



October 6, 2022

Board of County Commissioners  
 Clackamas County

**Approval of a Construction Contract #7021 with Colton Homes, Inc., for the Fischer’s Forest Park-Collection System Rehab Project. Contract Value is \$664,211.00. Funding is through Water Environment Services Operating Funds. County General Funds are not involved. - Procurement**

<b>Purpose/Outcomes</b>	Approval of a Construction Contract #7021 with Colton Homes, Inc., for the Fischer’s Forest Park-Collection System Rehab Project. Contract Value is \$664,211.00. Funding is through Water Environment Services Operating Funds. County General Funds are not involved. - Procurement
<b>Dollar Amount and Fiscal Impact</b>	The Contract Value is \$664,211.00.
<b>Funding Source</b>	Funding is through Water Environment Services (WES) Operating Funds. County General Funds are not involved.
<b>Duration</b>	The contract duration is 150 days to final completion following execution and issuance of a Notice to Proceed.
<b>Previous Board Action</b>	This item was presented at Issues on October 4, 2022.
<b>Strategic Plan Alignment</b>	<ol style="list-style-type: none"> <li>1. This project supports the WES strategic plan for infrastructure strategy and performance by replacing the entirety of the sanitary sewer collection system that supports the 26 homes in this area.</li> <li>2. This project supports the county strategic plan to build a strong infrastructure. Maintaining a healthy environment. Updating county facilities will ensure that key services are accessible to all residents.</li> </ol>
<b>Counsel Review</b>	Date of Counsel Review: September 21, 2022 Counsel Review: Amanda Keller
<b>Procurement Review</b>	Was this item reviewed by Procurement? Yes
<b>Contact Person</b>	Nathan Seaver, WES Civil Engineer, 503-742-4573
<b>Agreement No.</b>	#7021

**BACKGROUND:**

Fisher’s Forest Park (“FFP”) is a community of 26 homes located along Fischer’s Mill Road, roughly one mile east of the intersection with Redland Road. The FFP development was constructed from 1969 to 1971. Water Environment Services (WES) operates the sewer utility, including the collection and onsite septic system, which provides sanitary sewer service to all 26 homes. The sewer pipes and manholes serving the facility are original and are in need of replacement. This project will replace the aging infrastructure and ensure long-term operation of the system.

**PROCUREMENT PROCESS:**

This project was advertised in accordance with ORS and LCRB Rules on July 7, 2022. Bids were opened on August 11, 2022. The District received bids from four (4) qualified firms: Enterprises Northwest, \$719,472.50; Interkaken, \$823,870.00; Jesse Rodriguez Construction, \$669,740.00; and Colton Homes, \$664,211.00. Colton Homes was determined to be the lowest responsible bidder. Notice of intent to award was published on August 15, 2022.

**RECOMMENDATION:**

Staff recommends that the Board of County Commissioners, acting as the governing body of Water Environment Services, approve the Contract between Water Environment Services and Colton Homes, Inc. for the Fischer's Forest Park- Collection System Rehab Project.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Greg Geist", with a long horizontal flourish extending to the right.

Greg Geist  
Director, Water Environment Services

Attachment: Contract #7021

**PROCUREMENT**



**WATER ENVIRONMENT SERVICES  
PUBLIC IMPROVEMENT CONTRACT**  
Contract #7021

This Public Improvement Contract (the “Contract”), is made by and between Water Environment Services, a political subdivision of the State of Oregon, hereinafter called “Owner,” and **Colton Homes, Inc**, hereinafter called the “Contractor” (collectively the “Parties”), shall become effective on the date this Contract has been signed by all the Parties and all County approvals have been obtained, whichever is later. All capitalized terms in this Contract shall have the meanings identified in the Clackamas County General Conditions for Public Improvement Contracts (10/13/2021) (“General Conditions”) referenced within the Instructions to Bidders.

Project Name: BID #2022-72 Fischer’s Forest Park- Collection System Rehab Project

**1. Contract Price, Contract Documents and Work.**

The Contractor hereby agrees to perform all Work described in and reasonably inferred from the Contract Documents. In consideration of the Contractor performing the Work in accordance with the terms of the Contract, the Owner agrees to pay the Contractor the sum of **Six Hundred Sixty-Four Thousand Two Hundred Eleven Dollars (\$664,211.00)** (the "Contract Price"). The Contract Price is the amount contemplated by the Base Bid, as indicated in the accepted Bid.

The following documents are incorporated by reference in this Contract and made a part hereof:

- Notice of Contract Opportunity
- Supplemental Instructions to Bidders
- Bid Form
- Performance Bond and Payment Bond
- Supplemental General Conditions
- Payroll and Certified Statement Form
- Addenda 1
- Instructions to Bidders
- Bid Bond
- Public Improvement Contract Form
- Clackamas County General Conditions
- Prevailing Wage Rates
- Plans, Specifications and Drawings

**2. Representatives.**

Contractor has named Jared Colton as its Authorized Representative to act on its behalf. Owner designates, or shall designate, its Authorized Representative as indicted below (check one):

Unless otherwise specified in the Contract Documents, the Owner designates Nathan Seaver as its Authorized Representative in the administration of this Contract. The above-named individual shall be the initial point of contact for matters related to Contract performance, payment, authorization, and to carry out the responsibilities of the Owner.

Name of Owner’s Authorized Representative shall be submitted by Owner in a separate writing.

**3. Key Persons.**

The Contractor’s personnel identified below shall be considered Key Persons and shall not be replaced during the project without the written permission of Owner, which shall not be unreasonably withheld. If the Contractor intends to substitute personnel, a request must be given to Owner at least 30 days prior to the intended time of substitution. When replacements have been approved by Owner, the Contractor shall provide a transition period of at least 10 working days during which the original and replacement personnel shall be working on the project concurrently. Once a replacement for any of these staff members is authorized, further replacement shall not occur without the written permission of Owner. The Contractor’s project staff shall consist of the following personnel:

**Project Executive:** Jared Colton shall be the Contractor’s project executive, and will provide oversight and guidance throughout the project term.

**Project Manager:** Jared Colton shall be the Contractor's project manager and will participate in all meetings throughout the project term.

**Job Superintendent:** Zach Winters shall be the Contractor's on-site job superintendent throughout the project term.

#### **4. Contract Dates.**

COMMENCEMENT DATE: Upon Issuance of Notice to Proceed  
SUBSTANTIAL COMPLETION DATE: 120 days from issuance of NTP  
FINAL COMPLETION DATE: 150 days from issuance of NTP

Time is of the essence for this Contract. It is imperative that the Work in this Contract reach Substantial Completion and Final Completion by the above specified dates.

#### **5. Change Order Authorization.**

Throughout the performance of the Work under this Agreement, the Owner's Project Manager is hereby granted the authority to verbally authorize change orders in the field for an amount up to \$10,000. As soon as possible following the authorization, the Owner's Project Manager shall complete the change order form provided by Clackamas County Procurement ("Procurement"), obtain the signature of Owner's Director or other authorized signatory, and submit the form to Procurement for processing. As soon as the Director signs off on the change order form, the Project Manager may then authorize another change order in the future for up to \$10,000 following the same procedure above. Each change order should include the cumulative cost of the entire change and may not be artificially broken up into multiple change orders to fall under the dollar threshold listed above. The authority granted to the Project Manager is limited by the Director's authorization to amend the Agreement under Clackamas County's Local Contract Review Board Rules and is subject to the discretion of the Director, who may suspend or restrict the Project Manager's ability to authorize change orders at any time for any reason.

#### **6. Insurance Certificates.**

In accordance with Section G.3.5 of the General Conditions, Contractor shall furnish proof of the required insurance naming Clackamas County and Water Environment Services as additional insureds. Insurance certificates may be returned with the signed Contract or may be emailed to [Procurement@clackamas.us](mailto:Procurement@clackamas.us).

#### **7. Tax Compliance.**

Contractor must, throughout the duration of this Contract and any extensions, comply with all tax laws of this state and all applicable tax laws of any political subdivision of this state. Any violation of this section shall constitute a material breach of this Contract. Further, any violation of Contractor's warranty in this Contract that Contractor has complied with the tax laws of this state and the applicable tax laws of any political subdivision of this state also shall constitute a material breach of this Contract. Any violation shall entitle County to terminate this Contract, to pursue and recover any and all damages that arise from the breach and the termination of this Contract, and to pursue any or all of the remedies available under this Contract, at law, or in equity, including but not limited to: (A) Termination of this Contract, in whole or in part; (B) Exercise of the right of setoff, and withholding of amounts otherwise due and owing to Contractor, in an amount equal to Owner's setoff right, without penalty; and (C) Initiation of an action or proceeding for damages, specific performance, declaratory or injunctive relief. Owner shall be entitled to recover any and all damages suffered as the result of Contractor's breach of this Contract, including but not limited to direct, indirect, incidental and consequential damages, costs of cure, and costs incurred in securing replacement performance. These remedies are cumulative to the extent the remedies are not inconsistent, and Owner may pursue any remedy or remedies singly, collectively, successively, or in any order whatsoever.

The Contractor represents and warrants that, for a period of no fewer than six calendar years preceding the effective date of this Contract, has faithfully complied with: (A) All tax laws of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317, and 318; (B) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, to Contractor's property, operations, receipts, or income, or to Contractor's performance of or compensation for any work performed by Contractor; (C) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, or to goods, services, or property,

whether tangible or intangible, provided by Contractor; and (D) Any rules, regulations, charter provisions, or ordinances that implemented or enforced any of the foregoing tax laws or provisions.

### **8. Confidential Information.**

Contractor acknowledges that it and its employees or agents may, in the course of performing their responsibilities under this Contract, be exposed to or acquire information that is confidential to Owner. Any and all information of any form obtained by Contractor or its employees or agents in the performance of this Contract shall be deemed confidential information of Owner (“Confidential Information”). Contractor agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Contractor uses in maintaining the confidentiality of its own confidential information, and not to copy, reproduce, sell, assign, license, market, transfer or otherwise dispose of, give, or disclose Confidential Information to third parties or use Confidential Information for any purpose unless specifically authorized in writing under this Contract.

### **9. Counterparts.**

This Contract may be executed in several counterparts, all of which when taken together shall constitute an agreement binding on all Parties, notwithstanding that all Parties are not signatories to the same counterpart. Each copy of the Contract so executed shall constitute an original.

### **10. Integration.**

All provisions of state law required to be part of this Contract, whether listed in the General or Special Conditions or otherwise, are hereby integrated and adopted herein. Contractor acknowledges the obligations thereunder and that failure to comply with such terms is a material breach of this Contract.

The Contract Documents constitute the entire agreement between the parties. There are no other understandings, agreements or representations, oral or written, not specified herein regarding this Contract. Contractor, by the signature below of its authorized representative, hereby acknowledges that it has read this Contract, understands it, and agrees to be bound by its terms and conditions.

### **11. Liquidated Damages**

The Owner and the Contractor acknowledge and agree that if the Contractor fails to reach Substantial Completion of the entire Work by the Substantial Completion Date identified in Section 4 above, the Owner will suffer damages, which are both extremely difficult and impracticable to ascertain, and on that basis agree to the assessment by Owner of liquidated damages as provided in this Section. These damages may include, but are not limited to, use of the Project, costs associated with Contract administration, and use of temporary facilities. The liquidated damages amount is not a penalty, but a reasonable estimate of the amount of losses the Owner will suffer. The Owner may deduct such liquidated damages as are payable under this Section 11 from money due or to become due to the Contractor, or pursue any other legal remedy to collect such liquidated damages from the Contractor and/or its Surety.

If the Contractor fails to achieve Substantial Completion of the entire Work by the Substantial Completion Date identified in Section 4, the Contractor shall pay the Owner as liquidated damages the amount of **\$935 for each day** occurring after the expiration of the date for Substantial Completion until the Contractor achieves Substantial Completion of the entire Work.

Payment of liquidated damages shall not release Contractor from its obligation with respect to the complete performance of the Work, nor shall the payment of liquidated damages constitute a waiver of Owner’s right to collect any additional damages that it may sustain by failure of Contractor to fully perform the Work, as it is the intent of the parties that the liquidated damages are a full and complete payment only for failure of Contractor to complete the Work on time. Owner expressly reserves the right to make claims for any and all other damages that Owner may incur due to contractor’s failure to perform in strict accordance with this Contract.

**12. Compliance with Applicable Law.** Contractor shall comply with all federal, state, county, and local laws, ordinances, and regulations applicable to the Work to be done under this Contract including, but not limited to, compliance with the prohibitions set forth in ORS 652.220, compliance of which is a material element of

this Contract and failure to comply is a material breach that entitles County to exercise any rights and remedies available under this Contract including, but not limited to, termination for default.

**13. Responsibility for Taxes.** Contractor is solely responsible for payment of any federal, state, or local taxes required as a result of the Contract or the Work including, but not limited, to payment of the corporate activity tax imposed under enrolled HB 3427 (2019 Oregon regular legislative session). Contractor may not include its federal, state, or local tax obligations as part of the cost to perform the Work.

**In witness whereof,** Owner executes this Contract and the Contractor does execute the same as of the day and year first above written.

Contractor DATA:

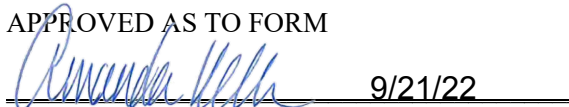
**Colton Homes, Inc**  
**P.O. Box 1168**  
**Oregon City, Oregon 97045**

Contractor CCB # 184522    Expiration Date: 11/5/2022  
Oregon Business Registry # 141080-96    Entity Type: DBC    State of Formation: Oregon

*Payment information will be reported to the IRS under the name and taxpayer ID# provided by the Contractor. Information must be provided prior to contract approval. Information not matching IRS records could subject Contractor to 28 percent backup withholding.*

Colton Homes, Inc  
  
Signature \_\_\_\_\_ Date 9/12/22  
Gina Colton /secretary  
Name / Title Printed \_\_\_\_\_

Water Environment Services  
\_\_\_\_\_  
Chair \_\_\_\_\_ Date \_\_\_\_\_  
\_\_\_\_\_  
Recording Secretary

APPROVED AS TO FORM  
  
County Counsel \_\_\_\_\_ Date 9/21/22



# CLACKAMAS COUNTY PUBLIC IMPROVEMENT CONTRACT OPPORTUNITY

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**CLACKAMAS COUNTY  
NOTICE OF PUBLIC IMPROVEMENT CONTRACT OPPORTUNITY**

**INVITATION TO BID #2022-72  
Fischer's Forest Park- Collection System Rehab Project  
July 7, 2022**

Clackamas County ("County") on behalf of Water Environment Services through their Board of County Commissioners is accepting sealed bids for the **Fischer's Forest Park- Collection System Rehab Project** until **August 11, 2022, 2:00 PM**, Pacific Time, ("Bid Closing") at the following location:

**DELIVER BIDS TO:** Clackamas County Procurement Division via email to [procurement@clackamas.us](mailto:procurement@clackamas.us)

Bidding Documents can be downloaded from the state of Oregon procurement website ("OregonBuys") at the following address: <https://oregonbuys.gov/bsv/view/login/login.xhtml>, Document No.S-C01010-0000.

Prospective Bidders will need to sign in to download the information and that information will be accumulated for a Plan Holder's List. Prospective Bidders are responsible for obtaining any Addenda from Website listed above.

Engineers Estimate: \$700,000.00

Contact Information

Procurement Process and Technical Questions: Tralee Whitley at [TWhitley@clackamas.us](mailto:TWhitley@clackamas.us)

Bids will be opened and publicly read aloud at the above Delivery address after the Bid Closing. Bid results will also be posted to the OregonBuys listing shortly after the opening.

**Prevailing Wage**

Prevailing Wage Rates requirements apply to this Project because the maximum compensation for all Owner-contracted Work is more than \$50,000. Contractor and all subcontractors shall comply with the provisions of ORS 279C.800 through 279C.870, relative to Prevailing Wage Rates. The Bureau of Labor and Industries (BOLI) wage rates and requirements set forth in the following BOLI booklet (and any listed amendments to that booklet), which are incorporated herein by reference, apply to the Work authorized under this Agreement:

PREVAILING WAGE RATES for Public Works Contracts in Oregon, July 1, 2022 which can be downloaded at the following web address: [http://www.oregon.gov/boli/WHD/PWR/Pages/pwr\\_state.aspx](http://www.oregon.gov/boli/WHD/PWR/Pages/pwr_state.aspx)  
The Work will take place in Clackamas County, Oregon.

Clackamas County encourages bids from Minority, Women, and Emerging Small Businesses.





## CLACKAMAS COUNTY PUBLIC IMPROVEMENT CONTRACT

### INSTRUCTIONS TO BIDDERS

Clackamas County Local Contract Review Board Rules (“LCRB Rules”) govern this procurement process. LCRB Rules may be found at: <http://www.clackamas.us/code/documents/appendixc.pdf>. The Instructions to Bidders is applicable to the procurement process for Clackamas County, or any component unit thereof identified on the Notice of Public Improvement Contract Opportunity, herein after referred to as the “Owner.”

#### **Article 1. Scope of Work**

The work contemplated under this contract with the Owner, includes all labor, materials, transportation, equipment and services necessary for, and reasonably incidental to, the completion of all construction work in connection with the project described in the Project Manual which includes, but is not necessarily limited to, the Notice of Public Improvement Contract Opportunity, Instructions to Bidders, Supplemental Instructions to Bidders, Bid Form, Bid Bond, Public Improvement Contract Form, Performance Bond, Payment Bond, Clackamas County General Conditions for Public Improvement Contracts (10/13/2021), Supplemental General Conditions, and Plans, Specifications and Drawings.

#### **Article 2. Examination of Site and Conditions**

Before making a Bid, the Bidder shall examine the site of the work and ascertain all the physical conditions in relation thereto. The Bidder shall also make a careful examination of the Project Manual including the plans, specifications, and drawings and other contract documents, and shall be fully informed as to the quality and quantity of materials and the sources of supply of the materials. Failure to take these steps will not release the successful Bidder from entering into the contract nor excuse the Bidder from performing the work in strict accordance with the terms of the contract at the

price established by the Bid.

The Owner will not be responsible for any loss or for any unanticipated costs, which may be suffered by the successful Bidder, as a result of such Bidder's failure to be fully informed in advance with regard to all conditions pertaining to the work and the character of the work required, including site conditions. No statement made by an elected official, officer, agent, or employee of the Owner in relation to the physical or other conditions pertaining to the site of the work will be binding on the Owner, unless covered by the Project Manual or an Addendum.

#### **Article 3. Interpretation of Project Manual and Approval of Materials Equal to Those Provided in the Specifications**

If any Bidder contemplating submitting a Bid for the proposed contract is in doubt as to the true meaning of any part of the plans, specifications or forms of contract documents, or detects discrepancies or omissions, such Bidder may submit to the Architect (read "Engineer" throughout in lieu of Architect as appropriate) a written request for an interpretation thereof at least ten (10) calendar days prior to the date set for the Bid Closing.

When a prospective Bidder seeks approval of a particular manufacturer's material, process or item of equal value, utility or merit other than that designated by the Architect in the Project Manual, the Bidder may submit to the Architect a written request for approval of such substitute at least ten (10) calendar days prior to the date set for the Bid Closing. The prospective Bidder submitting the request will be responsible for its prompt delivery.

Requests of approval for a substitution from that specified shall be accompanied by samples, records of performance, certified copies of tests by

impartial and recognized laboratories, and such other information as the Architect may request.

To establish a basis of quality, certain processes, types of machinery and equipment or kinds of materials may be specified in the Project Manual either by description of process or by designating a manufacturer by name and referring to a brand or product designation or by specifying a kind of material. Whenever a process is designated or a manufacturer's name, brand or item designation is given, or whenever a process or material covered by patent is designated or described, it shall be understood that the words "or approved equal" follow such name, designation or description, whether in fact they do so or not.

Any interpretation of the Project Manual or approval of manufacturer's material will be made only by an Addendum duly issued. All Addenda will be posted to the OregonBuys listing and will become a part of the Project Manual. The Owner will not be responsible for any other explanation or interpretation of the Project Manual nor for any other approval of a particular manufacturer's process or item for any Bidder.

When the Architect approves a substitution by Addendum, it is with the understanding that the Contractor guarantees the substituted article or material to be equal or better than the one specified.

#### **Article 4. Security to Be Furnished by Each Bidder**

Each Bid must be accompanied by either 1) a cashier's check or a certified check drawn on a bank authorized to do business in the State of Oregon, or 2) a Bid bond described hereinafter, executed in favor of the Owner, for an amount equal to ten percent (10%) of the total amount Bid as a guarantee that, if awarded the contract, the Bidder will execute the contract and provide a performance bond and payment bond as required. The successful Bidder's check or Bid bond will be retained until the Bidder has entered into a contract satisfactory to Owner and furnished a one hundred percent (100%) performance bond and one hundred percent (100%) payment bond. The Owner

reserves the right to hold the Bid security as described in Article 10 hereof. Should the successful Bidder fail to execute and deliver the contract as provided for in Article 12 hereof, including a satisfactory performance bond and payment bond within twenty (20) calendar days after the Bid has been accepted by the Owner, then the contract award made to such Bidder may be considered canceled and the Bid security may be forfeited as liquidated damages at the option of the Owner. The date of the acceptance of the Bid and the award of the contract as contemplated by the Project Manual shall mean the date of acceptance specified in the Notice of Intent to Award.

#### **Article 5. Execution of Bid Bond**

Should the Bidder elect to utilize a Bid bond as described in Article 4 in order to satisfy the Bid security requirements, such form must be completed in the following manner:

- A. Bid bonds must be executed on the County forms, which will be provided to all prospective Bidders by the Owner.
- B. The Bid bond shall be executed on behalf of a bonding company licensed to do business in the State of Oregon.
- C. In the case of a sole individual, the bond need only be executed as principal by the sole individual. In the case of a partnership, the bond must be executed by at least one of the partners. In the case of a corporation, the bond must be executed by stating the official name of the corporation under which is placed the signature of an officer authorized to sign on behalf of the corporation followed by such person's official capacity, such as president, etc. The corporation seal should then be affixed to the bond.
- D. The name of the surety must be stated in the execution over the signature of its duly authorized attorney-in-fact and accompanied by the seal of the surety corporation.

## **Article 6. Execution of the Bid Form**

Each Bid shall be made in accordance with: (i) the sample Bid Form accompanying these instructions; (ii) the appropriate signatures for a sole individual, partnership, corporation or limited liability corporation shall be added as noted in Article 5C above; (iii) numbers pertaining to base Bids shall be stated both in writing and in figures; and (iv) the Bidder's address shall be typed or printed.

The Bid Form relates to Bids on a specific Project Manual. Only the amounts and information asked for on the Bid Form furnished will be considered as the Bid. Each Bidder shall Bid upon the work exactly as specified and provided in the Bid Form. The Bidder shall include in the Bid a sum to cover the cost of all items contemplated by the Contract. The Bidder shall Bid upon all alternates that may be indicated on the Bid Form. When Bidding on an alternate for which there is no charge, the Bidder shall write the words "No Charge" in the space provided on the Bid Form. If one or more alternates are shown on the Bid Form, the Bidder shall indicate whether each is "add" or "deduct."

## **Article 7. Prohibition of Alterations to Bid**

Bids that are incomplete, or contain ambiguities or have differing conditions required by the Bidder, including requested changes or exceptions to the Public Improvement Contract form or other portions of the Project Manual, may be rejected in Owner's sole and absolute discretion.

## **Article 8. Submission of Bid**

Each Bid shall be sealed in an envelope, properly addressed to the Owner, showing on the outside of the envelope the name of the Bidder and the name of the project. Bids will be received at the time and place stated in the Notice of Public Improvement Contract Opportunity.

## **Article 9. Bid Closing and Opening of Bids**

All Bids must be received by the Owner at the place and time set for the Bid Closing. Any Bids received after the scheduled Bid Closing time for

receipt of Bids will be rejected.

At the time of opening and reading of Bids, each Bid received will be publicly opened and read aloud, irrespective of any irregularities or informalities in such Bids.

Generally, Bid results will be posted to the OregonBuys Website within a couple hours of the opening.

## **Article 10. Acceptance or Rejection of Bids by Owner**

Unless all Bids are rejected, the Owner will award a contract based on the lowest responsive Bid from a responsible Bidder. If that Bidder does not execute the contract, it will be awarded to the next lowest responsible Bidder or Bidders in succession.

The Owner reserves the right to reject all Bids and to waive minor informalities. The procedures for contract awards shall be in compliance with the provisions of the LCRB Rules in effect at that time.

The Owner reserves the right to hold the Bid and Bid security of the three lowest Bidders for a period of thirty (30) calendar days from and after the time of Bid opening pending award of the contract. Following award of the contract the Bid security of the three lowest Bidders may be held twenty (20) calendar days pending execution of the contract. All other Bids will be rejected and Bid security will be returned.

In determining the lowest Bidder, the Owner reserves the right to take into consideration any or all authorized base Bids as well as alternates or combinations indicated in the Bid Form.

If no Bid has been accepted within thirty (30) calendar days after the opening of the Bids, each of the three lowest Bidders may withdraw the Bid submitted and request the return of the Bid security.

## **Article 11. Withdrawal of Bid**

At any time prior to the Bid Closing, a Bidder may withdraw its Bid. This will not preclude the

submission of another Bid by such Bidder prior to the time set for the Bid Closing.

After the time set for the Bid Closing, no Bidder will be permitted to withdraw its Bid within the time frames specified in Article 10 for award and execution, except as provided for in that Article.

#### **Article 12. Execution of Contract, Performance Bond and Payment Bond**

The Owner will provide the successful Bidder with contract forms within seven (7) calendar days after the completion of the award protest period. The Bidder is required to execute the contract forms as provided, including a performance bond and a payment bond from a surety company licensed to do surety business in the State of Oregon, within seven (7) calendar days after receipt of the contract forms. The contract forms shall be delivered to the Owner in the number called for and to the location as instructed by the Owner.

#### **Article 13. Recyclable Products**

Contractors will use recyclable products to the maximum extent economically feasible in the performance of the Contract.

#### **Article 14. Clarification or Protest of the Solicitation Document or Specifications**

Any request for clarification or protest of the solicitation document or specifications must be submitted in the manner provided for in the applicable section of the LCRB Rules to the Procurement Representative referenced in the Notice of Public Improvement Contract Opportunity.

A protest of the Solicitation Document must be received within seven (7) business days of the issuance of the Bid or within three (3) business days of issuance of an addendum.

Requests for clarification may be submitted no less than five (5) business days prior to the Bid Closing Date.

#### **Article 15. Protest of Intent to Award**

Owner will name the apparent successful Bidder in a "Notice of Intent to Award" letter. Identification of the apparent successful Bidder is procedural only and creates no right in the named Bidder to the award of the contract. Competing Bidders will be notified by publication of the Notice of Intent to Award on the OregonBuys Website of the selection of the apparent successful Bidder(s) and Bidders shall be given seven (7) calendar days from the date on the "Notice of Intent to Award" letter to review the file at the Procurement Division office and file a written protest of award, pursuant to C-049-0450. Any award protest must be in writing and must be delivered by hand delivery or mail to the Procurement Division Director at: Procurement Division, 2051 Kaen Road, Oregon City, OR 97045.

#### **Article 16. Disclosure of First-Tier Subcontractors**

Within two (2) working hours after the Bid Closing, all Bidders shall submit to the County a disclosure form identifying any first-tier subcontractors (those entities that would be contracting directly with the prime contractor) that will be furnishing labor and materials on the contract, if awarded, whose subcontract value would be equal to or greater than: (a) Five percent (5%) of the total contract price, but at least \$15,000; or (b) \$350,000, regardless of the percentage of the total contract price.

Disclosures may be submitted with the Bid or may be hand delivered to the Bid Closing address or emailed to [procurement@clackamas.us](mailto:procurement@clackamas.us).



**CLACKAMAS COUNTY  
PUBLIC IMPROVEMENT CONTRACT**

**SUPPLEMENTAL INSTRUCTIONS TO BIDDERS**

**BID #2022-72 Fischer's Forest Park- Collection System Rehab Project**

**The following modify the Clackamas County “Instructions to Bidders” for this Project. Where a portion of the Instructions to Bidders has been modified by these Supplemental Instructions to Bidders, the unaltered portions shall remain in effect.**

- 1. Electronic Submissions:** The County is requiring all bids for this project be electronically submitted. Complete Bids (including all attachments) must be received by the closing time and date 2:00 p.m. Pacific Time, August 11, 2022. The Bid must be emailed to the following address: [Procurement@clackamas.us](mailto:Procurement@clackamas.us). **The email subject line must read “Bid for #2022-72 Fischer’s Forest Park-Collection System Rehab Project.”** Upon receiving of the bid, the County will send bidders an email confirmation acknowledging receipt. Bids delayed or lost by email system filtering or failures may be considered at Clackamas County’s sole and absolute discretion.

**Bids will be publicly read aloud via the computer application, Zoom. Bidders will be allowed to video conference or listen by phone to the bid results. The projects Zoom meeting can be accessed via the information below:**

**ZOOM LINK**

Join Zoom Meeting

<https://clackamascounty.zoom.us/j/83808446413>

Meeting ID: 838 0844 6413

One tap mobile

+14086380968,,83808446413# US (San Jose) 16694449171,,83808446413# US

Dial by your location

+1 408 638 0968 US (San Jose)

+1 669 444 9171 US

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

+1 646 931 3860 US

+1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago)

+1 646 876 9923 US (New York)

Meeting ID: 838 0844 6413

Find your local number: <https://clackamascounty.zoom.us/u/kbmkChbtRI>

\*\*The Apparent Low bid results will be posted to the projects OregonBuys listing as soon as possible following the bid opening.

2. **Good Faith Effort:** Clackamas County encourages participation in contracts by Historically Underrepresented Businesses. “Historically Underrepresented Businesses” are State of Oregon-certified and self-identified minority, women and emerging small business as well as firms that are certified federally or by another state or entity with substantially similar requirements as the State of Oregon.

Bidders must perform Good Faith Effort (defined below) and submit **Form 1 and Form 2** for the Bidders Bid to be considered responsive. **Form 1 and Form 2** must be submitted within **two (2) hours** after the Closing Date and Time. Form 1 and Form 2 may be submitted by hand delivery to the location the Bid was due or may email the completed Forms to [Procurement@clackamas.us](mailto:Procurement@clackamas.us). “Good Faith Effort” is a requirement of a prime contractor to reach out to at least three Historically Underrepresented Business Subcontractors for each division of work that will be subcontracted out and to complete the required forms. If fewer than three Historically Underrepresented Business Subcontractors are reasonably available for a particular division of work, the Bidder must specifically note the reason for there being fewer than three contacts. The outreach should be performed with sufficient time to give the subcontractors at least 5 calendar days to respond to the opportunity. Form 3, which documents the actual amount of subcontractors on the project, must be submitted with the project final pay application. Compliance with the Good Faith Effort and submission of Forms 1, 2 and 3 is a contractual requirement for final payment.

The sufficiency of the documentation or the performance of Good Faith Effort shall be in the sole and absolute determination of Clackamas County. Only those Bidders that Clackamas County has determined have not sufficiently performed Good Faith Effort shall have protest rights of the determination for such Bidder. No Bidder shall have protest rights of the sufficiency of any other Bidder completing Good Faith Effort.

**CLACKAMAS COUNTY  
GOOD FAITH EFFORT  
SUBCONTRACTOR AND SELF-PERFORMED WORK LIST  
(FORM 1)**

Prime Contractor Name: Colton Construction/Colton Homes Inc Total Contract Amount: 664,211  
 Project Name: BID# 2022-72 Fischer's Forest Park- Collection System Rehab Project

**PRIME SELF-PERFORMING:** Identify below ALL GFE Divisions of Work (DOW) to be self-performed Good Faith Efforts are otherwise required

<u>DOW BIDDER WILL SELF-PERFORM (GFE not required)</u>	
<u>Self performing all items</u>	

**PRIME CONTRACTOR SHALL DISCLOSE AND LIST ALL SUBCONTRACTORS**, including those Minority-owned, Woman-owned, and Emerging Small Businesses ("M/W/ESB") that you intend to use on the project. Hand delivery to Procurement, 2051 Kaen Road, Oregon City, OR 97045 or email to [procurement@clackamas.us](mailto:procurement@clackamas.us) within 2 hours of the BID/Quote Closing Date/Time

<u>LIST ALL SUBCONTRACTORS BELOW</u> Use <u>correct legal name</u> of Subcontractor (No Assumed Business Names)	<b>Division of Work</b> (Painting, electrical, landscaping, etc.) List <b>ALL</b> DOW performed by Subcontractors	<b>DOLLAR AMOUNT OF SUBCONTRACT</b>	If Certified or self-reporting MBE/WBE/ESB Subcontractor  Check box <input checked="" type="checkbox"/>		
			MBE	WBE	ESB
Name Address City/St/Zip Phone# OCCB#	<u>NONE</u>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## GFE SUBCONTRACTOR AND SELF-PERFORMED WORK LIST (FORM 1) cont'd

Prime Contractor Name:

Total Contract Amount:

Project Name: BID# 2022-72 Fischer's Forest Park-Collection  
System Rehab Project

<b>LIST ALL SUBCONTRACTORS BELOW</b> Use <u>correct legal name</u> of Subcontractor (No Assumed Business Names)	<b>Division of Work</b> (Painting, electrical, landscaping, etc.) List <b>ALL</b> DOW performed by Subcontractors	<b>DOLLAR                      AMOUNT OF                      SUBCONTRACT</b>	If Certified or self-reporting MBE/WBE/ESB Subcontractor  Check box <input checked="" type="checkbox"/>		
			MBE	WBE	ESB
Name Address City/St/Zip Phone# OCCB#	<p style="font-size: 2em; color: blue;">NONE</p>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**CLACKAMAS COUNTY  
GOOD FAITH EFFORT  
M/W/ESB CONTACT / BIDS RECEIVED LOG  
(FORM 2)**

Prime Contractor:

Project: BID# 2022.72 Fischer's Forest Park- Collection System Rehab Project

Prime Contractor must contact or endeavor to contact at least 3 M/W/ESB Subcontractors for each Division of Work. Prime Contractor shall record its contacts with M/W/ESB Subcontractors through use of this log (or equivalent) entering all required information. All columns shall be completed where applicable. Additional forms may be copied if needed.

NAME OF M/W/ESB SUBCONTRACTOR	Divisions of Work (Painting, electrical, landscaping, etc.)	Date Solicitation Letter / Fax Sent	PHONE CONTACT		BID ACTIVITY Check Yes or No			REJECTED BIDS (if bid received & not used)		Notes
			Date of Call	Person Receiving Call	Will Bid	Bid Received	Bid Used	Bid Amount	Reason Not Used (Price, Scope or Other. If Other, explain in Notes>>)	
NONE					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No			

**CLACKAMAS COUNTY  
GOOD FAITH EFFORT  
PROJECT COMPLETION REPORT  
(FORM 3)**

Prime Contractor Name:

Total Contract Amount:

Project Name: BID# 2022-72 Fischer's Forest Park- Collection System Rehab Project

Complete this form and submit with your request for final payment upon the project completion. Please list all subcontractors used for the project. Use additional sheets as necessary.

<p align="center"><u>LIST ALL SUBCONTRACTORS BELOW</u> Use <u>correct legal name</u> of Subcontractor (No Assumed Business Names)</p>	<p align="center">Division of Work (Painting, electrical, landscaping, etc.) List <b>ALL</b> DOW performed by Subcontractors</p>	<p align="center">FINAL DOLLAR AMOUNT OF SUBCONTRACT</p>	<p align="center">If Certified or self-reported MBE/WBE/ESB Subcontractor</p>		
			<p align="center">Check box <input checked="" type="checkbox"/></p>	<p align="center">MBE</p>	<p align="center">WBE</p>
<p>Name Address City/St/Zip Phone# OCCB#</p> <p align="center" style="font-size: 2em; color: blue;">NONE</p>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Name Address City/St/Zip Phone# OCCB#</p>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Name Address City/St/Zip Phone# OCCB#</p>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Name Address City/St/Zip Phone# OCCB#</p>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Name Address City/St/Zip Phone# OCCB#</p>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Name Address City/St/Zip Phone# OCCB#</p>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BY SIGNING BELOW, I HEREBY CERTIFY THAT THE ABOVE LISTED FIRMS HAVE BEEN UTILIZED BY OUR COMPANY IN THE AMOUNTS REPRESENTED ABOVE AND THAT THE INFORMATION CONTAINED HEREIN IS COMPLETE AND ACCURATE.

  
Authorized Signature of Contractor Representative

8/11/22  
Date



CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT

BID BOND

Project Name: BID# 2022-72 Fischer's Forest Park- Collection System Rehab Project

We, Colton Homes Inc. dba Colton Construction, as "Principal,"
(Name of Principal)

and The Ohio Casualty Insurance Company, an New Hampshire Corporation,
(Name of Surety)

authorized to transact Surety business in Oregon, as "Surety," hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns to pay unto Clackamas County ("Obligee") the sum of (\$ 10% of Bid Amount )

Ten Percent (10%) of Bid Amount dollars.

WHEREAS, the condition of the obligation of this bond is that Principal has submitted its proposal or bid to an agency of the Obligee in response to Obligee's procurement document (No. 2022-72 ) for the project identified above which proposal or bid is made a part of this bond by reference, and Principal is required to furnish bid security in an amount equal to ten (10%) percent of the total amount of the bid pursuant to the procurement document.

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, we have caused this instrument to be executed and sealed by our duly authorized legal representatives this 11st day of August, 2022.

Principal: Colton Homes Inc. dba Colton Construction

Surety: The Ohio Casualty Insurance Company

By: [Signature] Signature
president Official Capacity

By: Attorney-In-Fact, Amber Lynn Reese

[Signature] Name



Attest: [Signature] Corporation Secretary

1001 4th Ave Suite 3700 Address Seal No. 8073

Seattle, WA 98154 City State Zip

(206) 473-3788 (425) 376-8840 Phone Fax



This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: 8207345-023049

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Aliceon A. Keltner, Alyssa J. Lopez, Amber Lynn Reese, Amelia G. Burrill, Annelies M. Richie, Brandon K. Bush, Brent E. Heilesen, Carley Espiritu, Christopher Kinyon, Cynthia L. Jay, Dana Marie Brinkley, Diane M. Harding, Donald Shanklin, Jr., Eric A. Zimmerman, Erica E. Mosley, Holli Albers, Jacob T. Haddock, James B. Binder, Jamie L. Marques, Julie R. Truitt, Justin Dean Price, Kari Michelle Motley, Katharine J. Snider, Lindsey Jorgensen, Lois F. Weathers, Michael Mansfield, Misti M. Webb, Sara Sophie Sellin, Tamara A. Ringeisen all of the city of Tacoma state of WA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 16th day of February, 2022.



Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

State of PENNSYLVANIA ss
County of MONTGOMERY

On this 16th day of February, 2022 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV - OFFICERS: Section 12. Power of Attorney.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII - Execution of Contracts: Section 5. Surety Bonds and Undertakings.

Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 11th day of August, 2022.



By: Renee C. Llewellyn, Assistant Secretary



For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.



CLACKAMAS COUNTY  
PUBLIC IMPROVEMENT CONTRACT

BID FORM

PROJECT: #2022-72 Fischer's Forest Park- Collection System Rehab Project  
BID CLOSING: August 11, 2022, 2:00 PM, Pacific Time  
BID OPENING: August 11, 2022, 2:05 PM, Pacific Time

FROM: Colton Homes, Inc  
*Bidder's Name (must be full legal name, not ABN/DBA)*

TO: Clackamas County  
Procurement Division – [procurement@clackamas.us](mailto:procurement@clackamas.us)

1. Bidder is (check one of the following and insert information requested):

- a. An individual; or
- b. A partnership registered under the laws of the State of \_\_\_\_\_; or
- c. A corporation organized under the laws of the State of Oregon; or
- d. A limited liability corporation organized under the laws of the State of \_\_\_\_\_;

and authorized to do business in the State of Oregon hereby proposes to furnish all material and labor and perform all work hereinafter indicated for the above project in strict accordance with the Contract Documents for the Basic Bid as follows:

six hundred sixty four thousand ~~two~~ <sup>two</sup> hundred eleven dollars Dollars (\$ 664,211.<sup>00</sup>)

and the Undersigned agrees to be bound by the following documents:

- Notice of Public Improvement Contract Opportunity
- Instructions to Bidders
- Bid Bond
- Public Improvement Contract Form
- Clackamas County General Conditions
- Prevailing Wage Rates
- Plans, Specifications and Drawings
- Supplemental Instructions to Bidders
- Bid Form
- Performance Bond and Payment Bond
- Supplemental General Conditions
- Payroll and Certified Statement Form

• ADDENDA numbered 0 through 1, inclusive (fill in blanks)

2. The Undersigned proposes to add to or deduct from the Base Bid indicated above the items of work relating to the following Alternate(s) as designated in the Specifications: N/A

3. The Undersigned proposes to add to or deduct from the Base Bid indicated above the items or work relating to the following Unit Price(s) as designated in the Specifications, for which any adjustments in the Contract amount will be made in accordance with the project specifications: **Provide the attached Bid Schedule with Bid.**

4. The work shall be completed within the time stipulated and specified in the contract documents.

5. Accompanying herewith is Bid Security which is equal to ten percent (10%) of the total amount of the Basic Bid, plus the total sum of all Alternatives (if any).

6. The Undersigned agrees, if awarded the Contract, to execute and deliver to Clackamas County, within twenty (20) calendar days after receiving the Contract forms, a Contract Form, and a satisfactory Performance Bond and Payment Bond each in an amount equal to one hundred percent (100%) of the Contract sum, using forms provided by the Owner. The surety requested to issue the Performance Bond and Payment Bond will be:

The Ohio Casualty Insurance Company  
(name of surety company - not insurance agency)

The Undersigned hereby authorizes said surety company to disclose any information to the Owner concerning the Undersigned's ability to supply a Performance Bond and Payment Bond each in the amount of the Contract.

7. The Undersigned further agrees that the Bid Security accompanying the Bid is left in escrow with Clackamas County; that the amount thereof is the measure of liquidated damages which the Owner will sustain by the failure of the Undersigned to execute and deliver the above-named Contract Form, Performance Bond and Payment Bond, each as published, and that if the Undersigned defaults in either executing the Contract Form or providing the Performance Bond and Payment Bond within twenty (20) calendar days after receiving the Contract forms, then the Bid Security shall become the property of the Owner at the Owner's option; but if the Bid is not accepted within thirty (30) calendar days of the time set for the opening of the Bids, or if the Undersigned executes and timely delivers said Contract Form, Performance Bond and Payment Bond, the Bid Security shall be returned.

8. The Undersigned certifies that: (i) This Bid has been arrived at independently and is being submitted without collusion with and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid designed to limit independent bidding or competition; and (ii) the contents of the Bid have not been communicated by the Undersigned or its employees or agents to any person not an employee or agent of the Undersigned or its surety on any Bond furnished with the Bid and will not be communicated to such person prior to the official opening of the Bid.

9. The undersigned  **HAS**,  **HAS NOT** (check one) paid unemployment or income taxes in Oregon within the past 12 months and  **DOES**,  **DOES NOT** (check one) a business address in Oregon. The undersigned acknowledges that, if the selected bidder, that the undersigned will have to pay all applicable taxes and register to do business in the State of Oregon before executing the Contract Form.

10. The Undersigned agrees, if awarded a contract, to comply with the provisions of ORS 279C.800 through 279C.870 pertaining to the payment of the prevailing rates of wage.

11. Contractor's CCB registration number is 184522. As a condition to submitting a bid, a Contractor must be registered with the Oregon Construction Contractors Board in accordance with ORS 701.035 to 701.055, and disclose the registration number. Failure to register and disclose the number will make the bid unresponsive and it will be rejected, unless contrary to federal law.

12. The successful Bidder hereby certifies that all subcontractors who will perform construction work as described in ORS 701.005(2) were registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time the subcontractor(s) made a bid to work under the contract.

13. The successful Bidder hereby certifies that, in compliance with the Worker's Compensation Law of the State of Oregon, its Worker's Compensation Insurance provider is Saif, Policy No. 741254, and that Contractor shall submit Certificates of Insurance as required.

14. Contractor's Key Individuals for this project (supply information as applicable):


Project Executive: Jared Colton, Cell Phone: 503.939.4765,  
Project Manager: Jared Colton, Cell Phone: 503.939.4765,  
Job Superintendent: Zach Winters, Cell Phone: 503.348.0433,  
Project Engineer: \_\_\_\_\_, Cell Phone: \_\_\_\_\_.

15. The Undersigned certifies that it has not discriminated against minority, women, or emerging small businesses in obtaining any subcontracts for this project.

16. The Undersigned certifies that it has a drug testing program in accordance with ORS 279C.505.

**REMINDER:** Bidder must submit the below First-Tier Subcontractor Disclosure Form.

By signature below, Contractor agrees to be bound by this Bid.

NAME OF FIRM Colton Homes Inc  
ADDRESS PO Box 1168  
Oregon City OR 97045  
TELEPHONE NO 503.939.4765/503.939.4704  
EMAIL office@coltonhomes.net  
SIGNATURE 1) \_\_\_\_\_  
Sole Individual  
or 2) \_\_\_\_\_  
Partner  
or 3)  \_\_\_\_\_  
Authorized Officer or Employee of Corporation

\*\*\*\*\* END OF BID \*\*\*\*\*

**BID# 2022-72 FISCHER'S FOREST PARK COLLECTION SYSTEM REHAB PROJECT**


Bid Item	Description	Quantity	Unit	Unit Price	Bid Amount
1	Mobilization	1	LS	45,000	45,000
2	Manholes	7	Each	15,100	105,700
3	8" Gravity Sewer Pipe	1,237	LF	180	222,660
4	4" Service - Open Cut	771	LF	120	92,520
5	4" Service - Trenchless	709	LF	150	106,350
6	AC Pavement Trench Restoration, 4-inches Thick	75	Ton	250	18,750
7	PCC Driveway Access, 6-inches Thick	225	SQYD	110	24,750
8	PCC Drainage Swale, 6-inches Thick	125	SQYD	110	13,750
9	PCC Driveways, 4-inches Thick	30	SQYD	110	3,300
10	Erosion Control	1	LS	1,000	1,000
11	Temporary Sewer Bypass Pumping - Mainline	1	LS	10,621	10,621
12	Temporary Sewer Bypass Pumping - Private Services	1	LS	7,000	7,000
13	Traffic Control	1	LS	2,000	2,000
14	Abandon Existing Pipe	571	LF	10	5,710
15	Abandon Existing Manhole	4	Each	1,000	4,000
16	3" PVC Conduit	1	LS	1,800	1,800

Total Project Construction Cost in \$: 664,211.00

Total Project Construction Cost (written): Six hundred sixty four thousand two hundred eleven Dollars

Name of Firm Colton Homes, Inc.

Bidder Name (Print) Jared Colton Phone # 503-939-4765

Bidder Signature  Date 8/11/22



400 8/11

FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM  
PROJECT: #2022-72 Fischer's Forest Park- Collection System Rehab Project

BID OPENING: August 11, 2022, 2:00 PM, Pacific Time

Failure to submit this Form by the disclosure deadline will result in a nonresponsive bid.

**INSTRUCTIONS:**

This First-Tier Subcontractor Disclosure Form ("Form") must be submitted and received at the location specified in the Notice of Public Improvement Contract Opportunity on the advertised Bid Closing, and within two working hours after the advertised Bid Closing Time.

The Form may be mailed, hand-delivered or emailed to: [Procurement@clackamas.us](mailto:Procurement@clackamas.us). It is the responsibility of Bidders to submit this Form and any additional sheets with the Project name clearly marked on the envelope or the subject line of the email.

Subcontractor lists may be submitted with the bid in the same envelope or email at the Bid Closing date and time. Subcontractor lists **MUST** be submitted within **two (2) hours** of the Bid Closing date and time.


List below the name of each subcontractor that will be furnishing labor, or labor and materials, for which disclosure is required, the category of work that the subcontractor will be performing, and the dollar value of the subcontract. Enter "**NONE**" if the value of the project bid is less than \$100,000 or there are no subcontractors that need to be disclosed. ATTACH ADDITIONAL SHEETS IF NECESSARY.

	SUBCONTRACTOR NAME	DOLLAR VALUE	CATEGORY OF WORK
1.	NONE		
2.			
3.			
4.			
5.			
6.			

The above listed first-tier subcontractor(s) are providing labor, or labor and material, with a Dollar Value equal to or greater than:

- a) 5% of the total Contract Price, but at least \$15,000. If the Dollar Value is less than \$15,000 do not list the subcontractor above; or
- b) \$350,000 regardless of the percentage of the total Contract Price.

Firm Name: Colten Homes Inc.

Bidder Signature:  Phone # 503.939.4765



**CLACKAMAS COUNTY  
PUBLIC IMPROVEMENT CONTRACT  
SUPPLEMENTAL GENERAL CONDITIONS**

**Project: Fischer's Forest Park - Collection System Rehab Project**

**The following modifies the October 13, 2020 Clackamas County General Conditions for Public Improvement Contracts ("County General Conditions") for this Contract. Except as modified below, all other terms and conditions of the County General Conditions shall remain in effect.**

The terms used in these Supplemental Conditions have the meanings stated in the Clackamas County General Conditions. Additional terms used in these Supplemental Conditions have the meanings stated below, which are applicable to both the singular and plural thereof. The address system used in these Supplemental Conditions is the same as the address system used in the Clackamas County General Conditions, with the prefix "SC" added thereto.

**SC A.3.1(a)**

Replace A.3.1 (a) through A.3.1 (e) with the following:

- a) Permits from outside agencies;
- b) Amendments to the Contract Documents and addenda, with those of later date having precedence over those of an earlier date;
- c) The Contract including all exhibits;
- d) Supplemental General Conditions;
- e) Clackamas County General Conditions (11/01/2017);
- f) Specifications – Division 01;
- g) Specifications Division 02;
- h) Construction Drawings (Construction Plans);
- i) Bonds

Design Details: Figure dimensions and dimensions that can be computed, on plans shall take precedence over scale dimensions. The Drawings with the higher level of detail take precedence over less detailed Drawings.

## **SC B.4 PERMITS**

The contents of Section B.4 - Permits are hereby deleted in its entirety and replaced with the following:

Owner has obtained Draft Utility Permits. Contractor will be responsible for finalizing these permits and maintaining compliance with all terms of the permits throughout the performance of the Work. Owner will pay the cost of obtaining all permits. The Contractor shall be responsible for any penalties or fines that result from Contractor's noncompliance with the terms of the permits.

## **D.2 DELAYS**

Delete first sentence of D.2.2 and delete entries D.2.2(a) and D.2.2(b).

### **E.5.1.1**

Delete everything after the first sentence.

## **F.2 PROTECTION OF WORKERS, PROPERTY AND THE PUBLIC**

Add the following after Paragraph F.2.8:

F.2.9 The following notice is applicable to Contractors who perform excavation Work:  
ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0090. You may obtain copies of the rules by calling the center at (877) 668-4001.

F.2.10 Contractor shall be aware that permit-required confined spaces exist in or near the Project Site. Entry to these spaces must be accomplished in compliance with the requirements of OAR 166-150-0190 (29 CFR 1910.146). Examples of permit-required confined spaces include but are not limited to the following:

1. Open tanks beyond the handrails including clarifiers, aeration basins, channels, etc.
2. Manholes.
3. Flow control structures which have the potential to contain sewage.
4. Enclosed tanks including digesters, clarifiers, grit basins, chemical tanks, etc.
5. Wet well and dry wells of pump stations.
6. Headworks channels.
7. Electrical vaults.

The hazards associated with these confined spaces may include but are not limited to:

1. Oxygen deficiency.
2. Combustible vapors including methane.
3. Slip hazards.
4. Fall/retrieval hazard.
5. Engulfment hazard.
6. Lockout required of mechanical and electrical devices.
7. Toxic or hazardous chemicals including hydrogen sulfide and process chemicals.
8. Traffic hazards.
9. Hot work and ignition sources.
10. Potential for rapid changes in working conditions.
11. Painting or coating application activities often pose temporary hazards.

Prior to beginning Work in permit-required confined spaces, Contractor shall provide Owner with a copy of Contractor's permit-required confined space entry plan/program including a copy of the permit forms that will be used by Contractor. Upon request by Contractor, Owner will review with Contractor, Owner's permit-required confined space program and specific procedures Owner would incorporate in spaces entered. Owner will coordinate any of its entries into the same spaces with Contractor. When the permit-required confined space Work is completed, Contractor shall inform Owner, in writing, of any hazards encountered or changes made resulting in different hazards within the space.

### **K.3 COMPLETION NOTICES**

Add the following after Paragraph K.3.2:

- K.3.3 Contractor shall provide Owner completed Certificate of Compliance (attached) at the time of Final Completion and before final payment will be released.

Water Environment Services  
CERTIFICATE OF COMPLIANCE

TO: Water Environment Services

PROJECT/CONTRACT NO: 700220304 / #2022-72

PROJECT NAME: Fisher's Forest Park – Collection System Rehab Project

CONTRACT FOR: \_\_\_\_\_

CONTRACT DATE: \_\_\_\_\_

I (We) hereby certify that all work on this project has been performed and materials supplied in accordance with the Plans, Specifications, and Contract Documents agreed to by the parties, and that:

- A. No less than prevailing rates of wages have been paid to laborers, workmen, and mechanics employed on this work.
- B. There have been neither unauthorized substitutions of subcontractors nor have any subcontracts been entered into without the name of the subcontractors having been submitted to the Engineer prior to the start of such subcontractor work.
- C. No subcontract was assigned or transferred or performed by any subcontractor other than the original subcontractor, without prior notice having been submitted to the Engineer together with the names of all subcontractors.
- D. All claims for material and labor and other services performed in connection with these Specifications have been paid. No further claims will be made and all liens have been satisfied and lifted.
- E. All monies due the State Industrial Accident Funds, the State Unemployment Compensation Trust Fund, the State Tax Commission, hospital associations, and/or others have been paid.

CERTIFIED BY:

\_\_\_\_\_  
CONTRACTOR

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TITLE

Subscribed and sworn to before me this day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public for the State of \_\_\_\_\_

My Commission Expires \_\_\_\_\_

**END OF SECTION**



# CLACKAMAS COUNTY GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS October 13, 2021

INSTRUCTIONS: The attached **Clackamas County General Conditions for Public Improvement Contracts ("County General Conditions")** apply to all designated Public Improvement contracts. Changes to the County General Conditions (including any additions, deletions or substitutions) should only be made by attaching Public Improvement Supplemental General Conditions. The text of these County General Conditions should not otherwise be altered.

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**CLACKAMAS COUNTY GENERAL CONDITIONS  
FOR PUBLIC IMPROVEMENT CONTRACTS  
("County General Conditions")**

**SECTION A  
GENERAL PROVISIONS**

**A.1 DEFINITION OF TERMS**

In the Contract Documents the following terms shall be as defined below:

**APPLICABLE LAWS**, means all federal, state and local laws, codes, rules, regulations and ordinances, as amended applicable to the Work, to the Contract, or to the parties individually.

**APPROVED BY CONTRACTING AGENCY**, for purposes of ORS 279C.570(2), means the date a progress payment is approved by the Clackamas County Treasurer's office.

**ARCHITECT/ENGINEER**, means the Person appointed by the Owner to make drawings and specifications and, to provide contract administration of the Work contemplated by the Contract to the extent provided herein or by supplemental instruction of Owner (under which Owner may delegate responsibilities to the Architect/Engineer), in accordance with ORS Chapter 671 (Architects) or ORS Chapter 672 (Engineers) and administrative rules adopted thereunder.

**AVOIDABLE DELAYS**, mean any delays other than Unavoidable Delays, and include delays that otherwise would be considered Unavoidable Delays but that: (a) Could have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors; (b) Affect only a portion of the Work and do not necessarily prevent or delay the prosecution of other parts of the Work nor the completion of the whole Work within the Contract Time; (c) Do not impact activities on the accepted critical path schedule; and (d) Are associated with the reasonable interference of other contractors employed by the Owner that do not necessarily prevent the completion of the whole Work within the Contract Time.

**BIDDER**, means a bidder in connection with Instructions to Bidders or a proposer in connection with a Request for Proposals, or Solicitation Document. May also be referenced as "Offeror," "Quoter" or "Proposer" based on the type of Solicitation Document.

**CHANGE ORDER**, means a written order which, when fully executed by the Parties to the Contract, constitutes a change to the Contract Documents. Change Orders shall be issued in accordance with the changes provisions in Section D and, if applicable, establish a Contract Price or Contract Time adjustment. A Change Order shall not be effective until executed by both parties.

**CLAIM**, means a demand by Contractor pursuant to Section D.3 for review of the denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, submitted in accordance with the requirements and within the time limits established for review of Claims in these County General Conditions.

**CONTRACT**, means the written agreement between the Owner and the Contractor comprised of the Contract Documents which describe the Work to be done and the obligations between the parties.

**CONTRACT DOCUMENTS**, means the Contract, County General Conditions, Supplemental General Conditions if any, Plans, Specifications, the accepted Offer, Solicitation Document and addenda thereto, Instructions to Offerors, and Supplemental Instructions to Offerors.

**CONTRACT PERIOD**, as set forth in the Contract Documents, means the total period of time beginning with the full execution of a Contract

and, if applicable, the issuance of a Notice to Proceed and concluding upon Final Completion.

**CONTRACT PRICE**, means the total price reflected in the Contract.

**CONTRACT TIME**, means any incremental period of time allowed under the Contract to complete any portion of the Work as reflected in the Project schedule.

**CONTRACTOR**, means the Person awarded the Contract for the Work contemplated.

**DAYS**, are calendar days, including weekdays, weekends and holidays, unless otherwise specified.

**DEFECTIVE WORK**, means Work that is not completed in accordance with the Specifications or the requirements of the Contract.

**DIRECT COSTS**, means, unless otherwise provided in the Contract Documents: the cost of materials, including sales tax and the cost of delivery; cost of labor which shall only include the applicable prevailing wage and fringe benefit (if applicable, and if paid to or on behalf of the employee) rate plus a maximum of a twelve percent (12%) markup on the prevailing wage (but not the fringe benefit) to cover Contractor's labor burden including but not limited to social security, Medicare, unemployment insurance, workers' compensation insurance, sick leave pay; substantiated Project cost increases for specific insurance (including, without limitation, Builder's Risk Insurance and Builder's Risk Installation Floater) or bond premiums; rental cost of equipment, and machinery required for execution of the Work; and the additional costs of field personnel directly attributable to the Work; travel expense reimbursement only if specifically authorized and only to the extent allowable under the County Contractor Travel Reimbursement Policy, hereby incorporated by reference.

**FINAL COMPLETION**, means the final completion of all requirements under the Contract, including Contract Closeout as described in Section K but excluding Warranty Work as described in Section I.2, and the final payment and release of all retainage, if any.

**FORCE MAJEURE**, means an act, event or occurrence caused by fire, riot, war, acts of God, terrorism, nature, sovereign, or public enemy, strikes, freight embargoes or any other act, event or occurrence that is beyond the control of the party to the Contract who is asserting Force Majeure.

**NOTICE TO PROCEED**, means the official written notice from the Owner stating that the Contractor is to proceed with the Work defined in the Contract Documents.

**OFFER**, means a bid in connection with Instructions to Bidders or a proposal in connection with a Request for Proposals, or Solicitation Document to do the work stated in the Solicitation Document at the price quoted. May also be referenced as "Bid," "Quote," or "Proposal" based on the type of Solicitation Document.

**OVERHEAD**, means those items which may be included in the Contractor's markup (general and administrative expense and profit) and that shall not be charged as Direct Cost of the Work, including without limitation such Overhead expenses as wages or salary of personnel above the level of foreman (i.e., superintendents and project managers), labor rates and fringe benefits above the applicable prevailing wage and fringe benefit (if applicable, and if paid to or on behalf of the employee), Contractor's labor burden for fringe benefit if paid to the employee, expenses of Contractor's offices and supplies at the Project Site (e.g. job trailer) and at Contractor's principal place of business and including expenses of personnel staffing the Project Site office and Contractor's principal place of business, and Commercial General Liability Insurance and Automobile Liability Insurance.

**OWNER**, means, Clackamas County or any component unit thereof including Clackamas County Development Agency, Clackamas County Service District No. 1, Surface Water Management Agency of Clackamas County, Tri-City Service District, Water Environment Services, North Clackamas Parks and Recreation District, Clackamas County Extension & 4-H Service District, Library Service District of Clackamas County, Enhanced Law Enforcement District, and Clackamas County Service District No. 5. Owner may elect, by written notice to Contractor, to delegate certain duties to more than one agent, including without limitation, to an Architect/Engineer. However, nothing in these County General Conditions is intended to abrogate the separate design professional responsibilities of Architects under ORS Chapter 671 or of Engineers under ORS Chapter 672.

**PERSON**, means a natural person or entity doing business as a sole proprietorship, a partnership, a joint venture, a corporation, a limited liability company or partnership, a nonprofit, a trust, or any other entity possessing the legal capacity to contract.

**PLANS**, means the drawings which show the location, type, dimensions, and details of the Work to be done under the Contract.

**PRODUCT DATA**, means illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

**PROJECT**, means the total undertaking to be accomplished for Owner by architects/engineers, contractors, and other others, including planning, study, design, construction, testing, commissioning, start-up, of which the Work to be performed under the Contract Documents is a part.

**PROJECT SITE**, means the specific real property on which the Work is to be performed, including designated contiguous staging areas, that is identified in the Plans, Specifications and Drawings.

**PUNCH LIST**, means the list of Work yet to be completed or deficiencies which need to be corrected in order to achieve Final Completion of the Contract.

**RECORD DOCUMENT**, means the as-built Plans, Specifications, testing and inspection records, product data, samples, manufacturer and distributor/supplier warranties evidencing transfer of ownership to Owner, operational and maintenance manuals, shop drawings, correspondence, certificate(s) of occupancy, and other documents listed in Subsection B.9.1 of these County General Conditions, recording all Services performed.

**SAMPLES**, means physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

**SHOP DRAWINGS**, means drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor (including any subcontractor), manufacturer, supplier, or distributor to illustrate some portion of the Work.

**SOLICITATION DOCUMENT**, means an Invitation to Bid, Request for Proposals, Request for Quotes, or other written document issued by Owner that outlines the required Specifications necessary to submit an Offer.

**SPECIFICATION**, means any description of the physical or functional characteristics of the Work, or of the nature of a supply, service or construction item included in the Solicitation Document. Specifications may include a description of any requirement for inspecting, testing or preparing a supply, service or construction item for delivery and the quantities or qualities of materials to be furnished under the Contract. Specifications generally will state the results or products to be obtained and may, on occasion, describe the method and manner of doing the

Work to be performed. Specifications may be incorporated by reference and/or may be attached to the Contract.

**SUBCONTRACTOR**, means a Person having a direct contract with the Contractor, or another Subcontractor of any tier, to perform one or more items of the Work.

**SUBSTANTIAL COMPLETION**, means the date when the Owner accepts in writing the construction, alteration or repair constituting the Work or any designated portion thereof as having reached that state of completion when it may be used or occupied for its intended purpose. Substantial Completion of facilities with operating systems occurs only after thirty (30) continuous Days of successful, trouble-free operation of the operating systems as provided in Section K.3.2.

**SUBSTITUTIONS**, means items that in function, performance, reliability, quality, and general configuration are the same or better than the product(s) specified. Substitutions also means the performance of the Work by a labor force other than what is submitted in the Offer.

**SUPPLEMENTAL GENERAL CONDITIONS**, means those conditions that remove from, add to, or modify these County General Conditions. Public Improvement Supplemental General Conditions may be included in the Solicitation Document or may be a separate attachment to the Contract.

**UNAVOIDABLE DELAYS**, mean delays other than Avoidable Delays that are: (a) to the extent caused by any actions of the Owner, or any other employee or agent of the Owner, or by a separate contractor employed by the Owner; (b) to the extent caused by any Project Site conditions which differ materially from the conditions that would normally be expected to exist and inherent to the construction activities defined in the Contract Documents; or (c) to the extent caused by Force Majeure acts, or events or occurrences.

**WORK**, means the furnishing of all materials, equipment, labor, transportation, services, incidentals, those permits and regulatory approvals not provided by the owner necessary to successfully complete any individual item or the entire Contract and the carrying out of duties and obligations imposed by the Contract Documents for the Project.

## **A.2 SCOPE OF WORK**

The Work contemplated under the Contract includes all labor, materials, transportation, equipment and services for, and incidental to, the completion of all work in connection with the Project described in the Contract Documents. The Contractor shall perform all Work necessary so that the Project can be legally occupied and fully used for the intended use as set forth in the Contract Documents.

## **A.3 INTERPRETATION OF CONTRACT DOCUMENTS**

A.3.1 Unless otherwise specifically defined in the Contract Documents, words which have well-known technical meanings or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Contract Documents are intended to be complementary. Whatever is called for in one, is interpreted to be called for in all. However, in the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following descending order of precedence:

- (a) The Contract and any amendments thereto, including Change Orders, with those of later date having precedence over those of an earlier date;
- (b) The Supplemental General Conditions;
- (c) County General Conditions;
- (d) Plans and Specifications;
- (e) The Solicitation Document, and any addenda thereto.



A.3.2 In the case of an inconsistency between Plans and Specifications or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Owner's interpretation in writing as determined in Owners sole discretion.

A.3.3 If the Contractor finds discrepancies in, or omissions from the Contract Documents, or if the Contractor is in doubt as to their meaning, the Contractor shall at once notify the Owner. Matters concerning and interpretation of requirements of the Contract Documents will be decided by the Owner in the Owner's sole discretion, who may delegate that duty in some instances to the Architect/Engineer. Responses to Contractor's requests for interpretation of Contract Documents will be made in writing by Owner (or the Architect/Engineer) within any time limits agreed upon or otherwise with reasonable promptness. Contractor shall not proceed without direction in writing from the Owner (or Architect/Engineer).

A.3.4 References to standard specifications, manuals, codes of any technical society, organization or association, to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws or regulations in effect in the jurisdiction where the Project Site is located on the first published date of the Solicitation Document, except as may be otherwise specifically stated.

#### **A.4 EXAMINATION OF PLANS, SPECIFICATIONS, AND PROJECT SITE**

A.4.1 It is understood that the Contractor, before submitting an Offer, has made a careful examination of the Contract Documents; has become fully informed as to the quality and quantity of materials and the character of the Work required; and has made a careful examination of the location and conditions of the Work and the sources of supply for materials. The Owner will in no case be responsible for any loss or for any unanticipated costs that may be suffered by the Contractor as a result of the Contractor's failure to acquire full information in advance in regard to all conditions pertaining to the Work. No oral agreement or conversation with any officer, agent, or personnel of the Owner, or with the Architect/Engineer either before or after the execution of the Contract, shall affect or modify any of the terms or obligations herein contained. Contractor shall at all times be responsible for all utility locates regardless of the ownership of such utility infrastructure or service.

A.4.2 Should the Plans or Specifications fail to particularly describe the materials, kind of goods, or details of construction of any aspect of the Work, Contractor shall have the duty to make inquiry of the Owner and Architect/Engineer as to what is required prior to performance of the Work. Absent Specifications to the contrary, the materials or processes that would normally be used to produce first quality finished Work shall be considered a part of the Contract requirements.

A.4.3 Any design errors or omissions noted by the Contractor shall be reported promptly to the Owner, including without limitation, any nonconformity with Applicable Laws.

A.4.4 If the Contractor believes that adjustments to cost or Contract Time are involved because of clarifications or instructions issued by the Owner (or Architect/Engineer) in response to the Contractor's notices or requests for information, the Contractor must submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt by Contractor of the clarifications or instructions issued. If the Owner denies Contractor's request for additional compensation, additional Contract Time, or other relief

that Contractor believes results from the clarifications or instructions, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process. If the Contractor fails to perform the obligations of Sections A.4.1 to A.4.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.

A.4.5 If the Contractor believes that adjustments to cost or Contract Time are involved because of an Unavoidable Delay caused by differing Project Site conditions, the Contractor shall notify the Owner immediately of differing Project Site conditions before the area has been disturbed. The Owner will investigate the area and make a determination as to whether or not the conditions differ materially from either the conditions stated in the Contract Documents or those which could reasonably be expected in execution of this particular Contract. If Contractor and the Owner agrees that a differing Project Site condition exists, any adjustment to compensation or Contract Time will be determined based on the process set forth in Section D.2.2 for adjustments to or deletions from Work. If the Owner disagrees that a differing Project Site condition exists and denies Contractor's request for additional compensation or Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

#### **A.5 INDEPENDENT CONTRACTOR STATUS**

The service or services to be performed under the Contract are those of an independent contractor as defined in ORS 670.600. Contractor represents and warrants that it is not an officer, employee or agent of the Owner as those terms are used in ORS 30.265.

#### **A.6 RETIREMENT SYSTEM STATUS AND TAXES**

Contractor represents and warrants that it is not a contributing member of the Public Employees' Retirement System and will be responsible for any federal or state taxes applicable to payment received under the Contract. Contractor will not be eligible for any benefits from these Contract payments of federal Social Security, employment insurance, workers' compensation or the Public Employees' Retirement System, except as a self-employed individual. Unless the Contractor is subject to backup withholding, Owner will not withhold from such payments any amount(s) to cover Contractor's federal or state tax obligations.

#### **A.7 GOVERNMENT EMPLOYMENT STATUS**

A.7.1 If this payment is to be charged against federal funds, Contractor represents and warrants that it is not currently employed by the Federal Government. This does not preclude the Contractor from holding another contract with the Federal Government.

### **SECTION B ADMINISTRATION OF THE CONTRACT**

#### **B.1 OWNER'S ADMINISTRATION OF THE CONTRACT**

B.1.1 The Owner shall administer the Contract as described in the Contract Documents throughout the term of the Contract, including the one-year period for correction of Work. The Owner will act as provided in the Contract Documents, unless modified in writing in accordance with other provisions of the Contract. In performing these tasks, the Owner may rely on the Architect/Engineer or other agents to perform some or all of these tasks.

B.1.2 The Owner may visit the Project Site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. The Owner will not

make exhaustive or continuous on-Project Site inspections to check the quality or quantity of the Work. Unless otherwise required in a Change Order, the Owner will neither have control over or charge of, nor be responsible for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work.

B.1.3 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, the Owner and Contractor shall communicate with each other within a reasonable time frame about matters arising out of or relating to the Contract. Communications by and with the Architect/Engineer's consultants shall be through the Architect/Engineer. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

B.1.4 Based upon the Architect/Engineer's evaluations of the Contractor's Application for Payment, or unless otherwise stipulated by the Owner, the Architect/Engineer will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

## **B.2 CONTRACTOR'S MEANS AND METHODS; MITIGATION OF IMPACTS**

B.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the Project Site safety thereof and, except as stated below, shall be fully and solely responsible for the Project Site safety of such means, methods, techniques, sequences or procedures.

B.2.2 The Contractor is responsible to protect and maintain the Work during the course of construction and to mitigate any adverse impacts to the Project, including those caused by authorized changes, which may affect cost, schedule, or quality.

B.2.3 The Contractor is responsible for the actions of all its personnel, laborers, suppliers, agents, and Subcontractors on the Project. The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of persons who are unfit or unskilled for the tasks assigned to them.

## **B.3 MATERIALS AND WORKMANSHIP**

B.3.1 The intent of the Contract Documents is to provide for the construction and completion of every detail of the Work described. All Work shall be performed in a professional manner and, unless the means or methods of performing a task are specified elsewhere in the Contract Documents, Contractor shall employ methods that are generally accepted and used by the industry, in accordance with industry standards.

B.3.2 The Contractor is responsible to perform the Work as required by the Contract Documents. Defective Work shall be corrected at the Contractor's sole expense and within a reasonable time frame.

B.3.3 Work done and materials furnished may be subject to inspection and/or observation and testing by the Owner to determine if they conform to the Contract Documents. Inspection of the Work by the Owner does not relieve the Contractor of responsibility for the Work in accordance with the Contract Documents.

B.3.4 Contractor shall furnish adequate facilities, as required, for the Owner to have safe access to the Work including without limitation walkways, railings, ladders, tunnels, and platforms. Producers, suppliers, and fabricators shall also provide proper facilities and access to their facilities.

B.3.5 The Contractor shall furnish Samples of materials for testing by the Owner and include the cost of the Samples in the Contract Price.

## **B.4 PERMITS**

Contractor shall obtain and pay for all necessary permits, licenses and fees, except for those specifically excluded in the Supplemental General Conditions, as required for the project. Contractor shall be responsible for all violations of the law. Contractor shall give all requisite notices to public authorities.

## **B.5 COMPLIANCE WITH GOVERNMENT REGULATIONS**

B.5.1 Contractor shall comply with Applicable Laws, as amended pertaining to the Work and the Contract. Failure to comply with such requirements shall constitute a breach of Contract and shall be grounds for Contract termination. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with the following, as applicable and as may be amended from time to time: (i) Title VI and VII of Civil Rights Act of 1964, as amended; (ii) Section 503 and 504 of the Rehabilitation Act of 1973, as amended; (iii) the Health Insurance Portability and Accountability Act of 1996; (iv) the Americans with Disabilities Act of 1990, as amended; (v) ORS Chapter 659A; as amended; (vi) all regulations and administrative rules established pursuant to any applicable laws; and (vii) all other applicable requirements of federal, state, county or other local government entity statutes, rules and regulations.

B.5.2 Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations, and

(a) Contractor shall not discriminate against Disadvantaged, Minority, Women or Emerging Small Business enterprises, as those terms are defined in ORS 200.005, or a business enterprise that is owned or controlled by or that employs a disabled veteran, as that term is defined in ORS 408.225, in the awarding of subcontracts.

(b) Contractor shall maintain, in current and valid form, all licenses and certificates required by Applicable Laws or the Contract when performing the Work.

B.5.3 Contractor shall certify that it shall not accept a bid from Subcontractors to perform Work unless such Subcontractors are registered with the Construction Contractors Board in accordance with ORS 701.021 at the time they submit their bids to the Contractor.

B.5.4 Contractor shall certify that each landscape contracting business, as defined in ORS 671.520(2), performing Work under the Contract holds a valid landscape construction professional license issued pursuant to ORS 671.560.

B.5.5 The following notice is applicable to Contractors who perform excavation Work. 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 952-001-0090. You may obtain copies of the rules by calling the center at (877) 668-4001.

B.5.6 Failure to comply with any or all of the requirements of B.5.1 through B.5.5 shall be a material breach of Contract and constitute

grounds for Contract termination. Damages or costs resulting from such noncompliance shall be the responsibility of Contractor.

- B.5.7 The Contractor shall include in each subcontract those provisions required under ORS 279C.580.
- B.5.8 Contractor shall comply with ORS 652.220, compliance of which is a material element of this Contract and failure to comply is a material breach that entitles County to exercise any rights and remedies available under this Contract including, but not limited to, termination for default.

## **B.6 SUPERINTENDENCE**

Contractor shall keep on the Project Site, during the progress of the Work, a competent superintendent and any necessary assistants who shall be satisfactory to the Owner and who shall represent the Contractor on the Project Site. Directions given to the superintendent by the Owner shall be confirmed in writing to the Contractor.

## **B.7 INSPECTION**

- B.7.1 Owner shall have access to the Work at all times.
- B.7.2 Inspection of the Work will be made by the Owner at its discretion. The Owner will have authority to reject Work that does not conform to the Contract Documents in the Owner's sole discretion. Any Work found to be not in conformance with the Contract Documents, in the discretion of the Owner, shall be removed and replaced at the Contractor's expense.
- B.7.3 Contractor shall make or obtain at the appropriate time all tests, inspections and approvals of portions of the Work required by the Contract Documents or by Applicable Laws or orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall give the Owner timely notice of when and where tests and inspections are to be made so that the Owner may be present for such procedures. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner.
- B.7.4 As required by the Contract Documents, Work done or material used without required inspection or testing and/or without providing timely notice to the Owner may be ordered removed at the Contractor's expense.
- B.7.5 If directed to do so by Owner or other permitting authority any time before the Work is accepted, the Contractor shall uncover portions of the completed Work for inspection. After inspection, the Contractor shall restore such portions of Work to the standard required by the Contract. If the Work uncovered is unacceptable or was done without required testing or inspection or sufficient notice to the Owner, the uncovering and restoration shall be done at the Contractor's expense. If the Work uncovered is acceptable and was done with sufficient notice to the Owner, the uncovering and restoration will be paid for pursuant to a Change Order.
- B.7.6 If any testing or inspection reveals failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Owner's and Architect/Engineer's services and expenses, shall be at the Contractor's expense.

- B.7.7 In Owner's sole discretion, it may authorize other interested parties to inspect the Work affecting their interests or property. Their right to inspect shall not make them a party to the Contract and shall not interfere with the rights of the parties of the Contract. Instructions or orders of such parties shall be transmitted to the Contractor, through the Owner.

## **B.8 SUBCONTRACTS AND ASSIGNMENT**

- B.8.1 Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound by the terms and conditions of these General Conditions and Supplemental General Conditions, and to assume toward the Contractor all of the obligations and responsibilities which the Contractor assumes toward the Owner thereunder, unless (1) the same are clearly inapplicable to the subcontract at issue because of legal requirements or industry practices, or (2) specific exceptions are requested by Contractor and approved in writing by Owner. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors at any level.
- B.8.2 At Owner's request, Contractor shall submit to Owner prior to their execution either Contractor's form of subcontract, or the subcontract to be executed with any particular Subcontractor. If Owner disapproves such form, Contractor shall not execute the form until the matters disapproved are resolved to Owner's satisfaction. Owner's review, comment upon or approval of any such form shall not relieve Contractor of its obligations under this Agreement or be deemed a waiver of such obligations of Contractor.
- B.8.3 Contractor shall not assign, sell, or transfer its rights, or delegate its responsibilities under the Contract, in whole or in part, without the prior written approval of the Owner. No such written approval shall relieve Contractor of any obligations of the Contract, and any transferee shall be considered the agent of the Contractor and bound to perform in accordance with the Contract Documents. Contractor shall remain liable as between the original parties to the Contract as if no assignment had occurred.

## **B.9 OWNER'S RIGHT TO DO WORK**

Owner reserves the right to perform other or additional work at or near the Project Site with other agents than those of the Contractor. If such work takes place within or next to the Project Site, Contractor shall coordinate work with the other contractors or agents, cooperate with all other contractors or forces, carry out the Work in a way that will minimize interference and delay for all agents involved, place and dispose of materials being used so as not to interfere with the operations of another, and join the Work with the work of the others in an acceptable manner and perform it in proper sequence to that of the others. The Owner will resolve any disagreements that may arise between or among Contractor and the other contractors over the method or order of doing all work (including the Work). In case of unavoidable interference, the Owner will establish work priority (including the Work) in the Owner's sole discretion.

## **B.10 OTHER CONTRACTS**

In all cases and at any time, the Owner has the right to execute other contracts related to or unrelated to the Work of the Contract. The Contractor of the Contract shall fully cooperate with any and all other contractors without additional cost to the Owner in the manner described in Section B.13.

## **B.11 ALLOWANCES**

- B.11.1 The Contractor shall include in the Contract Price all allowances stated in the Contract Documents. Items covered by allowances

shall be supplied for such amounts and by such persons or entities as the Owner may direct.

- B.11.2 Unless otherwise provided in the Contract Documents:
- (a) when finally reconciled, allowances shall cover the cost of the Contractor's materials and equipment delivered at the Project Site and all required taxes, less applicable trade discounts;
  - (b) Contractor's costs for unloading and handling at the Project Site, labor, installation costs, Overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Price but not in the allowances;
  - (c) whenever costs are more than or less than allowances, the Contract Price shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (i) the difference between actual costs and the allowances under Section B.17.2(a) and (ii) changes in Contractor's costs under Section B.17.2(b);
  - (d) Unless Owner requests otherwise, Contractor shall provide to Owner a proposed fixed price for any allowance work prior to its performance.

#### **B.12 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

- B.12.1 The Contractor shall prepare and keep current, for the Architect's/Engineer's approval (or for the approval of Owner if approval authority has not been delegated to the Architect/Engineer), a schedule and list of submittals which is coordinated with the Contractor's construction schedule and allows the Architect/Engineer reasonable time to review submittals. Owner reserves the right to finally approve the schedule and list of submittals. Submittals include, without limitation, Shop Drawings, Product Data, and Samples.
- B.12.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review of submittals by the Architect/Engineer is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, or for approval of safety precautions or, unless otherwise specifically stated by the Architect/Engineer, of any construction means, methods, techniques, sequences or procedures, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect/Engineer's review of the Contractor's submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect/Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component. Informational submittals upon which the Architect/Engineer is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect/Engineer without action.
- B.12.3 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect/Engineer Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents

and approved by the Contractor may be returned by the Architect/Engineer without action.

- B.12.4 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- B.12.5 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect/Engineer.
- B.12.6 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect/Engineer's review or approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect/Engineer in writing of such deviation at the time of submittal and (i) the Architect/Engineer has given written approval to the specific deviation as a minor change in the Work, or (ii) a Change Order has been executed by Owner authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect/Engineer's review or approval thereof.
- B.12.7 In the event that Owner elects not to have the obligations and duties described under this Section B.18 performed by the Architect/Engineer, or in the event no Architect/Engineer is employed by Owner on the Project, all obligations and duties assigned to the Architect/Engineer hereunder shall be performed by the Owner.

#### **B.13 SUBSTITUTIONS**

The Contractor may make Substitutions only with the written consent of the Owner, after evaluation by the Owner and only in accordance with a Change Order. Substitutions shall be subject to the requirements of the Solicitation Document. By making requests for Substitutions, the Contractor represents that the Contractor has personally investigated the proposed substitute product; represents that the Contractor will provide the same warranty for the Substitution that the Contractor would for the product originally specified unless approved otherwise; certifies that the cost data presented is complete and includes all related costs under the Contract including redesign costs, and waives all claims for additional costs related to the Substitution which subsequently become apparent; and will coordinate the installation of the accepted Substitution, making such changes as may be required for the Work to be completed in all respects.

#### **B.14 USE OF PLANS AND SPECIFICATIONS**

Plans, Specifications and related Contract Documents furnished to Contractor by Owner or Owner's Architect/Engineer shall be used solely for the performance of the Work under the Contract. Contractor and its Subcontractors and suppliers are authorized to use and reproduce applicable portions of such documents appropriate to the execution of the Work, but shall not claim any ownership or other interest in them beyond the scope of the Contract, and no such interest shall attach. Unless otherwise indicated, all common law, statutory and other reserved rights, in addition to copyrights, are retained by Owner.

**SECTION C**  
**WAGES AND LABOR**

**C.1 PREVAILING WAGE RATES ON PUBLIC WORKS**

Contractor shall comply fully with the provisions of ORS 279C.800 through 279C.870. Pursuant to ORS 279C.830(1)(d), Contractor shall pay workers at not less than the specified minimum hourly rate of wage, and shall include that requirement in all subcontracts. If the Work is subject to both the state prevailing wage rate law and the federal Davis-Bacon Act, Contractor shall pay the higher of the applicable state or federal prevailing rate of wage. Contractor shall provide written notice to all workers of the number of hours per day and days per week such workers may be required to work.

**C.2 PAYROLL CERTIFICATION AND FEE REQUIREMENTS**

- C.2.1 In accordance with ORS 279C.845, the Contractor and every Subcontractor shall submit written certified statements to the Owner on the form prescribed by the Commissioner of the Bureau of Labor and Industries ("BOLI"), certifying the hourly rate of wage paid each worker which the Contractor or the Subcontractor has employed on the Project and further certifying that no worker employed on the Project has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the Contract, which certificate and statement shall be verified by the oath of the Contractor or the Subcontractor that the Contractor or Subcontractor has read the certified statement, that the Contractor or Subcontractor knows the contents of the certified statement, and, that to the Contractor's or Subcontractor's best knowledge and belief, the certified statement is true. The certified statements shall set out accurately and completely the payroll records for the prior week, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Certified statements for each week during which the Contractor or Subcontractor has employed a worker on the Project shall be submitted once a month, by the fifth (5<sup>th</sup>) business day of the following month. The Contractor and Subcontractors shall preserve the certified statements for a period of ten (10) years from the date of completion of the Contract.
- C.2.2 Pursuant to ORS 279C.845(7), the Owner shall retain 25 percent of any amount earned by the Contractor on the Project until the Contractor has filed the certified statements required by section C.2.1. The Owner shall pay to the Contractor the amount retained under this subsection within 14 days after the Contractor files the required certified statements, regardless of whether a Subcontractor has failed to file certified statements.
- C.2.3 Pursuant to ORS 279C.845(8), the Contractor shall retain 25 percent of any amount earned by a first-tier Subcontractor on this Project until the first-tier Subcontractor has filed with the Owner the certified statements required by C.2.1. Before paying any amount retained under this subsection, the Contractor shall verify that the first-tier Subcontractor has filed the certified statement. Within 14 days after the first-tier Subcontractor files the required certified statement the Contractor shall pay the first-tier Subcontractor any amount retained under this subsection.
- C.2.4 In accordance with statutory requirements and administrative rules promulgated by the Commissioner of the Bureau of Labor and Industries, the fee required by ORS 279C.825(1) will be paid by Owner to the Commissioner.

**C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS**

- C.3.1 As a condition to Owner's performance hereunder, the Contractor shall:
- C.3.1.1 Make payment promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the Work provided for in the Contract.
- C.3.1.2 Pay all contributions or amounts due the State Industrial Accident Fund or successor program from such Contractor or Subcontractor incurred in the performance of the Contract.
- C.3.1.3 Not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished. Contractor will not assign any claims that Contractor has against Owner, or assign any sums due by Owner, to Subcontractors, suppliers, or manufacturers, and will not make any agreement or act in any way to give Subcontractors a claim or standing to make a claim against the Owner.
- C.3.1.4 Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.
- C.3.2 If Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor of a Subcontractor by any person in connection with the Project as such claim becomes due, the proper officer(s) representing the Owner may pay the claim and charge the amount of the payment against funds due or to become due Contractor under the Contract. Payment of claims in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.
- C.3.3 Contractor shall include in each subcontract for property or services entered into by the Contractor and a first-tier subcontractor, including a material supplier, for the purpose of performing a construction contract, a payment clause that obligates the Contractor to pay the first-tier Subcontractor for satisfactory performance under its subcontract within ten (10) Days out of such amounts as are paid to the Contractor by the Owner under such contract.
- C.3.4 If the Contractor or a first-tier subcontractor fails, neglects or refuses to pay a person that provides labor or materials in connection with the Contract within 30 days after receiving payment from the contracting agency or a contractor, the Contractor or first-tier subcontractor owes the person the amount due plus interest charges that begin at the end of the 10-day period within which payment is due under ORS 279C.580 (4) and that end upon final payment, unless payment is subject to a good faith dispute as defined in ORS 279C.580. The rate of interest on the amount due is nine percent per annum. The amount of interest may not be waived.
- C.3.5 If the Contractor or a subcontractor fails, neglects or refuses to make payment to a person furnishing labor or materials in connection with the Contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580.
- C.3.6 All employers, including Contractor, that employ subject workers who work under the Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.
- C.3.7 In accordance with ORS 279C.570, for all subcontracts that exceed \$500,000 that the Contractor withholds retainage, the Contractor shall place amounts deducted as retainage into an interest-bearing escrow account. Interest on the retainage amount accrues from the

date the payment request is approved until the date the retainage is paid to the Subcontractor to which it is due.

**C.4 PAYMENT FOR MEDICAL CARE**

As a condition to Owner's performance hereunder, Contractor shall promptly, as due, make payment to any person, co-partnership, association or corporation furnishing medical, surgical, and hospital care or other needed care and attention, incident to sickness or injury, to the employees of the Contractor, of all sums of which the Contractor agrees to pay for the services and all moneys and sums that the Contractor collected or deducted from the wages of employees under any law, contract or agreement for the purpose of providing or paying for the services.

**C.5 HOURS OF LABOR**

As a condition to Owner's performance hereunder, no person shall be employed to perform Work under the Contract for more than ten (10) hours in any one day or forty (40) hours in any one week, except in cases of necessity, emergency or where public policy absolutely requires it. In such instances, Contractor shall pay the employee at least time and a half pay:

- (a) For all overtime in excess of eight (8) hours a day or forty (40) hours in any one week when the work week is five consecutive Days, Monday through Friday; or
- (b) For all overtime in excess of ten (10) hours a day or forty (40) hours in any one week when the work week is four consecutive Days, Monday through Friday; and
- (c) For all Work performed on Saturday and on any legal holiday specified in ORS 279C.540.

This Section C.5 will not apply to Contractor's Work under the Contract to the extent Contractor is currently a party to a collective bargaining agreement with any labor organization.

This Section C.5 shall not excuse Contractor from completion of the Work within the time required under the Contract.

**SECTION D  
CHANGES IN THE WORK**

**D.1 CHANGES IN WORK**

D.1.1 The terms of the Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever, without prior written agreement and then only after any necessary approvals have been obtained. A Change Order is required to modify the Contract, which shall not be effective until its execution by the parties to the Contract and all approvals required by public contracting laws have been obtained.

D.1.2 It is mutually agreed that changes in Plans, quantities, or details of construction may be necessary or desirable during the course of construction. Within the general scope of the Contract, the Owner may at any time, without notice to the sureties and without impairing the Contract, require changes it deems necessary or desirable within the scope of this Project and consistent with this Section D.1. All changes to the Work shall be documented and Change Orders shall be executed under the conditions of the Contract Documents. Such changes may include, but are not limited to:

- (a) Modification of specifications and design.
- (b) Increases or decreases in quantities.
- (c) Increases or decreases to the amount of Work.
- (d) Addition or elimination of any Work item.
- (e) Change in the duration of the Project.

- (f) Acceleration or delay in performance of Work.
- (g) Deductive changes.

Deductive changes are those that reduce the scope of the Work, and shall be made by mutual agreement whenever feasible. In cases of suspension or partial termination under Section J, Owner reserves the right to unilaterally impose a deductive change and to self-perform such Work, for which the provisions of Section B.13 (Owner's Right to Do Work) shall then apply. Adjustments in compensation shall be made under Section D.1.3, in which costs for deductive changes shall be based upon a Direct Costs adjustment together with the related percentage markup specified for profit, Overhead and other indirect costs, unless otherwise agreed to by Owner.

D.1.3 The Owner and Contractor agree that adjustments to or deletions from the Work shall be administered and compensated according to the following:

- (a) **Unit Pricing:** Unit pricing may be utilized at the Owner's option when unit prices or solicitation alternates were provided that established the cost for adjustments to Work, and a binding obligation exists under the Contract on the parties covering the terms and conditions of the adjustment to Work.
- (b) **Fixed Fee:** If the Owner elects not to utilize unit pricing, or in the event that unit pricing is not available or appropriate, fixed pricing may be used for adjustments to or deletions from the Work. In fixed pricing, the basis of payments or total price shall be agreed upon in writing between the parties to the Contract, and shall be established before the Work is done whenever feasible. Notwithstanding the foregoing, the mark-ups set forth in Section D.1.3(c) shall be utilized in establishing fixed pricing, and such mark-ups shall not be exceeded. Cost and price data relating to adjustments to or deletions from the Work shall be supplied by Contractor to Owner upon request, but Owner shall be under no obligation to make such requests.
- (c) **Time and Material:** In the event that unit pricing and fixed pricing are not utilized, then adjustments to or deletions from the Work shall be performed on a cost reimbursement basis for Direct Costs. Such Work shall be compensated on the basis of the actual, reasonable and allowable cost of labor, equipment, and material furnished on the Work performed. The Contractor or Subcontractor who performs the Work shall be allowed to add up to ten percent (10%) markup to the Direct Costs as full compensation for profit, Overhead and other indirect costs for Work performed with the Contractor's or Subcontractor's own agents

Each ascending tier Subcontractor or the Contractor that did not perform the Work, will be allowed to add up to five percent (5%) supplemental markup on the Direct Costs of the Work (but not the above allowable markups) covered by a Change Order. No additional markup shall be permitted for any third tier or greater descending Subcontractor.

Example: \$20,000 of Direct Costs Work performed by a 2<sup>nd</sup> Tier Subcontractor

	Markup	Allowed Total Fee Plus Markup
General Contractor	5%	\$1,000.00
1 <sup>st</sup> Tier Sub Contractor	5%	\$1,000.00
2 <sup>nd</sup> Tier Sub Contractor	10%	\$22,000.00

- (d) Payments made to the Contractor shall be complete compensation for Overhead, profit, and all costs that were incurred by the Contractor or by other agents furnished by the Contractor, including Subcontractors, for adjustments to or deletions from the Work pursuant to a Change Order. Owner may establish a maximum cost for additional Work under this Section D.1.3, which shall not be exceeded for reimbursement without additional written

authorization from Owner in the form of a Change Order. Contractor shall not be required to complete such additional Work without additional authorization.

- D.1.4 Any necessary adjustment of Contract Time that may be required as a result of adjustments to or deletions from the Work must be agreed upon by the parties before the start of the revised Work unless Owner authorizes Contractor to start the revised Work before agreement on Contract Time adjustment.

Contractor shall submit any request for additional compensation (and additional Contract Time if Contractor was authorized to start Work before an adjustment of Contract Time was approved) as soon as possible but no later than thirty (30) Days after receipt of Owner's request for additional Work. If Contractor's request for additional compensation or adjustment of Contract Time is not made within the thirty (30) Day time limit, Contractor's requests pertaining to that additional Work shall be barred. The thirty (30) Day time limit for making requests shall not be extended for any reason, including without limitation Contractor's claimed inability to determine the amount of additional compensation or adjustment of Contract Time, unless an extension is granted in writing by Owner. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process. No other reimbursement, compensation, or payment will be made, except as provided in Section D.1.5 for impact claims.

- D.1.5 If any adjustment to Work under Section D.1.3 causes an increase or decrease in the Contractor's cost of, or the Contract Time required for the performance of any other part of the Work under the Contract, Contractor shall submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt of Owner's request for adjustments to or deletions from the Work by Contractor.

The thirty (30) Day time limit applies to claims of Subcontractors, suppliers, or manufacturers who may be affected by Owner's request for adjustments to or deletions from the Work and who request additional compensation or an extension of Contract Time to perform; Contractor has responsibility for contacting its Subcontractors, suppliers, or manufacturers within the thirty (30) Day time limit, and including their requests with Contractor's requests. If the request involves Work to be completed by Subcontractors, or materials to be furnished by suppliers or manufacturers, such requests shall be submitted to the Contractor in writing with full analysis and justification for the adjustments to compensation and Contract Time requested. The Contractor shall analyze and evaluate the merits of the requests submitted by Subcontractors, suppliers, and manufacturers to Contractor prior to including those requests and Contractor's analysis and evaluation of those requests with Contractor's requests for adjustments to compensation or Contract Time that Contractor submits to the Owner. Failure of Subcontractors, suppliers, manufacturers or others to submit their requests to Contractor for inclusion with Contractor's requests submitted to Owner within the time period and by the means described in this section shall constitute a waiver of these Subcontractor claims. The Owner will not consider direct requests or claims from Subcontractors, suppliers, manufacturers or others not a party to the Contract. The consideration of such requests and claims under this section does not give any Person, not a party to the Contract the right to bring a claim against Owner, whether in this claims process, in litigation, or in any dispute resolution process.

If the Owner denies the Contractor's request for adjustment to compensation or Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

- D.1.6 No request or Claim by the Contractor for additional costs or an adjustment of Contract Time shall be allowed if made after receipt of final payment application under the Contract. Final payment application must be made by Contractor within the time required under Section E.6.4.

- D.1.7 It is understood that changes in the Work are inherent in construction of this type. The number of changes, the scope of those changes, and the effect they have on the progress of the original Work cannot be defined at this time. The Contractor agrees that it will work in good faith with Owner to undertake changes, when agreed upon by execution of a Change Order. Each change will be evaluated for extension of Contract Time and increase or decrease in compensation based on its own merit.

## **D.2 DELAYS**

- D.2.1 Contractor shall not be entitled to additional compensation or additional Contract Time for Avoidable Delays.

- D.2.2 In the event of Unavoidable Delays, Contractor may be entitled to the following:

- (a) Contractor may be entitled to additional compensation or additional Contract Time, or both, for Unavoidable Delays described in Section D.2.1.2 (a) and (b).
- (b) Contractor may be entitled to additional Contract Time for Unavoidable Delays described in Section D.2.1.2(c) and (d).

In the event of any requests for additional compensation or additional Contract Time, or both, as applicable, arising under this Section D.2.2 for Unavoidable Delays, other than requests for differing Project Site conditions for which a review process is established under Section A.4.5, Contractor shall submit a written notification of the delay to the Owner within two (2) Days of the occurrence of the cause of the delay. This written notification shall state the cause of the potential delay, the Project components impacted by the delay, and the anticipated additional Contract Time extension or the additional compensation, or both, as applicable, resulting from the delay. Within seven (7) Days after the cause of the delay has been mitigated, or in no case more than thirty (30) Days after the initial written notification, the Contractor shall submit to the Owner, a complete and detailed request for additional compensation or additional Contract Time, or both, as applicable, resulting from the delay. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

If Contractor does not timely submit the notices required under this Section D.2, Contractor's Claim shall be barred.

## **D.3 CLAIMS REVIEW PROCESS**

- D.3.1 All Contractor Claims shall be referred to the Owner for review. Contractor's Claims, including Claims for adjustments to compensation or Contract Time, shall be submitted in writing by Contractor to the Owner within five (5) Days after a denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, provided that such initial request has been submitted in accordance with the requirements and within the time limits established in these County General Conditions. Within thirty (30) Days after the initial Claim, Owner shall receive from Contractor a complete and detailed description of the Claim (the "Detailed Notice") that includes all information required by Section D.3.2. Unless the Claim is made in accordance with these time requirements, it shall be barred.

**SECTION E**  
**PAYMENTS**

D.3.2 The Detailed Notice of the Claim shall be submitted in writing by Contractor and shall include all information, records and documentation necessary for the Owner to properly and completely evaluate the claim, including, but not limited to a detailed, factual statement of the basis of the Claim, pertinent dates, Contract provisions which support or allow the Claim, reference to or copies of any documents which support the Claim, the dollar value of the Claim, and the Contract Time adjustment requested for the Claim. If the Claim involves Work to be completed by Subcontractors, the Contractor will analyze and evaluate the merits of the Subcontractor claim prior to forwarding it and that analysis and evaluation to the Owner. The Owner will not consider direct claims from Subcontractors, suppliers, manufacturers, or others not a party to the Contract. Contractor agrees that it will make no agreement, covenant, or assignment, nor will it commit any other act that will permit or assist any Subcontractor, supplier, manufacturer, or other to directly or indirectly make a claim against Owner.

D.3.3 The Owner, through the Architect/Engineer (or other employee or agent assigned by the Owner) will review all Claims and take one or more of the following preliminary actions within ten (10) Days of receipt of the Detailed Notice of a Claim: (1) request additional supporting information from the Contractor; (2) inform the Contractor and Owner in writing of the time required for adequate review and response; (3) reject the Claim in whole or in part and identify the reasons for rejection; (4) recommend approval of all or part of the Claim; (5) arrange a meeting with the Contractor for formal review of the Claim; or (6) propose an alternate resolution.

D.3.4 Once the Engineer or Project Manager determines the Owner is in receipt of a properly submitted claim, the Engineer or Project Manager may arrange a meeting, as agreed by the parties, with the Contractor in order to present the claim for formal review and discussion. A person authorized by the Contractor to execute Change Orders on behalf of the Contractor must be present and attend all claim meetings.

D.3.5 The Owner's decision, through the Architect/Engineer (or other employee or agent assigned by the Owner), shall be final and binding on the Contractor unless appealed by written notice to the Owner within fifteen (15) Days of receipt of the decision. The Contractor must present written documentation supporting the Claim within fifteen (15) Days of the notice of appeal. After receiving the appeal documentation, the Owner, through the appropriate department director, shall review the materials and render a decision within thirty (30) Days after receiving the appeal documents.

D.3.6 If, at any step in the claim decision or review process, the Contractor fails to promptly submit requested information or documentation that the Owner deems necessary to analyze the claim, the Contractor is deemed to have waived its right to further review, and the Claim will not be considered properly filed and preserved.

D.3.7 Both parties agree to exercise their best efforts in good faith to resolve all disputes within sixty (60) Days of the issuance of the appeal in Section D. 3.4 above. If the parties are unable to resolve their issues through mediation or otherwise, either party may seek redress through all available remedies in equity or in law.

D.3.8 Unless otherwise directed by Owner, Contractor shall proceed with the Work while any Claim, or mediation or litigation arising from a Claim, is pending. Regardless of the review period or the final decision of the Owner, the Contractor shall continue to diligently pursue the Work as identified in the Contract Documents. In no case is the Contractor justified or allowed to cease or delay Work, in whole or in part, without a written stop work order from the Owner.

**E.1 SCHEDULE OF VALUES**

The Contractor shall submit, by or before the pre-construction conference (as described in Section H.1.3), a schedule of values ("Schedule of Values") for the Contract Work. This schedule shall provide a breakdown of values for the Contract Work and will be the basis for progress payments. The breakdown shall demonstrate reasonable, identifiable, and measurable components of the Work. Unless objected to by the Owner, this schedule shall be used as the basis for reviewing Contractor's applications for payment. If objected to by Owner, Contractor shall revise the schedule of values and resubmit the same for approval of Owner.

**E.2 APPLICATIONS FOR PAYMENT**

E.2.1 Owner shall make progress payments on the Contract monthly as Work progresses, in accordance with the requirements of this Section E.2 and ORS 279C.570. Applications for payment shall be based upon estimates of Work completed and the Schedule of Values. As a condition precedent to Owner's obligation to pay, all applications for payment shall be approved by the Owner. A progress payment shall not be considered acceptance or approval of any Work or waiver of any defects therein. Owner shall pay to Contractor interest in accordance with ORS 279C.570 for overdue invoices, not including retainage, due the Contractor. Overdue invoices will be those that have not been paid within the earlier of:

- (a) Thirty (30) days after receipt of the invoice; or
- (b) Fifteen (15) days after the payment is approved by the County.

Notwithstanding the foregoing, in instances when an application for payment is filled out incorrectly, or when there is any defect or impropriety in any submitted application or when there is a good faith dispute, Owner shall so notify the Contractor within fifteen (15) Days stating the reason or reasons the application for payment is defective or improper or the reasons for the dispute. A defective or improper application for payment, if corrected by the Contractor within seven (7) Days of being notified by the Owner, shall not cause a payment to be made later than specified in this section unless interest is also paid. Payment of interest will be postponed when payment on the principal is delayed because of disagreement between the Owner and the Contractor.

Owner reserves the right, instead of requiring the Contractor to correct or resubmit a defective or improper application for payment, to reject the defective or improper portion of the application for payment and pay the remainder of the application for such amounts which are correct and proper.

Owner, upon written notice to the Contractor, may elect to make payments to the Contractor only by means of Electronic Funds Transfers ("EFT") through Automated Clearing House ("ACH") payments. If Owner makes this election, the Contractor shall arrange for receipt of the EFT/ACH payments.

E.2.2 Contractor shall submit to the Owner an application for each payment and, if required, receipts or other vouchers showing payments for materials and labor including payments to Subcontractors. Contractor shall include in its application for payment a schedule of the percentages of the various parts of the Work completed, based on the Schedule of Values which shall aggregate to the payment application total, and shall include, on the face of each copy thereof, a certificate in substantially the following form:



"I, the undersigned, hereby certify that the above bill is true and correct, and the payment therefore, has not been received.

Signed: \_\_\_\_\_  
Dated: \_\_\_\_\_"

E.2.3 Generally, applications for payment will be accepted only for materials that have been installed. Under special conditions, applications for payment for stored materials will be accepted at Owner's sole discretion. Such a payment, if made, will be subject to the following conditions:

- (a) The request for stored material shall be submitted at least thirty (30) Days in advance of the application for payment on which it appears. Applications for payment shall be entertained for major equipment, components or expenditures only.
- (b) The Contractor shall submit applications for payment showing the quantity and cost of the material stored.
- (c) The material shall be stored in a bonded warehouse and Owner shall be granted the right to access the material for the purpose of removal or inspection at any time during the Contract Period.
- (d) The Contractor shall name the Owner as co-insured on the insurance policy covering the full value of the property while in the care and custody of the Contractor until it is installed. A certificate noting this coverage shall be issued to the Owner.
- (e) Payments shall be made for materials and equipment only. The submitted amount in the application for payment shall be reduced by the cost of transportation from the storage site to the Project Site and for the cost of an inspector to verify delivery and condition of the goods at the storage site. The cost of storage and inspection shall be borne solely by the Contractor.
- (f) Within sixty (60) Days of the application for payment, the Contractor shall submit evidence of payment covering the material and/or equipment stored and of payment for the storage site.
- (g) Payment for stored materials and/or equipment shall in no way indicate acceptance of the materials and/or equipment or waive any rights under the Contract for the rejection of the Work or materials and/or equipment not in conformance with the Contract Documents.
- (h) All required documentation shall be submitted with the respective application for payment.

E.2.4 The Owner reserves the right to withhold all or part of a payment, or may nullify in whole or part any payment previously made, to such extent as may be necessary in the Owner's opinion to protect the Owner from loss because of:

- (a) Work that is defective and not remedied, or that has been demonstrated or identified as failing to conform with Applicable Laws or the Contract Documents;
- (b) third party claims filed or evidence reasonably indicating that such claims will likely be filed unless security acceptable to the Owner is provided by the Contractor;
- (c) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment (in which case Owner may issue checks made payable jointly to Contractor and such unpaid persons under this provision, or directly to Subcontractors and suppliers at any level under Section C.3.2);

- (d) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;
- (e) damage to the Work, Owner or Owner's agent;
- (f) reasonable evidence that the Work will not be completed within the Contract Time required by the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- (g) failure to carry out the Work in accordance with the Contract Documents; or
- (h) assessment of liquidated damages, when withholding is made for offset purposes.

E.2.5 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- (a) Take that portion of the Contract Price properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Price allocated to that portion of the Work in the Schedule of Values, less retainage as provided in Section E.5. Pending final determination of cost to the Owner of changes in the Work, no amounts for changes in the Work can be included in applications for payment until the Contract Price has been adjusted by a Change Order;
- (b) Add that portion of the Contract Price properly allocable to materials and equipment delivered and suitably stored at the Project Site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner pursuant to Section E.2.3, suitably stored off the Project Site at a location agreed upon in writing), less retainage as provided in Section E.5;
- (c) Subtract the aggregate of previous payments made by the Owner; and
- (d) Subtract any amounts for which the Owner has withheld or nullified payment as provided in the Contract Documents.

E.2.6 Contractor's applications for payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier.

E.2.7 The Contractor warrants to Owner that title to all Work covered by an application for payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an application for payment all Work for which payments are received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided financing, labor, materials and equipment relating to the Work.

E.2.8 If Contractor disputes any determination by Owner with regard to any application for payment, Contractor nevertheless shall continue to expeditiously perform the Work. No payment made hereunder shall be or be construed to be final acceptance or approval of that portion of the Work to which such partial payment relates or shall relieve Contractor of any of its obligations hereunder.

### **E.3 PAYROLL CERTIFICATION REQUIREMENT**

Owner's receipt of payroll certification pursuant to Section C.2 of the Contract shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due.

#### **E.4 DUAL PAYMENT SOURCES**

Contractor shall not be compensated for Work performed under the Contract from any state agency other than the agency that is a party to the Contract.

#### **E.5 RETAINAGE**

E.5.1 Retainage shall be withheld and released in accordance with the requirements set forth in Local Contract Review Board Rules or the applicable County standard.

E.5.1.1 Owner may reserve as retainage from any progress payment an amount not to exceed five percent of the payment. As Work progresses, Owner may reduce the amount of retainage on or may eliminate retainage on any remaining monthly Contract payments after fifty (50) percent of the Work under the Contract is completed if, in the Owner's discretion, such Work is progressing satisfactorily. Elimination or reduction of retainage shall be allowed only upon written application by the Contractor, which application shall include written approval of Contractor's surety; except that when the Work is ninety-seven and a half percent (97.5%) completed in Owner's estimation, the Owner may, at its discretion and without application by the Contractor, reduce the retained amount to hundred (100) percent of the value of the Work remaining to be done. Upon receipt of written application by the Contractor, Owner shall respond in writing within a reasonable time.

E.5.1.2 If retainage is withheld, unless the Contractor requests and the Owner accepts a form of retainage described in options (a) or (b) below, the Owner (except as otherwise provided below for a contract of \$500,000 or less), will deposit the retainage in an interest-bearing escrow account as required by ORS 279C.570(2). The Contractor shall execute such documentation and instructions respecting the interest-bearing escrow account as the Owner may require to protect its interests, including but not limited to a provision that no funds may be paid from the account to anyone without the Owner's advance written authorization. For a Contract over \$500,000, if the Contractor requests that the Owner deposit the retainage in an interest-bearing account under ORS 279C.560(5), the Owner will use an interest-bearing escrow account as stated above. For a Contract of \$500,000 or less, if the Contractor requests that the Owner deposit the retainage in an interest-bearing account under ORS 279C.560(5), the Owner will use an interest-bearing account (in a bank, savings bank, trust company or savings association) as provided under ORS 279C.450(5).

In accordance with the provisions of ORS 279C.560, Local Contract Review Board Rules, or the applicable County standard, unless the Owner finds in writing that accepting bonds, securities or other instruments described in option (a) below or a security bond described in option (b) below poses an extraordinary risk that is not typically associated with the bond, security or instrument, the Owner will approve the Contractor's written request:

- a. to be paid amounts which would otherwise have been retained from progress payments where Contractor has deposited acceptable bonds, securities or other instruments of equal value with Owner or in a custodial account or other mutually-agreed account satisfactory to Owner, with an approved bank or trust company to be held in lieu of the cash retainage for the benefit of Owner. Interest or earnings on the bonds, securities or other instruments shall accrue to the Contractor. The Contractor shall execute and provide such documentation and instructions respecting the bonds, securities and other instruments as the Owner may require to protect its interests. To be permissible, the bonds, securities and other instruments must be of a character approved by Owner; or

- b. that the Contractor be allowed, with the approval of the Owner, Owner allow Contractor to deposit a surety bond for the benefit of Owner, in a form acceptable to Owner, in lieu of all or a portion of funds retained, or to be retained. Such bond and any proceeds therefrom shall be made subject to all claims and liens in the manner and priority as set forth for retainage under ORS 279C.550 to ORS 279C.625.

When the Owner has accepted the Contractor's election of option (a) or (b), Owner may recover from Contractor any additional costs incurred through such election by reducing Contractor's final payment. Where the Owner has agreed to Contractor's request for option (b), Contractor shall accept like bonds from Subcontractors and suppliers on the Project from which Contractor has required retainages.

E. 5.1.3 The retainage held by Owner shall be included in and paid to the Contractor as part of the final payment of the Contract Price. The Owner shall pay to Contractor interest at the rate of two thirds of one percent per month on the final payment due Contractor, interest to commence forty-five (45) Days after the date which Owner receives Contractor's final approved application for payment and Work under the Contract has been completed and accepted and to run until the date when final payment is tendered to Contractor. The Contractor shall notify Owner in writing when the Contractor considers the Work complete and deliver to Owner its final application for payment and Owner shall, within fifteen (15) Days after receiving the written notice and the application for payment, either accept the Work or notify the Contractor of Work yet to be performed on the Contract. If Owner does not within the time allowed notify the Contractor of Work yet to be performed to fulfill contractual obligations, the interest provided by this subsection shall commence to run forty-five (45) Days after the end of the fifteen (15) Day period.

E.5.1.4 Owner will reduce the amount of the retainage if the Contractor notifies the Owner that the Contractor has deposited in an escrow account with a bank or trust company, in a manner authorized by the Owner, bonds and securities of equal value of a kind approved by the Owner and such bonds and securities have in fact been deposited.

E.5.1.5 Contractor agrees that if Contractor elects to reserve a retainage from any progress payment due to any Subcontractor or supplier, such retainage shall not exceed five percent of the payment, and such retainage withheld from Subcontractors and suppliers shall be subject to the same terms and conditions stated in Subsection E.5 as apply to Owner's retainage from any progress payment due to Contractor.

E.5.1.6 The Contractor shall comply with all applicable legal requirements for withholding and releasing retainage and for prompt payments, including but not limited to those in ORS Chapters 279C and 701, and 49 CFR 26.29.

#### **E.6 FINAL PAYMENT**

E.6.1 Upon completion of all the Work under the Contract, the Contractor shall notify the Owner, in writing, that Contractor has completed Contractor's obligations under the Contract and shall prepare its application requesting final payment. The amount of final payment will be the difference between the total amount due the Contractor pursuant to the Contract Documents and the sum of all payments previously made. Upon receipt of such notice and application for payment, the Owner will inspect the Work, and, if acceptable, submit to Contractor a recommendation as to acceptance of the completed Work and the final estimate of the amount due the Contractor. If the Work is not acceptable, Owner will notify Contractor within fifteen (15) Days of Contractor's request for final payment. Upon approval of this final application for payment by the Owner and compliance by the Contractor with

provisions in Section K, and Contractor's satisfaction of other provisions of the Contract Documents as may be applicable, the Owner shall pay to the Contractor all monies due under the provisions of these Contract Documents.

- E.6.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Owner (1) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) Days' prior written notice has been given to the Owner, (2) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (3) consent of surety, if any, to final payment and (4), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien.
- E.6.3 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final application for payment.
- E.6.4 Contractor agrees to submit its final payment application within ninety (90) Days after Substantial Completion, unless written extension is granted by Owner. Contractor shall not delay final payment application for any reason, including without limitation nonpayment of Subcontractors, suppliers, manufacturers or others not a party to the Contract, or lack of resolution of a dispute with Owner or any other person of matters arising out of or relating to the Contract. If Contractor fails to submit its final payment application within ninety (90) Days after Substantial Completion, and Contractor has not obtained written extension by Owner, all requests or Claims for additional costs or an extension of Contract Time shall be barred.

## **SECTION F PROJECT SITE CONDITIONS**

### **F.1 USE OF PREMISES**

Contractor shall confine equipment, storage of materials and operation of Work to the limits indicated by Contract Documents, Applicable Laws, permits or directions of the Owner. Contractor shall follow the Owner's instructions regarding use of premises, if any.

### **F.2 PROTECTION OF WORKERS, PROPERTY AND THE PUBLIC**

- F.2.1 Contractor shall maintain continuous and adequate protection of all of the Work from damage and shall protect the Owner, workers and property from injury or loss arising in connection with the Contract. Contractor shall remedy acceptably to the Owner any damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by authorized representatives or personnel of the Owner. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents.
- F.2.2 Contractor shall take all necessary precautions for the safety of all personnel on the Project Site or otherwise engaged in the undertaking of the Work and shall comply with the Contract Documents, best practices and all applicable provisions of federal, state and municipal safety laws and building codes to prevent

accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for protection of workers and the public against any hazards created by construction. Contractor shall designate a responsible employee or associate on the Project Site, whose duty shall be the prevention of accidents. The name and position of the person designated shall be reported to the Owner. The Owner has no responsibility for Project Site safety. Project Site safety shall be the responsibility of the Contractor.

- F.2.3 Contractor shall not enter upon private property without first obtaining permission from the property owner or its duly authorized representative. Contractor shall be responsible for the preservation of all public and private property along and adjacent to the Work contemplated under the Contract and shall use every precaution necessary to prevent damage thereto. In the event the Contractor damages any property, the Contractor shall at once notify the property owner and make, or arrange to make, full restitution. Contractor shall, immediately and in writing, report to the Owner, all pertinent facts relating to such property damage and the ultimate disposition of the claim for damage.
- F.2.4 Contractor shall be responsible for protection of adjacent work areas including impacts brought about by activities, equipment, labor, utilities, vehicles and materials on the Project Site.
- F.2.5 Contractor shall at all times direct its activities in such a manner as to minimize adverse effects on the environment. Handling of all materials shall be conducted so no release will occur that may pollute or become hazardous.
- F.2.6 In an emergency affecting the safety of life or limb or of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Owner, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by the Owner. Any compensation claimed by the Contractor on account of emergency work shall be determined in accordance with section D.
- F.2.7 Contractor shall comply with all Owner safety rules and regulations, if applicable. Prior to commencement of any Work, Contractor and Subcontractors shall be required to complete an Owner Contractor Safety Orientation and submit all Owner required safety plans.
- F.2.8 Contractor shall demonstrate that an employee drug testing program is in place.

### **F.3 CUTTING AND PATCHING**

- F.3.1 If applicable, Contractor shall be responsible for coordinating all cutting, fitting, or patching of the Work to make its several parts come together properly and fit to receive or be received by work of other contractors or Subcontractors shown upon, or reasonably implied by, the Contract Documents.
- F.3.2 If applicable, Contractor shall be responsible for restoring all cut, fitted, or patched surfaces to an original condition; provided, however, that if a different condition is specified in the Contract Documents, then Contractor shall be responsible for restoring such surfaces to the condition specified in the Contract Documents.

### **F.4 CLEANING UP**

From time to time as may be prudent or ordered by the Owner and, in any event, immediately after completion of the Work, the Contractor shall, at its own expense, clean up and remove all refuse and unused materials of any kind resulting from the Work. If Contractor fails to do so within twenty-four (24) hours after notification by the Owner the work may be

done by others and the cost charged to the Contractor and deducted from payment due the Contractor.

## **F.5 ENVIRONMENTAL CONTAMINATION**

F.5.1. Contractor shall be held responsible for and shall indemnify, defend (with counsel of Owner's choice), and hold harmless Owner from and against any costs, expenses, damages, claims, and causes of action, or any of them, resulting from all spills, releases, discharges, leaks and disposal of environmental pollution, including storage, transportation, and handling during the performance of the Work or Contractor's obligations under the Contract which occur as a result of, or are contributed by, the negligence or actions of Contractor or its personnel, agents, or Subcontractors or any failure to perform in accordance with the Contract Documents (except to the extent otherwise void under ORS 30.140). Nothing in this section F.5.1 shall limit Contractor's responsibility for obtaining insurance coverages required under Section G.3 of the Contract, and Contractor shall take no action that would void or impair such coverages.

F.5.1.1 Contractor agrees to promptly dispose of such spills, releases, discharge or leaks to the satisfaction of Owner and regulatory agencies having jurisdiction in a manner that complies with Applicable Laws. Cleanup shall be at no cost to the Owner and shall be performed by properly qualified and, if applicable, licensed personnel.

F.5.1.2 Unless otherwise approved in the Solicitation Document, Contractor shall obtain the Owner's written consent prior to bringing onto the Project Site any (i) environmental pollutants or (ii) hazardous substances or materials, as the same or reasonably similar terms are used in any Applicable Laws. In any event, Contractor shall provide prior written notice to Owner when hazardous materials are brought on to the Project Site. The Contractor, at all times, shall:

- (a) properly handle, use and dispose of all environmental pollutants and hazardous substances or materials on the Project Site, in accordance with all Applicable Laws;
- (b) be responsible for any and all spills, releases, discharges, or leaks of (or from) environmental pollutants or hazardous substances or materials which Contractor has brought onto the Project Site; and
- (c) promptly clean up and remediate, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all Applicable Laws.

F.5.2 Contractor shall report all reportable quantity releases, as such releases are defined in Applicable Laws. Upon discovery, regardless of quantity, Contractor must verbally report all releases to the Owner in a prompt manner. A written follow-up report shall be submitted to Owner within 48 hours of the telephonic report. Such written report shall contain, as a minimum:

- (a) Description of items released (identity, quantity, manifest numbers, and any and all other documentation required by law).
- (b) Whether amount of items released is EPA/DEQ reportable, and, if so, when reported.
- (c) Exact time and location of release, including a description of the area involved.
- (d) Containment procedures initiated.

(e) Summary of communications about the release between Contractor and State, local or federal officials other than Owner. Any communication to the press will be done by Owner and Contractor will defer to Owner.

(f) Description of cleanup procedures employed or to be employed at the Project Site, including disposal location of spill residue.

(g) Personal injuries, if any, resulting from, or aggravated by, the release.

## **F.6 ENVIRONMENTAL CLEAN-UP**

F.6.1 Unless disposition of environmental pollution is specifically a part of the Contract, or was caused by the Contractor (reference F.5 Environmental Contamination), Contractor shall immediately notify Owner of any hazardous substance(s) which Contractor discovers or encounters during performance of the Work required by the Contract. "Hazardous substance(s)" means any hazardous, toxic and radioactive materials and those substances defined as "hazardous substances," "hazardous materials," "hazardous wastes," "toxic substances," or other similar designations in any federal, state, or local law, regulation, or ordinance, including without limitation asbestos, polychlorinated biphenyl ("PCB"), or petroleum, and any substances, materials or wastes regulated by 40 CFR, Part 261 and defined as hazardous in 40 CFR S 261.3. In addition to notifying Owner of any hazardous substance(s) discovered or encountered, Contractor shall immediately cease working in any particular area of the Project where a hazardous substance(s) has been discovered or encountered if continued work in such area would present a risk or danger to the health or wellbeing of Contractor's or any Subcontractor's work force, property or the environment.

F.6.2 Upon being notified by Contractor of the presence of hazardous substance(s) on the Project Site, not brought on to the Project Site by Contractor, Owner shall arrange for the proper disposition of such hazardous substance(s).

## **F.7 DEMOLITION**

F.7.1 For demolition tasks, if any, the Contractor shall salvage or recycle construction and demolition debris, if feasible and cost-effective.

## **SECTION G INDEMNITY, BONDING, AND INSURANCE**

### **G.1 RESPONSIBILITY FOR DAMAGES / INDEMNITY**

G.1.1 Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay that may be caused by, or result from, the carrying out of the Work to be done under the Contract, or from any act, omission or neglect of the Contractor, its Subcontractors, employees, guests, visitors, invitees and agents.

G.1.2 To the fullest extent permitted by law, Contractor shall indemnify, defend (with counsel approved by Owner) and hold harmless the Owner and its elected officials, officers, directors, agents, and employees (collectively "Indemnitees") from and against all liabilities, damages, losses, claims, expenses, demands and actions of any nature whatsoever which arise out of, result from or are related to: (a) any damage, injury, loss, expense, inconvenience or delay described in this Section G.1; (b) any accident or occurrence which happens or is alleged to have happened in or about the Project Site or any place where the Work is being performed, or in the vicinity of either, at any time prior to the time the Work is fully completed in all respects; (c) any failure of the Contractor to

observe or perform any duty or obligation under the Contract Documents which is to be observed or performed by the Contractor, or any breach of any agreement, representation or warranty of the Contractor contained in the Contract Documents or in any subcontract; (d) the negligent acts or omissions of the Contractor, a Subcontractor or anyone directly or indirectly employed by them or any one of them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder (except to the extent otherwise void under ORS 30.140); and (e) any lien filed upon the Project or bond claim in connection with the Work. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section G.1.2.

G.1.3 In claims against any person or entity indemnified under Section G.1.2 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section G.1.2 shall not be limited on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

## **G.2 PERFORMANCE AND PAYMENT SECURITY; PUBLIC WORKS BOND**

G.2.1 When the Contract Price is \$50,000 or more, the Contractor shall furnish and maintain in effect at all times during the Contract Period a performance bond in a sum equal to the Contract Price and a separate payment bond also in a sum equal to the Contract Price. Contractor shall furnish such bonds even if the Contract Price is less than the above thresholds if otherwise required by the Contract Documents.

G.2.2 Bond forms furnished by the Owner and notarized by Contractor's surety company authorized to do business in Oregon are the only acceptable forms of performance and payment security, unless otherwise specified in the Contract Documents.

G.2.3 Before execution of the Contract, the Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by Oregon Revised Statutes, Chapter 279C.830 and 279C.836, unless otherwise exempt under those provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting any Subcontractor to start Work.

## **G.3 INSURANCE**

G.3.1 Primary Coverage: Insurance carried by Contractor under the Contract shall be the primary coverage. The coverages indicated are minimums unless otherwise specified in the Contract Documents.

G.3.2 Workers' Compensation: All employers, including Contractor, that employ subject workers who work under the Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. This shall include Employer's Liability Insurance with coverage limits of not less than the minimum amount required by statute for each accident. Contractors who perform the Work without the assistance or labor of any employee need not obtain such coverage if the Contractor certifies so in writing. Contractor shall ensure that each of its Subcontractors complies with these requirements. The Contractor shall require proof of such Workers' Compensation coverage by receiving and keeping on file a certificate of insurance from each

Subcontractor or anyone else directly employed by either the Contractor or its Subcontractors.

### **G.3.3 Builder's Risk Insurance:**

G.3.3.1 Builder's Risk: During the term of the Contract, for new construction the Contractor shall obtain and keep in effect Builder's Risk insurance on an all risk forms, including earthquake and flood, for an amount equal to the full amount of the Contract, plus any changes in values due to modifications, Change Orders and loss of materials added. Such Builder's Risk shall include, in addition to earthquake and flood, theft, vandalism, mischief, collapse, transit, debris removal, and architect's fees "soft costs" associated with delay of Project due to insured peril. Any deductible shall not exceed \$50,000 for each loss, except the earthquake and flood deductible which shall not exceed 2 percent of each loss or \$50,000, whichever is greater. The deductible shall be paid by Contractor. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear.

G.3.3.2 Builder's Risk Installation Floater: For Work other than new construction, Contractor shall obtain and keep in effect during the term of the Contract, a Builder's Risk Installation Floater for coverage of the Contractor's labor, materials and equipment to be used for completion of the Work performed under the Contract. The minimum amount of coverage to be carried shall be equal to the full amount of the Contract. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear. Owner may waive this requirement at its sole and absolute discretion.

G.3.3.3 Such insurance shall be maintained until Owner has occupied the facility.

G.3.3.4 A loss insured under the Builder's Risk insurance shall be adjusted by the Owner and made payable to the Owner as loss payee. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner. The Owner shall have power to adjust and settle a loss with insurers.

### **G.3.4 General Liability Insurance:**

G.3.4.1 Commercial General Liability: Upon execution of a Contract, Contractor shall obtain, and keep in effect at Contractor's expense for the term of the Contract, Commercial General Liability Insurance ("CGL") covering bodily injury and property damage in the amount of not less than \$1,000,000 per claim and \$2,000,000 per occurrence in a form satisfactory to Owner. This insurance shall include personal injury liability, products and completed operations, and contractual liability coverage for the indemnities provided under the Contract (to the extent contractual liability coverage for the indemnity is available in the marketplace), and shall be issued on an occurrence basis written on ISO Form GC 00 01 (12 04 or later) or an equivalent form approved in advance by Owner. The CGL shall provide separation of insured language. The policy or policies obtained by Contractor for purposes of fulfilling the requirements of this section shall be primary insurance with respect to the Owner. Any insurance or self-insurance maintained by the County shall be excess and shall not contribute to it.

G.3.4.2 Automobile Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of the Contract, Automobile Liability Insurance covering owned, and/or hired vehicles, as applicable. The coverage may be written in combination with the Commercial General Liability Insurance. Contractor shall provide proof of insurance of not less than \$1,000,000 per claim and \$2,000,000 per occurrence. Contractor

and its Subcontractors shall be responsible for ensuring that all non-owned vehicles maintain adequate Automobile Liability insurance while on Project Site.

- G.3.4.3 Owner may adjust the insurance amounts required in Section G.3.4.1 and G.3.4.2 based upon institution specific risk assessments through the issuance of Supplemental General Conditions and a Contract.
- G.3.4.4 To the extent that the Contract Documents require the Contractor to provide professional design services, design-build, or certifications related to systems, materials, or equipment, the Contractor shall (1) purchase and maintain professional liability/errors-and-omissions insurance with limits of not less than \$1,000,000 for each claim and \$2,000,000 general annual aggregate and (2) cause those Subcontractors (of any tier) who are providing professional design services including any design-build services to procure and maintain professional liability/errors-and-omissions insurance with limits of not less than \$1,000,000 for each claim and \$2,000,000 general annual aggregate. This policy shall be for the protection of the Owner, its elected officials, officers, agents and employees against liability for damages because of personal injury, bodily injury, death, or damage to property, including loss of use thereof, and damages because of negligent acts, errors and omissions in any way related to the Contract. The Owner, at its option, may require a complete copy of the above policy.
- G.3.4.5 "Tail" Coverage: If any of the required liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of the Contract for a duration of 36 months or the maximum time period available in the marketplace if less than 36 months. Contractor shall furnish certification of "tail" coverage as described or continuous "claims made" liability coverage for 36 months following Final Completion. Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage, provided its retroactive date is on or before the effective date of the Contract. Owner's receipt of the policy endorsement evidencing such coverage shall be a condition precedent to Owner's obligation to make final payment and to Owner's final acceptance of Work or services and related warranty (if any).
- G.3.4.6 Umbrella Liability (if required by Owner through issuance of Supplemental General Conditions): Contractor shall obtain, at Contractor's expense, and keep in effect during the term of the Contract, Umbrella liability Insurance over and above the general liability, automobile liability and workers' compensation coverage if required by Owner in specified limits at time of requirement.
- G.3.4.7 Pollution Liability may be required by Owner through issuance of Supplemental General Conditions.
- G.3.5 Additional Insured: The general liability insurance coverage, automobile liability, umbrella, and pollution liability if required, shall include the Owner as additional insureds but only with respect to the Contractor's activities to be performed under the Contract. The additional-insured endorsement for CGL insurance must be written on ISO Form CG 20 10 (10 01) and CG 20 37 (10 01), or their equivalent, but shall not use either of the following forms: CG 20 10 (10 93) or CG 20 10 (03 94). Proof of insurance must include a copy of the endorsement showing "Clackamas County, its elected officials, agents, officers, and employees" as scheduled insureds.

If Contractor cannot obtain an insurer to name the Owner as additional insureds, Contractor shall obtain at Contractor's expense, and keep in effect during the term of the Contract, Owners and Contractors Protective Liability Insurance, naming the Owner as additional insureds with not less than a \$2,000,000

limit per occurrence. This policy must be kept in effect for 36 months following Final Completion. As evidence of coverage, Contractor shall furnish the actual policy to Owner prior to execution of the Contract.

- G.3.6 Notice of Cancellation or Change: If the Contractor receives a non-renewal or cancellation notice from an insurance carrier affording coverage required herein, or receives notice that coverage no longer complies with the insurance requirements herein, Contractor agrees to notify Owner by fax within five (5) business days with a copy of the non-renewal or cancellation notice, or written specifics as to which coverage is no longer in compliance. When notified by Owner, the Contractor agrees to stop Work pursuant to the Contract at Contractor's expense, unless all required insurance remain in effect. Any failure to comply with the reporting provisions of this insurance, except for the potential exhaustion of aggregate limits, shall not affect the coverages provided to the Owner and its institutions, divisions, officers, and employees.
- Owner shall have the right, but not the obligation, of prohibiting Contractor from entering the Project Site until a new certificate(s) of insurance is provided to Owner evidencing the replacement coverage. The Contractor agrees that Owner reserves the right to withhold payment to Contractor until evidence of reinstated or replacement coverage is provided to Owner.
- G.3.7 Certificate(s) of Insurance/Insurance Carrier Qualification: As evidence of the insurance coverage required by the Contract, the Contractor shall furnish certificate(s) of insurance to the Owner prior to execution of the Contract. The certificate(s) will specify all of the parties who are additional insureds or loss payees for the Contract. A renewal certificate shall be sent to Owner at least 10 days prior to coverage expiration. Insurance coverage required under the Contract shall be obtained from insurance companies or entities acceptable to the Owner and that are eligible to provide such insurance under Oregon law. Eligible insurers include admitted insurers that have been issued a certificate of authority from the Oregon Department of Consumer and Business Services authorizing them to conduct an insurance business and issue policies of insurance in the state of Oregon, and certain non-admitted surplus lines insurers that satisfy the requirements of applicable Oregon law and which are subject to approval by the Owner. The Contractor shall be financially responsible for all deductibles, self-insured retentions and/or self-insurance included hereunder. Any deductible, self-insured retention and/or self-insurance in excess of \$50,000 shall be subject to approval by the Owner in writing and shall be a condition precedent to the effectiveness of any Contract.

## **SECTION H SCHEDULE OF WORK**

### **H.1 CONTRACT PERIOD**

- H.1.1 Time is of the essence. The Contractor shall at all times carry on the Work diligently, without delay and punctually fulfill all requirements herein.
- H.1.2 Notice to Proceed. Unless otherwise directed in the Contract Documents, Contractor shall commence Work on the Project Site within fifteen (15) Days of the Notice to Proceed. Notwithstanding the Notice to Proceed, Contractor shall not be authorized to proceed with the Work until all initial Contract requirements, including the Contract, performance bond and payment bond, and certificates of insurance, have been fully executed and submitted in a form acceptable to Owner.
- H.1.3 Unless otherwise not required in the Construction Documents, Contractor shall participate in a pre-construction conference with the Owner's representative and designated design team. The

purpose of this pre-construction conference is to review the Contractor's proposed Schedule of Values and to review any other Project logistics to be coordinated between the parties.

H.1.4 Unless specifically extended by a Change Order, all Work shall be complete by the date contained in the Contract Documents. The Owner shall have the right to accelerate the completion date of the Work, which may require the use of overtime. Such accelerated Work schedule shall be an acceleration in performance of Work under Section D.1.2(f) and shall be subject to the provisions of Section D.1.

H.1.5 The Owner shall not waive any rights under the Contract by permitting the Contractor to continue or complete in whole or in part the Work after the date described in Section H.1.2 above.

## **H.2 SCHEDULE**

H.2.1 Contractor shall provide, by or before the pre-construction conference, the initial as-planned schedule for review and acceptance by the Owner. The submitted schedule must illustrate Work by Project components, labor trades, and long lead items broken down by building and/or floor where applicable. If Owner shall so elect, Contractor shall provide the schedule in CPM format showing the graphical network of planned activities, including i) a reasonably detailed list of all activities required to complete the Work; ii) the time and duration that each activity will take to completion; and iii) the dependencies between the activities. Schedules lacking adequate detail, or unreasonably detailed, will be rejected. The schedule shall include the following: Notice to Proceed or the date the Work commences, if no Notice to Proceed is issued by Owner, Substantial Completion, and Final Completion. Schedules shall be updated monthly, unless otherwise required by the Contract Documents, and submitted with the monthly application for payment. Acceptance of the Schedule by the Owner does not constitute agreement by the Owner as to the Contractor's sequencing, means, methods, or durations. Any positive difference between the Contractor's scheduled completion and the Contract completion date is float owned by the Owner. Owner reserves the right to negotiate the float if it is deemed to be in Owner's best interest to do so. In no case shall the Contractor make a claim for delays if the Work is completed within the Contract Time but after Contractor's scheduled completion.

H.2.2 All Work shall be completed during normal weekdays (Monday through Friday) between the hours of 7:00 a.m. and 5:00 p.m. unless otherwise specified in the Contract Documents. Unless otherwise specified in the Contract Documents, no Work shall be performed during the following holidays:

- New Year's Day
- Martin Luther King Day
- Memorial Day
- Independence Day
- Labor Day
- Veterans Day
- Thanksgiving Day
- Christmas Day
- President's Day

When a holiday falls on a Sunday, the following Monday shall be recognized as a legal holiday. When a holiday falls on Saturday, the preceding Friday shall be recognized as a legal holiday.

## **H.3 PARTIAL OCCUPANCY OR USE**

The Owner may occupy or use any completed or partially completed portion of the Work at any stage, provided such occupancy or use is consented to by public authorities having

jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have reasonably accepted in writing the responsibilities assigned to each of them. Approval by the Contractor to partial occupancy or use shall not be unreasonably withheld. Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

## **SECTION I CORRECTION OF WORK**

### **I.1 CORRECTION OF WORK BEFORE FINAL PAYMENT**

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects, and that the Work will conform to the requirements of the Contract Documents. Work failing to conform to these requirements shall be deemed defective. Contractor shall promptly remove from the premises and replace all defective materials and equipment as determined by the Owner, whether incorporated in the Work or not. Removal and replacement shall be without loss or expense to the Owner, and Contractor shall bear the cost of repairing all Work destroyed or damaged by such removal or replacement. Contractor shall be allowed a period of no longer than thirty (30) Days after Substantial Completion for completion of defective (Punch List) work. At the end of the thirty-day period, or earlier if requested by the Contractor, Owner shall arrange for inspection of the Work by the Architect/Engineer. Should the work not be complete, and all corrections made, the costs for all subsequent reinspections shall be borne by the Contractor. If Contractor fails to complete the Punch List work within the thirty (30) Day period, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand without affecting Contractor's obligations.

### **I.2 WARRANTY WORK**

I.2.1 Neither the final certificate of payment nor any provision of the Contract Documents shall relieve the Contractor from responsibility for Defective Work and, unless a longer period is specified, Contractor shall correct all defects that appear in the Work within a period of one year from the date of issuance of the written notice of Substantial Completion by the Owner except for latent defects which will be remedied by the Contractor at any time they become apparent. The Owner shall give Contractor notice of defects with reasonable promptness. Contractor shall perform such warranty work within a reasonable time after Owner's demand and at Contractor's sole expense. If Contractor fails to complete the warranty work within such period as Owner determines reasonable, or at any time in the event of warranty work consisting of emergency repairs, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand, without affecting Contractor's obligations. The Contractor shall perform the warranty Work by correcting defects within twenty-four (24) hours of notification by Owner, unless otherwise specified in the Contract Documents. Should the Contractor fail to respond within the specified response time, the Owner may, at its option, complete the necessary repairs using another contractor or its agents. If Owner completes the repairs using Owner's agent, Contractor shall pay Owner at the rate of one and one-half (1½) times the standard hourly rate of Owner's agent, plus related overhead and any direct non-salary costs. If Owner completes the repairs using another contractor, Contractor shall pay Owner the amount of Owner's direct costs billed by the other contractor for the work, plus the direct salary costs and related overhead and direct non-salary expenses of Owner's agents who

are required to monitor that contractor's work. Work performed by Owner using Owner's own agents or those of another contractor shall not affect the Contractor's contractual duties under these provisions, including warranty provisions.

- I.2.2 Nothing in this Section I.2 provision shall negate guarantees or warranties for periods longer than one year including without limitation, such guarantees or warranties required by other sections of the Contract Documents for specific installations, materials, processes, equipment or fixtures.
- I.2.3 In addition to Contractor's warranty, manufacturer's warranties shall pass to the Owner and shall not take effect until such portion of the Work covered by the applicable warranty has been accepted in writing by the Owner.
- I.2.4 The one-year period for correction of Work shall be extended with respect to portions of Work performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work, and shall be extended by corrective Work performed by the Contractor pursuant to this Section, as to the Work corrected. The Contractor shall remove from the Project Site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.
- I.2.5 Nothing contained in this Section I.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the period for correction of Work as described in this Section I.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.
- I.2.6 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced as appropriate and equitable as determined by Owner. Such adjustment shall be effected whether or not final payment has been made.

## **SECTION J**

### ***SUSPENSION AND/OR TERMINATION OF THE WORK***

#### **J.1 OWNER'S RIGHT TO SUSPEND THE WORK**

- J.1.1 The Owner has the authority to suspend portions or all of the Work due to the following causes:
  - (a) Failure of the Contractor to correct unsafe conditions;
  - (b) Failure of the Contractor to carry out any provision of the Contract;
  - (c) Failure of the Contractor to carry out orders;
  - (d) Conditions, in the opinion of the Owner, which are unsuitable for performing the Work;
  - (e) Time required to investigate differing Project Site conditions; or
  - (f) Any reason considered to be in the public interest.
- J.1.2 The Owner shall notify Contractor and the Contractor's Surety in writing of the effective date and time of the suspension, and Owner shall notify Contractor and Contractor's surety in writing to resume Work.

#### **J.2 CONTRACTOR'S RESPONSIBILITIES**

- J.2.1 During the period of the suspension, Contractor is responsible to continue maintenance at the Project just as if the Work were in progress. This includes, but is not limited to, protection of completed Work, maintenance of access, protection of stored materials, temporary facilities, and clean-up.
- J.2.2 When the Work is recommenced after the suspension, the Contractor shall replace or renew any Work damaged during the suspension, remove any materials or facilities used as part of temporary maintenance, and complete the Work in every respect as though its prosecution had been continuous and without suspension.

#### **J.3 COMPENSATION FOR SUSPENSION**

Depending on the reason for suspension of the Work, the Contractor or the Owner may be due compensation by the other party. If the suspension was required due to acts or omissions of Contractor, the Owner may assess the Contractor actual costs of the suspension in terms of administration, remedial work by the Owner's agents or another contractor to correct the problem associated with the suspension, rent of temporary facilities, and other actual costs related to the suspension, and any liquidated damages arising from the delay. If the suspension was caused by acts or omissions of the Owner, the Contractor may be due compensation which shall be defined using Section D, Changes in Work. If the suspension was required through no fault of the Contractor or the Owner, neither party shall owe the other for the impact.

#### **J.4 OWNER'S RIGHT TO TERMINATE CONTRACT**

- J.4.1 The Owner may, without prejudice to any other right or remedy, and after giving Contractor seven (7) Days' written notice and an opportunity to cure, terminate the Contract in whole or in part under the following conditions:
  - (a) If Contractor should, voluntarily or involuntarily, seek protection under the United States Bankruptcy Code and Contractor as debtor-in-possession or the Trustee for the estate fails to assume the Contract within a reasonable time;
  - (b) If Contractor should make a general assignment for the benefit of Contractor's creditors;
  - (c) If a receiver should be appointed on account of Contractor's insolvency;
  - (d) If Contractor should repeatedly refuse or fail to supply an adequate number of skilled workers or proper materials to carry on the Work as required by the Contract Documents, or otherwise fail to perform the Work in a timely manner;
  - (e) If Contractor should repeatedly fail to make prompt payment to Subcontractors or for material or labor, or should disregard laws, ordinances or the instructions of the Owner;
  - (f) If Contractor is otherwise in breach of any part of the Contract; or
  - (g) If Contractor is in violation of Applicable Laws, either in the conduct of its business or in its performance of the Work.

- J.4.2 At any time that any of the above occurs, Owner may exercise all rights and remedies available to Owner at law or in equity, and, in addition, Owner may take possession of the premises and of all materials and appliances and finish the Work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive further payment until the Work is completed. If



the Owner's cost of finishing the Work exceeds the unpaid balance of the Contract Price, Contractor shall pay the difference to the Owner.

#### **J.5 TERMINATION FOR CONVENIENCE, NON-APPROPRIATION OF FUNDS, OR FORCE MAJEURE**

- J.5.1 Owner may terminate the Contract in whole or in part whenever Owner determines: (a) that termination of the Contract is in the best interest of Owner or the public; (b) that the Owner failed to receive funding, appropriations, allocations or other expenditure authority as contemplated by Owner's budget and Owner determines, in its sole determination, and its assessment and ranking of the policy objectives explicit or implicit in Owner's budget, Owner may determine it is necessary to and may terminate the Contract.; or (c) in the event of Force Majeure.
- J.5.2 The Owner shall provide the Contractor with seven (7) Days prior written notice of a termination for Owner's or for public convenience. After such notice, the Contractor shall provide the Owner with immediate and peaceful possession of the premises and materials located on and off the premises for which the Contractor received progress payment under Section E. Compensation for Work terminated by the Owner under this provision will be according to Section E. In no circumstance shall Contractor be entitled to lost profits for Work not performed due to termination. If the Contract is terminated for public convenience, neither the Contractor nor its Surety shall be relieved of liability for damages or losses suffered by the Owner as a result of defective, unacceptable or unauthorized Work completed or performed.

#### **J.6 ACTION UPON TERMINATION**

- J.6.1 Upon receiving a notice of termination, and except as directed otherwise by the Owner, Contractor shall immediately cease placing further subcontracts or orders for materials, services, or facilities. In addition, Contractor shall terminate all subcontracts or orders to the extent they relate to the Work terminated and, with the prior written approval of the Owner, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts and orders.
- J.6.2 As directed by the Owner, Contractor shall, upon termination, transfer title and deliver to the Owner all Record Documents, information, and other property that, if the Contract had been completed, would have been required to be furnished to the Owner.
- J.6.3 Upon Owner's notice of termination pursuant to either Section J.4 or J.5, if Owner shall so elect, Contractor shall assign to the Owner such subcontracts and orders as Owner shall specify. In the event Owner elects to take assignment of any such subcontract or order, Contractor shall take such action and shall execute such documents as Owner shall reasonably require for the effectiveness of such assignment and Contractor shall ensure that no contractual arrangement between it and its subcontractors or suppliers of any tier or sub-tier shall prevent such assignment.

### **SECTION K CONTRACT CLOSE OUT**

#### **K.1 RECORD DOCUMENTS**

As a condition of final payment (refer also to section E.6), Contractor shall comply with the following: Contractor shall provide Record Documents for the entire Project to Owner. Record Documents shall depict the Project as constructed and shall reflect each and every change, modification, and deletion made during the construction. Record Documents are part of the Work and shall be provided prior to the Owner's issuance of final payment. Record Documents include all modifications to the Contract Documents unless otherwise directed.

#### **K.2 OPERATION AND MAINTENANCE MANUALS**

As part of the Work, Contractor shall submit two completed operation and maintenance manuals ("O & M Manuals") for review by the Owner prior to submission of any pay request for more than 75% of the Work. Owner's receipt of the O & M Manuals shall be a condition precedent to any payment thereafter due. The O & M Manuals shall contain a complete set of all submittals, all product data as required by the specifications, training information, telephone list and contact information for all consultants, manufacturers, installer and suppliers, manufacturer's printed data, record and shop drawings, schematic diagrams of systems, appropriate equipment indices, warranties and bonds. The Owner shall review and return one O & M Manual for any modifications or adjustments required. Prior to submission of its final pay request, Contractor shall deliver two (2) complete and approved sets of O & M Manuals in paper form and one (1) complete and approved set in electronic form to the Owner and Owner's receipt of the O & M Manuals shall be a condition precedent to Owner's obligation to make final payment.

#### **K.3 COMPLETION NOTICES**

- K.3.1 Contractor shall provide Owner written notice of both Substantial and Final Completion. The certificate of Substantial Completion shall state the date of Substantial Completion, the responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and the time within which the Contractor shall finish all items on the Punch List accompanying the Certificate. Both completion notices must be signed and notarized by the Contractor and signed by the Architect/Engineer (if applicable) and Owner to be valid. The Owner shall provide the final signature on the notices. The notices shall take effect on the date they are signed by the Owner.
- K.3.2 Substantial Completion of a facility with operating systems (e.g., mechanical, electrical, HVAC) shall be that degree of completion that has provided a minimum of thirty (30) continuous Days of successful, trouble-free operation, which period shall begin after all performance and acceptance testing has been successfully demonstrated to the Owner. All equipment contained in the Work, plus all other components necessary to enable the Owner to operate the facility in the manner that was intended, shall be complete on the Substantial Completion date. The Contractor may request that a Punch List be prepared by the Owner with submission of the request for the Substantial Completion notice.

#### **K.4 TRAINING**

As part of the Work, and prior to submission of the final application for payment, the Contractor shall schedule with the Owner training sessions for all equipment and systems as required by the Contract Documents. Contractor shall schedule training sessions at least two weeks in advance of the date of training to allow Owner to provide its personnel with adequate notice. If assignments arise because of termination under Section J.4, then such assignments shall not relieve Contractor of liability hereunder. The O & M Manual shall be used as a basis for training. In addition to any off-Project Site training required by the Contract Documents, training shall include a formal session conducted at the Project Site after the equipment and/or system is completely installed and operational in its normal operating environment.

#### **K.5 EXTRA MATERIALS**

As part of the Work, Contractor shall provide spare parts, extra maintenance materials, and other materials or products in the quantities specified in the Contract Documents prior to final payment. Delivery point for extra materials shall be designated by the Owner.

#### **K.6 ENVIRONMENTAL CLEAN-UP**

As part of the Final Completion notice, or as a separate written notice submitted with or before the notice of Final Completion, the Contractor shall notify the Owner that all environmental and pollution clean-up, remediation and closure have been completed in accordance with all Applicable Laws and pursuant to the authority of all agencies having jurisdiction, and Contractor shall provide Owner with any and all documentation related to the same, including but not limited to directives, orders, letters, certificates and permits related to or arising from such environmental pollution. The notice shall reaffirm the indemnification given under Section F.5.1 above. Contractor's completion of its obligations under this Section K.6 and Owner's receipt of documents evidencing such completion shall be a condition precedent to Owner's obligation to make final payment.

#### **K.7 CERTIFICATE OF OCCUPANCY**

Owner's receipt of an unconditioned certificate of occupancy from the appropriate state and/or local building officials shall be a condition precedent to Owner's obligation to make final payment, except to the extent failure to obtain an unconditional certificate of occupancy is due to the fault or neglect of Owner.

#### **K.8 OTHER CONTRACTOR RESPONSIBILITIES**

The Contractor shall be responsible for returning to the Owner all property of Owner issued to Contractor during construction such as keys, security passes, Project Site admittance badges, and all other pertinent items. Upon notice from Owner, Contractor shall be responsible for notifying the appropriate utility companies to transfer utility charges from the Contractor to the Owner. The utility transfer date shall not be before Substantial Completion and may not be until Final Completion, if the Owner does not take beneficial use of the facility and the Contractor's agents continue with the Work.

The Owner's property is drug free and weapons free areas and the use of tobacco products is only allowed in designated areas. Contractor shall be required to ensure that its employees, Subcontractors and agents shall comply with these requirements.

### **SECTION L GENERAL PROVISIONS**

#### **L.1 NO THIRD PARTY BENEFICIARIES**

Owner and Contractor are the only parties to the Contract and are the only parties entitled to enforce its terms. Nothing in the Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of the Contract.

#### **L.2 SEVERABILITY**

If any provision of the Contract is declared by a court to be unenforceable, illegal, or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular provision held to be invalid.

#### **L.3 ACCESS TO RECORDS**

L.3.1 Contractor shall keep, at all times on the Project Site, one record copy of the complete Contract Documents, including the Plans, Specifications, addenda, and Change Orders (if any) in good order and marked currently to record field changes and selections made during construction, and one record copy of Shop Drawings, Product Data, Samples and similar submittals, and shall at all times give the Owner access thereto.

L.3.2 Contractor shall retain and the Owner and its duly authorized representatives shall have access, for a period not less than ten (10)

years, to all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract, including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Work or the Contract shall be subject to litigation, Contractor shall retain all such records until all litigation is resolved and Contractor shall continue to provide Owner and/or its agents with full access to such records until such time as all litigation is complete and all periods for appeal have expired and full and final satisfaction of any judgment, order or decree is recorded and Owner receives a record copy of documentation from Contractor.

#### **L.4 WAIVER**

Failure of the Owner to enforce any provision of the Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of the Contract.

#### **L.5 SUCCESSORS IN INTEREST**

The provisions of the Contract shall be binding upon and shall accrue to the benefit of the parties to the Contract and their respective permitted successors and assigns.

#### **L.6 GOVERNING LAW**

The Contract shall be governed by and construed in accordance with the laws of the State of Oregon without giving effect to the conflict of law provisions thereof.

#### **L.7 APPLICABLE LAW**

Contractor hereto agrees to comply in all ways with applicable local, state and federal ordinances, statutes, laws and regulations.

#### **L.8 NON-EXCLUSIVE RIGHTS AND REMEDIES**

Except as otherwise expressly provided herein, the rights and remedies expressly afforded under the provisions of the Contract 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.

#### **L.9 INTERPRETATION**

The titles of the sections of the Contract are inserted for convenience of reference only and shall be disregarded in construing or interpreting any of its provisions.

#### **L.10 DEBT LIMITATION**

The Contract 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.

#### **L.11 LITIGATION**

Any Claim between Owner and Contractor that arises from or relates to the Contract and that is not resolved through the Claims Review Process in Section D.3 shall be brought and conducted solely and exclusively within the Circuit Court of Clackamas County for the State of Oregon; provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the County of any form of defense or

immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. CONTRACTOR, BY EXECUTION OF THE CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF THE COURTS REFERENCED IN THIS SECTION.

**L. 12 SURVIVAL**

All warranty, indemnification, and record retention provisions of the Contract, and all of Contractor's other obligations under the Contract that are not fully performed by the time of Final Completion or termination, and all other rights and obligations which by their context are intended to survive, shall survive Final Completion or any termination of the Contract.

**L.13 ACCESS TO RECORDS**

L.13.1. Contractor shall keep, at all times on the Work site, one record copy of the complete Contract Documents, including the Plans, Specifications, Construction Change Directives and addenda, in good order and marked currently to record field changes and selections made during construction, and one copy of Shop Drawings, Project Data, Samples and similar submittals, and shall at all times give the Owner access thereto.

L.13.2 Contractor shall retain and the Owner and its duly authorized representatives shall have access, for a period not less than ten (10) years, to all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract, including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Work or this Contract shall be subject to litigation, Contractor shall retain all such records until all litigation is resolved and Contractor shall continue to provide Owner and/or its agents with full access to such records until such time as all litigation is complete and all periods for appeal have expired and full and final satisfaction of any judgment, order or decree is recorded and Owner receives a record copy of documentation from Contractor.

**L.14 WAIVER**

Failure of the Owner to enforce any provision of this Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of this Contract.

**L. 15 NO ATTORNEY FEES.**

In the event any arbitration, action or proceeding, including any bankruptcy proceeding, is instituted to enforce any term of this Contract, each party shall be responsible for its own attorneys' fees and expenses.



WATER ENVIRONMENT SERVICES
PUBLIC IMPROVEMENT CONTRACT

PERFORMANCE BOND

Bond No.: 023221615

Solicitation: #2022-72

Project Name: Fischer's Forest Park- Collection System Rehab Project

Table with 3 columns: Insurance Company (Surety #1), Insurance Company (Surety #2)\*, Bond Amount No. 1, Bond Amount No. 2:\*, Total Penal Sum of Bond.

We, Colton Homes Inc. dba Colton Construction as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves...

WHEREAS, the Principal has entered into a contract with the District, along with the plans, specifications, terms and conditions of which are contained in the above-referenced Project Contract Documents; and

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Performance Bond by reference, whether or not attached to the contract (all hereafter called "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and all authorized modifications of the Contract which increase the amount of the work, the amount of the Contract, or constitute an authorized extension of the time for performance, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal herein shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things undertaken by Contractor to be performed under the Contract...

Nonpayment of the bond premium will not invalidate this bond nor shall the District, be obligated for the payment of any premiums.

This bond is given and received under authority of Oregon Revised Statutes Chapter 279C and the Clackamas County Local Contractor Review Board Rules, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES.

Dated this 15th day of September, 2022.

PRINCIPAL: Colton Homes Inc. dba Colton Construction

By: [Signature]  
Signature  
president  
Official Capacity

Attest: [Signature]  
Corporation Secretary

SURETY: The Ohio Casualty Insurance Company  
*[Add signatures for each if using multiple bonds]*

BY ATTORNEY-IN-FACT:  
*[Power-of-Attorney must accompany each bond]*

Amber Lynn Reese  
Name  
[Signature]  
Signature  
1001 4th Ave Suite 3700  
Address  
Seattle, WA 98154  
City State Zip  
(206) 473-3788 (425) 376-8840  
Phone Fax

It is hereby certified that the above named person is a member of the Board of Directors of the [Company Name] and that he is a full-time employee of the [Company Name].

IN WITNESS WHEREOF, I have hereunto set my hand and the seal of the [Company Name] at [City, State] this [Date] day of [Month].

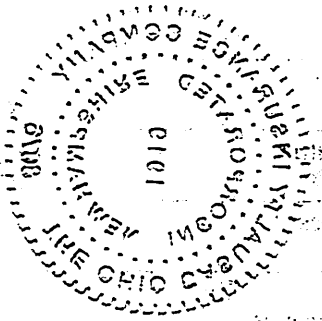
Signature of [Name] \_\_\_\_\_  
Title of [Name] \_\_\_\_\_

Signature of [Name] \_\_\_\_\_  
Title of [Name] \_\_\_\_\_

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Title of [Name] \_\_\_\_\_

Signature of [Name] \_\_\_\_\_  
Title of [Name] \_\_\_\_\_

Signature of [Name] \_\_\_\_\_  
Title of [Name] \_\_\_\_\_





WATER ENVIRONMENT SERVICES  
PUBLIC IMPROVEMENT CONTRACT

PAYMENT BOND

Bond No.: 023221615

Solicitation: #2022-72

Project Name: Fischer’s Forest Park- Collection System Rehab Project

The Ohio Casualty Insurance Company (Surety #1)

Bond Amount No. 1: \$ 664,211.00

N/A (Surety #2)\*

Bond Amount No. 2:\* \$ N/A

\* *If using multiple sureties*

Total Penal Sum of Bond: \$ 664,211.00

We, Colton Homes Inc. dba Colton Construction, as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Water Environment Services (“District”), the sum of (Total Penal Sum of Bond) Six Hundred Sixty-Four Thousand, Two Hundred Eleven and 00/100 (\$664,211.00) (Provided, that we the Sureties bind ourselves in such sum “jointly and severally” as well as “severally” only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety); and

WHEREAS, the Principal has entered into a contract with the District, along with the plans, specifications, terms and conditions of which are contained in above-referenced Project Contract Documents; and

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Payment Bond by reference, whether or not attached to the contract (all hereafter called “Contract”); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and schedule of contract prices which are set forth in the Contract and any attachments, and all authorized modifications of the Contract which increase the amount of the work, or the cost of the Contract, or constitute authorized extensions of time for performance of the Contract, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things by it undertaken to be performed under said Contract and any duly authorized modifications that are made, upon the terms set forth therein, and within the time prescribed therein, or as extended therein as provided in the Contract, with or without notice to the Sureties, and shall defend, indemnify, and save harmless the District and Clackamas County and their elected officials, officers, employees and agents, against any claim for direct or indirect damages of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Contractor or its subcontractors, and shall promptly pay all persons supplying labor, materials or both to the Principal or its subcontractors for prosecution of the work provided in the Contract; and shall promptly pay all contributions due the State Industrial Accident Fund and the State Unemployment Compensation Fund from the Principal or its subcontractors in connection with the performance of the Contract; and shall pay over to the Oregon Department of Revenue all sums required to be deducted and retained from the wages of employees of the Principal and its subcontractors pursuant to ORS 316.167, and shall permit no lien nor claim to be filed or prosecuted against the District on account of any labor or materials furnished; and shall do all things required of

the Principal by the laws of this State, then this obligation shall be void; otherwise, it shall remain in full force and effect for so long as any term of the Contract remains in effect.  
Nonpayment of the bond premium will not invalidate this bond nor shall the District be obligated for the payment of any premiums.

This bond is given and received under authority of Oregon Revised Statutes Chapter 279C and the Clackamas County Local Contractor Review Board Rules, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES:

Dated this 15th day of September, 2022.

PRINCIPAL: Colton Homes Inc. dba Colton Construction

By: [Signature]  
Signature  
president  
Official Capacity

Attest: [Signature]  
Corporation Secretary

SURETY: The Ohio Casualty Insurance Company  
*[Add signatures for each if using multiple bonds]*

BY ATTORNEY-IN-FACT:  
*[Power-of-Attorney must accompany each bond]*

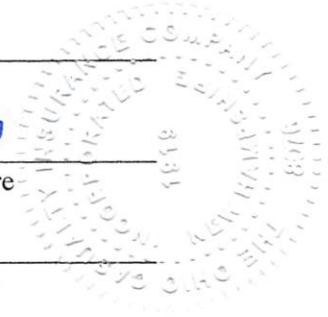
Amber Lynn Reese

Name  
[Signature]  
Signature

1001 4th Ave Suite 3700  
Address

Seattle, WA 98154  
City State Zip

(206) 473-3788 (425) 376-8840  
Phone Fax





The following information is being furnished to you for your information and is not to be used for any other purpose. This information is being furnished to you for your information and is not to be used for any other purpose.

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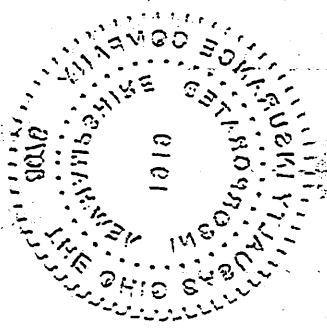
Date of Receipt: \_\_\_\_\_

Principal Officer Name for this Organization

Signature  
Official Capacity  
Address

The following information is being furnished to you for your information and is not to be used for any other purpose.

Date of Receipt: \_\_\_\_\_



Date of Receipt: \_\_\_\_\_

Date of Receipt: \_\_\_\_\_

Date of Receipt: \_\_\_\_\_

Date of Receipt: \_\_\_\_\_

Date of Receipt: \_\_\_\_\_

Date of Receipt: \_\_\_\_\_



This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: 8207345-023049

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Aliceon A. Keltner; Alyssa J. Lopez; Amber Lynn Reese; Amelia G. Burrill; Annelies M. Richie; Brandon K. Bush; Brent E. Heilesen; Carley Espiritu; Christopher Kinyon; Cynthia L. Jay; Dana Marie Brinkley; Diane M. Harding; Donald Shanklin, Jr.; Eric A. Zimmerman; Erica E. Mosley; Holli Albers; Jacob T. Haddock; James B. Binder; Jamie L. Marques; Julie R. Truitt; Justin Dean Price; Kari Michelle Motley; Katharine J. Snider; Lindsey Jorgensen; Lois F. Weathers; Michael Mansfield; Misti M. Webb; Sara Sophie Sellin; Tamara A. Ringeisen

all of the city of Tacoma state of WA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 16th day of February, 2022.



Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: David M. Carey
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

State of PENNSYLVANIA ss
County of MONTGOMERY

On this 16th day of February, 2022 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV - OFFICERS: Section 12. Power of Attorney.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII - Execution of Contracts: Section 5. Surety Bonds and Undertakings.

Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 15th day of September, 2022.



By: Renee C. Llewellyn
Renee C. Llewellyn, Assistant Secretary

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com

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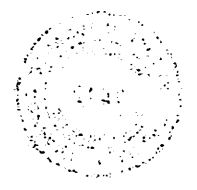
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CLACKAMAS COUNTY  
PUBLIC IMPROVEMENT CONTRACT  
PROJECT INFORMATION, PLANS, SPECIFICATIONS AND DRAWINGS

PROJECT: #2022-72 Fischer's Forest Park- Collection System Rehab Project

**Project Scope:**

Fischer's Forest Park ("FFP") is a community of 26 homes located along Fischer's Mill Road, roughly one mile east of the intersection with Redland Road. The FFP development was constructed from 1969 to 1971. Water Environment Services (WES) constructed, owns and operates the sewer utility, including the collection and onsite septic system, which provides sanitary sewer service to all 26 homes.

This project will replace the entirety of the sanitary sewer collection system associated with the facility including but not limited to:

- Construction of approximately 1,237 lineal feet of 8-inch C900 PVC sewer pipe, 7 sanitary sewer manholes, and approximately 3,000 square feet of concrete access and drainage path
- Replacement of 26 4-inch residential sewer laterals
- Sanitary sewer bypassing
- Abandonment of 4 manholes and approximately 571 feet of sewer pipe
- Asphalt pavement trench restoration and the restoration of landscaping and other improvements impacted by construction
- All other ancillary work necessary to complete the improvements.

The project sites includes work on private property within WES' permanent easements, private property covered by temporary construction easements, and work in Clackamas County Roads.

The method of installation for each sewer lateral has not been finalized. Construction methods will be chosen based on verified field conditions, input from the contractor, along with other factors. Properties being considered for trenchless methods include:

1. 17960 S Deininger Rd
2. 17961 S Merry Meadow Ct
3. 17993 S Merry Meadow Ct
4. 17994 S Merry Meadow Ct
5. 17900 S Princess Ct
6. 17930 S Princess Ct
7. 17961 S Princess Ct
8. 17991 S Princess Ct
9. 17992 S Princess Ct
10. 17941 S Fir Cone Ct
11. 17990 S Fir Cone Ct

Some, all, or none of these properties may be chosen for trenchless methods. Additionally, properties not listed may be chosen for trenchless installation methods.

**Engineer's Estimate:** \$700,000.00

**Key Dates:**

All Basic Bid Work may begin as soon as the Notice to Proceed ("NTP") is issued.

Substantial Completion: 120 days from issuance of NTP

Final Completion: 150 days from issuance of NTP

**The Scope further includes the following Plans, Specifications and Drawings:**

- Special Provisions for Fischer's Forest Park Large Onsite Sewage System- March 2022- (110 pages)

**FISHER'S FOREST PARK LARGE ONSITE SEWAGE SYSTEM**

**CERTIFICATE OF ENGINEER**

Century West Engineering  
Ron C. Weigel



EXPIRES: 6-30-22

*3/14/22*  
*SIGNED*

I certify the Specifications Sections listed below are applicable to the design for the subject project and were prepared by me or under my supervision.

01010, 01025, 01040, 01062, 01195, 01300, 01560,  
01570, 01700, 02120, 02160, 02221, 02500,  
02720, 02935, 02960, 03300, 03350

**FISHER'S FOREST PARK LARGE ONSITE SEWAGE SYSTEM  
CERTIFICATE OF ENGINEER**

<p>Water Environment Services Jessica D. Rinner</p>  <p>Expires 12/31/2022</p>	<p>I certify the Specifications Sections listed below are applicable to the design for the subject project and were prepared by me or under my supervision.</p> <p style="text-align: center;">01310</p>
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## SECTION 00010

### TABLE OF CONTENTS

#### SEWER RELAY WORK

<u>Section Number</u>	<u>Title</u>
01010	Summary of Work
01025	Measurement and Payment
01040	Coordination and Project requirements
01062	Permits and Easements
01195	Protection and Maintenance of Work and Property
01300	Submittals Procedure
01310	Construction Schedule
01560	Environmental Controls
01570	Traffic Control
01700	Contract Closeout
02120	Clearing and Removal of Obstructions
02160	Sheeting, Shoring, and Bracing
02221	Trenching, Backfilling, and Compacting
02500	Surface Restoration
02720	Sanitary Sewer Pipe and Manholes
02935	Restoration of Landscaping
02960	Pipe Bursting
03300	Cast-In-Place Concrete
03350	Concrete Finishes

#### Appendices

- A. Site Specific Safety Plan Certification
- B. Clackamas County Utility Permit
- C. Manhole/Pipeline Testing Forms
- D. Construction Drawings (Plans)



## SECTION 01010

### SUMMARY OF WORK

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. This contract consists of replacement of approximately 1,237 lineal feet of sanitary sewer mainline 8-inches in diameter, 48-inch diameter manholes, AC Pavement restoration and replacement and reconnection of 26 individual private sewer services with 4-inch pipe to the new main. Service lateral improvements to individual residents will include either an open cut or trenchless installation. Final method for each service shall be determined by the Owner based upon field conditions and consideration of input from Contractor.
- B. The accomplishment of all of the above work, if awarded, shall meet the scheduled sequence, milestones, limitations and the final completion dates specified.
- C. All Work is to be substantially completed within 120 days of Notice to Proceed and ready for final payment 30 days thereafter.
- D. The estimated construction cost for Work scope is \$700,000
- E. QUESTIONS ON TECHNICAL INFORMATION
- F. PERMITS

Contractor shall obtain and pay for all construction permits and licenses. District will assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary; for the prosecution of the Work which are applicable at the time of opening of Bids.

##### G. SITE VISITS

There will be no mandatory pre-bid site visit, but Bidders and sub-bidders are required to become familiar with and satisfy themselves as to the general, local and site conditions that may affect the cost, performance and furnishing of the Work.

##### 1.02 WORK OF THIS CONTRACT

- A. The work generally consists of furnishing and installing the following:
  - 1. Installation of Sanitary Sewer mainline pipe
  - 2. Sanitary Sewer bypassing.
  - 3. Replacement of sanitary sewer services
  - 4. Asphalt pavement trench restoration
  - 5. All other ancillary work necessary to complete the improvements.
- B. Contractor Duties

1. Provide and pay for labor, materials, tools, equipment, superintendence, temporary facilities and services necessary for proper execution and completion of Work.
2. All required permits, governmental fees and licenses.
3. Comply with ordinances and regulation of public authorities having jurisdiction, including, but not limited to following:
  - a. Clackamas County
  - b. State of Oregon Department of Environmental Quality
4. Contractor's Normal work hours shall be limited to between 7:00 a.m. to 6:00 p.m., Monday through Friday excepting Owner legal holidays.

### 1.03 EXISTING UTILITIES

- A. In general, the locations of existing major utilities, whether aboveground or underground, are indicated on the Drawings. This information has been obtained from utility maps and field surveys. Owner does not guarantee the accuracy or completeness of this information, and it is to be understood that other aboveground or underground facilities not shown on the Drawings may be encountered during the course of the work. In any case, most minor lines such as individual services for water, gas and sprinkler irrigation lines are not indicated.
- B. Existing utilities, whether shown on the Drawings or not, shall be maintained, relocated, rerouted, removed and restored as may be necessary by the Contractor in a manner satisfactory to owners and operators of the utilities and to Owner in accordance with the provisions and to the satisfaction of the affected utility or local agency.

### 1.04 SPECIFICATION LANGUAGE

Portions of the Specifications are written in imperative and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words "shall be" shall be included by inference where a colon (:) is used within sentences or phrases. Example: Aggregate: ASTM C33.

Where the Bidding Documents define methods, materials, or equipment by specifying a trade name, manufacturer and model or catalog number, the intent is not to limit competition but to establish a standard of quality, features, workmanship, reliability, serviceability, compatibility, performance, etc. Unless the specification description expressly states that no substitutions or "equals" will be allowed, the words "or equal" shall be deemed inserted in each such instance.

END OF SECTION

## SECTION 01025

### MEASUREMENT AND PAYMENT

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. Measurement is described under each proposal item in Paragraph 01025-1.02.
- B. Payment for the various items on the Proposal, as further specified herein, shall be based on measurements of completed work in accordance with United States Standard Measures and shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the work all in accordance with the requirements of the Contract Documents, including all appurtenances thereto and including all costs of compliance with the regulations of public agencies having jurisdiction, including safety and health requirements of the Occupational Safety and Health Act of the U.S. Department of Labor (OSHA) and Oregon State Department of Labor and Industries, also for loss or damage arising from the nature of the work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the Work until the final acceptance by the Owner. No separate payment will be made for any item that is not specifically set forth in the Proposal Schedule, and all costs therefor shall be included in the prices named in the Proposal Schedule for the various appurtenant items of work.
- C. Quantities listed in the Proposal do not govern final payment. Payments to the Contractor will be made only for actual quantities of Contract items performed in accordance with terms of the Contract and for items of work actually performed under Change Orders.
- D. Indirect costs, such as supervision and overheads, profit, the general conditions specified in the Contract, all shall be allocated to each proposal item as applicable for work defined in the proposal item. No separate payment will be made to the Contractor for these items.

##### 1.02 PROPOSAL ITEM MEASUREMENT AND PAYMENT

- A. Mobilization: Payment for Mobilization will be made on a lump sum basis for each Bid Schedule. The amount to be allowed for Mobilization in the partial payment to be made under the Contract will be as follows:
  - 1. When 5% of the total original contract amount is earned from other proposal items, not including advances on materials, 50% of the amount bid for Mobilization, or 2.5% of the original contract amount, whichever is the least, less normal retainage, will be paid.
  - 2. When 10% of the total original contract amount is earned from other proposal items, not including advances on materials, 100% of the amount bid for Mobilization, will be paid.

zation, or 5% of the original contract amount, whichever is the least, less normal retainage, will be paid.

3. Upon completion of all work on the project, payment of any amount bid for Mobilization in excess of 5% of the total original contract amount will be paid.
4. The above schedule of progress payments for Mobilization shall not limit or preclude progress payments otherwise provided by the Contract.
5. ***Mobilization paid under paragraphs 1-4 above shall not exceed 5% of the total original contract amount for bid items 2 through 16. Amounts greater than 5% shall be reimbursed with the Final Pay Request at the end of the construction.***

B. Manholes

1. Measurement for sanitary sewer manholes 48" diameter will be made on a unit price basis as shown in the Proposal for all depths.
2. Payment per each 48" manhole (standard or flat-top) shall include full compensation for: materials, equipment and labor including common excavation; base rock; imported backfill; dewatering; manhole frame and cover; manhole grade rings; testing and constructing the manhole complete in place. No separate payment will be made for flat-top manholes.

C. Gravity Sewer Pipe: Measurement for gravity mainline sewer pipe, will be computed for pipe size and material based on the following limits for length of trench:

1. Length: Length of all sewer pipe will be measured horizontally along center of pipe from center-to-center through fittings, to manholes, or to the end of pipe, whichever is applicable.
2. Depth: Depth of mainline sewer pipe for Class A or Class C backfill will not be measured.
3. Payment per linear foot for 8" pipe and trench excavation (*Class A and Class C includes all depths*) shall be full compensation for all materials, equipment and labor to construct the sewer pipe in place; the pipe bedding required by the Plans and Specifications; all material used to complete the backfill of the pipe zone in accordance with the Specifications; and all work necessary to furnish, place, and compact the bedding, pipe zone backfill materials, and crushed rock for imported backfill to pavement base or to the ground surface as required. The price proposal shall also include: construction staking to establish lines and grades based upon control points supplied on the drawings; dewatering, sawcutting, sheeting, shoring and bracing; backfilling trench with native (Class A) or imported materials (Class C); disposal of excess excavation; the excavation necessary to widen the trench for installation of manholes and appurtenances; the supporting and protection of existing utility crossings; the plugging or removing of abandoned conduit and structures; the preparation of subgrade; removal and replacement of concrete curbs; and all other work necessary to install the pipe in place including testing and plugs. No payment will be made for any section of pipe not yet passing all trench backfill, air and mandrel testing requirements. Surface restoration

as described in Section 02500 does not have to be completed in order to process payment for the pipe. Asphalt pavement trench restoration, temporary asphalt concrete trench patching and foundation stabilization if necessary will be paid under separate bid items.

E. Gravity Service Lateral Pipe: Measurement for gravity service lateral pipe, will be computed for pipe size and type of installation including open cut (all depths) and trenchless methods (pipe bursting) on a per each basis with no separate measurements of length due to the varying locations to each residence. Contractor shall make best estimate of the average length necessary assuming the connection point will be somewhere along the side of the house that fronts the existing sanitary sewer.

1. Payment per linear foot for new 4" services to each residence to within 5 feet of the exterior wall of the residence by open cut (all depths) and trenchless methods (pipe bursting) as shown in the proposal shall be full compensation for all materials, equipment and labor to construct the sewer pipe in place; the pipe bedding required by the Plans and Specifications; all material used to complete the backfill of the pipe zone in accordance with the Specifications; and all work necessary to furnish, place, and compact the bedding, pipe zone backfill materials, imported or native trench backfill, removal and replacement of concrete curbs, imported or native topsoil and crushed rock for pavement base as required. Specific locations for open cut and trenchless methods are not shown, but with an estimated 54/45 split anticipated in the two methods (i.e. open cut/trenchless) The price proposal shall also include: clearing and grubbing of all materials within the available space to excavate the trench; sawcutting, sheeting, shoring and bracing; dewatering; backfilling trench with the native or imported materials (depending upon location); disposal of excess excavation; the excavation necessary to widen the trench for installation of appurtenances; the supporting and protection of existing utility crossings; the preparation of subgrade; and all other work necessary to install the pipe in place including air testing, plugs and the markers at the end of each service line pipe. Class C Backfill shall be used for that portion of the trench located within driveways, streets or the existing shoulders of gravel or paved streets (final dimension to be determined by the Engineer), while native material (Class A) above the pipe zone shall be used in remaining areas (beyond shoulder areas determined previously) to the edge of the right-of-way. Construction of open cut service lines will include locator wire and cleanouts to meet uniform Plumbing Code. Payment will also include installation of marker tape 12 inches above the service connection pipe stubs. No separate payment will be made for any fittings including but not limited to the 8" x 4" tee, fittings, cleanouts or any other surface restoration required. Length of service will vary for each residence. No effort has been made to identify individual trenchless or open cut services on the plans. Owner shall ultimately be responsible for choosing final method. Contractor input into this decision will be important in making the best choice for all parties. Open cut trenching across concrete driveways will require entire panels to be replaced with final limits acceptable to resident. PCC driveways if necessary will be paid under a separate bid item.

F. AC Pavement Trench Restoration, 4-inches thick

1. Measurement for permanent AC pavement trench restoration for mainline and service lateral trench 4-inches thick will be made unit price per ton basis based upon the width of trench disturbed. The work shall include a two (2) lifts of 2-

inch thick AC pavement width covering the area disturbed by construction to a maximum width parallel to the pipe trench of up to 6 feet and around manholes a 12 foot square.

2. Payment per ton shall include all materials, equipment, and labor necessary to perform the work as specified. This shall also include cutting the existing asphalt concrete on each side of the trench to a neat line prior to excavation for the pipe trench and a second time just prior to permanent pavement installation with a saw along with removal and disposal of any temporary road surface material within the trench prior to paving.

F. PCC Drainageways, 6-inches thick

1. Measurement for PCC sections as shown on the plans at the end of each cul-de-sac will be made on a square yard basis based upon limits shown. The work shall include excavation, preparation of subgrade, base rock, rebar and all miscellaneous materials to construct the concrete section.
2. Payment per square yard shall include all materials, equipment and labor necessary to perform the work as specified.

G. PCC Driveways, 4-inches thick

1. Measurement for PCC sections for private driveways removed for service lateral installation will be made on a square yard basis based upon limits shown. The work shall include excavation, sawcutting, preparation of subgrade, base rock and all miscellaneous materials to replace the concrete section.
2. Payment per square yard shall include all materials, equipment and labor necessary to perform the work as specified

H. Erosion Control: All erosion control measures including materials, equipment and labor unless identified as part of other individual bid items shall be measured and paid on a lump sum basis.

I. Dewatering: All dewatering/ground control measures including materials, equipment and labor unless identified as part of other individual bid items shall be incidental to the cost of related items of work and no separate payment will be made.

J. Clearing and Removal of Obstructions: All work associated with this item is described in Section 02120 and not part of a separate bid item shall be considered incidental to the cost of other items of work and no separate payment will be made.

K. Temporary Sewer Bypass Pumping – Mainline: All work associated with this item described in Section 02720, Paragraph 3.04 shall be measured and paid on a lump sum basis.

L. Temporary Sewer Bypass Pumping – Service Laterals: All work associated with this item described in Section 02720, Paragraph 3.04 or Section 02960, Paragraph 3.03 shall be measured and paid on a lump sum basis.

- M. Traffic Control: Measurement and payment for traffic control shall be made on a lump sum basis. The lump sum price shall include all costs for materials, equipment and labor for: furnishing, erecting and maintaining temporary barricades, signs and other traffic control devices; preparing and updating the Traffic Control Plan for approval by the Owner; notification schedules and notifying property owners and government agencies at least 14 days in advance of beginning work; and providing all flagging identified in the approved Traffic Control Plan.
- N. Abandon Existing Pipe: Measurement and payment for abandoning pipe, regardless of size shall be on a linear foot basis. This shall include all materials, equipment and labor to install the CSLM inside the pipe as specified.
- O. Abandon Existing Manhole: Measurement and payment for abandoning manholes for all depths shall be on a unit price basis and include all materials equipment and labor to perform the work as specified.
- P. 3" Schedule 40 PVC Conduit: All work associate with this item as shown on Sheet C01 and C04 shall be measured and paid on a lump sum basis.

END OF SECTION

## SECTION 01040

### COORDINATION AND PROJECT REQUIREMENTS

#### PART 1 GENERAL

##### 1.01 PROJECT COORDINATION

- A. Coordinate scheduling, submittals and work of various Sections of the Specifications and subcontractors to assure efficient and orderly sequence of interdependent construction.

##### 1.02 CONNECTIONS TO UNDERGROUND UTILITIES, CONDUITS, OR PROCESS PIPING

- A. Obtain best available current information on location, identification and marking of existing utilities, piping and conduits and other underground facilities before beginning any excavation. Contact Oregon Utility Notification center at 503-246-6699 for information at least 48 hours in advance of beginning work. Give Engineer 24 hours notice before beginning work.
- B. The location of existing utilities and underground facilities known to the Engineer are shown in their approximate location based on information available at the time of preparing the Drawings. The actual location, size type and number of utilities and underground facilities may differ from that shown and utilities or underground facilities may be present that are not shown.
- C. Where connections to existing utilities or other underground facilities is required or where new piping or conduits may cross or interfere with existing utilities or underground facilities carefully excavate and uncover existing installations to a point 1 foot below the pipe or conduit to determine the actual elevation and alignment. Call the Engineer's attention to differing existing conditions that may require a clarification or change.
- D. Use extreme care when excavating or working in areas that may contain existing utilities, conduits or other underground facilities. Use careful potholing, hand digging and probing to determine the exact location of underground installations. Some locations contain multiple pipes or conduits. Prior to performing any subsurface work, confirm with the Owner that means to protect each location from damage will be complied with.

##### 1.03 FIELD ENGINEERING AND LAYOUT

- A. See General Conditions regarding reference points provided on the plans and responsibilities of the Contractor to accurately layout the Work.

##### 1.04 PRECONSTRUCTION MEETING

- A. Prior to beginning the Work, the Contractor and its key personnel and Subcontractors including the Contractor's Superintendent, Project Manager, and Field Engineer shall attend a meeting with the Owner and the Engineer to discuss the following:
  - 1. Name, Authority, and Responsibilities of Parties Involved
  - 2. Project Procedures:
    - a. Progress meetings
    - b. Correspondence
    - c. Notification



- d. Submittal of Shop Drawing Samples, and Proposed Equivalents
  - e. Requests for Information
  - f. Response to Requests for Information
  - g. Work Directive Change
  - h. Contractor Reporting requirements
  - i. Change Orders
3. Temporary Schedule and Contractor's Construction Schedule
  4. Maintenance of Record Drawings
  5. Punch Lists and Project Closeout Procedures
  6. Final Deliverables including Record Drawings

#### 1.05 PROGRESS MEETINGS

- A. The Owner will conduct weekly progress meetings with Contractor at job site. Attendance required by Contractor's project manager and superintendent. The Owner will prepare, maintain and distribute agenda and dated record of: (1) actions required and taken and (2) decisions needed and made.
- B. Agenda:
  1. Review critical items/action list.
  2. Review work progress. Compare actual progress with planned progress shown on Contractors Construction Schedule. Discuss Corrective action required and proposed methods to correct deficiencies.
  3. Review status of Submittals; review delivery dates and date of need for critical items.
  4. Review coordination problems.
  5. Discuss Contractor Quality Control.
  6. Discuss open items on Engineers "Items of Concern List."
  7. Discuss impact of proposed changes on progress Schedule.
  8. Other business.

#### 1.06 MATERIALS

- A. General:
  1. Verify that products delivered meet requirements of Contract Documents and the requirements for approved submittals.
- B. Transportation and Handling:
  1. Transport and handle products in accordance with manufacturer's instructions.
  2. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.
  3. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- C. Storage and Protection:
  1. Store and protect products in accordance with manufacturer's instructions. Seals and labels shall be intact and legible.
  2. Provide offsite storage and protection including insurance coverage when site does not permit onsite storage or protection.
  3. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing

with foreign matter.

## 1.07 SAFETY

- A. In accordance with generally accepted construction practice, applicable law and the General Conditions, the Contractor shall be solely and exclusively responsible for:
  - 1. Construction means and methods.
  - 2. Safety of employees engaged in the work while on and off the site.
  - 3. Safety of the Owner, the Engineer, and others who may visit or be affected by the work.
  - 4. Safety of the work itself including material and equipment to be incorporated therein.
  - 5. Safety of other property at the site or adjacent thereto.
  - 6. Safety programs, equipment and protective devices required to assure the safety of persons and property for whom/which the Contractor is responsible.
- B. The duties of the Engineer in conducting review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's work methods, equipment, bracing, scaffolding or safety measures in, on, or near the construction site.
- C. The Contractor is hereby informed that work on this project could be hazardous. The Contractor shall carefully instruct all personnel working in potentially hazardous work areas as to potential dangers and shall provide such necessary safety equipment and instructions as required to prevent injury to personnel and damage to property, and to comply with all applicable laws and regulations including State OSHA, Federal OSHA, and other regulations referenced in these Contract Documents.
- D. The Contractor shall, at all times, maintain the job in a condition that is safe for the Owner, the Engineer and their Consultants to make site visits and to conduct construction reviews. If the Owner or the Engineer cannot allow personnel to visit the job because it is not safe, the Contractor is not providing required safe access to the Work as required by General Conditions.
- E. The Contractor shall submit a completed Site Specific Safety Plan Certification Form ( Appendix A).

## 1.08 CONTRACTOR'S QUALITY CONTROL

- A. The Contractor shall be fully responsible for inspecting the work of its suppliers and Subcontractors to assure that the work when completed will comply with the standards for materials and workmanship required by the Contract Documents.
- B. Inspections, periodic observations and testing performed by the Owner or the Engineer are for the Owner's benefit and information only and shall not be construed as partial or incremental acceptance of the work and shall not be deemed to establish any duty on the part of the Owner or the Engineer to the Contractor, its subcontractors or suppliers.
- C. The Contractor shall:
  - 1. Monitor quality control over suppliers, manufacturer, products, services, site conditions, and workmanship, to produce work of specified quality.
  - 2. Comply fully with manufacturer's installation instructions, including performing each step in sequence as recommended by the manufacturer.
  - 3. Submit a Request for Information to Engineer before proceeding with work when manufacturers' instructions or reference standards conflict with Contract Documents.

4. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
  5. Perform work by persons specializing in the specific trade and class of work required and qualified to produce workmanship of specified quality.
- D. If reference standards or manufacturers' instructions contain provisions that would alter or are at variance with relationships between the parties to the Contract set forth in the Contract Documents, the provisions in the Contract Documents shall take precedence.

#### 1.09 TESTING LABORATORY SERVICES AND CERTIFIED LABORATORY REPORTS

- A. Prior to the start of construction, Contractor shall obtain and provide the Engineer with a certified Standard Proctor test for all imported backfill material used in the trench at his sole expense. Additionally, a Rice Density test shall be provided by the Contractor for the approved asphalt pavement. Compaction testing shall be completed by the Owner's representative at locations determined by the Engineer. Areas not meeting specified compaction shall be recompact at no additional charge. Contractor will have re-test costs of areas that failed compaction deducted from payments later. Contractor shall cooperate to provide the open areas for the testing to be completed.

END OF SECTION

## SECTION 01062

### PERMITS AND EASEMENTS

#### PART 1 GENERAL

##### 1.01 PERMITS

- A. Owner has obtained a Utility Permit for Clackamas County, copies of which are found in Appendix B (UP011822). Contractor shall sign and meet all of the conditions set forth in the permits for excavation, backfill, surface replacement, surface protection, traffic control and erosion control measures contained in the permit prior to receiving approval to open the next permit.

##### 1.02 EASEMENTS

- A. Owner has coordinated with all property Owners to secure permission to complete work.
- B. Contractor shall replace install new service laterals to within 5 feet of each property with the least amount of disturbance possible, but will still be responsible for final surface restoration following completion of work.

##### 1.03 RESTORATION OF PROPERTY/MISCELLANEOUS

- A. It is expected that additional items requiring protection and/or replacement will be encountered as a general construction practice and the Contractor shall assume responsibility thereof at no additional cost.
- B. Removal of trees will not be allowed.
- C. Restoration: See Section 02935

#### PART 2 PRODUCTS – NOT USED

#### PART 3 EXECUTION – NOT USED

END OF SECTION

## SECTION 01195

### PROTECTION AND MAINTENANCE OF WORK AND PROPERTY

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

This section specifies the protection and maintenance of work and property as they are affected by the work.

##### 1.02 RELATED SECTIONS

A list of sections of the project specifications that are most closely related to this section is provided for the convenience of the Contractor.

- A. Section 01560, *Environmental Controls*
- B. Section 02720, *Sanitary Sewer Pipe and Manholes*

##### 1.03 PUBLIC AND PRIVATE PROPERTY

- A. Protect all public and private property, insofar as it may be endangered by Contractors' operations and take every reasonable precaution to avoid damage to such property.
- B. Restore and bear the cost of any public or private improvement facility, structure or land and landscaping within the Right-of-Way or within areas impacted to install the new service lateral to each residence and the 8" sewer main (Line A shown on the Plans) which is damaged or injured directly or indirectly by or on account of an act, omission, or neglect in the execution of the Work. Restore to a condition substantially equivalent to that existing before such damage or injury occurred, by repairing, rebuilding, or otherwise affecting restoration thereof, or if this is not feasible, make a suitable settlement with the owner of the damaged property.
- C. Contractor is responsible to complete any temporary bypassing and/or other measures necessary to install the new mainline pipe and all services. Submit all temporary measures agreed upon to the Owner prior to commencing work within each affected section of main line pipe.
- D. Protect all construction facilities such as trenches, pits, etc. located on private property to prevent animals and children from entering. Completely cover any open excavations at the end of each workday with plywood or other materials that will not break or allow for inadvertent entrance to the work area. Secure materials to prevent sliding or movement.

##### 1.04 LOCATION OF EXISTING FACILITIES

- A. Pothole locations ahead of pipeline construction to verify locations so as not to affect main pipeline installation.

- B. In general, the locations of existing major utilities are indicated on the Drawings. This information has been obtained from utility maps and field surveys. Owner does not guarantee the accuracy or completeness of this information, and it is to be understood that other aboveground or underground utilities not shown on the Drawings may be encountered during the course of the work.
- C. Use a pipe locator or hand excavation to determine the exact location of underground facilities in the interest of avoiding unnecessary damage, maintenance costs, and to ensure continuity of customer service.
- D. Contact all utility companies and departments having underground facilities within the construction area and request they locate and mark their utilities. In addition, verify the location of all buried utilities in the construction area 48 hours before contractor digs by calling the one-call locator service at 1-800-332-2344. The contractor shall comply with Oregon "locate law" ORS 757.541 to ORS 757.571.

#### 1.05 UNDERGROUND UTILITIES WITHIN PRIVATE PROPERTY/EASEMENTS

- A. Additional underground utilities which include private irrigation systems may be present within the easements. Owner does not guarantee the accuracy or completeness of this information and it is understood that other underground utilities not shown on the Drawings or described in the Specifications may be encountered during the course of the work. Repair and replacement of the utilities shall be incidental to the work and no further payments will be provided.

END OF SECTION

## **SECTION 01300**

### **SUBMITTALS PROCEDURE**

#### **PART 1 GENERAL**

##### **1.01 DESCRIPTION**

This Section specifies procedures for Contractor submittals. Where required by the Specifications, submit descriptive information that will enable the Engineer to assess whether the Contractor's proposed materials, equipment or methods of work are in general conformance to the design concept and in compliance with the Drawings and Specifications. The information to be submitted shall consist of drawings, specifications, descriptive data, certificates, samples, test results and such other information, all as specifically required in the Specifications.

#### **PART 2 PRODUCTS**

##### **2.01 CONTRACTOR RESPONSIBILITIES**

- A. Contractor shall be responsible for the accuracy and completeness of the information contained in each submittal and shall ensure that the material, equipment or method of work shall be as described in the submittal. Verify that the material and equipment described in each submittal conforms to the requirements of the Specifications and Drawings prior to transmittal to the Engineer. Ensure that there is no conflict with other submittals and notify the Engineer in each case where such submittal may affect the work of another contractor or Owner.
- B. If the Contractor's review determines that the information shows deviations from the Specifications or Drawings, submit a request for substitution.

#### **PART 3 EXECUTION**

##### **3.01 TRANSMITTAL PROCEDURE**

- A. General:
  - 1. Submittals regarding material and equipment shall be accompanied by Submittal/Transmittal Form. A separate form shall be used for each specific item, class of material, equipment, and items specified in separate, discrete sections for which the submittal is required. Submittals for various items shall be made with a single form when the items taken together constitute a manufacturer's package or are so functionally related that expediency indicates checking or review of the group or package as a whole.
  - 2. A unique number, sequentially assigned, shall be noted on the transmittal form accompanying each item submitted. Original submittal numbers shall have the following format: "XXX"; where "XXX" is the sequential number assigned by the Contractor. Resubmittals shall have the following format: "XXX-Y"; where "XXX" is the originally assigned submittal number and "Y" is a sequential letter assigned for resubmittals, i.e., A, B or C being the 1st, 2nd and 3rd resubmittals,

respectively. Submittal 25B, for example, is the second resubmittal of Submittal 25.

- B. Deviation from Contract: Submit a request for substitution for deviations from the Specifications or Drawings. Include the reason for the deviation and cost differential for the deviation. Deviations from the Contract shall be authorized by change order only.
- C. Submittal Completeness: Submittals which do not have all the information required to be submitted are not acceptable and will be returned without review.
- D. Submit to the Engineer the following items for review:
  - 1. Construction Schedule
  - 2. List of employees to be contacted in an emergency with their home phone numbers and cell numbers (available 24 hrs/day)
  - 3. List of subcontractors that will work on the project
  - 4. Erosion control plan
  - 5. Site Specific Safety Plan Certification
  - 6. Sanitary Sewer Bypass Plan
  - 7. Copy of confined space entry plan.
  - 8. Shoring Plan
  - 9. Imported granular materials, supplier and location of pit, gradation
  - 10. Manholes and connections to pipe
  - 11. Castings
  - 12. Manhole steps
  - 13. PVC pipe and PVC fittings with manufacturer and certificates of compliance

The Engineer reserves the right to ask for additional SUBMITTALS that are not included on the above list. Review by the Engineer shall not relieve the Contractor from responsibility for error of omission. Obtain the Engineer's approval prior to beginning any fabrication or other work. No deviation from the reviewed drawings shall be allowed without approval from the Owner or Engineer.

### 3.02 REVIEW PROCEDURE

- A. For each required submittal, submit electronic copies of all the submitted information.
- B. Unless otherwise specified, within 28 days after receipt of the submittal/resubmittal, the Engineer will review and return it to the Contractor. The returned electronic material will consist of one (1) marked-up copy of the submittal. The returned submittal will indicate one of the following actions:
  - 1. If the review indicates that the material, equipment or work method is in general conformance with the Contract Drawings/Specifications, the submittal copies shall be marked "Approved." In this event, the Contractor may begin to incorporate the material/equipment/work method covered in the submittal.
  - 2. If the review indicates that the submittal is insufficient or that limited corrections are required, the submittal copies may be marked "Approved as Noted." The Contractor may begin to implement the work method or incorporate materials/comments covered in the submittal in accordance with the corrections/comments noted.



3. If the review reveals the submittal is insufficient or contains incorrect data and the comments require revision and resubmittal, the submittal copies shall be marked “Not Approved, Resubmit.” In this case, the Contractor shall not then undertake work covered by this submittal until the submittal has been revised, re-submitted and returned to the Contractor with a marking of “Approved” or “Approved as Noted.”
4. If the review indicates that the submittal is incomplete or that additional information is required, the submittal copies may be marked “Submit Specified Item”. In this case the Contractor shall not undertake work covered by this item until the submittal has been revised and returned to the Contractor with a marking of “Approved” or “Approved as Noted.”
5. If the review reveals the material, equipment, or work does not require submittal, then the submitted copies shall be marked “Review Not Required Per Contract Documents.” In this event, the Contractors may begin to incorporate the material/equipment/work covered by the submittal and no further action is required.

### 3.03 EFFECT OF REVIEW OF CONTRACTOR’S SUBMITTALS

Review of drawings, methods of work or information regarding materials or equipment the Contractor proposes to provide shall not relieve the Contractor of his responsibility for errors therein, nor shall it be regarded as an assumption of risks or liability by the Engineer on behalf of Owner, or by any officer or employee of Owner. The Contractor shall have no claim under the Contract on account of the failure, or partial failure, of the method of work, material or equipment so reviewed. A mark of “Approved” or “Approved as Noted” shall mean the Owner has no objection to the Contractor, upon the Contractor’s own responsibility, using the plan or method of work proposed, or providing the materials or equipment proposed.

END OF SECTION

## SECTION 01310

### CONSTRUCTION SCHEDULE

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. This Section specifies requirements and procedures for the Contractor in preparing a construction schedule. The purpose of the schedule shall be to ensure adequate planning of the work by the Contractor, to establish the standard against which satisfactory completion of the project shall be judged, to assist the Engineer in monitoring progress, and to assess a change proposal's impact on the construction schedule.

##### 1.02 SUBMITTALS

- A. Before starting work, the Contractor shall submit to the Engineer an overall contract construction schedule showing the proposed order of work and indicate the time required for completion of the major items and sub-items of work. The schedule shall also show the critical path to accomplish all of the work. The format for the schedule shall be as a minimum a Gantt Chart format showing start and completion dates for the various work activities.

#### PART 2 PRODUCTS

##### 2.01 CONSTRUCTION SCHEDULES

- A. Gantt Chart, Bar Chart, or equivalent as approved by the Engineer.

#### PART 3 EXECUTION

##### 3.01 SUBMISSION AND APPROVAL

- A. The schedule shall be realistic and definitive as to the amount of work which is to be accomplished within the time indicated and shall be updated monthly to reflect actual work progress. The schedule shall breakdown the project into activities corresponding to the plan sheets and will include major tasks to complete all phases of work. It will be used as an indication of the sequence of the major construction operations and as a check on the progress of the work and may, at the sole discretion of the Engineer, be employed by the Engineer in determining delays and time extensions.
- B. If the Contractor wishes to make changes in the construction schedule, then to the maximum extent possible provide two (2) weeks notice to the Engineer, or secure the approval of the Engineer prior to performing such changes. Such schedule changes shall be strictly in accordance with the other requirements of this specification, and shall show the interrelationship between the original schedule and the proposed changes to the schedule.
- C. The Engineer's review of the original schedule shall not constitute a warranty or representation by the Owner that the Contractor can perform the work according to such schedule.

- D. Submission of a full updated schedule may not be required with each monthly progress payment invoice, if the two week look ahead schedule has been kept up to date to the satisfaction of the Engineer.

END OF SECTION

## SECTION 01560

### ENVIRONMENTAL CONTROLS

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. This section specifies environmental mitigation and temporary environmental controls required to be maintained during construction. Nothing in this section shall relieve any person from the obligation to comply with the regulations or permits of any federal, state, or local authority.
- B. Related Sections: A list of sections most closely related to this section is provided for the convenience of the Contractor.
  - 1. Section 02221, *Trenching, Backfilling and Compacting*

##### 1.02 SUBMITTALS

- A. Procedures: See Section 01300.
- B. Erosion Control Plan: Develop and maintain for the duration of the contract an Erosion Control Plan that will effectively incorporate and implement environmental protection precautions. The Contractor's Erosion Control Plan shall include methods and interim facilities to be constructed and/or used concurrently during construction to control erosion in such a manner as to ensure that sediment and sediment laden water does not enter any drainage system, roadways, or violate applicable water quality standards. Visible or measurable erosion which enters, or is likely to enter, a public storm and surface water system, wetland or stream is prohibited. The plan shall include the name of the Contractor's employee authorized to supervise and enforce compliance with the Erosion Control Plan and telephone number(s) to contact that person at any time.
- C. The Erosion Control Plan shall be submitted and approved in accordance with Section 01300 prior to initiating work within the public right-of-way.
- D. In the event a regulatory agency or jurisdiction determines the Erosion Control Plan to be inadequate to protect environment:
  - 1. The Contractor shall stop immediately the affected work in progress until adequate environmental protection measures are implemented.
  - 2. The Contractor shall modify the Erosion Control Plan to meet the requirements of said regulatory agencies, jurisdictions and provide the Engineer with the revisions to the Plan within five (5) calendar days of the notice of deficiency. Plan resubmittal will be in accordance with Section 01300.

## **PART 2 PRODUCTS (NOT USED)**

## **PART 3 EXECUTION**

### **3.01 NOISE CONTROL**

- A. Comply with all local controls and noise level rules, regulations and ordinances.
- B. Each internal combustion engine, used on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler.
- C. Noise levels for all equipment shall not exceed 85 dBA. Equipment that cannot meet these levels shall be quieted by use of improved exhaust mufflers, noise attenuation barriers or other means.
- D. If special circumstances or emergency conditions require work beyond the hours as specified, the Contractor shall:
  - 1. Notify the Engineer and Owner 72 hours in advance of any proposed extended work hours for preauthorization. The Contractor's written request shall specify the work to be performed and the circumstances that warrant the request. The request shall include any additional measures to mitigate noise generated by this construction activity if deemed necessary by the Engineer.
  - 2. If an emergency situation occurs that warrants immediate extended hours, the Contractor shall notify the Engineer immediately upon determining the need for this work.

### **3.02 WATER QUALITY PROTECTION AND STORMWATER CONTROL**

- A. All construction activities shall comply with all conditions contained in applicable Federal, State, and Local permits.
- B. Provide approved inlet protection for all structures within or immediately downstream of all pipe bursting efforts within the project limits.

### **3.03 EROSION CONTROL**

- A. Execute the approved Erosion Control Plan.
- B. The Contractor shall not drag, drop, track, or otherwise place or deposit, or permit to be deposited, mud, dirt, rock or other such debris into any part of the public storm or surface water system, or any part of a private storm, sanitary sewer or surface water system. Any such deposit of material shall be immediately removed by the Contractor at the Contractor's expense. No material shall be washed or flushed into any part of the sanitary sewer system.

- C. The Contractor shall maintain the facilities and techniques contained in the approved Erosion Control Plan so as to continue to be effective during the construction or other permitted activity. If the facilities and techniques approved in an Erosion Control Plan are not effective or sufficient as determined by the Engineer, the Contractor shall revise the plan immediately upon notification by the Engineer. Upon approval of the revised plan by the Owner, the Contractor shall immediately implement the additional facilities and techniques. In cases where erosion is occurring, the Engineer may require the Contractor to install interim control measures prior to submittal of the revised Erosion Control Plan.
- D. The Contractor shall ensure that all necessary pollution control equipment, supplies, or materials are available to implement the Plan.

#### 3.04 STREET CLEANING

- A. Prevent dirt, mud and dust from escaping trucks departing the work site, by covering dusty loads and cleaning truck tires before leaving the construction site.
- B. All streets in the construction area used by the Contractor's trucks or any other equipment hauling material to and from the area, whether within the Contract limits or adjacent thereto, shall be kept clean by the Contractor and shall be serviced by the Contractor's use of water distribution trucks to control dust on a daily basis. Engineer will require multiple sprinkling operations if the dust becomes excessive during the day. All cleaning and sprinkling shall be at the Contractor's expense. Violations of these requirements are sufficient grounds for the Engineer to order the streets in question to be cleaned by others. The expense of the street cleaning will be charged against the Contractor and cost withheld from the Contractor's payments. Contractor shall be responsible for all fines incurred from non-compliance with regulations of governing authorities.

#### 3.05 DEWATERING AND WATER CONTROL

- A. No direct water from construction activities shall be diverted to the sanitary sewer.
- B. Maintain excavations free from water while construction is in progress. Keep trenches and other areas free from water as required to permit continuous progress of, or to prevent damage to the work.

#### 3.06 FINES

- A. Contractor shall be responsible for all fines incurred from non-compliance with regulations of governing authorities.

END OF SECTION

**SECTION 01570**  
**TRAFFIC CONTROL**

**PART 1 GENERAL**

1.01 DESCRIPTION

- A. This work consists of furnishing, erecting, and maintaining temporary barricades, signs, and other traffic control devices, and provision of temporary roadways, detours, flagging and other safeguards necessary for orderly flow of traffic during performance of the work.
- B. The Contractor shall submit a Traffic Control Plan (TCP) which addresses, emergency services, mail delivery, property owner access and school bus service, to the Engineer for approval. The Advanced Detour Plans and Typical Closure Details included in the contract documents shall also be incorporated into and become part of the Traffic Control Plan (TCP) submittal. Affected permitting agencies including Clackamas County Department of Transportation (DTD) will review the plan and have input that must be complied with. The input may include placement of additional signs or flagging needs for specific working conditions proposed by the Contractor. The Contractor shall update the TCP as required during the progress of the work. A preliminary Traffic Control Plan used to secure Utility Permit UP011822 has been included in Appendix A and may be used by the Contractor for their submittal. Alternative plans may be also be submitted if different conditions were considered to work better. Approval of the alternative plans are not guaranteed.

1.02 RELATED SECTIONS

A list of sections of the project specifications that are most closely related to this section is provided for the convenience of the Contractor.

- A. Section 01300, *Submittals Procedure*.
- B. Section 01560, *Environmental Controls*.

1.03 QUALITY ASSURANCE

- A. Traffic Control Devices shall be in conformance with the current edition of the *Manual on Uniform Traffic Control Devices* (MUTCD), as published by the U.S. Department of Transportation – Federal Highway Administration; the Oregon Supplements to the MUTCD as published by the State of Oregon Department of Transportation; and as approved by the Engineer through the Traffic Control Plan. Copies of the MUTCD are available at the United States Government Book Store, 1304 SW 1<sup>st</sup> Avenue, Portland, Oregon.
- B. Minimum Requirements for Labor and Equipment:
  - 1. Ensure flaggers are certified in the state of Oregon.

2. Labor under these provisions applies particularly to flaggers, all of whom shall be physically and mentally qualified, trained in their duties, efficient, and courteous. Each flagger on duty, except uniformed law enforcement officers, shall wear an orange or yellow colored hard hat and an orange colored or fluorescent red-orange or fluorescent yellow-orange vest, and shall be equipped with a highly visible, reflectorized "Stop-Slow" hand sign conforming to current standards for daylight use; and with illuminated stand area, of high visibility for night use.

#### 1.04 SUBMITTALS

- A. The Contractor shall provide the following to the Owner and the Engineer in accordance with Section 01300 at least fourteen (14) calendar days in advance of the time the traffic control will be required:
- B. The TCP shall as a minimum address the following:
  1. Annotate proposed location of barricades, lighting, signing, temporary striping and other traffic control devices.
  2. Closures that allow local traffic access through the work zone at all times through the use of flagging with a delay of no more than 5 minutes.
  3. Maintain emergency access at all times.
  4. Provide Haul Route plan for all construction activities.
  5. Channel traffic flow through the work zone per approved Traffic Control Plan.
  6. Ensure the plan addresses all modes of transportation, including vehicles, bicycles, pedestrians, transit, and adjacent property access.
  7. Ensure the plan shows pertinent roadway features that will be obstructed by construction activity, such as fire hydrants.
  8. Provide TCP for all road closure and detours. Include details of detour traffic control plans for each proposed closure.

#### 1.05 REQUIREMENTS

- A. The TCP must be approved in writing by the Owner following review by Clackamas County Department of Transportation before any work commences within the applicable areas covered by each permit.
- B. Vehicular and pedestrian routing on streets where the work is not being performed shall not be revised without approval of a supplemental Traffic Control Plan by the Owner.
- C. Saturday and Sunday work is not allowed on the project.
- D. Public Streets:



1. Property owner, emergency vehicle, mail delivery, pedestrian, and bicycle access shall be maintained at all times.
- E. Signs:
1. Standard construction zone warning signs shall be in accordance with documents referenced in Section 01570 - 1.03.
- F. Advance Information Signs and Warning Arrow Panels:
1. Information Signs:
    - a. Black lettering on orange background
    - b. List beginning of work, work zone limits, nature of the work, and nature of traffic restrictions.
    - c. Post two weeks before beginning the work on the affected work zone.
  2. Warning Arrow Panels: Required to be positioned at each end of the work zones as required by permitting agency if Contractor wants to close work zone and allow local traffic only.

#### 1.06 COORDINATION

- A. The Contractor shall coordinate all construction to offer the least possible obstruction and inconvenience to the public. The Contractor shall have under construction no greater length or amount of work than can be executed properly with due regards to the rights of the public.
- B. The Contractor shall coordinate all revisions to the existing traffic control with the Owner. Traffic controls are to remain in operation unless determined to be unnecessary and confusing under the approved Traffic Control Plan. All damaged or lost traffic control devices shall be immediately replaced by the Contractor.

#### 1.07 NOTIFICATIONS

- A. Written approval of the Traffic Control Plan and/or supplemental Traffic Control Plan shall be obtained from the Owner at least thirty (30) days prior to initiating work.
- B. Written approval shall be obtained from the Owner before scheduling closure of any street. The notification shall give the time of commencement and completion of the work, names of streets to be closed, schedule of operation, routes of detours, etc.
- C. To accommodate emergency vehicle rerouting, notification shall be given to Owner in writing, not less than 72 hours prior to construction operations that modify existing traffic flow conditions.
- D. Individual property owners or businesses shall be notified at least 48 hours in advance of beginning work that restricts the use of the property.

## **PART 2 PRODUCTS**

### **2.01 TRAFFIC CONTROL PLAN**

Traffic Control Plan for each individual street shall be completed in accordance with Sections 01570-1.04 through 1.06.

## **PART 3 EXECUTION**

### **3.01 TRAFFIC MAINTENANCE**

- A. The Contractor shall maintain a normal flow of vehicular and pedestrian traffic, to prevent accidents and to protect the work throughout the construction stages until completion of the work. The Contractor shall make all necessary arrangements to reroute traffic, provide and maintain barriers, cones, guards, barricades, and construction warning and regulatory signs. Regulatory devices provided by the Contractor shall be suitable for nighttime operation. The Contractor shall protect other portions of the work during construction and until completion. This includes providing and maintaining barricade lights, construction signs, guards, temporary crossovers, and flaggers in accordance with documents referenced in Section 01570-1.03.
- B. The Contractor shall provide Emergency vehicle access at all times throughout the project.

### **3.02 ACCESS**

- A. The Contractor shall maintain access to private properties at all times.
- B. If during some urgent stages of construction the Engineer and Owner concur that temporary closure of an access to a property is unavoidable, the closure shall be coordinated with the property owners and approved by the Engineer at least 48 hours in advance of closure. If required, alternative access and mail delivery shall be provided. Property access shall not be closed until the alternative access is available.

### **3.03 SAFETY**

- A. The Contractor shall provide adequate safeguards, safety devices and protective equipment and take all necessary actions to protect life, health and safety of the public and construction crew and to protect property in connection with the performance of work covered by the Contract. This action shall include the provision of adequate safeguards, safety devices and protective equipment.
- B. The Contractor shall provide and erect all necessary standard construction signs, warning signs, portable message signs and detour signs to warn and protect the public at all times from injury or damage as a result of the Contractor's operations.
- C. Where flaggers are employed by the Contractor to safeguard traffic, the flagger's equipment shall be in accordance with documents referenced in Section 01570 - 1.03. Flaggers while flagging traffic must use this equipment.

- D. The Contractor shall furnish standard signs as well as other appropriate signs prescribed by the Owner or review agency as applicable and necessary for the work. Signs on posts and supports shall be erected and maintained by the Contractor in a neat and presentable condition until they are no longer necessary. When a sign is no longer necessary, the Contractor, upon approval by the Owner, shall take down such sign. Signs necessary for nighttime traffic control, or that remain in place during hours of darkness shall be fully reflectorized.
- E. The Contractor shall safeguard and direct traffic after the existing signs have been removed. Preservation and maintenance of traffic control and street name signs shall be the sole responsibility of the Contractor. Signs and other traffic control devices damaged or lost by the Contractor, shall be replaced by the Contractor at the Contractor's expense.
- F. Upon failure of the Contractor to provide necessary traffic control when ordered to do so by the Engineer, the Engineer can, without further notice to the Contractor, provide the necessary traffic control. The cost of the traffic control shall be deducted from any payment due the Contractor.
- G. The Contractor shall provide adequate traffic control for protection of the work and the public at all times. The Contractor shall be liable for injuries and damages to persons and property suffered by reason of the Contractor's operations or negligence.

END OF SECTION

## SECTION 01700

### CONTRACT CLOSEOUT

#### PART 1 GENERAL

##### 1.01 SUMMARY

This Section includes a description of procedures to be followed and related work required to accomplish an orderly transfer of Project deliverables from the Contractor to the Owner.

##### 1.02 DEFINITIONS

- A. Punch List: The stated qualification accompanying either the Engineer's Certificate of Substantial Completion or the Certificate of Final Payment, or any list of construction items found to be deficient or incomplete through review of the Work by Engineer and communicated in writing to Contractor at any time during the Contract Period.
- B. Substantial Completion: When the work is ready for its intended use.
- C. Record Drawings: Drawings showing changes made during actual construction.

##### 1.03 SUBMITTALS

###### A. SUBSTANTIAL COMPLETION

- 1. Contractor to notify Engineer in writing that the Contractor considers the Work as a whole to be in Substantial Completion and request for a Substantial Completion inspection.
- 2. Record Drawings submitted to Engineer with accurate representation of all changes, as approved.

###### B. FINAL COMPLETION

- 1. Contractor to notify Engineer in writing that the Contractor considers the Work to have progressed to final completion.
- 2. Certification that all subcontractors and suppliers have been paid.
- 3. Submit to Engineer letter(s) from Contractor's bonding agent(s) authorizing Owner to make final payment to the Contractor indentifying the bonding agent's full approval for such actions.

#### PART 2 PRODUCTS (NOT USED)

#### PART 3 EXECUTION

##### 3.01 SUBSTANTIAL COMPLETION, ADJUSTMENT AND RELEASE OF RETAINAGE

- A. When the Work is found to be in a state of Substantial Completion with stated qualifications:

1. Engineer will determine the value of the punch list work using either Project approved schedule of values or other method at its discretion.
  2. The value of incomplete work will be multiplied by two (2) and retainage reduced to that amount.
- B. No partial payments of the Substantial Completion retainage will be allowed.
- C. The Substantial Completion retainage will be released with final payment.

### 3.02 INSPECTION FOR FINAL ACCEPTANCE AND PAYMENT

- A. When the Work on the Punch List(s) have been completed, and Contractor considers the Work of the entire Project is complete, he shall submit written certification that:
1. Contract Documents have been reviewed.
  2. Work has been inspected for compliance with Contract Documents.
  3. Work has been completed in accordance with Contract Documents.
  4. Work is completed and ready for final inspection.
  5. Certification that all subcontractor and suppliers have been paid.
- B. Engineer will make an inspection with the Contractor to verify the status of completion within 5 calendar days after receipt of such certification.
- C. Should Engineer consider that the Work is incomplete or defective the following actions will occur:
1. Engineer: Notify the Contractor in writing within 5 calendar days, listing the incomplete or defective work.
  2. Contractor: Remedy the stated deficiencies and send a second written certification to Engineer that the Work is complete.
  3. Engineer will reinspect the Work.
- D. When Engineer finds the Work acceptable in accordance with the Contract Documents: Engineer requests Contractor to make closeout submittals.

### 3.03 FINAL APPLICATION FOR PAYMENT

- A. Complete demobilization prior to submitting final application for payment.
- B. Submit final application for payment in accordance with procedures and requirements stated in the Conditions of the Contract.
- C. Engineer will review application and if approved recommend final payment within 5 calendar days of receipt of application.

END OF SECTION

## SECTION 02120

### CLEARING AND REMOVAL OF OBSTRUCTIONS

#### PART 1 GENERAL

##### 1.01 SUMMARY

This Section specifies requirements for clearing, stripping, removal of obstructions, and disposal and related work necessary for construction operations.

##### 1.02 RELATED SECTIONS

A list of sections of the project specifications that are most closely related to this section is provided for the convenience of the Contractor.

- A. Section 01560, *Environmental Controls*
- B. Section 02221, *Trenching, Backfilling and Compacting*

#### PART 2 PRODUCTS – Not Used

#### PART 3 EXECUTION

##### 3.01 CLEARING

- A. The Contractor shall protect all trees and other plants from damage incidental to site preparation and construction operation to reach the end of each private service lateral and along the gravity mainline alignment. If any tree or other type of plants are destroyed, disfigured or damaged so that in the Engineer's opinion removal is required, Contractor will be assessed damages which will be deducted from the payment due the Contractor.

All trees requiring limbing in order to move construction equipment shall be neatly trimmed back to the trunk and the exposed wood surface covered with white paint to promote healing. All trimming shall be completed in a timely manner and shall be considered as a legitimate reason to withhold either partial or final payments until the work is deemed acceptable by the Engineer.

##### 3.02 GRUBBING

- A. Grubbing shall consist of the removal and disposal of stumps, roots larger than three (3) inches in diameter, and matted roots from the construction area. Depressions made by grubbing shall be filled with satisfactory and suitable topsoil material and compacted to make the surface conform to the original adjacent surface of the ground.

##### 3.03 REMOVAL OF OBSTRUCTIONS

- A. This item refers to obstructions that may be removed and do not require replacement. Obstructions to the construction of the trench such as but not limited to abandoned concrete

structures, logs, rubbish and debris of all types shall be removed by the Contractor at his own expense without additional compensation from the Owner.

#### 3.04 DISPOSAL OF CLEARED MATERIAL

- A. Material generated by clearing, grubbing and removal of obstructions, shall be conveyed to a suitable waste disposal site and disposed of in a manner that will meet all the requirements of the applicable federal, state, and county regulations. The waste disposal shall be provided by the Contractor at his/her expense and approved by the Engineer. Alternative disposal of brush and small limbs may be possible if approved by the Engineer through on-site shredding and dispersal within the limits of the temporary construction easement. Areas for dispersal would be in the immediate vicinity of the vegetation removed.

END OF SECTION

## SECTION 02160

### SHEETING, SHORING, AND BRACING

#### PART 1 GENERAL

##### 1.01 SUMMARY

This Section specifies requirements for sheeting, shoring, and bracing of trenches and open excavations greater than 4 feet in depth. Where shoring, sheeting, bracing, or other supports are necessary, they shall be furnished, placed, maintained, and removed by the Contractor. Shoring, sheeting, and bracing are required where necessary to prevent caving, and to protect adjacent structures, property, workers, utilities and the public.

##### 1.02 RELATED SECTIONS

A list of sections of the project specifications that are most closely related to this section is provided for the convenience of the Contractor.

- A. Section 01300, *Submittals Procedure*
- B. Section 02221, *Trenching, Backfilling and Compacting*

##### 1.03 REFERENCES

Oregon Occupational Safety and Health Act (OR-OSHA)

##### 1.04 SYSTEM DESCRIPTION

- A. Design Requirements:
  - 1. The design, planning, installation, and removal of all sheeting, shoring, shields sheet piling, lagging, and bracing shall be accomplished in such a manner as to maintain the required excavation or trench section and to maintain the undisturbed state of the soils below and adjacent to the excavation. Shoring shall be designed and constructed to withstand all soil and hydrostatic loading that might occur during various stages of construction and for any surcharge loading caused by equipment loads and loads from material or soil stockpiles.
  - 2. The Contractor shall design sheeting, shoring, and bracing in accordance with OR-OSHA.
  - 3. Horizontal strutting below the barrel of a pipe and the use of the pipe as support for the trench support system are not acceptable.

##### 1.05 SAFETY

- A. The Contractor is solely responsible for protection of personnel and existing facilities and utilities and for ensuring compliance with all applicable laws and regulations.



- B. The Contractor shall have in the shoring work area during all phases of construction, a competent person capable of identifying hazards, anomalies, conditions that differ from the shoring design assumptions and other factors that would indicate the possibility of hazardous or dangerous conditions in the work area. The responsible person shall have the authority to stop all work when such conditions are identified.

#### 1.06 QUALITY ASSURANCE

- A. The Contractor is solely responsible for quality assurance of shoring. At a minimum, the Contractor shall continually verify that the shoring is planned, executed, and maintained in accordance with applicable codes and regulations and good construction practice.
- B. The Contractor shall institute as a part of shoring construction a quality assurance program at each shoring location. The program shall include, but not be limited to, systematic observation of suitability of shoring materials, installation, excavation, groundwater control adjacent construction activities, and other factors.
- C. The responsible engineer for engineered temporary shoring shall verify at critical stages of shoring construction that the actual construction is in accordance with the Contractor prepared plans.
- D. Dewatering shall be as specified in Section 02140. If the Contractor is unable to adequately dewater excavations as required in the Specifications for any reason, then the design of the shoring shall include the additional lateral force produced by the presence of water, water-saturated soils, and seepage, and shall prevent flow or other destabilization of water saturated soils.

#### 1.07 EXISTING CONDITIONS

- A. The Contractor shall make its own interpretations, deductions and conclusions as to the nature of the materials to be excavated, the difficulties of making and maintaining the required excavations, and the difficulties of doing any other work affected by geotechnical conditions, and shall accept full responsibility therefore.

#### 1.08 PROTECTION OF EXISTING FACILITIES

- A. Protect existing buildings, structures, streets and active sewer, water, gas, electricity, and other utility services.
- B. Coordinate the nature and extent of such protection with the owners of the building, structures, and utilities.

#### 1.09 RESTORATION OF EXISTING FACILITIES

- A. Contractor shall restore all existing facilities damaged, destroyed, or altered by soil movements resulting from temporary shoring movements or nonperformance, at Contractor's own expense.
- B. Proposal shall be submitted by the Contractor to define the character and extent of the Contractor's proposed restoration work when requested by the Engineer. Actual restoration work shall be as directed by the Engineer and may or may not include any or all of the Contractor's proposal.

## **PART 2 PRODUCTS**

### **2.01 GENERAL**

All materials for shoring shall conform to the requirements of these Specifications and any specifications, notes, or requirements contained on the Contractor's submittals or Contractor-prepared designs for shoring. Materials may be new or used, but they should be in good serviceable condition, free of defects and other strength reducing deficiencies.

## **PART 3 EXECUTION**

### **3.01 PROTECTION OF EXISTING FACILITIES**

A. Temporary shoring is to be installed for excavation and embankments necessary for construction of facilities. Care must be taken to minimize settlements and displacements of existing facilities and roadways by providing appropriate shoring systems and strict adherence to suitable construction practices for those Contractor proposed shoring systems. Sheeting and shoring systems shall be selected and installed so as to avoid damage to adjacent properties and improvements.

B. Detrimental Movements or Settlements:

Work shall be stopped immediately and the causes of detrimental movements be ascertained if:

1. Damage is noted on adjacent structures, utilities, roadways, or other adjacent improvements.
2. Work is directed to stop by the Engineer due to other detrimental effects or factors.

C. The causes of the detrimental movements or excessive settlements must be identified by the Contractor. Corrective measures must be proposed to and approved by the Engineer before further work.

### **3.02 OBSTRUCTIONS**

A. Obstructions and other impediments to excavation should be considered a possibility within the limits of construction. If, during the course of work, obstructions are encountered, the Engineer should be immediately notified. Corrective measures must be proposed to and approved by the Engineer before further work.

### **3.03 REMOVAL OF SHORING**

A. Shoring may be removed only if public safety is maintained, completed work is protected, existing facilities are protected, and adequate steps are taken to prevent damage to facilities or personnel during removal

C. All trench sheeting, shoring, and bracing shall be removed.

END OF SECTION

## SECTION 02221

### TRENCHING, BACKFILLING, AND COMPACTING

#### PART 1 GENERAL

##### 1.01 SUMMARY

This Section specifies requirements for trenching, backfilling, and compacting of trenches for pipeline construction along with abandonment of existing pipe and structures.

##### 1.02 RELATED SECTIONS

A list of sections of the project specifications that are most closely related to this section is provided for the convenience of the Contractor.

- A. Section 02120, *Clearing and Removal of Obstructions*
- B. Section 02160, *Sheeting, Shoring, and Bracing.*
- C. Section 02720, *Sanitary Sewer Pipe and Manholes*

##### 1.03 REFERENCES

- A. AASHTO T-99
- B. Oregon Department of Transportation (ODOT), *Standard Specifications for Highway Construction*

#### PART 2 PRODUCTS

##### 2.01 BEDDING AND BACKFILL MATERIALS

- A. Gravel for Trench Foundation Material: 2 ½ inch minus clean pit-run gravel, crushed rock or gravel, having reasonably even gradation from coarse to fine or open graded. Maximum percent passing the ¼ inch screen shall be 20% by weight.
- B. Crushed Gravel Pipe Base and Pipe Zone: ¾ inch minus crushed gravel, having reasonably even gradation from coarse to fine, in accordance with the Oregon State Highway Commission Standard Specifications for Highway Construction specification for Aggregate and Aggregate Base, Section 02630.10.
- C. Select Material for Trench Backfill and Aggregate Base: ¾-inch minus crushed gravel or rock, reasonably even graded from coarse to fine, in accordance with the Oregon State Highway Commission Standard Specification for Highway Construction for Aggregate and Aggregate base, Section 02630.10.
- D. Portland Cement Concrete: PCC shall be composed of cement, pozzolans, fine aggregate, water and admixtures with a 28-day compressive strength of 3,300 psi.

- E. Controlled Low Strength Material (CLSM): CLSM shall be composed of cement, pozzolans, fine aggregate, water and admixtures. CLSM shall have a low cement content, be non-segregating, self consolidating, free-flowing and excavatable material which will result in a hardened, dense, non-settling fill and a compressive strength at 28 days of 100 to 200 psi

## **PART 3 EXECUTION**

### **3.01 TRENCHING**

- A. Clearing the Right-of-Way or Private Property:
  - 1. Existing trees or tree limbs whether on public or private property, are not to be removed without permission from the Engineer or as designated on the plans. This will specifically cover those areas necessary to replace existing services to the new gravity main. Alternative trenchless construction shall be utilized whenever possible versus open cut that may require the removal of a tree (s).
  - 2. The Contractor shall exercise all due care in protecting property along the route of the improvement. This protection shall include, but not be limited to, trees, yard, fences, drainage lines, mail boxes, driveways, shrubs and lawns. If any of the above have been disturbed without Engineer approval, they shall be restored to as near their original condition as possible.
- B. Obstructions: This item refers to obstructions which may be removed and do not require replacement. Obstructions to the construction of the trench such as but not limited to stumps, abandoned waterlines, manholes, logs, rubbish, and debris of all types, shall be removed by the Contractor at his own expense without additional compensation from the Owner.
- C. Trench Width: Trench width at the ground surface shall kept to a minimum necessary to install the pipe in a safe manner. In all cases, trenches must be of sufficient width to allow for shoring and permit proper joining of pipe and compaction of the backfill material along sides of the pipe. Minimum trench width, in the pipe zone, must provide a clear working space 6 inches on each side of the barrel for sewer pipe. If there is a maximum width shown and said width is exceeded by Contractor without written authorization, Contractor will be required, at no expense to Owner, to provide pipe of a higher strength designation, a higher class of bedding, or both, as approved. In all cases, confine trench operations to dedicated right-of-way for public thoroughfares or within areas for which construction easements have been obtained, unless special arrangements have been made with the affected property owners.
- D. Grade: The bottom of the trench shall be carried to the lines and grades shown on the plans or as established by the Engineer, with proper allowance for pipe thickness and gravel bedding. Correct any part of the trench excavated below grade with material of the type specified in paragraph 2.01 for the full width of the trench; thoroughly compacted in layers not to exceed 6 inches to the established grade.
- E. Shoring, Sheet piling, and Grading of Trenches: Whenever necessary to prevent caving during excavation in gravel, sandy soil, or other unstable material, adequately sheet and brace the trench. Where sheet piling and bracing are used, increase trench widths according-

ly. Ensure trench sheeting remains in place until the pipe has been placed and backfill of the pipe zone is completed. All sheeting, shoring and bracing of trenches shall conform to the requirements of Section 02160.

- F. Location of Excavated Materials: During trench excavation, locate the excavated material so it will not completely obstruct a traveled roadway or street and, unless otherwise approved by the Engineer, keep all streets and roadways open to at least one-way traffic. In easement areas, locate excavated materials to minimize erosion and sediment.
- G. Removal of Water: Provide and maintain ample means and devices with which to promptly remove and dispose of all water when trench is being prepared for pipe laying, during laying of pipe, and until backfill has been completed. Dispose of water in accordance with state and local regulations.
- H. Foundation Material: When, in the opinion of the Engineer, the material in the bottom of the trench is unsuitable for supporting the pipe, excavate below the flow line as directed by the Engineer, place 12-ounce non-woven geotextile fabric at bottom and backfill to the required grade with gravel of the type specified in paragraph 2.01.
- I. Trench Backfill at Pipe Zone for PVC Pipe: For all classes of backfill, the pipe zone is defined as extending from the bottom of bedding in the trench (6 inches below invert) to a point 12 inches above the outside of the pipe, and for the full width of the trench. Backfill the entire pipe zone with 3/4 inch minus crushed gravel placed and hand-leveled in 6 inch layers. Special effort to properly bed pipe by slicing backfill in pipe haunches up to springline shall be provided.
- J. Bypass Pumping: Provide bypass pumping of all sanitary sewer necessary for installation of new pipe including both main line and services. Refer to Section 02720.

### 3.02 BACKFILLING AND COMPACTION

- A. Trench Backfill Above Pipe Zone: Use the following types of backfill on the project in the areas shown on the plans. The class of backfill used for service connections will generally be the same as that used for the sewer line to which they are connected.
  - 1. Class A Backfill: Backfill the entire trench above the pipe zone with native excavated material and compact in accordance with the specifications. Contractor shall stockpile top 12-inches of material excavated from trench separate from remaining material and place on top of the finished trench.
  - 2. Class C Backfill: Backfill the entire trench above the pipe zone with ¾ inch minus to the finish ground surface, base of the asphalt concrete or PCC concrete trench section and compact to 95% of maximum density.

### 3.03 EXCESS EXCAVATED MATERIAL

Haul and dispose of all excess excavated material. The Contractor shall make arrangements for the disposal of the excavated material and shall bear all costs and retain any profit incidental to such disposal. The Contractor shall comply with all provisions of any agency having jurisdiction.

### 3.04 GENERAL COMPACTION REQUIREMENTS

- A. Backfill shall be maintained at proper moisture content so that the material is within 5%± of optimum moisture.
- B. Maximum density and optimum moisture will be determined using Method A of AASHTO T-99. All listed compaction levels are based on the T-99 compaction requirements unless otherwise stated. Contractor shall be responsible for providing certified test reports for compaction efforts within the existing paved streets. This will include a minimum of two locations spaced along the length of trench where designated by the Engineer at mid-height within the trench backfill above the pipe zone.
- C. Native backfill used for Class A shall be compacted to at least 90% of maximum density above the pipe zone and to within three feet of the ground surface. The top three feet shall be compacted to 92% of maximum density.

### 3.05 MECHANICAL COMPACTION REQUIREMENT

- A. The method of compaction shall be at the Contractor's option, unless otherwise noted.
- B. Unless otherwise noted, the Contractor shall be responsible to provide the proper size and type of compaction equipment and select the proper method of utilizing said equipment to attain the required compaction density without damage to pipe, adjacent utilities and properties.

### 3.06 ABANDONMENT OF EXISTING PIPE AND MANHOLES

- A. Drain abandoned pipes and fill entire length with CLSM. Properly dispose of any sewage within pipes being filled. Spillage of liquid shall be prohibited.
- B. Remove the manhole cone or flat top and manhole sections to a minimum depth of 3 feet below finish grade and fill the remaining manhole barrel with ¾"-0 crushed rock in roadway areas. When in landscaped or unimproved roadway areas, backfill with sand and place topsoil in the upper 12-inches to existing ground surface.

END OF SECTION

## SECTION 02500

### SURFACE RESTORATION

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

This Section specifies gravel surfacing and pavement patching on all streets that are currently paved with asphalt concrete. The work includes construction of aggregate base, sawcutting along trench edges, temporary asphalt concrete pavement and permanent asphalt concrete pavement. Other work includes placement of Portland Cement Concrete pavement for the access driveways at the end of S Merry Meadow Ct, S Princess Ct. and S Fir Ct.

##### 1.02 RELATED SECTIONS

A list of sections of the project specifications that are most closely related to this section is provided for the convenience of the Contractor.

- A. Section 01300, *Submittals Procedure*
- B. Section 02221, *Trenching, Backfilling and Compaction*
- C. Section 03300, *Cast-in-Place Concrete*
- D. Section 03350, *Concrete Finishes*

##### 1.03 REFERENCES

This Section incorporates by reference the following documents:

- A. ODOT/APWA, 2018 Standard Specifications for Construction.
- B. Clackamas County Department of Transportation and Development Standards

##### 1.04 SUBMITTALS

- A. Procedures: Section 01300.

##### 1.05 GENERAL PAVING REQUIREMENTS

- A. Pavement Restoration Timing:
  - 1. Follow pipe installation operations with pavement restoration as closely as practicable.

- B. Clackamas County Standard Details for Trench Restoration
  - 1. C100 - Street Structural Section (Local)
  - 2. U200 - Standard Trench and Backfill
- C. Scope of Road Restoration:
  - 1. Includes, but not limited to, sawcutting of trench with tee-cut, proper backfill and compaction of pavement and base, shaping and general restoration of the roadway including pavement, removal of debris and surplus material and all other requirements of this section.

## **PART 2 PRODUCTS**

### **2.01 AGGREGATE BASE**

- A. Base Course Aggregate. Aggregate for the base course of the street shall be  $\frac{3}{4}$ " – 0" and shall conform to the applicable portions ODOT/APWA 2018 Standard Specifications for course aggregate base material.

### **2.02 TACK COAT**

Emulsified asphalt RS-1, CRS-1, or approved equal.

### **2.03 SURFACE MATERIALS (PERMANENT)**

- A. Asphalt Concrete shall be Level 2, 12.5 mm mix, Dense graded HMAC conforming to ODOT/APWA 2008 Standard Specifications.
- B. Portland Cement Concrete, See Section 03300

## **PART 3 EXECUTION**

### **3.01 PAVEMENT REMOVAL**

- A. General:
  - 1. Conform to the requirements of the referenced standards.
  - 2. Saw cut edges along trenches prior to pavement removal. Prior to placement of permanent trench patch, Contractor shall T-cut asphalt concrete a second time an additional 12-inches back from original sawcut. Final determination for limits of second sawcutting shall be as determined by the Engineer. The second sawcut may be greater than 12-inches where the existing edges exhibit pavement failure.
  - 3. Replace all asphalt pavement with equivalent depth of new pavement which is outside work limits or damaged by Contractor's operations at no cost to Owner. This includes replacement of base course if necessary also.



4. Replace all pavement which is outside trench work limits damaged by Contractor's operations at no cost to Owner.

### 3.02 AGGREGATE BASE PLACEMENT

Base Aggregate Course. Workmanship in manufacturing, placing, compacting, and maintaining base, shall be in conformance with the requirements of the ODOT/APWA 2018 Standard Specifications section 00641.

### 3.03 ASPHALT PAVEMENT PLACEMENT – (PERMANENT TRENCH PATCH)

- A. Comply with DTD Permit UP01182 found in Appendix A for all surface restoration requirements of existing asphalt pavement.
- B. Asphalt concrete shall not be placed when the atmospheric temperature is 45 degrees Fahrenheit or below, during rainfall, or when the surface is frozen or wet. Exceptions will be permitted only in special cases and only with prior written approval of the Engineer. Air temperature conditions must be at least 45 degrees Fahrenheit and rising. All other conditions previously described remain applicable.
- C. Contractor shall place the asphaltic concrete over the trench to a depth of four inches after removal and disposal of any temporary asphalt pavement or crushed rock. The Contractor shall spread and level the asphaltic concrete and compact it by rolling or by use of hand tampers where rolling is impossible. Power rollers shall be capable of providing compression of 250 pounds per inch of width. The density of asphalt concrete shall be at least 92% of Rice theoretical maximum density.
- D. Meet lines shall be straight and the edges vertical where pavement is sawcut. The edges of all asphalt shall be painted with tack coat at a rate of 0.06 to 0.12 gallons per square yard prior to placing asphalt concrete. Jagged edges from previously sawcut trenches shall be removed through additional cutting in straight lines prior to final patching. Upon completion of patching, all joints shall be sanded.
- E. After completion of the paving, clean the entire roadway surface by brooming.
- F. Sand seal all edges of asphalt concrete patch following installation of final lift.

### 3.04 PORTLAND CEMENT CONCRETE PLACEMENT ( DRIVEWAY SECTION)

Comply with Section 03350. Place 4" thick section of Portland Cement Concrete over prepared 2" thick base of ¾"-0 crushed aggregate. Provide construction joints every eight feet in order to minimize cracking and complete finished surface in accordance with Section 03350.

### 3.05 TEMPORARY TRENCH PATCH

Temporary asphalt concrete shall be place over all trenches at the end of the day

### 3.06 FIELD TESTING

Testing will be conducted by the Contractor to determine compliance with the specified degree of compaction for asphalt concrete. Aggregate base compaction testing will be the Contractor's responsibility as described in Section 02221.

### 3.07 DRAINAGE FACILITIES

After completion of the pipeline installation, clean up catch basins, drainage ditches and miscellaneous drainage facilities and restore all existing drainage structures that may have been damaged during the course of construction.

### 3.08 PORTLAND CEMENT CONCRETE PLACEMENT ( DRAINAGEWAY SECTIONS)

Comply with Section 03350. Place 6" thick section of Portland Cement Concrete over prepared 2" thick base of ¾"-0 crushed aggregate following excavation to subgrade where shown on the plans. Provide #3 rebar @ 18" o.c each way within slab centered in 6" section. Provide construction joints every six feet in order to minimize cracking and complete finished surface in accordance with Section 03350.

END OF SECTION

## SECTION 02720

### SANITARY SEWER PIPE AND MANHOLES

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

The work covered by this section consists of furnishing and installing all sanitary sewer pipe and appurtenances. In order to accomplish the work, temporary bypass pumping of sanitary sewer may be necessary.

##### 1.02 RELATED SECTIONS

A list of sections of the project specifications that are most closely related to this section is provided for the convenience of the Contractor.

- A. Section 02221, *Trenching, Backfilling, and Compacting.*
- B. Section 02960, *Pipe Bursting.*

##### 1.03 REFERENCES

- A. ASTM A48, *Gray Iron Castings.*
- B. ASTM A304, *Steel Bars, Alloy, Subject to End-Quench Hardenability Requirements.*
- C. ASTM A615, *Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.*
- D. ASTM C478, *Precast Reinforced Concrete Manhole Sections.*
- E. ASTM C924, *Practice for Testing Pipe Sewer Lines by Low-Pressure Air Test Method.*
- F. ASTM C1244, *Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test.*
- G. ASTM D2837, *Long Term Strength (L.T.H.S.) @ 74.4 degrees F, 1600 PSI*

##### 1.04 SUBMITTALS

- A. Submittals: Section 1300
- B. Provide sufficient data for the Engineer to properly evaluate the proposed pipe, manholes and appurtenances.
- C. Product data submittals shall include, as a minimum, test reports. Provide test reports upon request, certifying that the pipe has been tested in accordance with and exceeds minimum requirements.
- D. Precast manhole submittals shall include shop drawings from supplier

- E. Bypass pumping procedures.

## **PART 2 PRODUCTS**

### **2.01 MATERIALS**

- A. Polyvinylchloride (PVC) Gravity Sanitary Pipe (service laterals) outside pavement areas: Of the size and type indicated on the plans, conforming to appropriate specifications detailed below.
  - 1. PVC Sanitary Sewer Fittings: Conform to ASTM D-3034, SDR 35. Fittings shall be injection molded, factory welded, or factory solvent cemented.
  - 2. Minimum Pipe Stiffness: 46 psi.
  - 3. Joint Type: Elastomeric gasket, conforming to the requirements of ASTM D3212.
  - 4. Rubber Gaskets: Conform to ASTM D1869.
  
- B. Polyvinylchloride (PVC) Gravity Sanitary Pipe (service laterals) within pavement areas: Of the size and type indicated on the plans, conforming to appropriate specifications detailed below.
  - 1. PVC Sewer Pipe: Conform to AWWA C 900, Class 150.
  - 2. Joint Type: Elastomeric gasket, conforming to the requirements of ASTM D3212.
  - 3. Rubber Gaskets: Conform to ASTM D1869
  - 4. Pipe fittings shall be PVC shall meet requirements for DR18 and AWWA C-900. Fittings shall be a one-piece injection molded or fabricated from a PVC compound meeting ASTM D1784. Joints shall conform to ASTM D3139 with gaskets confirming to ASTM F477.
  - 5. Fittings to transition from C900 to ASTM D-3034 shall be solid wall PVC with appropriate sized rubber gasket. Banded flexible couplings will not be acceptable.
  
- C. Polyvinylchloride (PVC) Sewer Pipe (Main Line): Of the size and type indicated on the plans, conforming to appropriate specifications detailed below.
  - 1. PVC Sewer Pipe: Conform to AWWA C 900, Class 150.
  - 2. Joint Type: Elastomeric gasket, conforming to the requirements of ASTM D3212.
  - 3. Rubber Gaskets: Conform to ASTM D1869

4. Pipe fittings shall be PVC shall meet requirements for DR18 and AWWA C-900. Fittings shall be a one-piece injection molded or fabricated from a PVC compound meeting ASTM D1784. Joints shall conform to ASTM D3139 with gaskets confirming to ASTM F477.
- D. High-density Polyethylene Pipe (HDPE) Gravity pipe. Refer to Section 02960, Paragraph 2.02 -Trenchless Installation
- E. Polyvinylchloride (PVC) Conduit: Of the size and type indicated on the plans, conforming to the appropriate specifications detailed below
- 1 PVC Conduit: Schedule 40 with solvent welded joints meeting the requirements of ASTM D2564, ASTM D2949 and ASTM D1785
- E. Manholes and Appurtenances:
1. Concrete: Concrete used in the construction of the manhole base and other structures specified shall be so proportioned and mixed as to meet a minimum 3,000 psi compression test after 28 days. There shall be a minimum of five sacks of cement per cubic yard of concrete.
  2. Precast Manhole Sections:
    - a. Minimum 48 inches in diameter, reinforced concrete pipe, Class 2, conforming to ASTM C478, with added requirement that the reinforcement be circular and not elliptical. Cones shall be eccentric with wall thickness and reinforcement similar to that of manhole pipe sections. The tops and bottoms of the cones shall be parallel.
    - b. Preformed gaskets shall be RAM-NEK, manufactured by K.T. Snyder Company, Inc., Houston, Texas; Kent-Seal by Hamilton Kent, Kent, Ohio; or as approved.
    - c. 48" manholes will be installed full diameter, capped with a flat top lid.
    - d. Flat-top manhole sections shall be used in lieu of eccentric cones where the depth from finish grade to invert is 5'-0" or less.
  3. Precast Concrete Bases:
    - a. Precast base sections or manhole bases shall be approved by the Owner prior to installation. All precast bases shall conform to ASTM C478.
    - b. Construct bases per standard details and as noted on the plans.
    - c. Provide flexible connectors that are designed to produce a positive watertight connection for pipes entering a precast manhole. The connector shall be manufactured by A-lok or an Owner approved equal and shall meet the requirements of ASTM C-923.
  4. Nonshrink Grout. Sika 212, Euco N-S, Euco Speed Plug, Euco Speed Crete Blue Line, Five Star, or USA approved equal nonmetallic cementitious commercial

grout exhibiting zero shrinkage. Grout shall not be amended with cement or sand and shall not be reconditioned with water after initial mixing. Nonshrink grout shall be placed or packed only with the use of an approved commercial concrete bonding agent. Unused grout shall be discarded after 20 minutes and shall not be used.

5. Mortar. Mortar shall conform to the requirements of ASTM C387. Or be proportioned one part Portland cement to two parts clean, well-graded sand, which will pass a 1/8-inch screen. Admixtures may be used not exceeding the following percentages by weight of cement: hydrated lime, 10 percent; diatomaceous earth or other inert materials, five percent. Mortar mixed for longer than 30 minutes shall not be used.
6. Manhole Extensions and Rings. Install rings and covers on top of manholes to positively prevent all infiltration of surface or groundwater into manholes. Rings shall be set in a bed of nonshrink grout with the nonshrink grout carried over the flange or the ring and shall be set so that tops of covers are flush with the surface of adjoining pavement, or 6-inches above natural ground, unless otherwise directed by the Owner. Extensions shall be limited to a maximum height of 27 inches from the center point of the first step to the top of the casting.
7. Manhole Frames and Covers: Provide Standard Frame and Cover; ensure castings are tough, close-grained, gray iron, free from blowholes, shrinkage, and cold shuts, and they conform to ASTM A48, Class 30; ensure they are sound, smooth, clean, and free from blisters and defects. Plane and grind all castings where necessary to ensure perfectly flat and true surfaces. Covers shall be true and shall seat within the ring at all points. Manhole covers shall have two holes.
8. Manhole Steps:
  - a. Steel reinforced polypropylene plastic, Lane International Corp. No. P-13850, or approved equal, in conformance with ASTM C478; aligned vertically. Ensure steps within a manhole are of the same design, type, and size. Mixing of unmatched steps within the same manhole is not permitted.
  - b. Prior to delivery to the jobsite, manufacturer is to drive steps into preformed holes in precast concrete manhole cones and sections in conformance with the following: ASTM A615 Grade 60, 1/2" deformed steel rod and ASTM 2146-78 Type II, Polypropylene.
  - c. Place steps where there are no incoming or outgoing lines. Loose steps shall be cause for rejection of that manhole cone or section.

## **PART 3 EXECUTION**

### **3.01 PREPARATION OF TRENCH**

- A. Crushed Gravel Pipe Base: Place in trench to a minimum depth of six inches below the flow line of the pipe. Place and level the base to approximate flow line grade in advance of laying pipe. Immediately following the placement of each pipe, place the crushed gravel pipe base to the invert of the ductile iron pipe or spring line of the flexible pipe.

- B. Bell Holes: At the location of each joint, bell holes of ample dimensions shall be dug in the bottom of the trench and at the sides where necessary to permit the joint to be properly fitted; to permit easy inspection of the entire joint; and to provide uniform bearing for the barrel of the pipe for its entire length.
- C. Removal of Water: Provide and maintain ample means and devices to remove and dispose of all water entering the trench excavation during the process of laying pipe.

### 3.02 PREPARATION OF SEWER PIPE

- A. Carefully inspect pipes and fittings before being laid; no cracked, broken, or defective pipe or fittings shall be used in the work. Clean the ends of the pipe to remove dirt or other foreign material.
- B. Exercise extreme care to ensure the inside surfaces of the bell are smooth and free from any projections which would interfere with the assembly or watertightness of the joint.

### 3.03 LAYING AND JOINTING PIPE AND FITTINGS

#### A. Line and Grade:

- 1. Lay sewer pipe in full lengths as manufactured; lay on a constant grade and in straight alignment from manhole to manhole or cleanout. Do not install pipe with elbows, bows or bellies. The Contractor shall establish line and grade for pipe by the use of lasers or by transferring the cut from the offset stakes to the trench at whatever intervals necessary to maintain the line and grade. The Contractor shall check line and grade as necessary. In the event that the limits prescribed in this section are not met, the work shall be immediately stopped, the Engineer notified, and the cause remedied before proceeding further with the work. Variance from the established line and grade shall not be greater than 1/32-inch per inch of pipe diameter and shall not exceed 1/2-inch for line and 1/4-inch for grade, providing that such variation does not result in a level or reverse-sloping invert.

#### B. Main Sanitary Sewer Installation:

##### 1. Open Cut Trenching:

- a. The installation of gravity sewer pipe shall commence at the lowest point along the sewer and shall proceed so that the spigot end of the section being laid is placed into the bell end of the pipe already laid. Take every precaution to prevent foreign materials from entering the pipe while it is being placed in the trench. During laying operations, no debris, tools, clothing or other materials shall be placed in the pipe.
- b. Install sewer pipe in accordance with the manufacturer's recommended installation procedures. Take special care to prevent movement of the pipe after installation when laid within a moveable trench shield.

C. Sanitary Sewer Service Connections

1. Open Cut or Trenchless Installations:

- a. Place service lateral tee branches at locations suitable for replacing the existing pipe by gravity from the private residence in the same location to within 5 feet of the exterior wall of the building and meeting the requirements of the Uniform Plumbing Code. After tee is in position, hand-place special pipe bedding material and select backfill around the tee to prevent any movement of the tee when the next pipe is laid. Contractor shall verify location of end connection at building through the use of CCTV inspection. Access for all work on private property shall be possible, but the Contractor is responsible for all surface restoration during open cut or trenchless installation efforts regardless of material to the satisfaction of the District and the property owner.
- b. Open cut service connections shall be laid on a grade as close to two percent as possible recognizing the limitations of the existing sewer main being replaced and the connection outside each building. Contractor is expected to provide all fittings and materials that will extend the new lateral to within 5' of the exterior building wall where a new cleanout with access from the ground surface shall be installed. Connections to the existing pipe at the cleanout must be completed using a solid wall compression coupling (Fernco or similar couplings with stainless steel shear bands will only be approved if the connecting pipe material is not compatible with the compression coupling) All services shall be replaced in the existing location or as close to it as possible. Alternative locations for the open cut installations may be approved by the District and individual property owner if less surface disruption occurs. This will be done on a case-by-case basis during the investigative phase of construction.
- c. Trenchless service installations will Pipe Burst the existing pipe in its current alignment as described in Section 02920. Connections to the existing service 5' from the building wall and the new cleanout shall be as described in Paragraph b above.

E. Waterline Crossings: The sewer pipe shall pass below existing waterlines and there shall have a minimum vertical separation of 18 inches between the outsides of the pipes. Notify the Engineer immediately for directions, if field conditions do not meet this criteria.

F. Manhole Connections: Connect PVC pipe to concrete manholes by means of an approved Kor-n-seal gasket or other approved equal. The use of Portland Cement grout for connecting PVC Pipe to manholes will not be permitted. Manholes shall be cored to insure a watertight connection using the approved coupling.

G. Manhole Installation:

1. Precast Manhole Concrete Base: Construct so the first section of the precast manhole has a uniform bearing throughout the full circumference of the manhole



wall. Deposit sufficient mortar on the concrete base to provide a watertight seal between the base and the manhole wall.

2. **Placing Precast Manhole Sections:** Construct the walls true to line and grade as established by the Engineer. Manhole sections shall use preformed captive rubber gaskets on all joints. Manhole shelf shall be integrally poured against the wall and over the pipe stub. Use of grout for shelf and channel is prohibited. Construct shelf in such a manner that when capacity of the pipe is reached, no portion of the shelf surface is used as part of the cross sectional flow channel required for free flow through the manhole.
3. **Manhole Inverts:** Constructed in conformance with the details shown on the plans. Ensure manhole invert channels provide a smooth flow-through characteristic. No sharp edges or rough sections that will tend to obstruct the flow of sewerage will be permitted. In the event a full section of pipe is laid through the manhole, pour the concrete up to spring line (one-half the diameter of the pipe), then break or cut out the top half of the pipe and mortar smooth all rough edges. Trowel smooth all cement used in the construction of the inverts. The Contractor may, at his option, use precast bases with pre-poured and formed invert channels. Use of grout for channel is prohibited.
4. **Manhole Covers:** Set rings so the tops of the covers flush with the existing pavement surface. Manholes located within unimproved areas shall be placed 6 inches above the finished ground surface or as directed by the Engineer.

### 3.04 BYPASS PUMPING (MAIN LINE OR SERVICE LATERAL)

- A. The Contractor shall notify the Owner 24 hours prior to commencing the bypass pumping operation if necessary to install the new main line pipe. The Contractor shall provide bypass pumping for acceptable completion of the pipe installation. Bypass pumping shall consist of furnishing, installing, and maintaining all power, primary and standby pumps, appurtenances, and bypass piping required to maintain existing flows and services. The Contractor shall submit a plan for bypass pumping diversion in accordance with Section 01300 of this specification. The bypass pumping shall include an emergency response plan to be followed in the event of a failure of the bypass pumping system.
- B. Bypass pumping shall be done in such a manner as to not damage private or public property, or create a nuisance or public menace. The pumped sanitary sewer shall be in an enclosed hose or pipe that exhibits no visible leaks during transfer of sewage and shall be redirected into the downstream manhole. Pipe exhibiting any leakage may not be repaired through use of duct tape or other temporary sealant method. Replace with a new section or sections of pipe.

### 3.05 TESTING OF GRAVITY SEWER PIPE AND APPURTENANCES

- A. **General:**
  1. Test all gravity sewer lines by “low pressure air testing”.

2. Air Tests For Gravity Sewers: Ensure all gravity sewers and appurtenances successfully pass the air test prior to acceptance and are free of visible leakage or infiltration.
3. The Contractor may desire to make an air test prior to backfilling for his own purposes; however, the acceptance air test shall be made after backfilling and compaction has been completed to final grade.
4. Furnish all facilities and personnel for conducting the test under the observation of the Engineer. The equipment and personnel shall be subject to the approval of the Engineer.
5. Acceptance testing shall be conducted on all of the manholes.

B. Testing Procedures:

1. The Contractor shall provide all equipment and personnel for the Time-Pressure Drop Method for all air testing. The method, equipment and personnel shall be subject to the approval of the Engineer. The Engineer may, at any time, require a calibration check of the instrument used. The pressure gauge used shall have minimum divisions of 0.10 psi and have an accuracy of 0.0625 psi (one ounce per square inch).
2. Immediately following the pipe cleaning, test the pipe with low pressure air. Plug all sewer outlets with suitable test plugs. Slowly supply air to the plugged pipe installation until the internal air pressure reaches 4.0 pounds per square inch greater than the average back pressure of any ground water that may submerge the pipe. The test pressure shall be increased 0.433 pounds per square inch for each foot of average water depth over the sewer. This pressure will be in addition to the initial 4.0 pounds per square inch previously identified. Allow at least two minutes for temperature stabilization, adding only the amount of air required to maintain pressure before proceeding further. After the temperature stabilization period, disconnect the air supply. Determine and record the time in seconds that is required for the internal air pressure measured by the gage to drop from 3.5 pounds per square inch to 2.5 pounds per square inch greater than the average back pressure of any ground water that may submerge the pipe.
3. Safety Precautions: All plugs used to close the sewer for the air test must be capable of resisting the internal pressures and must be securely braced, if necessary. All air testing equipment must be placed above ground and no one shall be permitted to enter a manhole or trench where a plugged line is under pressure. All pressure must be released before the plugs are removed. The testing equipment used must include a pressure relief device designed to relieve pressure in the line under test at 10 psi or less and must allow continuous monitoring of the test pressures in order to avoid excessive pressure. The Contractor shall use care to avoid the flooding of the air inlet by infiltrated ground water. The Contractor shall inject the air at the upper plug if possible. Only qualified personnel shall be permitted to conduct the test.

C. Acceptance of Test:

1. The pipeline shall be considered acceptable when tested as described herein before if the section under test does not lose air at a rate greater than 0.0015 cfm per square foot of internal sewer surface. For test sections containing over 625 square feet of surface area, the time measured by this method for 1.00 pounds per square inch pressure drop shall be calculated according to the following formula:

$$T = d^2L/42$$

T = test duration, seconds  
D = pipe diameter, inches  
L = section length, feet  
42 = conversion factor

For test sections containing less than 625 square feet of internal surface area, the time measured by this method for 1.00 pounds per square inch pressure drop shall be calculated according to the following formula:

$$T = 56d$$

The internal surface area of pipeline sections may be calculated using the formula:

$$A = \pi Ld/12$$

The surface areas of lateral lines of differing lengths and diameters may be accommodated in Equations 1 and 2 above by using the sums  $d_1^2L_1 + \dots + d_n^2L_n$  and  $d_1 + \dots + d_n$  in place of  $d^2L$  and  $d$ , respectively.

2. If the pipe installation fails to meet these requirements, the Contractor shall determine, at his own expense, the source or sources of leakage, and shall repair or replace all defective materials and correct all faulty workmanship. The type of repairs proposed by the Contractor must be approved by the Engineer before the repair work is begun. The completed pipe installation shall meet the requirements of the air test before being considered acceptable.

D. Manhole Vacuum Test (Adapted from ASTM C1244-93):

1. Summary of Practice: Plug all lift holes and pipes entering the manhole. A vacuum will be drawn and the vacuum drop over a specified period of time is used to determine the acceptability of the manhole.
2. Significance and Use: This is not a routine test. The values recorded are applicable only to the manhole being tested and at the time of testing.
3. Preparation of the Manhole:
  - a. Plug all lift holes with an approved non-shrink grout. All other areas that will eventually require grouting shall be completed after the manhole has successfully passed the Vacuum Test such as interior barrel sections and pipe penetrations.

- b. Plug all pipes entering the manhole, taking care to securely brace the pipes and plugs from being drawn into the manhole. The manhole shall be set to finish grade and all paving (if applicable) completed.

4. Procedure:

- a. Place the test head at the inside of the top of the frame and the seal inflated in accordance with the manufacturer’s recommendations.
- b. Draw a vacuum of 10 inches of mercury, with the valve on the vacuum line of the test head closed, and the vacuum pump shut off. With the valves closed, measure the time for the vacuum to drop to 9 inches.
- c. The manhole shall pass if the time for the vacuum reading to drop from 10 inches of mercury to 9 inches meets or exceeds the values indicated below.
- d. Utilizing the formulas that follow, the comparable times for a successful vacuum test for different size manholes are:

DEPTH (ft) (Length of Manhole)	TIME (sec) (Dia.)		
	<u>48"</u>	<u>60"</u>	<u>72"</u>
6	15	20	29
8	20	26	35
10	25	33	41
12	30	39	49
14	35	46	57
16	40	52	67
18	45	59	73
20	50	65	81
22	55	72	89
24	59	78	97
26	64	85	105
28	69	91	113
30	74	98	121

- e. If the manhole fails the initial test, make necessary repairs with a nonshrink grout after the vacuum has been released. Proceed with retesting until a satisfactory test is obtained.
- f. Use or failure of this vacuum test shall not preclude acceptance by appropriate water infiltration or exfiltration testing, or other means.

C. Subsequent Failure: Infiltration of groundwater, in any amount, following a successful hydrostatic vacuum or air test as specified, shall be considered as evidence that the original test was in error or that subsequent failure of the pipeline, manhole or cleanout assembly has occurred. The Contractor will be required to correct such failures should they occur.

D. Deflection Testing of the AWWA C900 PVC pipe will not be required.

### 3.06 ACCEPTANCE

- A. Thoroughly clean all pipelines after acceptance of all joint testing and after backfilling and restoration of surfaces.
- B. Base acceptance of the pipeline on a final inspection of the entire line conducted jointly by the Contractor and the Engineer. This will also include results from Owner's operations staff which will lamp each individual section between manholes.
- C. Any infiltration evidence in manholes or pipe shall be properly repaired, even if unit passed testing.

END OF SECTION

## SECTION 02935

### RESTORATION OF LANDSCAPING

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

This section covers the work necessary for restoration in easements and rights-of-way of grass establishment, and lawn establishment, including furnishing and delivering material, seeding, and maintenance of grass, lawns and ornamentals. Provide all labor, materials, tools, and equipment as required to restore all disturbed areas by construction as called for on the drawings or as directed by the Engineer. Lawns are assumed to include all areas adjacent to private homes on the project.

##### 1.02 RELATED SECTIONS

- A. Section 02221, *Trenching, Backfilling and Compaction.*
- B. Section 02500, *Surface Restoration.*

#### PART 2 PRODUCTS

##### 2.01 GRASS SEED / FERTILIZER / MULCH/TREES

- A. Deliver all grass and legume seed in standard, sealed containers. Label each container with the following:
  - 1. The kind and variety of the seed.
  - 2. The kind and variety of each seed in a mixture, of 3% or more.
  - 3. Percent of germination (each kind).
  - 4. Percent of pure seed (each kind).
  - 5. Percent and kind of other crop.
  - 6. Percent of inert (not to exceed 1.5%)
  - 7. Percent of weed seed.
  - 8. Percent of noxious weed seed.
  - 9. Date of test.
- B. All grass and legume seed shall be tagged "Oregon Certified Seed" and shall be from the most recent crop available. Test and label each kind according to the Oregon Seed Law and Federal Seed Act. The seed shall have been tested within 9 months of the delivery date and shall not be sprouted, moldy, or show evidence of having been wet or otherwise damaged.
- C. The minimum requirements of Oregon certified seed are as published in the current year's Oregon Certified Seed Handbook available from County Extension Offices or Oregon State University. Seed that is not labeled or that does not conform to specifications will be rejected and shall be replaced at the Contractor's expense.

- D. Fertilizer shall be commercial grade 5-20-10.
- E. Bark mulch for hydroseeding shall be natural wood cellulose fiber, undyed, at the rate of 1500 pounds per acre.

### **PART 3 EXECUTION**

#### **3.01 GENERAL**

- A. All work specified in this section shall be accomplished by an experienced Landscape Contractor.
- B. Lawn areas shall be restored using seed (80% Perennial Ryegrass / 20% Creeping Red Fescue, or approved alternative mixture) and either existing or imported topsoil in the top 4 inches of the backfill trench. The Contractor shall not place the topsoil within the trench boundaries until the proper compaction has been reached. Areas disturbed by construction equipment outside the trench area shall also be restored with sufficient topsoil and mulch to the satisfaction of the Engineer in order to insure the establishment of the seed mixture.
- C. For the seeding method used, the Contractor shall abide by the following criteria:
  - 1. Seeding: Not earlier than August 15<sup>th</sup> nor later than October 1<sup>st</sup> for establishment without supplemental water.
  - 2. Soil Preparation: The Contractor shall cultivate soil within lawn areas to a minimum depth of 4 inches and bring surface to a true and even grade as shown on the Plans or as designated by the Engineer. Extraneous materials unearthed during cultivation shall be removed and disposed of. Seed bed shall be a minimum of one inch in depth, brought to a friable condition satisfactory for sowing seed. Seed beds shall be approved by the Engineer prior to seeding.
  - 3. Seeding and Fertilizing:
    - a. Lawn Areas - Seed mixture shall be evenly distributed over area at a rate of 8 pounds per 1,000 square feet, followed by an evenly spread application of fertilizer at rate of 15 pounds per 1,000 square feet.
  - 4. Mulching and Protection: The Contractor shall mulch all areas by spreading a uniform light cover of straw mulch over the seeded area at a rate of 50 pounds per 1,000 square feet. This work will also be required outside of the window of time allowed for seeding as a part of the erosion control plan.
  - 5. Hydroseeding may be applied as an alternative to hand application where accessible. Restoration efforts adjacent to the Springwater Corridor must use hydroseeding as the method of choice. Seed, fertilizer and mulch shall be applied in one application at the rates specified above. Add mulch and thoroughly mix with water prior to adding seed. Place the fertilizer in the hydroseeder tank no more than 30 minutes prior to application. Apply or spray the area thoroughly saturating the soil.

END OF SECTION

## SECTION 02960

### PIPE BURSTING

#### PART 1 GENERAL

##### 1.01 REQUIREMENTS

- A. This specification covers the work necessary to furnish and install, complete and in-place, high density polyethylene (HDPE) pipe by pneumatic pipe bursting methods as shown on the Drawings and specified herein. This method will be considered as an alternative to standard open-cut replacement of the existing 4" service laterals to each residence. The Contractor shall provide all materials, labor, equipment and services necessary for bypass pumping diversion of sanitary flows, installation of HDPE pipe along with closed circuit television (CCTV) preconstruction inspection of each service. The District has completed CCTV inspection of the existing sewer main to determine the approximate location for each house lateral. It will be the Contractors responsibility to locate the current route of each lateral from the main to within 5 feet of the exterior of each residence. Based upon the location of each pipe, Owner shall determine final replacement option of the pipe through trenchless means (Pipe Bursting) or conventional open cut methods for the price identified in the Contractor's bid for that method.
- B. The Contractor shall locate receiving/insertion pits to suit the pneumatic pipe bursting operation. All pits shall be restored with approved backfill.

##### 1.02 REFERENCE SPECIFICATION, CODES AND STANDARDS

- A. The following references are part of this Specification. In case of conflict between the requirements of this Specification and those of the listed documents, the requirements of this Specification shall prevail. The latest edition of the following references shall be used:
  - 1. ASTM D1248, Polyethylene Plastics Molding and Extrusion Materials.
  - 2. ASTM D2657, Heat Joining of Thermoplastic Pipe and Fittings.
  - 3. ASTM D3035, Polyethylene Plastic Pipe (SDR-PR) Based on Controlled Outside Diameter.
  - 4. ASTM D3261, Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing.
  - 5. ASTM D3350, Polyethylene Plastic Pipe and Fittings Materials.
  - 6. ASTM F714, Standard Specification for Polyethylene Plastic Pipe Based on Outside Diameter.

##### 1.03 SUBMITTALS

- A. Action Submittals:
  - 1. The Contractor shall submit catalog cuts, specifications, dimensioned drawings, installation details and sketches, and other pertinent information for the HDPE pipe installation work. All materials provided shall be fully in accordance with the requirements of the reference specifications specified above.
  - 2. The Contractor shall submit detail drawings which will include, but not be limited to: pull and insertion pit locations and dimensions showing entry slopes; equipment



and pipe layout for each burst. Equipment information will include, but not be limited to: bursting equipment make, model, dimensions and specifications; description of the hammer capacity, maximum pull force available and outside diameter of the bursting head. Calculations that identify the maximum anticipated pull forces between the longest manhole to manhole run using the specified pipe wall thickness will also be provided. Finally a written description of the construction procedure and sequence including manhole reconnection will also be required.

- B. Certification: The Contractor shall furnish a certified affidavit of compliance for all HDPE pipe and fittings furnished confirming that the materials supplied fully conform to the requirements specified herein.
- C. The Contractor shall submit detailed drawings and a written description of the construction procedure and sequencing including locations for initiating bypass of the sanitary sewer flow from each home. The bypass pumping plan shall include procedures to follow in the event of a failure of the bypass pumping system.
- D. Submit logged data from fusion equipment for each weld used in the final installation.
- E. Submit post-construction inspection video tapes for each service.

#### 1.04 QUALITY ASSURANCE

- A. All work shall be performed as specified herein and supervised by personnel experienced in pipe bursting installation.
- B. The pipe bursting contractor shall be certified and satisfactorily trained by the pipe bursting system manufacturer. The system manufacturer shall verify in writing that the company is fully trained and is a licensed installer using their pipe bursting system.
- C. HDPE pipe joining shall be performed by personnel trained in the use of butt-fusion equipment by the specific manufacturer of said equipment using recommended methods for fusion butt welding. Personnel directly involved with installing the new pipe shall receive training in the proper methods for handling and installing the polyethylene pipe. Training shall be performed by a qualified and certified representative of the equipment and pipe manufacturer.
- D. Quality assurance procedures shall be performed by the pipe manufacturer fully in accordance with the requirements of this Specification. The certification shall include certified laboratory data confirming that said tests have been performed on a sample of the pipe to be provided under this contract, or pipe from that production run, and that satisfactory results were obtained prior to any installation of said pipe.
- E. Fusion joining and other procedures necessary for correct assembly of the HDPE pipe shall be done only by personnel trained in those skills to the satisfaction of the Engineer and the pipe supplier.
- F. Full penetration welds shall provide a homogeneous material across the cross section of the weld.

- G. Fusion equipment shall be operated only by technicians who have been certified by the pipe manufacturer or supplier and who have a minimum of 2 years' experience of fusion welding up to 12-inch diameter pipelines. The technician's experience and verifiable references shall be documented in the HDPE pipe submittal.
- H. Only those tools designed for the aforementioned procedures, and approved by the pipe manufacturer or supplier and the Engineer, shall be used for assembly of pipe fittings to ensure proper installation. The heater plate shall be equipped with a data logger and thermometers or pyrometers to record the temperature of the plate surfaces in relation to time and to assure uniform heating.
- I. Pipe bursting insertion equipment shall be operated only by technicians who have a minimum of 3 years' experience (or Owner approved training) in the installation of the polyethylene pipe, using pipe bursting lining technology as specified herein. The technician's experience and references shall be documented in the HDPE pipe submittal.

## **PART 2      PRODUCT**

### **2.01    GENERAL**

- A. The Contractor shall provide HDPE pipe as specified. The pipe shall be made to diameter and tolerances in accordance with ASTM D3035. The minimum ratio of orthogonal diameters prior to installation shall be 0.95. All pipe shall be made from virgin grade material. The pipe shall be of the diameter and class shown on the drawings and specified and shall be furnished complete with all fabricated fittings, and other appurtenances as necessary for a complete and functional system.
- B. Markings: Pipe materials shall be legibly marked by the pipe manufacturer. The following shall be printed on the pipe:
  - 1. Name and trademark of manufacturer.
  - 2. Nominal pipe size.
  - 3. Dimension ratio.
  - 4. The letters PE followed by the polyethylene grade per ASTM D1248, followed by the Hydrostatic Design Basis in hundreds of psi.
  - 5. Manufacturing Standard Reference.
  - 6. A production code from which the date and place of manufacture can be determined.

### **2.02    PIPE**

- A. Pipe: Pipe shall be high molecular weight, high-density polyethylene pipe. The material shall be listed by the Plastic Pipe Institute (PPI) with a designation of PE 3408 and have a minimum cell classification of 345434C, D, or E (inner wall shall be light gray in color) as described in ASTM D3350. The pipe material shall meet the requirements for Type III, Class B or C, Category 5, Grade P34 material as described in ASTM D1248. The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same specification from the same raw pipe material pipe. Pipe and fittings shall be made in conformance with ASTM F714 and ASTM D3261 as modified for the specified material. The pipe shall be homogeneous throughout and free of visible

cracks, holes, foreign inclusions or other injurious defects. It shall be uniform in density and other physical properties. Any pipe not meeting these criteria shall be rejected.

B. Pipe Color:

1. Pipe shall conform to the following:
  - a. Inside: The inner wall shall be black.
  - b. Outside: The outer wall shall be black.

C. Standard Dimension Ratio (SDR): Pipe shall conform to the following:

1. Nominal Size: 4 to 14 inches, iron pipe sizes.
2. SDR: Thickness greater than or equal to 17.

D. Manufacturers:

1. KWH Pipe Ltd.
2. CP Performance Pipe.
3. Approved Equal

E. Fittings:

1. Provide formed fitting with appropriate O.D. that will allow solid wall coupling to transition from HDPE to the PVC pipe used for tee at sewer mainline connection.

## 2.03 JOINTS

- A. HDPE pipe shall be joined by butt fusion welding, as specified in Paragraph 3.06 of this section.

## PART 3 EXECUTION

### 3.01 GENERAL

- A. The Contractor shall protect existing and new facilities including utilities, road pavement, and private property from damage by forces generated by the pipe bursting equipment. Any damage to any existing facilities as a result of the pipe bursting operation shall be the responsibility of the Contractor. The cost to repair or replace the damaged facility shall be the responsibility of the Contractor.

### 3.02 HANDLING AND STORAGE

- A. The Contractor shall exercise special care during the unloading, handling, and storage of all HDPE pipe to ensure that the pipe is not cut, gouged, scored, or otherwise damaged. Any pipe segment, which has cuts in the pipe wall exceeding 10 percent of the wall thickness, shall be cut out and removed from the Site at the Contractor's expense. The pipe shall be stored so that it is not deformed axially or circumferentially. After the unloading of any pipe material ordered to the Project Site and before installation of the

pipe, the Contractor shall inspect all pipe to verify its condition prior to installation with the Engineer and/or the project inspector.

### 3.03 BYPASS PUMPING

- A. The Contractor shall notify the Owner 24 hours prior to commencing the bypass pumping operation if necessary to install the new pipe for each service. The Contractor shall provide bypass pumping for acceptable completion of the pipe installation.
- B. Bypass pumping shall be done in such a manner as to not damage private or public property, or create a nuisance or public menace. The pumped sanitary sewer shall be in an enclosed hose or pipe that shall be redirected into the downstream manhole. Flexible pipe cannot be repaired if leakage occurs during pumping. Only pipe without any method of repair including bands, tape, etc. is allowed to be used for bypass.

### 3.04 PRE-INSTALLATION CCTV INSPECTION – ASSESSMENT OF CONDITIONS

- A. The Contractor shall televise the individual sanitary sewer service laterals with a color CCTV tilt-head type camera recorded on a USB flash drive immediately before pipe bursting to assess the existing conditions are suitable for bursting.
- B. It shall be the Contractor's responsibility to assure that the sanitary sewer pipe is capable to be used for the pipe bursting operations. Not every service may be possible to reach by CCTV, however Contractor is still responsible for providing a new pipe in the same location unless approved otherwise through trenchless or open cut methods.
- C. Documentation of the television results shall be painted on the ground surface and measured from fixed structures for as-built records.

### 3.05 EXCAVATION AND BACKFILL OF INSERTION PITS

- A. Insertion pits shall be prepared and backfilled with either existing native material or imported crushed rock depending upon their location. Native soils or other approved material will only be acceptable across yards or other landscaped areas. All other openings will require the imported crushed rock to the base of the replacement surfacing including asphalt concrete or PCC.
- B. Insertion pit dimensions shall be determined by the Contractor.

### 3.06 PIPE JOINING/TESTING

- A. Sections of HDPE pipe shall be joined into continuous lengths on the jobsite above ground. The joining method shall be the butt fusion method and shall be performed in strict accordance with the pipe manufacturer's recommendations. Fusion equipment used in the joining procedure shall be capable of meeting all conditions recommended by the pipe manufacturer, including, but not limited to, fusion temperature, alignment, and fusion pressure. Electrofusion may be used for field closures as necessary when appropriate fusion equipment can be utilized in a trench type environment. For end sections or "tail" pipe, the use of electrofusion couplings as manufactured by Central Plastics Company, or approved equal can be utilized.

- B. A fire-retardant bag or approved suitable enclosure shall be used with the heater plate to facilitate control of the heating process and to protect the heater plate surfaces from dirt and other debris when not in use. The heater plate surfaces shall be cleaned regularly as needed to prevent accumulation of fusion welding residues or other substances that may result in faulty pipe joining.
- C. Butt fusion shall conform to ASTM D2657 and pipe manufacturer's criteria for the type of joining. Joint strength shall be equal to or greater than that of the adjacent pipe.
- D. The inside and outside of pipe ends shall be cleaned with a cotton or nonsynthetic cloth to remove dirt, water, grease, and other foreign materials. The pipe ends shall be cut square and carefully aligned just prior to heating.
- E. After achieving the proper melt pattern, the pipe ends shall be brought together in a firm, rapid motion applying sufficient pressure to form a pipe bead (1/8 inch to 3/16 inch in height) around the outside and inside the entire circumference of the pipe. Remove fusion beads on the inside of all butt welds with an inside rotary cutter or other approved method. Unless otherwise directed or approved, bead removal shall restore the inside diameter to that of the rest of the pipe. Use only tools and methods recommended by pipe manufacturer when cutting or machining the pipe.
- F. Rejoin ends of pipeline in accordance with the manufacturer's recommendation. Render the inside surface of the pipe free of cuts, gouges, or scratches.

### 3.07 PIPE INSTALLATION BY PIPE BURSTING METHOD

- A. The Contractor shall install the HDPE pipe by utilizing a constant tension system with a pneumatic bursting device that relies on percussive hammering action to secure sufficient space to insert the new 4" ID HDPE pipe. The Contractor shall be responsible to provide adequately designed pipe bursting equipment.
- B. The pipe shall be installed with appropriate elbows and cleanouts necessary to meet the requirements of the latest Uniform Plumbing Code. This shall specifically include, but not be limited to installation of a cleanout at the connection to the existing service located 5 feet outside the face of the structure.

### 3.08 ACCEPTANCE

- A. The completed installation of the replacement pipe shall be free from visual defects, damage, flow obstructions, holes and other detrimental features.
- B. All excavations for pipe bursting operations shall be completed with the approved native and material and surface restoration.

END OF SECTION

## SECTION 03300

### CAST-IN-PLACE CONCRETE

#### PART 1 - GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. All cast-in-place concrete for access path, curbs, driveways and all manholes not specified to be precast.
  - 2. Concrete shoring, formwork, patching, grouting, sealants and crack repair.
  - 3. Concrete curing.
- B. Related Sections:
  - 1. Section 03350: Concrete Finishes

##### 1.02 REFERENCES

- A. American Concrete Institute (ACI):
  - ACI 117 Standard Tolerances for Concrete Construction and Materials
  - ACI 347 Guide to Formwork for Concrete
  - ACI 350 Environmental Engineering Concrete Structures
- B. American Society for Testing and Materials (ASTM) Standard Specification or Test Method:
  - ASTM C33 Concrete Aggregates
  - ASTM C39 Compressive Strength of Cylindrical Concrete Specimens
  - ASTM C88 Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
  - ASTM C94 Ready-Mixed Concrete
  - ASTM C136 Sieve Analysis of Fine and Coarse Aggregates
  - ASTM C142 Clay Lumps and Friable Particles in Aggregates
  - ASTM C143 Slump of Hydraulic-Cement Concrete
  - ASTM C150 Portland Cement
  - ASTM C156 Water Retention by Concrete Curing Materials
  - ASTM C157 Length Change of Hardened Hydraulic-Cement Mortar and Concrete
  - ASTM C172 Sampling Freshly Mixed Concrete
  - ASTM C231 Air Content of Freshly Mixed Concrete by the Pressure Method
  - ASTM C260 Air-Entraining Admixtures for Concrete
  - ASTM C289 Potential Alkali-Silica Reactivity of Aggregates (Chemical Method)
  - ASTM C309 Liquid Membrane-Forming Compounds for Curing Concrete
  - ASTM C494 Chemical Admixtures for Concrete
  - ASTM C618 Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete
  - ASTM C881 Epoxy-Resin-Base Bonding Systems for Concrete
  - ASTM C1077 Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation
  - ASTM C1240 Use of Silica Fume as a Mineral Admixture in Hydraulic-Cement Concrete, Mortar, and Grout
  - ASTM D2419 Sand Equivalent Value of Soils and Fine Aggregate

- D. State of Oregon, Department of Transportation (ODOT) 2020 Standard Specifications:  
Section 02001: Concrete
- E. 2020 Uniform Building Code (UBC)

### 1.03 SUBMITTALS

- A. Submit in accordance with Section 01300:
- B. Product Data:
  - 1. Concrete mix product certification: Submit certified laboratory test results that the mix proportions and materials comply with these Specifications.
    - a. Cementitious materials.
    - b. Coarse and fine aggregates.
    - c. Admixtures.
    - d. Water.
    - e. Ready-mix plant certification.
    - f. Mix designs.
    - g. Mix test results.
  - 2. Formwork products:
    - a. Form coatings.
  - 3. Miscellaneous products: Submit technical data including installation instructions, independent laboratory test reports (ICBO), and handling and storage instructions.
    - a. Curing materials and curing program.
    - b. Joint fillers.
    - c. Sealants.
    - d. Epoxy compounds, including adhesives and grouts.
    - e. Non-shrink grouts.
    - f. Methods and materials for concrete repairs.

### 1.04 QUALITY ASSURANCE

- A. Construction Standard: Applicable requirements of the UBC, ACI 301, and recommendations of ACI 350.
- B. Concrete Mix Designs: By an independent commercial testing laboratory, complying with ASTM C1077 and favorably reviewed by the Engineer. Concrete mix design proportions shall be established on the basis of field experience and trial mixtures with the materials to be employed in accordance with UBC Section 1905.
- C. Concrete Mix Test Results:
  - 1. Submit result statistics of satisfactory mix designs if available from prior projects. Comply with UBC Section 1905.3.
- D. Concrete Tests, as Placed: None required

## **PART 2 - PRODUCTS**

### 2.01 GENERAL

- A. Obtain materials from an established and experienced manufacturer or supplier. Provide new materials of first-class ingredients guaranteed to perform the service required.

## 2.02 CONCRETE MATERIALS

- A. Cementitious Materials:
  - 1. General: Use only one brand of each cementitious material. The color shall not significantly alter the typical grey concrete color.
  - 2. Portland Cement: ASTM C150, Type II. Comply with the requirements for low alkali cement in Table 2.
  - 3. Pozzolan: ASTM 618, Mineral Admixture Class N.
  - 4. Blended Cement: ASTM C595 Type 1P(MS).
  - 5. Flyash: ASTM C618, Class F, with the following restrictions:
    - a. Loss on Ignition: 4% maximum
    - b. SO<sub>3</sub> Content: 3% maximum
    - c. Moisture Content: 1% maximum
- B. Concrete Aggregates:
  - 1. General: ASTM C33:
    - a. Provide free from organic materials, waste products, clay balls, shale, and mica and thoroughly washed before use.
    - b. Provide 1-1/2-inch maximum size for all concrete on the project. For thin sections, such as slabs or walls 10 inches thick or less, or for sections that require special placement due to shape, form or congestion of reinforcing, provide 1-inch maximum size.
    - c. Provide aggregates that do not deleteriously react with the alkalis in the cement.
    - d. Grading: ASTM C136. Submit results of sieve analysis.
    - e. Reactivity: ASTM C289. Submit graphical data showing compliance.
  - 2. Coarse Aggregates:
    - a. Provide clean, hard, durable gravel, crushed gravel, crushed rock, or combinations.
    - b. Deleterious substances: Submit compliance with ASTM C33, Table 3 and as follows:
      - 1) Clay lumps and friable particles: ASTM C142. Not more than 5%.
      - 2) Abrasion: ASTM C131. Not more than 45%.
      - 3) Soundness: ASTM C88. Not more than 10%.
      - 4) Cleanness: CALTRANS Test 227. For three tests, not less than 70, with an average greater than 75.
    - c. Do not use aggregate containing more than 10% of inferior materials, flat or elongated particles, cracked or laminated rock, or rock than can be readily broken after immersion in water for one hour.
  - 3. Fine Aggregate:
    - a. Provide natural sand or a combination of natural and manufactured sand, of siliceous, granitic or igneous origin, hard and durable.
    - b. Deleterious substances: Submit compliance with ASTM C33 Table 1 and as follows:
      - 1) Organic impurities: ASTM C87. Not less than 95% relative strength.
      - 2) Sand equivalent: ASTM D2419 or CALTRANS Test 217. For three tests not less than 70, with an average greater than 75.
- C. Combined Aggregates: Provide a mixture of fine aggregate and coarse aggregate uniformly graded between the screen sizes specified below:



Sieve Size	Percentage Passing	
	1-1/2-Inch Maximum	1-inch Maximum
2"	100	--
1-1/2"	90-100	100
1"	50-96	90-100
3/4"	45-80	55-100
3/8"	38-55	45-75
No. 4	30-45	35-60
No. 8	23-38	27-45
No. 16	17-33	20-35
No. 30	10-22	12-25
No. 50	3-10	3-15
No. 100	0-3	0-5
No. 200	0-2	0-2

### 2.03 WATER

- A. Provide water for washing aggregates, for mixing concrete, for patching grout and for curing that is free from oil and contains not more than 1,000 parts per million (ppm) of chlorides as Cl, nor more than 1,300 ppm of sulfates as SO<sub>4</sub>. Do not allow impurities that will cause a change in the setting time of the portland cement of more than 25%, nor a reduction in the compressive strength of mortar at 14 days of more than 5%, when compared to the results obtained with distilled water.
- B. Do not allow impurities that cause discoloration of the concrete or produce etching of the surface.

### 2.04 ADMIXTURES

- A. Air Entraining: ASTM C260.
- B. Accelerating: ASTM C494, Type C or E.
- C. Retarding: ASTM C494, Type D.
- D. Water Reducing: ASTM C494, Type A.
- E. Shrinkage Reducing: Eclipse by W.R. Grace, Tetraguard AS20 by Master Builders, or equal.
- G. No admixture containing any chloride ions is acceptable.
- H. Manufacturers: WR Grace & Co., Master Builders, Inc., or equal.

### 2.05 CONCRETE MIX DESIGN

- A. Mix Proportions:

Concrete Type	A
Specified 28-Day Compressive Strength (lb/in <sup>2</sup> )	4,000
Maximum Coarse Aggregate Size (in)	1
Air Content at Point of Placement (%)	6
Maximum Water-Cementitious Material Ratio	0.45
Minimum Cementitious Material Content (lb/yd <sup>3</sup> )	570

- B. Cementitious Material: Either portland cement, cement with fly ash, cement with natural Pozzolan, or blended cement.
- C. Pozzolan or Flyash: Optional. Not less than 10%, nor more than 20% of the weight of the cementitious materials. Do not use pozzolan or flyash as an admixture in concrete made with portland-pozzolan cement.

#### 2.06 READY-MIX CONCRETE

- A. Supply concrete for the project using truck mixers and a ready-mix plant certified by the National Ready-Mix Concrete Association. Submit certification.
- B. Alternatively, qualify the supplier according to ASTM C94 Sections 8 through 11, inclusive.

#### 2.07 DRY PACK GROUT

- A. Very stiff mix grout; one part portland cement to two parts sand (by weight) and water. Wet the mixture only sufficiently to moisten the materials to the point where they will ball when squeezed by hand.

#### 2.08 CEMENT MORTAR

- A. For Repairs and Patching Concrete.
- B. One part portland cement, two parts fine sand (by weight) and water. Use only the amount of water needed to make the mix workable for the intended use.
- C. Provide a mixture of white and regular cements as required to make a mortar that after curing 28 days will match the adjacent concrete. Prepare several trial batches and make test samples in an inconspicuous location for review.
- D. When a mix has been selected for color match, batch all mortar by weight in accordance with the formula for the selected mix.

## 2.09 CURING MATERIALS

- A. Cure by fog spray, or by one of the following methods after discontinuance of the fog spray. Slabs shall be continuously wet cured with sheet materials or wet blankets after discontinuance of the fog spray; liquid curing compound alone is insufficient.
- B. Liquid Curing Compound: A water-based membrane-forming resin suitable for exterior or interior use as a curing and hardening compound on freshly placed concrete.
  - 1. Provide an emulsion of synthetic resinous solids dispersed in water containing no waxes, paraffins or oils. Provide the fugitive type that will oxidize and disintegrate completely within 60 days when exposed to sunlight in exterior applications or that can be removed by washing with dilute muriatic acid or TSP in interior applications.
  - 2. Water retention requirements: ASTM C309, Type I or II, Class B, when tested in accordance with ASTM C156.
  - 3. Comply with the applicable local air quality district.
  - 4. Exterior surfaces: Aqua Resin Cure-White by Burke; 1200-White by W.R. Meadows; or equal.
- C. Sheet Materials: ASTM C171. Waterproof paper, plastic sheeting or white burlap-polyethylene sheet.
  - 1. Plastic sheeting: fungus-resistant, minimum 4 mil thick, clear and free of defects, having ASTM E96 perm rating of not more than 0.5.
  - 2. Waterproof paper: Two layers of non-staining kraft paper laminated with latex adhesive and reinforced with glass in both directions. Seal joints with 2-inch-wide tape with water resistant adhesive.

## PART 3 - EXECUTION

### 3.01 PROPORTIONING CONCRETE MATERIALS

- A. Place no concrete prior to favorable review of submittals for reinforcing steel, materials specified in this Section and the mix proposed. Unfavorable results of actual pours may require a redesign of mixes.
- B. Make no substitutions to the constituents tested in the design of concrete mixes without favorable review of the revised mix and the new test results.

### 3.02 BATCHING AND MIXING CONCRETE MATERIALS

- A. Ready or Transit Mixed Concrete:
  - 1. Deliver completely mixed to the project site.
  - 2. Do not add mixing water during hauling. Add water after delivery only when agreed by the Engineer. Should water be added, revolve the mixing drum not less than 30 revolutions at mixing speed after adding and before commencing discharge.
  - 3. Deliver each load at the job site accompanied by a ticket showing mix design number, volume of concrete, the weight of cement in pounds and the total weight of each ingredient in pounds. Also show the time at which the materials were batched and the reading of the revolution counter at the time the truck mixer was charged.
  - 4. No retempering of partially hardened material is permitted. Do not use partially hardened concrete in the work.

B. Batching in Adverse Weather:

1. Cold Weather: When the atmospheric temperature is below 40°F, or is likely to fall below 40°F during the 24-hour period after placing, heat the materials before mixing, so that the temperature of the mix when deposited shall be between 65° and 80°F. Do not heat the mixing water or the cement over 160°F. Remove lumps of frozen material and ice from the aggregates before they are placed in the mixer.
2. Hot Weather: When temperatures are above 90°F, reduce the temperature of the concrete mix by using iced mixing water, and protecting aggregates and cement from direct rays of the sun. Do not place concrete exceeding 80°F.
3. Should the provisions noted in 1. and 2. above not be possible or practicable, postpone the batching until favorable weather conditions prevail.

### 3.03 FORMS

A. General:

1. Take responsibility for adequacy of the form, bracing, and shoring. Satisfy ACI 347.
2. Form all concrete unless specified otherwise.
3. Construct forms conforming to the shape, line and grade specified.
4. Provide tight seams, or seal with tape, to be mortar-tight.
5. Brace and shore all forms properly to ensure stability against pressure from any source, without failure of any component part.

- B. Chamfers: 3/4-inch at all exposed outside corners, including the top edges of all walls, machinery bases and curbs. Use mill run chamfer strips surfaced all sides. Provide rounded top edges of sidewalks, walkways and where directed.

### 3.04 REMOVAL OF FORMS

- A. General: Remove without damage to the concrete and with complete safety of the structure. Ensure that the concrete has hardened sufficiently and the members have attained sufficient strength to safely support the imposed loads.

- B. Cold Weather: Engineer may increase the minimum form removal times if the temperature is 40°F or lower.

### 3.05 PLACING CONCRETE AND GROUT

A. Preliminary Work:

1. Remove hardened concrete and foreign materials from the inner surface of the mixing and conveying equipment. Remove all debris from the space to be occupied by the concrete.
2. Remove water from the space to be occupied by the concrete before concrete is deposited. Divert any flow of water into an excavation through proper site drainage to a sump, or by other methods. If required by the Engineer, grout up any water vent pipes and drains after the concrete has thoroughly hardened.

B. Embedded Items:

1. Move reinforcement bars as necessary to avoid interference with other reinforcing steel, conduits, or embedded items, but not so as to impair design strengths of the member. If bars are moved more than two bar diameters, submit the resulting arrangement of bars for review.
2. Inspect the installation of all embedded items and reinforcing.

- C. Placing:
  - 1. Transfer the concrete to the place of final deposit as rapidly as practicable by methods that prevent the separation or loss of ingredients. Under no circumstances deposit partially hardened concrete in the work. Deposit concrete in the forms as nearly as practicable in its final position to avoid rehandling. Maintain, until the completion of the pour, a plastic concrete surface, approximately horizontal.
  - 2. Deposit concrete without segregation of the aggregate and without displacement of the reinforcement.
  - 3. Use every means to secure a dense, impervious, homogeneous concrete, free from voids or pockets. If honeycomb, air, or rock pockets occur, repair the structure to the complete satisfaction of the Engineer, and modify the placing method or mix design, to prevent recurrence of deficient concrete. Provide such repairs and modifications at no additional cost. Extensive honeycomb or pockets may be cause for rejection of the work.
- D. Time Limit: Place all concrete in its final position in slab or forms within 1-1/2 hours of batching. Alternatively, as part of the mix design, provide admixtures that delay the initial set and state the proposed length of time in the submittal.
- E. Temperature Limits: Place all concrete in its final position in slab or forms at:
  - 1. Less than 90°F, measured in the mix.
  - 2. More than 40°F, measured both in the mix and in the air, with air temperature predicted to rise above 50°F.
  - 3. More than 50°F, measured in the mix, 40°F measured in the air, with air temperature falling.

### 3.06 VIBRATION

- A. Compact the concrete with high frequency, internal mechanical vibrating equipment, and when required, supplement by hand spading and tamping. Consolidate slabs 6 inches or less in depth by hand tampers, spreading and settling with a heavy leveling straightedge.
- B. Operate vibrators with vibratory element submerged in the concrete, with frequency between 8,000 and 12,000 impulses per minute when submerged.

### 3.07 CONCRETE JOINTS

- A. General:
  - 1. Provide joints as required for constructibility

### 3.08 CURING AND PROTECTION

- A. General: Maintain concrete above 50°F and below 90°F in a moist condition and without external loadings for 14 days after placement. For slabs, after the specified initial moist cure, provide further moist curing, utilizing sheet materials or wet blankets for 14 days after placement. Apply liquid membrane curing after the 14-day wet curing period.
- B. Cold Weather Requirements: Provide adequate equipment for heating the placed concrete during freezing or near freezing weather:

1. Whenever the surrounding air temperature is below 40°F, or may fall below 40°F within the 24-hour period after pouring of concrete, maintain all freshly poured concrete at not less than 50°F for 5 days.
2. Keep the housing, covering, or other protection in place and intact at least 24 hours after the artificial heating is discontinued.
3. Do not use manure, salt, calcium chloride, or other chemicals on the concrete to prevent freezing.

### 3.09 CONCRETE FINISHES

- A. Refer to Section 03350.

### 3.10 FIELD QUALITY CONTROL

#### A. Concrete Placement:

1. Verify that forms and reinforcement are accurately placed and secured in position. Confirm that both forms and reinforcement have been favorably reviewed.
2. Verify that all sleeves, castings, pipes, conduits, bolts, anchors, and any other items required, are accurately and securely placed within or on the forms.
3. Verify adequate vibrators are available.
4. Check that the mix design is compatible with the method of placement of the concrete, by pump or by batch.
5. Verify the concrete delivered to site is satisfactory, including checks on the batch tickets, quality assurance tests and direct observation of the batches.

#### B. Concrete Curing:

1. Verify procedures and equipment are available for controlling concrete temperature during hot and cold weather conditions.
2. Verify actual time of application of evaporation retardant, fog spray and curing materials for each placement.
3. Provide acceptable procedures prior to repairs. Repairs by painting or surface treatment will not be acceptable.

END OF SECTION

## SECTION 03350

### CONCRETE FINISHES

#### PART 1 - GENERAL

##### 1.01 SUMMARY

- A. Section Includes:
  - 1. Concrete finishes for all horizontal and vertical concrete surfaces.
  - 2. Sealers, hardeners and curing compounds for concrete.
- B. Related Sections:
  - 1. Section 03300: Cast-in-Place Concrete

##### 1.02 REFERENCES

- A. American Society of Testing and Materials (ASTM):
  - 1. ASTM C156 Test Method for Water Retention by Concrete Curing Materials
  - 2. ASTM C171 Specifications for Sheet Materials for Curing Concrete
  - 3. ASTM C309 Specification for Liquid Membrane-Forming Compounds for Curing Concrete
  - 4. ASTM C1028 Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method
  - 5. ASTM D882 Test Method for Tensile Properties of Thin Plastic Sheeting
  - 6. ASTM E96 Test Methods for Water Vapor Transmission of Materials
- B. Uniform Building Code (UBC).
- C. "Evaluation Reports" published by the International Conference of Building Officials.

##### 1.03 SUBMITTALS

- A. Submit in accordance with Section 01300.
- B. Product Data: Describe all products proposed for use.

##### 1.04 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with applicable requirements in the Uniform Building Code, adopted edition, including without limitation Chapters 10, 11, 11A and 11B.

#### PART 2 - PRODUCTS

##### 2.01 CURING COMPOUND

- A. Curing Compound:
  - 1. Water-based membrane forming water retaining curing compound for freshly placed concrete.
  - 2. An emulsion of synthetic resinous solids containing no waxes, paraffins or oils.

3. Fugitive type that will oxidize and disintegrate completely within 90 to 120 days when exposed to sunlight or that can be removed by washing with dilute muriatic acid.
4. Meet the water retention requirements of ASTM C309 Type I or II Class A and B when tested in accordance with ASTM C156.
5. Comply with the regulations of the Air Quality Management District having jurisdiction and have a maximum volatile organic compound (VOC) level of 350.

B. Manufacturers:

1. Aqua Resin Cure by Burke;
2. Sealtite #1100 Clear by W. R. Meadows Inc.;
3. or equal.

## 2.02 SEALING COMPOUND

A. Sealing Compound:

1. Water-based alpha-methylstyrene curing, sealing and hardening compound.
2. Leave a protective clear transparent film on the concrete surface that is non-yellowing and resistant to deterioration due to exposure to ultraviolet light.
3. A good primer for paints, mastic adhesives and coatings.
4. Minimize dusting of concrete and deterioration of carpet backings.

B. Manufacturers:

1. Burke Spartan-Cote WB Cure/Seal/Hardener;
2. Vocomp 20 by W. R. Meadows Inc.;
3. or equal.

## 2.03 SURFACE RETARDER

- A. Liquid surface retarder: Formulate to retard the setting of the concrete to a depth of 3/16-inch for 10 days after placing. Use form grade Surface Retarder as a form coating to retard the surface set of formed cast-in-place concrete. Use top Surface Retarders applied to freshly poured concrete slabs to retard surface set.

B. Manufacturers:

1. Lithochrome Surface Retarder Form Grade or Top Surface Grade by L. M. Scofield Company;
2. Equivalent Conrad Sovig;
3. or equal.

## PART 3 - EXECUTION

### 3.01 CONCRETE SURFACE FINISHES FOR SLABS

A. General:

1. Provide a surface finish on all exterior and interior horizontal concrete slabs that has a coefficient of friction when measured in accordance with ASTM C1028 not less than 0.60 for level surfaces and 0.80 for surfaces sloped 1:20 or more.
2. For all exterior paving surfaces provide a minimum slope of 1% (1/8-inch per foot) to drain surface water to catch basins, drains or edges of pavement adjacent to landscaping and drainage swales. Review grades shown and recommend any adjustments necessary to achieve minimum specified slope.



3. Finish slabs so they do not deviate more than 1/4-inch (6.3 mm) in 10 feet from a straight edge. Finish elevations to within 1/8-inch (3.2 mm) elevations shown or required to match adjacent existing conditions. Provide "as-built" slopes for drainage no less than those shown or specified.
  4. Finish edges and surfaces smooth, true and clean.
  5. Apply finish to slabs as soon as the concrete can support the weight of the workmen.
  6. Increase the humidity of the air directly above the concrete surface, prior to and during finishing operations by adding a fine fog mist of water to the air with mist nozzles when atmospheric conditions (temperature, humidity, and wind) are such that rapid evaporation of mixing water from the concrete is likely to occur.
- B. WOOD OR MAGNESIUM FLOAT FINISH AND PRELIMINARY STEPS FOR OTHER FINISHES:
1. Applies to slab surfaces indicated to have a wood or magnesium Float finish. This finish is also the initial step for all other finishes.
  2. Place and consolidate concrete.
  3. Screed to grade using a strike-off board guided on accurately set screeds.
  4. Work the surface with a bull or darby float to embed large aggregate, consolidate surface mortar and create a smooth true surface.
  5. When surface has taken initial set and bleed water has disappeared work surface with wood floats followed by magnesium floats (if a magnesium float finish is called for) to even out slight irregularities and further consolidate surface.
  6. When concrete has set further so that excess water and fine material will not be brought to the surface, either begin the first steel troweling if this is the preliminary step for other finishes or work the surface with magnesium or wood float if this is the final step in a Float finish. Work the surface sufficiently to consolidate the mortar and produce a finished surface at the proper grade that is free of voids, ripples or other defects. Apply a final swirl texture finish in a fan pattern with the wood or magnesium float. Retool slab edges and control joints. Leave a uniform smooth border around all slab edges and each side of control joints.
- C. BROOM FINISH:
1. Applies to all slabs indicated to receive a Broom finish.
  2. Complete work required under "Preliminary Steps for Other Finishes."
  3. Apply a second and third steel troweling after the concrete has set sufficiently so mortar does not adhere to the edge of the trowel and sufficient pressure can be applied to further consolidate the surface.
  4. Broom texture the surface of the slab at right angles to the normal direction of traffic. Use a stiff fiber bristled broom for Coarse Broom Finish and a fine hair broom for Fine Broom Finish. Match selected control sample.

END OF SECTION

APPENDIX A  
SITE SPECIFIC SAFETY PLAN



# SITE SPECIFIC SAFETY PLAN CERTIFICATION

Contractor performs all operations in strict accordance with all applicable standards set by Oregon Occupational Safety and Health Division (OR-OSHA), including, but not limited to Oregon Administrative Rules (OAR) 437, Chapter 2, Sections 141 – 147 (29 CFR Part 1910, 29 CFR Part 1926).

Contractor creates and maintains a Site-Specific Safety Plan, which is require on-site through the entirety of the project. The Contractor's Safety Manager is trained and knowledgeable in all safety requirements and shall be responsible for the compliance with all applicable safety requirements. All job personnel are knowledgeable of and comply with the Site Specific Safety Plan requirements.

The Site-Specific Safety Plan includes the following basic elements:

- Policy or goals statement
- List of responsible persons, including 24 hour contact information
- Hazzard identification and assessment (Job Hazard Analysis)
- Hazzard controls and safe practices
- Emergency and accident response
- Confined Space Entry Plan, including the Rescue Plan
- Emergency Spill Response Plan
- Pollution Control Plan
- Employee training and communication
- Recordkeeping

Contractor acknowledges that they are solely and completely responsible for the safety of the construction site, including, but not limited to, the safety of all persons and property present at the site at any time until final completion and acceptance by District.

I, \_\_\_\_\_ (the undersigned Contractor), affirm that I comply with the above information.

\_\_\_\_\_  
Name of Firm

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

APPENDIX B  
UTILITY PERMIT  
CLACKAMAS COUNTY DTD





DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DEVELOPMENT SERVICES BUILDING

150 BEAVERCREEK ROAD OREGON CITY, OR 97045

# UTILITY PERMIT

Permit Number: UP011822 Permit Issued: 02/23/22

Business or Subdivision name: TRENCH FOR SANITARY | Fischer's Forest Park LOSS Rehabilitation Project Permit Expires: 02/23/23

Description: PROJECT OUT TO BID (WES) | TRENCH FOR SANITARY WES is the sewer provider for a combined septic system that serves 26 homes in a small development east of the Redland area. The system is over 50 years old and in need of rehabilitation. WES will be hiring a contractor to replace the sewer pipes along the three dead-end roads (S Merry Meadow Ct, S Princess Ct, & S Fir Cone Ct) that serve the community. The work will include open-cutting the roads, removing the aged collection system sewer pipe and replacing it with 8" C900 PVC pipe, and replacing the old manholes.

Permit Status: Issued

Applicant Project #:

Site Address: S MERRY MEADOW CT OR

Location: Project Road - S Merry Meadow Ct, S Princess Ct, S Fir Cone Ct, Project starts - S Fischers Mill Rd, Project ends - 17922 S Deininger Rd

Parcel:

Applicant: NATHAN SEAVER  
150 BEAVERCREEK RD, OREGON CITY, OR 97045 - NSEAVER@CLACKAMAS.US  
(503) 679-5709

Contractor:

24-Hour Emergency Phone:

Owner:

Primary Inspector: Eric Fine 503-319-8891 If the primary inspector is not available please call (503) 742-4700

## TYPE OF WORK

Size of permitted excavation: Minimum depth is 30" (County Code chapter 7.03.170 Paragraph)

Work Description: Trench

Width: 3 Feet Depth: 6 Feet Length: 625 Feet

Proposed Start: 07/01/2022

Call or fax in actual start & completion date to:

Proposed Complete:

Phone: (503) 742-4700 Fax: (503) 742-4659

Conditions of this permit:

ENG101 - INSPECTIONS REQUIRED - Inspections are required and should be requested at least one (1) working day before the day an inspection is needed. Contact the County at 503-742-4700 for the inspection request.

ENG102 - SEE DRAWING - Contractor must have a copy of the permit on site. See the handout for applicable drawings for this access.

ENG105 - EXPIRATION - Work must be finished by the expiration date unless approval has been obtained from the inspector.

ENG142 - GRANULAR BACKFILL - Granular backfill (1 1/2"-0", 1"-0" or 3/4"-0"), approved by Clackamas County, must be a minimum of 95% compaction. Compaction test results are to be returned to Clackamas County Engineering Division within ten (10) days of completion of the project.

2. Shoulders must be replaced to "as good" or "better" condition with County approved materials.
3. Bike paths and pedestrian walkways are to be repaired to the same standards as the roadway.
4. Return right-of-way to "as good" or "better" condition.

ENG145 - TRENCH PAVING - A.C REPLACEMENT - Asphalt Replacement -

1. Surface repairs to asphalt pavements shall conform to the current ODOT/APWA (Asphalt Concrete Pavement) Specifications.
2. Saw cut the pavement to a full depth at trench limits. Double saw cut to provide a twelve (12) inch 'T-cut' with a four (4) inch minimum asphalt replacement for trench repair. (See Standard Drawing U250/U260)
3. The outside saw cut must be at least three (3) feet from the edge of pavement. If less than three (3) feet, the existing outside asphalt to the edge of pavement must be removed and replaced as part of the trench pavement.
4. Minimum asphaltic concrete replacement is three (3) foot width at edge of pavement. The repair shall maintain existing road width and alignment.
5. Subsequent to asphalt removal, trench repair paving must be applied in two (2) separate lifts of two (2) inch compacted thickness for a minimum four (4) inch thickness, or the thickness that was removed; whichever is greater.
6. All undermined pavements caused by trench excavation and cave in shall be removed immediately during the construction.
7. For temperatures under 50 degrees the asphaltic concrete shall be placed in three (3) inch lifts.
8. All asphalt joints must be sealed with hot liquid asphalt, and choked with sand.
9. Any disruption in road striping must be replaced to Clackamas County Traffic Standards. Temporary reflective striping tape or reflective markers (such as stick and stomps) must be used until permanent strip can be applied.
10. Shoulders must be replaced to "as good" or "better" condition with County approved materials.
11. Bike paths and pedestrian walkways are to be repaired to the same standards as the roadway.
12. Return right-of-way to "as good" or "better" condition.

ENG147 - TRENCH PAVING - COLD PLANE - Cold Plane - This project may require a nine (9) foot to fifteen (15) foot wide, two (2) inch deep cold plane and asphaltic concrete inlay, OR a full road width two (2) inch asphaltic concrete overlay may be substituted for grind and inlay. Call the inspector to determine the exact width of cold plane.

ENG152 - BIKE PATHS/PED WAYS & ROAD SHOULDERS - Shoulders/Bike Paths/ROW -

1. Road shoulders and right-of-way must be replaced to "as good" or "better" condition with County approved materials.
2. Bike paths and pedestrian walkways are to be repaired to the same standards as the roadway.

ENG153 - UTILITY - TRENCH PLATING - Trench Plating -

1. Trench plating and patching is required in any trench within the travel lane, and includes the bike lane and shoulder of the roadway.
2. All trench work shall be backfilled and temporarily patched with two (2) inches asphaltic concrete mix or plated and tapered with cold mix at the end of each workday.
3. Plating shall be positively secured from movement and shall be ramped with cold mix asphalt or approved temporary reusable ramps to provide for all traffic use.
4. Lighted barricades with 'CONSTRUCTION AHEAD' and 'BUMP' signs mounted on them shall be placed sufficiently both ahead and adjacent of the plating to warn all traffic. All plating signs are to remain in place until permanent surface repair paving operations are underway.

ENG154 - POTHOLE - Backfill material within the pipe zone shall be sand for gas lines, and granular backfill for all other utilities.

Pothole excavations within road surfaces shall be filled above the pipe zone with CDF and be capped with either twelve (12) inches concrete cap or hot mix A.C. to match the thickness of the asphalt, and sealed with emulsion.

If core pothole excavation occurs on the shoulder, granular fill (meeting County spec.) is the required backfill.

Road shoulders and right-of-way must be restored to as good or better condition with County approved materials.

If a pothole is done within the sidewalk or a concrete street, a full panel replacement is required

## ENG154 - TRAFFIC CONTROL - Traffic Control - County Code Chapter 7.03.140

1. Provide a traffic control plan for the temporary protection and direction of traffic during the construction. Traffic Control must comply with the "Manual on Uniform Traffic Control Devices" ( MUTCD).
2. Check all signs frequently for proper positioning & condition.

### GENERAL

- The applicant is hereby authorized to work in the right of way and roadway at the location designated provided all work is performed in accordance with the Clackamas County Code, Roadway Standards, this permit, and conditions of land use approval.
- Each applicant should obtain a copy of the Clackamas County Code and Roadway Standards.
- Any fixed objects installed within County right of way must comply with Clackamas County Code and Roadway Standards.

### DOCUMENTATION

Maintain a complete set of the permit, approved plans and any conditions or special provisions at the job site.

### MODIFICATION OF THE PERMIT

Engineer of record should request approval for changes to the permit, plans, conditions or provisions if the scope of work changes.

### NOTIFICATION

Contact the County at 503-742-4700 with at least one (1) business day's notice for the following:

- Start of construction
- A break in construction greater than three (3) days (excluding holidays and weekends)
- Completion of construction

Be prepared to have your permit number available for entry into this automated system.

### UTILITY NOTIFICATION

**ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center.** Those rules are set forth in OAR 952. (Oregon Utility Notification Center 800-332-2344 or 811 or [www.digsafelyoregon.com](http://www.digsafelyoregon.com))

Contact the affected utility companies and request line location services. Resolve any utility conflicts before initiation of construction.

### SAFETY REQUIREMENTS

- The person performing the work is responsible for providing adequate safeguards in the form of barricades, pedestrian walks, night lighting, and/or other measures as the Inspector directs. The roadway or walk area shall not be unnecessarily obstructed. All material and debris shall be removed from the public right of way within a reasonable amount of time.
- Keep mud and debris off the traveled portion of the roadway.
- The person performing the work is responsible for personal or property damage resulting from the work and shall hold the County harmless from any and all legal action arising out of said work.
- The County Inspector may order the change or removal of any construction authorized by this permit at any time when the public safety, public convenience, and the general welfare of the public requires such action.

### CONSTRUCTION AND MAINTENANCE RESPONSIBILITY

Failure to fulfill the construction requirements, maintain the structures as permitted to the extent that it results in damage to the county or public road, causes a hazard to the public, or where they find violations of the Clackamas County Code, Clackamas County Roadway Standards, 2008 Oregon Standard Specifications, and any special conditions or provisions established for this permit is reason for the Inspector to revoke the permit.

### CONSTRUCTION

- Limit work and activity zones (construction, restoration, erosion control, etc.) to no more than 2,500 lineal feet at any one time, unless previously approved by the County.
- Limit open trenches in the right of way of an existing road to no more than 250 lineal feet at any one time, unless previously approved by the County. No trenches are to be left open overnight.

### ACCESS CONTROL/MANAGEMENT OF THE RIGHT OF WAY

- Clackamas County retains its right to full supervision and control within the road right of way, and this permit is not exclusive.
- Other utilities or persons may be permitted to occupy the same portion of the road right of way simultaneously.

- The person performing or contracting the work shall not cause interference with any County road work.
- Preserve and protect all public and private infrastructure (i.e. survey monuments, drainage systems, traffic control devices, roadside barriers, utilities, etc.) ensuring that these facilities continue to properly function during the course of the work.

#### **TRAFFIC CONTROL**

- Establish and maintain work zone traffic control in compliance with the Oregon Temporary Traffic Control Handbook (OTTCH) For Operations of Three Days or Less (December 2011).
- For traffic control set up for a continuous duration of longer than three (3) days, comply with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD) and the Oregon Supplements to the MUTCD.
- Roadway closures are prohibited unless approved by Clackamas County under separate permit and in compliance with the Roadway Standards.

#### **SURVEY MONUMENTS**

ORS 209.140 and 209.150 as well as the County Code 7.03.210 require the protection of all existing survey monuments. These Statutes also require notice to the County Surveyor prior to disturbing or removing any survey monument. This may require the employment of a registered Professional Land Surveyor. The applicant shall employ all necessary means in order to preserve these monuments. Failure to comply with these terms may be prosecuted as stated in ORS 209.990. The Clackamas County Surveyor's Office can be reached at 503-742-4475.

#### **INTERIM RIGHT OF WAY RESTORATION**

Restore and maintain road surfaces to their pre-existing grade with like materials or steel plating at the end of each work day unless otherwise approved. For bituminous road surfaces (asphaltic concrete or chip seals), interim restoration shall be with either hot mix or cold mix asphaltic concrete.

#### **PERMANENT RIGHT OF WAY RESTORATION**

Restore all existing infrastructure affected by the work to original or better condition including but not limited to the road surface, base and subgrade, pavement markings, drainage facilities, signs, safety appurtenances, bicycle and pedestrian facilities, vegetation or landscaping, and any other feature affected by the work.

#### **ENVIRONMENTAL**

Approval by Clackamas County does not imply or guarantee approval by Oregon Department of State Lands (DSL), Department of Environmental Quality (DEQ) or US Army Corps of Engineers (COE).

The applicant is responsible for all applications, fees, and coordination of Federal, State and Local regulatory offices with regard to fills and excavations within regulated waterways, riparian zones, and wetlands associated with the Clean Water Act and the Urban Stormwater National Pollutant Discharge Elimination System (NPDES), if required.

#### **EROSION CONTROL**

Install and maintain appropriate erosion and sediment control devices, in accordance with approved Erosion and Sediment Control Plan (ESCP) to ensure that all catch basins, drainage inlets, manholes, wetlands, waterways, and resource waters are sufficiently protected from erosion and sediment. Erosion and sediment control devices must be modified as changing conditions warrant. In the absence of a formal ESCP, comply with Water Environment Services standards (Erosion Prevention Planning and Design Manual), DEQ standards (DEQ Erosion and Sediment Control Manual, April 2005), and/or 1200c Permit, if applicable.

#### **DRAINAGE**

If the work performed under this permit involves or in any way interferes with the drainage of the roadway, the owner shall wholly and at their own expense make such corrections as necessary to the County's satisfaction.

#### **BEST MANAGEMENT PRACTICES**

Ensure all equipment is leak free with sufficient and appropriate spill prevention and clean up materials on site and that the personnel involved with the work are familiar with and proficient in their use. Remove construction equipment from the right of way when not in use. Do not park, re-fuel, or service equipment or store hazardous materials directly over or uphill from catch basins, drainage inlets, or manholes or within 150 feet of any wetland, waterway, or resource water. Re-fuel over a pervious surface and use absorbent pads to collect spilled fuel.

#### **CUSTOMER SERVICE**

Communicate and mutually coordinate, as needed, with adjacent residents and business that may be impacted by the work.



Interaction with the public shall be in a professional, courteous, and timely manner.

This permit does not permit trespass on the lands of others.

***Our goal is to provide you with excellent service. If you would like to discuss your experience with us, contact Diane Gissel at 503 742-4339, [dianeg@clackamas.us](mailto:dianeg@clackamas.us) or simply fill out our online survey at <https://www.surveymonkey.com/s/ccustomersurvey>***

# FISCHER'S FOREST PARK LARGE ONSITE SEWAGE SYSTEM CLACKAMAS COUNTY, OREGON



STATE MAP



**LOCATES (48 HOURS NOTICE  
REQUIRED PRIOR TO EXCAVATION)**

THE CONTRACTOR MUST COMPLY WITH THE REGULATIONS OF O.R.S. 757.541 TO 757.571 IN LOCATION AND PROTECTION OF UNDERGROUND UTILITIES. 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 THE RULES BY CALLING THE CENTER.

**COLOR CODES:**

- RED - ELECTRICAL POWER LINES, CABLES, OR CONDUIT, AND LIGHTING CABLES
- YELLOW - GAS, OIL, STEAM, PETROLEUM, OR OTHER HAZARDOUS LIQUID OR GASEOUS MATERIALS.
- ORANGE - COMMUNICATIONS, CABLE TV, ALARM OR SIGNAL LINES, CABLES OR CONDUITS.
- BLUE - WATER, IRRIGATION, AND SLURRY LINES.
- GREEN - SEWERS, DRAINAGE FACILITIES OR OTHER DRAIN LINES.
- WHITE - PRE-MARKING OF THE OUTER LIMITS OF THE PROPOSED EXCAVATION OR MARKING THE CENTERLINE AND WIDTH OF PROPOSED LINEAL INSTALLATIONS OF BURIED FACILITIES.
- PINK - TEMPORARY SURVEY MARKINGS
- PURPLE - SLURRY AND RECLAIMED



PROJECT COORDINATES: LAT: 45°20'47"N  
LONG: 122°28'28"W

**LOCATION MAP**  
SCALE: 1"=2000'



FISCHER'S FOREST PARK LOSS  
CLACKAMAS COUNTY

REV #	DESCRIPTION	BY	DATE

DES. BY	1BTR
DRG. BY	6NSG
CHK. BY	1GLT
DATE	8/17/2021
JOB No.	2020230021

WATER ENVIRONMENT SERVICES  
FISCHERS FOREST PARK SANITARY SEWER  
COVER PAGE

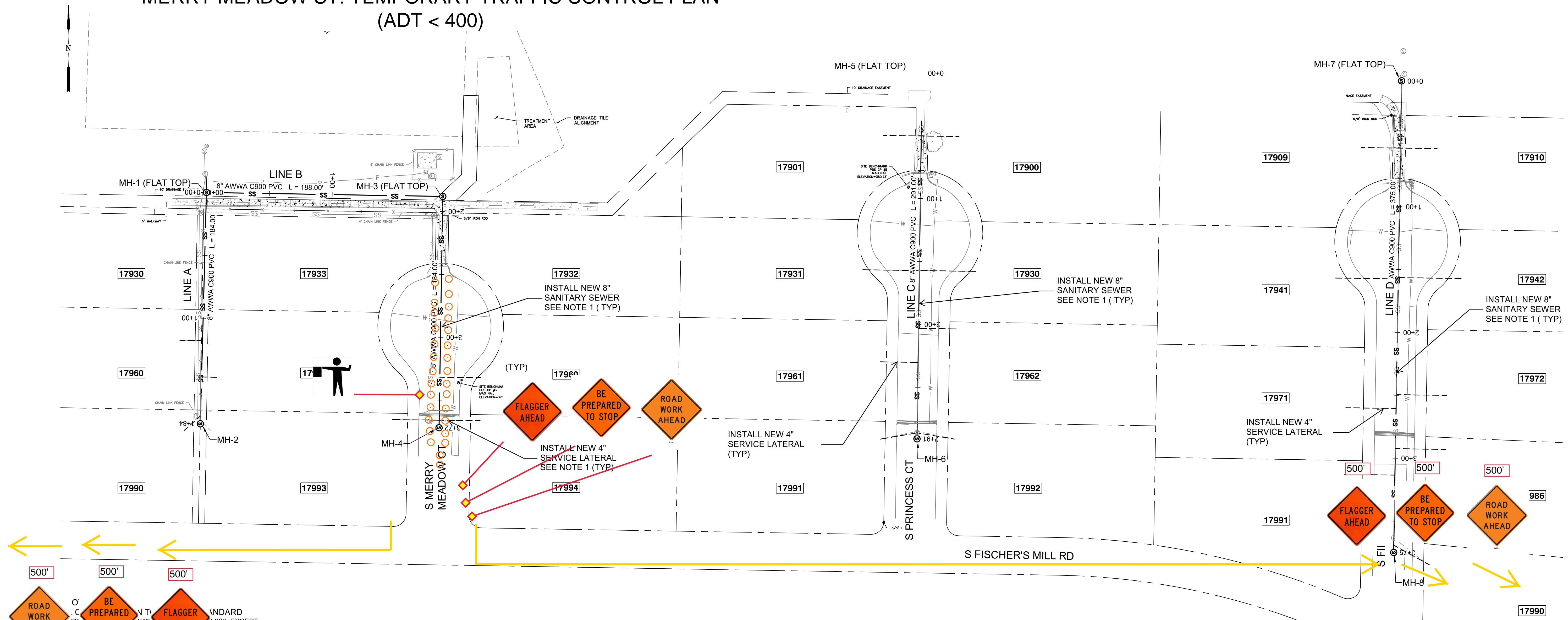
APPROVED PLANS

SHEET	01
-------	----

UP011822

S:\Working Drafting\2020230021 Clackamas County\DWG\LOSS\2020230021 LOSS G1.dwg 12/27/2021 NG711452

# MERRY MEADOW CT: TEMPORARY TRAFFIC CONTROL PLAN (ADT < 400)



SIGN SPACING=X (FEET) (1)		
<b>FREeways &amp; EXPRESSWAYS</b>	55/70 MPH	1500± (OR AS PER MUTCD)
<b>RURAL HIGHWAYS</b>	60/65 MPH	800±
<b>RURAL ROADS</b>	45/55 MPH	500±
<b>RURAL ROADS &amp; URBAN ARTERIALS</b>	35/40 MPH	350±
<b>RURAL ROADS, URBAN ARTERIALS RESIDENTIAL &amp; BUSINESS DISTRICTS</b>	25/30 MPH	200±(2)
<b>URBAN STREETS</b>	25 MPH OR LESS	100±(2)

ALL SIGNS ARE 48" X 48" BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.

- (1) All spacing may be adjusted to accommodate interchange ramps, at-grade intersections, and driveways.
- (2) This spacing may be reduced in urban areas to fit roadway conditions.



VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING.  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

NO.	DATE	BY	APPR	REVISIONS

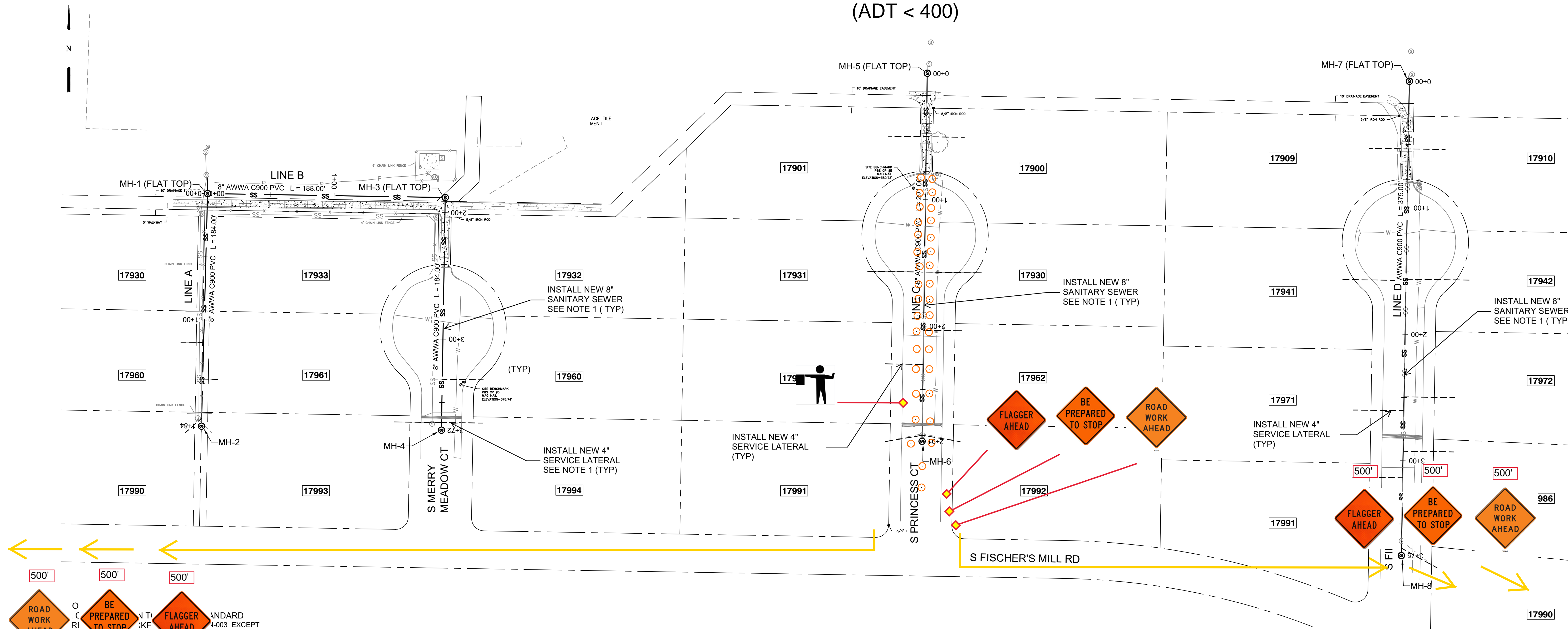
DESIGNED BY:	DRAWN BY:	CHECKED BY:	SCALE:
			1" = 40'
DATE:	PROJECT NO:		
NOVEMBER 2021			

WATER ENVIRONMENT SERVICES  
 FISCHER'S FOREST PARK SANITARY SEWER  
 PLAN VIEW

DRAWING NO. C1  
 SHEET NO. 1

APPROVED PLANS

# S PRINCESS CT: TEMPORARY TRAFFIC CONTROL PLAN (ADT < 400)



SIGN SPACING=X (FEET) (1)		
<b>FREeways &amp; EXPRESSWAYS</b>	55/70 MPH	1500± (OR AS PER MUTCD)
<b>RURAL HIGHWAYS</b>	60/65 MPH	800±
<b>RURAL ROADS</b>	45/55 MPH	500±
<b>RURAL ROADS &amp; URBAN ARTERIALS</b>	35/40 MPH	350±
<b>RURAL ROADS, URBAN ARTERIALS RESIDENTIAL &amp; BUSINESS DISTRICTS</b>	25/30 MPH	200±(2)
<b>URBAN STREETS</b>	25 MPH OR LESS	100±(2)
ALL SIGNS ARE 48" X 48" BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.		

- (1) All spacing may be adjusted to accommodate interchange ramps, at-grade intersections, and driveways.
- (2) This spacing may be reduced in urban areas to fit roadway conditions.



VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING.  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

NO.	DATE	BY	APPR	REVISIONS

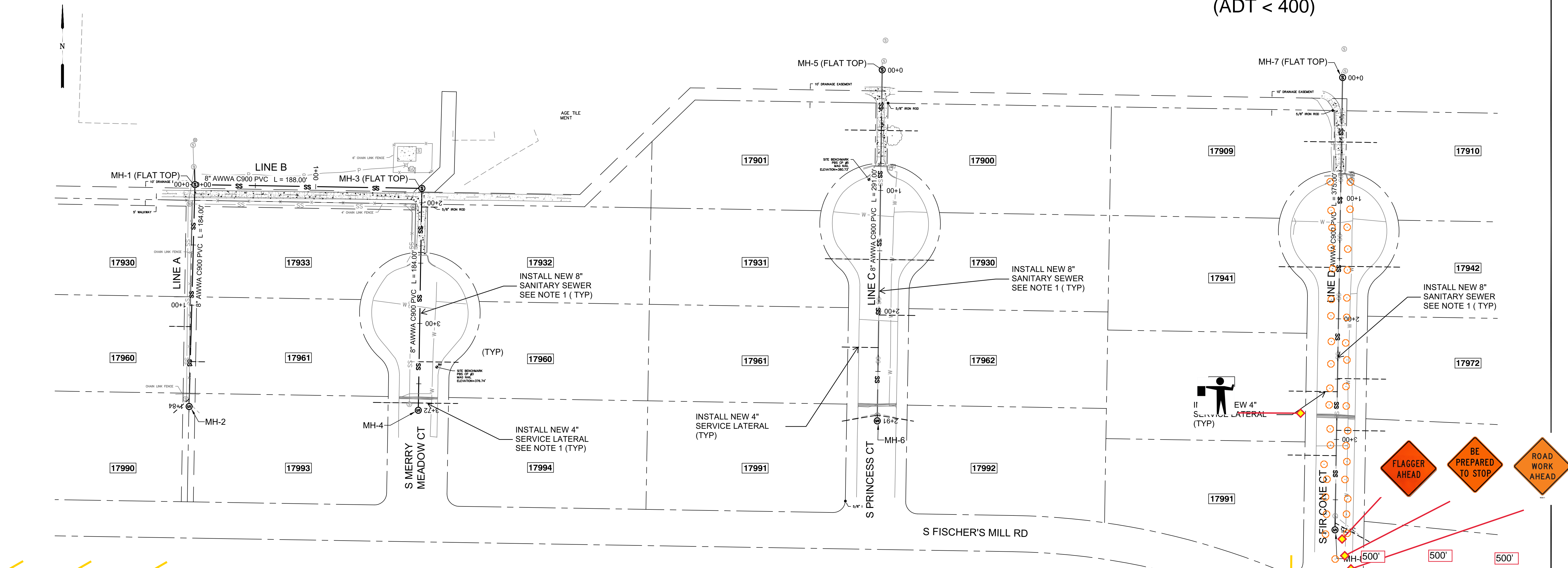
DESIGNED BY:	DRAWN BY:	CHECKED BY:	SCALE:
DATE:	NOVEMBER 2021	PROJECT NO.:	1" = 40'

WATER ENVIRONMENT SERVICES  
 FISCHER'S FOREST PARK SANITARY SEWER  
 PLAN VIEW

DRAWING NO. C1  
 SHEET NO.

APPROVED PLANS

# S FIR CONE CT: TEMPORARY TRAFFIC CONTROL PLAN (ADT < 400)

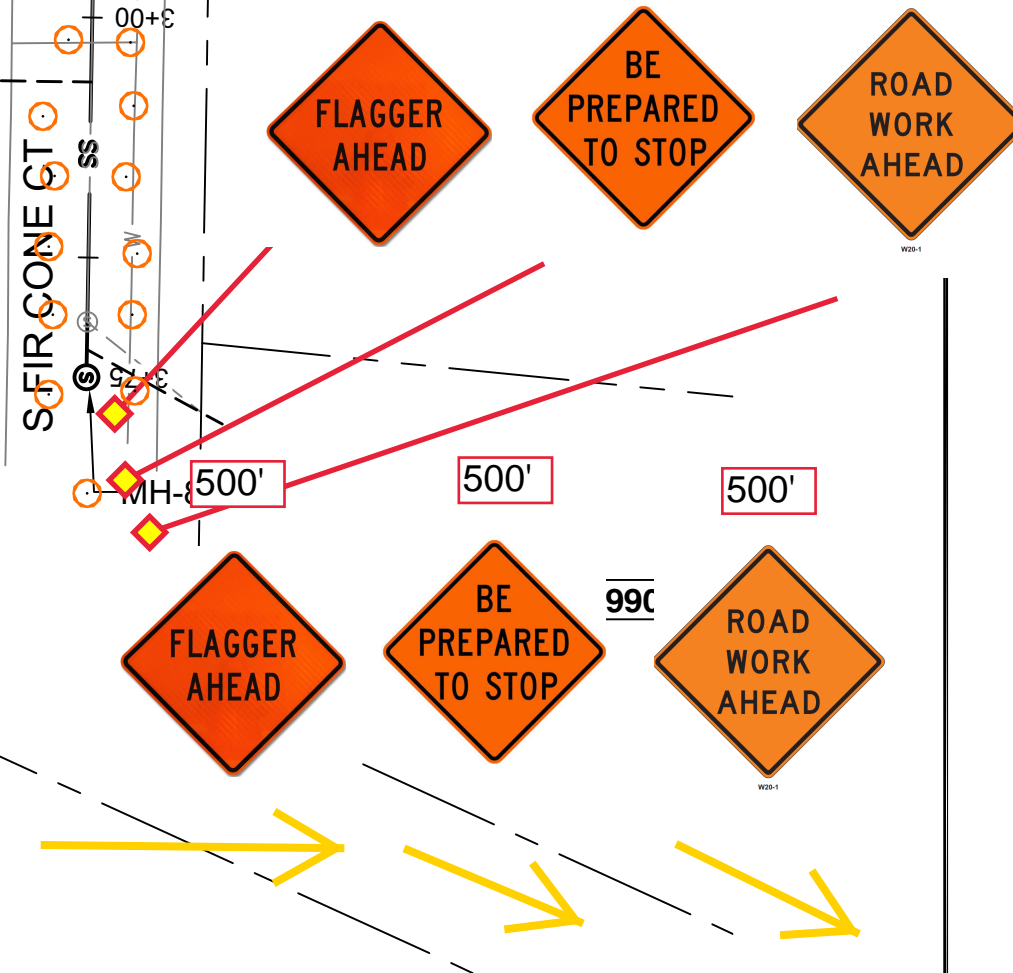


NOTE:  
1. CONSTRUCTION TO FOLLOW STANDARD TRENCH 500' BACKFILL 500' SAN-003 EXCEPT



SIGN SPACING=X (FEET) (1)		
FREEWAYS & EXPRESSWAYS	55/70 MPH	1500'± (OR AS PER MUTCD)
RURAL HIGHWAYS	60/65 MPH	800'±
RURAL ROADS	45/55 MPH	500'±
RURAL ROADS & URBAN ARTERIALS	35/40 MPH	350'±
RURAL ROADS, URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	200'±(2)
URBAN STREETS	25 MPH OR LESS	100'±(2)
ALL SIGNS ARE 48" X 48" BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.		

- (1) All spacing may be adjusted to accommodate interchange ramps, at-grade intersections, and driveways.
- (2) This spacing may be reduced in urban areas to fit roadway conditions.



VERIFY SCALES  
BAR IS ONE INCH ON ORIGINAL DRAWING.  
0" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

NO.	DATE	BY	APPR	REVISIONS

DESIGNED BY: \_\_\_\_\_ DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ SCALE: 1" = 40'  
DATE: NOVEMBER 2021 PROJECT NO: \_\_\_\_\_

WATER ENVIRONMENT SERVICES  
FISCHER'S FOREST PARK SANITARY SEWER  
PLAN VIEW

DRAWING NO. C1  
SHEET NO. 1

APPROVED PLANS

APPENDIX C  
MANHOLE/PIPELINE TESTING FORMS





**WATER ENVIRONMENT SERVICES  
A DEPARTMENT OF CLACKAMAS COUNTY**

**LOW PRESSURE AIR/MANDREL TEST**

Project: NCRA – Phase III Improvements

Date: \_\_\_\_\_

Contractor: \_\_\_\_\_

Project #: \_\_\_\_\_

Testing Company: \_\_\_\_\_

Inspector: \_\_\_\_\_

Tested Section:		Air Test:		Passed	Failed	Mandrel Test:	Passed	Failed
Diameter (in)	Length (ft)	$T=d^2L/42$	T=Minutes					
				1. Average Ground Water Height Above Pipe	=	_____	feet	
				2. Psi/ft of Ground Water	x	<u>0.433</u>	psi/ft	
				3. Average Ground Water Pressure	=	_____	psi	
				4. Test Pressure	+	<u>4.00</u>	psi	
				5. Beginning Test Pressure	=	_____	psi	
				6. Timed Pressure Drop	-	_____	psi	
				7. Ending Test Pressure	=	_____	psi	
				8. TIME REQUIRED BY SPEC	=	_____	Min	
T = 56 d if A < 625 ft <sup>2</sup>		Totals						

Tested Section:		Air Test:		Passed	Failed	Mandrel Test:	Passed	Failed
Diameter (in)	Length (ft)	$T=d^2L/42$	T=Minutes					
				1. Average Ground Water Height Above Pipe	=	_____	feet	
				2. Psi/ft of Ground Water	x	<u>0.433</u>	psi/ft	
				3. Average Ground Water Pressure	=	_____	psi	
				4. Test Pressure	+	<u>4.00</u>	psi	
				5. Beginning Test Pressure	=	_____	psi	
				6. Timed Pressure Drop	-	_____	psi	
				7. Ending Test Pressure	=	_____	psi	
				8. TIME REQUIRED BY SPEC	=	_____	Min	
T = 56 d if A < 625 ft <sup>2</sup>		Totals						

Tested Section:		Air Test:		Passed	Failed	Mandrel Test:	Passed	Failed
Diameter (in)	Length (ft)	$T=d^2L/42$	T=Minutes					
				1. Average Ground Water Height Above Pipe	=	_____	feet	
				2. Psi/ft of Ground Water	x	<u>0.433</u>	psi/ft	
				3. Average Ground Water Pressure	=	_____	psi	
				4. Test Pressure	+	<u>4.00</u>	psi	
				5. Beginning Test Pressure	=	_____	psi	
				6. Timed Pressure Drop	-	_____	psi	
				7. Ending Test Pressure	=	_____	psi	
				8. TIME REQUIRED BY SPEC	=	_____	Min	
T = 56 d if A < 625 ft <sup>2</sup>		Totals						

Inspector's Signature: \_\_\_\_\_

## Procedure for Air Testing of Sewer Pipe & Appurtenances

1. The Contractor may desire to make an air test prior to backfilling for his own purposes. However, the acceptance air test shall be made after backfilling and compaction has been completed to finish grade.
2. The Contractor shall furnish all facilities and personnel for conducting the test under the observation of the Engineer. The equipment and personnel shall be subject to the approval of the Engineer. The pressure gauge used shall have minimum divisions of 0.10 psi and have an accuracy of 0.0625 psi (one ounce per square inch). All air used shall pass through a single control panel.
3. The first section of pipe not less than 300 feet in length installed by each crew shall be tested in order to qualify the crew and/or material. Successful installation of this section shall be a prerequisite to further pipe installation by said crew.
4. All tees, and/or ends of side sewer stubs shall be plugged and banded, or acceptable alternate and securely fastened to withstand the internal test pressures. The Contractor shall clean the line before proceeding with the air test. All debris shall be removed at the first manhole where its presence is noted. In the event cemented or wedged debris or a damaged pipe shall prevent cleaning, the contractor shall remove the obstruction.
5. Safety Provisions. The plugs must be firmly secured and care should be exercised in their removal. The total force on a 12" plug at 4.0 psi is over 450 pounds. Care must be exercised in not loading the sewer line with the full pressure of the compressor. Keep all personnel out of manholes until the pressure has been released. If water leaks into the line after the plugs are installed and floods the air inlet and the needle on the air pressure gage indicates zero, then possibly the water column has balanced the air pressure in this instance and care is necessary in releasing the pressure. If testing below ground water level, inject the air at the upper plug and/or turn the inlet up as with a water test apparatus.
6. The pipe or sections of pipe to be tested may be wetted before the air test is started. Immediately following the pipe cleaning and wetting, the pipe shall be tested with low pressure air. Air shall be slowly supplied to the plugged pipe installation until the internal air pressure reaches 4.0 pounds per square inch greater than the average back pressure of any ground water that may submerge the pipe.
7. At least two minutes shall be allowed for temperature stabilization before proceeding further. After the two minute temperature stabilization period, disconnect the air supply.
8. The pipeline shall be considered acceptable, when tested for the calculated period of time at an average pressure of 4.0 pounds per square inch greater than the average back pressure of any ground water that may submerge the pipe; if: (1) the total rate of air loss from any section tested in its entirety between manhole and cleanout structures does not exceed 1.0 cubic feet per minute, or (2) the section under test does not lose air at a rate greater than 0.0015 cubic feet per minute per square foot of internal pipe surface.
9. If the Pipe installation fails to meet these requirements, the Contractor shall determine at his own expense the source or sources of leakage, and he shall repair or replace all defective materials and correct all faulty workmanship. The type of repairs proposed by the Contractor must be approved by the Engineer before the repair work is begun. The completed pipe installation shall meet the requirements of the air test before being considered acceptable.

## Mandrel Testing Procedures

1. In addition to hydrostatic or air testing, sanitary sewers constructed of PVC sewer pipe shall be deflection tested not less than 30 days after the trench backfill and compaction has been completed. The test shall be conducted by pulling an approved solid pointed mandrel through the completed pipeline. The diameter of the mandrel shall be 95 percent of the inside diameter of the pipe. The mandrel shall be a rigid, nonadjustable, odd-numbered-leg (9 legs minimum) mandrel having an effective length of not less than its nominal diameter.
2. Testing shall be conducted on a manhole to manhole basis and shall be done after the line has been completely cleaned and flushed. Any portion of the sewer which fails to pass the test shall be excavated, repaired or realigned, and retested with both air and deflection tests.



Sample Calculations for Time in Minutes of Air Testing Procedure for 1 psi drop

If A is > 625

$$T = d^2L/42$$

<u>d - Inches</u>	<u>L - Feet</u>	<u>d<sup>2</sup>L</u>	<u>T - Seconds</u>	<u>T - Minutes</u>
4	200	3200	76	1.27
8	502	32128	765	12.75
		35328	841	14.02

$$A = \pi Ld/12$$

<u>πd - Inches</u>	<u>L-feet</u>	<u>A = Ft<sup>2</sup></u>
4	200	209
8	502	1051
		1260

is > 625

If A is < 625 then use formula (T= 56d)

$$T = 56d$$

<u>d - Inches</u>	<u>T - Seconds</u>	<u>T - Minutes</u>
12 (8 + 4)	672	11.20
8	448	7.47

$$A = \pi Ld/12$$

<u>πd - Inches</u>	<u>L-feet</u>	<u>A = Ft<sup>2</sup></u>
4	20	21
8	150	314
		335

is < 625



**WATER ENVIRONMENT SERVICES  
A DEPARTMENT OF CLACKAMAS COUNTY**

**MANHOLE VACUUM TEST**

PROJECT: \_\_\_\_\_ DATE: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_ PROJ #: \_\_\_\_\_

TESTING COMPANY: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_

DATE	MH#	MH DIAM.	MH DEPTH	TIME REOD	VACUUM		PASS / FAIL	COMMENTS
					START	END		

NOTE: All manhole vacuum tests will be conducted in accordance with CCSD#1 Standard Sewer Specifications, Section 2-C-3-c-8. The manhole shall be set to finish grade and all paving (if applicable) completed.

Inspector's Signature: \_\_\_\_\_  
Procedures on back

### Procedure for manhole vacuum test

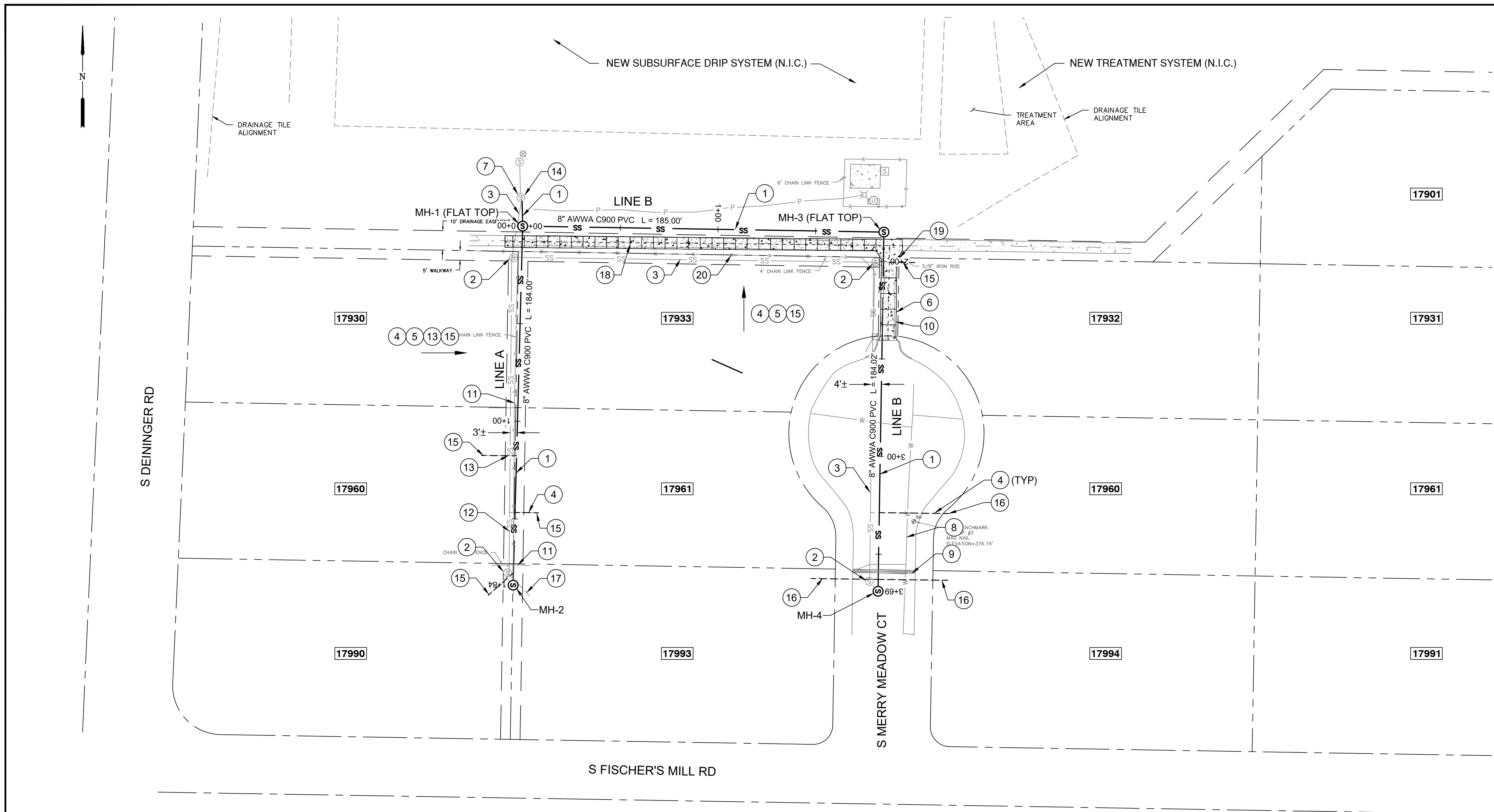
1. All lift holes shall be plugged with an approved non-shrink grout.
2. All pipes entering the manhole shall be plugged, taking care to securely brace the pipes and plugs from being drawn into the manhole. The manhole shall be set to finish grade and all paving (if applicable) completed.
3. The test head shall be placed at the inside of the top of the frame and the seal inflated in accordance with the manufacturers' recommendations.
4. A vacuum of 10 inches of mercury shall be drawn, the valve on the vacuum line of the test head closed, and the vacuum pump shut off. With the valves closed, the time shall be measured for the vacuum to drop to 9 inches.
5. The manhole shall pass if the time for the vacuum reading to drop from 10 inches of mercury to 9 inches meets or exceeds the values indicated below.

Depth of Manhole (feet)	Allowable Time (seconds)		
	48 - inch	60 - inch	72 - inch
8	20	26	33
10	25	33	41
12	30	39	49
14	35	46	57
16	40	52	67
18	45	59	73
20	50	65	81
22	55	72	89
24	59	78	97
26	64	85	105
28	69	91	113
30	74	98	121

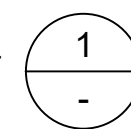
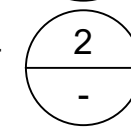
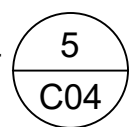
6. If the manhole fails the initial test, necessary repairs shall be made with a non-shrink grout after the vacuum has been released. Retesting shall proceed until a satisfactory test is obtained.

APPENDIX D  
CONSTRUCTION DRAWINGS (PLANS)





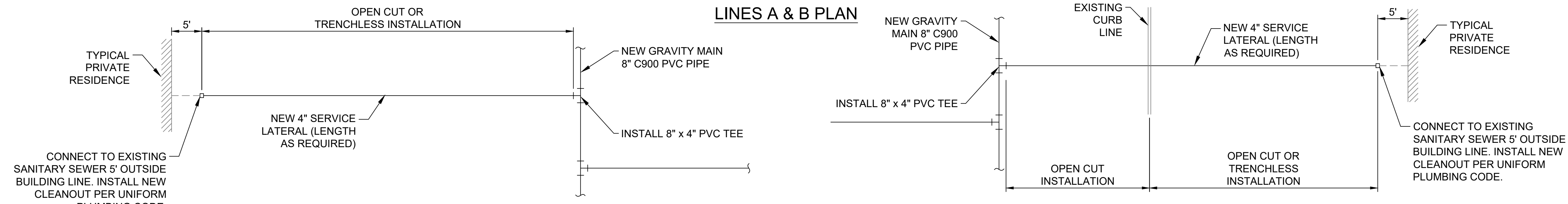
**CONSTRUCTION NOTES**

- 1 SEE SHEET C03 FOR PROFILE.
- 2 ABANDON EXISTING MANHOLE.
- 3 ABANDON EXISTING 8" CIP PIPE IN PLACE.
- 4 VERIFY LOCATION OF EXISTING SERVICE LATERAL TO BE REPLACED.
- 5 ARROWS INDICATE WHICH PIPE INDIVIDUAL HOME CONNECTS TO. VERIFY ACTUAL LOCATION IN FIELD.
- 6 SEE SHEET C04 FOR THIS AREA.
- 7 EXISTING 5,400 GALLON SEPTIC TANK. EXPOSE INLET PIPE AND REPLACE WITH NEW 8" PVC PIPE FROM MH-1.
- 8 EXISTING 4" CI WATER.
- 9 PROTECT EXISTING COMMUNICATION CONDUITS.
- 10 PROVIDE 3" SCH 40 PVC PIPE BENEATH NEW DRIVEWAY. L = 60'± REFER TO C04 FOR DETAIL.
- 11 REMOVE AND REPLACE EXISTING FENCE.
- 12 ABANDON EXISTING 8" AC PIPE IN PLACE.
- 13 CUT SHORT SECTION OF EXISTING 8" AC PIPE TO MAKE ROOM FOR NEW 4" SERVICE CONNECTION.
- 14 CONNECT TO EXISTING SEPTIC TANK.
- 15 REFER TO DETAIL 
- 16 REFER TO DETAIL 
- 17 ABANDON EXISTING SERVICE.
- 18 REPLACE PCC DRAINAGE CHANNEL PARALLEL TO LINE B. L = 190'± REFER TO DETAIL 
- 19 PROTECT EXISTING PROPERTY PIN DURING CONSTRUCTION.
- 20 PROTECT FENCE DURING INSTALLATION OF NEW SERVICE.

**GENERAL NOTES**

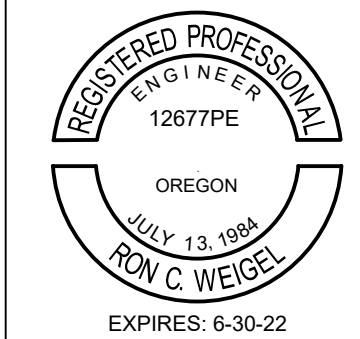
1. PROVIDE 4" AC TRENCH PATCH WITHIN ALL EXISTING PAVED SECTIONS AFTER MINIMUM 12" WIDE TEE-CUT. REFER TO DTD STD DWG U200.
2. ALL PIPE TRENCHING WITHIN PAVED AREAS EXCEPT LINE A SHALL HAVE IMPORTED CLASS C BACKFILL.
3. LENGTH OF NEW 4" SERVICE WILL VARY.
4. RECONNECT ACTIVE SERVICE LATERALS ONLY.
5. EXISTING SANITARY SEWER TO BE ABANDONED VARIES FROM 2' TO 4'± OF COVER FROM GROUND SURFACE.
6. SURFACE RESTORATION AND TRAFFIC CONTROL PER APPROVED DTD PERMIT #UP011822.
7. CONTRACTOR TO VERIFY EXACT LOCATION OF EACH SERVICE LATERAL BEFORE INSTALLING TEE IN MAINLINE.

**LINES A & B PLAN**



**TYPICAL SERVICE LATERAL**  
SCALE: N.T.S. 

**TYPICAL SERVICE LATERAL**  
SCALE: N.T.S. 



VERIFY SCALES  
BAR IS ONE INCH ON ORIGINAL DRAWING.  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

NO.	DATE	BY	APPR	REVISIONS

**CENTURY WEST ENGINEERING**

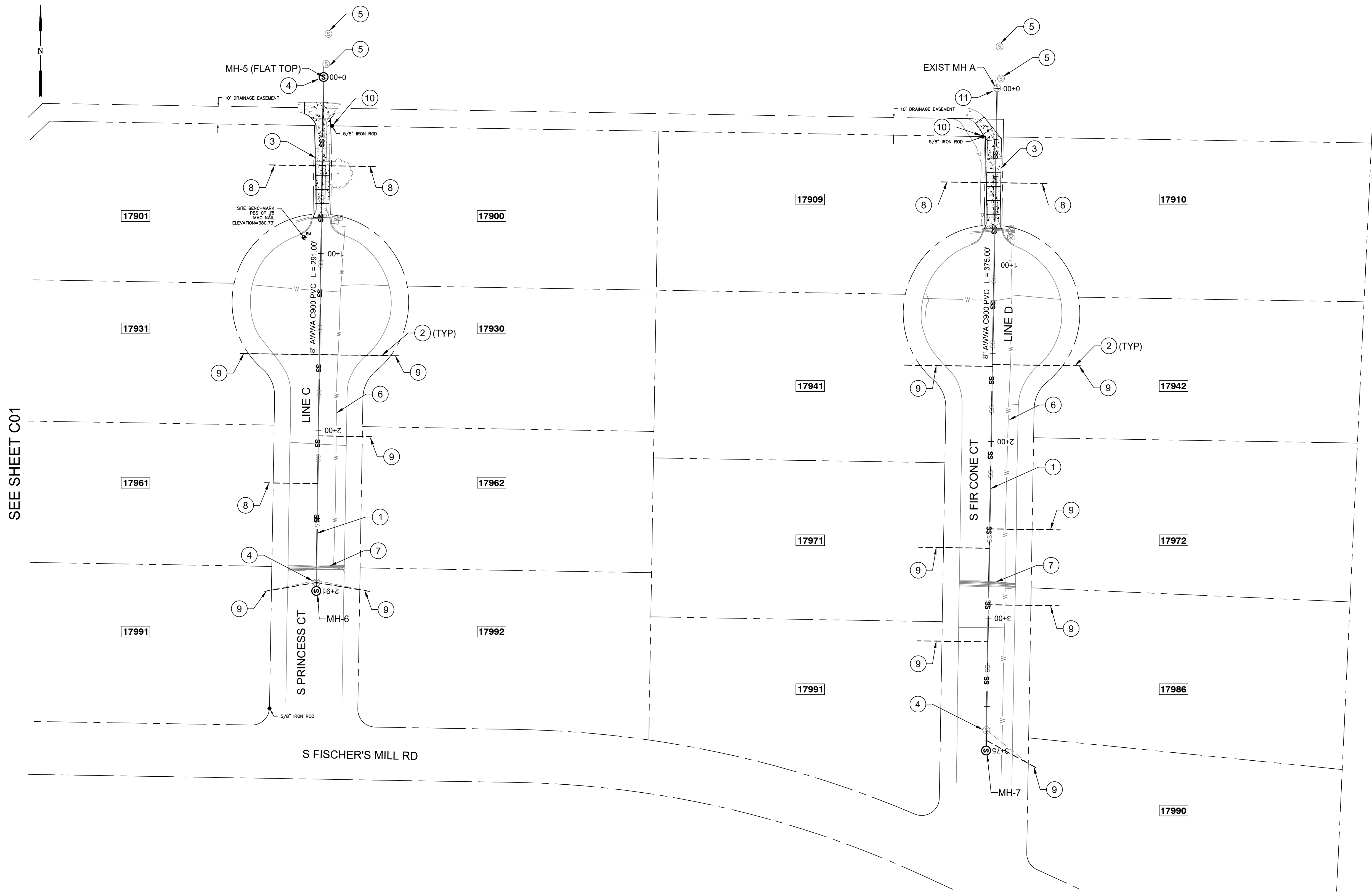
PORTLAND OFFICE  
5500 MEADOWS RD., #250  
LAKE OSWEGO, OR 97035  
503.419.2130 OFFICE  
503.639.2710 FAX

DESIGNED BY: RW    DRAWN BY: SLK    CHECKED BY: RW    SCALE: 1" = 30'  
DATE: MARCH 2022    PROJECT NO: 40748041.01

**WATER ENVIRONMENT SERVICES**  
**FISCHER'S FOREST PARK SANITARY SEWER**

**LINE A & LINE B PIPING PLAN**

DRAWING NO.  
SHEET NO.  
**C01**



**CONSTRUCTION NOTES**

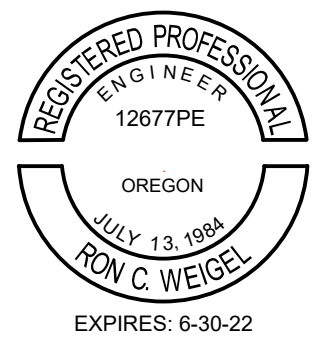
- ① SEE SHEET C03 FOR PROFILE.
- ② APPROXIMATE LOCATION OF EXISTING SERVICE LATERAL TO BE REPLACED.
- ③ SEE SHEET C04 FOR THIS AREA.
- ④ REMOVE EXISTING MANHOLE.
- ⑤ EXISTING SEPTIC TANK COVER.
- ⑥ EXISTING 4" CI WATER.
- ⑦ PROTECT EXISTING COMMUNICATION CONDUITS.
- ⑧ REFER TO DETAIL  $\frac{1}{C01}$
- ⑨ REFER TO DETAIL  $\frac{2}{C01}$
- ⑩ PROTECT EXISTING PROPERTY PIN DURING CONSTRUCTION.
- ⑪ REMOVE EXISTING PIPE. CONNECT TO EXISTING MH A.

**GENERAL NOTES**

- 1. PROVIDE 4" AC TRENCH PATCH WITHIN ALL EXISTING PAVED SECTIONS AFTER MINIMUM 12" WIDE TEE-CUT. REFER TO DTD STD DWG U200.
- 2. ALL PIPE TRENCHING WITHIN PAVED AREAS EXCEPT LINE A SHALL HAVE IMPORTED CLASS C BACKFILL.
- 3. LENGTH OF NEW 4" SERVICE WILL VARY.
- 4. RECONNECT ACTIVE SERVICES ONLY.
- 5. SURFACE RESTORATION AND TRAFFIC CONTROL PER APPROVED DTD PERMIT #UP011822.
- 6. CONTRACTOR TO VERIFY EXACT LOCATION OF EACH SERVICE LATERAL BEFORE INSTALLING TEE IN MAINLINE.

SEE SHEET C01

LINES C & D PLAN



VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING.  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

NO.	DATE	BY	APPR	REVISIONS

**CENTURY WEST ENGINEERING**

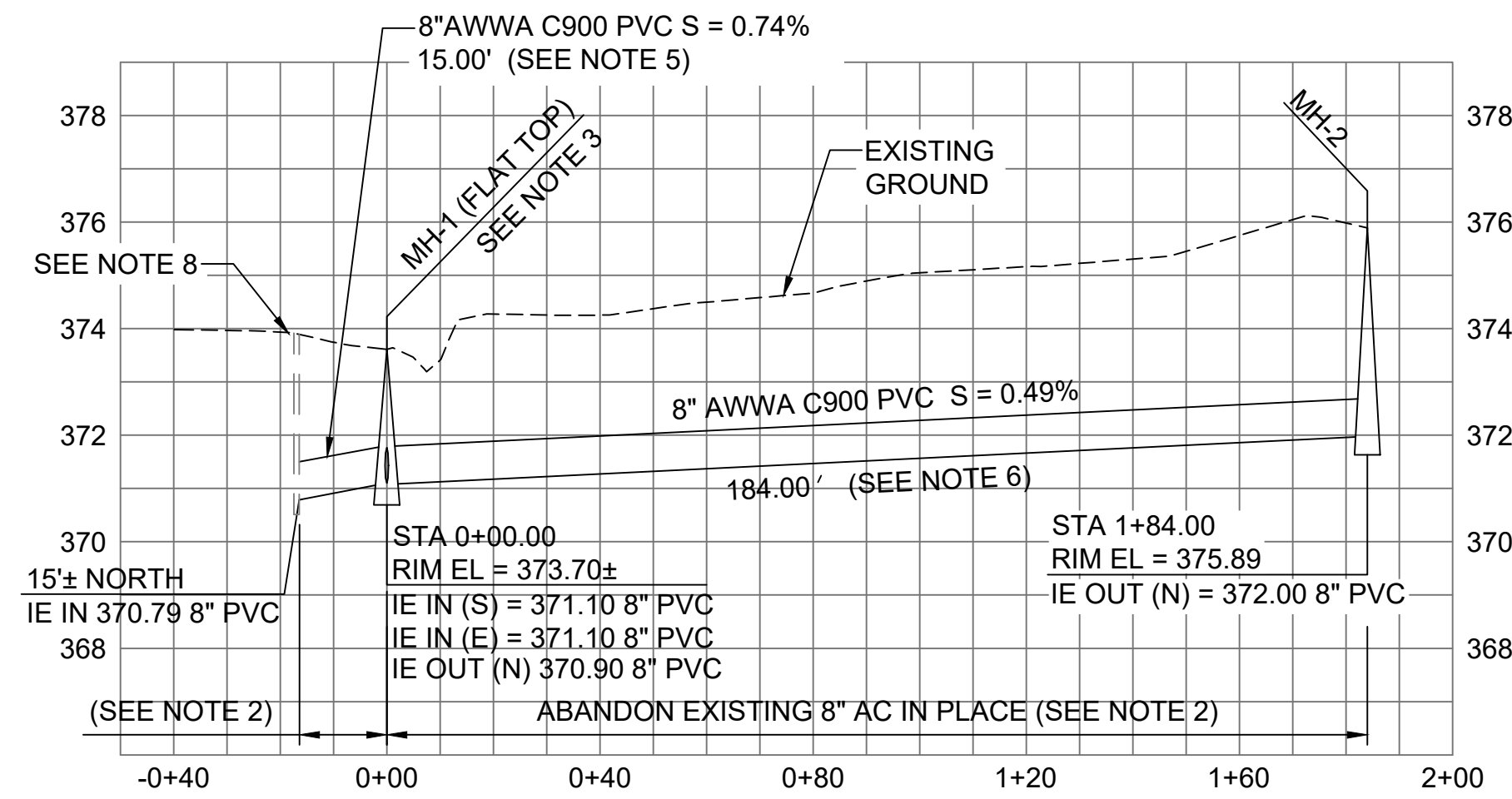
PORTLAND OFFICE  
 5500 MEADOWS RD., #250  
 LAKE OSWEGO, OR 97035  
 503.419.2130 OFFICE  
 503.639.2710 FAX

DESIGNED BY: RW    DRAWN BY: SLK    CHECKED BY: RW    SCALE: 1" = 30'  
 DATE: MARCH 2022    PROJECT NO: 40748041.01

**WATER ENVIRONMENT SERVICES**  
**FISCHER'S FOREST PARK SANITARY SEWER**

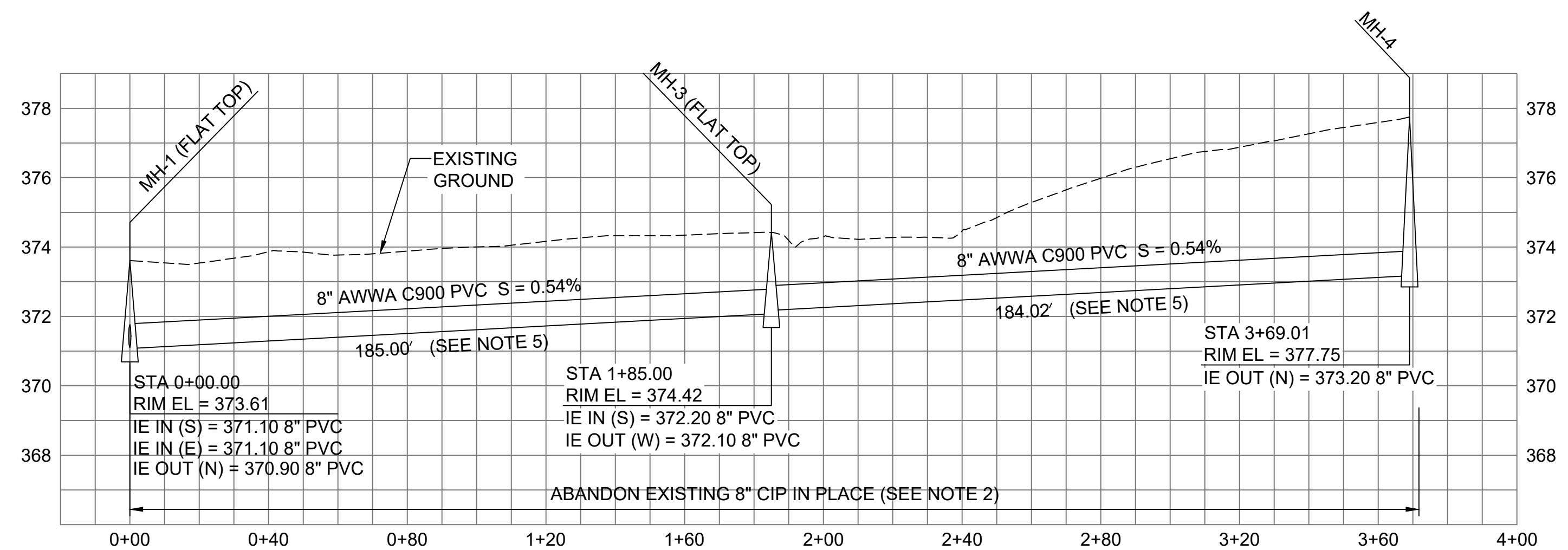
**LINE C & LINE D PIPING PLAN**

DRAWING NO.  
 SHEET NO.  
**C02**



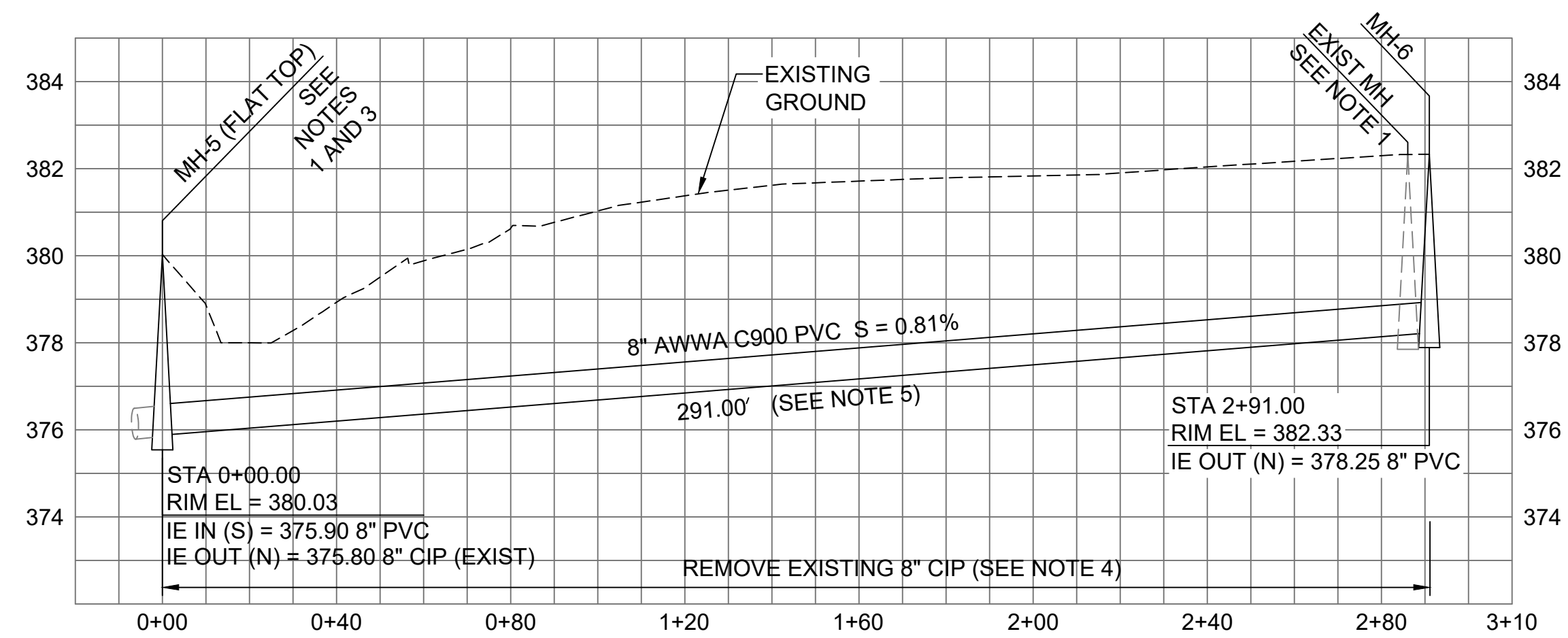
**LINE A PROFILE**

SCALE: 1" = 30' HORIZ  
1" = 3' VERT



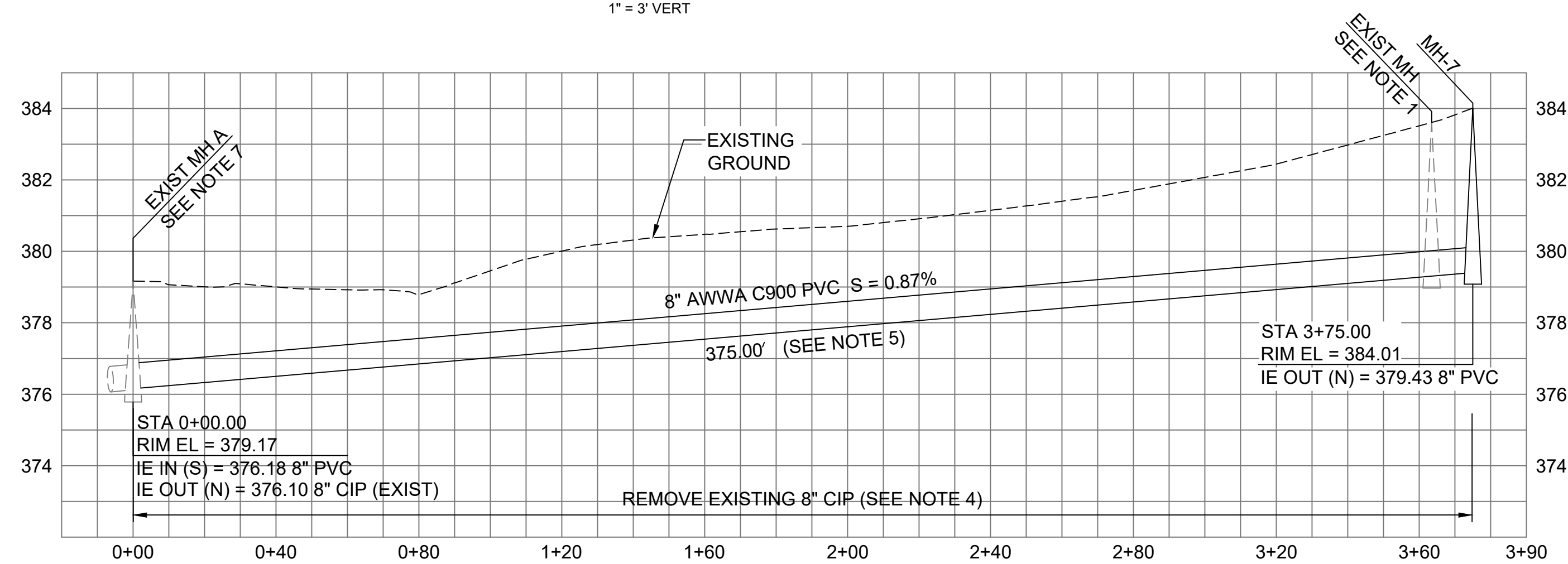
**LINE B PROFILE - S MERRY MEADOW CT**

SCALE: 1" = 30' HORIZ  
1" = 3' VERT



**LINE C PROFILE - S PRINCESS CT**

SCALE: 1" = 30' HORIZ  
1" = 3' VERT

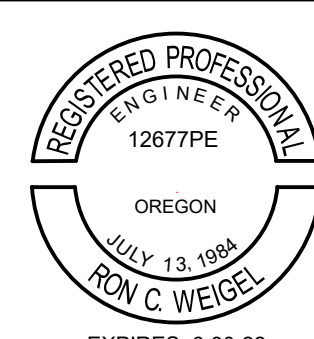


**LINE D PROFILE - S FIR CONE CT**

SCALE: 1" = 30' HORIZ  
1" = 3' VERT

**GENERAL NOTES**

1. REMOVE EXISTING MANHOLE WITHIN NEW TRENCH.
2. FILL EXISTING PIPE (NOT SHOWN IN PROFILE) WITH CLSM AFTER ABANDONING.
3. CONNECT EXISTING 8" CIP PIPE TO NEW MANHOLE.
4. POTHOLE AND PROTECT ANY WATER SERVICES AND COMMUNICATION CONDUITS CROSSING TRENCH.
5. INSTALL IMPORTED CLASS C BACKFILL ABOVE PIPE ZONE WITHIN TRENCH.
6. INSTALL NATIVE CLASS A BACKFILL ABOVE PIPE WITHIN TRENCH.
7. CONNECT NEW 8" PVC TO EXISTING MANHOLE. REMOVE EXISTING PIPE AS REQUIRE.
8. APPROXIMATE LOCATION OF EXISTING SEPTIC TANK WALL. REMOVE EXISTING PIPE AND INSTALL NEW 8" PVC AND SEAL WATERTIGHT. CONFIRM INVERT ELEVATION IN FIELD.



VERIFY SCALES  
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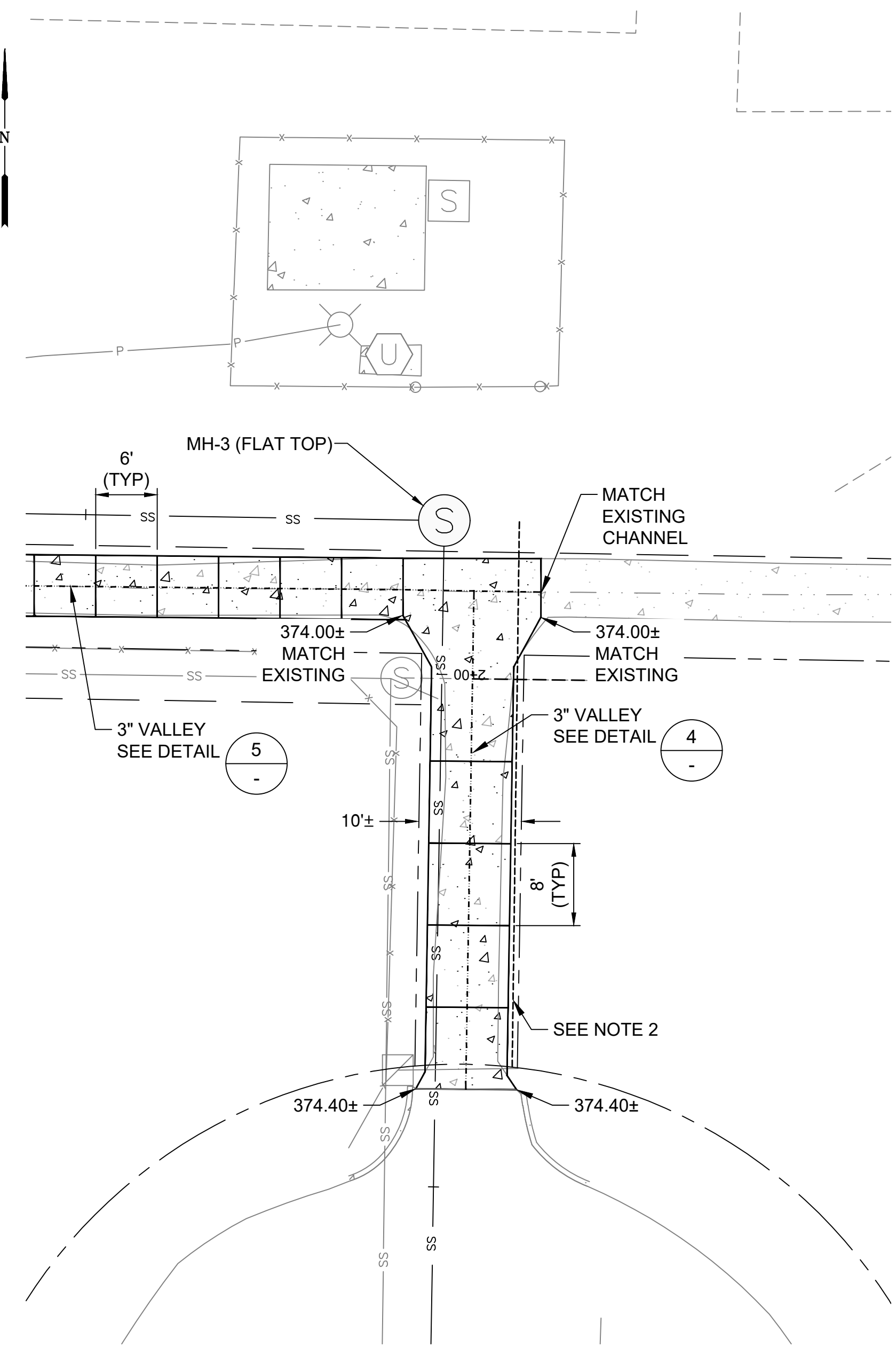
PORTLAND OFFICE  
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LAKE OSWEGO, OR 97035  
503.419.2130 OFFICE  
503.639.2710 FAX

DESIGNED BY: RW	DRAWN BY: SLK	CHECKED BY: RW	SCALE: AS SHOWN
DATE: MARCH 2022		PROJECT NO: 40748041.01	

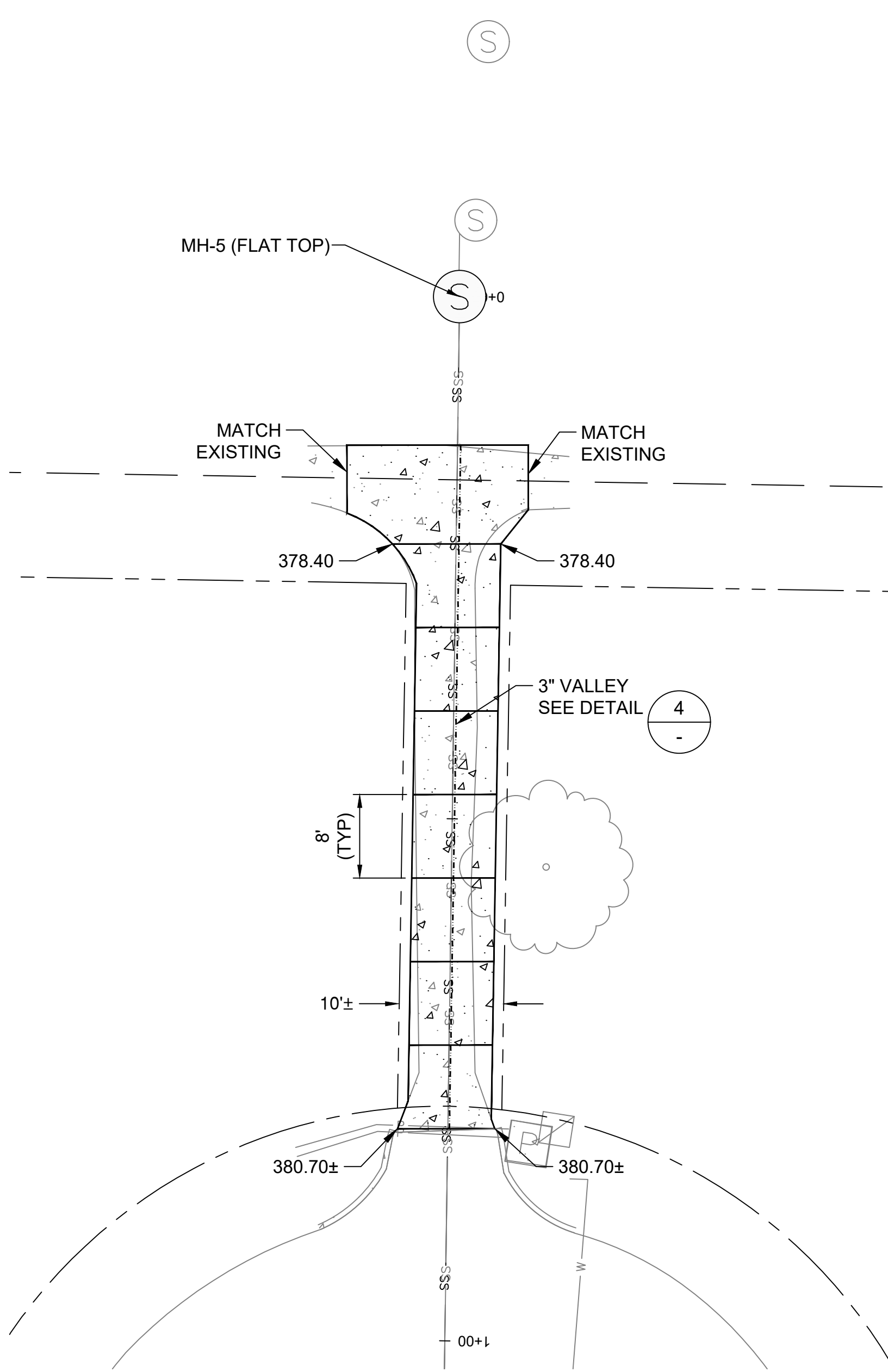
**WATER ENVIRONMENT SERVICES  
FISCHER'S FOREST PARK SANITARY SEWER**

**LINE A, LINE B, LINE C, AND LINE D  
PROFILES**

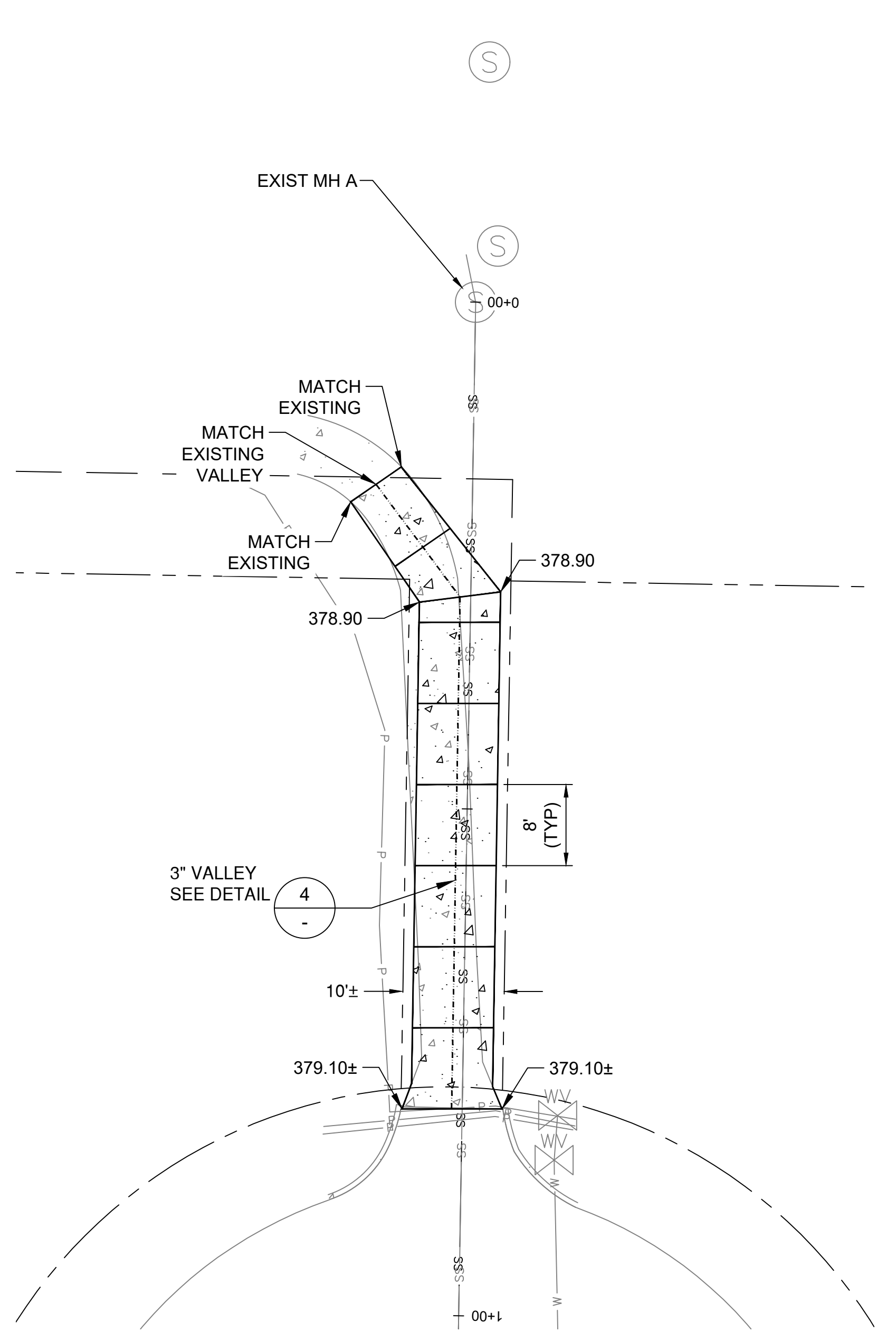
DRAWING NO.  
.  
SHEET NO.  
**C03**



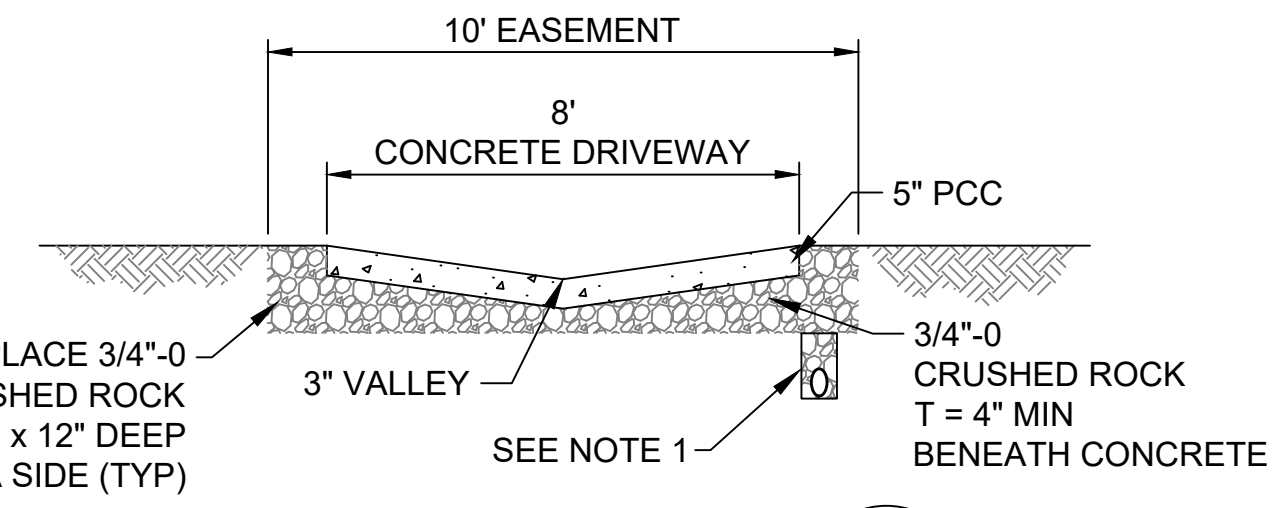
**DRIVEWAY - S MERRY MEADOW CT** 1  
SCALE: 1" = 10' C04



**DRIVEWAY - S PRINCESS CT** 2  
SCALE: 1" = 10' C04



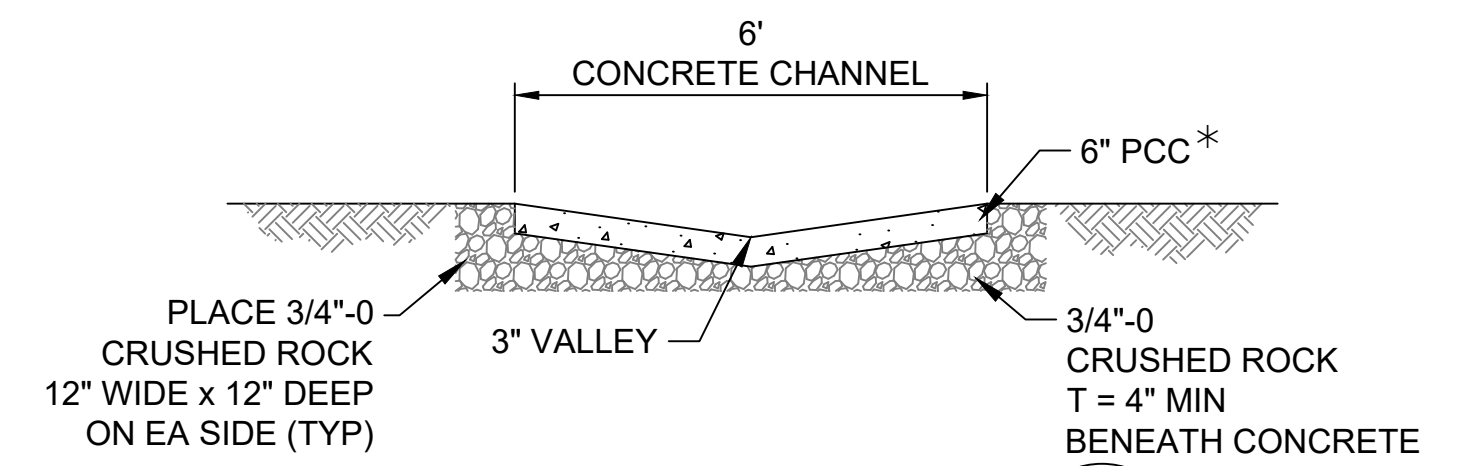
**DRIVEWAY - S FIR CONE CT** 3  
SCALE: 1" = 10' C04



**DRIVEWAY SECTION** 4  
SCALE: N.T.S. C04

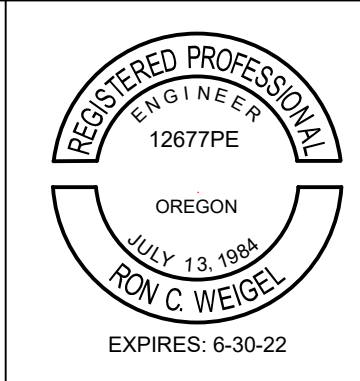
**NOTES**

1. INSTALL 3" SCH 40 PVC CONDUIT IN CRUSHED ROCK TRENCH. D = 30" MIN BELOW FINISHED SURFACE AT EDGE OF PCC.
2. 3" PVC CONDUIT FOR FUTURE USE BY OTHERS. SECURE EACH END WITH PVC CAP AND MARK WITH STAKE. L = 60'±



**DRAINAGE CHANNEL SECTION** 5  
SCALE: N.T.S. C04

\*PROVIDE CONSTRUCTION JOINT EVERY 6'



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**CENTURY WEST ENGINEERING**

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DATE: MARCH 2022    PROJECT NO: 40748041.01

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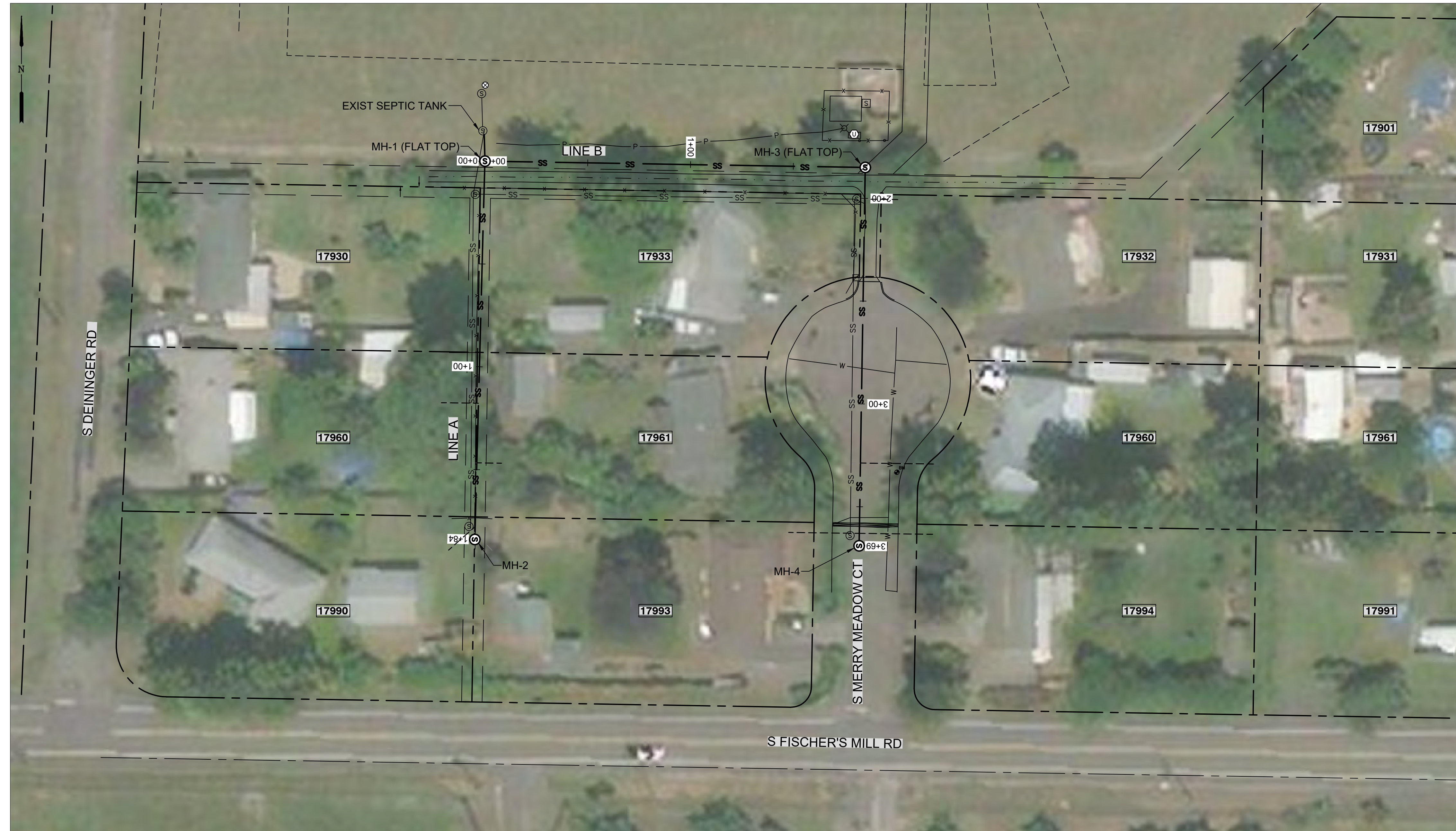
**WATER ENVIRONMENT SERVICES  
FISCHER'S FOREST PARK SANITARY SEWER**

**DRIVEWAY ACCESS PLAN**

DRAWING NO. .

SHEET NO. **C04**

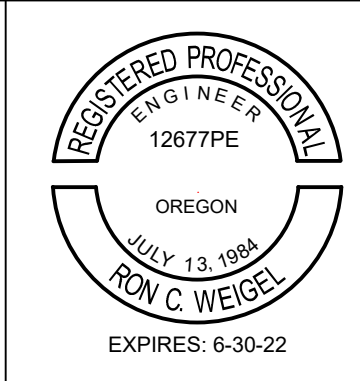




LINES A & B

LINE A CONNECTION	
PROPERTY	SEE SHEET
17930	C07
17960	C07
17990	C07
17993	C07

LINE B CONNECTION	
PROPERTY	SEE SHEET
17933	C08
17961	C08
17932	C08
17960	C08
17994	C09



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NO.	DATE	BY	APPR	REVISIONS

**CENTURY WEST ENGINEERING**

DESIGNED BY: RW    DRAWN BY: SLK    CHECKED BY: RW    SCALE: 1" = 30'

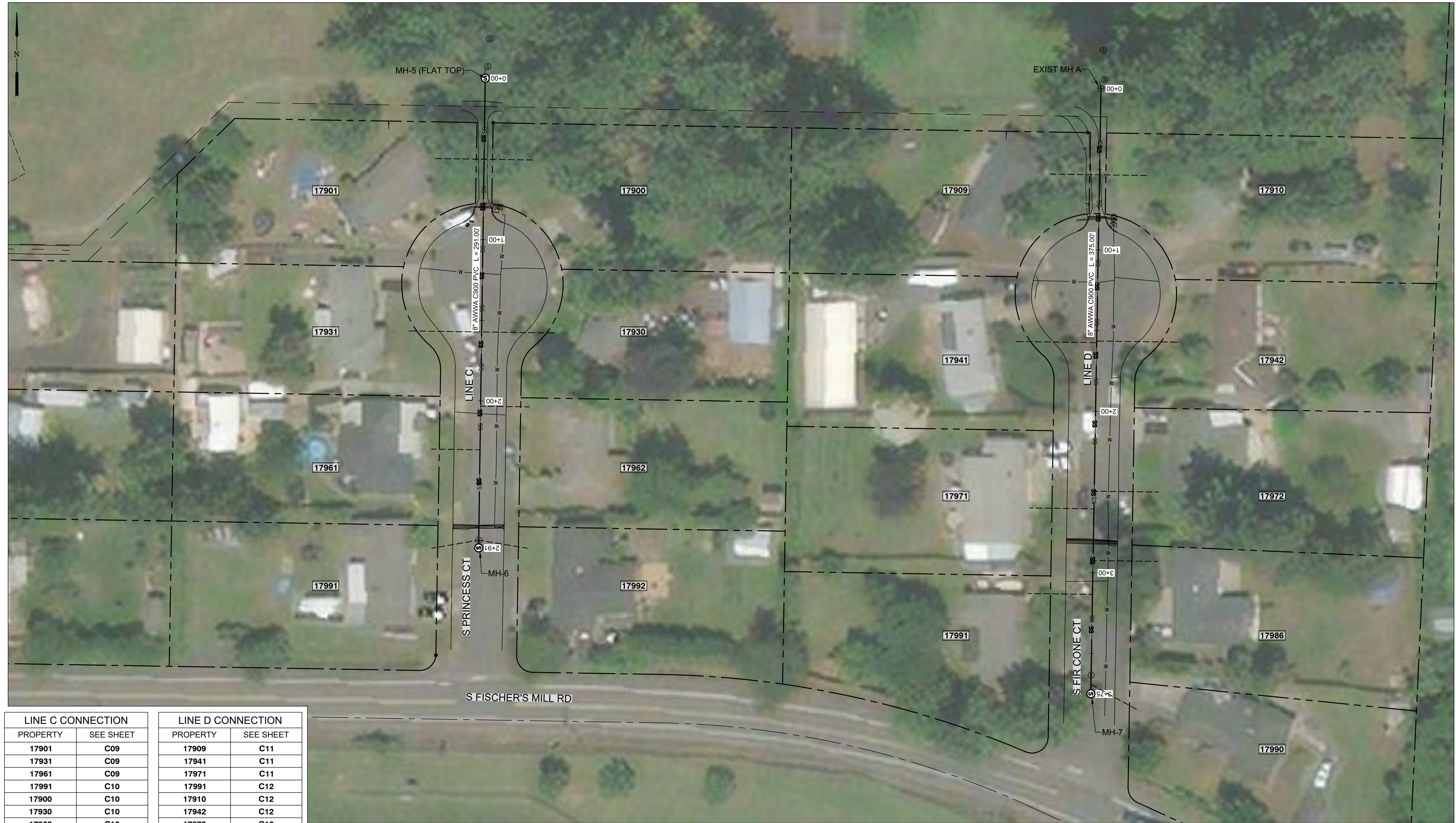
DATE: MARCH 2022    PROJECT NO: 40748041.01

PORTLAND OFFICE  
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WATER ENVIRONMENT SERVICES  
 FISCHER'S FOREST PARK SANITARY SEWER

LINE A & LINE B  
 HOUSE SERVICES

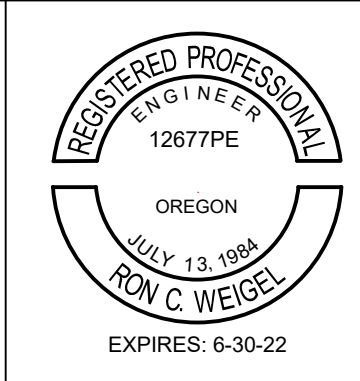
DRAWING NO.  
 SHEET NO.  
 C05



LINES C & D

LINE C CONNECTION	
PROPERTY	SEE SHEET
17901	C09
17931	C09
17961	C09
17991	C10
17900	C10
17930	C10
17962	C10
17992	C11

LINE D CONNECTION	
PROPERTY	SEE SHEET
17909	C11
17941	C11
17971	C11
17991	C12
17910	C12
17942	C12
17972	C12
17986	C13
17990	C13



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NO.	DATE	BY	APPR	REVISIONS

**CENTURY WEST ENGINEERING**

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DATE: MARCH 2022    PROJECT NO: 40748041.01

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WATER ENVIRONMENT SERVICES  
 FISCHER'S FOREST PARK SANITARY SEWER

LINE C & LINE D  
 HOUSE SERVICES

DRAWING NO.  
 SHEET NO.  
 C06

17930

S DEININGER ROAD



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17960

S DEININGER ROAD



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17990

S DEININGER ROAD



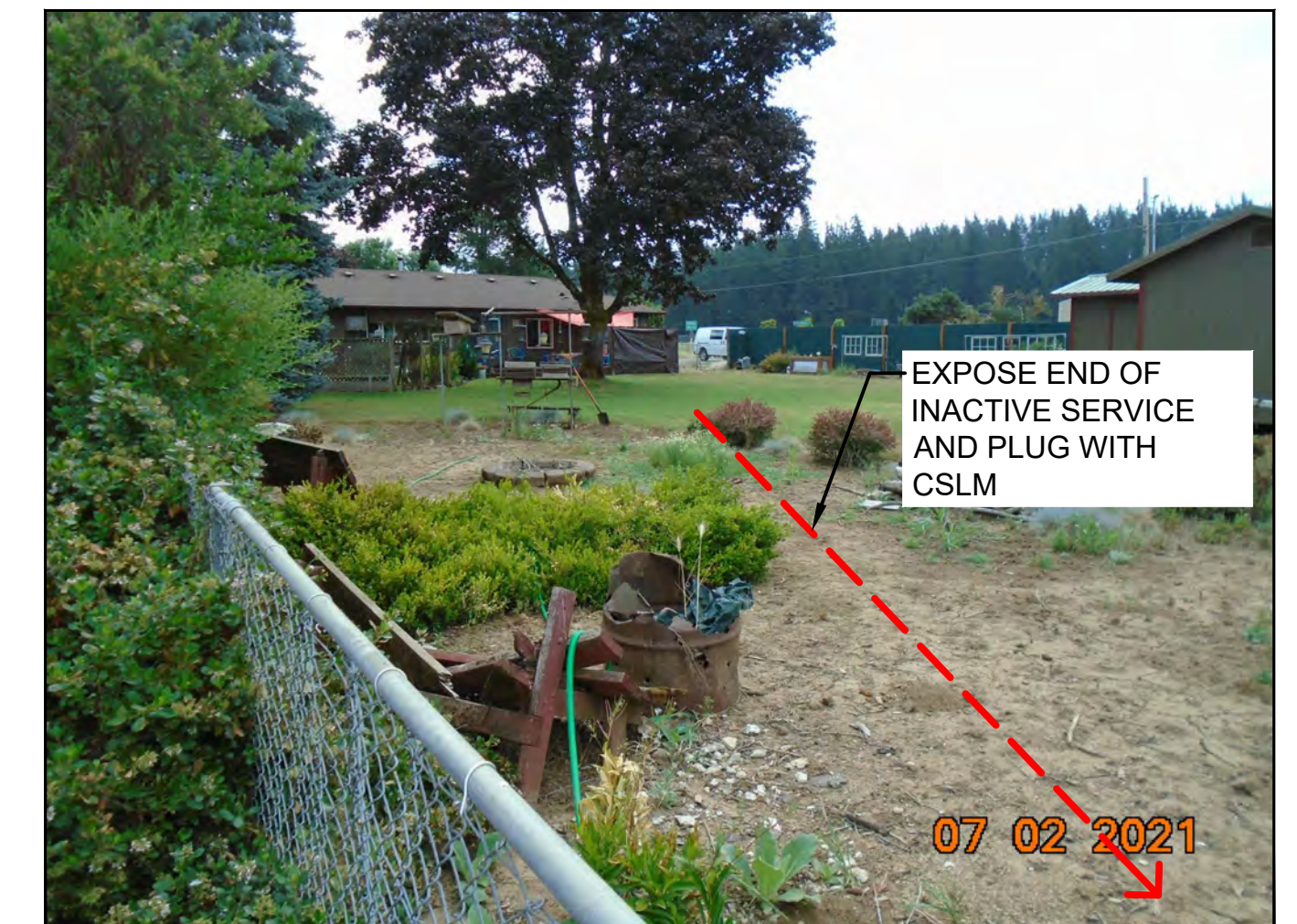
SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY

17993

S MERRY MEADOW COURT

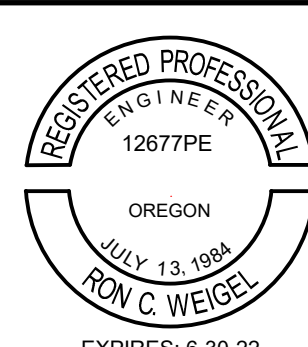


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LEGEND

---> APPROXIMATE LOCATION OF EXISTING SERVICE WITH FLOW DIRECTION



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WATER ENVIRONMENT SERVICES  
FISCHER'S FOREST PARK SANITARY SEWER  
HOUSE SERVICES  
LINE A

DRAWING NO.  
SHEET NO.  
C07

17933

S MERRY MEADOW COURT



UNABLE TO CONFIRM SERVICE LOCATION TO 17933 DURING DESIGN. SERVICE ENTERS LINE B BETWEEN MH-1 AND MH-3.



17961

S MERRY MEADOW COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17932

S MERRY MEADOW COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17960

S MERRY MEADOW COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



LEGEND

---> APPROXIMATE LOCATION OF EXISTING SERVICE WITH FLOW DIRECTION



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DATE: MARCH 2022		PROJECT NO: 40748041.01	

WATER ENVIRONMENT SERVICES  
FISCHER'S FOREST PARK SANITARY SEWER

HOUSE SERVICES  
LINE B

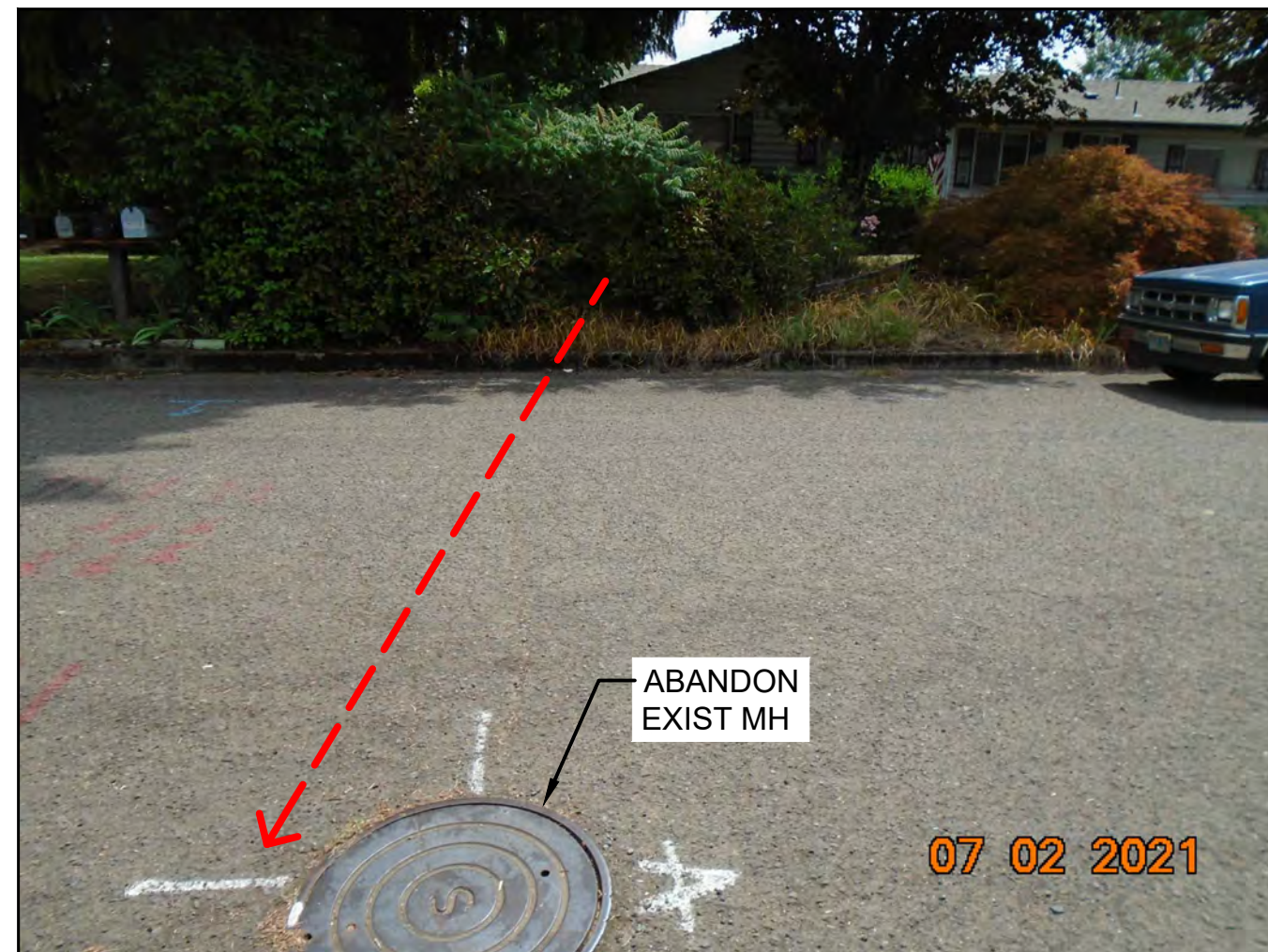
DRAWING NO.

SHEET NO.

C08

17994

S MERRY MEADOW COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17901

S PRINCESS COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17931

S PRINCESS COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17961

S PRINCESS COURT

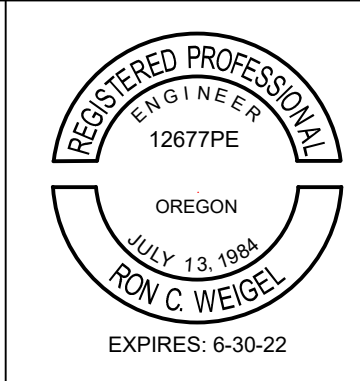


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LEGEND

---> APPROXIMATE LOCATION OF EXISTING SERVICE WITH FLOW DIRECTION



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NO.	DATE	BY	APPR	REVISIONS

**CENTURY WEST**  
ENGINEERING

DESIGNED BY: RW  
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DATE: MARCH 2022  
PROJECT NO: 40748041.01

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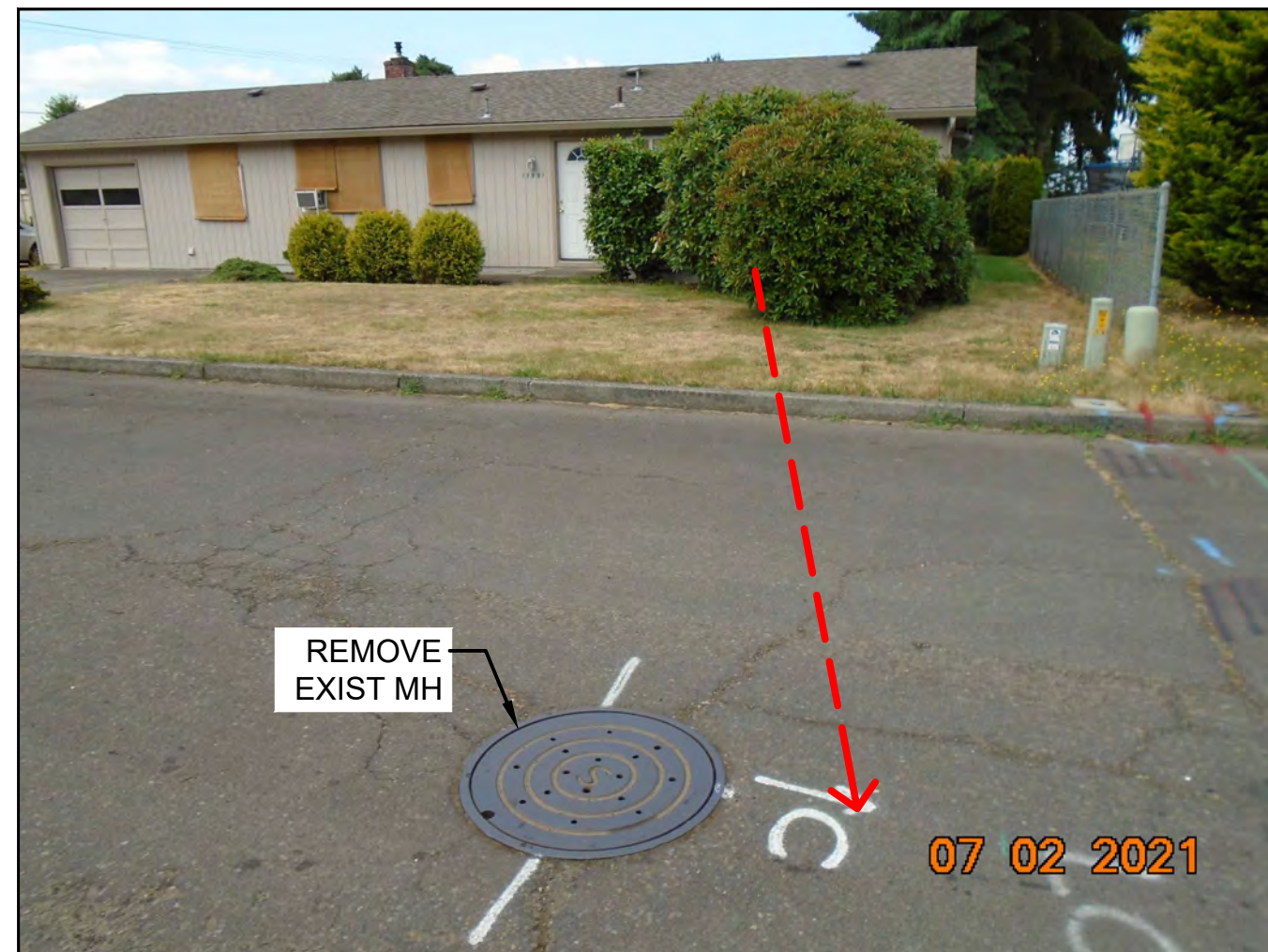
WATER ENVIRONMENT SERVICES  
FISCHER'S FOREST PARK SANITARY SEWER

HOUSE SERVICES  
LINE B AND LINE C

DRAWING NO.  
SHEET NO.  
C09

17991

S PRINCESS COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17900

S PRINCESS COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17930

S PRINCESS COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17962

S PRINCESS COURT

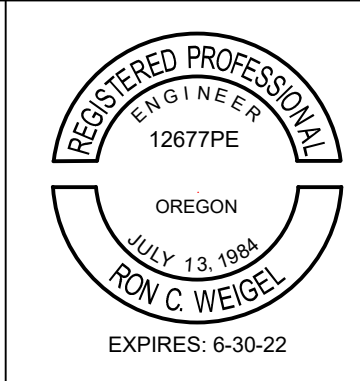


SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



LEGEND

---> APPROXIMATE LOCATION OF EXISTING SERVICE WITH FLOW DIRECTION



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**CENTURY WEST**  
ENGINEERING

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WATER ENVIRONMENT SERVICES  
FISCHER'S FOREST PARK SANITARY SEWER

HOUSE SERVICES  
LINE C

DRAWING NO.  
SHEET NO.  
C10

**17992**  
S PRINCESS COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



**17909**  
S FIR CONE COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



**17941**  
S FIR CONE COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY

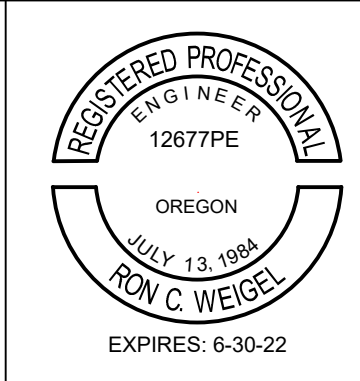
**17971**  
S FIR CONE COURT



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**LEGEND**  
 APPROXIMATE LOCATION OF EXISTING SERVICE WITH FLOW DIRECTION



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 DATE: MARCH 2022    PROJECT NO: 40748041.01

**WATER ENVIRONMENT SERVICES FISCHER'S FOREST PARK SANITARY SEWER**  
 HOUSE SERVICES LINE C AND LINE D  
 DRAWING NO. .  
 SHEET NO. C11

17991

S FIR CONE COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17910

S FIR CONE COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17942

S FIR CONE COURT



SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17972

S FIR CONE COURT

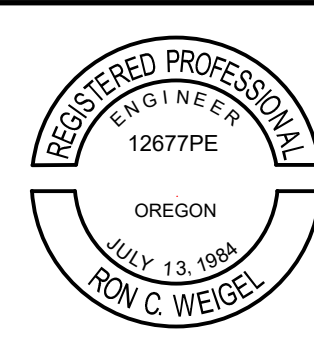


SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



LEGEND

---> APPROXIMATE LOCATION OF EXISTING SERVICE WITH FLOW DIRECTION



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WATER ENVIRONMENT SERVICES  
FISCHER'S FOREST PARK SANITARY SEWER

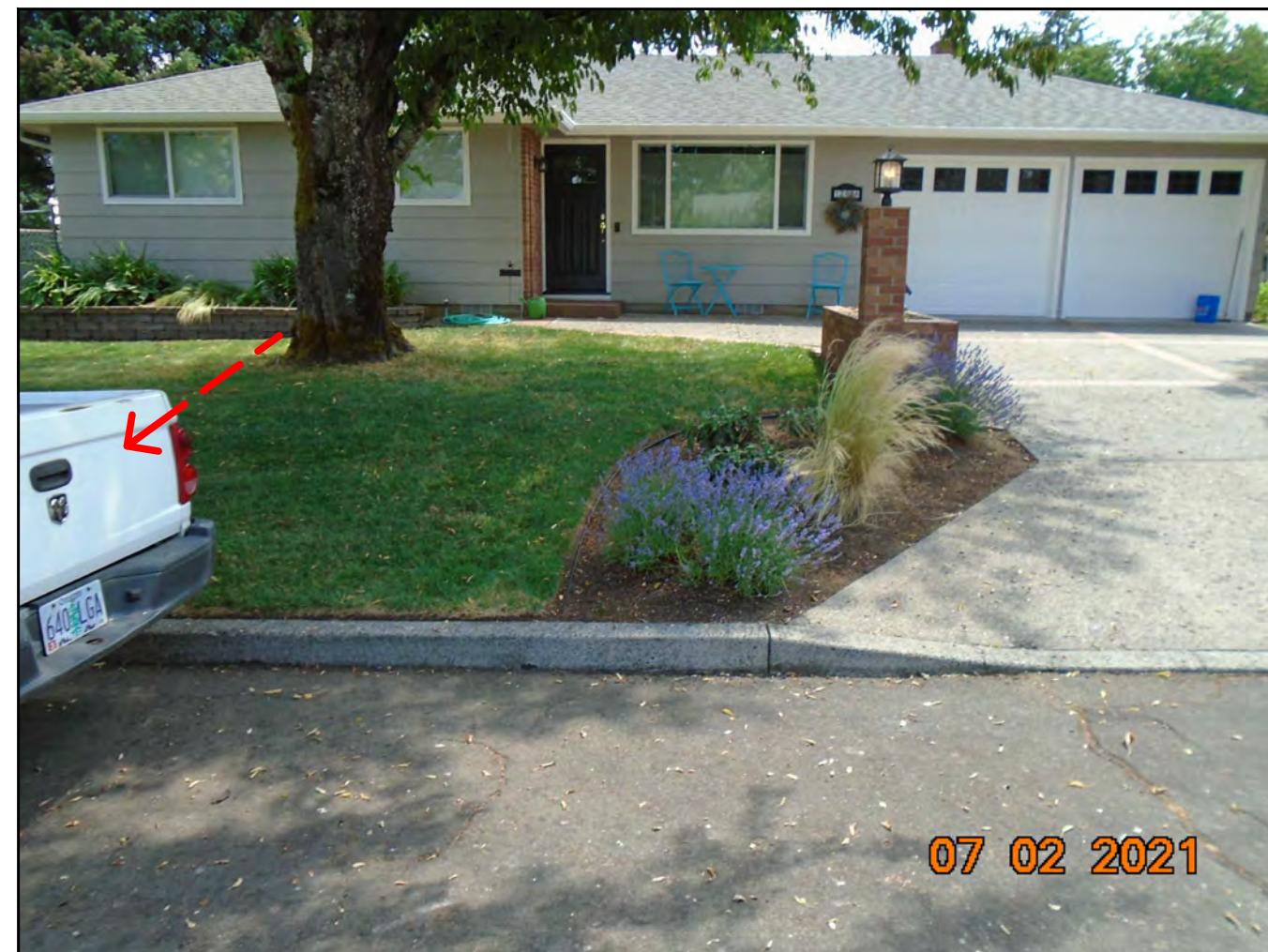
HOUSE SERVICES  
LINE D

DRAWING NO.  
.  
SHEET NO.  
C12

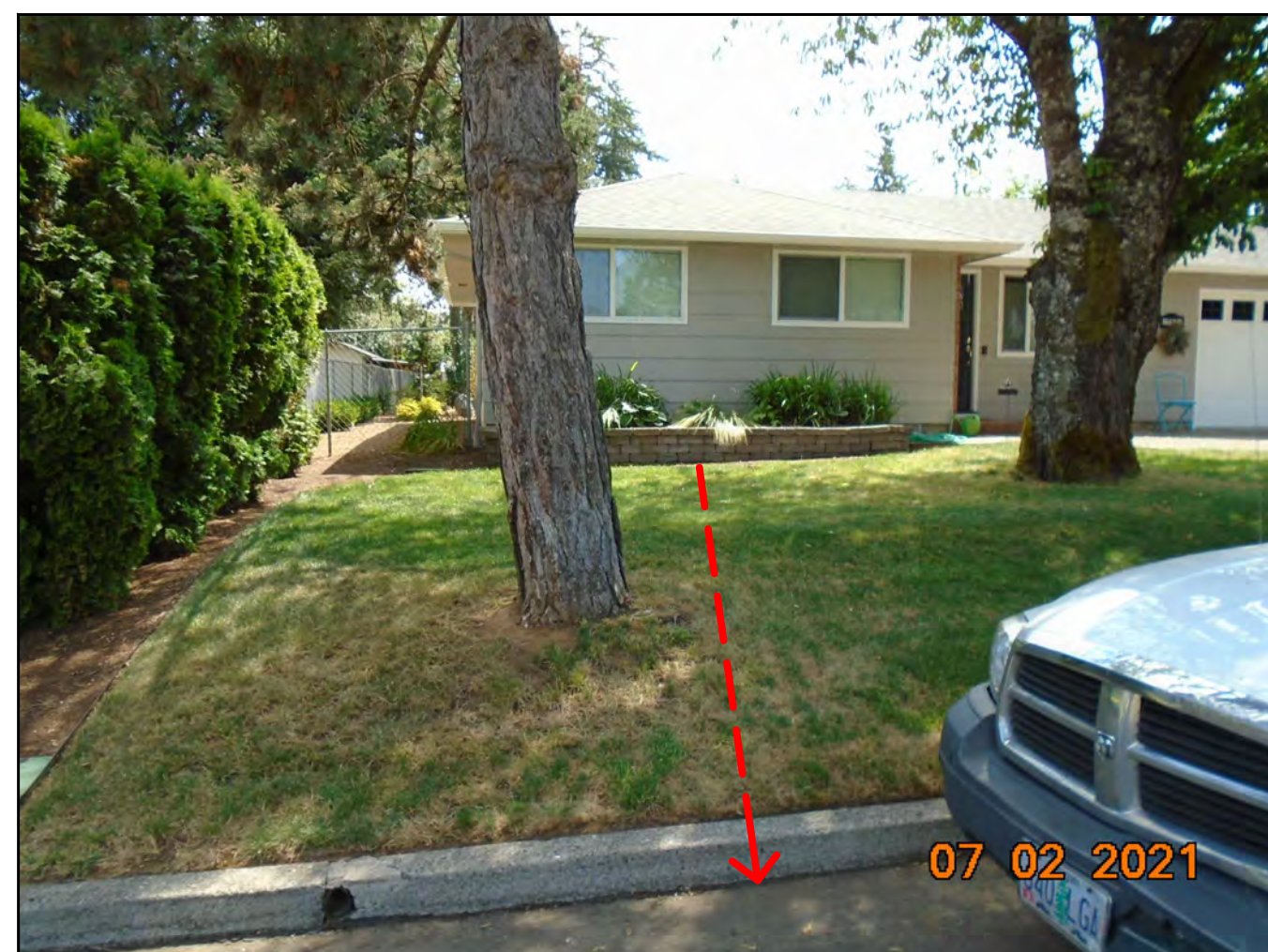


17986

S FIR CONE COURT

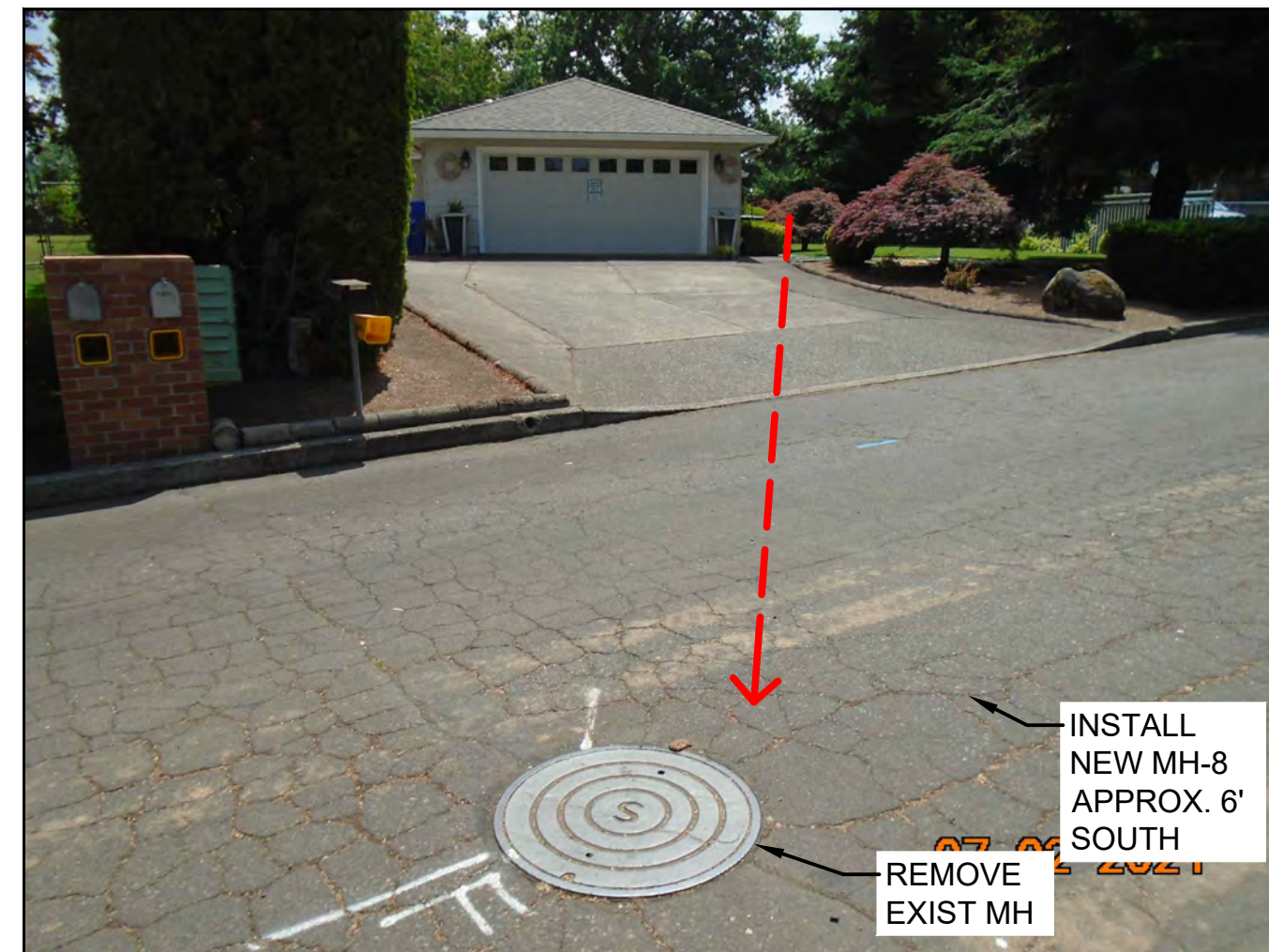


SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



17990

S FIR CONE COURT

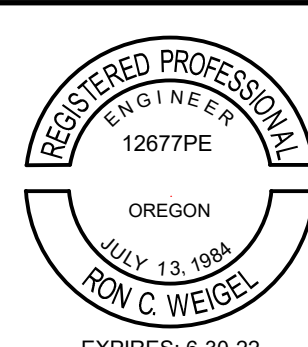


SERVICE LOCATIONS MUST BE VERIFIED IN FIELD. LINE'S SHOWN ARE ESTIMATES ONLY



LEGEND

---> APPROXIMATE LOCATION OF EXISTING SERVICE WITH FLOW DIRECTION



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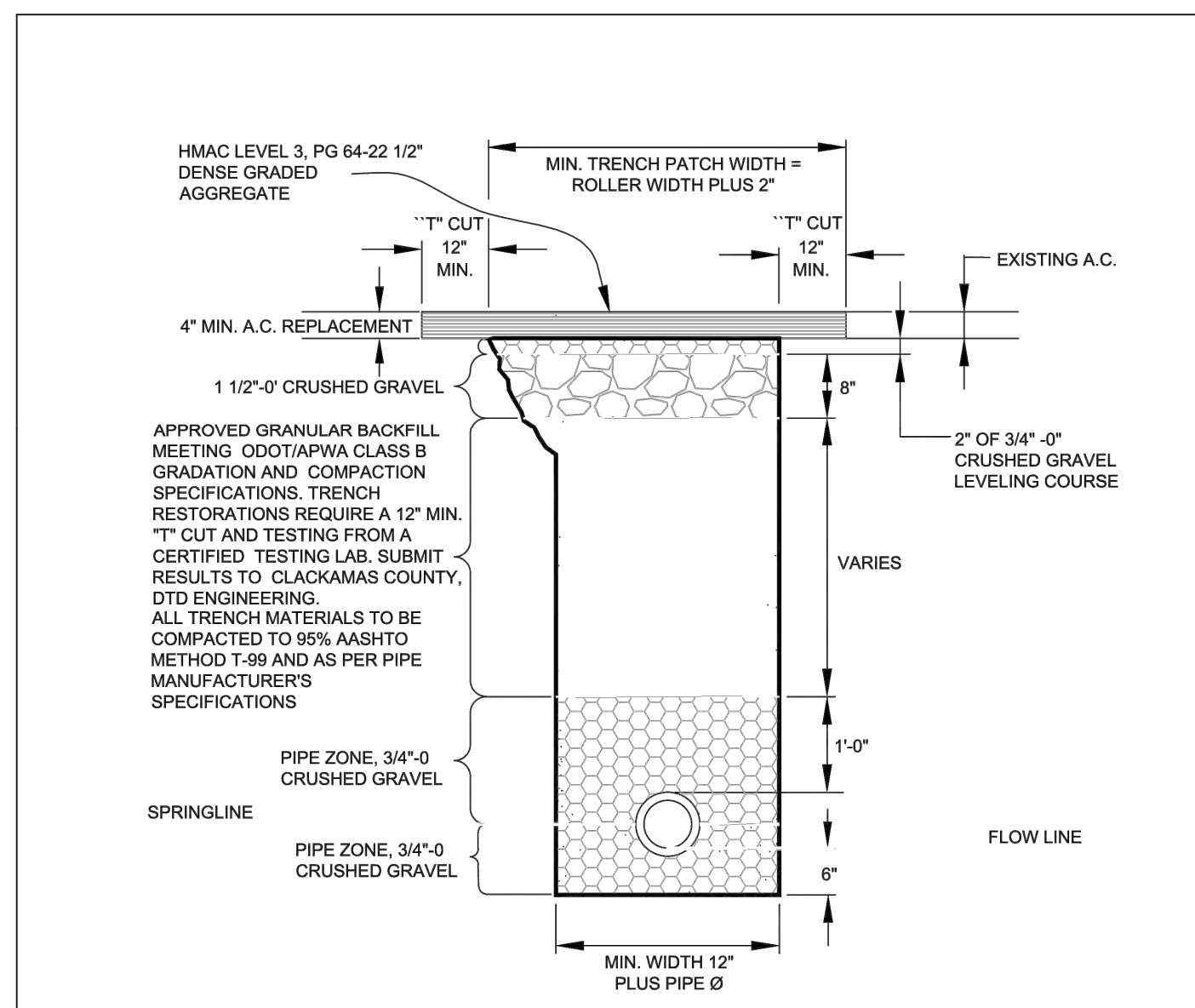


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WATER ENVIRONMENT SERVICES  
FISCHER'S FOREST PARK SANITARY SEWER  
HOUSE SERVICES  
LINE D

DRAWING NO.  
.  
SHEET NO.  
C13

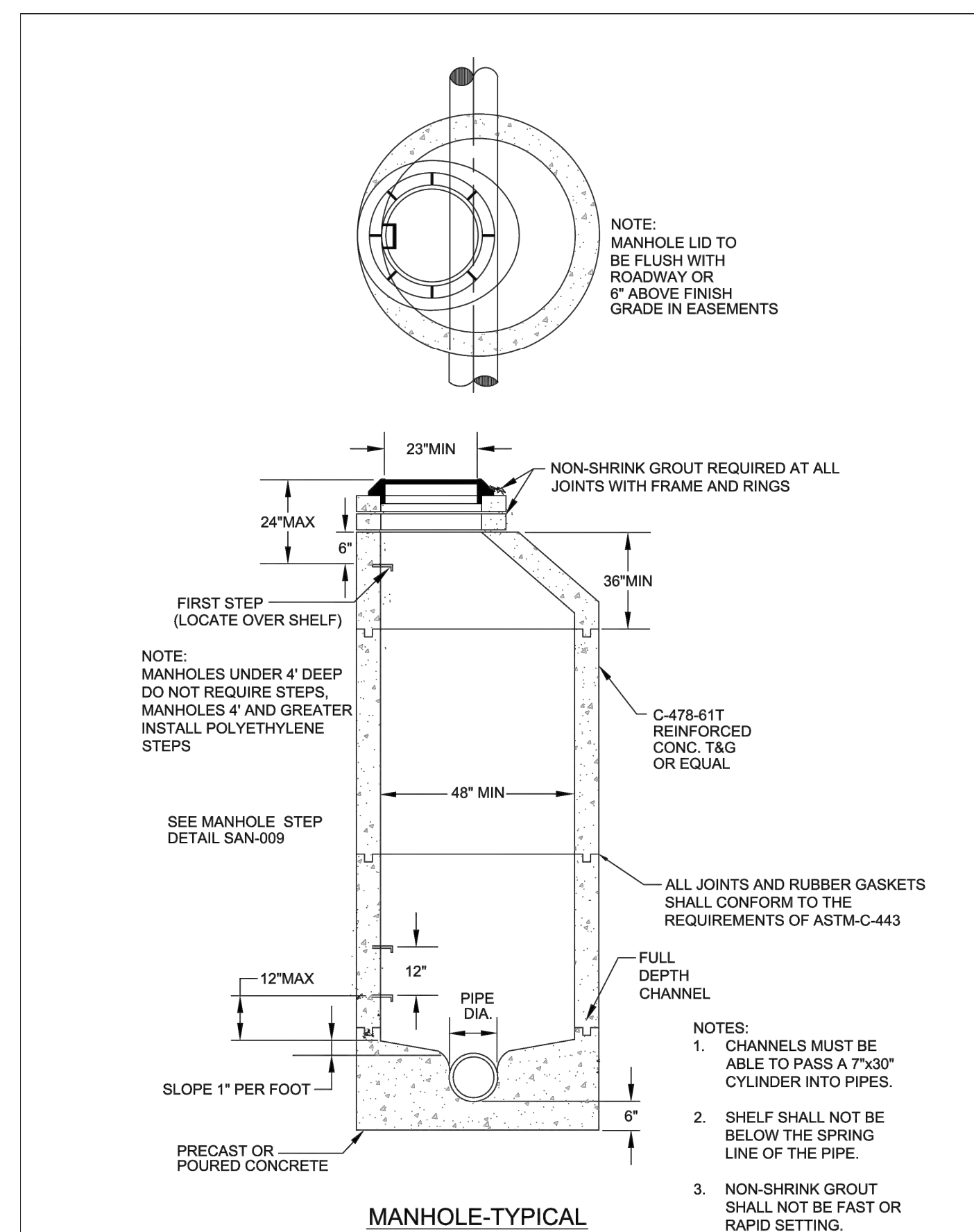


**BACKFILL-CLASS "C"**

**NOTES**

1. THE EXISTING A.C. SHALL BE SAWCUT THROUGH ENTIRE A.C. SECTION PRIOR TO EXCAVATION.
2. BACKFILL IN PIPE ZONE SHALL BE PLACED IN MAXIMUM 6" LIFTS AND COMPACTED.
3. TRENCH BACKFILL SHALL BE PLACED IN MAXIMUM 12" LIFTS TO 95% DENSITY.
4. THE USE OF CONTROL DENSITY FILL SHALL BE DETERMINED BY CLACKAMAS COUNTY, REFER TO STANDARD DRAWING U-250.
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 A.C. THE SAWCUT LINE SHALL BE APPROVED BY CLACKAMAS COUNTY PRIOR TO THE PERMANENT A.C. REPAIR.
7. RESTORE A.C. SECTION WITH 4" OF 1/2" DENSE GRADED AGGREGATE MIX OR AN EQUAL THICKNESS OF THAT REMOVED WHICHEVER IS GREATER, PLACE A.C. IN MAXIMUM 2" LIFTS.
8. A.C. JOINTS/SEAMS SHALL BE SEALED WITH HOT LIQUID ASPHALT, OR APPROVED EQUAL, AND SANDED.
9. CLACKAMAS COUNTY SHALL BE NOTIFIED FOR INSPECTION.

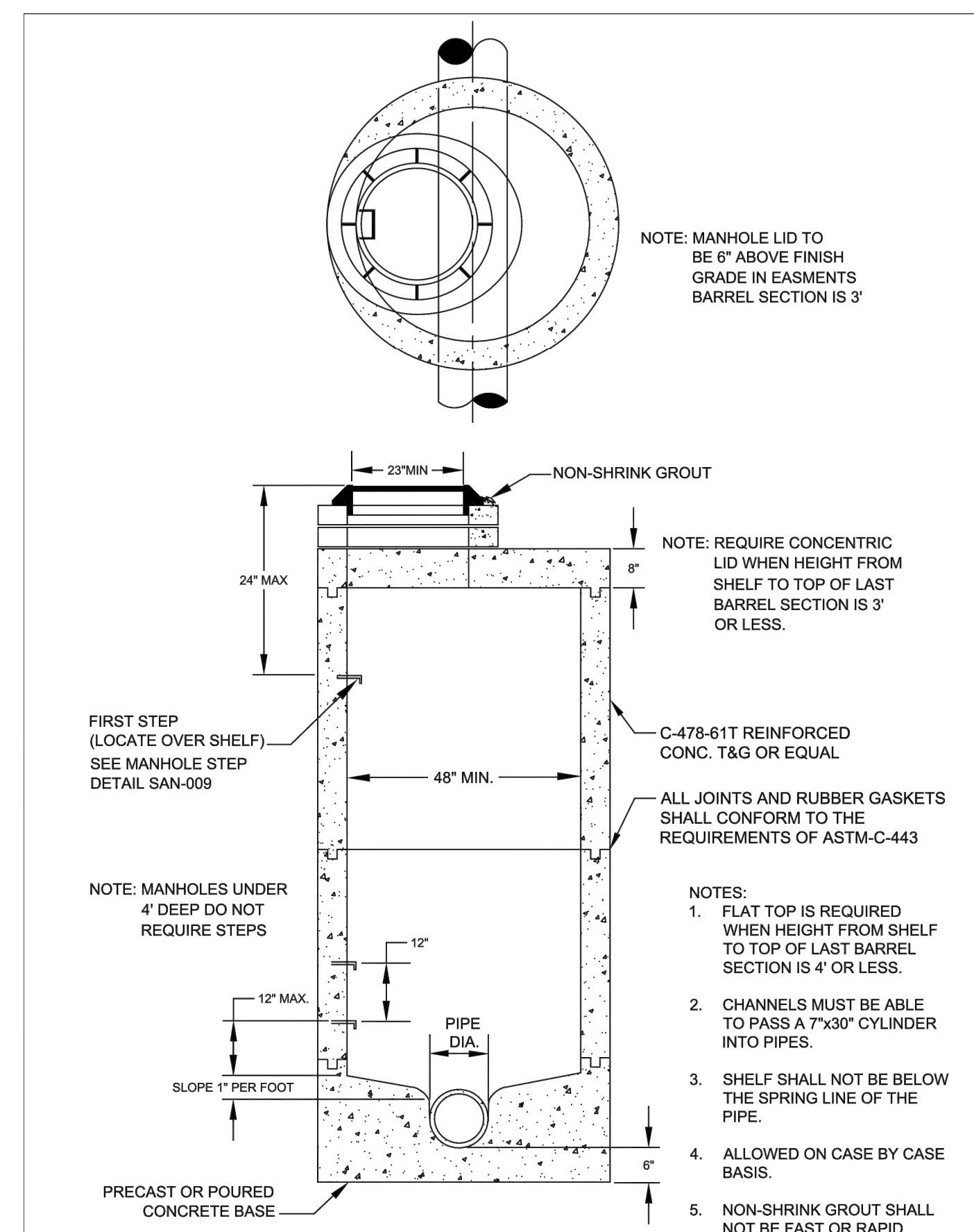
	CLACKAMAS WES 150 BEAVERCREEK ROAD OREGON CITY, OR 97045	APPROVAL DATE: 2021 SCALE: N.T.S. STANDARD DRAWING <b>BACKFILL-CLASS "C"</b>	SAN-003
	CLACKAMAS WATER ENVIRONMENT SERVICES		



**MANHOLE-TYPICAL**

- NOTES:**
1. CHANNELS MUST BE ABLE TO PASS A 7"x30" CYLINDER INTO PIPES.
  2. SHELF SHALL NOT BE BELOW THE SPRING LINE OF THE PIPE.
  3. NON-SHRINK GROUT SHALL NOT BE FAST OR RAPID SETTING.

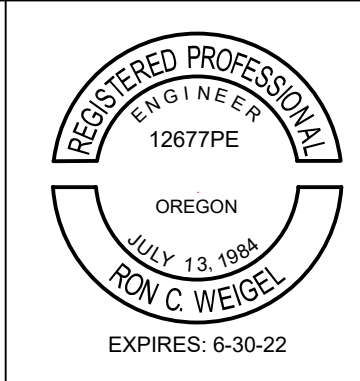
	CLACKAMAS WES 150 BEAVERCREEK ROAD OREGON CITY, OR 97045	APPROVAL DATE: 2021 SCALE: N.T.S. STANDARD DRAWING <b>MANHOLE-TYPICAL</b>	SAN-004
	CLACKAMAS WATER ENVIRONMENT SERVICES		



**MANHOLE-FLAT TOP**

- NOTES:**
1. FLAT TOP IS REQUIRED WHEN HEIGHT FROM SHELF TO TOP OF LAST BARREL SECTION IS 4' OR LESS.
  2. CHANNELS MUST BE ABLE TO PASS A 7"x30" CYLINDER INTO PIPES.
  3. SHELF SHALL NOT BE BELOW THE SPRING LINE OF THE PIPE.
  4. ALLOWED ON CASE BY CASE BASIS.
  5. NON-SHRINK GROUT SHALL NOT BE FAST OR RAPID SETTING.

	CLACKAMAS WES 150 BEAVERCREEK ROAD OREGON CITY, OR 97045	APPROVAL DATE: 2021 SCALE: N.T.S. STANDARD DRAWING <b>MANHOLE-FLAT TOP</b>	SAN-005
	CLACKAMAS WATER ENVIRONMENT SERVICES		



VERIFY SCALES  
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NO.	DATE	BY	APPR	REVISIONS

**CENTURY WEST ENGINEERING**

DESIGNED BY: RW    DRAWN BY: SLK    CHECKED BY: RW    SCALE: N.T.S.

DATE: MARCH 2022    PROJECT NO: 40748041.01

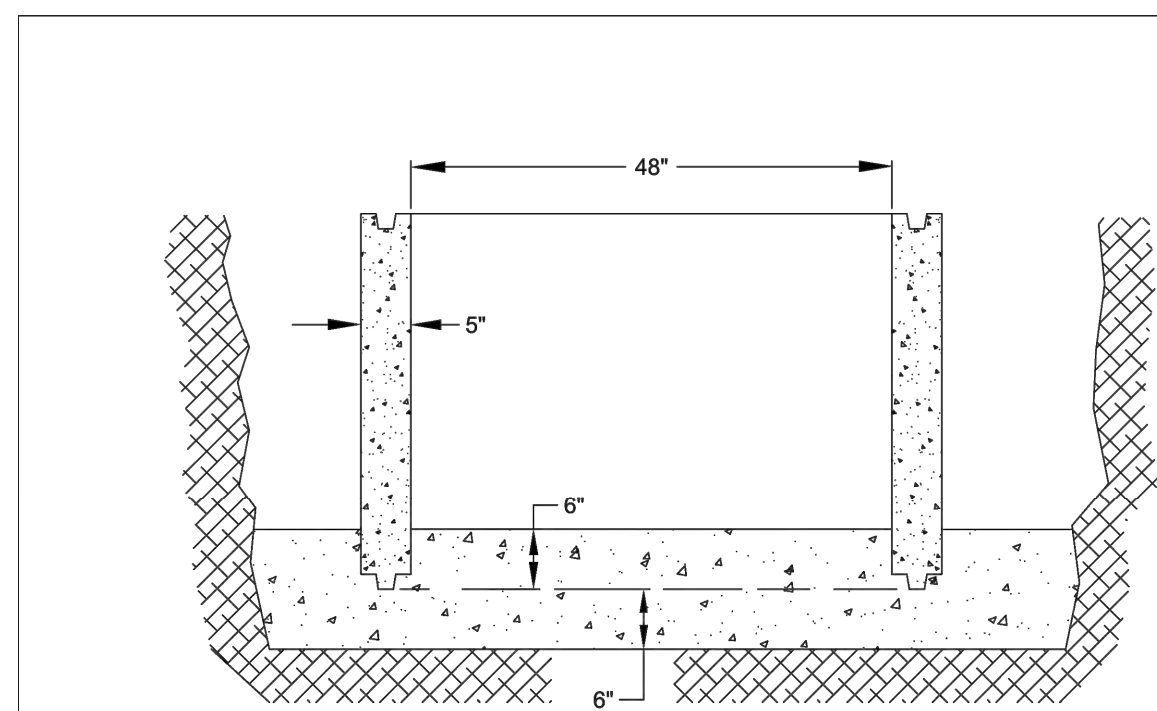
PORTLAND OFFICE  
 5500 MEADOWS RD., #250  
 LAKE OSWEGO, OR 97035  
 503.419.2130 OFFICE  
 503.639.2710 FAX

**WATER ENVIRONMENT SERVICES**  
**FISCHER'S FOREST PARK SANITARY SEWER**

**DETAILS**

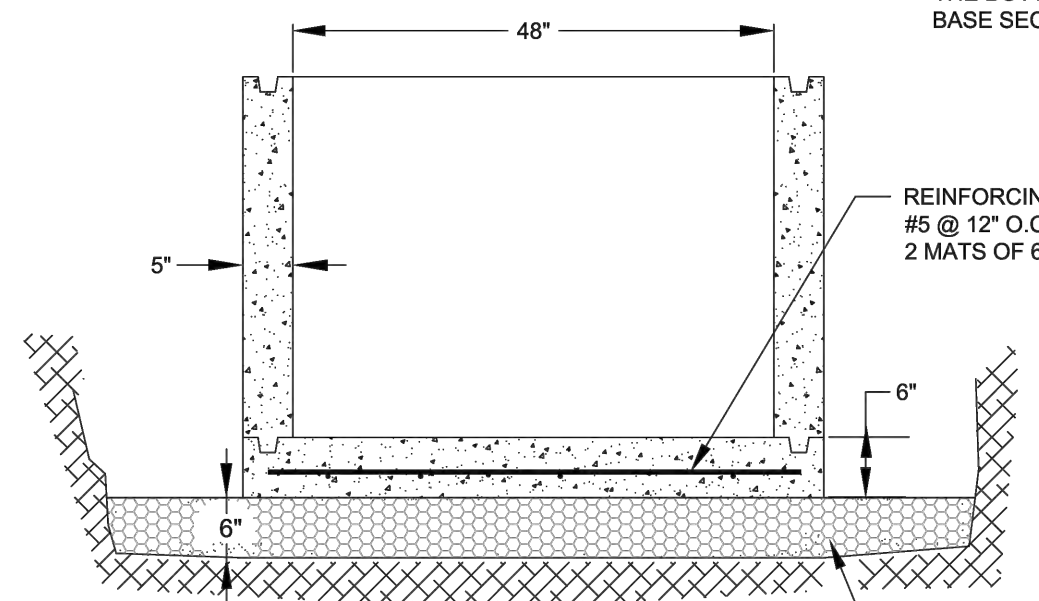
DRAWING NO. .

SHEET NO. **C14**



**POURED IN PLACE MANHOLE-BASE**

NOTE:  
1. CONCRETE TO EXTEND 12" OUTSIDE OF MH WALL AND 6" ABOVE THE BOTTOM OF THE BASE SECTION.

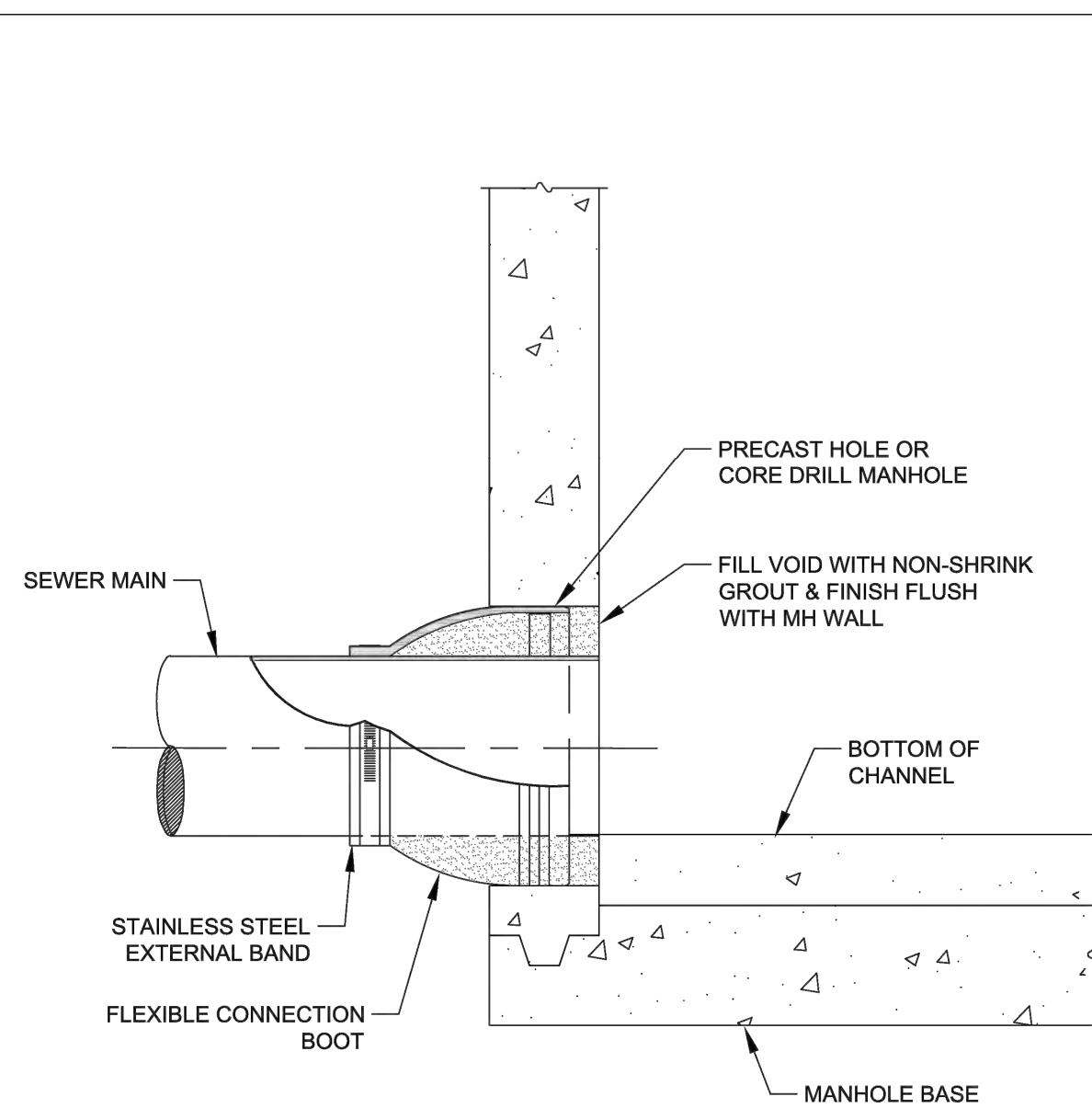


**PRECAST MANHOLE-BASE**

REINFORCING SHALL BE #5 @ 12" O.C. E.W. OR 2 MATS OF 6 X 6 X 10 GA.

3/4" 0" CRUSHED ROCK BASE COMPACTED

	CLACKAMAS WES 150 BEAVERCREEK ROAD OREGON CITY, OR 97045	APPROVAL DATE: 2021 <b>MANHOLE-BASE</b>	SCALE: N.T.S. STANDARD DRAWING <b>SAN-007</b>

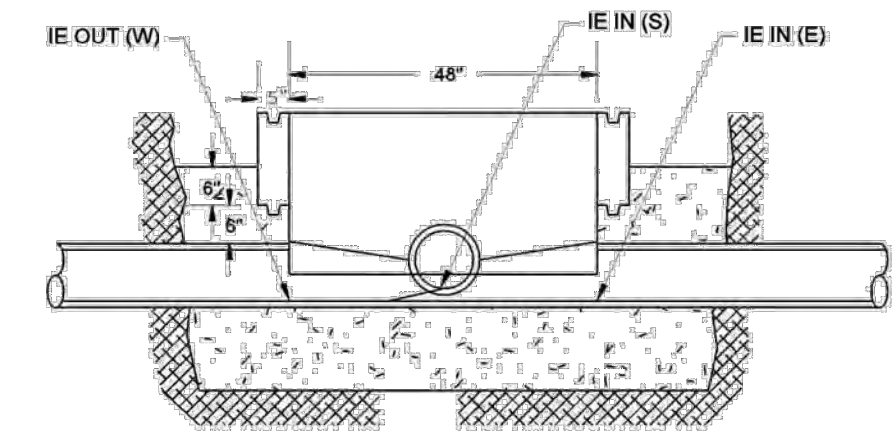


NOTE:  
1. NON-SHRINK GROUT SHALL NOT BE FAST OR RAPID SETTING.

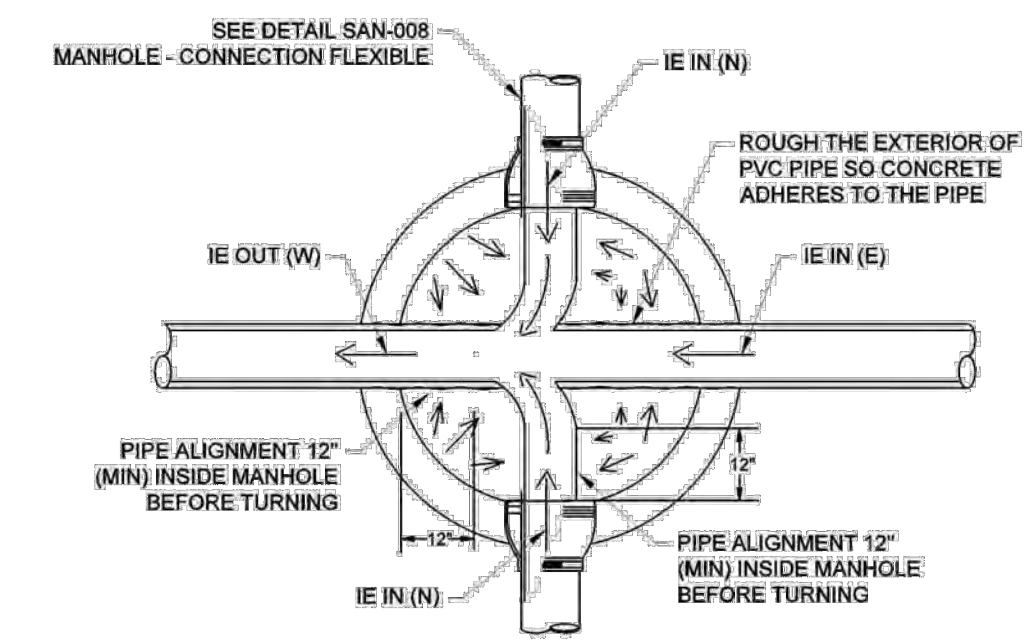
**MANHOLE-CONNECTION FLEXIBLE (KOR-N-SEAL OR EQUAL)**

	CLACKAMAS WES 150 BEAVERCREEK ROAD OREGON CITY, OR 97045	APPROVAL DATE: 2021 <b>MANHOLE-CONNECTION FLEXIBLE</b>	SCALE: N.T.S. STANDARD DRAWING <b>SAN-008</b>

- NOTES:
- CONSTRUCT THE MANHOLE WITH THE IE INS AND OUTS PER THE APPROVED PLANS.
  - WES INSPECTION REQUIRED PRIOR TO BACKFILLING/COVERING THE EXISTING PIPES AND AROUND THE MANHOLE CONTACT OUR OFFICE AT 503-742-4567 AND ASK FOR DEVELOPMENT SERVICES, OR EMAIL WES-PERMIT SERVICES@CLACKAMAS.US TO SCHEDULE THE INSPECTION. INSPECTION RESPONSE TIMES CAN VARY, THEREFORE PLAN TO WORK ACCORDINGLY.
  - SET BARREL SECTION OVER EXISTING CONCRETE PIPE, POUR MANHOLE BASE AND NEW CHANNEL. CUT OUT PIPE AND CLEAN, GROUT AND SMOOTH CHANNEL.
  - CHANNELS MUST PASS A 7-INCHES DIA. BY 30-INCHES LONG CYLINDRICAL OBJECT FOR MAINTENANCE PURPOSES.
  - POURED CONCRETE BASE TO EXTEND 12-INCHES OUTSIDE OF MANHOLE WALL AND 6-INCHES ABOVE AND BELOW THE BOTTOM OF THE BARRELL SECTION.

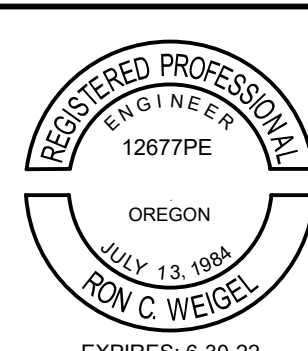


**POURED IN PLACE MANHOLE BASE (SEE DETAIL SAN-007)**



**GENERAL PLAN ON CHANNEL INTERSECTION**

	CLACKAMAS WES 150 BEAVERCREEK ROAD OREGON CITY, OR 97045	APPROVAL DATE: 2021 <b>NEW MANHOLE OVER EXISTING PIPE</b>	SCALE: N.T.S. STANDARD DRAWING <b>SAN-010</b>

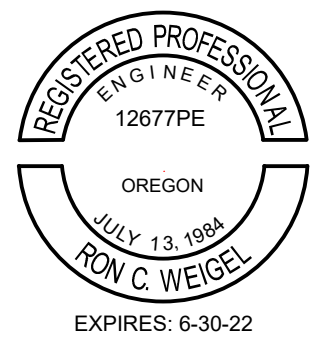
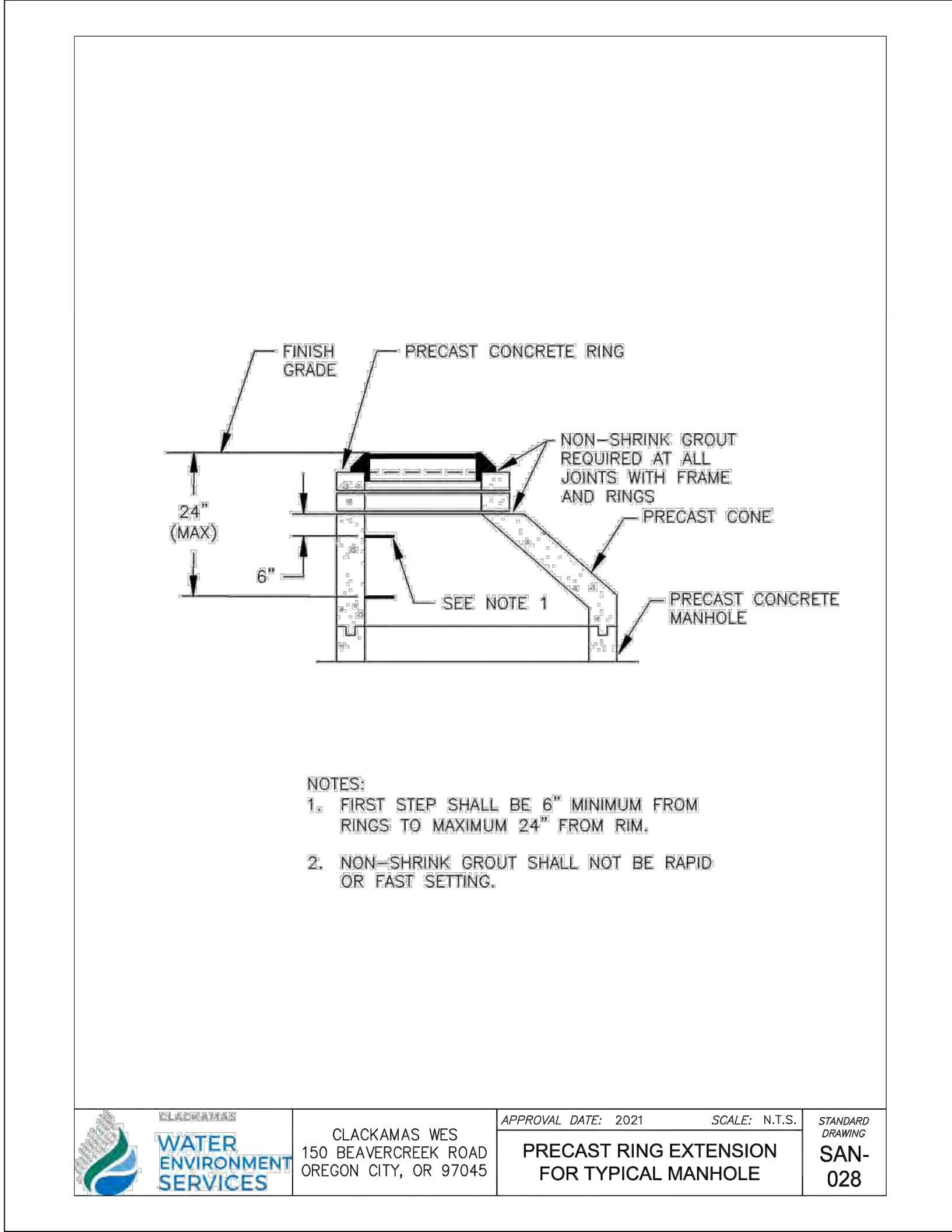
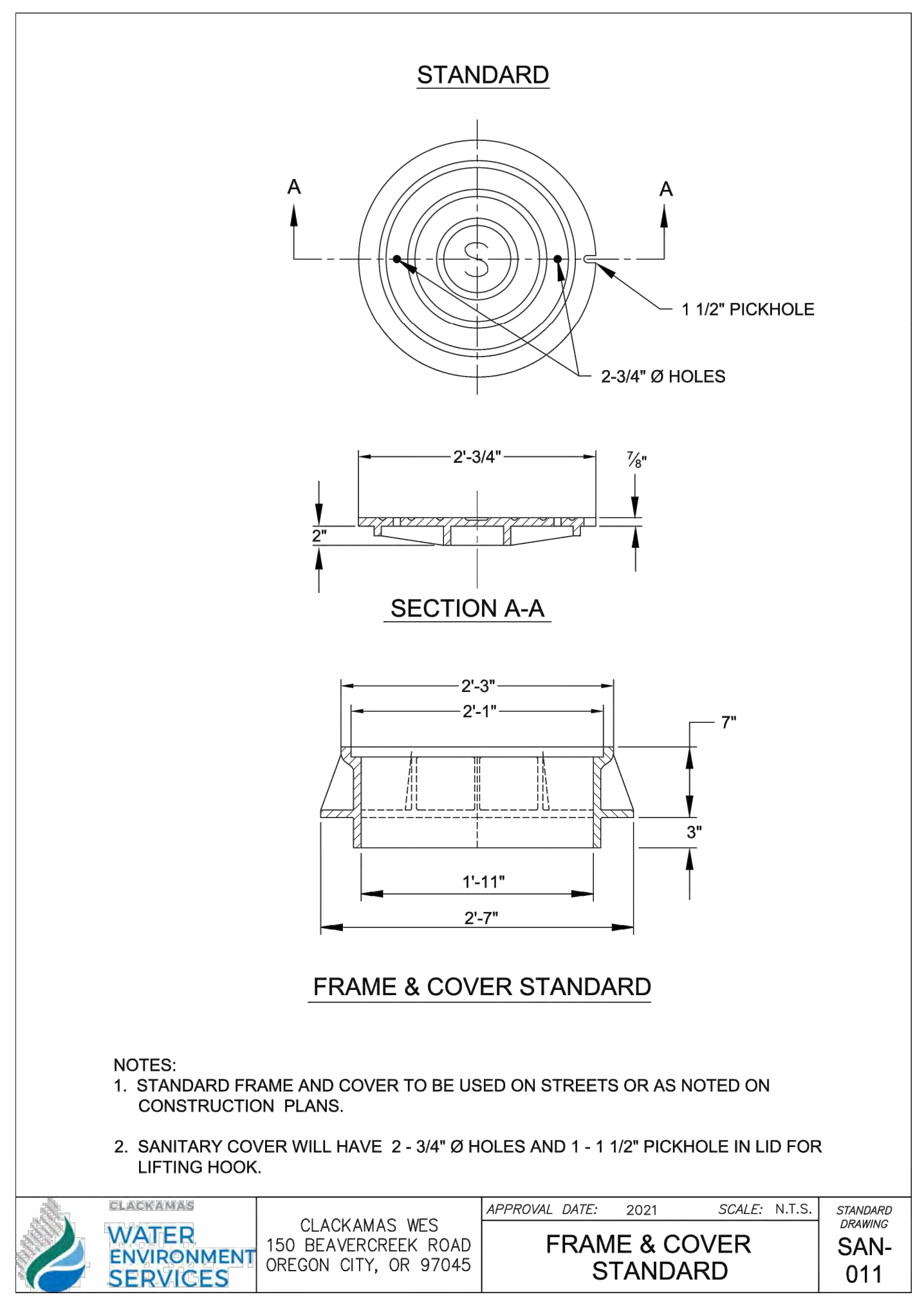


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NO.	DATE	BY	APPR	REVISIONS

		PORTLAND OFFICE 5500 MEADOWS RD., #250 LAKE OSWEGO, OR 97035 503.419.2130 OFFICE 503.639.2710 FAX	
DESIGNED BY: RW	DRAWN BY: SLK	CHECKED BY: RW	SCALE: N.T.S.
DATE: MARCH 2022		PROJECT NO: 40748041.01	

<b>WATER ENVIRONMENT SERVICES FISCHER'S FOREST PARK SANITARY SEWER</b>		DRAWING NO.
<b>DETAILS 2</b>		SHEET NO. <b>C15</b>



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DESIGNED BY: RW	DRAWN BY: SLK	CHECKED BY: RW	SCALE: N.T.S.
DATE: MARCH 2022		PROJECT NO: 40748041.01	

WATER ENVIRONMENT SERVICES  
 FISCHER'S FOREST PARK SANITARY SEWER

DETAILS 3

DRAWING NO.  
.

SHEET NO.  
**C16**



INVITATION TO BID #2022-72  
FISCHER'S FOREST PARK:  
COLLECTION SYSTEM REHAB PROJECT  
ADDENDUM NUMBER 1  
August 4, 2022

On July 7, 2022, Clackamas County ("County") published Invitation to Bid #2022-72 ("BID"). The County has found that it is in its interest to amend the BID through the issuance of this Addendum #1. Except as expressly amended below, all other terms and conditions of the original BID and subsequent Addenda shall remain unchanged.

A. APPENDIX D: CONSTRUCTION DRAWINGS (PLANS)

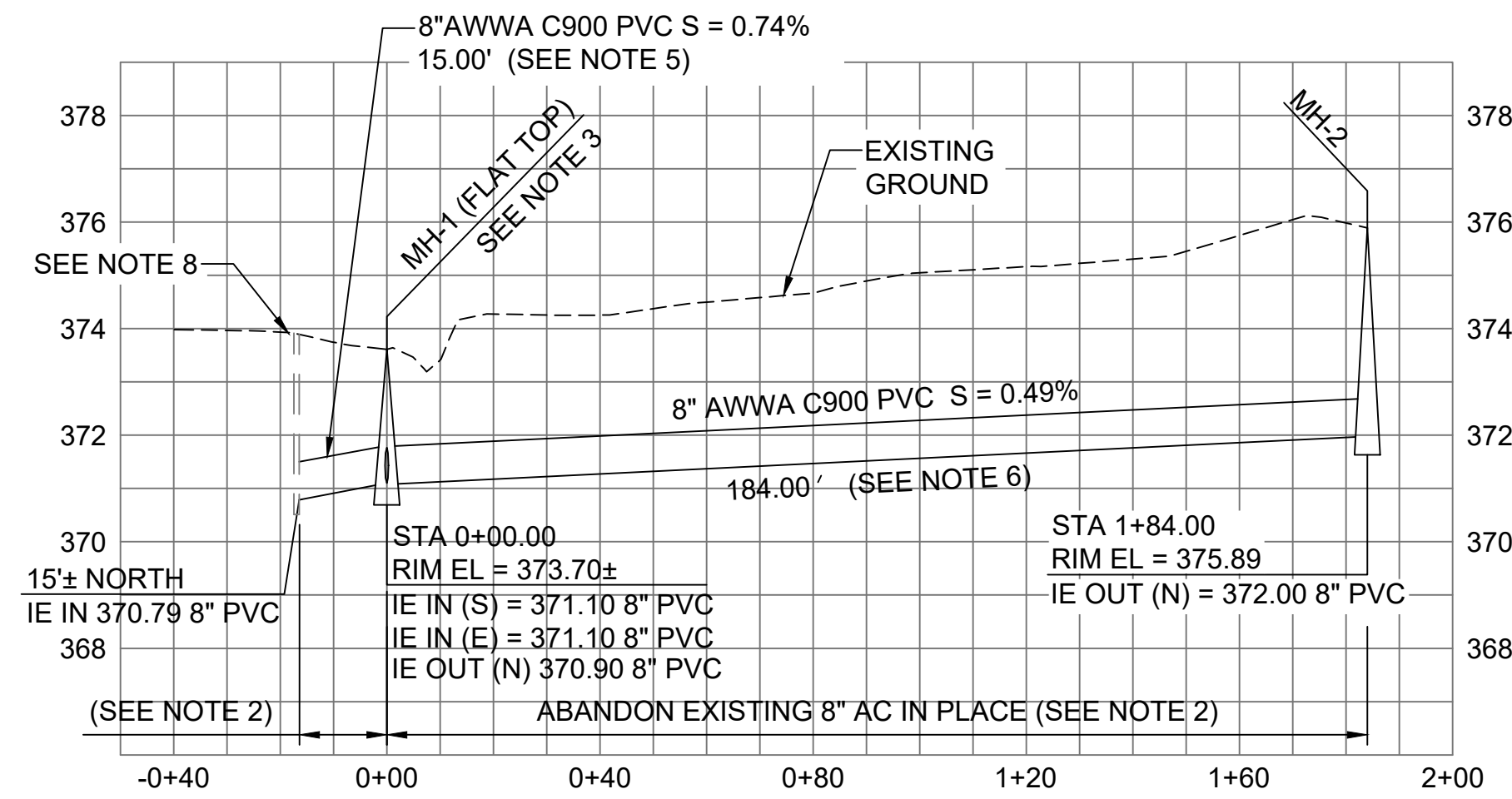
1. Sheet C03
  - a. Replace Sheet C03 with Sheet C03 revision no.1 dated 8/22
2. Sheet C04
  - a. Replace Sheet C04 with Sheet C04 revision no.1 dated 8/22

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 1 in the Bid Form or by submitting the Addendum with the bid package. Bid Forms submitted without acknowledgment or without this Addendum will be considered in nonconformance.

Appended hereto and part of Addendum No. 1:  
CONSTRUCTION DRAWING: Sheet C03 revision no. 1  
CONSTRUCTION DRAWING: Sheet C04 revision no. 1

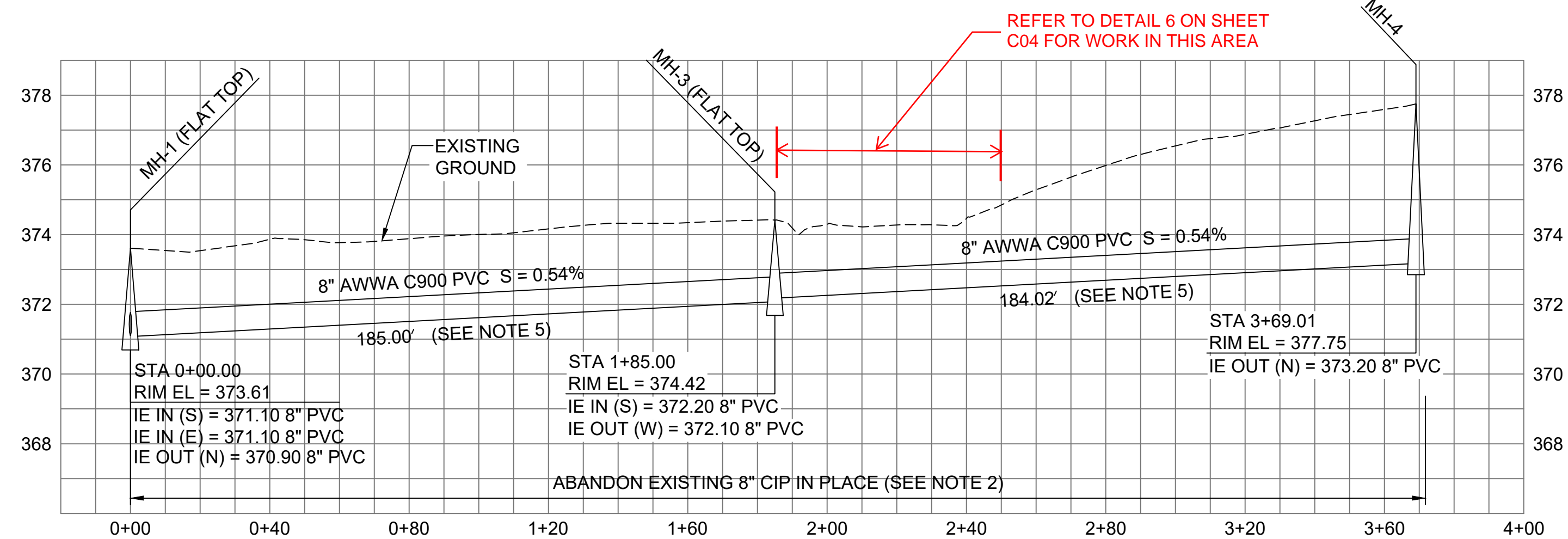
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End of Addendum #1



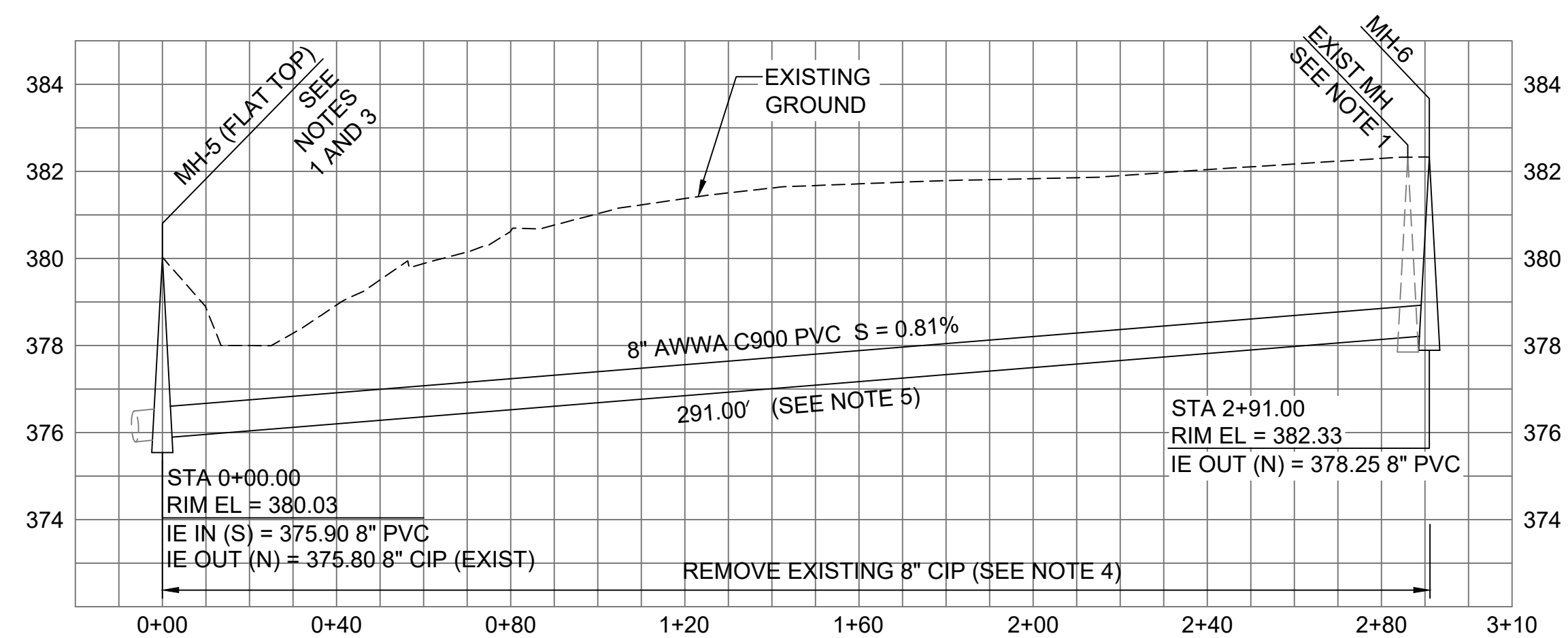
**LINE A PROFILE**

SCALE: 1" = 30' HORIZ  
1" = 3' VERT



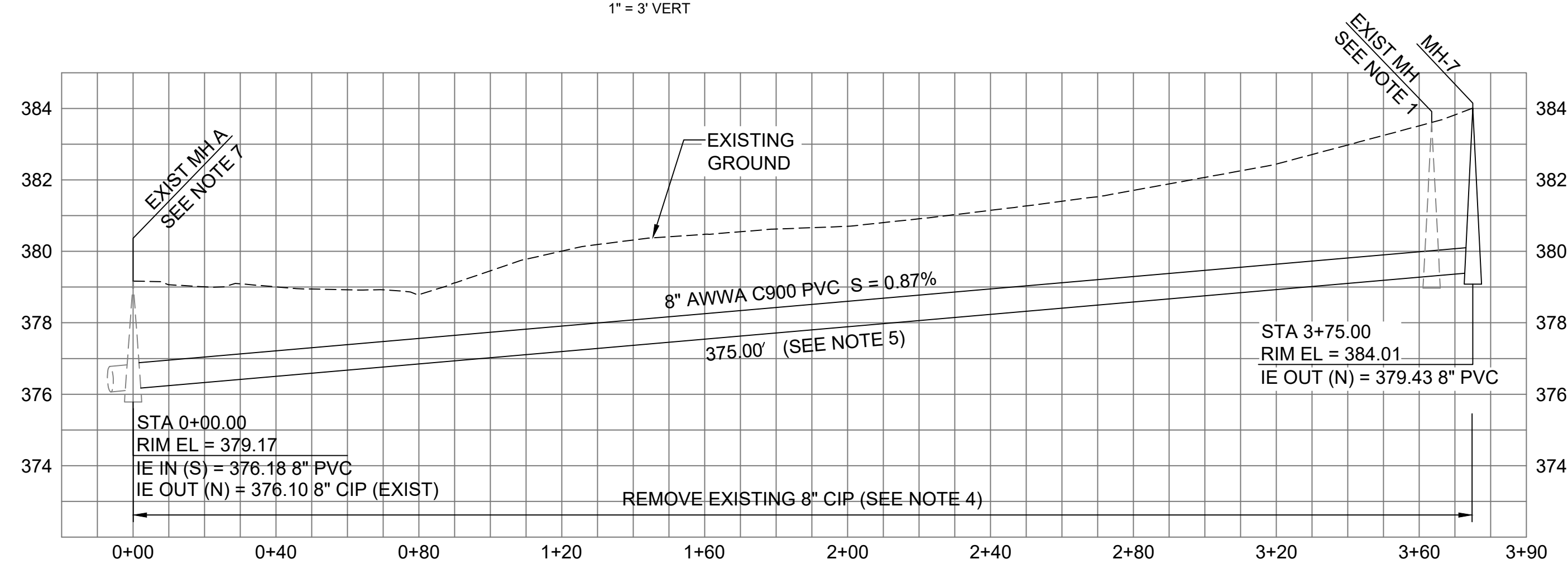
**LINE B PROFILE - S MERRY MEADOW CT**

SCALE: 1" = 30' HORIZ  
1" = 3' VERT



**LINE C PROFILE - S PRINCESS CT**

SCALE: 1" = 30' HORIZ  
1" = 3' VERT

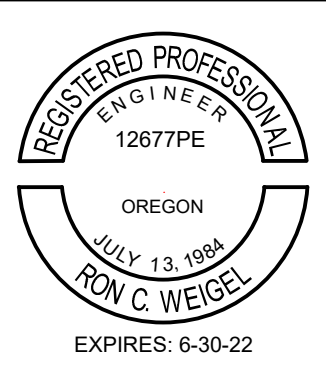


**LINE D PROFILE - S FIR CONE CT**

SCALE: 1" = 30' HORIZ  
1" = 3' VERT

**GENERAL NOTES**

1. REMOVE EXISTING MANHOLE WITHIN NEW TRENCH.
2. FILL EXISTING PIPE (NOT SHOWN IN PROFILE) WITH CLSM AFTER ABANDONING.
3. CONNECT EXISTING 8" CIP PIPE TO NEW MANHOLE.
4. POT HOLE AND PROTECT ANY WATER SERVICES AND COMMUNICATION CONDUITS CROSSING TRENCH.
5. INSTALL IMPORTED CLASS C BACKFILL ABOVE PIPE ZONE WITHIN TRENCH.
6. INSTALL NATIVE CLASS A BACKFILL ABOVE PIPE WITHIN TRENCH.
7. CONNECT NEW 8" PVC TO EXISTING MANHOLE. REMOVE EXISTING PIPE AS REQUIRE.
8. APPROXIMATE LOCATION OF EXISTING SEPTIC TANK WALL. REMOVE EXISTING PIPE AND INSTALL NEW 8" PVC AND SEAL WATERTIGHT. CONFIRM INVERT ELEVATION IN FIELD.



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NO.	DATE	BY	APPR	REVISIONS
1	8/22	RW		ADDENDUM #1

**CENTURY WEST ENGINEERING**

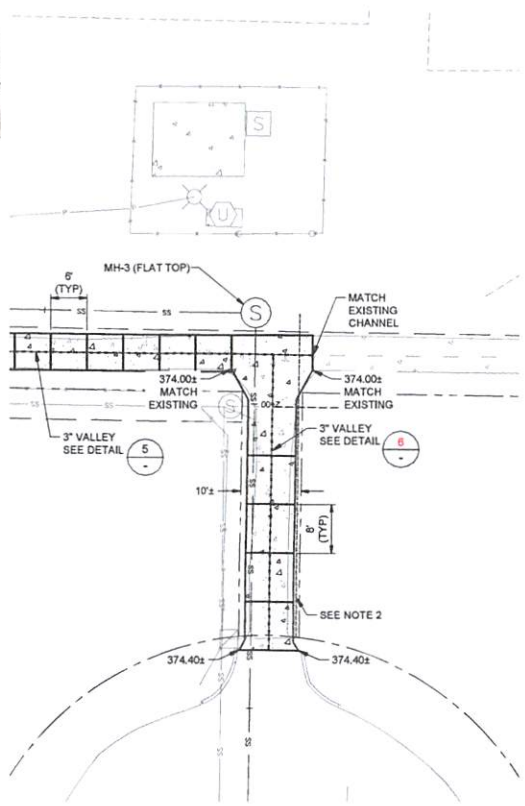
DESIGNED BY: RW  
DRAWN BY: SLK  
CHECKED BY: RW  
SCALE: AS SHOWN  
DATE: MARCH 2022  
PROJECT NO: 40748041.01

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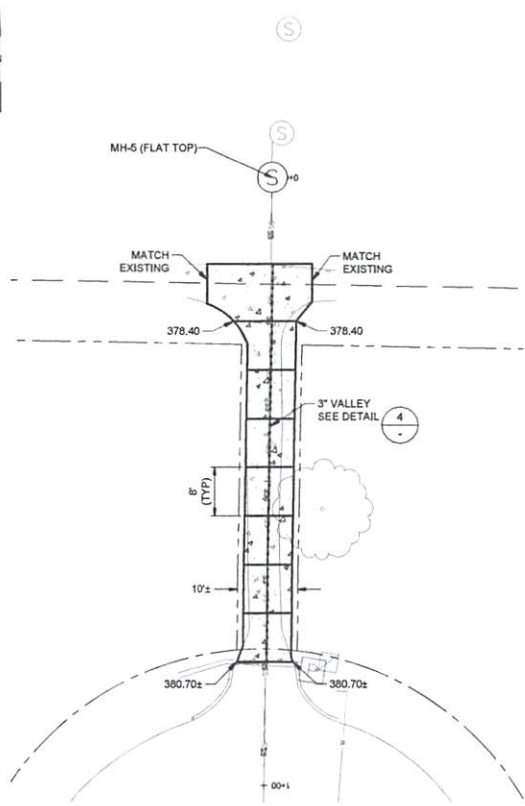
**WATER ENVIRONMENT SERVICES  
FISCHER'S FOREST PARK SANITARY SEWER**

**LINE A, LINE B, LINE C, AND LINE D  
PROFILES**

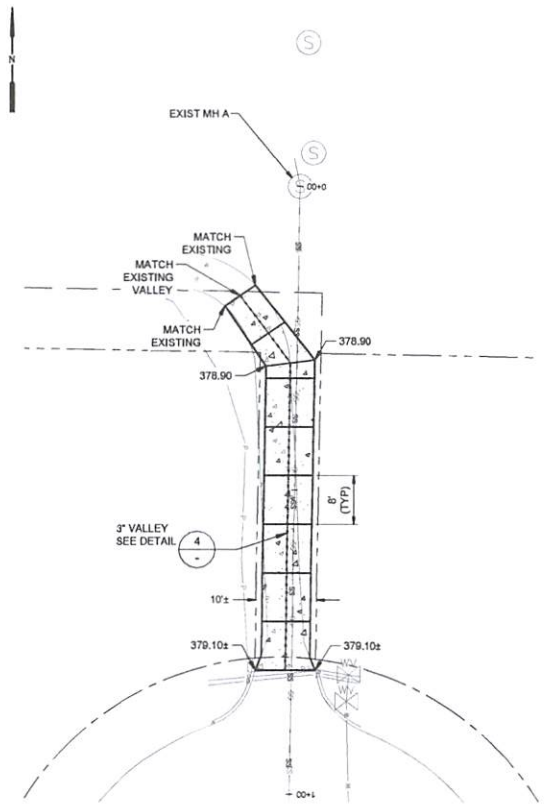
DRAWING NO.  
SHEET NO.  
**C03**



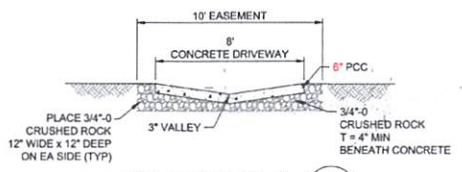
**DRIVEWAY - S MERRY MEADOW CT**  
SCALE: 1" = 10'  
1  
C04



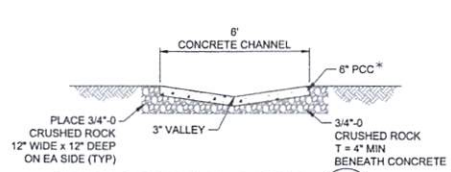
**DRIVEWAY - S PRINCESS CT**  
SCALE: 1" = 10'  
2  
C04



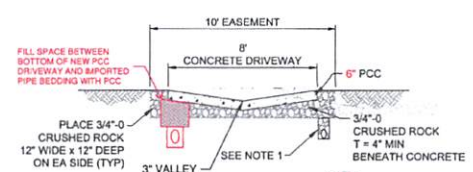
**DRIVEWAY - S FIR CONE CT**  
SCALE: 1" = 10'  
3  
C04



**DRIVEWAY SECTION**  
SCALE: N.T.S.  
4  
C04



**DRAINAGE CHANNEL SECTION**  
SCALE: N.T.S.  
5  
C04



**DRIVEWAY SECTION**  
SCALE: N.T.S.  
6  
C04

- NOTES**
- INSTALL 3" SCH 40 PVC CONDUIT IN CRUSHED ROCK TRENCH. D = 30" MIN BELOW FINISHED SURFACE AT EDGE OF PCC.
  - 3" PVC CONDUIT FOR FUTURE USE BY OTHERS. SECURE EACH END WITH PVC CAP AND MARK WITH STAKE. L = 60"

\* PROVIDE CONSTRUCTION JOINT EVERY 6'



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1	9/22	RW		ADDENDUM #1



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503.638.2710 FAX

**WATER ENVIRONMENT SERVICES**  
**FISCHER'S FOREST PARK SANITARY SEWER**  
**DRIVEWAY ACCESS PLAN**

DRAWING NO.  
SHEET NO.  
C04

DESIGNED BY: RW  
DRAWN BY: BLK  
CHECKED BY: RW  
DATE: MARCH 2022  
SCALE: 1" = 10'  
PROJECT NO: 40748041.D1

COVER SHEET

- New Agreement/Contract
- Amendment/Change/Extension to \_\_\_\_\_
- Other \_\_\_\_\_

Originating County Department: \_\_\_\_\_

Other party to contract/agreement: \_\_\_\_\_

Description:

After recording please return to: \_\_\_\_\_

- County Admin
- Procurement

If applicable, complete the following: \_\_\_\_\_

Board Agenda Date/Item Number: \_\_\_\_\_