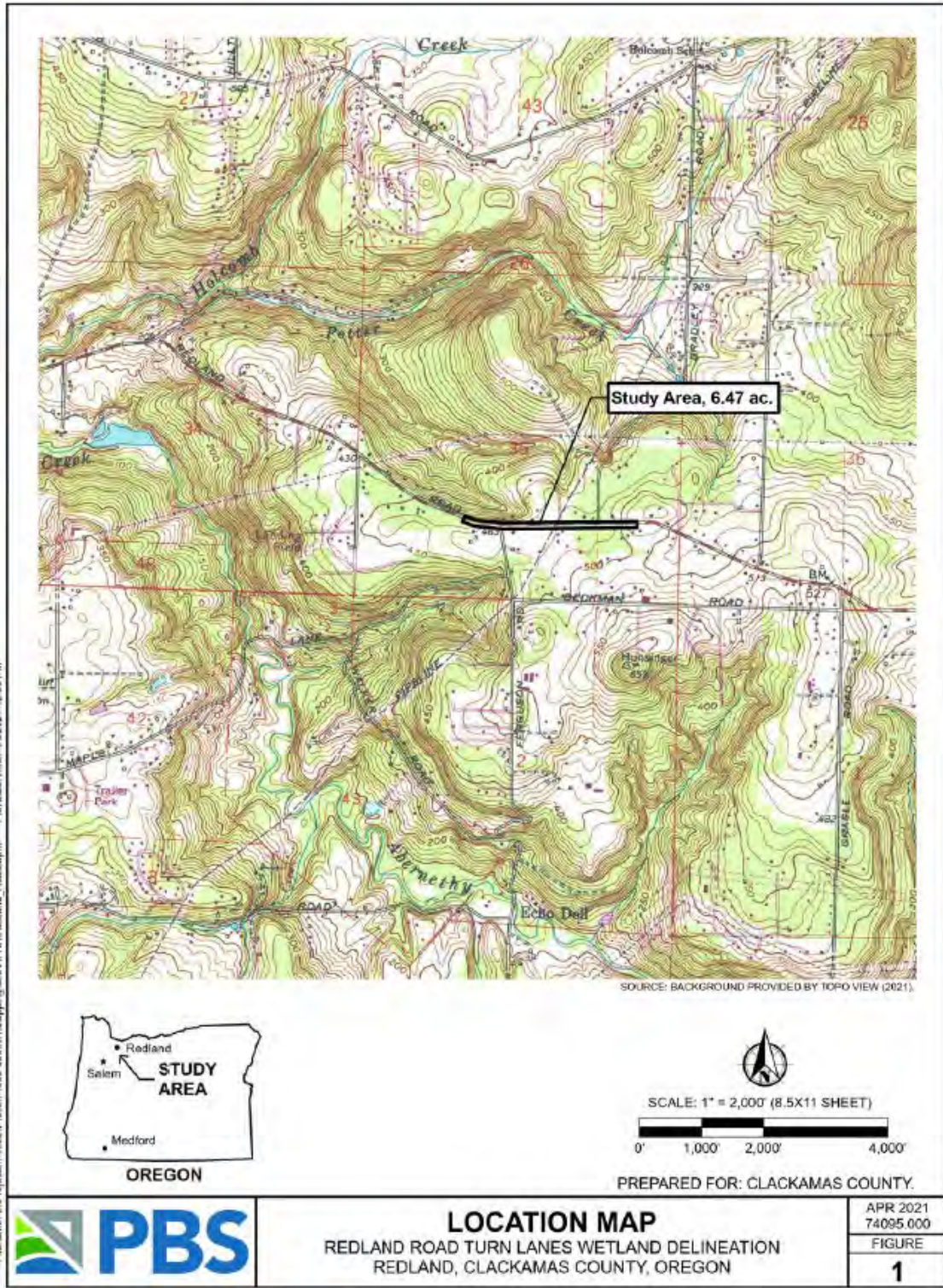
### **SCOPE OF WORK**

#### **Scope of Work:**

As part of the Agency's Redland Rd Turn Lanes at Ferguson and Bradley Improvement Project, the Agency and its contractor will construct the CRW Redland Road Waterline Project (the "Project") on behalf of CRW. This work entails construction of the proposed design to replace existing water services with a new waterline, fire hydrants and associated required elements of work that will be incorporated into the overall Redland Rd Turn Lanes at Ferguson and Bradley Improvement Project. Specific elements of construction of the CRW project to be incorporated are detailed in Exhibit D (attached). Associated Scope of Services also includes:

CRW, through its engineering consultant, PBS Engineering & Environmental, will provide construction as-built drawings of the project to reflect changes made during construction through CRW's separate agreement with PBS. The as-built drawings will be generated from contractor and inspector notes (new survey will not be completed). Provide digital AutoCAD and PDF files to Agency and CRW.

**EXHIBIT B  
PROJECT AREA**



**EXHIBIT C  
ESTIMATED CONSTRUCTION COST**

**Final Construction Cost Estimate - 100%**

Redland Road (Ferguson - Bradley) - Waterline

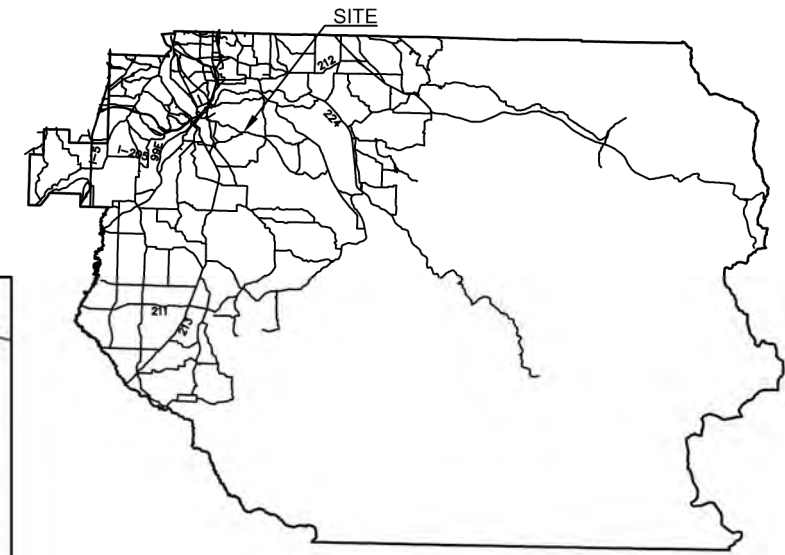
March 3, 2023

ITEM No.	ITEM DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	COST
0210-0100000A	MOBILIZATION	LS	ALL	ALL	\$ 24,470
0221-0101000A	TEMPORARY WORK ZONE TRAFFIC CONTROL, COMPLETE	LS	ALL	ALL	\$ 9,788
0305-0100000A	CONSTRUCTION SURVEY WORK	LS	ALL	ALL	\$ 6,500
1140	ABANDON EXISTING WATERLINE	LS	ALL	ALL	\$ 4,500
1140-0195000E	BLOWOFF ASSEMBLY, 2 INCH	EACH	\$ 1,700	1	\$ 1,700
1140-0300000E	12 INCH CONNECTION TO 12 INCH EXISTING MAIN	EACH	\$ 2,400	1	\$ 2,400
1140-0300000E	8 INCH CONNECTION TO 8 INCH EXISTING MAIN	EACH	\$ 5,000	1	\$ 5,000
1140-0500000F	12 INCH DUCTILE IRON PIPE with RESTRAINED JOINTS AND CLASS B BACKFILL	FOOT	\$ 80	1,840	\$ 147,200
1140	TRACER WIRE TERMINAL STATION	EACH	\$ 900	2	\$ 1,800
1160-0100000E	HYDRANT ASSEMBLIES, TYPE 3	EACH	\$ 3,600	2	\$ 7,200
1170	RECONNECT EXISTING WATER SERVICES, 1 INCH , LONG SIDE	EACH	\$ 4,200	9	\$ 37,800
1170	RECONNECT EXISTING WATER SERVICES, 1 INCH , SHORT SIDE	EACH	\$ 3,600	7	\$ 25,200
1170-0111000E	RELOCATE EXISTING WATER SERVICE, 1 INCH, SHORT SIDE	EACH	\$ 1,800	3	\$ 5,400
	<b>SUBTOTAL</b>				<b>\$ 278,958</b>
	CONTINGENCY		25%		\$ 69,740
	<b>TOTAL</b>				<b>\$ 348,698</b>

**EXHIBIT D  
CONSTRUCTION PLAN SET**

# CLACKAMAS RIVER WATER (CRW) REDLAND ROAD WATERLINE

CLACKAMAS COUNTY, OREGON  
APRIL 2023



Sheet List Table	
Sheet ID	Sheet Title
C-01	WATERLINE COVER SHEET
C-02	GENERAL NOTES - CLACKAMAS RIVER WATER
C-03	GENERAL NOTES - WILLIAMS GAS PIPELINE
WP-01	WATERLINE PLAN & PROFILE
WP-02	WATERLINE PLAN & PROFILE
WP-03	WATERLINE PLAN & PROFILE
WP-04	WATERLINE PLAN & PROFILE
WP-05	WATERLINE PLAN & PROFILE
WP-06	WATERLINE PLAN & PROFILE
WP-07	WATERLINE PLAN & PROFILE
WP-08	WATERLINE PLAN & PROFILE
WP-09	WATERLINE CONNECTION DETAILS
WP-10	WATER DETAILS
WP-11	WATER DETAILS



VICINITY MAP  
NOT TO SCALE



**BIDDING NOTICE TO CONTRACTORS**

DUE TO THE ONGOING DELAYS IN MANUFACTURING AND DELIVERY OF MATERIALS, CRW PRE-ORDERED PIPING, FITTINGS, AND OTHER MATERIALS TO CONSTRUCT THE WATERLINE IMPROVEMENTS. CONTRACTOR SHALL ARRANGE WITH CRW AND PICKUP MATERIALS FROM THEIR FACILITY LOCATED AT 9100 SE MANGAN DR. CLACKAMAS, OR 97015. CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH AND INSTALL ALL MISCELLANEOUS MATERIALS NOT PROVIDED BY CRW AS REQUIRED FOR A COMPLETE PROJECT ASSEMBLY. THE LIST OF CRW FURNISHED MATERIALS IS PROVIDED ON SHEET WP-11.

**CONTACT INFORMATION:**

**Clackamas River Water**  
16770 SE 82nd Dr  
Clackamas, OR 97015  
503-722-9220  
www.crvwater.com  
**Joseph D. Eskew, PE**  
jeskew@crwater.com  
(503) 723-2565  
(503) 747-8520, mobile

Civil Engineer:  
**PBS Engineering & Environmental**  
4412 S Corbett Avenue  
Portland, OR 97239  
**Ken Rehms, PE**  
Ken.Rehms@pbsusa.com  
(503) 417-7720  
(503) 729-8880, mobile

**ATTENTION!**  
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 952-001-0100. YOU MAY OBTAIN COPIES OF THE RULES FROM THE CENTER OR ANSWERS TO QUESTIONS ABOUT THE RULES BY CALLING (503) 232-1987.

**NOTE:**  
PROJECT DATUM ELEVATION IS BASED ON NAVD 1988 DERIVED FROM RTK GPS OBSERVATIONS. COORDINATES ARE ORN-83 SPC(FT)



EXPIRES: 12/31/2024

WATERLINE COVER SHEET  
REDLAND ROAD WATERLINE  
PROJECT NO.: CL-300320344



PBS Engineering and Environmental Inc.  
4412 S Corbett Avenue  
Portland, OR 97239  
503.248.1939  
pbsusa.com



DESIGNED BY: PPG  
DRAFTED BY: PPG  
CHECKED BY: KSR

NO.	DATE	REVISIONS

Sheet No. C-01

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**GENERAL CONSTRUCTION NOTES:**

- NOTICE OF WORK:** THE CONTRACTOR SHALL FOLLOW THE CLACKAMAS RIVER WATER (CRW), CLACKAMAS COUNTY DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT (DTD), AND OTHER AFFECTED JURISDICTIONS' ADVANCE NOTIFICATION REQUIREMENTS PRIOR TO CONSTRUCTION START.
- CONSTRUCTION STANDARDS AND SPECIFICATIONS:** ALL CONSTRUCTION IS TO BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE MOST RECENT VERSION OF CLACKAMAS RIVER WATER STANDARD SPECIFICATIONS, OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, CCDDT'S SPECIAL PROVISIONS FOR REDLAND ROAD TURN LANES AND FERGUSON & BRADLEY PROJECT, CLACKAMAS COUNTY WATER ENVIRONMENTAL SERVICES (WES) STANDARDS (INCLUDING EROSION PREVENTION AND SEDIMENT CONTROL) AND THE OREGON ADMINISTRATIVE RULES (OAR), CHAPTER 333, UNLESS NOTED ON THE PLANS OR SPECIFIED OTHERWISE.
- CONSTRUCTION PLANS:** THE CONTRACTOR AND/OR SUB-CONTRACTOR SHALL HAVE AT LEAST ONE SET OF DISTRICT-APPROVED CONSTRUCTION PLANS ON THE JOB SITE AT ALL TIMES.
- INSURANCE:** A COPY OF THE CONTRACTOR'S CERTIFICATE OF INSURANCE SHALL BE AVAILABLE ON THE JOB SITE AT ALL TIMES.
- CONSTRUCTION STAKING:** THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION STAKING, INCLUDING WATERLINE ALIGNMENT STAKING AND OFFSETS, UTILIZING DESIGN SURVEY INFORMATION AS PROVIDED BY CRW AND PBS ENGINEERING AND ENVIRONMENTAL.
- PERMITS:** THE CONTRACTOR SHALL OBTAIN AND PAY ALL REQUIRED FEES, BONDS AND WARRANTIES FOR THE REQUIRED JURISDICTION'S UTILITY PLACEMENT AND/OR STREET OPENING PERMITS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL OTHER PERMITS REQUIRED FOR CONSTRUCTION. THE CONTRACTOR SHALL COMPLY WITH ALL STIPULATED PERMIT CONDITIONS.
- EROSION CONTROL:** EFFECTIVE EROSION CONTROL, DUST CONTROL, AND DRAINAGE CONTROL IS REQUIRED AND SHALL BE MAINTAINED AT ALL TIMES, IN ACCORDANCE WITH THE PERMITTING JURISDICTION'S EROSION CONTROL REQUIREMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROTECTION OF ALL WORK AREAS, AND ANY ADJACENT AND DOWNSTREAM PROPERTIES FROM EROSION AND RUNOFF DURING THE COURSE OF THE WORK. ANY DAMAGE RESULTING FROM SUCH EROSION OR RUNOFF SHALL BE CORRECTED AT THE CONTRACTOR'S SOLE EXPENSE. THE ABSENCE OF IDENTIFIED EROSION CONTROL PLACEMENT LOCATIONS ON THE DRAWINGS DOES NOT RELIEVE THE CONTRACTOR FROM SUPPLYING PROPER EROSION CONTROL MEASURES WHICH MEET SPECIFIED REQUIREMENTS.
- TRAFFIC CONTROL:** THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEETING THE REQUIREMENTS OF THE OREGON TEMPORARY TRAFFIC CONTROL HANDBOOK, 2011, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED AND APPROVED BY DTD PRIOR TO COMMENCEMENT OF WORK.
- MATERIAL SUBMITTALS:** THE CONTRACTOR SHALL PROVIDE SUBMITTALS OF ALL MATERIALS TO BE INCORPORATED INTO THE WORK. ALL MATERIAL SUBMITTALS SHALL INCLUDE PROOF OF MATERIALS TESTING IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS. ANY MATERIAL NOT IN CONFORMANCE WITH APPROVED SUBMITTALS SHALL BE REMOVED FROM THE SITE AT NO ADDITIONAL COST TO THE OWNER.
- UTILITY LOCATIONS:** LOCATIONS AND GRADES OF EXISTING UTILITIES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND SHALL BE CONSIDERED APPROXIMATE ONLY AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. OREGON LAW REQUIRES THE CONTRACTOR TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER, AS SET FORTH IN OAR 952-001-0010 THROUGH 952-001-0090. THE CONTRACTOR SHALL HAVE UTILITIES LOCATED IN ACCORDANCE WITH ORS 757.541 THROUGH 757.571 PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL ALSO FIELD VERIFY DEPTHS OF EXISTING UTILITIES TO IDENTIFY POTENTIAL CONFLICTS, AND AS MAY BE REQUIRED FOR CONNECTIONS TO EXISTING SYSTEMS.
- UTILITY POTHOLING:** THE CONTRACTOR SHALL POTHOLE AND VERIFY LOCATION, DEPTH, TYPE, AND SIZE OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION OF NEW WATERLINE AND SERVICE PIPE. THE CONTRACTOR SHALL POTHOLE EXISTING UTILITIES AT LEAST 200 FEET AHEAD OF LAYING PIPE AT ALL CROSSINGS TO ALLOW REQUIRED ELEVATION ADJUSTMENTS TO BE ACCOMPLISHED WITHOUT ADDITIONAL BENDS, FITTINGS OR OTHER WORK. ELEVATION ADJUSTMENTS MAY BE REQUIRED AND ARE INCIDENTAL TO THE WORK. DEFLECT PIPE AS REQUIRED TO AVOID EXISTING UTILITIES AND TO COMPLETE TIE-INS (ALLOWABLE DEFLECTION IS 50% OF MANUFACTURER RECOMMENDED MAXIMUM). IF CONFLICTS ARISE, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A PLAN DETAILING THE INVESTIGATIVE POTHOLING TO BE COMPLETED PRIOR TO BEGINNING THE WORK. POTHOLING PLAN SHALL INDICATE THE LOCATION AND NUMBER OF POTHOLES AND THE EQUIPMENT USED TO POTHOLE.
- UTILITY DISTURBANCE AND REPAIR:** IF THE CONTRACTOR DAMAGES, DESTROYS, OR OTHERWISE DISTURBS AN EXISTING UTILITY, DTD AND THE UTILITY OWNER SHALL BE IMMEDIATELY CONTACTED, AND THE UTILITY SHALL BE REPAIRED WITHOUT DELAY OR COST TO THE DISTRICT OR DTD.
- UTILITIES ABANDONED IN PLACE:** UTILITIES OR INTERFERING PORTIONS OF UTILITIES THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL SEAL AND CAP THE REMAINING EXPOSED ABANDONED UTILITIES WITH NON-SHRINK GROUT TO 1 FOOT LENGTH INTO PIPE, OR AS OTHERWISE SPECIFIED.
- PERFORMANCE OF THE WORK:** THE CONTRACTOR SHALL PERFORM ALL THE WORK SHOWN ON THE

- DRAWINGS AND ALL INCIDENTAL WORK CONSIDERED NECESSARY TO COMPLETE THE PROJECT IN AN ACCEPTABLE MANNER, USING EQUIPMENT, TOOLS AND METHODS THAT FOLLOW GENERALLY ACCEPTED INDUSTRY AND TRADE PRACTICES FOR THE REQUIRED WORK. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY.
- CONSTRUCTION SEQUENCING:** THE CONTRACTOR SHALL PLAN AND SEQUENCE THE WORK IN CONJUNCTION WITH DTD'S REDLAND ROAD PROJECT AND AS REQUIRED TO MINIMIZE DISRUPTION OF SERVICE, INCLUDING TEMPORARY CONNECTIONS AND BYPASSES AS NECESSARY.
  - SYSTEM CONNECTION:** CONNECTIONS TO EXISTING WATERLINES SHALL NOT BE MADE UNTIL ALL REQUIRED INSPECTIONS AND TESTS HAVE BEEN COMPLETED ON THE NEW WORK AND IT IS FOUND TO CONFORM IN ALL RESPECTS TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.
  - CHANGES OR DEVIATIONS TO WORK:** ANY CHANGE OR DEVIATION FROM THE APPROVED CONSTRUCTION PLANS MUST BE SUBMITTED IN WRITING TO DTD AND CRW AND APPROVED BY CRW A MINIMUM OF FOUR (4) WORKING DAYS PRIOR TO STARTING THE MODIFIED WORK.
  - FIELD PLACEMENT OF SYSTEM COMPONENTS:** FINAL LOCATIONS OF ALL VALVES AND VALVE BOXES, FIRE HYDRANTS, AIR RELEASE ASSEMBLIES, AND SERVICE CONNECTION CORPORATION STOPS MAY VARY FROM LOCATIONS SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE FIELD ADJUSTED LOCATIONS OF THESE AND SIMILAR ITEMS WITH DTD AND THE DISTRICT.
  - AS-BUILT DRAWINGS:** THE CONTRACTOR SHALL SUBMIT COMPLETE "AS-BUILT" DRAWINGS AFTER FINAL COMPLETION INDICATING ALL CHANGES IN GRADE, ALIGNMENT, FITTINGS, AND MATERIALS INSTALLED AND ANY OTHER UTILITIES OR OBSTACLES NOT SO INDICATED ON THE APPROVED CONSTRUCTION PLANS.
  - MAINTENANCE OF WORK AREA:** MAINTENANCE OF THE WORK AREA AND APPROACH ROADS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE WORK AREA AND APPROACH ROADS SHALL BE MAINTAINED IN A CLEAN CONDITION, FREE FROM OBSTRUCTIONS AND HAZARDS AS REQUIRED BY THE LOCAL JURISDICTIONAL STANDARDS.
  - SITE RESTORATION AT END OF WORKDAY:** AT THE END OF EACH WORKDAY ALL TRENCHES SHALL BE BACKFILLED, AND ALL TRENCHES WITHIN STREETS SHALL BE TEMPORARILY RESTORED TO THE SATISFACTION OF THE DISTRICT AND DTD. USE OF STEEL SHEETS FOR TEMPORARY RESTORATION SHALL BE ONLY AS ALLOWED BY APPLICABLE PERMITS. PERMANENT AC PAVEMENT SHALL BE HOT MIX BITUMINOUS ASPHALT, UNLESS OTHERWISE SPECIFIED. TEMPORARY AC PAVEMENT MAY BE HMAC OR COLD MIX ASPHALT, "EASY STREET" OR EQUAL PENDING APPROVAL BY DTD. NO TRENCH, ON-SITE OR OFF-SITE, SHALL BE LEFT AT ANY TIME IN AN UNSAFE CONDITION. THE CONTRACTOR IS RESPONSIBLE AND LIABLE FOR ANY HAZARDS OR DAMAGE RESULTING FROM HIS PROSECUTION OF THE WORK.
  - ACCESS TO DRIVEWAYS:** THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS. IF A DRIVEWAY MUST BE BLOCKED TEMPORARILY, THE CONTRACTOR SHALL GIVE THE PROPERTY OWNER AND/OR BUILDING TENANT 24 HOURS' NOTICE AND SHALL ENSURE ACCESS TO DRIVEWAYS AT THE END OF EACH WORKDAY.
  - PROTECTION OF PROPERTY:** THE CONTRACTOR SHALL EXERCISE ALL DUE CARE IN PROTECTING PROPERTY WITHIN AND ADJACENT TO THE JOB SITE. THIS PROTECTION SHALL INCLUDE, BUT NOT BE LIMITED TO, TREES, YARDS, FENCES, DRAINAGE LINES, MAILBOXES, DRIVEWAYS, SHRUBS, LAWNS, AND IRRIGATION SYSTEMS WITHIN ANY RIGHTS-OF-WAY OR EASEMENTS. IF ANY PROPERTY DISTURBANCE OCCURS, THE CONTRACTOR SHALL RESTORE TO AS NEAR ORIGINAL CONDITION AS POSSIBLE OR REPLACE IN KIND.
  - SURVEY MONUMENTS:** ALL SURVEY MONUMENTS SHALL BE LOCATED AND PROTECTED, EXCEPT AS SPECIFICALLY DIRECTED BY THE COUNTY SURVEYOR OR LOCAL JURISDICTION'S ENGINEER.
  - SITE RESTORATION AT PROJECT COMPLETION:** UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL LEAVE THE PROJECT AREA FREE OF DEBRIS AND UNUSED MATERIALS.

**GENERAL WATERLINE NOTES:**

- CRW SPECIFICATIONS:** ALL WORK SHALL BE DONE IN ACCORDANCE WITH CLACKAMAS RIVER WATER STANDARD SPECIFICATIONS AND DETAILS, AS INCLUDED IN DTD'S REDLAND ROAD TURN LANES AT FERGUSON & BRADLEY PROJECT.
- NOTICE OF SERVICE DISRUPTION:** UNLESS OTHERWISE DIRECTED, THE CONTRACTOR SHALL PROVIDE CRW, DTD, AND ANY AFFECTED UTILITIES A MINIMUM OF SEVEN (7) DAYS ADVANCE NOTICE OF CONSTRUCTION AND/OR PLANNED DISRUPTION OF SERVICE. THE CONTRACTOR SHALL SCHEDULE AND COORDINATE SHUTDOWNS WITH ALL AFFECTED UTILITIES.
- NOTICE OF SERVICE DISRUPTION FOR CRW CUSTOMERS:** CRW WILL PROVIDE NOTIFICATION TO AFFECTED WATER USERS FOR PLANNED SERVICE DISRUPTIONS.
- OPERATION OF SYSTEM:** OPERATION OF VALVES AND ANY OTHER COMPONENTS OF THE PUBLIC WATER SYSTEM SHALL ONLY BE PERFORMED BY CRW.
- EXISTING WATER SERVICE:** EXISTING WATER MAINS AND SERVICES SHALL BE KEPT IN OPERATION UNTIL NEW MAINS ARE CONNECTED AND IN SERVICE.
- WATERLINE BURY DEPTH:** ALL PIPING SHALL HAVE A MINIMUM OF 42 INCHES OF COVER FROM TOP OF PIPE TO STREET GRADE OR OTHER FINISHED GRADE, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

- UTILITY CROSSINGS:** AS MAY BE REQUIRED BY THE DISTRICT, THE CONTRACTOR SHALL PROVIDE PVC SHIELDING AND/OR POLYETHYLENE ENCASEMENT IN ACCORDANCE WITH AWWA C105.
- WATERLINE PIPE:** ALL NEW PIPE SHALL BE CLASS 52 CEMENT-LINED DUCTILE IRON PIPE PER AWWA C151, OF NEW MANUFACTURE AND APPROVED BY THE DISTRICT. ALL PIPE SHALL BE PUSH-ON JOINT UNLESS OTHERWISE SPECIFIED.
- WATERLINE FITTINGS:** WATERLINE FITTINGS SHALL BE CEMENT-LINED DUCTILE OR CAST IRON WITH MECHANICAL JOINTS PER AWWA C110 OR C153.
- JOINT RESTRAINTS:** ALL JOINTS AT VALVES, FITTINGS AND PIPE BELLS SHALL BE MECHANICALLY RESTRAINED. SEE SPECIFICATIONS FOR ALLOWABLE TYPES OF RESTRAINT SYSTEMS.
- FLANGED CONNECTIONS:** ALL FLANGED CONNECTIONS, WHERE REQUIRED, SHALL BE PROVIDED WITH CUT-RING GASKETS, AS SPECIFIED.
- THRUST BLOCKS:** THE USE OF CONCRETE THRUST BLOCKS IS ALLOWED ONLY AS SHOWN ON PLANS OR AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE TEMPORARY THRUST RESTRAINT FOR FITTINGS AND/OR PIPING THAT WILL RECEIVE SERVICE PRESSURES BEFORE PERMANENT CONCRETE THRUST BLOCK DEVELOPS FULL STRENGTH. THE CONTRACTOR SHALL PLACE 5-MIL PLASTIC SHEETING BETWEEN THRUST BLOCK AND PIPE FITTINGS.
- CONCRETE STRENGTH:** ALL CONCRETE FOR THRUST BLOCKS SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI UNLESS OTHERWISE SPECIFIED.
- MATERIALS AND WORKMANSHIP:** ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH CRW SPECIFICATIONS AS WELL AS OTHER GENERALLY ACCEPTED INDUSTRY STANDARDS- INCLUDING AWWA, THE UNIFORM PLUMBING CODE, AND OTHERS AS APPLICABLE. ALL MATERIALS SHALL BE OF NEW MANUFACTURE. NO REBUILT OR USED MATERIALS WILL BE ALLOWED.
- BACKFILL:** ALL BACKFILL IN THE RIGHT OF WAY OR OTHER TRAFFIC AREAS SHALL BE 3/4"-0" OR 1"-0" CRUSHED ROCK, COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY PER AASHTO T-99 UNLESS OTHERWISE SPECIFIED.
- PRESSURE TESTING AND DISINFECTION PREPARATION:** WATERLINES AND APPURTENANCES SHALL BE PRESSURE TESTED AND DISINFECTED FOLLOWING COMPLETION OF ASSEMBLY AND BEFORE CONNECTION TO THE EXISTING SYSTEM AND SERVICES. PRIOR TO TESTING AND DISINFECTION, ALL LINES AND APPURTENANCES SHALL BE FLUSHED AS DIRECTED. THE CONTRACTOR SHALL INSTALL TEMPORARY BLOW-OFF ASSEMBLIES FOR TESTING AND DISINFECTION. PROVIDE TEMPORARY TAPS FOR TESTING AND CHLORINE INJECTION AS REQUIRED. PLUG TEMPORARY TAPS WITH BRASS PLUGS UPON ACCEPTANCE OF NEW WATERLINE.
- PRESSURE TESTING:** STANDARD TEST PRESSURE SHALL BE 1.5 TIMES THE SYSTEM OPERATING PRESSURE BUT IN NO CASE LESS THAN THE MINIMUM TEST PRESSURE OF 150 PSI; MEASURED AT THE HIGHEST ELEVATION OF THE PIPE BEING TESTED. ALLOWABLE LEAKAGE SHALL BE WITHIN CRW SPECIFICATION WITH NO VISIBLE LEAKAGE ALLOWED.
- DISINFECTION:** DISINFECT IN CONFORMANCE WITH CRW REQUIREMENTS, AWWA C651, OREGON HEALTH AUTHORITY GUIDELINES AND THE REQUIREMENTS OF THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY. THE CONTRACTOR SHALL DISPOSE OF SUPERCHLORINATED WATER IN AN APPROVED MANNER AND LOCATION. DO NOT ALLOW DISINFECTION WATER TO FLOW INTO A WATERWAY WITHOUT ADEQUATE DILUTION OR OTHER SATISFACTORY METHODS OF REDUCING CHLORINE RESIDUALS TO A SAFE LEVEL AS MANDATED BY DEQ. THE CONTRACTOR SHALL NOTIFY LOCAL JURISDICTIONS AS NECESSARY.
- DISINFECTION OF SHORT PIPING SECTIONS AND CONNECTIONS:** CRW AND THE CONTRACTOR SHALL IDENTIFY ALL SHORT SECTIONS OF PIPE AND/OR FITTINGS THAT CONNECT TO THE EXISTING SYSTEM THAT REQUIRE MANUAL DISINFECTION. A 300 PPM CHLORINE SOLUTION SHALL BE APPLIED BY SPRAYING AND BRUSHING TO THE INTERIOR OF ALL PIPE, VALVES, AND FITTINGS AS DIRECTED. THE CHLORINE SOLUTION SHALL REMAIN FOR 15 MINUTES BEFORE FLUSHING, UNLESS OTHERWISE DIRECTED.
- BACTERIOLOGICAL SAMPLING AND TESTING:** POST-DISINFECTION SAMPLING AND BAC-T TESTING WILL BE CONDUCTED BY CRW. PASSING TESTS ARE REQUIRED FOR PROJECT ACCEPTANCE.
- PROTECTION OF POTABLE WATER PIPING:** THE CONTRACTOR SHALL PROTECT POTABLE WATER PIPE ENDS FROM CONTAMINATED WATER AND DEBRIS AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE WATERTIGHT CAPS OR PLUGS ON PIPE ENDS AT THE END OF EACH WORKDAY.
- TRACER WIRE:** INSTALL NO. 12 AWG SOLID COPPER TRACER WIRE WITH BLUE COLORED HMWPE INSULATION ALONG THE TOP CENTERLINE OF NEW PIPE. TRACER WIRE INTERSECTIONS SHALL BE SOLDERED OR MECHANICALLY CONNECTED WITH APPROVED WATERPROOF CONNECTOR DEVICES.

<b>GENERAL NOTES - CRW</b>	
<b>REDLAND ROAD WATERLINE</b>	
DATE: 03/20/2023 PROJECT NO.: CL-300320344	
	
	
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WILLIAMS GAS PIPELINE GENERAL NOTES

1. WILLIAMS- NORTHWEST PIPELINE LLC ("NORTHWEST") WILL REQUIRE THE EXECUTION OF AN ENCROACHMENT AGREEMENT AND ISSUE A WILLIAMS GAS PIPELINE ENCROACHMENT/FOREIGN LINE CROSSING PERMIT FOR EACH CONTRACTOR AND ACTIVITY WITHIN THE PIPELINE EASEMENT. THE AGREEMENT MUST BE EXECUTED BEFORE WORK BEGINS ON THE RIGHT OF WAY.
2. NORTHWEST WILL REQUIRE SUBMITTAL OF PLAN AND PROFILE DRAWINGS FOR PRIOR REVIEW AND APPROVAL BY NORTHWEST. ALL DRAWINGS MUST SHOW IN DETAIL, ALL OF NORTHWEST'S FACILITIES AND OTHER FEATURES THAT WILL ALLOW NORTHWEST TO DETERMINE THE EFFECTS OF THE PROPOSED CONSTRUCTION OR MAINTENANCE ACTIVITY ON ITS FACILITIES.
3. AN AUTHORIZED NORTHWEST REPRESENTATIVE MUST BE ON SITE PRIOR TO AND DURING ANY SURFACE-DISTURBING WORK OR EQUIPMENT CROSSINGS PERFORMED WITHIN THE PIPELINE RIGHT OF WAY EASEMENT. NORTHWEST REPRESENTATIVE WILL ASSIST IN DETERMINING THE LOCATION OF THE PIPELINE, THE RIGHT-OF-WAY WIDTH AND EXISTING DEPTH OF THE PIPELINE. NORTHWEST'S REPRESENTATIVE WILL SUPERVISE ALL WORK WITHIN NORTHWEST'S RIGHT-OF-WAY AND SHALL HAVE STOP WORK AUTHORITY AT ALL TIMES.
4. NORTHWEST'S REPRESENTATIVE WILL CONDUCT A SAFETY/INFORMATIONAL DISCUSSION WITH CONTRACTORS PRIOR TO CONSTRUCTION.
5. EVERY PERSON WORKING WITHIN THE NORTHWEST GAS PIPELINE RIGHT OF WAY EASEMENT MUST FOLLOW ALL REQUIREMENTS IN THE WILLIAMS DEVELOPERS' HANDBOOK AND ENCROACHMENT/FOREIGN LINE CROSSING PERMIT UNLESS IT IS WAIVED BY A NORTHWEST REPRESENTATIVE AND WRITTEN ON THE PERMIT. IN THE EVENT WORK COMMENCES ABSENT SUCH AN AGREEMENT, NORTHWEST MAY TAKE STEPS TO PREVENT FURTHER ACTIVITY.
6. ANY CROSSINGS MADE WITHOUT A NORTHWEST REPRESENTATIVE ON SITE WILL BE EXCAVATED AT THE EXCAVATOR'S EXPENSE TO PROVIDE NORTHWEST AN OPPORTUNITY TO INSPECT ALL AFFECTED PIPELINE FACILITIES. NORTHWEST WILL BE FULLY AND COMPLETELY COMPENSATED FOR ANY DAMAGES TO ITS FACILITIES RESULTING FROM THE ACTS OF THIRD PARTIES WHO ARE WORKING IN THE VICINITY OF NORTHWEST'S FACILITIES WITH OR WITHOUT NORTHWEST'S CONSENT.
7. TO PROTECT NORTHWEST'S GAS PIPELINE FROM EXTERNAL LOADING, NORTHWEST MUST PERFORM AND ENGINEERING EVALUATION TO DETERMINE THE EFFECTS OF ANY PROPOSED EQUIPMENT USE. MATS, TIMBER BRIDGES, OR OTHER PROTECTIVE MATERIALS DEEMED NECESSARY BY NORTHWEST WILL BE PLACED OVER NORTHWEST'S GAS FACILITIES FOR THE DURATION OF ANY LOADING. PROTECTIVE MATERIALS SHALL BE PURCHASED, PLACED, AND REMOVED AT NO COST TO NORTHWEST. THE GAS LINE EASEMENT OR RIGHT-OF-WAY MUST BE RESTORED TO ITS ORIGINAL CONDITION.
8. NORTHWEST MAY REQUIRE MARKINGS TO IDENTIFY SPECIFIC AREAS WHERE EQUIPMENT USE IS AUTHORIZED. VIBRATORY EQUIPMENT IS NOT PERMITTED ON THE GAS LINE EASEMENT.
9. NORTHWEST REPRESENTATIVES MUST BE PROVIDED SAFE ACCESS TO ALL OPEN EXCAVATIONS. EXCAVATIONS MUST BE PROPERLY SLOPED OR SHORED IN ACCORDANCE WITH OSHA REGULATIONS.
10. NO CUT OR FILL ON THE RIGHT-OF-WAY IS ALLOWED WITHOUT NORTHWEST'S APPROVAL.
11. STOCKPILING FILL, BRUSH, TRASH, OR OTHER DEBRIS ON THE RIGHT OF WAY IS PROHIBITED.
12. NORTHWEST MUST BE NOTIFIED AT THE EUGENE DISTRICT OFFICE (541) 342-4434 AT LEAST 72 HOURS BEFORE ANY WORK COMMENCES ON OR NEAR ITS RIGHT-OF-WAY. REFERENCE MILEPOST 24.53-24.55 ON THE 2479 LINE.



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GENERAL NOTES - WILLIAMS GAS PIPELINE

REDLAND ROAD WATERLINE

DATE: 03/20/2023 PROJECT NO.: CL-300320344



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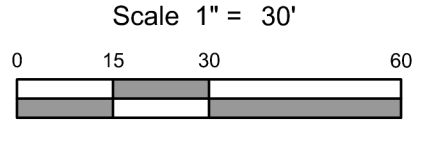
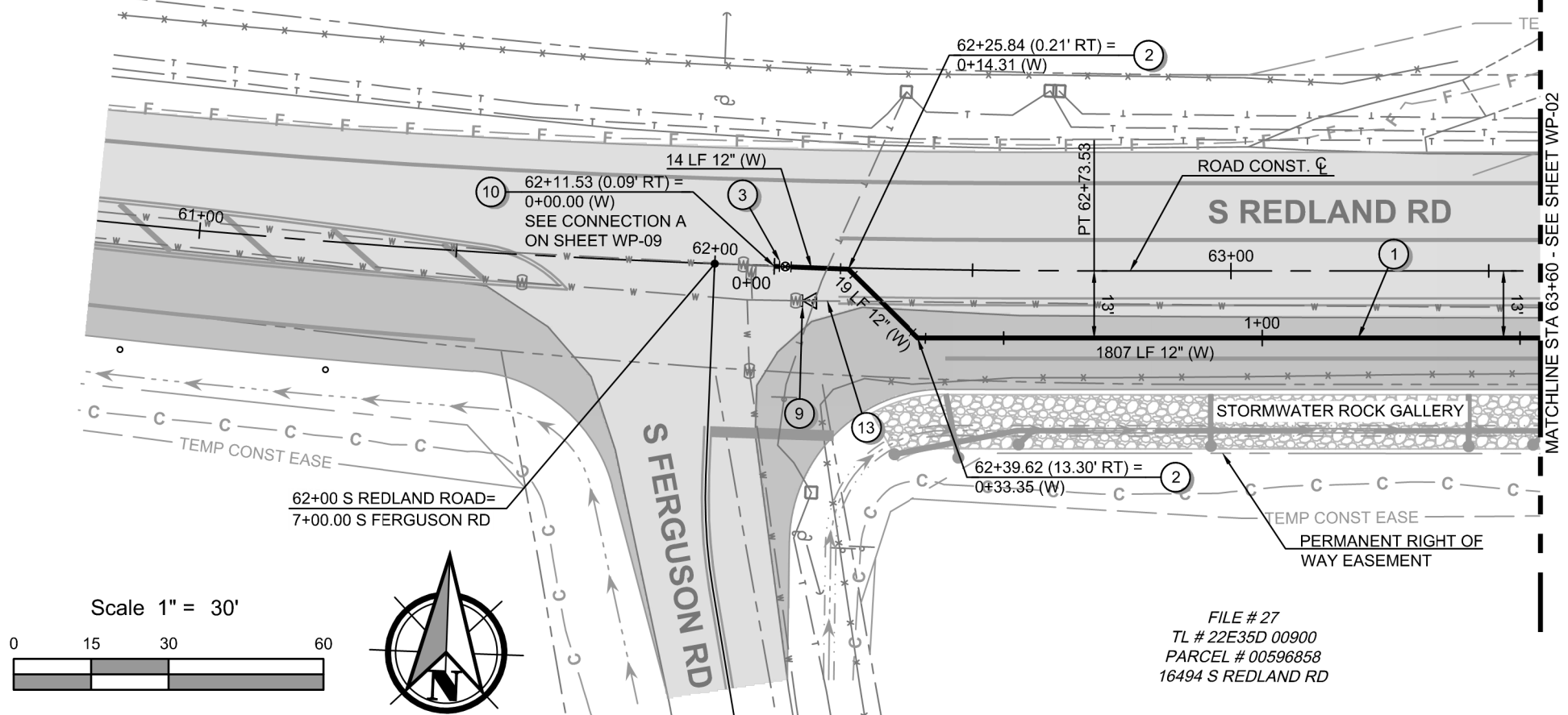
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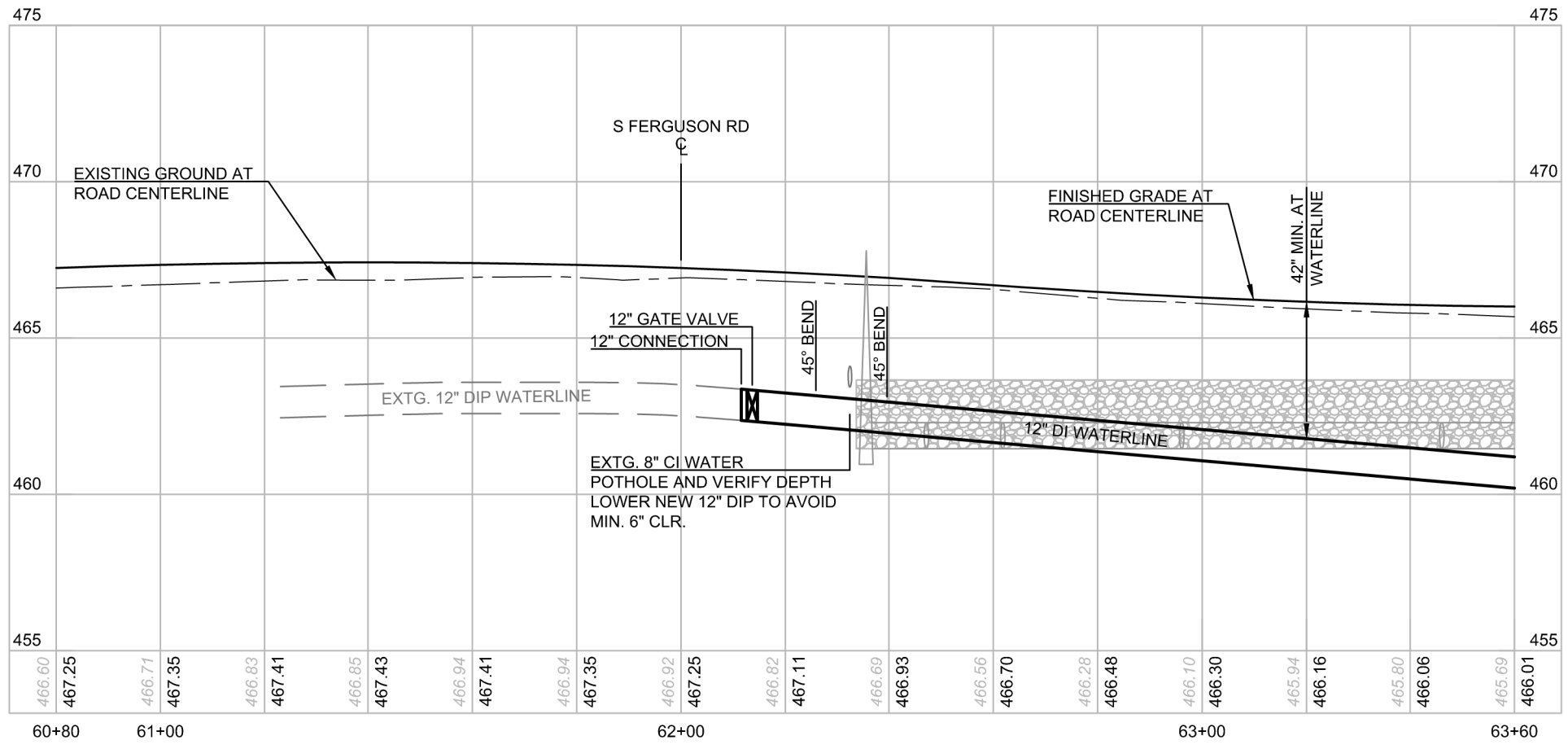
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- CONSTRUCTION NOTES:**
- ① INSTALL RESTRAINED 12" DI WATERLINE (FOR DETAILS, SEE CRW STD. DTL. 101A)
  - ② INSTALL 12" 45° MJ BEND - 2 FULLY RESTRAIN ALL PIPE JOINTS
  - ③ INSTALL 12" MJ X MJ RSGV WITH BOX AND LID INSTALL 12" FOSTER ADAPTER FULLY RESTRAIN ALL PIPE JOINTS
  - ⑨ INSTALL 8" PLUG AND THRUST BLOCK UPON ACCEPTANCE OF NEW WATERLINE
  - ⑩ REMOVE PLUG AND CONNECT 12" DI WATERLINE FULLY RESTRAIN ALL PIPE JOINTS (FOR DETAILS, SEE SHT. WP-09)
  - ⑬ ABANDON EXISTING 8" CI WATERLINE AFTER ACCEPTANCE OF NEW 12" MAIN. PLUG CUT END WITH CONCRETE

- ADDITIONAL NOTES:**
1. FOR WATER SERVICE CONNECTIONS, SEE DETAILS ON SHEET WP-11.
  2. FOR CRW PROVIDED MATERIALS LIST, SEE SHEET WP-11.



S REDLAND ROAD



**WATERLINE PLAN & PROFILE**

**REDLAND ROAD WATERLINE**

PROJECT NO.: CL-300320344  
 DATE: 03/20/2023

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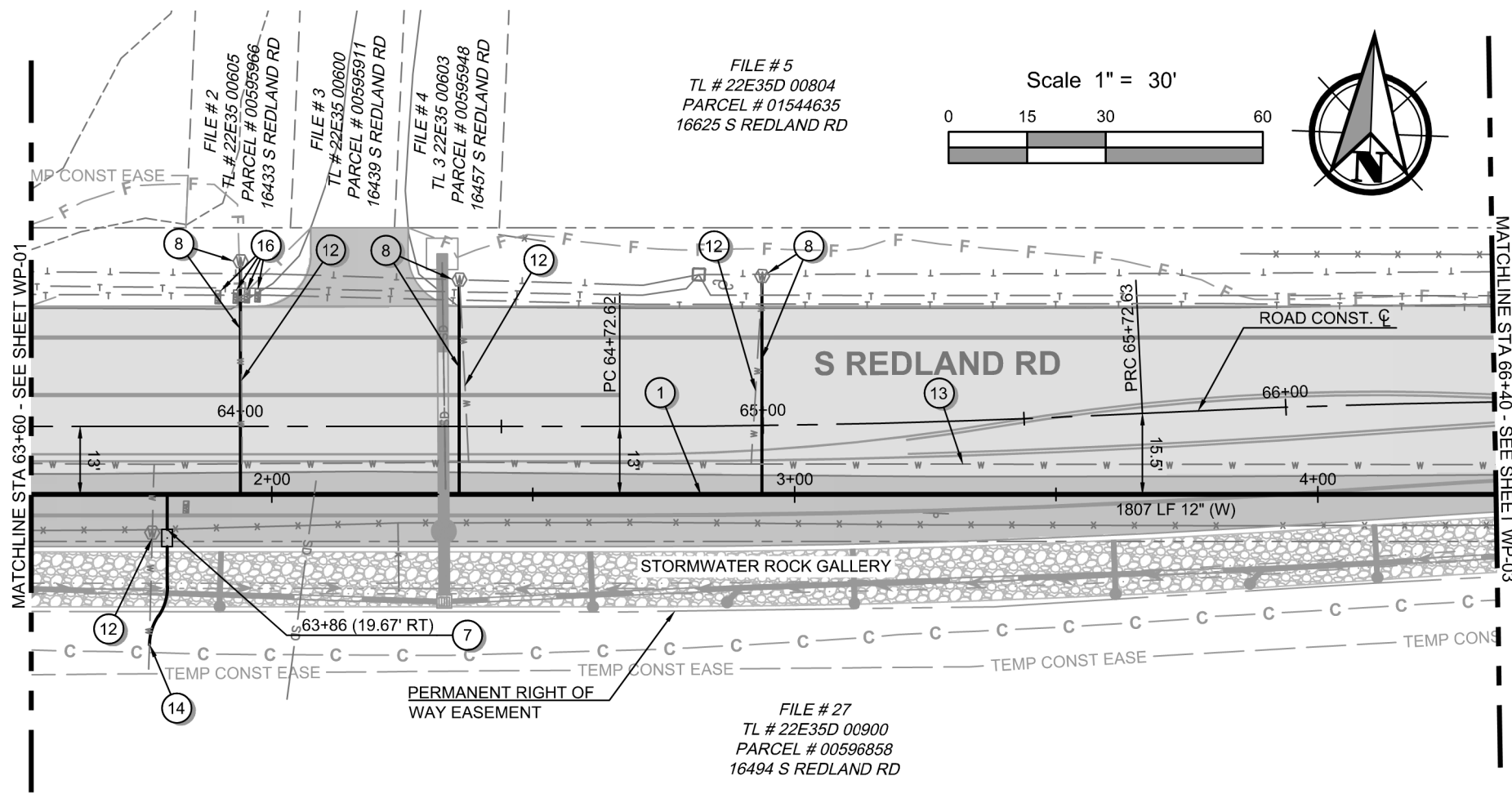
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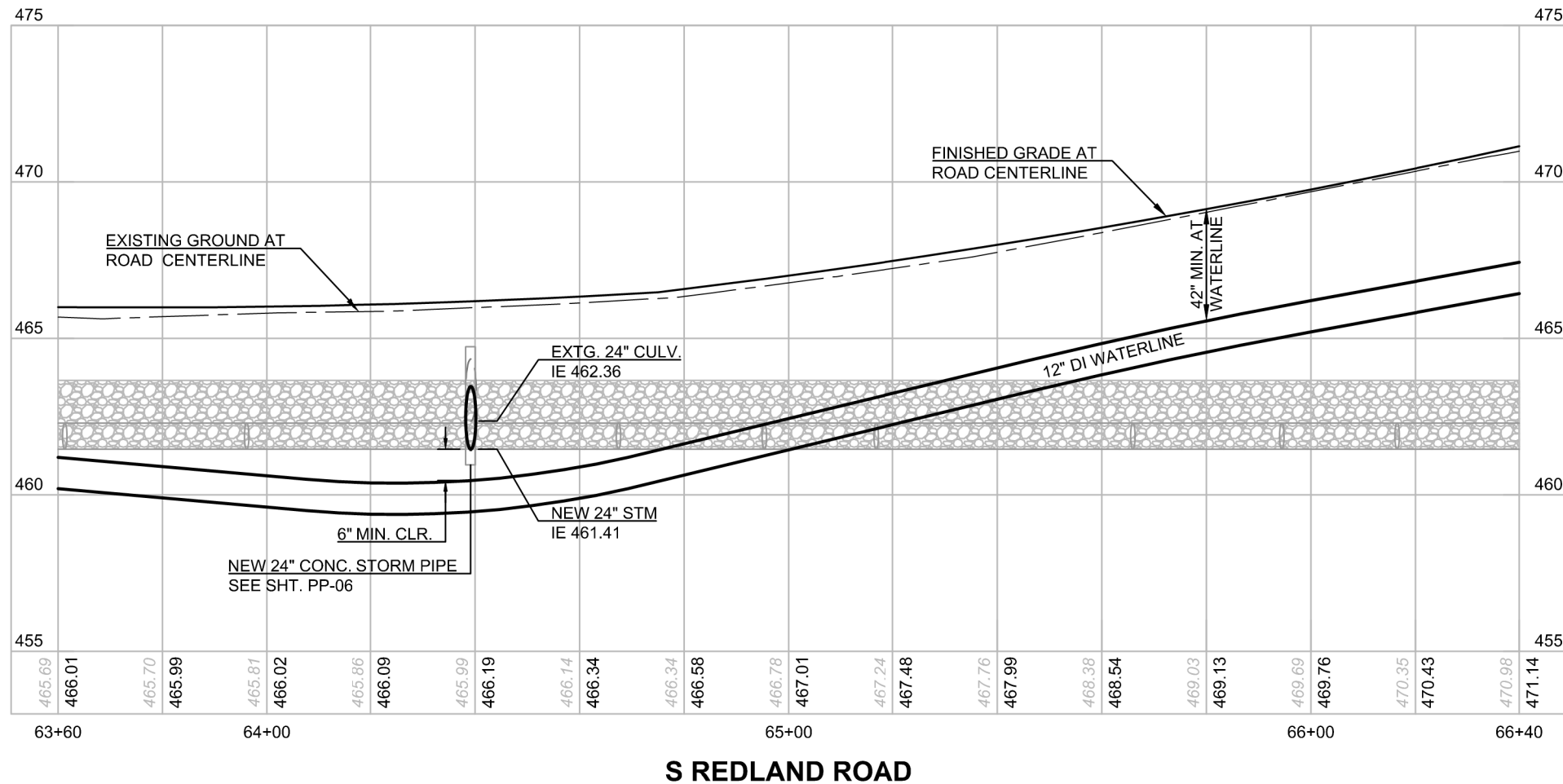
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- CONSTRUCTION NOTES:**
- ① INSTALL RESTRAINED 12" DI WATERLINE (FOR DETAILS, SEE CRW STD. DTL. 101A)
  - ⑦ CONSTRUCT SERVICE AND METER ASSEMBLY INSTALL METER BOX FLUSH WITH PAVEMENT SURFACE (FOR DETAILS, SEE CRW STD. DTL. 108A)
  - ⑧ CONSTRUCT SERVICE AND CONNECT TO EXISTING METER ASSEMBLY. ADJUST METER TO SLOPE OF FINISHED GRADE (FOR DETAILS, SEE CRW STD. DTL. 108B)
  - ⑫ ABANDON EXISTING SERVICE. COORDINATE WITH CRW
  - ⑬ ABANDON EXISTING 8" CI WATERLINE AFTER ACCEPTANCE OF NEW 12" MAIN.
  - ⑭ INSTALL NEW SERVICE 18" MIN. BELOW STORMWATER ROCK GALLERY AND RECONNECT TO EXISTING SERVICE AFTER ACCEPTANCE OF NEW WATERLINE.
  - ⑮ TEMPORARILY RELOCATE METER AND SERVICE CONNECTION UNDER ROCK GALLERY BEFORE EXCAVATION. REINSTALL EXISTING METER BETWEEN EXISTING EDGE OF PAVEMENT AND NEW ROCK GALLERY. RECONNECT SERVICE.
  - ⑯ PRESERVE AND PROTECT MAILBOXES. TEMPORARILY REMOVE MAILBOX(ES) AND SUPPORTS AS REQUIRED FOR WATER SERVICE WORK. SEE ROADWAY SHEET PP-06, NOTE 17 FOR PERMANENT INSTALLATION.

- ADDITIONAL NOTES:**
1. FOR WATER SERVICE CONNECTIONS, SEE DETAILS ON SHEET WP-11.
  2. FOR CRW PROVIDED MATERIALS LIST, SEE SHEET WP-11.



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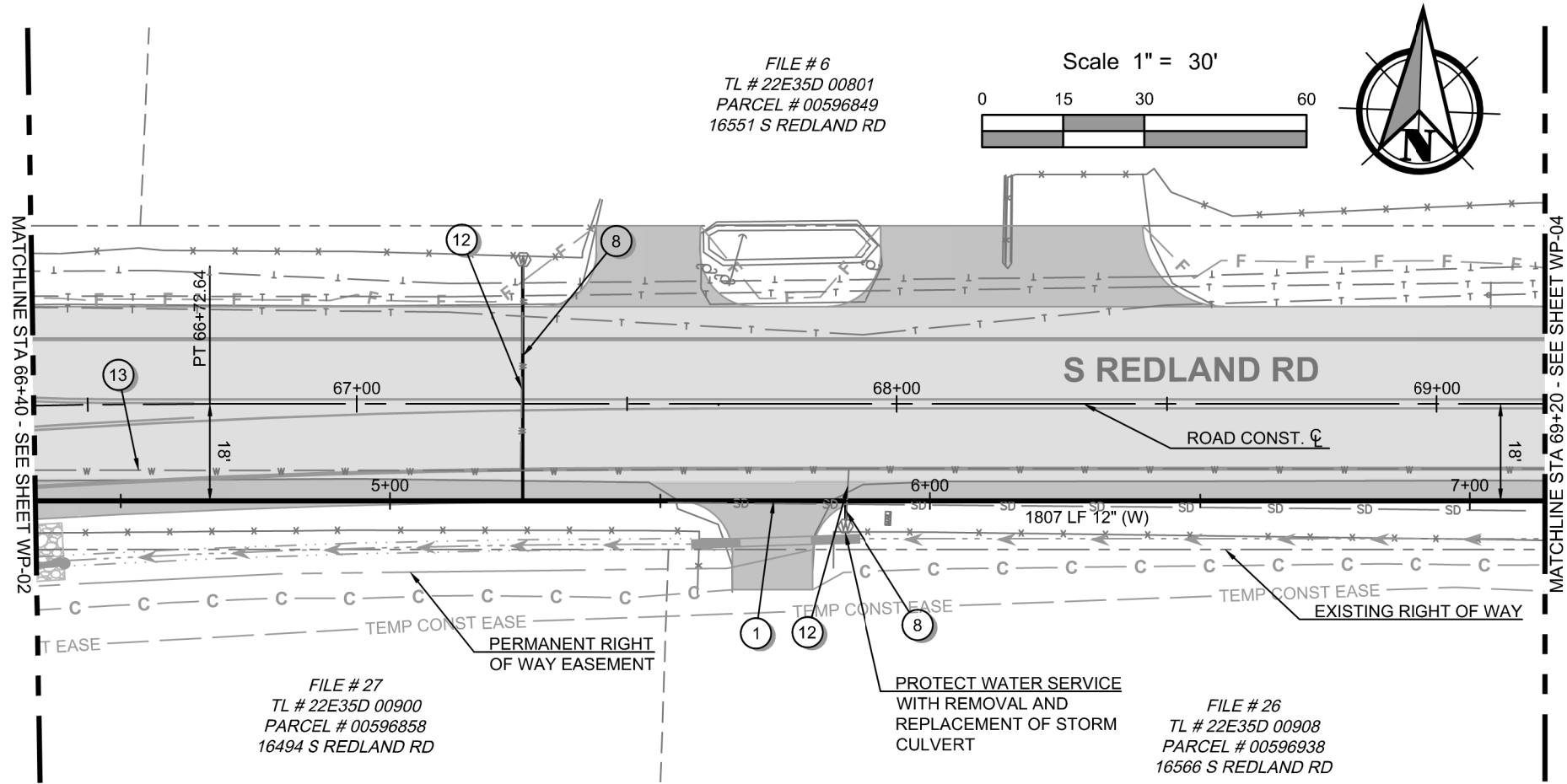
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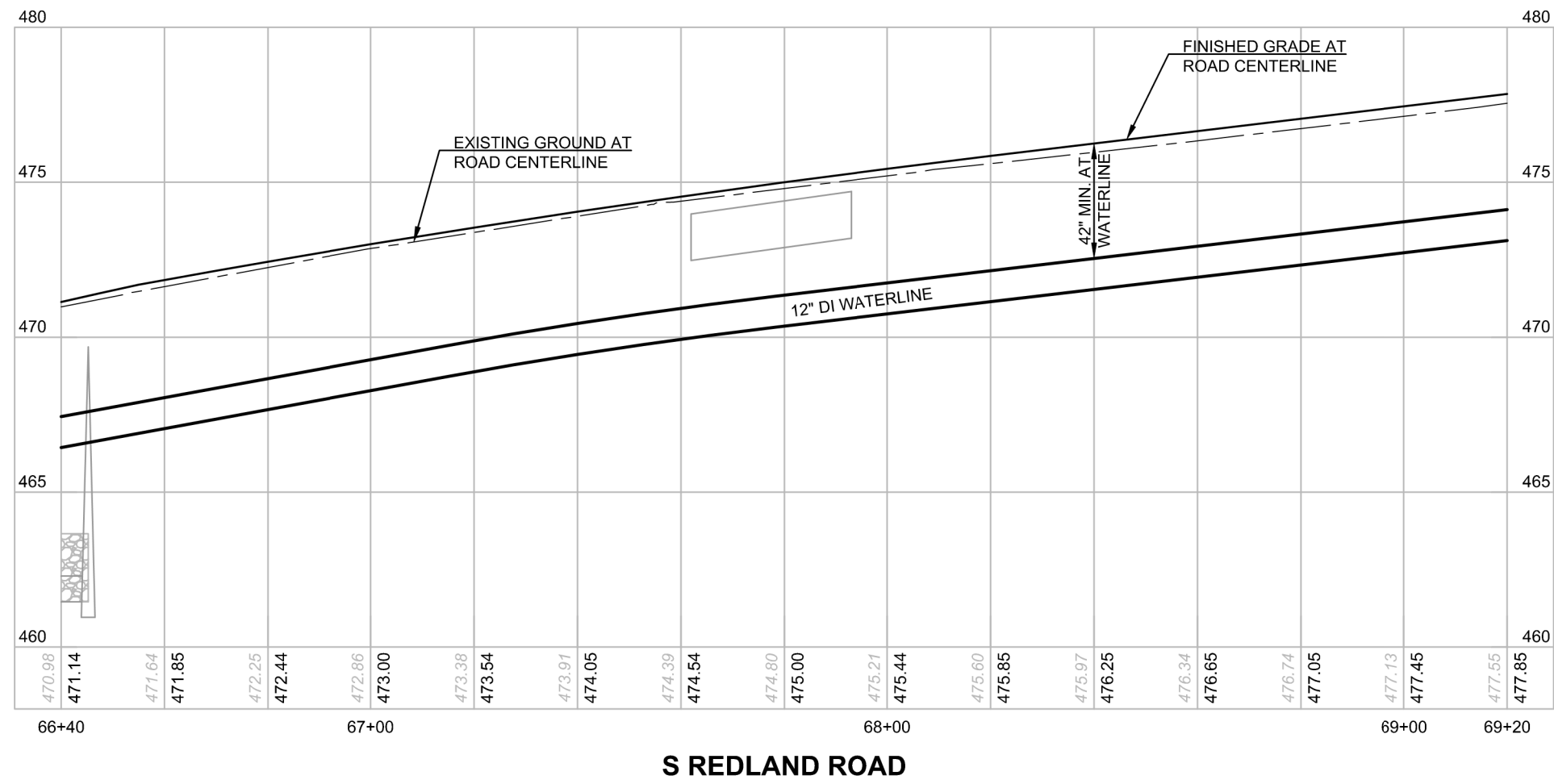
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Clackamas River Water



- CONSTRUCTION NOTES:**
- ① INSTALL RESTRAINED 12" DI WATERLINE (FOR DETAILS, SEE CRW STD. DTL. 101A)
  - ⑧ CONSTRUCT SERVICE AND CONNECT TO EXISTING METER ASSEMBLY. ADJUST METER TO SLOPE OF FINISHED GRADE (FOR DETAILS, SEE CRW STD. DTL. 108B)
  - ⑫ ABANDON EXISTING SERVICE. COORDINATE WITH CRW
  - ⑬ ABANDON EXISTING 8" CI WATERLINE AFTER ACCEPTANCE OF NEW 12" MAIN.

- ADDITIONAL NOTES:**
- 1. FOR WATER SERVICE CONNECTIONS, SEE DETAILS ON SHEET WP-11.
  - 2. FOR CRW PROVIDED MATERIALS LIST, SEE SHEET WP-11.



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**WATERLINE PLAN & PROFILE**

**REDLAND ROAD WATERLINE**

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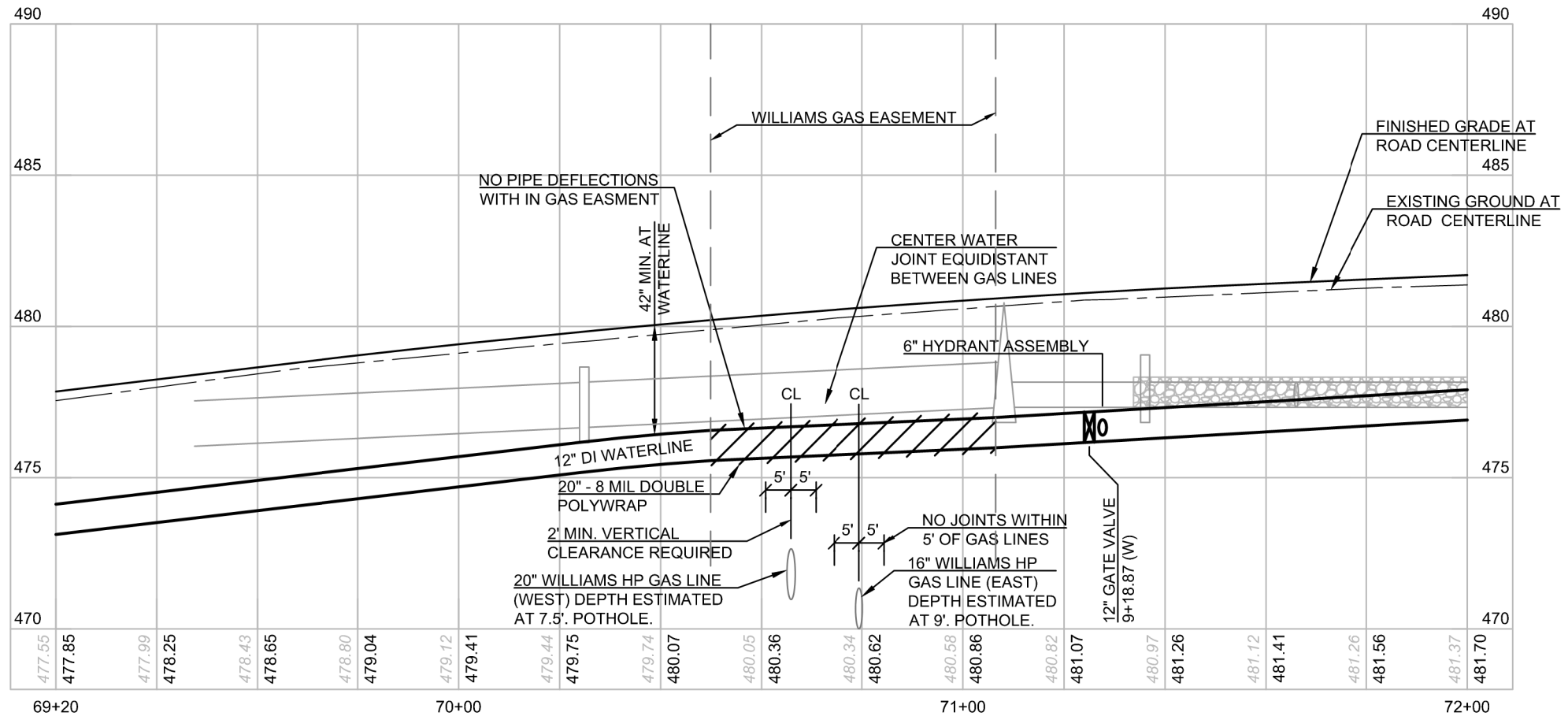
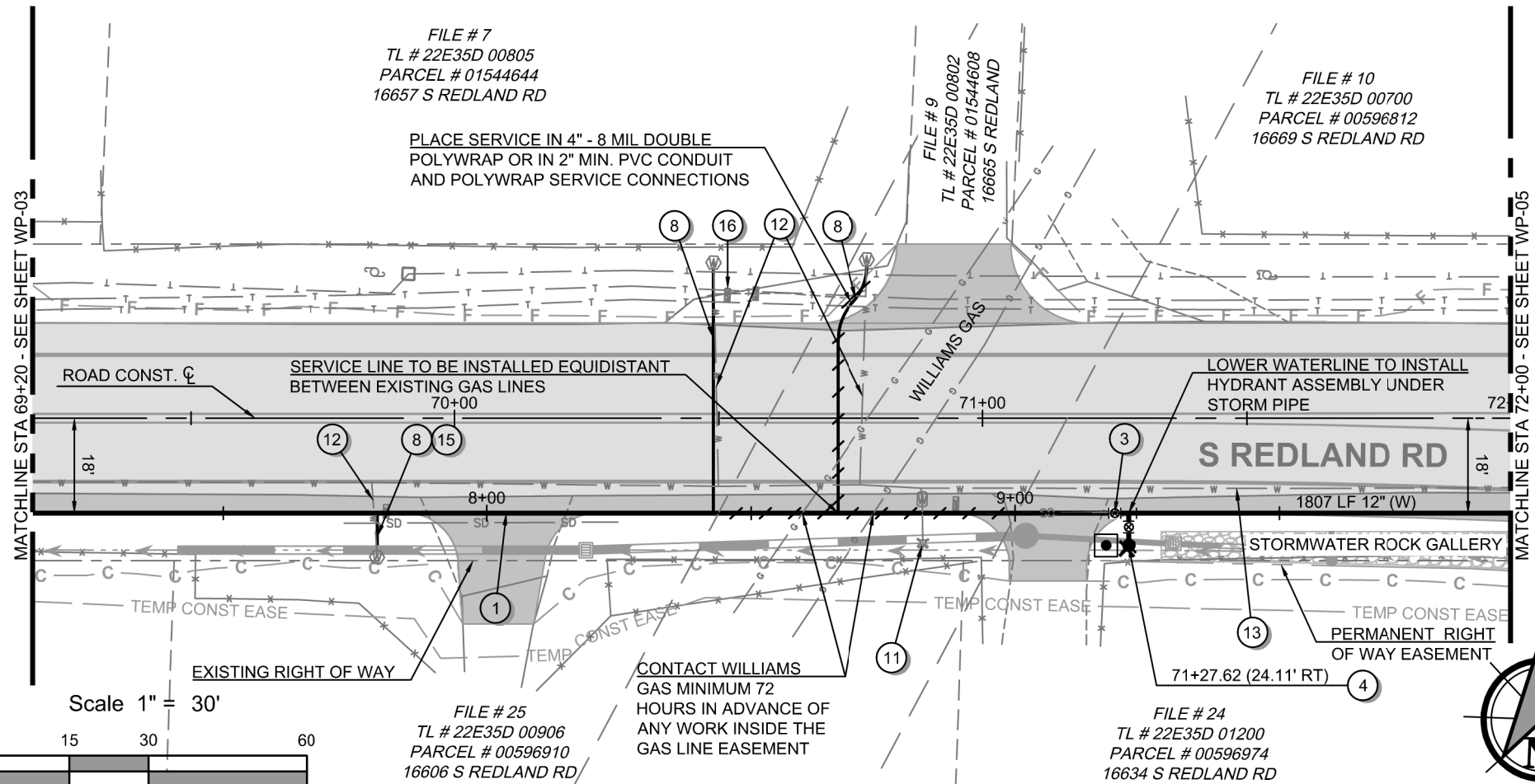
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S REDLAND ROAD

**CONSTRUCTION NOTES:**

- 1 INSTALL RESTRAINED 12" DI WATERLINE  
PLACE DI WATERLINE IN 8 MIL DOUBLE POLYWRAP THROUGH GAS EASEMENT  
(FOR DETAILS, SEE CRW STD. DTL. 101A)
- 3 INSTALL 12" MJ X MJ RSGV WITH BOX AND LID  
INSTALL 12" FOSTER ADAPTER  
FULLY RESTRAIN ALL PIPE JOINTS
- 4 INSTALL HYDRANT ASSEMBLY, TYPE III  
INSTALL 12" X 6" TEE, MJ X FLG  
INSTALL 6" FLG X MJ RSGV WITH BOX AND LID  
INSTALL TRACER WIRE STATION  
FULLY RESTRAIN ALL JOINTS IN HYDRANT LINE  
(FOR DETAILS, SEE CRW STD. DTL. 104A, 110B, 110C, AND 115)
- 8 CONSTRUCT SERVICE AND CONNECT TO EXISTING METER ASSEMBLY. ADJUST METER TO SLOPE OF FINISHED GRADE  
(FOR DETAILS, SEE CRW STD. DTL. 108B)
- 11 REMOVE EXISTING HYDRANT AND RETURN TO CRW
- 12 ABANDON EXISTING SERVICE. COORDINATE WITH CRW
- 13 ABANDON EXISTING 8" CI WATERLINE AFTER ACCEPTANCE OF NEW 12" MAIN.
- 15 TREE AND STUMP REMOVAL WILL LIKELY DESTROY METER AND SERVICE. TEMPORARILY RELOCATE METER AND SERVICE CONNECTION BEFORE STUMP REMOVAL. REINSTALL EXISTING METER TO SLOPE OF FINISHED GRADE BETWEEN NEW STORM PIPE AND RIGHT OF WAY. RECONNECT SERVICE.
- 16 PROTECT MAILBOX

**ADDITIONAL NOTES:**

1. FOR WATER SERVICE CONNECTIONS, SEE DETAILS ON SHEET WP-11.
2. FOR CRW PROVIDED MATERIALS LIST, SEE SHEET WP-11.
3. FOR WILLIAMS GAS PIPELINE GENERAL NOTES, SEE SHEET C-03



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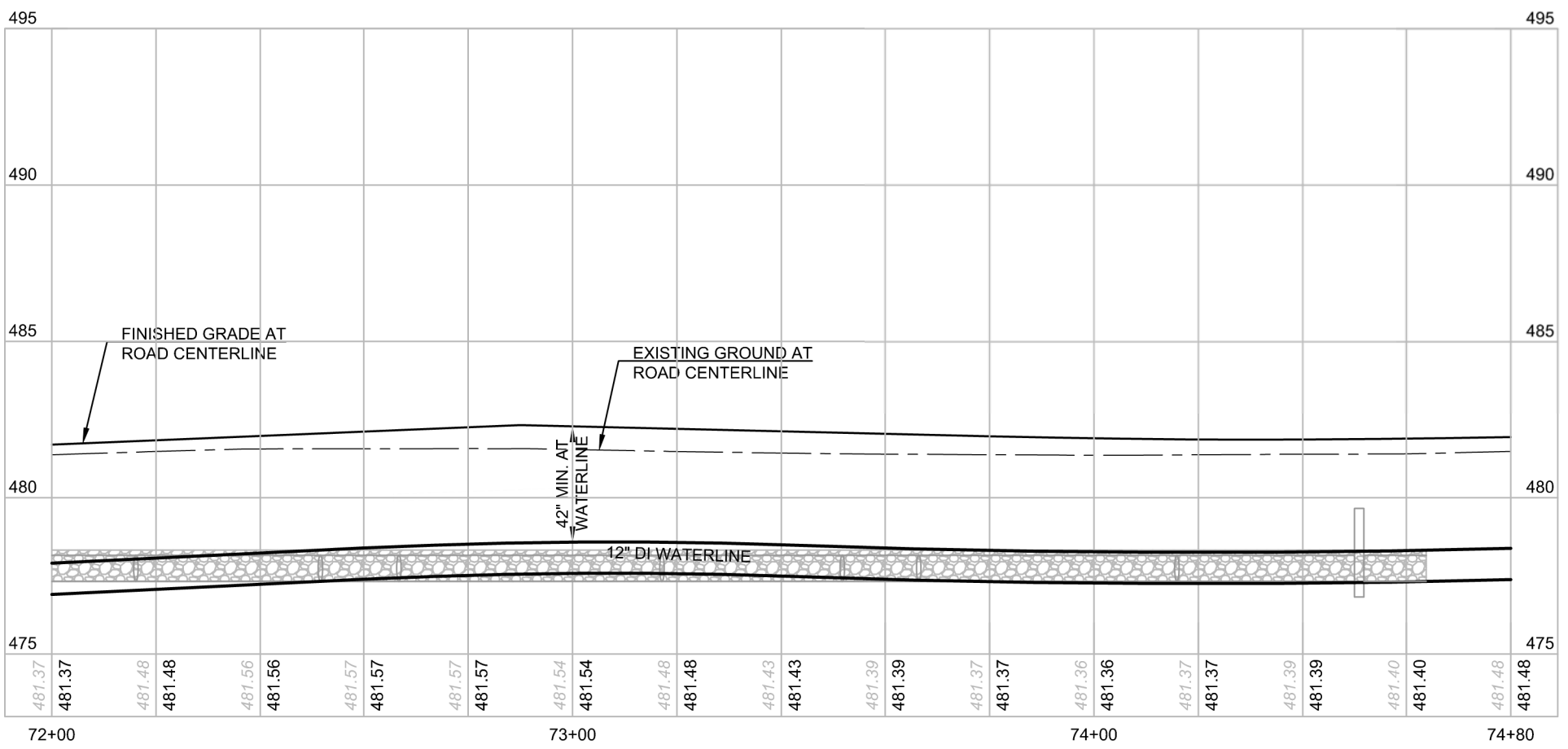
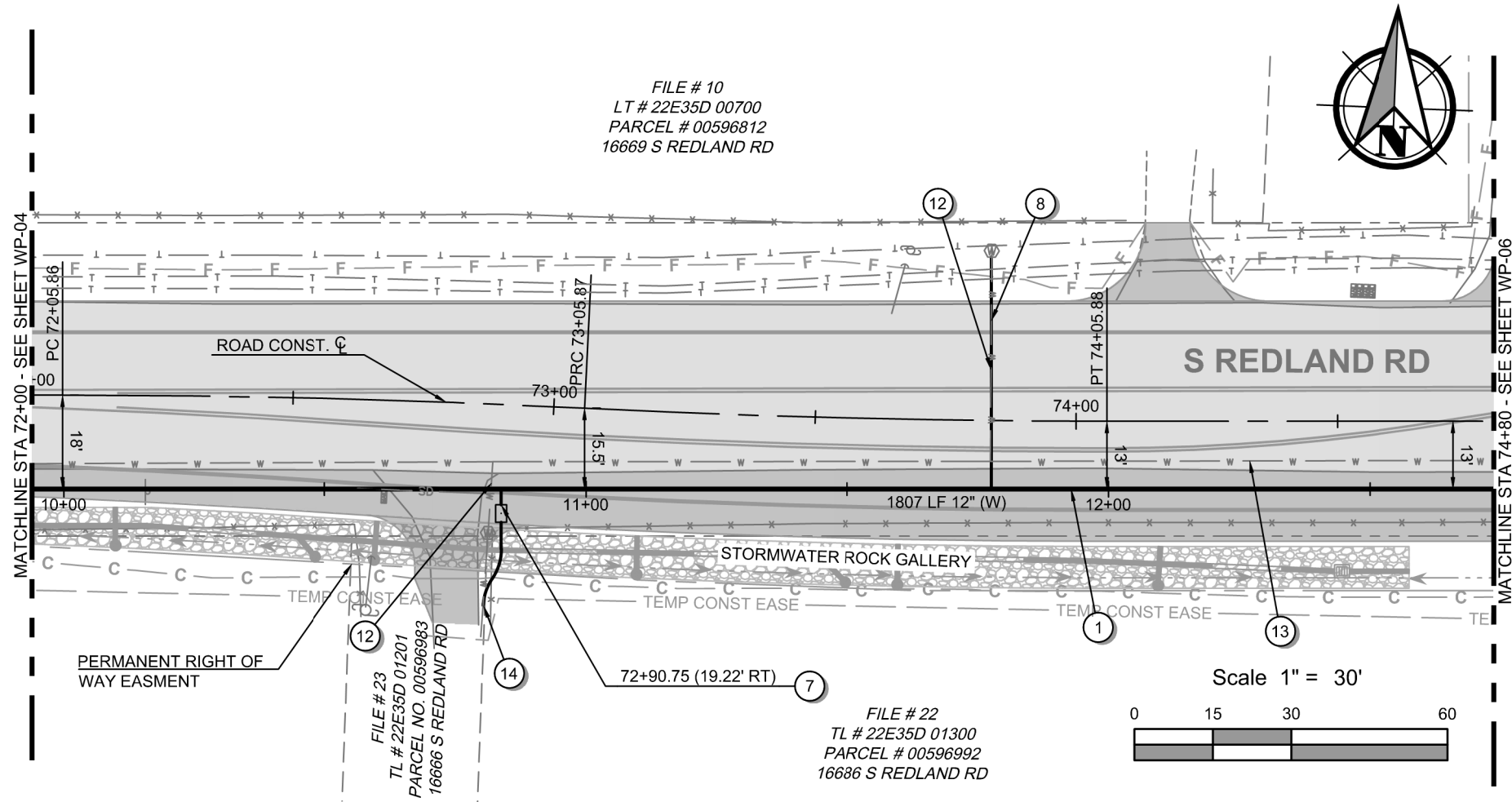
WATERLINE PLAN & PROFILE

REDLAND ROAD WATERLINE

Clackamas River Water

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S REDLAND ROAD

**CONSTRUCTION NOTES:**

- ① INSTALL RESTRAINED 12" DI WATERLINE (FOR DETAILS, SEE CRW STD. DTL. 101A)
- ⑦ CONSTRUCT SERVICE AND METER ASSEMBLY INSTALL METER BOX FLUSH WITH PAVEMENT SURFACE (FOR DETAILS, SEE CRW STD. DTL. 108A)
- ⑧ CONSTRUCT SERVICE AND CONNECT TO EXISTING METER ASSEMBLY. ADJUST METER TO SLOPE OF FINISHED GRADE (FOR DETAILS, SEE CRW STD. DTL. 108B)
- ⑫ ABANDON EXISTING SERVICE. COORDINATE WITH CRW.
- ⑬ ABANDON EXISTING 8" CI WATERLINE AFTER ACCEPTANCE OF NEW 12" MAIN.
- ⑭ INSTALL NEW METER ASSEMBLY AND SERVICE ABOVE STORMWATER ROCK GALLERY AND RECONNECT TO EXISTING SERVICE AFTER ACCEPTANCE OF NEW WATERLINE

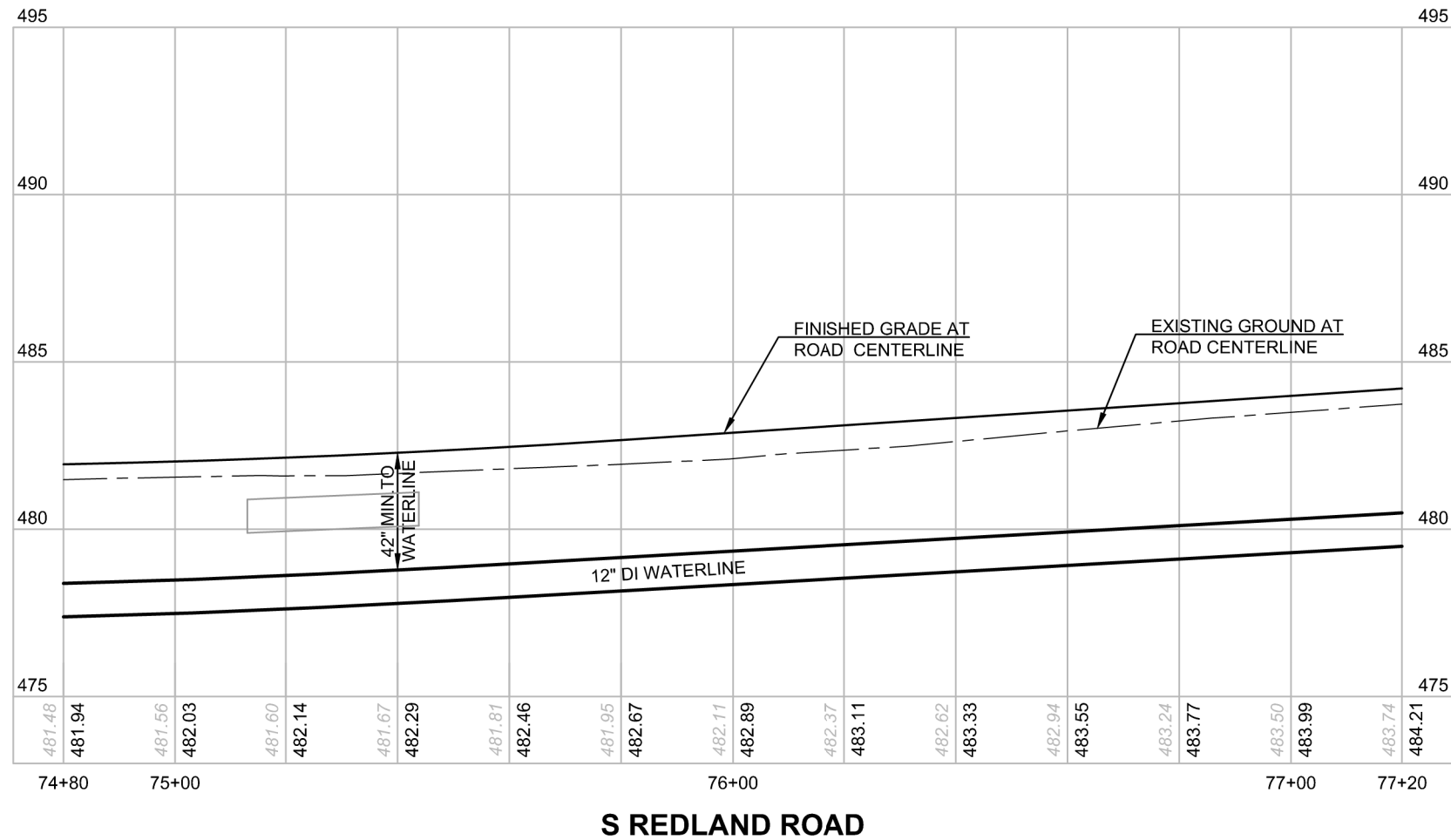
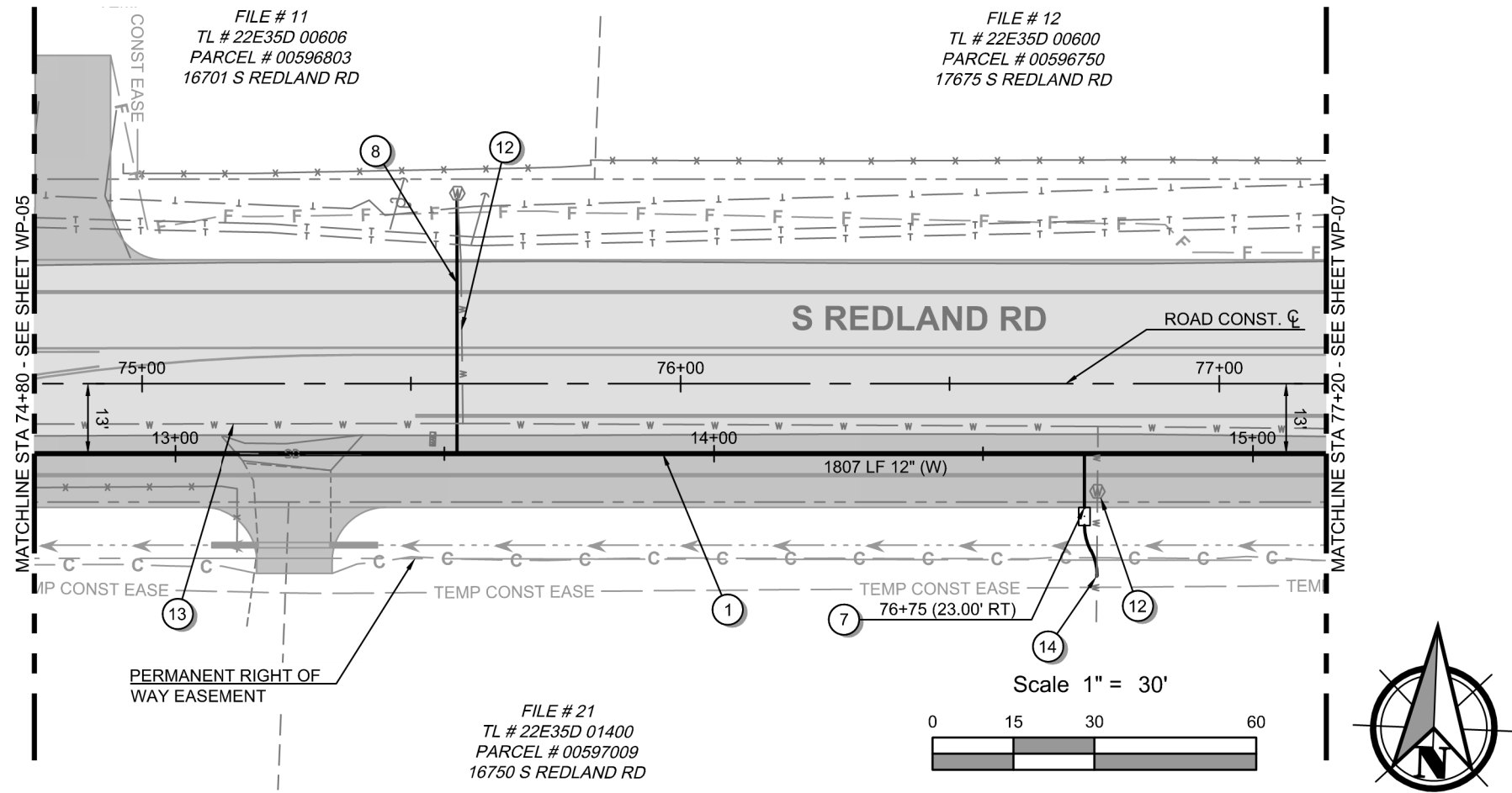
**ADDITIONAL NOTES:**

- 1. FOR WATER SERVICE CONNECTIONS, SEE DETAILS ON SHEET WP-11.
- 2. FOR CRW PROVIDED MATERIALS LIST, SEE SHEET WP-11.



EXPIRES: 12/31/2024

<p>WATERLINE PLAN &amp; PROFILE</p>	<p>REDLAND ROAD WATERLINE</p>						
<p>PBS Engineering and Environmental Inc. 4412 S Corbett Avenue Portland, OR 97239 503.248.1939 pbsusa.com</p>							
<p>DESIGNED BY: PPG</p>	<p>CHECKED BY: KSR</p>						
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NO	DATE	DESCRIPTION					
<p>Sheet No. WP-05</p>							
<p>PROJECT NO.: CL-300320344 DATE: 03/20/2023</p>							



**CONSTRUCTION NOTES:**

- ① INSTALL RESTRAINED 12" DI WATERLINE (FOR DETAILS, SEE CRW STD. DTL. 101A)
- ⑦ CONSTRUCT SERVICE AND METER ASSEMBLY. INSTALL METER BOX TO SLOPE OF FINISHED GRADE (FOR DETAILS, SEE CRW STD. DTL. 108A)
- ⑧ CONSTRUCT SERVICE AND CONNECT TO EXISTING METER ASSEMBLY. ADJUST METER TO SLOPE OF FINISHED GRADE (FOR DETAILS, SEE CRW STD. DTL. 108B)
- ⑫ ABANDON EXISTING SERVICE. COORDINATE WITH CRW
- ⑬ ABANDON EXISTING 8" CI WATERLINE AFTER ACCEPTANCE OF NEW 12" MAIN.
- ⑭ RECONNECT TO EXISTING SERVICE AFTER ACCEPTANCE OF NEW WATERLINE

**ADDITIONAL NOTES:**

- 1. FOR WATER SERVICE CONNECTIONS, SEE DETAILS ON SHEET WP-11.
- 2. FOR CRW PROVIDED MATERIALS LIST, SEE SHEET WP-11.



EXPIRES: 12/31/2024

WATERLINE PLAN & PROFILE

REDLAND ROAD WATERLINE

PROJECT NO.: CL-300320344  
DATE: 03/20/2023



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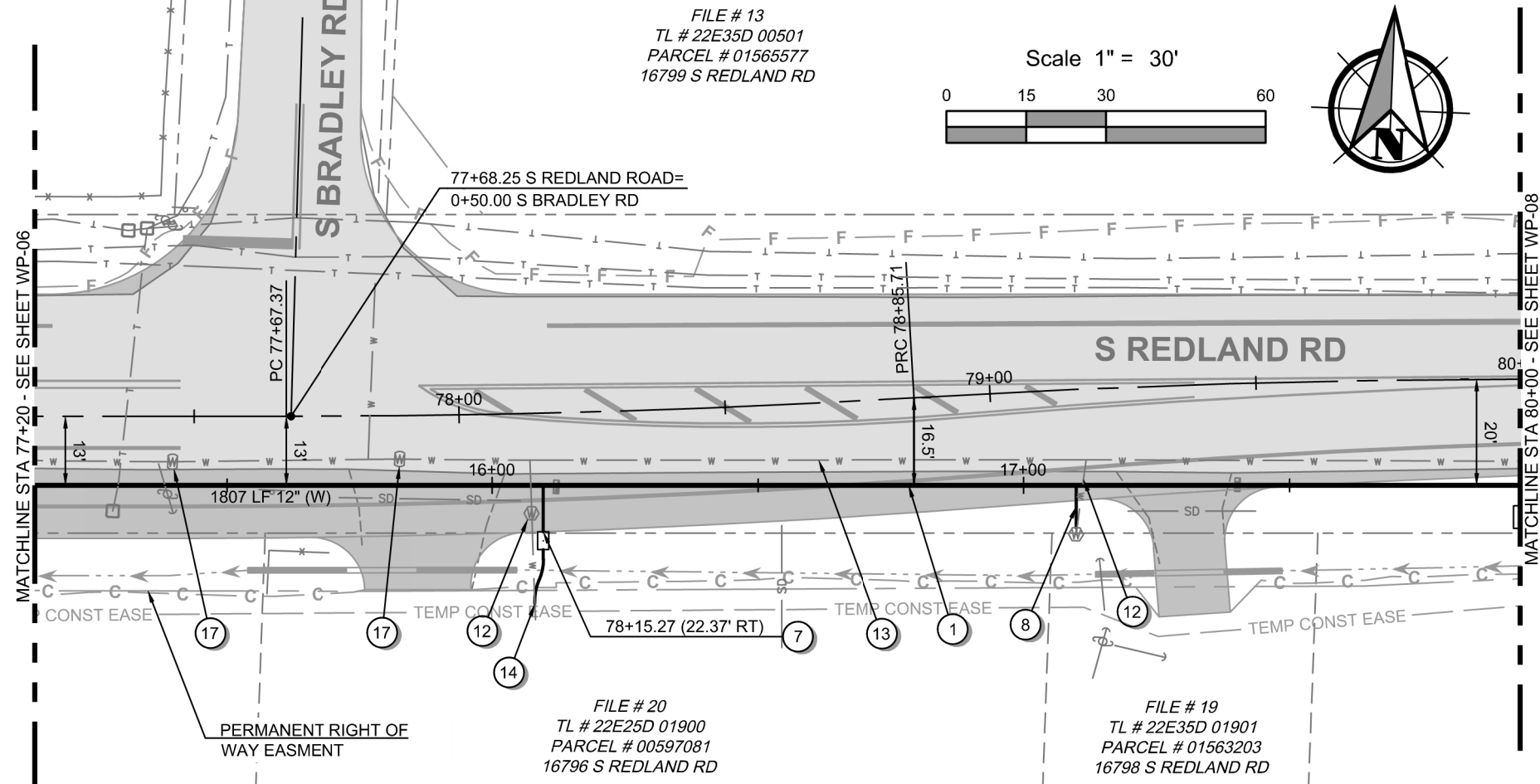


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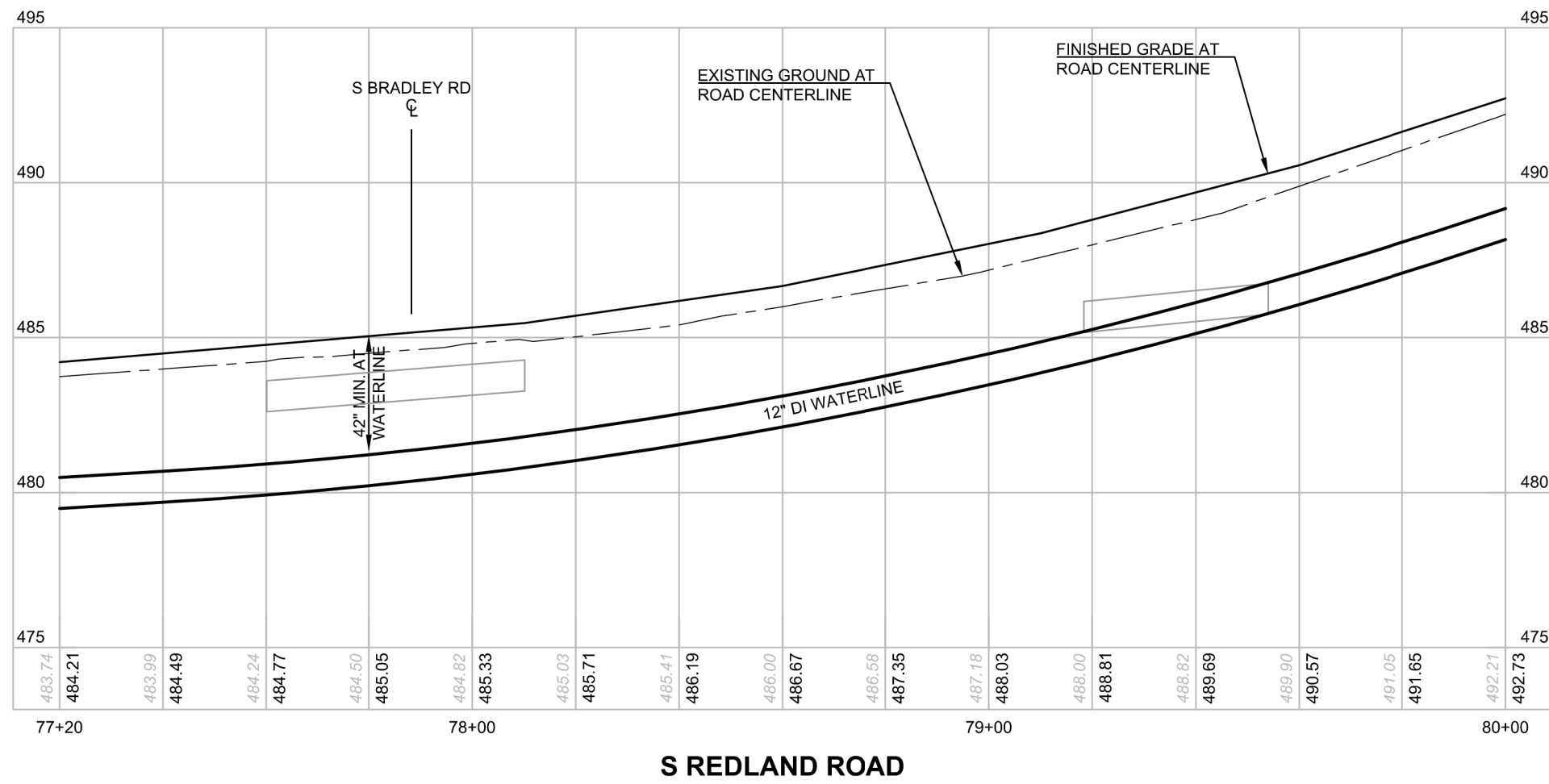
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Sheet No. WP-06



- CONSTRUCTION NOTES:**
- ① INSTALL RESTRAINED 12" DI WATERLINE (FOR DETAILS, SEE CRW STD. DTL. 101A)
  - ⑦ CONSTRUCT SERVICE AND METER ASSEMBLY INSTALL METER BOX TO SLOPE OF FINISHED GRADE (FOR DETAILS, SEE CRW STD. DTL. 108A)
  - ⑧ CONSTRUCT SERVICE AND CONNECT TO EXISTING METER ASSEMBLY. ADJUST METER TO SLOPE OF FINISHED GRADE (FOR DETAILS, SEE CRW STD. DTL. 108B)
  - ⑫ ABANDON EXISTING SERVICE. COORDINATE WITH CRW
  - ⑬ ABANDON EXISTING 8" CI WATERLINE AFTER ACCEPTANCE OF NEW 12" MAIN.
  - ⑭ RECONNECT TO EXISTING SERVICE AFTER ACCEPTANCE OF NEW WATERLINE
  - ⑰ REMOVE VALVE AND ABANDON LINE AFTER ACCEPTANCE OF NEW WATERLINE

- ADDITIONAL NOTES:**
1. FOR WATER SERVICE CONNECTIONS, SEE DETAILS ON SHEET WP-11.
  2. FOR CRW PROVIDED MATERIALS LIST, SEE SHEET WP-11.



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Sheet No. WP-07

WATERLINE PLAN & PROFILE

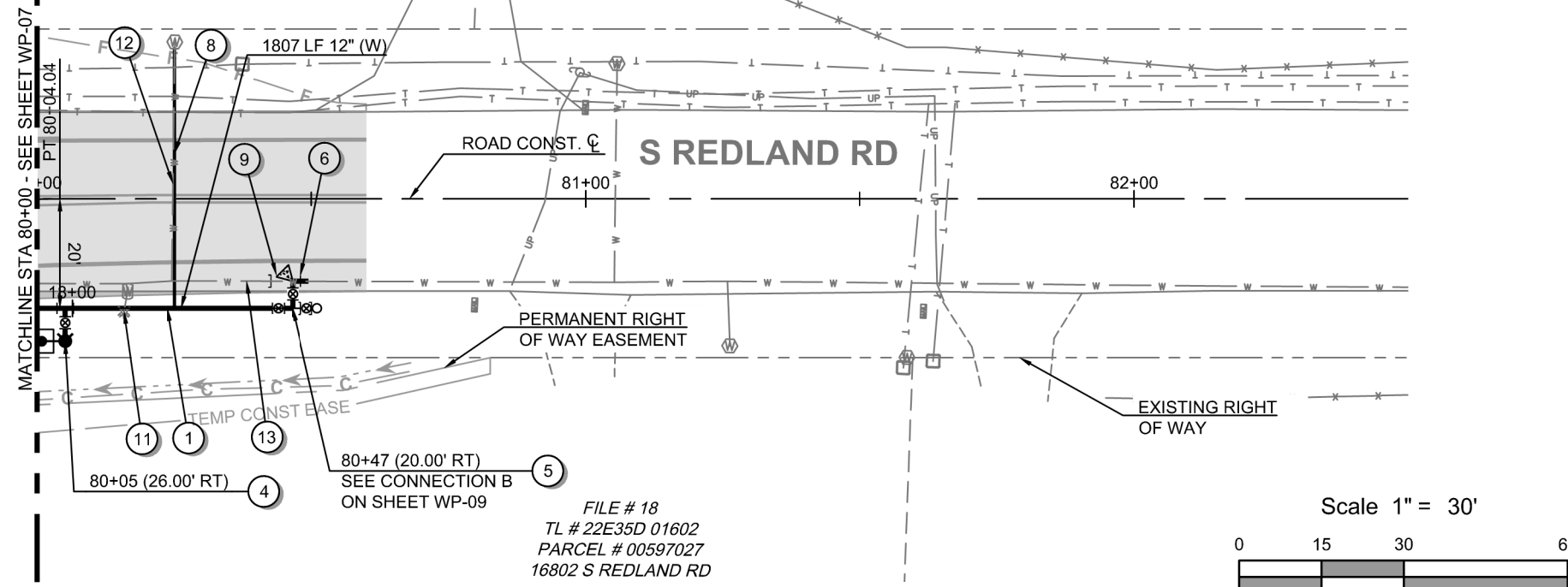
REDLAND ROAD WATERLINE

DATE: 03/20/2023 PROJECT NO.: CL-300320344

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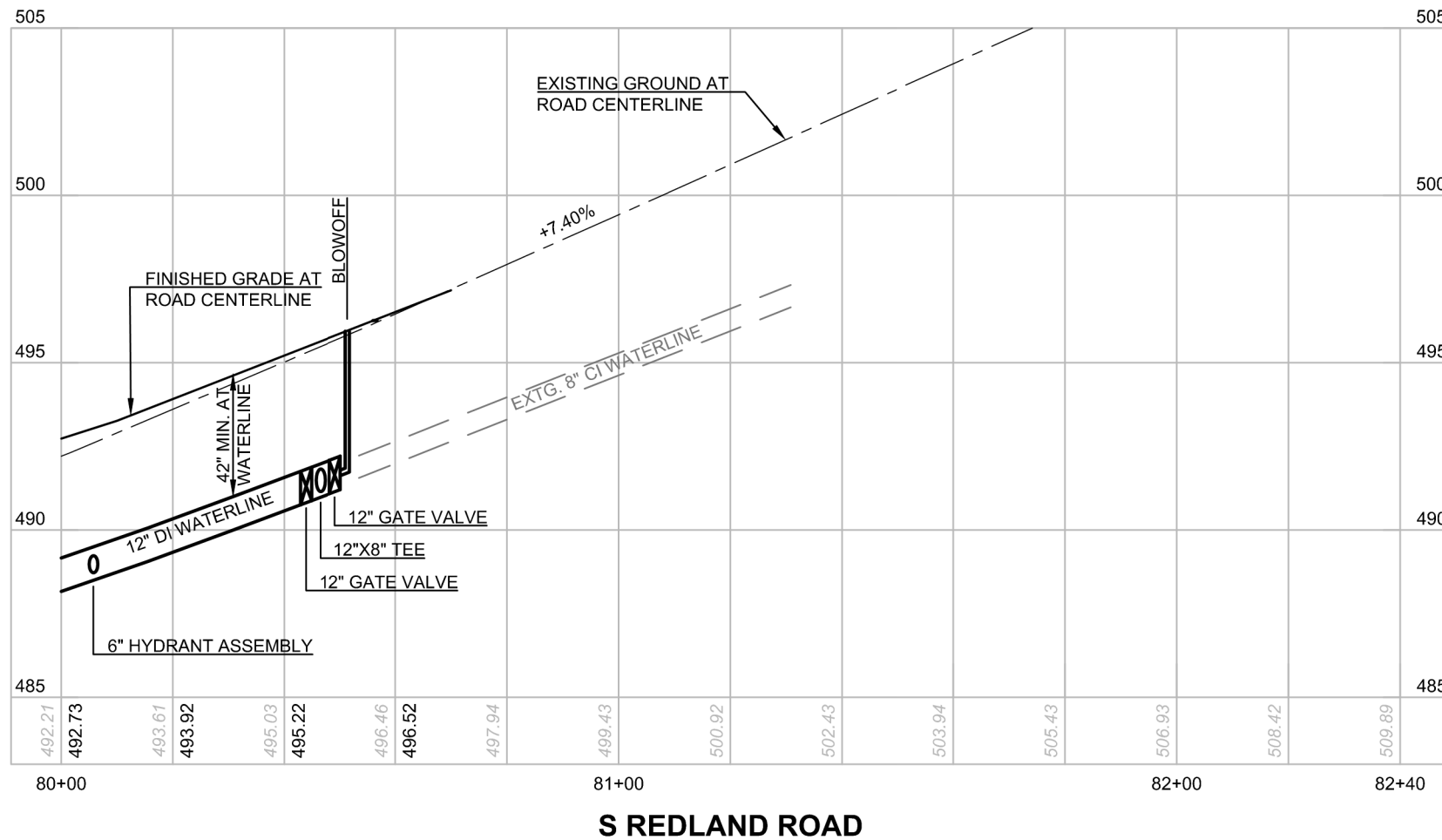
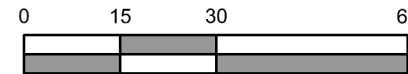


FILE # 13  
 TL # 22E35D 00501  
 PARCEL # 01565577  
 16799 S REDLAND RD



FILE # 18  
 TL # 22E35D 01602  
 PARCEL # 00597027  
 16802 S REDLAND RD

Scale 1" = 30'



**CONSTRUCTION NOTES:**

- ① INSTALL RESTRAINED 12" DI WATERLINE (FOR DETAILS, SEE CRW STD. DTL. 101A)
- ④ INSTALL HYDRANT ASSEMBLY, TYPE III  
 INSTALL 12" X 6" TEE, MJ X FLG  
 INSTALL 6" FLG X MJ RSGV WITH BOX AND LID  
 INSTALL BOX TO SLOPE OF FINISHED GRADE  
 INSTALL TRACER WIRE STATION  
 FULLY RESTRAIN ALL JOINTS IN HYDRANT LINE  
 (FOR DETAILS, SEE CRW STD. DTL. 104A, 110B, 110C, AND 115)
- ⑤ INSTALL 12" X 8" TEE, FLG X FLG  
 INSTALL 12" FLG X MJ RSGV WITH BOX AND LID - 2  
 INSTALL 8" FLG X MJ RSGV WITH BOX AND LID  
 INSTALL BOXES TO SLOPE OF FINISHED GRADE  
 INSTALL TYPE II BLOW OFF ASSEMBLY  
 FULLY RESTRAIN ALL PIPE JOINTS  
 (FOR DETAILS, SEE CRW STD. DTL. 104A AND 106B)  
 POT HOLE EXISTING WATERLINE TO SET GRADE
- ⑥ INSTALL 8" 90° MJ BEND  
 INSTALL 8" LONG CAST SLEEVE TO CONNECT INTO EXISTING 8" WATERLINE AFTER ACCEPTANCE OF NEW WATERLINE  
 FULLY RESTRAIN ALL PIPE JOINTS
- ⑧ CONSTRUCT SERVICE AND CONNECT TO EXISTING METER ASSEMBLY. ADJUST METER TO SLOPE OF FINISHED GRADE (FOR DETAILS, SEE CRW STD. DTL. 108B)
- ⑨ PLUG EXISTING 8" CI WATERLINE WITH CONCRETE
- ⑪ REMOVE EXISTING HYDRANT AND RETURN TO CRW
- ⑫ ABANDON EXISTING SERVICE. COORDINATE WITH CRW
- ⑬ ABANDON EXISTING 8" CI WATERLINE AFTER ACCEPTANCE OF NEW 12" MAIN.

**ADDITIONAL NOTES:**

- 1. FOR WATER SERVICE CONNECTIONS, SEE DETAILS ON SHEET WP-11.
- 2. FOR CRW PROVIDED MATERIALS LIST, SEE SHEET WP-11.



EXPIRES: 12/31/2024

WATERLINE PLAN & PROFILE

REDLAND ROAD WATERLINE

PROJECT NO.: CL-300320344  
 DATE: 03/20/2023



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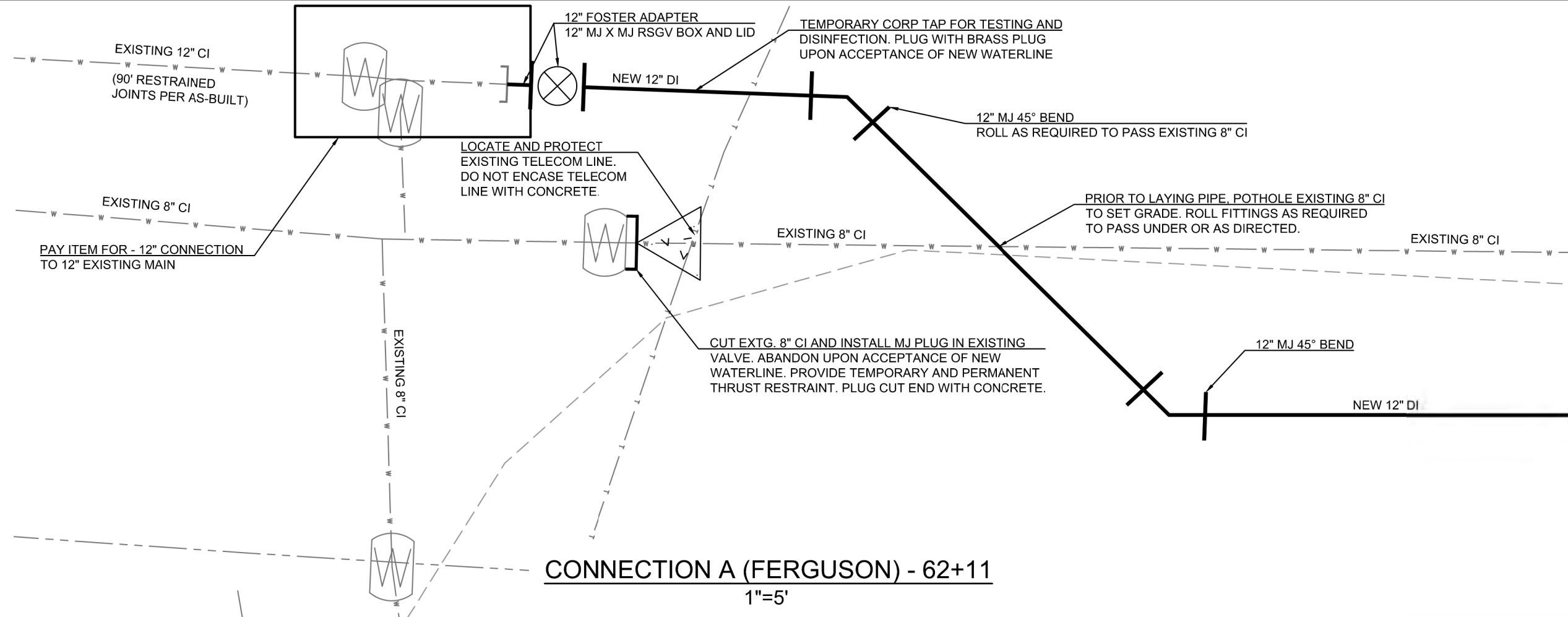
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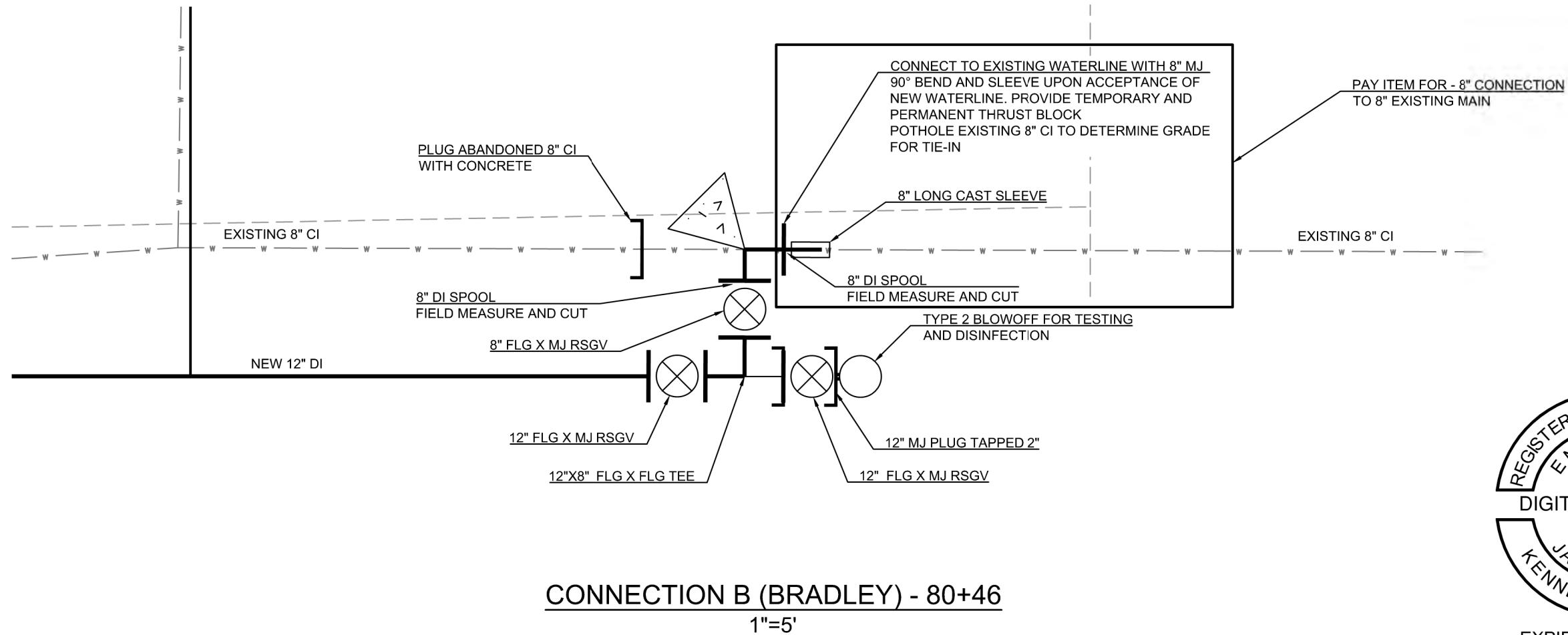
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**CONNECTION A (FERGUSON) - 62+11**  
1"=5'



**CONNECTION B (BRADLEY) - 80+46**  
1"=5'



EXPIRES: 12/31/2024

WATERLINE CONNECTION DETAILS

REDLAND ROAD WATERLINE

PROJECT NO.: CL-300320344

DATE: 03/20/2023



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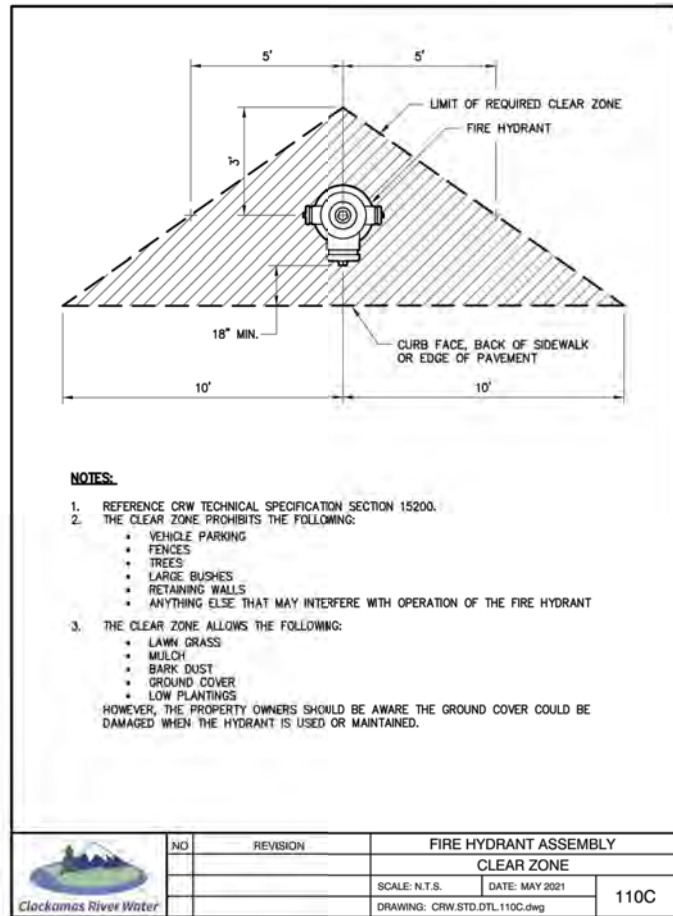
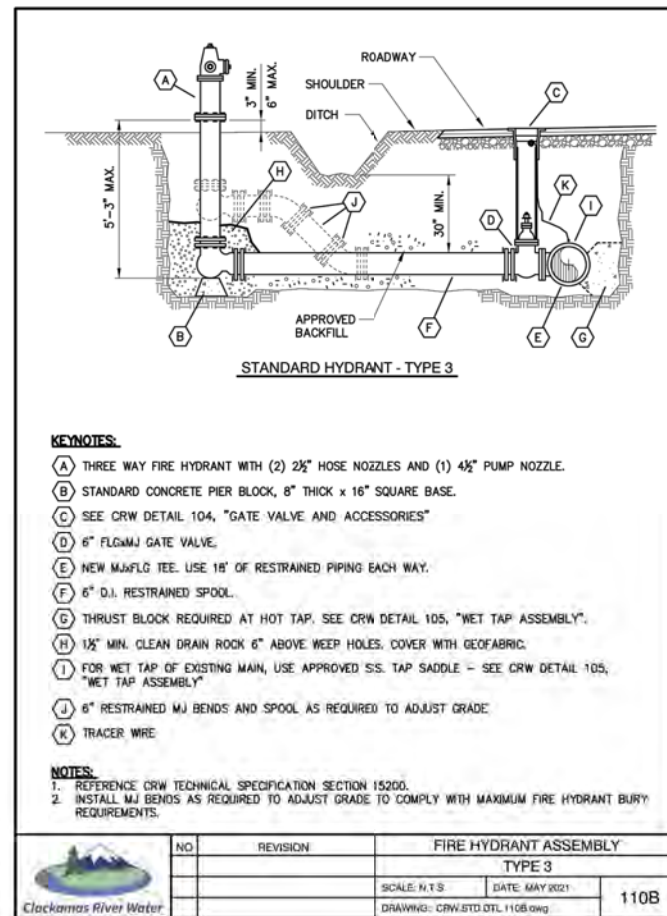
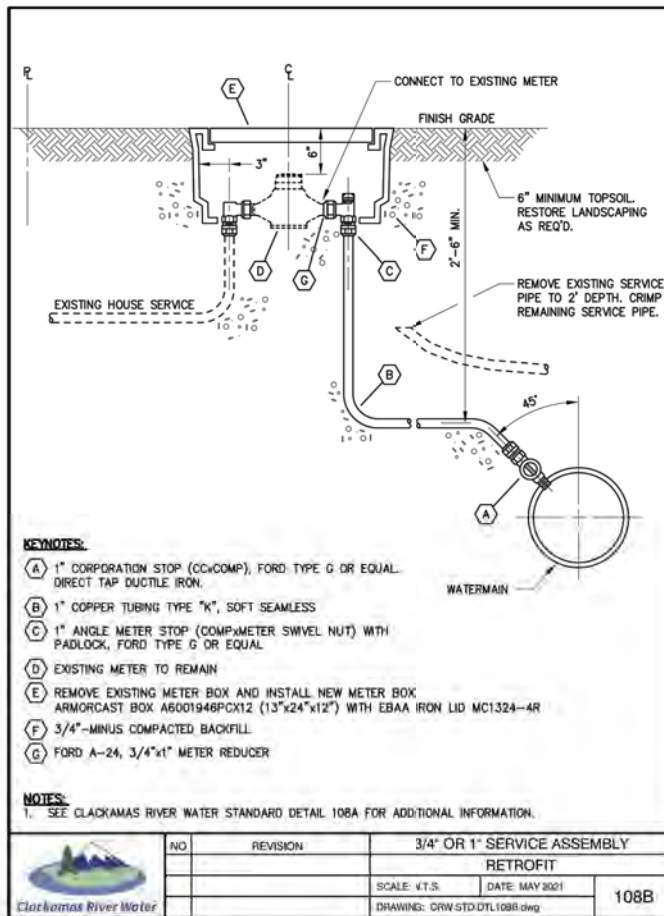
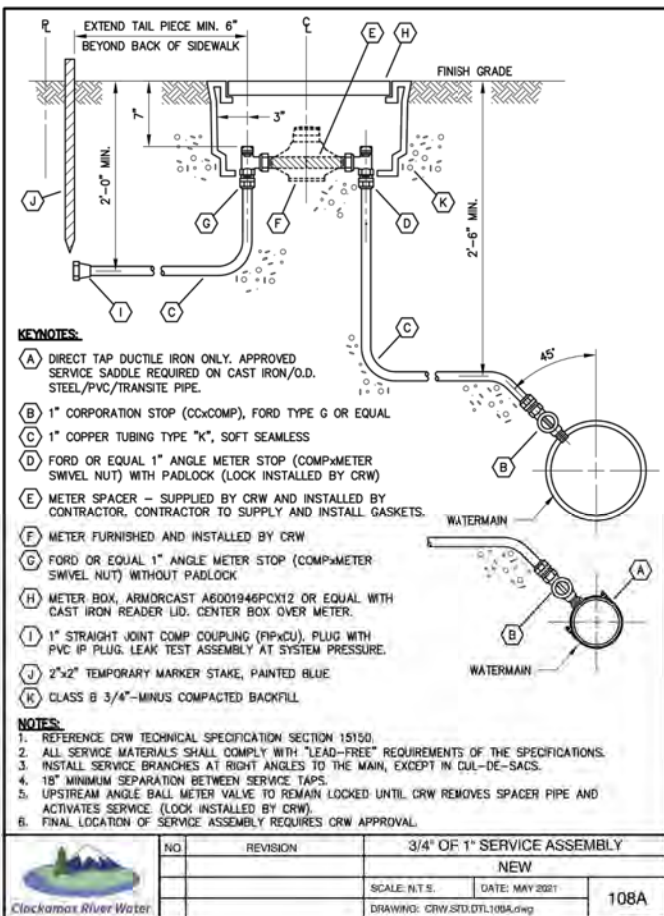
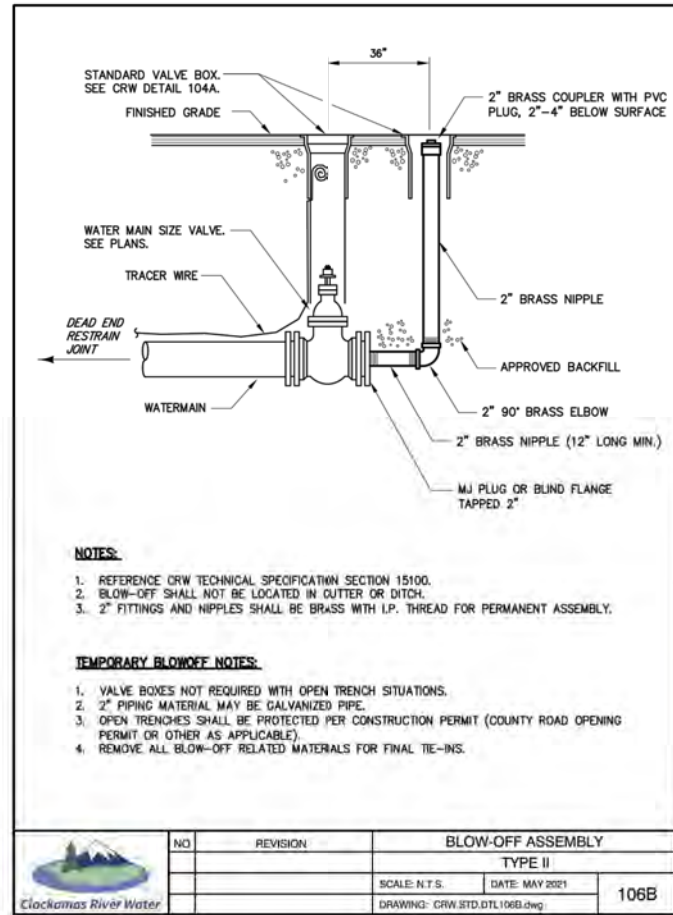
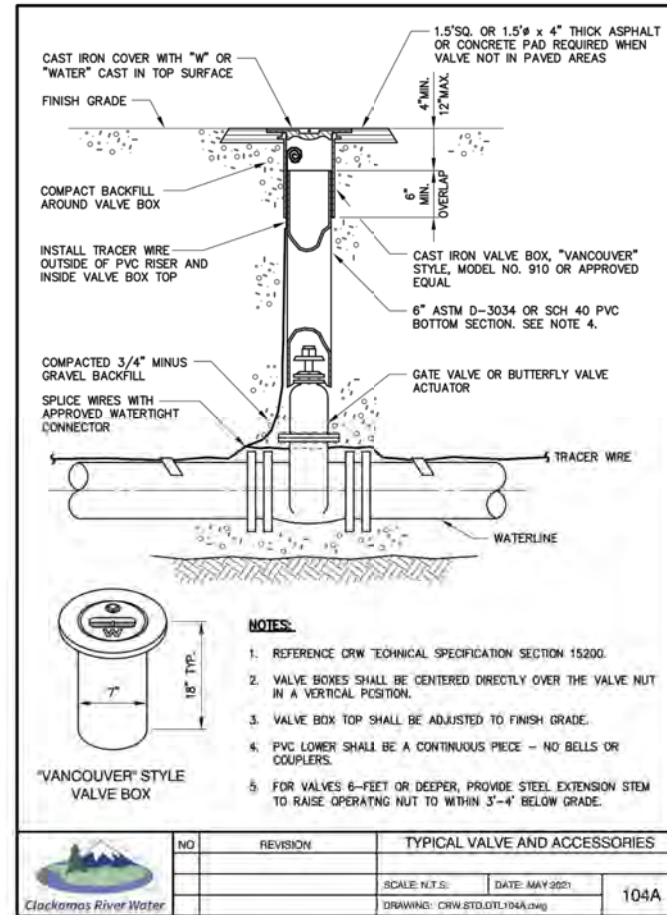
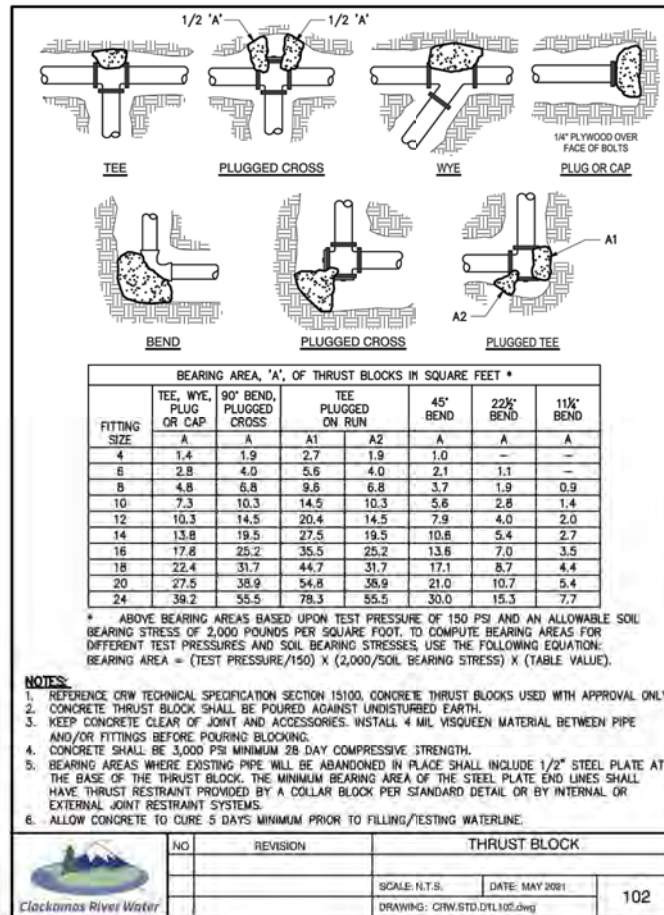
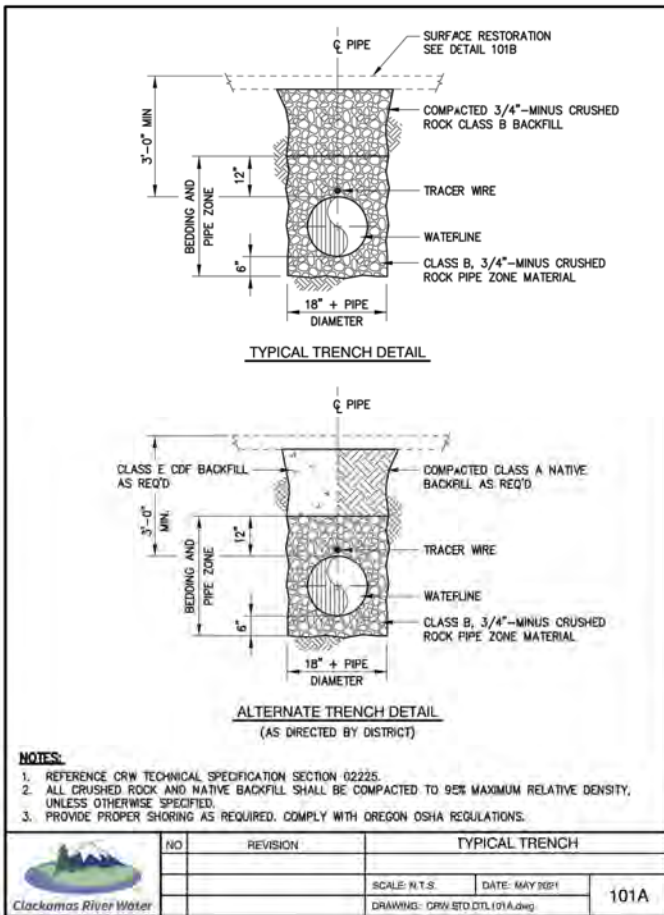


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WATER DETAILS

REDLAND ROAD WATERLINE

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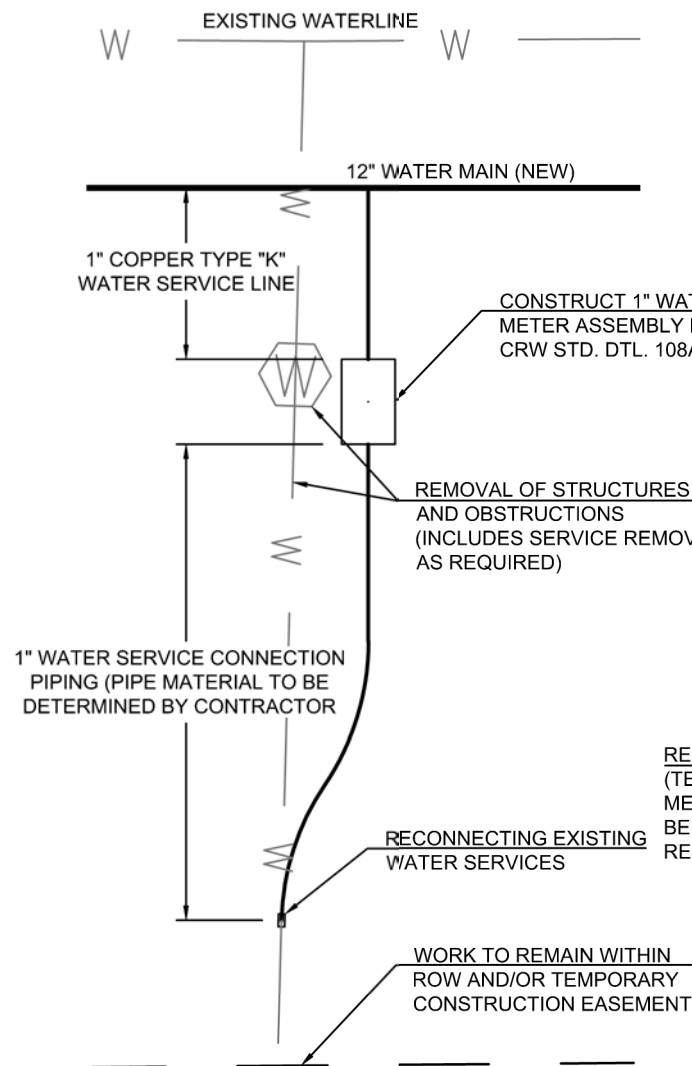
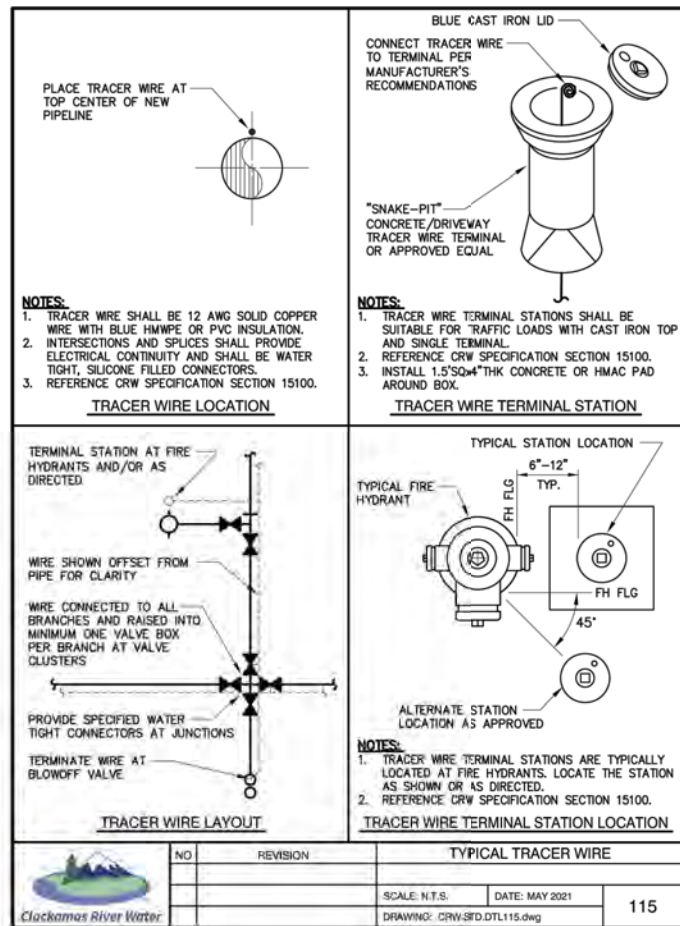


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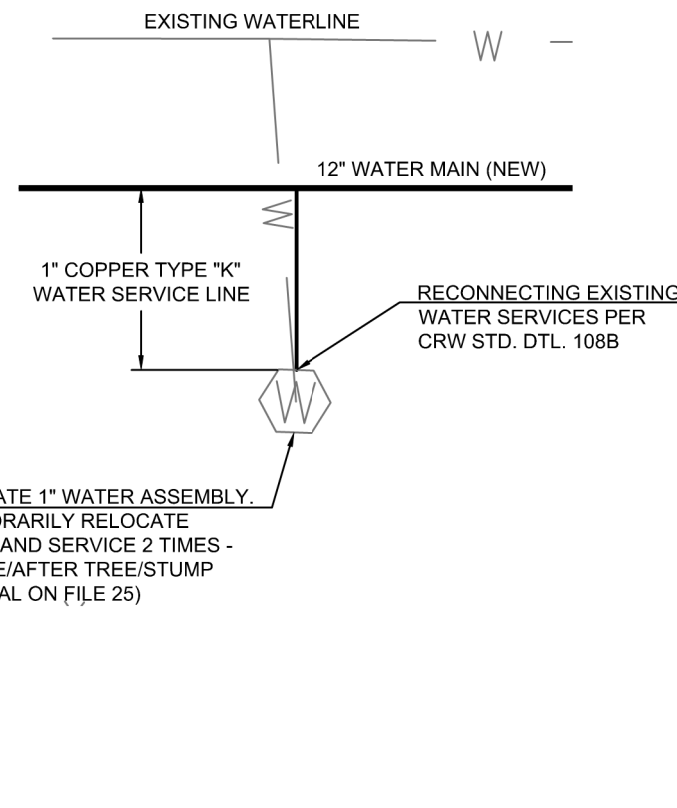
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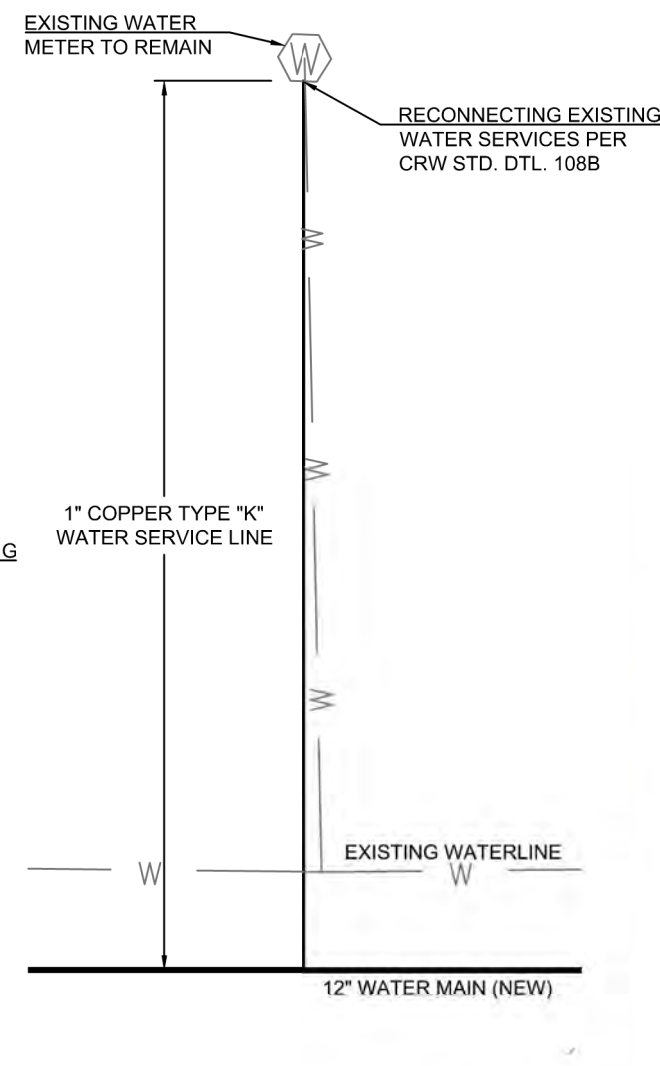
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Typical Water Service Connection  
Detail - 1  
NTS



Typical Water Service Connection  
Detail - 2  
NTS

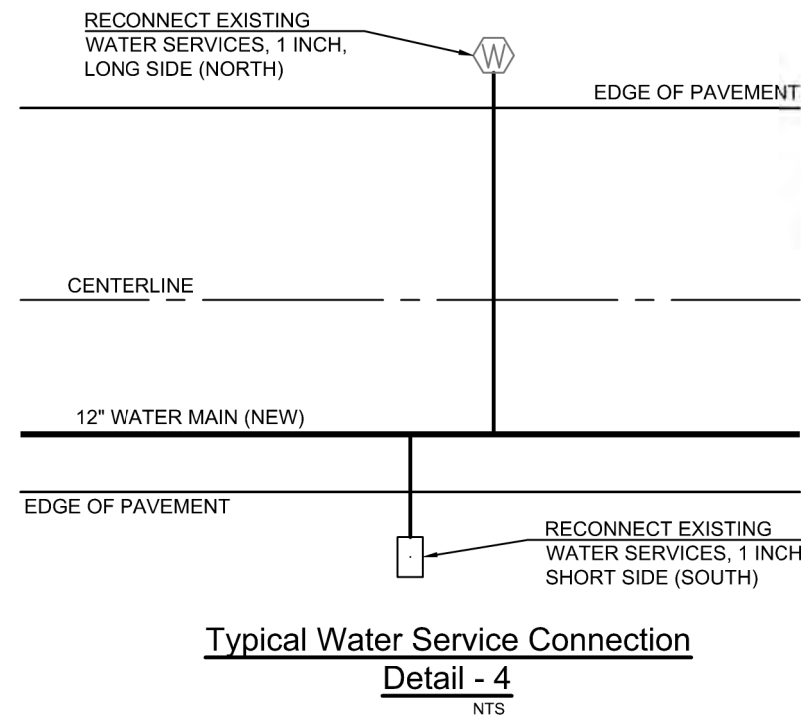


Typical Water Service Connection  
Detail - 3  
NTS

CRW Provided Materials List

Item No.	Description	Quantity	Unit
1	12" Class 52 Ductile Iron Pipe, AWWA C151	101 x 18'	Each
2	8" Class 52 Ductile Iron Pipe, AWWA C151	1 x 18'	Each
3	6" Class 52 Ductile Iron Pipe, AWWA C151	1 x 18'	Each
4	12" Gate Valve, MJxMJ, AWWA C515	2	Each
5	12" Gate Valve, FLGxMJ, AWWA C515	2	Each
6	8" Gate Valve, FLGxMJ, AWWA C515	1	Each
7	6" Gate Valve, FLGxMJ, AWWA C515	2	Each
8	12" 45 MJ Bend, AWWA C153	4	Each
9	12"x6" MJxFLG Tee, AWWA C153	2	Each
10	12"x8" FLGxFLG Tee, AWWA C153	1	Each
11	12" MJ Plug Tapped 2", AWWA C153	1	Each
12	8" MJ Plug, AWWA C153	1	Each
13	8" MJ 90 Bend, AWWA C153	1	Each

Item No.	Description	Quantity	Unit
14	8" MJ Long Cast Sleeve, AWWA C153	1	Each
15	Fire Hydrant, 5-foot barrel length	2	Each
16	12" Restraining Bell Gaskets, AWWA C111	103	Each
17	12" MJ Restraints	14	Each
18	8" MJ Restraints	3	Each
19	6" MJ Restraints	4	Each
20	12" Foster Adaptor	2	Each
21	8" Foster Adaptor	1	Each
22	1" Corporation Stop	16	Each
23	1" Angle Meter Stop	20	Each
24	Meter Box, 13"x24"	16	Each
25	Meter Box Lid	16	Each
26	Valve Box and Lid	7	Each



Typical Water Service Connection  
Detail - 4  
NTS



**WATER DETAILS**

**REDLAND ROAD WATERLINE**

Clackamas River Water

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