



DAN JOHNSON  
DIRECTOR

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

August 15, 2024

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

Board of County Commissioners  
Clackamas County

**Approval of a Public Improvement Contract with KNL Industries, Inc., for the Fischers Mill Road Paving Project. Total value is \$866,053.40. Funding is through County HB2017 Program Funds. No County General Funds are involved.**

<b>Previous Board Action/Review</b>	08/13/2024: Request for consent		
<b>Performance Clackamas</b>	This project will provide strong infrastructure and ensure safe communities by maintaining the County’s existing road infrastructure.		
<b>Counsel Review</b>	Yes	<b>Procurement Review</b>	Yes
<b>Contact Person</b>	Jon Sparks	<b>Contact Phone</b>	503-650-3235

**EXECUTIVE SUMMARY:** This contract is for the Fischers Mill Road Paving Project which will resurface approximately 2.0 miles of roads. This contract will resurface S Strowbridge Road between S Springwater Road and S Fischers Mill Road, which is classified as a local roadway, and S Harding Road between S Springwater Road and S Fischers Mill Road and S Fischers Mill Road between S Springwater Road and Clear Creek Bridge which are both minor arterials. This contract will include, but not be limited to: placing approximately 4,400 tons of asphalt; 5,100 square yards of cold plane pavement removal; completing pavement repairs of varying depth, guardrail replacement, placing pavement markers and striping, installing, maintaining, and removing temporary work zone traffic control measures; and performing additional incidental work as called for by the specifications and plans.

**PROCUREMENT PROCESS:** This project was advertised in accordance with ORS and LCRB Rules on June 18, 2024. Bids were publicly opened on July 2, 2024. The County received six (6) bids: KNL Industries, Inc., \$866,053.40; Brix Paving Northwest, Inc., \$1,005,000.00; Granite Construction Company, \$1,119,365.20; Knife River Corporation – Northwest, \$936,687.00; North Santiam Paving Company, \$1,202,510.10; and TFT Construction, Inc., \$1,066,767.35.

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After review of the bids, KNL Industries, Inc., was determined to be the lowest responsive bidder.

**RECOMMENDATION:** Staff recommends that the Board approve this public improvement contract with KNL Industries, Inc., for the Fischers Mill Road Paving Project.

Respectfully submitted,

*Dan Johnson*

Dan Johnson  
Director of Transportation & Development



**CLACKAMAS COUNTY**  
**PUBLIC IMPROVEMENT CONTRACT**  
Contract #9882

This Public Improvement Contract (the "Contract"), is made by and between the Clackamas County, a political subdivision of the State of Oregon, hereinafter called "Owner," and **KNL Industries, 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.

**Project Name: # 2024-58 Fischers Mill Road Paving Project**

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

The Contractor, in consideration of the sum of **Eight Hundred Sixty-Six Thousand Fifty-Three Dollars and Forty Cents (\$866,053.40)** (the "Contract Price"), to be paid to the Contractor by Owner in the manner and at the time hereinafter provided, and subject to the terms and conditions provided for in the Instructions to Bidders and other Contract Documents (as defined in the project specifications) referenced within the Instructions to Bidders), all of which are incorporated herein by reference, hereby agrees to perform all Work described and reasonably inferred from the Contract Documents. 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
- Prevailing Wage Rates
- Plans, Specifications and Drawings
- Instructions to Bidders
- Bid Bond
- Performance Bond and Payment Bond
- Payroll and Certified Statement Form

The Plans, Specifications and Drawings expressly incorporated by reference into this Contract includes, but is not limited to, the Special Provisions for Fischers Mill Road Paving Project (the "Specifications"), together with the provisions of the Oregon Standard Specifications for Construction (2021) referenced therein.

The Contractor shall comply 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.

**2. Representatives.**

Contractor has named Keith Callaway 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 Jon Sparks 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:** Keith Callaway shall be the Contractor's project executive, and will provide oversight and guidance throughout the project term.

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

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

**Project Engineer:** Michael Calquhoun shall be the Contractor's project engineer, providing assistance to the project manager, and subcontractor and supplier coordination throughout the project term.

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

COMMENCEMENT DATE: Upon Issuance of Notice to Proceed ("NTP")

SUBSTANTIAL COMPLETION DATE: August 30, 2024

FINAL COMPLETION DATE: December 31, 2024

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. Insurance Certificates and Required Performance and Payment Bonds.**

5.1 In accordance with Section 00170.70 of the Specifications, Contractor shall furnish proof of the required insurance naming Clackamas County as an additional insured. Insurance certificates may be returned with the signed Contract or may be emailed to the County Contract Analyst.

5.2 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.

5.2.1 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.

5.3 Builder's Risk Insurance: 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.

5.4 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.

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

5.4.2 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.

5.5 "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).

5.6 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.

5.7 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.

5.8 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.

5.9 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.

## **6. Responsibility for Damages/Indemnity.**

6.1 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.

6.2 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 6.1; (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 6.2.

6.3 In claims against any person or entity indemnified under Section 6.2 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 6.2 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.

## **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 County's setoff right, without penalty; and (C) Initiation of an action or proceeding for damages, specific performance, declaratory or injunctive relief. County 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 County 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 Contractor acknowledges that the Owner will sustain damages as a result of the Contractor's failure to substantially complete the Project in accordance with the Contract Documents. These damages may include, but are not limited to delays in completion, use of the Project, and costs associated with Contract administration and use of temporary facilities. Liquidated damages are set forth in the Contract Documents and may include the following:

11.1 \$700 per Calendar day past the Substantial Completion date, as set forth in section 00180.85 (b).

11.2 \$500 per 15 minutes, or for a portion of 15 minutes, per lane, for any lane closure beyond the limits listed in 00220.40(e), as set forth in 00180.85(c).

11.3 \$500 per 20 minutes, or for a portion of 20 minutes, for stopping or holding traffic longer than 20 minutes, as set forth in 00180.85(d).

11.4 \$500 per each calendar day, or for a portion of a calendar day, for not constructing a driveway connection beyond 30 calendar days of when mainline was completed in front of the driveway, as set forth in 00180.85(e).

**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.

**14. 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.

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

Contractor DATA:

**KNL Industries, Inc.**

**10672 S. Macksburg Road**

**Canby, Oregon 97013**

Contractor CCB # 245086 Expiration Date: 3/30/2025

Oregon Business Registry # 1623485-94 Entity Type: FBC

State of Formation: Nevada

*Signature Page Follows*



*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.*

KNL Industries, Inc.

Clackamas County

*Keith Callaway*

7/31/2024

Authorized Signature

Date

Chair

Date

Keith Callaway, COO

Name / Title Printed

Recording Secretary

APPROVED AS TO FORM

*[Signature]*

07/31/2024

County Counsel

Date



**CLACKAMAS COUNTY  
PUBLIC IMPROVEMENT CONTRACT OPPORTUNITY**

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

**INVITATION TO BID #2024-58**  
**Fischers Mill Road Paving Project**  
**June 18, 2024**

Clackamas County (“County”) through its Board of County Commissioners is accepting sealed bids for the **Fischers Mill Road Paving Project** until **July 2, 2024, 2:00 PM**, Pacific Time, (“Bid Closing”) at the following location:

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-C01010-00010758.

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.

**Submitting Proposals: Bid Locker**

Proposals will only be accepted electronically thru a secure online bid submission service, **Bid Locker**. *Email submissions to Clackamas County email addresses will no longer be accepted.*

- A. Completed proposal documents must arrive electronically via Bid Locker located at <https://bidlocker.us/a/clackamascounty/BidLocker>.
- B. Bid Locker will electronically document the date and time of all submissions. Completed documents must arrive by the deadline indicated in Section 1 or as modified by Addendum. **LATE PROPOSALS WILL NOT BE ACCEPTED.**
- C. Proposers must register and create a profile for their business with Bid Locker in order to submit for this project. It is free to register for Bid Locker.
- D. Proposers with further questions concerning Bid Locker may review the Vendor’s Guide located at <https://www.clackamas.us/how-to-bid-on-county-projects>.

Engineers Estimate: \$991,000.00

**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.

To be eligible for award under this Invitation to Bid, bidders (prime contractors) must submit a prequalification application (either ODOT or County) to the County at least two business days prior to the Bid Closing. County will reject bids from bidders who are not prequalified for the class of work indicated prior to the Bid Closing. **Bidders must be prequalified in Asphalt Concrete Paving (ACP), Temporary Traffic Control (TTC), and Pavement Markings (PAVE).**

**State 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, January 5, 2024 and amended on April 5, 2024, 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, 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 email, 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 the Contract Information Analyst listed on the Notice of Contract Opportunity.





**CLACKAMAS COUNTY  
PUBLIC IMPROVEMENT CONTRACT**

**SUPPLEMENTAL INSTRUCTIONS TO BIDDERS**

**Project Name: # 2024-58 Fischers Mill Road Paving 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. To be eligible for award under this Invitation to Bid, bidders (prime contractors) must submit a prequalification application (either ODOT or County) to the County at least two business days prior to the Bid Closing. County will reject bids from bidders who are not prequalified for the class of work indicated prior to the Bid Closing. **Bidders must be prequalified in Asphalt Concrete Paving & Oiling (ACP), Temporary Traffic Control (TTC), and Pavement Markings (PAVE).**
1. **Electronic Submissions: The County is requiring all bids for this project be electronically submitted. Complete Bids (including all attachments) will only be accepted electronically thru a secure online bid submission service, Bid Locker. Email submissions to Clackamas County email addresses will no longer be accepted. <https://bidlocker.us/a/clackamascounty/BidLocker>.**

**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 LINKS.

Join Zoom Meeting

<https://clackamascounty.zoom.us/j/88299643651>

Meeting ID: 882 9964 3651

One tap mobile

+16699006833,,88299643651# US (San Jose) 17193594580,,88299643651# US

Dial by your location

- +1 669 900 6833 US (San Jose)
- +1 719 359 4580 US
- +1 253 205 0468 US
- +1 253 215 8782 US (Tacoma)
- +1 346 248 7799 US (Houston)

- +1 408 638 0968 US (San Jose)
- +1 669 444 9171 US
- +1 305 224 1968 US
- +1 309 205 3325 US
- +1 312 626 6799 US (Chicago)
- +1 360 209 5623 US
- +1 386 347 5053 US
- +1 507 473 4847 US
- +1 564 217 2000 US
- +1 646 876 9923 US (New York)
- +1 646 931 3860 US
- +1 689 278 1000 US
- +1 301 715 8592 US (Washington DC)

Meeting ID: 882 9964 3651

Find your local number: <https://clackamascounty.zoom.us/j/88299643651>

\*\*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 to either the Contact Information Analyst listed on Notice of Contract Opportunity or via the <https://bidlocker.us/a/clackamascounty/BidLocker> listing.

“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: **KNL Industries, INC.**  
Project Name: # 2024-58 Fischers Mill Road Paving Project

Total Contract Amount:  
**\$ 866,003.40**

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

DOW BIDDER WILL SELF-PERFORM (GFE not required)

**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. Delivery via bid locker <https://bidlocker.us/a/clackamascounty/BidLocker> within 2 hours of the BID/Quote Closing Date/Time.

<b>LIST ALL SUBCONTRACTORS BELOW</b> Use <b>correct legal name</b> 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 <b>D&amp;H Flagging, INC.</b> Address <b>1621 SE Pardee St.</b> City/St/Zip <b>Portland, OR 97202</b> Phone# <b>503-232-2488</b> OCCB# <b>216371</b>	<b>Traffic Control</b>	<b>\$25,000</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Name <b>Rose city Flagging</b> Address <b>21974 NE Hwy 240</b> City/St/Zip <b>Newberg, OR 97132</b> Phone# <b>971-265-0852</b> OCCB# <b>242680</b>	<b>Traffic Control</b>	<b>\$32,000</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Name <b>A+ Flagging, INC.</b> Address <b>P.O. Box 123</b> City/St/Zip <b>Aumsville, OR 97325</b> Phone# <b>503.749.2211</b> OCCB# <b>191152</b>	<b>Traffic Control</b>	<b>\$45,000</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Name <b>Hicks Striping &amp; Curbing, LLC</b> Address <b>PO BOX 9127</b> City/St/Zip <b>Salem, OR 97303</b> Phone# <b>503.364.4577</b> OCCB# <b>240403</b>	<b>striping</b>	<b>\$20,000</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

Prime Contractor Name: **KNL Industries, INC.**

Total Contract Amount:

Project Name: # 2024-58 Fischers Mill Road Paving

**\$866,003.40**

Project # 2024 -58 Fischers Mill Road Paving 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 <b>Columbia River Contractors, INC.</b> Address <b>PO Box 1070</b> City/St/Zip <b>Clackamas, OR 97015</b> Phone# <b>503-722-1778</b> OCCB# <b>123490</b>	<b>Guardrails</b>	<b>\$23,425.00</b>	<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: **KNL Industries, INC**  
Project: # 2024-58 Fischers Mill Road Paving 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>>)	
D & H Flagging INC.	Traffic Control	6/24/24	6/24/24	Randy Olson	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Rose city Flagging	Traffic Control	6/24/24	6/26/24	Sheila Bradbury	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	\$ 32,000	Price	
A+ Flagging INC.	Traffic Control	6/24/24	6/25/24	Christine Busche	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	\$45,000	Price	
Hicks Striping & Curbing INC.	Striping	6/25/24	6/28/24	Chris Henning	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Columbia River Contractors INC.	Guardrails	6/25/24	6/28/24	Ryan Duncan	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" 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: KNL Industries, INC. Total Contract Amount: \$866,003.40  
 Project Name: # 2024-58 Fischers Mill Road Paving 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.

<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>FINAL DOLLAR            AMOUNT OF            SUBCONTRACT</b>	If Certified or self-reported MBE/WBE/ESB Subcontractor		
			Check box <input checked="" type="checkbox"/>	MBE <input type="checkbox"/>	WBE <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"/>

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.

*M. Kelly*  
 Authorized Signature of Contractor Representative

7/2/24  
 Date



CLACKAMAS COUNTY  
PUBLIC IMPROVEMENT CONTRACT

BID BOND

Project Name: # 2024-58 Fischers Mill Road Paving Project

We, KNL Industries, Inc., as "Principal,"  
(Name of Principal)

and Employers Mutual Casualty Company, an Iowa 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% TAB )

Ten Percent of the Total Amount Bid 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. <sup>S-C01010-00</sup><sub>010758</sub>) 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 28th day of June, 2024.

Principal: KNL Industries, Inc.

Surety: Employers Mutual Casualty Company

By: [Signature]  
Signature

By: [Signature]  
By: Attorney-In-Fact

President  
Official Capacity

Amanda C. Webb  
Name

Attest: [Signature]  
Corporation Secretary

5515 SE Milwaukie Avenue  
Address

Portland, OR 97202

City State Zip  
503.239.4116 503.231.9021  
Phone Fax



# POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

**KNOW ALL MEN BY THESE PRESENTS, that:**

- 1. Employers Mutual Casualty Company, an Iowa Corporation
- 2. EMCASCO Insurance Company, an Iowa Corporation
- 3. Union Insurance Company of Providence, an Iowa Corporation

- 4. Illinois EMCASCO Insurance Company, an Iowa Corporation
- 5. Dakota Fire Insurance Company, a North Dakota Corporation
- 6. EMC Property & Casualty Company, an Iowa Corporation

hereinafter referred to severally as "Company" and collectively as "Companies", each does, by these presents, make, constitute and appoint:

**Amanda C. Webb**

its true and lawful attorney-in-fact, with full power and authority conferred to sign, seal, and execute the Bid Bond

In an amount not exceeding Five Million Dollars .....\$5,000,000.00

and to bind each Company thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of each such Company, and all of the acts of said attorney pursuant to the authority hereby given are hereby ratified and confirmed.

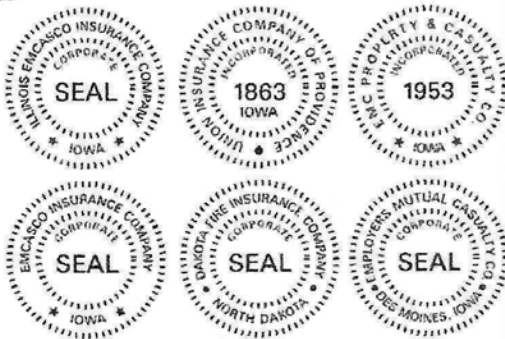
## AUTHORITY FOR POWER OF ATTORNEY

This Power-of-Attorney is made and executed pursuant to and by the authority of the following resolution of the Boards of Directors of each of the Companies at the first regularly scheduled meeting of each company duly called and held in 1999:

**RESOLVED:** The President and Chief Executive Officer, any Vice President, the Treasurer and the Secretary of Employers Mutual Casualty Company shall have power and authority to (1) appoint attorneys-in-fact and authorize them to execute on behalf of each Company and attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof; and (2) to remove any such attorney-in-fact at any time and revoke the power and authority given to him or her. Attorneys-in-fact shall have power and authority, subject to the terms and limitations of the power-of-attorney issued to them, to execute and deliver on behalf of the Company, and to attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, and any such instrument executed by any such attorney-in-fact shall be fully and in all respects binding upon the Company. Certification as to the validity of any power-of-attorney authorized herein made by an officer of Employers Mutual Casualty Company shall be fully and in all respects binding upon this Company. The facsimile or mechanically reproduced signature of such officer, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power-of-attorney of the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

**IN WITNESS THEREOF**, the Companies have caused these presents to be signed for each by their officers as shown, and the Corporate seals to be hereto affixed this 22nd day of September, 2022.

Seals



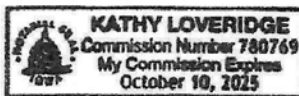
*Scott R. Jean*  
 Scott R. Jean, President & CEO  
 of Company 1; Chairman, President  
 & CEO of Companies 2, 3, 4, 5 & 6

*Todd Strother*  
 Todd Strother, Executive Vice President  
 Chief Legal Officer & Secretary of  
 Companies 1, 2, 3, 4, 5 & 6

On this 22nd day of September, 2022 before me a Notary Public in and for the State of Iowa, personally appeared Scott R. Jean and Todd Strother, who, being by me duly sworn, did say that they are, and are known to me to be the CEO, Chairman, President, Executive Vice President, Chief Legal Officer and/or Secretary, respectively, of each of the Companies above; that the seals affixed to this instrument are the seals of said corporations; that said instrument was signed and sealed on behalf of each of the Companies by authority of their respective Boards of Directors; and that the said Scott R. Jean and Todd Strother, as such officers, acknowledged the execution of said instrument to be their voluntary act and deed, and the voluntary act and deed of each of the Companies.

My Commission Expires October 10, 2025.

*Kathy Loveridge*  
 Notary Public in and for the State of Iowa.



## CERTIFICATE

I, Ryan J. Springer, Vice President of the Companies, do hereby certify that the foregoing resolution of the Boards of Directors by each of the Companies, and this Power of Attorney issued pursuant thereto on 22nd day of September, 2022, are true and correct and are still in full force and effect.

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 28th day of June, 2024.

*Ryan J. Springer*  
 Vice President



CLACKAMAS COUNTY  
PUBLIC IMPROVEMENT CONTRACT

BID FORM

PROJECT: # 2024-58 Fischers Mill Road Paving Project  
BID CLOSING: July 2, 2024, 2:00 PM, Pacific Time  
BID OPENING: July 2, 2024, 2:05 PM, Pacific Time

FROM: KNL Industries, INC.  
*Bidder's Name (must be full legal name, not ABN/DBA)*

TO: https://bidlocker.us/a/clackamascounty/BidLocker

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 Nevada; 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:

Eight Hundred sixty six Thousand Three Dollars and forty cents Dollars (\$ 866,003.40 )

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
- Prevailing Wage Rates
- Plans, Specifications and Drawings
- Supplemental Instructions to Bidders
- Bid Form
- Performance Bond and Payment Bond
- Payroll and Certified Statement Form

• ADDENDA numbered Ø through Ø, 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 Schedules with Bid.**

4. The work shall be completed within the time stipulated and specified in 00180.50(h) of the Special Provisions for **Fischers Mill Road Paving Project, Clackamas County Department of Transportation**

**and Development.**

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 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:

Employers Mutual Casualty 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 245086. 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. 100061023, and that Contractor shall submit Certificates of Insurance as required.

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

Project Executive: <u>Keith Callaway</u>	Cell Phone: <u>971-201-6760</u>
Project Manager: <u>Kyle Beck</u>	Cell Phone: <u>503-504-3345</u>
Job Superintendent: <u>Paul Callaway</u>	Cell Phone: <u>503-318-4867</u>
Project Engineer: <u>Michael Calquhoun</u>	Cell Phone: <u>971-271-2345</u>

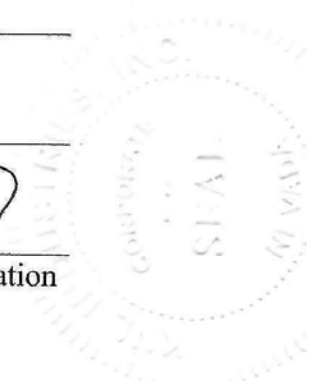
15. The Undersigned certifies that it has not discriminated against minority, women, or emerging small businesses in obtaining any subcontracts for this project.

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	<u>KNL Industries, INC.</u>
ADDRESS	<u>10672 S Macksburg Rd.</u> <u>Canby, OR 97013</u>
TELEPHONE NO	<u>971-201-6760</u>
EMAIL	<u>Keithjr@Kandlindustries.com</u>
SIGNATURE 1)	_____
	Sole Individual
or 2)	_____
	Partner
or 3)	<u>Julia B Callaway</u>
	Authorized Officer or Employee of Corporation



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

Fischers Mill Paving Project

Summer 2024

Item #	Spec #	Item Description	Unit	Quantity	Unit Price	Amount
<b>TEMPORARY FEATURES AND APPURTENANCES</b>						
101	00197	EXTRA WORK DONE ON FORCE ACCOUNT BASIS	LS	1	\$ 10,000.00	\$ 10,000.00
102	00210	MOBILIZATION	LS	1	80,000.00	80,000.00
103	00221	TEMPORARY WORK ZONE TRAFFIC CONTROL, COMPLETE: S FISCHERS MILL RD	LS	1	15,000.00	15,000.00
104	00221	TEMPORARY WORK ZONE TRAFFIC CONTROL, COMPLETE: S HARDING RD	LS	1	10,000.00	10,000.00
105	00221	TEMPORARY WORK ZONE TRAFFIC CONTROL, COMPLETE: S STROWBRIDGE RD	LS	1	15,000.00	15,000.00
106	00222	TEMPORARY PROJECT INFORMATION SIGNS	SQFT	75	50.00	3,750.00
107	00222	PORTABLE CHANGEABLE MESSAGE SIGNS	EACH	4	2,400.00	9,600.00
108	00225	TEMPORARY FLEXIBLE PAVEMENT MARKERS	EACH	7966	2.00	15,932.00
109	00225	TEMPORARY PAVEMENT BARS	FT	280	2.00	560.00
110	00280	EROSION CONTROL PLAN	LS	1	1,000.00	1,000.00
111	00290	POLLUTION CONTROL PLAN	LS	1	1,000.00	1,000.00
<b>TEMPORARY FEATURES AND APPURTENANCES-SUBTOTAL</b>						<b>\$ 161,842.00</b>
<b>ROADWORK</b>						
112	00310	REMOVAL OF GAURDRAIL	LS	1	1,600.00	1,600.00
113	00320	CLEARING AND GRUBBING	LS	1	3,500.00	3,500.00
114	00331	12 INCH SUBGRADE STABILIZATION	SQYD	620	80.00	49,600.00
115	00490	INSTALL CAST IRON MONUMENT BOXES	EACH	3	800.00	2,400.00
<b>ROADWORK - SUBTOTAL</b>						<b>\$ 57,100.00</b>
<b>BASES</b>						
116	00620	COLD PLANE PAVEMENT REMOVAL, 0 - 2 INCHES DEEP	SQYD	400	4.25	1,700.00
117	00620	COLD PLANE PAVEMENT REMOVAL, 2 - 4 INCHES DEEP	SQYD	600	4.25	2,550.00
118	00620	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	SQYD	1800	4.25	7,650.00
119	00620	COLD PLANE PAVEMENT REMOVAL, 4 INCHES DEEP	SQYD	2300	4.25	9,775.00
120	00641	AGGREGATE SHOULDERS (1 1/2"-0)	TON	420	55.00	23,100.00
121	00641	AGGREGATE APPROACH: AGGREGATE BASE	TON	40	100.00	4,000.00
<b>BASES - SUBTOTAL</b>						<b>\$ 48,725.00</b>

Should be \$2,550.00

\$48,775.00 *gross*

Fischers Mill Paving Project

Summer 2024

page 2 of 2

Item #	Spec #	Item Description	Unit	Quantity	Unit Price	Amount
<b>WEARING SURFACES</b>						
122	00745	LEVEL 2, 1/2 INCH ACP, WITH FIBERS IN LEVELING	TON	100	108.00	10,800.00
123	00745	LEVEL 2, 1/2 INCH ACP, WITH FIBERS	TON	2,400	108.00	259,200.00
124	00745	LEVEL 3, 1/2 INCH ACP, WITH FIBERS	TON	1,900	108.00	205,200.00
125	00748	18 INCH ASPHALT CONCRETE PAVEMENT REPAIR	SQYD	620	80.00	49,600.00
126	00749	EXTRA FOR ASPHALT APPROACHES	SQYD	29	400.00	11,600.00
127	00749	EXTRA FOR SPOT GRIND AND INLAYS	SQYD	1,300	18.00	23,400.00
<b>WEARING SURFACES - SUBTOTAL</b>						<b>\$ 559,800.00</b>
<b>PERMANENT TRAFFIC SAFETY AND GUIDENCE DEVICES</b>						
128	00810	GUARDRAIL @ STA 40+55 RIGHT	LS	1	20,000.00	20,000.00
129	00855	BI-DIRECTIONAL YELLOW TYPE 1AR MARKERS, RECESSED	EA	124	40.00	4,960.00
130	00866	DRIBBLE LINE, SPRAYED, SURFACE	FOOT	2,458	0.40	983.20
131	00866	HI-BUILD PAINT, 25 MIL, SPRAYED, SURFACE	FOOT	24,883	0.40	9,953.20
132	00867	PAVEMENT BAR, TYPE B-HS	SF	140	16.00	2,240.00
133	00867	PAVEMENT LEGEND, TYPE B-HS: YIELD LINE TRIANGLE	EA	4	100.00	400.00
<b>PERMANENT TRAFFIC SAFETY AND GUIDENCE DEVICES - SUBTOTAL</b>						<b>\$ 38,536.40</b>
<b>TOTAL</b>						<b><del>\$ 866,003.40</del></b>

Should be  
\$866,053.40

\$866,053.40  
just

Total Price Eight Hundred Sixty six Thousand Fifty three Dollars and  
~~Eight Hundred sixty six Thousand Three~~  
forty ~~Forty~~ just Cents

Name of Firm KNL Industries, INC.  
 Name (Print) Keith Callaway  
 Signature Mr. Callaway Date 7/2/24

**FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM**  
**PROJECT: #2024-58 Fischers Mill Road Paving Project**

**BID OPENING: July 2, 2024, 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.

- A. Completed proposal documents must arrive electronically via Bid Locker located at <https://bidlocker.us/a/clackamascounty/BidLocker>.
- B. Bid Locker will electronically document the date and time of all submissions. Completed documents must arrive by the deadline indicated in Section 1 or as modified by Addendum. **LATE PROPOSALS WILL NOT BE ACCEPTED.**
- C. Proposers must register and create a profile for their business with Bid Locker in order to submit for this project. It is free to register for Bid Locker.
- D. Proposers with further questions concerning Bid Locker may review the Vendor's Guide located at <https://www.clackamas.us/how-to-bid-on-county-projects>.

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.	D & H Flagging, INC	\$25,000.00	Traffic Control
2.	Hicks Striping & Curbing	\$20,000.00	Striping
3.	Columbia River Contractors, INC	\$23,425.00	Guardrails
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: KNL Industries, INC

Bidder Signature: *MM Wly* Phone # 971-201-6760



CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT

PERFORMANCE BOND

Bond No.: S046126
Solicitation: #2024-58
Project Name: Fischers Mill Road Paving Project

Table with 3 columns: Surety Name, Bond Amount No., and Amount. Includes entries for Employers Mutual Casualty Company (Surety #1), (Surety #2)\*, and Total Penal Sum of Bond.

\* If using multiple sureties

We, KNL Industries, Inc. 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 Clackamas County, the sum of (Total Penal Sum of Bond) Eight Hundred Sixty-Six Thousand Fifty-Three and 40/100 (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 Clackamas County, along with the plans, specifications, terms and conditions of which are contained in the above-referenced Solicitation; 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, upon the terms set forth therein, and within the time prescribed therein, or as extended as provided in the Contract, with or without notice to the Sureties, and shall defend, indemnify, and save harmless Clackamas County and its elected officials, officers, employees and agents, against any direct or indirect damages or claim 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 Principal or its subcontractors, and shall in



all respects perform said contract according to law, then this obligation is to 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 Clackamas County, 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 25th day of July, 2024.

**PRINCIPAL:** KNL Industries, Inc.

By: Sullivan B Callaway  
Signature  
President

Attest: Kim W. [Signature]  
Official Capacity  
Corporation Secretary

**SURETY:** Employers Mutual Casualty Company  
*[Add signatures for each if using multiple bonds]*

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

Amanda C. Webb

Amanda C. Webb  
Name  
Signature

5515 SE Milwaukie Avenue  
Address

Portland, OR 97202

City State Zip  
503.239.4116 503.231.9021

Phone Fax

# POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

**KNOW ALL MEN BY THESE PRESENTS, that:**

- |   |  |
|---|--|
| 1. Employers Mutual Casualty Company, an Iowa Corporation     | 4. Illinois EMCASCO Insurance Company, an Iowa Corporation   |
| 2. EMCASCO Insurance Company, an Iowa Corporation             | 5. Dakota Fire Insurance Company, a North Dakota Corporation |
| 3. Union Insurance Company of Providence, an Iowa Corporation | 6. EMC Property & Casualty Company, an Iowa Corporation      |

hereinafter referred to severally as "Company" and collectively as "Companies", each does, by these presents, make, constitute and appoint:

**Amanda C. Webb**

its true and lawful attorney-in-fact, with full power and authority conferred to sign, seal, and execute the following Surety Bond(s):

<b>Surety Bond</b>	<b>Principal:</b>
<b>Number</b>	KNL Industries, Inc.

S046126

In an amount not exceeding Five Million Dollars .....\$5,000,000.00

and to bind each Company thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of each such Company, and all of the acts of said attorney pursuant to the authority hereby given are hereby ratified and confirmed.

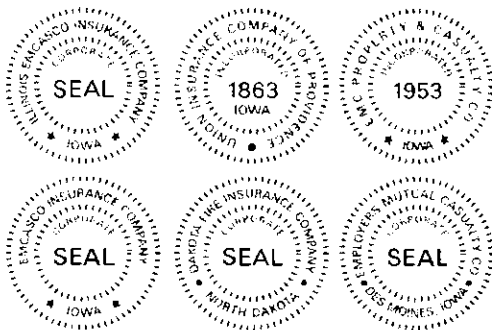
## AUTHORITY FOR POWER OF ATTORNEY

This Power-of-Attorney is made and executed pursuant to and by the authority of the following resolution of the Boards of Directors of each of the Companies at the first regularly scheduled meeting of each company duly called and held in 1999:

**RESOLVED:** The President and Chief Executive Officer, any Vice President, the Treasurer and the Secretary of Employers Mutual Casualty Company shall have power and authority to (1) appoint attorneys-in-fact and authorize them to execute on behalf of each Company and attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof; and (2) to remove any such attorney-in-fact at any time and revoke the power and authority given to him or her. Attorneys-in-fact shall have power and authority, subject to the terms and limitations of the power-of-attorney issued to them, to execute and deliver on behalf of the Company, and to attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, and any such instrument executed by any such attorney-in-fact shall be fully and in all respects binding upon the Company. Certification as to the validity of any power-of-attorney authorized herein made by an officer of Employers Mutual Casualty Company shall be fully and in all respects binding upon this Company. The facsimile or mechanically reproduced signature of such officer, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power-of-attorney of the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

**IN WITNESS THEREOF,** the Companies have caused these presents to be signed for each by their officers as shown, and the Corporate seals to be hereto affixed this 22nd day of September, 2022.

Seals



*Scott R. Jean*  
 Scott R. Jean, President & CEO  
 of Company 1; Chairman, President  
 & CEO of Companies 2, 3, 4, 5 & 6

*Todd Strother*  
 Todd Strother, Executive Vice President  
 Chief Legal Officer & Secretary of  
 Companies 1, 2, 3, 4, 5 & 6

On this 22nd day of September, 2022 before me a Notary Public in and for the State of Iowa, personally appeared Scott R. Jean and Todd Strother, who, being by me duly sworn, did say that they are, and are known to me to be the CEO, Chairman, President, Executive Vice President, Chief Legal Officer and/or Secretary, respectively, of each of the Companies above; that the seals affixed to this instrument are the seals of said corporations; that said instrument was signed and sealed on behalf of each of the Companies by authority of their respective Boards of Directors; and that the said Scott R. Jean and Todd Strother, as such officers, acknowledged the execution of said instrument to be their voluntary act and deed, and the voluntary act and deed of each of the Companies.

My Commission Expires October 10, 2025.



*Kathy Loveridge*  
 Notary Public in and for the State of Iowa

## CERTIFICATE

I, Ryan J. Springer, Vice President of the Companies, do hereby certify that the foregoing resolution of the Boards of Directors by each of the Companies, and this Power of Attorney issued pursuant thereto on 22nd day of September, 2022, are true and correct and are still in full force and effect.

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 25th day of July, 2024.

*Ryan J. Springer*  
 Vice President



CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT

PAYMENT BOND

Bond No.: S046126
Solicitation: #2024-58
Project Name: Fischers Mill Road Paving Project

Table with 3 columns: Surety Name, Bond Amount No., and Amount. Includes Employers Mutual Casualty Company (Surety #1), (Surety #2)\*, and Total Penal Sum of Bond: \$ 866,053.40.

We, KNL Industries, Inc., 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 Clackamas County, the sum of (Total Penal Sum of Bond) Eight Hundred Sixty-Six Thousand Fifty-Three and 40/100 (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 Clackamas County, along with the plans, specifications, terms and conditions of which are contained in above-referenced Solicitation; 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 Clackamas County and its 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 Clackamas County 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 Clackamas County 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 25th day of July, 2024.

**PRINCIPAL:** KNL Industries, Inc.

By: *William B. Callaway*  
Signature  
President  
Official Capacity

Attest: *Wm Kelly*  
Corporation Secretary

**SURETY:** Employers Mutual Casualty Company  
*[Add signatures for each if using multiple bonds]*

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

Amanda C. Webb  
Name  
*Amanda C. Webb*  
Signature  
5515 SE Milwaukie Avenue  
Address  
Portland, OR 97202  
City State Zip  
503.239.4116 503.231.9021  
Phone Fax

### POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

KNOW ALL MEN BY THESE PRESENTS, that:

- 1. Employers Mutual Casualty Company, an Iowa Corporation
- 2. EMCASCO Insurance Company, an Iowa Corporation
- 3. Union Insurance Company of Providence, an Iowa Corporation
- 4. Illinois EMCASCO Insurance Company, an Iowa Corporation
- 5. Dakota Fire Insurance Company, a North Dakota Corporation
- 6. EMC Property & Casualty Company, an Iowa Corporation

hereinafter referred to severally as "Company" and collectively as "Companies", each does, by these presents, make, constitute and appoint:

**Amanda C. Webb**

its true and lawful attorney-in-fact, with full power and authority conferred to sign, seal, and execute the following Surety Bond(s):

**Surety Bond Principal:**  
**Number** KNL Industries, Inc.

S046126

In an amount not exceeding Five Million Dollars .....\$5,000,000.00

and to bind each Company thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of each such Company, and all of the acts of said attorney pursuant to the authority hereby given are hereby ratified and confirmed.

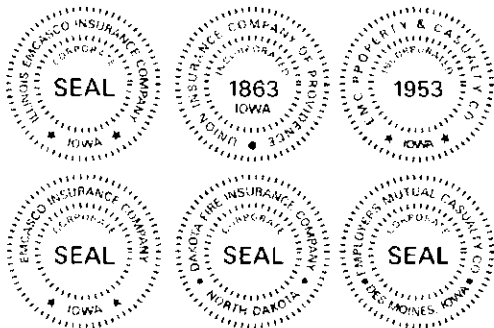
### AUTHORITY FOR POWER OF ATTORNEY

This Power-of-Attorney is made and executed pursuant to and by the authority of the following resolution of the Boards of Directors of each of the Companies at the first regularly scheduled meeting of each company duly called and held in 1999:

**RESOLVED:** The President and Chief Executive Officer, any Vice President, the Treasurer and the Secretary of Employers Mutual Casualty Company shall have power and authority to (1) appoint attorneys-in-fact and authorize them to execute on behalf of each Company and attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof; and (2) to remove any such attorney-in-fact at any time and revoke the power and authority given to him or her. Attorneys-in-fact shall have power and authority, subject to the terms and limitations of the power-of-attorney issued to them, to execute and deliver on behalf of the Company, and to attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, and any such instrument executed by any such attorney-in-fact shall be fully and in all respects binding upon the Company. Certification as to the validity of any power-of-attorney authorized herein made by an officer of Employers Mutual Casualty Company shall be fully and in all respects binding upon this Company. The facsimile or mechanically reproduced signature of such officer, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power-of-attorney of the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

**IN WITNESS THEREOF**, the Companies have caused these presents to be signed for each by their officers as shown, and the Corporate seals to be hereto affixed this 22nd day of September, 2022.

Seals



*Scott R. Jean*  
 Scott R. Jean, President & CEO  
 of Company 1; Chairman, President  
 & CEO of Companies 2, 3, 4, 5 & 6

*Todd Strother*  
 Todd Strother, Executive Vice President  
 Chief Legal Officer & Secretary of  
 Companies 1, 2, 3, 4, 5 & 6

On this 22nd day of September, 2022 before me a Notary Public in and for the State of Iowa, personally appeared Scott R. Jean and Todd Strother, who, being by me duly sworn, did say that they are, and are known to me to be the CEO, Chairman, President, Executive Vice President, Chief Legal Officer and/or Secretary, respectively, of each of the Companies above; that the seals affixed to this instrument are the seals of said corporations; that said instrument was signed and sealed on behalf of each of the Companies by authority of their respective Boards of Directors; and that the said Scott R. Jean and Todd Strother, as such officers, acknowledged the execution of said instrument to be their voluntary act and deed, and the voluntary act and deed of each of the Companies.

My Commission Expires October 10, 2025.

*Kathy Loveridge*  
 Notary Public in and for the State of Iowa



### CERTIFICATE

I, Ryan J. Springer, Vice President of the Companies, do hereby certify that the foregoing resolution of the Boards of Directors by each of the Companies, and this Power of Attorney issued pursuant thereto on 22nd day of September, 2022, are true and correct and are still in full force and effect.

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 25th day of July, 2024.

*Ryan J. Springer*  
 Vice President



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

**PROJECT: #2024-58 Fischers Mill Road Paving Project**

**Project Background:**

The Fischers Mill Road Paving Project is an asphalt paving contract. This contract will resurface 2.03 miles of road.

This contract will resurface S Stowbridge Road between S Springwater Road and S Fischers Mill Road, which is classified as a local roadway.

This contract will also resurface a S Harding Road between S Springwater Road and S Fischers Mill Road, which is classified as a minor arterial.

This contract will also resurface S Fischers Mill Road between S Springwater Road and Clear Creek Bridge, which is classified as a minor arterial.

This contract will include, but not be limited to: placing approximately 4,400 tons of asphalt; 5,100 square yards of cold plane pavement removal; completing pavement repairs of varying depth, guardrail replacement, placing pavement markers and striping; installing, maintaining, and removing temporary work zone traffic control measures; and performing additional incidental work as called for by the specifications and plans.

**Engineers Estimate:** \$991,000.00

**Key Dates:**

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

Substantial Completion: August 30, 2024

Final Completion: December 31, 2024

Time is of the essence for this Project. Note the Liquidated Damages requirements as described in the project Specifications.

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

SPECIAL PROVISIONS FOR FISCHERS MILL ROAD PAVING PROJECT- CLACKAMAS COUNTY DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, (52 PAGES)

Fishers Mill Road Paving Project- Drawing Set, SHEET No. G-01-G-02, TC-1, C-01-C-14, RD402-RD403, RD406, RD416, RD419-RD420, RD610, RD701, RD1005, RD1010, RD1032, TM500, TM502-TM503, TM517, TM530, TM570, TM800, TM840-TM841, TM844, TM850, M100, M150, D500 (42 Pages).

**SPECIAL PROVISIONS**  
**FOR**  
**FISCHERS MILL ROAD PAVING PROJECT**

**CLACKAMAS COUNTY DEPARTMENT OF  
TRANSPORTATION AND DEVELOPMENT**

**CLACKAMAS COUNTY, OREGON**



Asphalt Paving & Oiling, Temporary Traffic Control, and Pavement Markings

Worksite 1: S Strowbridge Road (S Springwater Rd to S Fischers Mill Road)

Worksite 2: S Fischers Mill Road (Clear Creek Bridge to S Springwater Road)

Worksite 3: S Harding Road (S Springwater Road to S Fischers Mill Road)

**CLACKAMAS COUNTY DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT**

**SPECIAL PROVISIONS**


**FOR**

**FISCHERS MILL ROAD PAVING PROJECT**

**CI-3-23316**

**CLACKAMAS COUNTY, OREGON**

**PROFESSIONAL OF RECORD CERTIFICATION(s):**

<p>Seal w/signature</p>  <p>DIGITALLY SIGNED 2024.06.06 14:49:56-07'00' <b>OREGON</b> JUNE 2, 2011 ANDREW HENRY GIESY RENEWS 06-30-2025</p>	<p>I certify the Special Provisions Sections listed below are applicable to the design for the subject project for traffic and roadway improvements. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Section 00210, 00220, 00221, 00222, 00223, 00224, 00225, 00226, 00228, 00280, 00290, 00310, 00320, 00330, 00331, 00340, 00440, 00490, 00585, 00610, 00620, 00641, 00730, 00745, 00748, 00749, 00810, 00840, 00850, 00855, 00866, 00867, 02010, 02020, 02030, 02440, 02050, 02070, 02080, 02440, 02640, 02820</p>
<p>Date Signed: <u>06-06-2024</u></p>	



## **SPECIAL PROVISIONS**

### **WORK TO BE DONE**

#### **FISCHERS MILL ROAD PAVING PROJECT, CLACKAMAS COUNTY, OREGON**

The Fischers Mill Road Paving Project is an asphalt paving contract. This contract will resurface 2.03 miles of road.

This contract will resurface S Strowbridge Road between S Springwater Road and S Fischers Mill Road, which is classified as a local roadway.

This contract will also resurface a S Harding Road between S Springwater Road and S Fischers Mill Road, which is classified as a minor arterial.

This contract will also resurface S Fischers Mill Road between S Springwater Road and Clear Creek Bridge, which is classified as a minor arterial.

This contract will include, but not be limited to: placing approximately 4,400 tons of asphalt; 5,100 square yards of cold plane pavement removal; completing pavement repairs of varying depth, guardrail replacement, placing pavement markers and striping, installing, maintaining, and removing temporary work zone traffic control measures; and performing additional incidental work as called for by the specifications and plans. The project estimate for this contract is \$991,000.

### **APPLICABLE SPECIFICATIONS**

The Specification that is applicable to the Work on this Project is the 2021 edition of the "Oregon Standard Specifications for Construction" produced by the Oregon Department of Transportation and the Oregon Chapter or the APWA.

All number references in these Special Provisions shall be understood to refer to the Sections and subsections of the Standard Specifications and Supplemental Specifications bearing like numbers and to Sections and subsections contained in these Special Provisions in their entirety.

### **CLASS OF PROJECT**

This is a Clackamas County Project and it is not federally funded.

### **CLASS OF WORK**

Asphalt Concrete Paving and Oiling (ACP)

Temporary Traffic Control (TTC)

Pavement Markings (PAVE)

## **Section 00110 – Organization, Conventions, Abbreviations and Definitions**

Comply with Section 00110 of the Standard Specifications modified as follows:

### **00110.05(a) Grammer**

Add the following bullet to the bullet list:

- For the purposes of this Contract, the terms "sidewalk ramp" and "sidewalk ramps" shall respectively refer to and shall be read to mean "curb ramp" and "curb ramps".

Replace the bullet that begins “Certain Subsections labeled “Payment” contain...” with the following bullet:

- Certain Subsections labeled “Payment” contain statements to the effect that the accepted quantities “will be paid for at the Contract unit price, per unit of measurement, for the following items” (followed by a list of items). In such cases, the Agency will pay for only those Pay Items listed in the Schedule of Items.

### **00110.05(d) References to Laws, Acts, Regulations, Rules, Ordinances, Statutes, Orders, and Permits**

Add the following to the first bullet (Statutes and Rules):

- Clackamas County’s Local Contract Review Board (LCRB) Rules are accessible online on the County’s website  
<https://dochub.clackamas.us/documents/drupal/ef976bc9-14f4-495b-9bd8-c69ee7334685>.

**00110.05(e) Reference to Websites** - Add the following bullet list to the end of this subsection:

- American Traffic Safety Services Association (ATSSA)  
www.atssa.com
- BidExpress  
www.bidx.com
- EquipmentWatch  
www.equipmentwatch.com
- ODOT Construction Section  
www.oregon.gov/odot/construction/pages/index.aspx
- ODOT Construction Section - Qualified Products List (QPL)  
www.oregon.gov/ODOT/Construction/Pages/Qualified-Products.aspx

- ODOT Construction Surveying Manual for Contractors  
[www.oregon.gov/ODOT/ETA/Documents\\_Geometronics/Construction-Survey-Manual-Contractors.pdf](http://www.oregon.gov/ODOT/ETA/Documents_Geometronics/Construction-Survey-Manual-Contractors.pdf)
- ODOT Electronic Bidding Information Distribution System (eBids)  
 (Also referred to as ODOT eBids website)  
[ecm.odot.state.or.us/cf/EBIDS/](http://ecm.odot.state.or.us/cf/EBIDS/)
- ODOT Estimating  
[www.oregon.gov/ODOT/Business/Pages/Steel.aspx](http://www.oregon.gov/ODOT/Business/Pages/Steel.aspx)
- Oregon Legislative Counsel  
[www.oregonlegislature.gov/lc](http://www.oregonlegislature.gov/lc)
- ODOT Procurement Office - Conflict of Interest Guidelines and Disclosure Forms  
[www.oregon.gov/ODOT/Business/Procurement/Pages/PSK.aspx](http://www.oregon.gov/ODOT/Business/Procurement/Pages/PSK.aspx)
- ODOT Procurement Office - Construction Contracts Unit Notice of Intent  
[www.oregon.gov/ODOT/Business/Procurement/Pages/NOI.aspx](http://www.oregon.gov/ODOT/Business/Procurement/Pages/NOI.aspx)
- ODOT Procurement Office - Construction Contracts Unit prequalification forms  
[www.oregon.gov/odot/business/procurement/pages/bid\\_award.aspx](http://www.oregon.gov/odot/business/procurement/pages/bid_award.aspx)
- Oregon Secretary of State: State Archives  
[sos.oregon.gov/archives/Pages/default.aspx](http://sos.oregon.gov/archives/Pages/default.aspx)
- ODOT Traffic Control Plans Unit  
[www.oregon.gov/ODOT/Engineering/Pages/Work-Zone.aspx](http://www.oregon.gov/ODOT/Engineering/Pages/Work-Zone.aspx)
- ODOT Traffic Standards  
[www.oregon.gov/ODOT/Engineering/Pages/Signals.aspx](http://www.oregon.gov/ODOT/Engineering/Pages/Signals.aspx)

**00110.10 Abbreviations**

Add the following:

- CCDA - Clackamas County Development Agency
- DTD - Clackamas County Department of Transportation and Development
- LCRB - Local Contract Review Board
- ODFW - Oregon Department of Fish and Wildlife
- UNS - Utility Notification System
- WES - Water Environment Services of Clackamas County

**00110.20 Definitions**-Add the following to this subsection:

**Agreement Form** – The written agreement between the Owner and Contractor covering the work to be performed under the contract.

**Amendment** – A contract modification for Additional Work, Changed Work, Extra Work, Field Directives, or other changes. An Amendment changes the contract value, scope, and/or time. Amendments require formal approval by the Board of County Commissioners, pursuant to LCRB Rule Division C-049-160, prior to approval of such work.

**Approved Equal** - Materials or services proposed by the contractor and approved by the County as equal substitutes for those materials or services specified.

**Award** – Same as “Notice to Intent to Award”.

**BCC** – The Clackamas County Board of County Commissioners

**Bid** - A written offer by a bidder on forms furnished by the County to do work stated in the bid documents at the prices quoted. "Bid" is synonymous with "proposal" in these bid documents.

**Bid Closing** - The date and time for Bid Closing is the same as the date and time for Bid Opening.

**Bid Documents**- The following documents together comprise the Bid Documents:

- Invitation to Bid, Instructions to Bidders, Bid Form, Bid Proposal, Schedule of Prices, Bid
- Bond, Performance Bond
- Certificate of Insurance, Prevailing Wage Rates
- The "Oregon Standard Specifications for Construction" by ODOT and APWA, 2021 edition.
- Plans and drawings
- Other bid documents included or referenced in the bid documents
- Addenda, if any
- The Agreement Form and Special Provisions

**Bonds** -The bond or surety bond is a written document given by the surety and principal to the obligee to guarantee a specific obligation.

**Change Order** - A price agreement for Extra Work, Changed Work, field directives or other changes. A Change Order does not change the contract value, scope, or

time until it is incorporated into an Amendment. Change Orders will be agreed upon, in writing, by the County Project Manager and the Contractor's designated representative.

**Contract** - The written contract agreement, including amendments, signed by the Contractor and Clackamas County, which describes the work to be done, the contract amount, and defines the relationships and obligations of the Contractor and the County.

**Contract Documents** - The Invitation to Bid, the Instructions to Bidders, the accepted Bid Proposal and Schedule of Prices, the Subcontractor List, the Bid Bond, the Performance and Payment Bond, the Certificate of Insurance, the Prevailing Wage Rates, the Standard Specifications and Special Provisions, Amendments, the Plans and Drawings, the Agreement, as well as all documents incorporated by reference therein, and any and all addenda prepared by or at the direction of and adopted by the County and further identified by the signature of the parties and all modifications thereof incorporated in the documents before their execution.

**County** - The term "County" shall mean Clackamas County, including the Board of County Commissioners, employees and agents of the County authorized to administer the conditions of these contract documents.

**Department** – A subdivision of the Agency.

**Engineer** - The County's Project Manager either acting directly or through an authorized representative(s). When referring to approval of extra work or other Contract modifications, "Engineer" also refers to the County's legal authority according to the LCRB rules.

**Invitation to Bid** - The public announcement (Notice to Contractors) inviting bids for work to be performed or materials to be furnished.

**Legal Holiday** - As defined in ORS 279C.540.

**Lump Sum** - A method of payment providing for one all-inclusive cost for the work or for a particular portion of the work.

**Notice of Intent to Award** - A written notice from the County notifying bidders that the County intends to award to the responsible bidder submitting lowest responsive bid.

**ODOT Procurement Office** – Clackamas County Procurement Division.

**Owner** – Synonymous with Agency.

**Plan Holder's List** – A list of contractor's names, contact names, phone and fax numbers that the County's Purchasing Department creates during bidding of the Project.

**Project Manager** – The Owner’s representative who directly supervises the engineering and administration of the contract.

**Shop Drawings** – Synonymous with Working Drawings.

**Solicitation Document** – Synonymous with Bid Documents.

**Standard Drawings** – The Agency-prepared detailed drawings for Work or methods of construction that normally do not change from project to project. The Standard Drawings include the ODOT Standard Drawings.

**Standard Specifications** - "Oregon Standard Specifications for Construction", current edition, published by the Oregon Department of Transportation and as amended by **the Agency**.

**State** - Where the term “State” or “State of Oregon” or “ODOT” appears in the contract documents it shall mean “Clackamas County”, “State of Oregon”, or “ODOT” as applicable because of context.

**Work Day** - Any and every calendar day from January 1 to December 31 of every year, excluding Saturdays, Sundays and Legal Holidays.

Add the following to the end of this subsection:

See Clackamas County General Conditions for Public Improvement Contracts for additional definitions.

## END OF SECTION

### Section 00120 – Bidding Requirements and Procedures

Comply with Section 00120 of the Standard Specifications modified as follows:

**00120.00 Prequalification of Bidders** - Replace with the following:

**00120.00 Prequalification of Bidders** - See Clackamas County Public Improvement Contract: Instructions to Bidders.

**00120.01 General Bidding Requirements** – Replace with the following:

**00120.01 General Bidding Requirements** – See Clackamas County Public Improvement Contract: Instructions to Bidders.

**00120.05 Request for Plans, Special Provisions, and Bid Booklets:** – Replace with the following:

**00120.05 Request for Plans, Special Provisions, and Bid Booklets:** – Bid documents may be obtained from the Clackamas County Procurement Division as indicated in Notice of Public Improvement Contract Opportunity.

Copies of the 2021 Oregon Standard Specifications for Construction and Supplements might be found on the Oregon Department of Transportation website at:

**00120.10 Bid Booklet** - In the paragraph that begins "The Bid Section includes all pages after...", add the following bullet to the bullet list:

- Certificate of nondiscrimination regarding ORS 279A.110 and certificate regarding policy and practice against sexual harassment, sexual assault and discrimination against employees who are members of a protected class as required by ORS 279A.112 (House Bill 3060, 2017)

**00120.15 Examination of Work Site and Solicitation Documents; Consideration of Conditions to be Encountered** – Delete the third paragraph.

**00120.30 Changes to Plans, Specifications, or Quantities before Opening of Bids** - Replace with the following:

**00120.30 Changes to Plans, Specifications, or Quantities before Opening of Bids** - See Clackamas County Public Improvement Contract: Instructions to Bidders.

**00120.40 Preparation of Bids** – Replace with the following:

**00120.40 Preparation of Bids** – See Clackamas County Public Improvement Contract: Instructions to Bidders.

**00120.45 Submittal of Bids** - Replace with the following:

**00120.45 Submittal of Bids** - See Clackamas County Public Improvement Contract: Instructions to Bidders.

**00120.50 Submitting Bids for More than One Contract** – Delete this subsection.

**00120.60 Revision or Withdrawal of Bids** - Replace with the following:

**00120.60 Revision or Withdrawal of Bids** - See Clackamas County Public Improvement Contract: Instructions to Bidders.

**00120.68 Mistakes in Bids** – Replace with the following:

**00120.68 Mistakes in Bids** – See Clackamas County Public Improvement Contract: Instructions to Bidders.

**00120.70 Rejection of Nonresponsive Bids** – Replace with the following:

**00120.70 Rejection of Nonresponsive Bids** – See Clackamas County Public Improvement Contract: Instructions to Bidders.

**00120.95 Opportunity for Cooperative Arrangement** – Delete this subsection.

## END OF SECTION

### Section 00130 – Award and Execution of Contract

Comply with Section 00130 of the Standard Specifications modified as follows:

**00130.00 Consideration of Bids** - Delete third paragraph.

**00130.10 Award of Contract** - Replace with the following:

**00130.10 Award of Contract** - See Clackamas County Public Improvement Contract: Instructions to Bidders.

**00130.15 Right to Protest Award** – Replace with the following:

**00130.15 Right to Protest Award** – See Clackamas County Public Improvement Contract: Instructions to Bidders.

**00130.30 Contract Booklet** – Add the following:

Other documents are part of the contract documents by reference. These include, but are not limited to:

- The "Oregon Standard Specifications for Construction", 2021 Edition, as published by the Oregon Department of Transportation (ODOT).
- "Oregon Standard Drawings" latest edition, as published by ODOT.
- Clackamas County Service District No. 1 "Surface Water Standard Specifications", latest edition.

**00130.40 Contract Submittals** - Replace with the following:

**00130.40 Contract Submittals** - See Clackamas County Public Improvement Contract: Instructions to Bidders.

**00130.70 Release of Bid Guaranties** – Replace with the following:

**00130.70 Release of Bid Guaranties** – See Clackamas County Public Improvement Contract: Instructions to Bidders.

**00130.80 Project Site Restriction**- Replace the paragraph that begins "Until the Agency sends...", with the following paragraph:

Until the Agency sends the Contractor written Notice to Proceed with the Work, and the Contractor has filed the public works bonds required in 00170.20, the Contractor shall not



go onto the Project Site on which the Work is to be done, nor move Materials, Equipment or workers onto the Project Site.

## END OF SECTION

### Section 00140 – Scope of Work

Comply with Section 00140 of the Standard Specifications supplemented modified as follows:

**00140.30 Agency-Required Changes in the Work** – Replace the last paragraph with the following:

Upon receipt of an Engineer's written order modifying the Work, the Contractor shall perform the Work as modified via Change Order, which may be subject to approval as an Amendment.

If an Amendment incorporating changes to the Work increases the Contract amount, the Contractor shall notify its Surety of the increase and shall provide the Agency with a copy of any resulting modification to bond documents. The Contractor's performance of Work pursuant to Amendments shall neither invalidate the Contract nor release the Surety. Payment for changes in the Work shall be made in accordance with 00195.20. Contract Time adjustments shall be made in accordance with 00180.80.

**00140.31 "As-Built" Records** - Add the following:

Maintain a current and accurate record of the work completed during the course of this contract. This may be in the form of "as-built" drawings kept by accurately marking a designated set of the contract plans with the specified information as the Work proceeds. Accurate, complete and current "as-built" drawings are a specified requirement for full partial payment of the work completed. At project completion and as a condition of final payment, the Contractor shall deliver to the Project Manager a complete and legible set of "as-built" drawings.

The "as-built" drawings must show the information listed below. Where the term "locate" or "location" is used, it shall mean record of position with respect to both the construction vertical datum and either construction horizontal datum or a nearby permanent improvement.

- 1) Record location of underground services and utilities as installed.
- 2) Record location of existing underground utilities and services that are to remain and that are encountered during the course of the work.
- 3) Record changes in dimension, location, grade or detail to that shown on the plans.
- 4) Record changes made by change order.
- 5) Record details not in the original plans.

6) Provide fully completed shop drawings reflecting all revisions.

## END OF SECTION

### Section 00150 – Control of Work

Comply with Section 00150 of the Standard Specifications modified as follows:

**00150.00 Authority of the Engineer** – Replace the first sentence with the following:

Except as indicated elsewhere in the Contract (e.g. Amendment approval by the BCC), the Engineer has full authority over the Work and its suspension.

**00150.05 Cooperative Arrangements** – Delete this subsection.

**00150.10 Coordination of Contract Documents**

**(a) Order of Precedence** – Replace with the following:

The Engineer will resolve any discrepancies between these documents in the following order of precedence:

- Approved Amendments;
- Approved Change Orders
- Bid Schedule with Schedule of Prices;
- Permits from governmental agencies
- Special Provisions;
- Agency-prepared drawings specifically applicable to the Project and bearing the Project title;
- Reviewed and accepted, stamped Working Drawings;
- Agreement Form;
- Standard Drawings;
- Approved Unstamped Working Drawings;
- Standard Specifications;
- All other Contract Documents not listed above.

Notes on a drawing shall take precedence over drawing details.

Dimensions shown on the drawings, or that can be computed, shall take precedence over scaled dimensions.

**00150.15(a) General** – Delete this subsection.

**00150.15(b) Agency Responsibilities** - Replace this subsection, except for the subsection number and title, with the following:

The Engineer will:

- Provide copies of plans and specifications.
- Perform measurements and calculations for pay quantities.
- Perform final "as constructed" measurements.

**00150.15(c) Contractor Responsibilities** - Replace this subsection, except for the subsection number and title, with the following:

The Contractor shall be responsible to furnish all field controls for setting principal lines, grades, and measurements as needed to construct the Work as indicated in the Contract Documents.

**00150.50 Cooperation with Utilities:** Add the following to the end of Paragraph (a):

There may be other utility servers who are not specifically listed in these Special Provisions or on the Plans that may be adjusting or inspecting their facilities within the project limits.

The locations, depth and description of existing utilities shown were compiled from available GIS mapping, records and/or field observations. The Engineer or Utility Companies do not guarantee the accuracy or the completeness of such locations. Additional utilities may exist in the project area.

**00150.50(c) Contractor Responsibilities** – Add the following to the bulleted list:

- Follow applicable rules adopted by the Oregon Utility Notification Center;
- Contact Utility owners during Bid preparation and after Contract is awarded to verify all Utilities involvement on the Project Site;
- Hold a utility scheduling meeting and monthly utility coordination meetings (see also 00180.42);
- Coordinate Project construction with Utilities' planned adjustments, take all precautions necessary to prevent disruption of Utility service, and perform its Work in the manner that results in the least inconvenience to the Utility owners;
- Include all Utility adjustment work, whether to be performed by the Contractor or the Utilities, on the Contractor's Project Work schedule submitted under 00180.41;
- Protect from damage or disturbance any Utility that remains within the area in which Work is being performed. Maintain and re-establish utility location marks according to OAR 952-001-0090(2)(a). Coordinate re-establishment of the location marks with the associated Utility;
- Not disturb an existing Utility if it requires an unanticipated adjustment, but shall protect the Utility from damage or disturbance and promptly notify the Engineer;
- Determine the exact location before excavating within the reasonable accuracy zone according to OAR 952-001-0090(2)(c);
- Backfill any exposed utilities as recommended and approved by the Utility representative. Obtain utility locate warning tape from the Utility and replace

damaged or removed warning tape. Utility locate warning tape may not be present at all existing utilities;

- Stake, place warning tape, and maintain no work limits around critical Utility facilities as shown or directed by the Engineer and the Utility;
- In addition to the notification required in OAR 952-001-0090(5), notify the Engineer and the Utility as soon as the Contractor discovers any previously unknown Utility conflicts or issues. Contrary to the OAR, stop excavating until directed by the Engineer and allow the Utility a minimum of two weeks to relocate or resolve the previously unknown utility issues;
- Report to the Engineer any Utility owner who fails to cooperate or fails to follow the planned Utility adjustment.

Subject to the Engineer's approval, the Contractor may adjust the Utilities by asking the Utility owners to move, remove, or alter their facilities in ways other than as shown on the Plans or in the Special Provisions. The Contractor shall conduct all negotiations, make all arrangements, and assume all costs that arise from such changes.

The existing underground utilities shown on the Plans have been determined by as-built records and field surveys, but are not guaranteed to be complete or accurate. The Contractor shall be responsible for contacting the individual utility companies to mark locations, and arranging with them for any relocation work that should be required.

The Contractor shall make excavations and borings ahead of the work where necessary to determine the exact location of underground pipes or other features, which might interfere with construction. The Contractor shall support and protect pipes or other services where they cross the trench and shall be responsible for all damages incidental in interruptions of service that may be caused by Contractor operations. Where a new utility line crosses an existing pipeline or other conduit, the trench backfill shall be well compacted in a manner that provides for the required backfill and compaction standards while protecting the utility in question.

**00150.50 Cooperation with Utilities** - Add the following subsection:

**(f) Utility Information:** The following organizations have utilities within the limits of the Project. Utility work is not anticipated beyond the adjustment work shown in the plans. Notify each utility, in writing, 14 Calendar Days before proposed pavement preservation work and coordinate adjustment work as necessary.

<b>Utility</b>	<b>Contact Person's Name and Phone Number</b>
1. Portland General Electric	Chris Quines chris.quines@pgn.com 503-522-8103
2. Clear Creek Communications	Brian Bellikka 503-631-4517 bbellikka@clearcreek.coop

**00150.70 Detrimental Operations** – Add the following:

Portions of this project will be constructed in close proximity to existing private improvements. All private improvements disturbed by the Contractor's operations shall be repaired or replaced to equal or better condition at the Contractor's expense. The Engineer may withhold from future payments to the Contractor, an amount equal to the costs reasonably estimated by the Engineer to repair or replace, as the case may be, those private improvements disturbed by the Contractor's operations. Engineer shall release the retained amount once Engineer has determined that the Contractor has completed the repair consistent with the requirements of this provision. In addition, prior to construction, the Contractor shall provide to the Engineer video showing private property, which may be disturbed during construction.

**END OF SECTION**

**Section 00160 – Source of Materials**

Comply with Section 00160 of the Standard Specifications modified as follows:

**00160.20(a) Buy America** – Delete this section and replace with the following: Federal highway funds are NOT involved on this Project.

**END OF SECTION**

**Section 00165 – Quality of Materials**

Comply with Section 00165 of the Standard Specifications modified as follows:

**00165.04 Costs of Testing** – Replace this section with the following sentence:

All testing required to be performed by the Contractor will be at the Contractor's expense.

**00165.10(a) Field-Tested Materials** – Add the following sentence:

The County follows the most current version of the MFTP on its projects:

**00165.10(b) Nonfield-Tested Materials** - Add the following sentence:

The County follows the most current version of the NTMAG on its projects.

**END OF SECTION**

## Section 00170 – Legal Relations and Responsibilities

Comply with Section 00170 of the Standard Specifications modified as follows:

**00170.02 Permits, Licenses, and Taxes** – Add the following:

The Contractor shall obtain and pay for a Clackamas County Road Closure Request for Temporary Road Closures when minor local streets are closed.

Add the following subsection:

**00170.67 Fees** - The fee required by ORS 279C.825(1) will be paid by the Agency to the Commissioner of the Oregon Bureau of Labor and Industries under the administrative rules of the Commissioner.

**00170.70 Insurance** - Replace with the following:

**00170.70 Insurance** - See Clackamas County Public Improvement Contract.

**00170.70(d) Additional Insured** - Add the following paragraph and bullets to the end of this subsection:

Add the following as Additional Insureds under the Contract:

Clackamas County and its officers, agents, and employees  
Clackamas County Board of Commissioners  
Conzor North America, Inc.

**00170.72 Indemnity/Hold Harmless** – Replace with the following:

**00170.72 Indemnity/Hold Harmless** – See Clackamas County Public Improvement Contract.

Extend indemnity and hold harmless to the Agency and the following:

- Clackamas County and its officers, agents, and employees
- Clackamas County Board of Commissioners
- Consor North America, Inc.

**00170.79 Third Party Beneficiary** – Replace the text of this section with the following:

- Third-party beneficiaries to the Contract include the Oregon Department of Transportation and its officers, agents, and employees.

**END OF SECTION**

**Section 00180 – Prosecution and Progress**

Comply with Section 00180 of the Standard Specifications modified as follows:

**00180.06 Assignment of Funds Due under the Contract** – Replace this subsection, except for the subsection number and title, with the following:

Assignment of funds due or to become due under the Contract to the Contractor will not be permitted unless:

- The Contractor secures the written consent of the Contractor's Surety to the assignment; and
- The Engineer gives prior written consent to the assignment, which will not be unreasonably withheld.

**00180.21(a) Subcontracting** - Add the following to the end of this subsection:

All contracts with subcontractors or suppliers shall have provisions making the contract assignable to the County, at the option of the County, if the Contractor terminates, goes out of business, declares bankruptcy, or otherwise is unable to perform provided that the County gives the subcontractor notice of assignment within fourteen (14) days of learning of the inability of the Contractor to perform.

The Engineer may revoke consent to subcontract. If the Engineer revokes consent to subcontract, the subcontractor shall be immediately removed from the Project Site.

**00180.40 Limitation of Operations** - Add the following to subsection (a):

The Contractor must provide, at a minimum, a 48-hour notice to the Clackamas County Project Manager in order to perform any work on Saturdays.

**00180.40(b) On-Site Work** – Add the following bulleted item:

- Conduct a Traffic Control Meeting per Section 00221.08;
- An approved Subgrade Protection Plan per Section 00610.44;

Add the following paragraph to the end of the subsection:

The Contractor shall not begin On-Site Work before June 17, 2024, unless approved by the Engineer.

Add the following subsection:

**00180.40(c) Specific Limitations** - Limitations of operations specified in these Special Provisions include, but are not limited to, the following:

<b>Limitations</b>	<b>Subsection</b>
Cooperation with Utilities .....	00150.50
On-Site Work .....	00180.40(b)

Contract Completion Time .....	00180.50(h)
Traffic Lane Restrictions .....	00220.40(e)
Special Events .....	00220.40(e)
Noise Control .....	00290.32
Maintenance Under Traffic .....	00620.43
Opening Sections to Traffic .....	00745.51

Be aware of and subject to schedule limitations in the Standard Specifications that are not listed in this Subsection.

**00180.41 Project Work Schedules** – Add the following:

A Type B schedule as detailed in the Supplemental Specifications is required on this Contract. In addition, a three-week look ahead schedule shall be prepared by the Contractor on a weekly basis and submitted to the Engineer. It shall include all construction activities planned for the following three-week period. The three-week look ahead schedule can be hand-written and shall be in a format agreed upon by the Contractor and the Engineer.

**The Contractor shall notify the County 2 weeks before the first substantial work activity commences on the project site. Project Information Signs and Portable Changeable Message Signs shall be in place 2 weeks before the first substantial work activity commences on the project site.**

**00180.42 Preconstruction Conference** - Add the following:

Before beginning On-Site Work and before meeting with the Engineer for the preconstruction conference, hold a group utilities scheduling meeting with representatives from the utility companies involved with this project. Incorporate the utilities time needs into the Contractor's schedule submitted prior to the preconstruction conference.

Submit the following during the preconstruction conference unless otherwise directed:

- The names, addresses, and telephone numbers of two or more persons employed by the Contractor who can be reached day or night to handle emergency matters.
- Subcontractor's list including contact list for each subcontractor with phone numbers and addresses and work to be performed.
- List of personnel authorized to sign change orders and receive progress payment warrants.
- Video recording of private properties affected by construction per 00150.70. A representative of each subcontractor shall be required to attend the pre-construction conference.

**00180.43 Commencement and Performance of Work** - Add the following bullet items:

- Conduct the work at all times in a manner and sequence that will insure minimal interference with traffic. The Contractor shall not begin work that will interfere with



work already started. If it is in the County's best interest to do so, the County may require the Contractor to finish a portion or unit of the project on which work is in progress or to finish a construction operation before work is started on an additional portion or unit of the project.

- **The Contractor shall notify the County 2 weeks before the first substantial work activity commences on the project site.**
- **Project Information Signs and Portable Changeable Message Signs shall be in place 2 weeks before the first substantial work activity commences on the project site.**
- Conduct the work at all times in a manner and sequence that will insure minimal interference with traffic. The Contractor shall not begin work that will interfere with work already started. If it is in the County's best interest to do so, the County may require the Contractor to finish a portion or unit of the project on which work is in progress or to finish a construction operation before work is started on an additional portion or unit of the project.
- The Contractor will be notified in writing of the specified date to commence work and will not begin work until receipt of this Notice to Proceed. Upon the commencement of grinding, tilling, grading or paving operations on any one respective work site, all necessary work including paving of driveways and road approaches shall be vigorously pursued to reach substantial completion within a 14 calendar day duration. **If at any time a work site is left prior to substantial completion (completed paving of driveways, road approaches, etc.) without written consent from the owner's project manager, this will be considered abandonment by the Contractor.** Failure to meet these time constraints or abandonment shall subject the contractor to the full amount of Liquidated Damages as detailed in Section 00180.50 of these Special Provisions.
- At the time Substantial Completion is reached, the Contractor shall submit a Notice of Substantial Completion.

Add the following subsection:

**00180.50(h) Contract Time** - Complete all Work to be done under the Contract not later than August 30, 2024.

**00180.70 Suspension of Work** - Add the following to the first bullet item:

If the Inspector has reason to believe that any safety provisions are not being adhered to, the Inspector will immediately notify the Contractor's site foreman and/or the appropriate person and the County Project Manager. The purpose of this discussion is to determine the validity of the alleged violation. This will also allow the Contractor a reasonable amount of time to correct or improve any of the provisions for the safety on this project. If the County Project Manager finds the problem still unresolved or uncorrected, they will notify the Contractor's Project Manager and the County's Risk Management Safety Analyst. If the County's Risk Management Safety Analyst finds that the job site contains any unresolved

safety issues they will take appropriate action up to and including suspension of the Contractor's operations on all or part of the Work.

**00180.85(b) Liquidated Damages** - Add the following paragraphs:

The liquidated damages for failure to complete the Work on time required by 00180.50(h) will be \$700 per Calendar Day \*.

\* Calendar Day amounts are applicable when the Contract time is expressed on the Calendar Day or fixed date basis.

Add the following subsection:

**00180.85(c) Lane Closures and Road Closures** - Lane closures and road closures beyond the limits specified will inconvenience the traveling public and will be a cost to the Agency.

**(1) Lane Closures** - It is impractical to determine the actual damages the Agency will sustain in the event traffic lanes are closed beyond the limits listed in 00220.40(e). Therefore, the Contractor shall pay to the Agency, not as a penalty, but as liquidated damages, \$500 per 15 minutes, or for a portion of 15 minutes, per lane, for any lane closure beyond the limits listed in 00220.40(e). In addition to the liquidated damages, all added cost for traffic control measures, including flagging, required to maintain the lane closures beyond the allowed time limits, will be at no additional cost to the Agency. The required traffic control measures will be as determined by the Engineer.

The Engineer will determine when it is safe to reopen lanes to traffic. Assessment of liquidated damages will stop when all lanes have been safely reopened. Any liquidated damages assessed under these provisions will be in addition to those listed in 00180.85(b).

Add the following subsection:

**00180.85(d) Traffic Delays Beyond 20 Minutes** - Stopping or holding vehicles beyond the limits specified will inconvenience the traveling public and will be a cost to the Agency.

It is impractical to determine the actual damages the Agency will sustain in the event traffic is stopped or held longer than the 20-minute limit listed in 00220.02. Therefore, the Contractor shall pay to the Agency, not as a penalty, but as liquidated damages, \$500 per 20 minutes, or for a portion of 20 minutes, for stopping or holding traffic longer than 20 minutes. In addition to the liquidated damages, any added cost for traffic control measures, including flagging, required to stop or hold traffic beyond the 20-minute time limit, will be at no additional cost to the Agency. The required traffic control measures will be as determined by the Engineer.

Assessment of liquidated damages will stop when the Engineer determines that traffic is no longer stopped or held beyond the 20-minute limit. Any liquidated damages assessed under these provisions will be in addition to those listed in 00180.85(b).

Add the following subsection:

**00180.85(e) Installation of Driveways** – Not completing driveways in a time specified will

be an inconvenience to the property owner and will be a cost to the Agency. It is impractical to determine the actual damages the Agency will sustain in the event a driveway connection isn't constructed in 30 calendar days after mainline paving was completed in front of a driveway. Therefore, the Contractor shall pay to the Agency, not as a penalty, but as liquidated damages, \$500 per each calendar day or for a portion of a calendar day, for not constructing a driveway connection beyond 30 calendar days of when mainline was completed in front of the driveway.

## END OF SECTION

### Section 00190 – Measurement of Pay Quantities

Comply with Section 00190 of the Standard Specifications modified as follows:

**00190.20(a) Contractor to Provide Vehicle Weigh Scales:** Delete and replace the last paragraph in this section with the following:

Unless otherwise provided in the Contract, Pay Items to be measured by weight shall include all Contractor costs for providing, maintaining, inspecting, and testing scales; for furnishing appropriate weigh tickets; for self-printing scales; for electronic weigh memo system(s); and for transporting Materials to the scales or to check weighing.

**00190.20(f)(1) Scale with Automatic Printer:** Delete and replace the first sentence in this section with the following:

If the scales have an automatic weigh memo printer or an approved electronic weigh memo system that does not require manual entry of gross weight information, the Agency may periodically have a representative at the scales to observe the weighing procedures.

**00190.20(f)(1) Scale with Automatic Printer:** Delete and replace the last bullet in this section with the following:

- Furnish a legible, serially numbered weigh memo for each load of Materials to the Agency's Materials receiver at the point of delivery, or as directed by the Engineer. The memo shall identify the Project, the Materials, the date, net weight (gross and tare as appropriate), and identification of the vehicle and weigh technician. If approved by the Engineer an electronic weigh memo system may be used. Requests to use an electronic weigh memo system shall be submitted to the Engineer according to 00150.37, providing sufficient detail for the Engineer to perform an evaluation. If approved, the Contractor shall provide training, technical support, reports, and weigh memo information to the Engineer at no additional cost to the Agency. The electronic weigh memo system shall be:
- Capable of recording and securely retaining the same required "weigh memo" information identified above. For retention see 00170.07(c).
- Fully integrated with the provided weigh scale system.
- Designed in such a way that the data electronically read from scales cannot be altered by the Contractor, Subcontractor, Supplier, Engineer, or other system users.
- Designed to allow the Engineer remote access to all the weigh memo data in real-time and allow the Engineer to add comments to the individual weigh memo

regarding waste, temperature, stations, yield or other information. The system shall identify the system user or individual that adds comments to the electronic weigh memo or otherwise access the system. The Contractor shall provide the Engineer a means to access the data if the Engineer cannot use an Agency provided hand held device for access.

- Capable of providing all the weigh memo information, including any added comments, in an electronic data file the Engineer can easily access without proprietary software.

**00190.20(g) Agency-Provided Weigh Technician:** Replace subsection (g) with the following:

The Contractor must provide a weigh technician. The Agency will not provide one for the Contractor.

**00190.30 Plant Scales:** Add the following sentence after the bulleted list:

If approved by the Engineer an electronic weigh memo system may be used in place of a printer system. See 00190.20(f)(3).

## END OF SECTION

### Section 00195 – Payment

Comply with Section 00195 of the Standard Specifications modified as follows:

**00195.10 Payment for Changes in Material Costs** - Delete and replace with the following:

No asphalt cement cost adjustment shall be used on this project.

**00195.12 Steel Material Price Escalation/De-Escalation Clause** – Add the following sentence:

No steel material price escalation/de-escalations shall be used on this project. There is no option for Contractor participation.

**00195.20(b) Significant Changed Work** - Replace the paragraph that begins “Any such adjustments...” with the following paragraph:

Any adjustments may be less than, but will not be more than the amount justified by the Engineer on the basis of the established procedures set out in Section 00197 for determining rates. This does not limit the application of Section 00199.

Significant is defined as:

- a) An increase or decrease of more than 25 percent of the total cost of the Work calculated from the original proposal quantities and the unit contract prices; or,

- b) An increase or decrease of more than 25 percent in the quantity of any one major contract item.

For condition b) above, a major item is defined as any item that amounts to 10 percent or more of the original total contract price.

**00195.50 Progress Payments and Retained Amounts** - Modify as follows:

**00195.50(a) Progress Payments** - Modify as follows:

**(1) Progress Estimates** - Replace the first sentence with the following:

At a regular period each month to be determined at the Preconstruction Conference, the Contractor will make an estimate of the amount and value of pay item work completed and in place. This estimate will be submitted to the Project Manager for review and approval.

**(2) Value of Material on Hand** - Replace with the following:

**(2) Value of Material on Hand** - The Contractor will make an estimate of the amount and value of acceptable material to be incorporated in the completed work which has been delivered and stored as given in 00195.60(a) for review and approval.

**(4) Limitations on Value of Work Accomplished** - In the first sentence, change "Engineer's estimate" to "Contractor's reviewed estimate".

**00195.50 (b) Retainage** - Replace the first paragraph with the following:

The amount to be retained from progress payments will be 5.0% of the value of payments made, and will be retained in one of the forms specified in Subsection (c) below. The County will withhold Retainage from all force account and change order work.

**00195.50(c) Forms of Retainage** – Replace the first paragraph with the following:

Forms of acceptable retainage are set forth below in Subsections (1) through (3). "Cash, Alternate A" or "Cash, Alternate B" (Retainage Surety Bond) are the Agency-preferred forms of retainage. Unless the Contractor notifies the County otherwise in writing, the County will automatically hold retainage per paragraph (2) "Cash, Alternate B (No Interest Earned)". If the Agency incurs additional costs as a result of the Contractor's election to use "Bonds and Securities", the Agency may recover such costs from the Contractor by a reduction of the final payment.

Replace paragraph (2) with the following:

**(2) Cash, Alternate B (No Interest Earned)** – Retainage will be deducted from progress payments and held by the Agency until final payment is made in accordance with 00195.90, unless otherwise specified in the Contract.

**00195.50(d) Release of Retainage** – Replace with the following:

**(d) Release of Retainage** - As the Work progresses, release of the amounts to be retained under (b) of this Subsection will only be considered for Pay Items that have been

satisfactorily completed. For purposes of this Subsection, a Pay Item will be considered satisfactorily completed only if all of the Work for the Pay Item is complete and all contractual requirements pertaining to the Pay Item and Work have been satisfied. Work not included in a Pay Item, or which constitutes part of an uncompleted Pay Item, will not be regarded as satisfactorily completed Work for the purposes of this Subsection.

When the Work is 50% completed and upon written application of the Contractor and written approval of the Surety, the Engineer or Project Manager may reduce or eliminate retainage on remaining progress payments if the Work is progressing satisfactorily.

A determination of satisfactory completion of Pay Items or Work or release of retainage shall not be construed as acceptance or approval of the Work and shall not relieve the Contractor of responsibility for defective Materials or workmanship or for latent defects and warranty obligations.

## **END OF SECTION**

### **Section 00196 – Payment for Extra Work**

Comply with Section 00196 of the Standard Specifications modified as follows:

**00196.91 Extra Work Allowance** – Add the following section:

The Bid schedule of prices contains a bid item for a pre-determined amount of Engineer ordered extra work. All Bidders shall reflect this same amount in their total Bid. No Bidder shall presume in the preparation of the bid or in the course of contract work that there will be a certain payment under that item or a certain order for extra work.

## **END OF SECTION**

### **Section 00197 – Payment for Force Account Work**

Comply with Section 00197 of the Standard Specifications.

## **END OF SECTION**

### **Section 00199 – Disagreements, Protests and Claims**

Comply with Section 00199 of the Standard Specifications supplemented and/or modified as follows:

**00199.40 Claim Decision; Review; Exhaustion of Administrative Remedies** - Replace the entire section with the following:

The Contractor must properly submit a claim as detailed in 00199.30.

**(a) Engineer Claim Review** - The Engineer or Project Manager will, as soon as practicable, consider and investigate a Contractor's properly submitted claim for additional compensation, Contract Time, or for a combination of additional compensation and Contract Time. Once the Engineer or Project Manager determines the Agency is in receipt of a properly submitted claim, the Engineer or Project Manager will arrange a meeting, within 28 Calendar Days, or as otherwise 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.

If the Engineer or Project Manager determines that the Contractor must furnish additional information, records, or documentation to allow proper evaluation of the claim, the Engineer will schedule a second meeting, to be held within 14 calendar days, or as otherwise agreed by the parties, at which the Contractor shall present the requested information, records and documentation.

The Engineer or Project Manager will advise the Contractor of the decision to accept or reject the claim. If the Engineer or Project Manager finds the claim has merit, an equitable adjustment will be offered. If the Engineer or Project Manager finds the claim has no merit, no offer of adjustment will be made and the claim will be denied. The County intends to resolve claims at the lowest possible level.

If, at any step in the claim decision or review process, the Contractor fails to promptly submit requested information or documentation that the Agency 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.

If the Engineer or Project Manager has denied a claim, in full or in part, for Contract Time only according to 00180.80, or has denied a claim, in full or in part, for correction of final compensation according to 00195.95, those disputed claims may then be resolved, in full or in part, at either of the two progressive steps of claim review procedure as specified in this Subsection. For all claims, all of the actions and review under each step of the review process shall occur before the review can be advanced to the next higher step.

**(b) Director Claim Review** - Upon request by the Contractor, the Department Director will review the Engineer or Project Manager's decision on the claim and advise the Contractor of the decision in writing. If the Director finds the claim has merit, and equitable adjustment will be offered. If the Director finds the claim has no merit, no offer of adjustment will be made and the claim will be denied.

Once the Engineer determines the Agency is in receipt of a properly submitted claim, the Engineer will arrange a meeting, within 21 Calendar Days or as otherwise agreed by the parties, with the Contractor in order to present the claim for formal review and discussion.

If the Engineer determines that the Contractor must furnish additional information, records or documentation to allow proper evaluation of the claim, the Engineer will schedule a second meeting, to be held within 14 Calendar Days or as otherwise agreed by the parties, at which the Contractor shall present the requested information, records and documentation.

The Director shall evaluate the claim based on the information provided by the Contractor to the Engineer or Project Manager. However, if the Department Director (or designee) determines that the Contractor must furnish additional information, records or documentation to allow proper evaluation of the claim, the Department Director (or designee) will schedule a meeting, to be held within 14 Calendar Days, or as otherwise agreed by the parties, at which the Contractor shall present the requested information, records and documentation.

The claim is subject to records review, if not all of the records requested by the Department Director (or designee) were furnished. If applicable, advancement of the claim is subject to the provisions regarding waiver and dismissal of the claim or portions of the claim.

The decision of the Department Director shall be the final decision of the Agency.

**(c) Commencement of Litigation** - If the Contractor does not accept the Director's decision, then the Contractor shall commence any suit or action to collect or enforce any claim filed in accordance with 00199.30 within a period of one (1) year following the mailing of the decision or within one (1) year following the date of "Second Notification", whichever is later. If said suit or action is not commenced in said one (1) year period, the Contractor expressly waives any **and** all claims for additional compensation and any and all causes of suit or action for the enforcement thereof that he might have had.

The Contractor must follow each step in order, and exhaust all available administrative remedies before resorting to litigation. Litigation of a claim that cannot be resolved through the process described above shall be initiated by filing a complaint in the Clackamas County Circuit Court for the State of Oregon.

In any litigation, the entire text of any order or permit issued by the County or any other governmental or regulatory authority, as well as any documents referenced or incorporated therein by reference, shall be admissible for purposes of Contract interpretation.

The Contract shall not be construed against either party regardless of which party drafted it. Other than as modified by the Contract, the applicable rules of contract construction and evidence shall apply. This Contract shall be governed by and construed according to the laws of the State of Oregon without regard to principles of conflict of laws.

The Contractor shall comply with 00170.00.

**00199.50 Mediation** - Delete the entire section.

**00199.60 Review of Determination Regarding Records** - Delete the entire section.

**END OF SECTION**



## SECTION 00210 - MOBILIZATION

Comply with Section 00210 of the Standard Specifications.

### END OF SECTION

## SECTION 00220 - ACCOMMODATIONS FOR PUBLIC TRAFFIC

Comply with Section 00220 of the Standard Specifications modified as follows:

**00220.02(a) General Requirements** - Add the following bullet to the end of the bullet list:

- When paving operations create an abrupt edge, protect traffic by installing a "DO NOT PASS" (R4-1) sign before the Work Area at sign spacing "A" from the TCD Spacing Table" shown on the Standard Drawings. Alternate "ABRUPT EDGE" (CW21-7) signs with appropriate (CW21-8) rider at 500 foot spacings. Install a "BUMP" (W8-1) sign 100 feet prior to the transverse paving edge.
- Maintain and coordinate access to all affected properties. Allow unrestricted vehicle and pedestrian access to all properties outside the allowable working hours.
- Open all lanes and adjacent asphalt surfaces (including shoulders and bike lanes) on all streets outside of allowable working or lane restriction hours with temporary or permanent pavement surfacing.
- Provide and maintain access to garbage containers and garbage pick-up, mail and other regularly scheduled deliveries. Coordinate with school districts and with public transit to minimize impacts and delays for any school and public bus routes. Coordinate Work with delivery schedules for business located on S Fishers Mill Road and S Strowbridge Road.
- Notify all emergency services of all changes to the traffic control prior to completing the change. Notify the Police and Fire of all lane closures. Maintain emergency entrance and exit of Clackamas Fire District #1 Station 12 located on S Harding Road, and provide flagger/spotter at the fire station driveway during Work hours to assist with emergency vehicle access.

Add the following subsection:

**00220.03(c) Work Zone Notifications** - The County will provide an electronic door-hanger template for the Contractor to add schedule information. The Contractor shall provide and deliver door-hanger notifications to properties surrounding the street to be paved. The County will provide a map showing the specific properties where door hangers are to be hung. Door-hangers shall be marked with the dates and times that the street and/or its traffic would be significantly affected. Door-hangers shall be delivered 72 hours before traffic would be significantly impacted on that street. In the event of a significant schedule change, door-

hangers shall be redelivered with the revised work dates/times 24 hours before significant street impacts. Work may be suspended if timely notification has not been provided.

**00220.40(e)(1) Closed Lanes** - Replace this subsection, except for the subsection number and title, with the following:

Traffic Lanes may be closed on S Fischers Mill Rd, S Harding Rd, and S Strowbridge Rd when allowed, shown, or directed during the following periods of time except as specified in 00220.40(e)(2):

**Single Lane Closures** – One Traffic Lane may be closed during the following times:

- Daily, Monday through Friday, between 7:00 a.m. and 6:00 p.m.

Add the following subsection:

**00220.40(f) Limited Duration Road Closure** –

- The Contractor will be permitted to close all Traffic Lanes on S Strowbridge Road for periods not to exceed 5 days in duration during pavement rehabilitation Work, as long as a road closure plan and detour plan has been approved by the Engineer and fully implemented. Local access shall be maintained. Detour plan shall be identified on the site-specific traffic control plan per Section 00221.06.
- The Contractor will be permitted to close all Traffic Lanes on S Harding Road for periods not to exceed 5 days in duration for each street during pavement rehabilitation Work, as long as a road closure plan and detour plan has been approved by the Engineer and fully implemented. Local access shall be maintained. Fischers Mill Rd shall remain open and accessible during this closure. Detour plan shall be identified on the site-specific traffic control plan per Section 00221.06.
- The Contractor will be permitted to close all Traffic Lanes on S Fischers Mill Road between S Springwater Road and S Harding Road for periods not to exceed 5 days in duration for each street during pavement rehabilitation Work, as long as a road closure plan and detour plan has been approved by the Engineer and fully implemented. Local access shall be maintained. Harding Road shall remain open and accessible during this closure. Detour plan shall be identified on the site-specific traffic control plan per Section 00221.06.

**00220.60(a)(1) Contractor Responsibility** - Add the following bulleted items to the end of this subsection:

- Keep surfaces being used by bicycles and pedestrians free of all dirt, mud, gravel and other harmful materials. Surfaces include bike paths, bike lanes, roadway shoulders or the outside 4 feet of the roadway.
- Vacuum sweep loose aggregate, soil and other materials on the roadway out of the travel ways at the end of each day. Swept materials shall be removed by broom, or other means to prevent pollution of the storm sewer system or receiving streams.

## END OF SECTION

### SECTION 00221 - COMMON PROVISIONS FOR WORK ZONE TRAFFIC CONTROL

Comply with Section 00221 of the Standard Specifications modified as follows:

**00221.03 Traffic Safety and Operations** - Replace the bullet that begins "When paving operations create..." with the following bullet:

- When paving operations create an abrupt or sloped edge drop off greater than 1 inch, protect traffic by installing signing according to the "2 Lane, 2 Way Roadway Overlay Area" detail shown on the Standard Drawings. Protect longitudinal and transverse Pavement joints by placing and maintaining an asphalt concrete wedge according to 00221.07(c)(1).
- All work zones exceeding 1,500 feet in length shall require the use of a pilot car. During pilot car operations, install a 15-inch by 24-inch "WAIT FOR PILOT CAR: (CR4-20) sign at each driveway approach and intersecting side street within the limits of the pilot car operation.

**00221.06 Traffic Control Plan** – Replace the first paragraph with the following:

The Contractor is required to submit a site-specific traffic control plan prepared by a TCP company, with additional detail meeting the project requirements for review 5 Calendar Days before the preconstruction conference.

**00221.07(c)(1) Paving** - Replace this subsection, except subsection number and title, with the following:

When the longitudinal joint is greater than 1 inch in height, install additional TCD according to 00221.03. Complete the placing of ACP and construction of paving joints according to 00745.47, and 00745.48, as applicable.

Replace the bullet that begins "When the Schedule of Items does not include ..." with the following bullet:

- Preparing and signing the daily "Traffic Control Inspection Report", when a TCS is not included in the Schedule of Items or when a TCS is not onsite for a work shift.

**00221.08 Traffic Control Meeting** - All personnel who will directly supervise the traffic control must attend a traffic control meeting. Contractor to produce and distribute meeting minutes within seven (7) days following the meeting.

**00221.98 Payment, Method "B" – Lump Sum Basis** – Replace this subsection except for the heading and title with the following:

Work zone traffic control will be paid for at the Contract lump sum amounts for the item "Temporary Work Zone Traffic Control, Complete for \_\_\_\_" where the name of the street(s) or location will be inserted in the blank.

When the schedule of items includes both "Temporary Work Zone Traffic Control, Complete: \_\_\_\_\_" and other unit based pay items described in Payment, Method "A", only the pay items included in the bid item schedule will be paid. All TCD and operations required to safely protect and direct traffic around and through the work zone(s) not listed in the bid item schedule shall be included in the lump sum price for "Temporary Work Zone Traffic Control, Complete: \_\_\_\_\_."

Payment includes all traffic control costs including flagging (to the extent deemed necessary by the Engineer) during the course of construction and as needed to complete punch list items. Payment also includes the removal of existing striping and legends shown to be replaced.

## END OF SECTION

### SECTION 00222 – TEMPORARY TRAFFIC CONTROL SIGNS

Comply with Section 00222 of the Standard Specifications modified as follows:

**00222.40(e) Temporary Sign Placement** - Add the following to the end of the bullet list:

- Place a "PEDESTRIANS ON ROADWAY" (CW11-2) sign at the beginning of each end of the Work Area, facing incoming traffic as shown, or as directed.
- Install a "PAVING SIGN" and a "COMMUNITY ROAD FUND SIGN" on a single wood post. Install a "PROJECT NOTIFICATION SIGN" on a single wood post. Place these Project Information Signs according to sign spacing "A" from the "TCD Spacing Table" shown on the Standard Drawings or as modified by the Supplemental Drawings, in advance of the "ROAD WORK AHEAD" sign at each end of the Project, facing incoming traffic. See project plans for sign size and legend.
- Install an 18 by 24-inch "NO PARKING" (R8-3a) sign in every block where on-street parking is prohibited, facing incoming traffic.
- When paving operations create an abrupt or sloped edge drop off greater than 1 inch, protect traffic by installing signing according to the "2 Lane, 2 Way Roadway Overlay Area Signing" detail shown on the Standard Drawings.
- All work zones exceeding 1,500 feet in length shall require the use of a pilot car. During pilot car operations, install a 15-inch by 24-inch "WAIT FOR PILOT CAR: (CR4-20) sign at each driveway approach and intersecting side street within the limits of the pilot car operation.

- In addition to the signs, public notification (e.g. flyers, door hangers) may be used to inform the residents that may be affected by the pilot car operations and the "WAIT FOR PILOT CAR" signs.

**00222.90 Payment** - Add the following pay items:

(e) Temporary Project Information Signs..... Square Feet

Add the following after the sentence that begins "In item (d)";

Item (e) includes installing and removing temporary project information signs shown in the plans.

**END OF SECTION**

**SECTION 00223 - WORK ZONE TRAFFIC CONTROL LABOR AND VEHICLES**

Comply with Section 00223 of the Standard Specifications.

**END OF SECTION**

**SECTION 00224 - TEMPORARY TRAFFIC CHANNELIZING DEVICES**

Comply with Section 00224 of the Standard Specifications modified as follows:

**00224.46 Pavement Edge Delineation** - Replace the paragraph that begins "Place tubular or conical markers..." with the following paragraph:

Place tubular or conical markers to delineate the edge of Pavement immediately after construction Work or paving operations create an abrupt or sloped edge drop-off greater than 1 inch in height along the right hand or left hand Shoulder.

**END OF SECTION**

**SECTION 00225 - TEMPORARY PAVEMENT MARKINGS**

Comply with Section 00225 of the Standard Specifications modified as follows:

**00225.40 Temporary Pavement Markers** - Replace the paragraph that begins "Unless otherwise shown..." and the three bullets with the following paragraphs and bullets:

Install temporary flexible overlay pavement markers for temporary centerline marking as follows:

- Place and maintain one temporary flexible overlay pavement marker on 40 foot spacing in tangent and curve sections except as below.
- Place and maintain one temporary flexible overlay pavement marker on 20 foot spacing in curved alignment sections identified by a speed rider displaying less than the posted speed and channelization areas.

Establish alignment for placing the temporary flexible overlay pavement markers as follows:

- Control markers at:
  - 200 foot intervals on tangents
  - 50 foot intervals on curves
  - 40 foot intervals on curves with speed rider
- Use string line or other appropriate means to maintain proper alignment of the markers. Adjust placement to avoid straddling a longitudinal joint, while maintaining a suitable alignment of markers.
- Remove and replace misaligned markers at no additional cost to the Agency.

#### **END OF SECTION**

### **SECTION 00226 - TEMPORARY ROADSIDE BARRIERS AND IMPACT ATTENUATORS**

Comply with Section 00226 of the Standard Specifications.

#### **END OF SECTION**

### **SECTION 00228 - TEMPORARY PEDESTRIAN AND BICYCLIST ROUTING**

Comply with Section 00228 of the Standard Specifications modified as follows:

**00228.00 Scope** - Replace this subsection, except subsection number and title, with the following:

In addition to the requirements of Section 00221, this Work consists of furnishing, installing, operating, maintaining, inspecting, and removing temporary devices for accommodating pedestrians and bicyclists through a work zone.

## SECTION 00280 - EROSION AND SEDIMENT CONTROL

Comply with Section 00280 of the Standard Specifications modified as follows:

**00280.00 Scope** - Add the following paragraph to the end of this subsection:

The Agency's NPDES 1200-CA Permit is applicable to the Project.

**00280.03 Standards** - Replace this subsection, except for the subsection number and title, with the following:

When designing, applying, installing, maintaining, inspecting, and removing erosion and sediment control devices, use the version in effect on the date the Project is advertised, of the Clackamas Water Environment Services *Erosion Prevention and Sediment Control Planning and Design Manual*.

**00280.06 Erosion and Sediment Control Manager** - Delete this subsection.

**00280.62 Inspection and Monitoring** - Replace this subsection, except for the subsection number and title, with the following:

Inspect the Project Site and all ESC devices for potential erosion or sediment movement on a weekly basis and when 1/2 inch or more of rainfall occurs within a 24-hour period, including weekends and holidays.

If a significant noncompliance or serious water quality issue occurs that could endanger health or the environment, verbally report it to the Engineer within 24 hours.

**00280.80 Measurement** - Add the following paragraph to the end of this subsection:

**(e) Incidental** – No measurement will be made and all Work shall be considered incidental to the Work. When unit based bid items are included in the bid item schedule, only those items listed will be measured and all other Work required to comply with this section and applicable permits shall be considered incidental.

**00280.90 Payment** – Add the following paragraph after the paragraph beginning “When only item (a)...”:

Only items listed in the bid schedule will be measured separately. All other work required to comply with this section and applicable permits will be considered incidental to the work and no additional payment will be made.

**END OF SECTION**

## **SECTION 00290 - ENVIRONMENTAL PROTECTION**

Comply with Section 00290 of the Standard Specifications modified as follows:

**00290.32 Noise Control** - Replace the first bullet paragraph with the following:

- Do not perform construction within 1,000 feet of an occupied dwelling between the hours of 10:00 pm and 7:00 am, Monday through Friday, without the approval of the Engineer. No work is allowed on the weekend without the approval of the Engineer.
- Delete the paragraph that begins "A Pollution Control Plan...".

**END OF SECTIONSECTION**

## **00310 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

Comply with Section 00310 of the Standard Specifications.

**END SECTION**

## **SECTION 00320 - CLEARING AND GRUBBING**

Comply with Section 00320 of the Standard Specifications.

**END SECTION**

## **SECTION 00330 - EARTHWORK**

Comply with Section 00330 of the Standard Specifications.

**END SECTION**

## **SECTION 00331 - SUBGRADE STABILIZATION**

Comply with Section 00331 of the Standard Specifications.

**END SECTION**



## **SECTION 00340 - WATERING**

Comply with Section 00340 of the Standard Specifications.

**END SECTION**

## **00440 - COMMERCIAL GRADE CONCRETE**

Comply with Section 00440 of the Standard Specifications.

**END SECTION**

## **SECTION 00490 - WORK ON EXISTING SEWERS AND STRUCTURES**

Comply with Section 00490 of the Standard Specifications modified as follows:

**00490.01 Descriptive Terms** – Supplement the definition of adjust with the following:

Adjusting structures (manhole rims, valves, boxes, and catch basins) shall also include hand removal of existing asphalt pavement around the structure as required to overlay or inlay the proposed pavement section. Adjusting inlets shall also include additional work associated with maintaining or revising the finish grade surrounding the catch basins to maintain or provide positive drainage.

**00490.48 Adjusting Boxes, Cleanout Lids and Similar Structures** – Add the following to the end of this subsection:

A pre-construction monument survey was performed by the Engineer's surveyor prior to construction. Multiple survey monuments may be present throughout the project areas, located outside monument boxes. The Contractor shall protect all monuments from damage to the maximum extent feasible and install new boxes, where shown in the Plans. Including installing new monument boxes over existing monument pins located within the roadway that do not have an existing box. The Contractor shall be responsible for installing monument boxes at the exact horizontal location of any monument that has been disturbed. The Engineer's surveyor will reset the vertical location of monuments that are disturbed after construction. Coordination with the Engineer's surveyor and protection of existing monuments shall be incidental to other work under this project.

The Contractor may encounter cases where a utility facility (such as a valve box) has been adjusted by the utility owner and cold mix has been placed around the facility. The Contractor shall remove and dispose of this cold mix, replace it with asphalt concrete pavement, and hand-compact it in advance of the pavement Work. This Work is considered incidental to the box adjustment item on the bid schedule.

Water and gas valve access lids shall only be adjusted by raising the top section of the existing valve can.

**00490.80 Measurement** – Add the following to this subsection:

No measurement shall be made for adjusting structures or boxes owned by utility providers. All work associated with installing grade adjustment rings provided by others or raising boxes to finish grade during paving operations which are not owned by Clackamas County will be considered incidental to other bid items including coordination with utility owners.

**00490.90 Payment:** Add the following:

Add the following pay items to the pay item list:

<b>Pay Item</b>	<b>Unit of Measurement</b>
(j) Install Cast Iron Monument Boxes.....	Each

Add the following to the end of this subsection:

Item (i) includes furnishing installing a new monument box over an existing monument to complete the work as approved by the Engineer. Coordination with the Engineer’s surveyor and protection of existing monuments shall be incidental to other bid items and will not be paid separately under this bid item.

**END SECTION**

**SECTION 00585 - EXPANSION JOINTS**

Comply with Section 00585 of the Standard Specifications.

**END SECTION**

**SECTION 00610 - RECONDITIONING EXISTING ROADWAY**

Comply with Section 00610 of the Standard Specifications modified as follows:

Add the following section:

**00610.44 Protect Existing Subgrade** – The Contractor shall protect the existing roadway base and subgrade from damage following cold plane pavement removal. Protection will include limiting all construction activities that could damage either exposed or aggregate base covered subgrade such as continued loading with construction equipment as part of haul routes for other work, continued loading during periods with inclement weather or as part of hauling operations that could compromise subgrade soils and all other activities within control

of the Contractor. The Contractor shall protect subgrades from excessive moisture after pavement removal. Preventative measures shall be utilized to protect the subgrade during forecasted precipitation. Any damage to the subgrade as a result of the Contractors negligence shall be repaired at the Contractors expense.

The Contractor shall prepare and submit a subgrade protection plan that identifies the Contractors intended means and methods of removing existing surfaces, constructing new base or subgrade surfaces as prescribed in the Contract Documents, and protecting the existing subgrade from potential damage by the Contractors operations or outside factors such as weather. The Contractor shall be responsible to phase all work that places construction loads directly on the existing subgrade and select equipment sizes and classes in an effort to minimize potential overloading of the existing subgrade. If the Contractor's plan includes running haul equipment on exposed subgrades or aggregate covered subgrades, the haul equipment shall be limited to half of the maximum legal load.

**00610.80 Measurement** – Replace this subsection, except for the number and title, with the following:

No measurement of quantities will be made for Work that is required to be done under these Specifications.

**00610.90 Payment** – Replace this subsection, except for the number and title, with the following:

No separate or additional payment will be made for Work that is required to be done under these Specifications.

## END SECTION

### SECTION 00620 - COLD PLANE PAVEMENT REMOVAL

Comply with Section 00620 of the Standard Specifications modified as follows:

**00620.40(e) Warning Signs** - Replace this subsection, except for the subsection number and title, with the following:

Provide warning signs as required where abrupt or sloped drop-offs occur at the edge of the existing or new surface according to Sections 00221 and 00222.

**00620.43 Maintenance Under Traffic** - Replace this subsection, except for the subsection number and title, with the following:

Traffic is allowed to drive on milled surface for up to 2 calendar days on S Harding Rd and on S Fischers Mill Rd between STA 1+63 and STA 46+85.

Traffic is not allowed on the cold planed surface for S Fischers Mill Rd between STA 0+96 and STA 1+63. Before opening the area to traffic, pave the surface according to 00745.51.

Through traffic is not allowed on the cold planed surface (local access only) for S Strowbridge Rd. Before opening the area to traffic, pave the surface according to 00745.51.

Prior to overlay paving or after the initial cold planing is completed through an area, the Engineer will examine the pavement surface and delineate areas requiring additional pavement repair by the Contractor. For areas that require additional pavement repairs, see Section 00748.

**00620.80 Measurement** – Add the following to the end of this section:

Areas marked in the field by the Engineer as requiring additional spot grinding prior to mainline overlay paving or additional grinding after the initial cold planning operations for mainline inlay paving will be measured under the bid item for “Extra for Spot Grind and Inlay Areas”. For areas that require additional structural repairs, see Section 00748.

**00620.90 Payment** – Add the following to the end of this section:

Payment will only be made for those areas shown or as directed by the Engineer.

Payment will be made for “Extra for Spot Grind and Inlay Areas” as shown or as directed by the Engineer. Payment will be payment in full for all extra or additional costs involved in cold plane pavement removal and in placing asphalt concrete as specified. These costs are in addition to those which are included in the payment for cold plane pavement removal and asphalt concrete incorporated into the spot grind and inlay areas.

No additional measurement or payment will be made for saw cutting vertical edges at milled joints.

## END SECTION

### SECTION 00641 - AGGREGATE SUBBASE, BASE, AND SHOULDERS

Comply with Section 00641 of the Standard Specifications.

**00641.10(a) Base and Shoulder Aggregate** – Replace the last sentence in the first paragraph with the following:

Shoulder aggregate shall be 1 ½”-0. Aggregate approach shall be either 1”-0 or ¾”-0 as the contractor elects.

Replace “Shoulder Aggregate.....2640” With the following:

Shoulder Aggregate.....2630.10

**00641.22 Spreading Equipment** – Add the following to the end of this subsection:

All shoulder rock shall be placed using a heavy-duty self-propelled road widener capable of widening from 1’ to 14’ in a single pass. Discharge of the speed of the aggregate is

controlled from a conveyor speed lever on the operator's console.

**00641.90 Payment** – Add the following pay item to this subsection:

<b>Pay Item</b>	<b>Unit of Measurement</b>
h) Aggregate Approach: Aggregate Base.....	Ton

Add the following to the end of this subsection:

In items (f), the size of the aggregate shall be included after the bid item in parenthesis.

Item (h) includes aggregate sections constructed as part of driveway approach transitions and the additional Work required to construct aggregate driveway transitions. No separate or additional payment will be made for:

- removal of existing surfaces
- reconditioning existing surfaces
- furnishing and placing aggregate bases

## **END SECTION**

### **SECTION 00730 - EMULSIFIED ASPHALT TACK COAT**

Comply with Section 00730 of the Standard Specifications modified as follows:

**00730.11 Emulsified Asphalt** - In the paragraph that begins "Obtain samples according to AASHTO T 40..." replace the words "AASHTO T 40" with the words "AASHTO R 66".

**00730.22 Asphalt Distributor** – Add the following to the end of this subsection:

Apply emulsified asphalt material to vertical surfaces (curb faces, catch basin faces, butt joints, etc.). Avoid excess tack coat overspray being applied to vertical surfaces. Shields protecting vertical faces shall be provided and used during tacking operations. All overspray shall be promptly removed.

**00730.44 Applying Tack Coat** – Replace the sentence beginning with "Apply the emulsified asphalt..." with the following sentence:

Apply the emulsified asphalt to the prepared surface at a rate between 0.08 and 0.20 gallons per square yard as directed and with the emulsified asphalt temperature between 140 °F and 185 °F as recommend by the manufacture. Additional application of tack may be required, as directed by the Inspector, to obtain the necessary residual asphalt.

**00730.90 Payment** - Replace this subsection, except for the subsection number and title, with the following:

No separate or additional payment will be made for Emulsified Asphalt tack coat.

**END SECTION**

**SECTION 00745 - ASPHALT CONCRETE PAVEMENT - STATISTICAL ACCEPTANCE**

Comply with Section 00745 of the Standard Specifications modified as follows:

**00745.00 Scope** - Add the following paragraph(s) to the end of this subsection:

Where shown, Work shall include furnishing all materials, labor, and incidentals for mixing aramid fibers into ACP, when aramid fiber is required as a mixture ingredient. The fiber reinforced HMA will be subject to all requirements for ACP in Section 00745, except as modified in this Section.

**00745.02 Definitions** – Insert the following in alphabetical order:

Reinforcing Fibers – An asphalt concrete pavement additive consisting of aramid fibers blended at time of mixing.

**00745.11(a) Asphalt Cement** - Replace PG 64-22 or PG 64-28 in the second paragraph with PG 64-22:

Add the following subsection:

**00745.15 Reinforcement Fiber Blend** - Provide a reinforcing fiber blend of Virgin Polyolefins and Virgin Aramids conforming to the minimum requirements below. Design JMF without the reinforcing fibers. Do not alter the final mix design for the addition of fiber at the asphalt plant. Certified reinforcing fiber test data for the fibers to be used on the project shall be submitted at the time of the JMF submittal.

<b>Property</b>	<b>Measure</b>	<b>Standard</b>
Material	Aramid	ASTM D276
Form	Monofilament fibers	Manufacturer Certification
Length	0.75 inches (+/- 10%)	Manufacturer Certification
Specific Gravity	1.44	ASTM D276
Minimum Tensile Strength	400,000 psi	ASTM D3379
Maximum Tensile Elongation	1.8 %	ASTM D3379
Degradation Temperature	800 degrees F	ASTM D276
Acid and Alkali Resistance	Inert	Manufacturer Certification

Submit the following:

- a. Provide a representative fiber product sample.

- b. Provide a fiber product data sheet and certification from the manufacturer that the fiber product supplied meets the requirements of this specification.
- c. Manufacturer's instructions and general recommendations.
- d. Provide the following from the product supplier at least three weeks prior to HMA production.
  - Identify the mixing plant.
  - The supplier's specified mix rate for the fiber product.
  - Evidence showing how many times, if any, the supplier's fiber product has been successfully produced at the asphalt plant to be used for the project.
  - Process for introducing the fiber product to the mix.

Add the following subsection:

**00745.25 Fiber Storage, Mixing and Mix Production** - Store, mix and produce the fiber reinforced ACP mixture in accordance with the following requirements:

1. Deliver fiber-reinforcement in sealed, undamaged containers with labels intact and legible, indicating material name and lot number.
2. Deliver fiber-reinforcement to location where it will be added to each batch or loaded into the mixer.
3. Store materials covered and off the ground. Keep sand and dust out of boxes and do not allow boxes to become wet.
4. Add aramid and polyolefin reinforcing fiber blends at a dosage rate of one (1) pound fiber per one (1) ton of asphalt. Non-aramid fiber blends, aramid fiber blends with dosages less than 1 pound per ton, or fiber ton equivalents will not be accepted.
5. Have a fiber manufacturer's representative on site during mixing and production.
6. Batch Plant - When a batch plant is used, add fiber to the aggregate in the weigh hopper and increase both dry and wet mixing times. Ensure that the fiber is uniformly distributed before the injection of asphalt cement into the mixture.
7. Drum Plant:
  - a. Inject fibers through the RAP collar manually or by feeding them with a metered air blown system to promote rapid and complete fiber dispersion. Rate the feeding of fibers with the rate the plant is producing asphalt mix. If there is any evidence of fiber bundles at the discharge chute, increase the mixing time and/or temperature or change the angle of the fiber feeder line to increase dry mixing time.
  - b. Add fibers continuously and in a steady uniform manner. Provide automated proportioning devices and control delivery within  $\pm 10\%$  of the mass of the fibers required. Perform an equipment calibration to the satisfaction of the fiber manufacturer's representative to show that the fiber is being accurately metered and uniformly distributed into the mix.

Include the following with the air blown system:

- Low level indicators
- No-flow indicators
- A printout of feed rate status in pounds/minute
- A section of transparent pipe in the fiber supply line for observing consistency of flow or feed.
- Manufacturer's representative's approval of fiber addition system

Add the following subsection:

**00745.26 Reinforcement Fiber Quality Control** - Provide reinforcement fiber quality control according to the following:

1. Collect a 10kg sample of mix from the discharge chute during first 50 tons of production. Visually assess the state of aramid fibers and rate the sample as "Pass" or "Fail".
  - i. "Pass" = All fibers exist in an Individual State and no Undistributed Clips or Agitated Bundles of fiber are detected.
  - ii. "Fail" = One or more Undistributed Clips or Agitated Bundles are detected.
2. If a sample is rated as "Fail", adjust mixing operations to improve fiber dispersion and repeat Step 1 above.
3. If Visual Test results in three consecutive "Fail" ratings, stop production until a plan for corrective action is approved by the Engineer.
4. In addition to Visual Test, use a shovel to inspect the fiber reinforced mix in the back of first three trucks and every tenth truck thereafter to confirm adequate blending of the fiber.
5. Remove any observed fiber bundles from placed mixture and adjust operations per the manufacturer's recommendation to eliminate future fiber bundle development, and repeat Steps 1 through 3 above to confirm adequate aramid fiber dispersion.

Add the following subsection:

**00745.27 Trucks** – Do not use vehicles or transfers with rear drop axles in which raising the drop axle would cause the vehicle to exceed legal load limits.

**00745.30 Quality Control Personnel** - Add the following to the end of the subsection:

Providing a fiber reinforcing product representative at the ACP plant site when producing mixture for the Project.

**00745.42 Preparation of Underlying Surfaces** - Add the following subsections:

- a) **Overlay Preparation** - Existing pavement surfaces shall be cleaned of all loose material, dirt vegetation, and dust by brooming, by flushing with water or other approved methods prior to applying the tack coat. Any grass or other vegetation between the existing asphalt concrete and the curb shall be totally removed. Any



vegetation that exists over the face of the curb line shall be removed in a neat workman like manner. The existing curb shall be cleaned and a tack coat applied to the curb face prior to paving.

**NOTE: The Contractor is responsible for street sweeping. Special attention will be given to organic materials in cracks and the removal of all materials on the edge of the existing pavement. The Contractor shall use vacuum sweepers that are self-propelled equipped with rotating brooms and brushes that are capable of loosening dirt and debris from the road surface and collecting the material by vacuum device.**

All work required in the cleaning and preparing the work site as described above and payment for this item shall be considered incidental to and included in the unit price for asphalt concrete material, and no additional compensation shall apply.

- b) **Leveling Courses** - Existing pavements have occasional surface irregularities and uneven crown section. In these worst cases, it is the intent that this condition be corrected through the means of application of an asphalt concrete leveling course prior to the placing of the uniform 2 inch wearing course overlay. In leveling irregular surfaces, the presence of low areas and the surface grade to which the final course is to be placed may require the asphalt mixture to be laid in two or more layers in which case the compacted thickness of any one layer shall not exceed 2 and one-half (2 ½) inches.

All pre-leveling work must be performed at the direction of the County and quantities identified on the schedule of prices are approximate.

Asphalt concrete mixture to achieve the necessary pre-leveling work will be paid at the contract unit price per ton.

**00745.46(b) Depositing** - Replace the paragraph that begins "Deposit ACP from..." with the following paragraph:

Deposit ACP from the hauling vehicles so segregation is prevented. Do not deliver the ACP directly into the paving machine for wearing Courses where the continuous length of the Panel is greater than 500 feet. Deliver the ACP to the paving machine by either a windrow pick-up machine or an end-dump transfer machine.

For driveways and approaches the Contractor shall wing out the paving machine or dump additional material by hand for driveway apron. In no case will material be removed from the traveled lane for driveway apron.

**00745.47(b) Drop-Offs** - Replace the bullet that begins "Provide warning signs and markings..." with the following bullet:

- Provide warning signs and markings according to Sections 00221, 00222, 00224 and 00225 where abrupt or sloped edge drop-offs greater than 1 inch in height occur.

**00745.49(b)(2)(b) Core Correlation of Nuclear Gauge Readings** - Replace this subsection, except for the subsection number and title, with the following:

For each lift on the Project that contains more than 2,500 tons of ACP, correlate each nuclear gauge that will be used on that lift. Perform core correlations and determine core correlation factors according to AASHTO T 355 and ODOT TM 327. Provide bulk specific gravity values to the Engineer within 24 hours of coring. If an Aggregate source or the asphalt cement source changes, new core correlations are required.

Apply correlation factors to all nuclear gauge readings for the Lift on which the core correlation was performed.

Both the Engineer and the Contractor may request additional core correlation of nuclear gauge readings. Core correlations requested by the Contractor or that are required due to a change in Aggregate or asphalt cement source will be at no additional cost to the Agency.

Add the following subsection:

**00745.51 Opening Sections to Traffic** - Schedule Work so that, during the same shift, the surfaces being paved are paved full width and length through the top Base Course before opening to traffic. Traffic will be allowed on the top Base Course up to two Calendar Days.

Before beginning Wearing Course paving operations, make repairs to the existing surface as directed according to 00610, 00620 and 00748.

**00745.76 Sand Seal** - Add the following subsection:

All joints between asphalt concrete pavement, Portland Cement Concrete, old surfaces, curbs, gutters, inlet structures, manholes, etc. shall be sealed by an application of CSS-1 emulsified asphalt followed immediately by a cover coat of clean sand. Width of joint seal coat shall be no less than four inches and no more than six inches.

**00745.77 Cleanup** - Clean and remove all excess asphalt, debris and tack from all facilities including but not limited to manhole covers, valve boxes, catch basins, concrete gutter and curb faces.

Keep a sweeper on site at all times to sweep areas at the end of each work shift, as needed and as directed.

**00745.78 Finish Surfaces** - Add the following subsection:

Finish surfaces to the necessary grade which establishes a smooth and drivable surface free from bumps, humps or other vertical abnormalities. Establish grades for positive drainage which matches existing acceptable drainage or improves the existing conditions of the site prior to pavement overlay, grind/inlay, and base grading. Grading which continues to cause ponding shall be discussed and approved by the Engineer prior to paving.

**00745.80 Measurement** - Add the following paragraph to the beginning of this subsection:

The quantities of ACP shown in the Contract Schedule of Items were computed on the basis of Aggregates having a specific gravity of 2.80.

Replace the paragraph that begins "The quantities of ACP..." with the following paragraph:

The quantities of ACP will be measured on the weight basis. No separate measurement will be made for asphalt cement used in the mixture. No deduction will be made for lime or any other additive used in the mixture.

**00745.90 Payment** – Replace the bullet that begins “The words “in Leveling”...” with the following bullet:

- The words "in Leveling with Fibers" or “with Fibers” will be inserted in the third blank when applicable.

Replace the paragraph that begins "No separate or additional..." with the following paragraph:

No separate or additional payment will be made for:

- reconditioning existing roadway
- asphalt cement, mineral filler, lime, and anti-stripping or other additives contained in the mixture
- tack coat
- cleaning existing pavement surfaces in preparation for applying the tack
- power sweeping existing surfaces
- sand sealing joints
- QC Testing
- temporary asphalt concrete pavement placed to open the roadway to traffic
- sawing, cleaning, and filling joints on bridge deck overlays

**00745.95 Price Adjustments** - Replace this subsection with the following:

There will be no ACP Price Adjustments for this project. Asphalt concrete placed that does not comply with the compaction requirements herein shall be removed and replaced at the discretion of the Engineer.

## END SECTION

### SECTION 00748 - ASPHALT CONCRETE PAVEMENT REPAIR

Comply with Section 00748 of the Standard Specifications modified as follows.

**00748.40(a) Confirmation of Subgrade Suitability** – Add the following subsection:

Where subgrade or aggregate is exposed from grinding or repair operations and prior to paving, test the stability of the exposed material in the presence of the inspector by either foundation probe or proof roll. Subgrade that is found to be unsatisfactory is subject to additional rehabilitation at the discretion of the Engineer.

**00748.80 Measurement** – Supplement this section with the following:

The Engineer will delineate repair areas in the field prior to the Contractor completing work under this section. Measurement of repair areas will be based on the actual measurements

delineated by the Engineer. No adjustment to the measurements will be made if the Contractor elects to remove additional area based on available equipment sizes and limitations.

**00748.90 Payment** – Add the following:

No separate or additional payment will be made for saw cutting existing pavements associated with this work.

**END SECTION**

**SECTION 00749 - MISCELLANEOUS ASPHALT CONCRETE STRUCTURES**

Comply with Section 00749 of the Standard Specifications modified as follows:

**00749.03 Definitions:**

**Spot Grind and Inlay Areas** - Spot grind and inlay areas are pavement areas that require localized cold plan pavement removal and ACP inlay to address existing pavement deficiencies following initial mainline cold plane pavement removal and sweeping operations. The Engineer shall determine the location of spot grind and inlay areas.

**00749.90 Payment** – Replace the paragraph that begins “Aggregate will be paid...”, with the following paragraph:

When aggregate base is not included as a separate Pay Item, no separate or additional payment will be made for aggregate base.

**00749.91 Method “A” – Weight and Extras Basis** - Add the following pay items to the pay item list:

<b>Pay Item</b>	<b>Measurement</b>
j) Extra for Spot Grind and Inlays.....	Square Yard

Item (j) includes spot grind and inlay areas as shown or as directed by the Engineer. This Work shall be performed prior to or after initial mainline cold plane pavement removal and sweeping operations. Areas will be based on a typical grinder width (7-foot minimum pay limit width). Asphalt concrete pavement and cold plane pavement removal will be measured and paid for separately.

**END SECTION**

## SECTION 00810 - METAL GUARDRAIL

Comply with Section 00810 of the Standard Specifications modified as follows:

**00810.15 Salvaged Material** - Replace the paragraph that begins "Material salvaged as part..." with the following paragraph:

Materials salvaged as part of removal work on the Project may be reused in new construction if the Engineer determines that the materials meet the requirements of 0810.10, except for preservative treatment requirements, and conform to the following:

**00810.16 Guardrail Flare Materials** – Add the following section:

(a) **Embankment** - Furnish embankment materials meeting the applicable parts of Section 00330.

(b) **Aggregate** - Furnish either 1" - 0 or 3/4" - 0 size crushed aggregate that is clean, hard, durable, and reasonably well-graded from the maximum size to dust.

(c) **Asphalt Concrete Mixture** - Furnish asphalt concrete mixture meeting the requirements of 00745.10 through 00745.14.

Acceptance of guardrail flare materials will be visual by the Engineer.

**00810.41 Excavation and Backfill** - Add the following paragraph to the end of this subsection:

Hand dig guardrail post holes or use other non-invasive methods when posts are located within 24 inches surrounding the outside dimension of all sides of underground utilities as shown or directed.

**00810.44 Guardrail Flares** – Add the following section:

(a) **Earthwork** - Perform earthwork according to the applicable parts of Section 00330.

(b) **Aggregate** - Place aggregate in two or more layers of nearly equal thickness. The maximum compacted thickness of any one layer shall not exceed 6 inches. Compact each layer of material by rollers conforming in general to 00641.24. Shape and maintain the surface of each layer during the compaction operation to produce a uniform texture and firmly keyed aggregates. Continue the compactive effort until there is no reaction or yielding observed under the compactor.

(c) **Asphalt Concrete Mixture** - Place asphalt concrete mixture according to 00745.40 through 00745.49.

**00810.80 Measurement** – Add the following bullet after the "Length Method" paragraph:

- **Lump Sum Method** – Work under this section will be performed on the lump sum basis for the guardrail section identified.

**00810.90 Payment** – Replace this subsection except for the heading and title with the following:

The accepted quantities of Work performed under this Section will be paid for at the Contract unit price, per unit of measurement, for the following items:

<b>Pay Item</b>	<b>Measurement</b>
a) Guardrail _____	Lump Sum

In item (a) the section of guardrail as identified in the Plans will be inserted into the blank. Payment will be payment in full for furnishing and placing all Materials, and for furnishing Equipment, labor, and incidentals necessary to complete the Work as specified.

No separate or additional payment will be made for guardrail traffic delineators, guardrail terminal ends, or 8 foot guardrail posts.

**END SECTION**

**SECTION 00840 - DELINEATORS AND MILEPOST MARKER POSTS**

Comply with Section 00840 of the Standard Specifications modified as follows:

**00840.80 Measurement** – Replace this subsection, except for the number and title, with the following:

No measurement of quantities will be made for Work that is required to be done under these Specifications.

**00840.90 Payment** – Replace this subsection, except for the number and title, with the following:

No separate or additional payment will be made for Work that is required to be done under these Specifications.

**END SECTION**

**SECTION 00850 - COMMON PROVISIONS FOR PAVEMENT MARKINGS**

Comply with Section 00850 of the Standard Specifications modified as follows:

Add the following subsection:

**00850.12 Reflective Elements** – Swarco 3130 blend or approved equal from the ODOT QPL shall be used with Hi-Built Paint.

**00850.30 Manufacturer's Representative** - Replace this subsection, except for the subsection number and title, with the following:

For Sections referencing 00850.30, the services of a manufacturer's representative are not required. Place pavement markings only when the pavement is ready for the pavement marking material according to the manufacturer's installation instructions.

**END SECTION**

**SECTION 00855 - PAVEMENT MARKERS**

Comply with Section 00855 of the Standard Specifications.

**END SECTION**

**SECTION 00866 - LONGITUDINAL PAVEMENT MARKINGS - HIGH PERFORMANCE**

Comply with Section 00866 of the Standard Specifications, modified as follows.

**00866.44 Alignment Layout** – Add the following subsection:

**00866.44 Alignment Layout** - Place control points for lines every 50 feet on tangent and every 25 feet on a curve. Using these control points, layout a continuous narrow guideline for each line, along one edge of, or uniformly offset from the intended permanent line location. Do not proceed with installation until the dribble line until guidelines are approved by the Engineer.

Dribble lines shall consist of marking the pavement with spots of paint no more than 2 inches in width and not more than 5 feet apart using a striping machine. Dribble lines shall be on a straight line between control points on tangent alignment and on a true arc control points on a curved alignment. Paint for dribble lines shall be the same color as the traffic stripe that will be placed. Do not proceed with installation of pavement markings until dribble lines are approved by the Engineer.

**00866.80 Measurement** – Add the following to the end of this subsection:

The quantities of dribble line will be measured on the length basis. Measurement will be the actual dribble line. Gaps between dribble marks will be measured.

**00866.90 Payment** - Replace this subsection, except for the subsection number and title, with the following:

The accepted quantities of work performed under this Section will be paid for at the Contract unit price, per unit of measurement, for the following items:

**Pay Item Unit of Measurement**

**Method 2 (Sprayed)**

- (a) Hi-Build Paint, 25 Mil, Sprayed, \_\_\_\_\_ ..... Foot
- (b) Dribble Line, Sprayed, \_\_\_\_\_ ..... Foot

The word "Surface" or "Grooved" will be inserted in the blank.

Payment will be payment in full for furnishing and placing all materials, and for furnishing all equipment, labor, and incidentals necessary to complete the work as specified.

Payment for work under this Section will be limited to 75 percent of the amount due until the Agency has received the signed Warranty.

**END SECTION**

**SECTION 00867 - TRANSVERSE PAVEMENT MARKINGS - LEGENDS AND BARS**

Comply with Section 00867 of the Standard Specifications.

**END SECTION**

**SECTION 02020 - WATER**

Comply with Section 02020 of the Standard Specifications.

**END SECTION**

**SECTION 02010 – Portland Cement**

Comply with Section 02010 of the Standard Specifications.

**END SECTION**

**SECTION 02030 – Supplementary Cementitious Materials**

Comply with Section 02030 of the Standard Specifications.

**END SECTION**



**SECTION 02030 – Curing Materials**

Comply with Section 02030 of the Standard Specifications.

**END SECTION**

**SECTION 02050 – Supplementary Cementitious Materials**

Comply with Section 02030 of the Standard Specifications.

**END SECTION**

**SECTION 02070 – Bonding Agents**

Comply with Section 02070 of the Standard Specifications.

**END SECTION**

**SECTION 02080 – Grout**

Comply with Section 02080 of the Standard Specifications.

**END SECTION**

**SECTION 02440 - JOINT MATERIALS**

Comply with Section 02440 of the Standard Specifications modified as follows:

**02440.30 Hot Poured Joint Filler** - Replace this subsection with the following subsection:

**02440.30 Hot Applied Joint Sealant** - Furnish hot applied joint sealant from the QPL and conforming to the requirements of ASTM D6690, Type II.

**END SECTION**

**SECTION 02640 - SHOULDER AGGREGATE**

Comply with Section 02640 of the Standard Specifications modified as follows:

**02640.10 Dense-Graded Aggregate** – Modify this section as follows:

Use 1 ½” – 0” column in Table 02630-1 for the specified gradation.

**END SECTION**

**SECTION 02820 - METAL GUARDRAIL**

Comply with Section 02820 of the Standard Specifications modified as follows:

**2820.40 Guardrail Anchor Hardware** - Replace the paragraph that begins “Provide cable and fittings...” with the following paragraph:

Provide cable and fittings for guardrail anchors that conform to the requirements of AASHTO M 30, Class A, for Type II cable. Galvanize all fittings according to AASHTO M 111 (ASTM A123). 02820.50 Acceptance of Materials - Replace this subsection, except for the subsection number and title, with the following: Acceptance of metal guardrail Materials will be according to Section 00165.35.

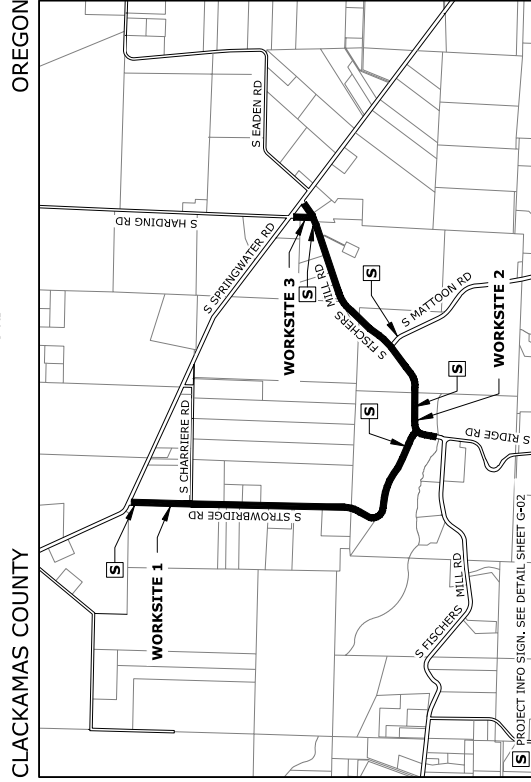
**END SECTION**

# CLACKAMAS COUNTY DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PLANS FOR PROPOSED PROJECT  
ASPHALT OILING & PAVING, TEMPORARY TRAFFIC CONTROL, AND PAVEMENT MARKINGS

## FISCHERS MILL ROAD PAVING PROJECT CI-3-23316

WORKSITE #1 - S STROWBRIDGE RD  
WORKSITE #2 - S FISCHERS MILL RD  
WORKSITE #3 - S HARDING RD

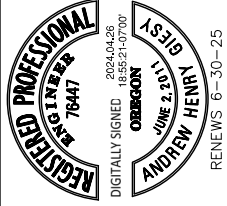


INDEX OF SHEETS	
G-01	COVER SHEET
G-02	GENERAL NOTES AND LEGEND
T-01	TRAFFIC CONTROL DETOUR PLAN
C-01 TO C-02	TYPICAL SECTIONS
C-03 TO C-04	PAVING DETAILS
C-05 TO C-14	PAVING PLAN AND NOTES

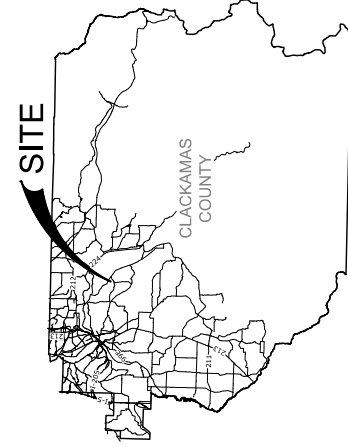
**VICINITY MAP**  
NOT TO SCALE

T. 2S, R. 3E SEC. 33 & 34  
T. 3S, R. 3E SEC. 04 & 03

**ATTENTION !**  
OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0100. YOU MAY OBTAIN COPIES OF THE RULES FROM THE CENTER OR ANSWERS TO QUESTIONS ABOUT THE RULES BY CALLING (503) 232-1987.



RENEWS 6-30-25



Know what's below.  
Call before you dig.



<p>DATE: APRIL 2024 PROJECT NO.: CI-3-23316</p>	<p>DIRECTOR DAN JOHNSON</p>	<p>DESIGNED BY: [ ] CHECKED BY: [ ] DRAFTED BY: [ ] RPH ARC</p>	<p>NO. [ ] DATE: [ ]</p>
<p>COVER SHEET FISCHERS MILL ROAD PAVING PROJECT</p>	<p>CLACKAMAS COUNTY DEPT. OF TRANSPORTATION AND DEVELOPMENT 150 BEAVERCREEK ROAD OREGON CITY, OR 97045</p>	<p>REVISIONS</p>	<p>Sheet No. G-01</p>



REGISTERED PROFESSIONAL ENGINEER  
 78447  
 HENLEY BESSY  
 OREGON  
 JUNE 2, 2011  
 2024.04.28  
 DIGITALLY SIGNED 15:49:40-07/20

REVISIONS 6-30-25

**ABBREVIATIONS**

AC	ASPHALTIC CONCRETE
AD	ADJACENT
ADJ	ADJACENT PAVEMENT
AGG	AGGREGATE
APPRX	APPROXIMATE
CA	CENTERLINE
CA/C	CONCRETE
DET	DETAIL
DWG	DRAWING
DWY	DRIVEWAY
EDP	EDGE OF PAVEMENT
EXIST	EXISTING
GR	GRANDGRADE
MIN	MINIMUM
MAX	MAXIMUM
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
NOB	NORMAL
NOOT	NON-ODOT DEPARTMENT OF TRANSPORTATION
PC	POINT OF CURVE
PVMT	PAVEMENT
R/W	RIGHT-OF-WAY
S/W	SIDEWALK
STA	STANDARD
STN	STATION
STD	STANDARD
THK	THICK/THICKNESS
TPP	TYPICAL
WES	WATER ENVIRONMENTAL SERVICES
S/LP	SLOPE

**TRAFFIC CONTROL / PHASING NOTES:**

- CONTRACTOR SHALL FOLLOW AN APPROVED PHASING PLAN THAT MEETS THE MINIMUM REQUIREMENTS AS SET FORTH IN THE CONTRACT DOCUMENTS. ANY MODIFIED PHASING THAT DEVIATES FROM THE APPROVED PHASING PLAN SHALL BE APPROVED BY THE COUNTY PRIOR TO BEGINNING WORK. DOCUMENTS, SHALL BE APPROVED IN WRITING BY THE COUNTY PRIOR TO BEGINNING WORK.
- CONTRACTOR SHALL PHASE AND COORDINATE CONSTRUCTION TO MINIMIZE DELAYS AND IMPACTS TO PUBLIC TRAFFIC, PUBLIC SERVICES (GARBAGE, MAIL, ETC.) AND PROPERTY ACCESS.
- CONTRACTOR SHALL PREPARE A DETAILED TRAFFIC CONTROL PLAN CONFORMING TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE MUTCD AND THESE CONTRACT DOCUMENTS.
- MAINTAIN ACCESS TO ADJOINING PROPERTIES AT ALL TIMES. PROVIDE ADVANCED NOTICE OF ALL ROAD CLOSURES TO RESIDENTS, PUBLIC SERVICES, AND EMERGENCY SERVICES.
- TRAFFIC CONTROL/DETOUR PLAN TO BE ACCOMPANIED BY ODOT STANDARD DRAWING NOS. TM800, TM820, TM821, TM822, TM844, TM850, AND TM851.
- UNLESS OTHERWISE SHOWN, USE "MINIMUM LENGTHS TABLE" ON DRAWING NO. TM800 TO DETERMINE TAPER LENGTH "L", AND BUFFER LENGTH "B".
- TO DETERMINE SIGN SPACING, USE "TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE" ON DRAWING NO. TM800.
- MAINTAIN PEDESTRIAN ACCESS WITHIN CONSTRUCTION LIMITS.
- COORDINATE AND COORDINATE WITH RESIDENTS AND BUSINESSES WHEN WORKING NEAR AFFECTED ACCESS POINTS.

**ODOT STANDARD DRAWINGS**

- RD615
- RD660
- RD1005
- RD1010
- RD1032
- RD406
- RD415
- RD419
- RD420
- RD443
- RD460
- TM520
- TM560
- TM570
- TM800
- TM810
- TM820
- TM822
- TM840
- TM841

**COUNTY STANDARD DRAWINGS**

- M100
- D500

**VERTICAL DATUM AND BASIS OF BEARINGS:**

- ALL PLAN INFORMATION IS BASED ON CLACKAMAS COUNTY GIS DATA AND AERIAL PHOTOS, WHICH IS APPROXIMATE.

**RIGHT-OF-WAY REPRESENTATION:**

- ALL LINE-WORK SHOWN RELATING PROPERTY BOUNDARY TO SCAN DATA IS FOR GRAPHICAL REPRESENTATION ONLY; ANY APPARENT DISCREPANCIES BETWEEN PROPERTY BOUNDARIES AND SCAN DATA WILL REQUIRE FIELD VERIFICATION THROUGH A PROPER RIGHT-OF-WAY RESOLUTION.

**PAVING NOTES:**

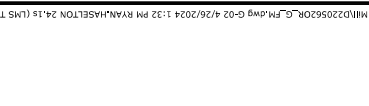
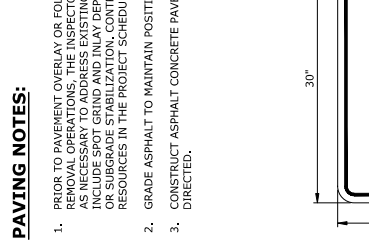
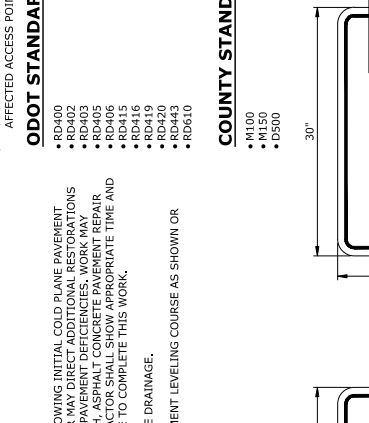
- PRIOR TO PAVEMENT OVERLAY OR FOLLOWING INITIAL COLD PLANE PAVEMENT CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL EXISTING PAVEMENT DEFICIENCIES. WORK MAY BE NECESSARY TO ADDRESS EXISTING PAVEMENT DEFICIENCIES. WORK MAY INCLUDE SPOT GRIND AND INLAY DEPTH, ASPHALT CONCRETE PAVEMENT REPAIR OR SUBGRADE STABILIZATION. CONTRACTOR SHALL SHOW APPROPRIATE TIME AND RESOURCES IN THE PROJECT SCHEDULE TO COMPLETE THIS WORK.
- GRADE ASPHALT TO MAINTAIN POSITIVE DRAINAGE.
- CONSTRUCT ASPHALT CONCRETE PAVEMENT LEVELING COURSE AS SHOWN OR DIRECTED.

**TOPOGRAPHIC LEGEND**

---	EXISTING PROPERTY ADDRESS
---	EXISTING CENTERLINE
---	EXISTING PROPERTY LINE (BASED ON GIS)
---	EXISTING RIGHT-OF-WAY (BASED ON GIS)
---	EXISTING CURB
---	EXISTING SIDEWALK
---	EXISTING ASPHALT CONCRETE
---	EXISTING ASPHALT CONCRETE DRIVEWAY
---	EXISTING CONCRETE
---	EXISTING PAVERS
---	EXISTING GRAVEL
---	EXISTING MANHOLE
---	EXISTING CLEAN-OUT
---	EXISTING CATCH BASIN/FIELD INLET
---	EXISTING ROOF DRAIN
---	EXISTING VALVE
---	EXISTING FIRE HYDRANT
---	EXISTING WATER METER
---	EXISTING MAIL BOX
---	EXISTING BENCHMARK OR MONUMENT
---	EXISTING COMMUNICATIONS RISER
---	EXISTING UTILITY POLE/STREET LIGHT
---	EXISTING UTILITY POLE GUY WIRE
---	EXISTING LIGHT
---	EXISTING UTILITY PULL BOX
---	PROPOSED SAWCUT

**NOTES:**

- SIGN SHALL BE PLACED AT EACH DRIVEWAY APPROACH WHEN A PILOT CAR IS USED.
- SIGN SHALL CONFORM TO ODOT DRAWING CR4-20 OR CR4-20A.



**PROJECT NOTIFICATION SIGN**

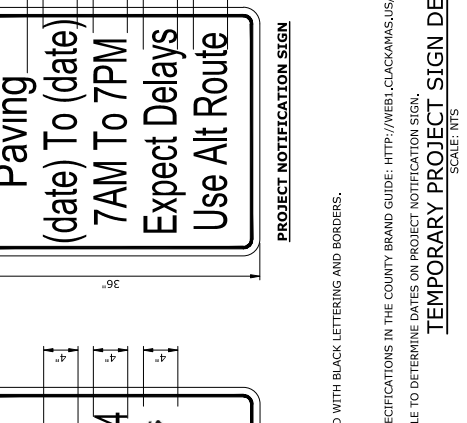
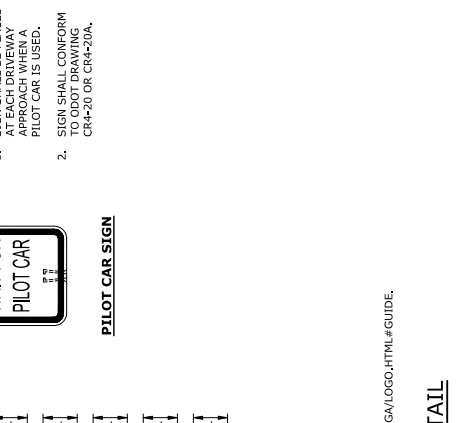
**PAVING SIGN**

**NOTES:**

- SIGNS TO BE ORANGE BACKGROUND WITH BLACK LETTERING AND BORDERS.
- TEXT FONT TO BE FHWA C.
- COUNTY LOGO TO COMPLY WITH SPECIFICATIONS IN THE COUNTY BRAND GUIDE: [HTTP://WEB1.CLACKAMAS.US/PGA/LOGO.HTML](http://web1.clackamas.us/pga/logo.html) #GUIDE.
- CONTRACTOR'S APPROVED SCHEDULE TO DETERMINE DATES ON PROJECT NOTIFICATION SIGN.

SCALE: NTS

**TEMPORARY PROJECT SIGN DETAIL**



**REVISIONS**

NO.	DATE:



GENERAL NOTES AND LEGEND

DATE: APRIL 2024 PROJECT NO.: CI-3-23316

CLACKAMAS COUNTY  
 DEPT. OF TRANSPORTATION  
 150 DEVALE ROAD  
 BEAVERTON, OREGON 97005

DAN JOHNSON  
 DIRECTOR

DESIGNED BY: ARC  
 DRAFTED BY: RPH  
 CHECKED BY: AHG

NO. DATE: \_\_\_\_\_

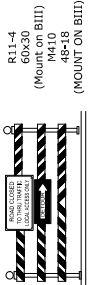
Sheet No. G-02



REGISTERED PROFESSIONAL ENGINEER  
 NO. 78447  
 STATE OF OREGON  
 ANDREW HENRY GIESY  
 JUNE 2, 2011  
 EXPIRES 06/30/25  
 DIGITALLY SIGNED BY: 2024.04.26 15:00:00-0700

REVISIONS 6-30-25

- 1. W20-1  
48"x48"
- 2. Type "W2"  
30"x30"
- 3. Type "W2"  
30"x30"
- 4. DETOUR  
M4-9L  
30"x24"
- 5. DETOUR  
M4-9R  
30"x24"
- 6. ADVANCE  
30"x36"
- 7. TEMPORARY TYPE 3 BARRICADE  
SCALE: NTS



TEMPORARY TYPE 3 BARRICADE  
 SCALE: NTS

DURING STROWBRIDGE RD CLOSURE	
STROWBRIDGE CLOSED	MM DD TO MM DD
USE DETOUR	

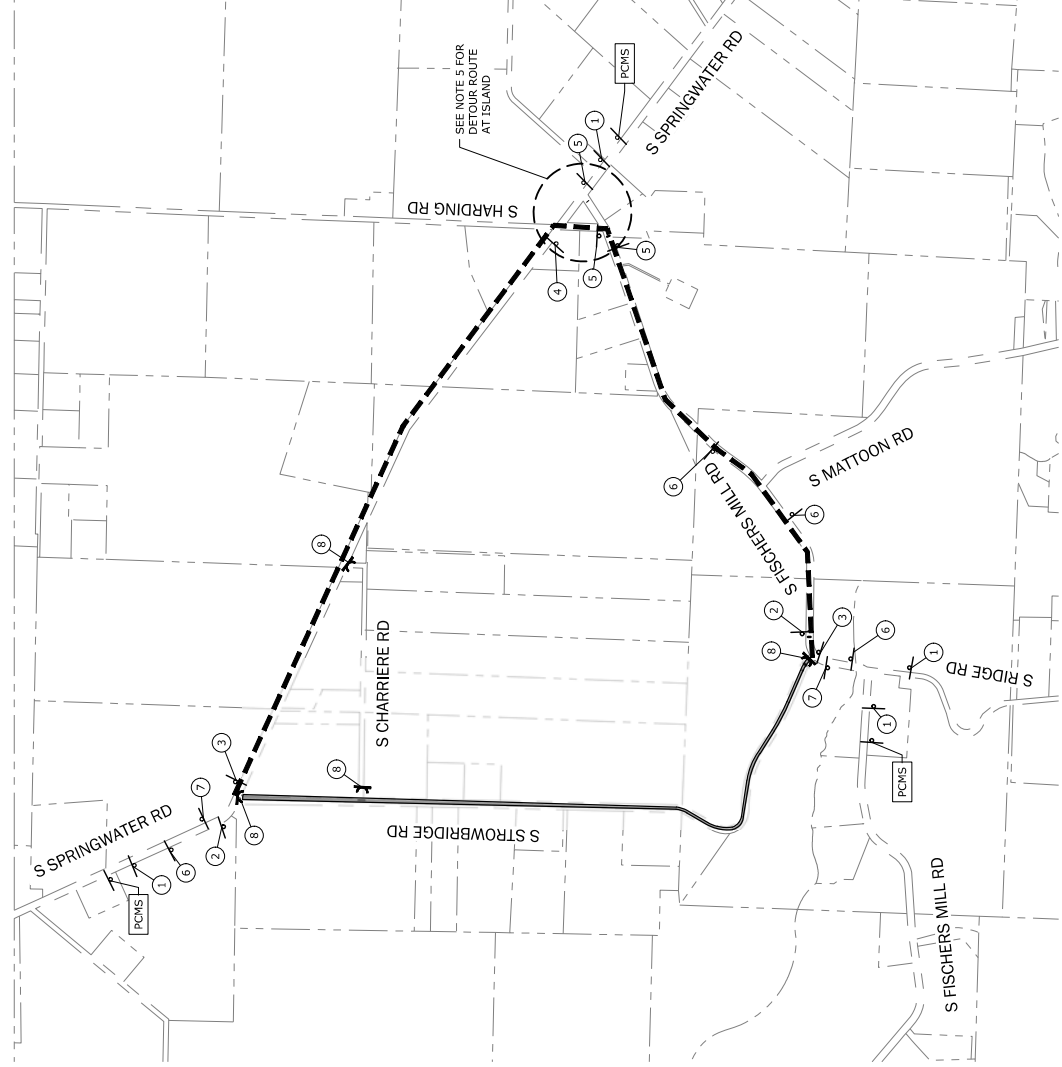
  

DURING FISCHERS MILL WORK	
PAVING FISCHERS MILL	MM DD TO MM DD
EXPECT DELAYS	X AM - X PM

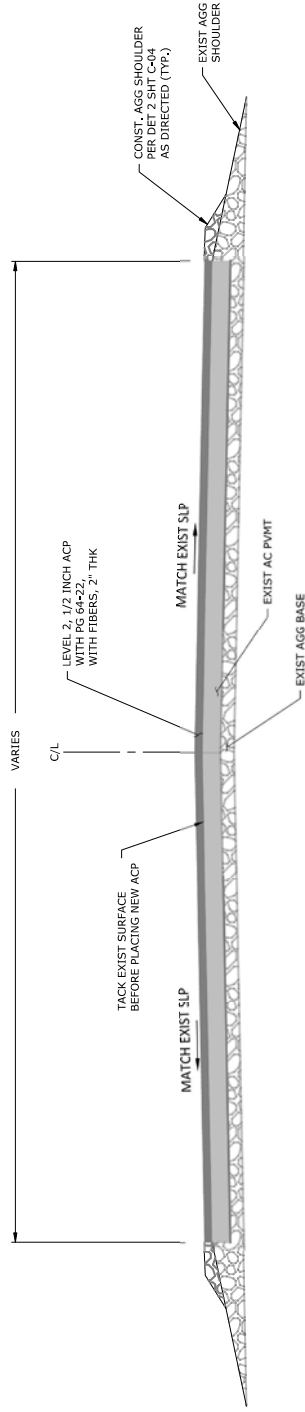
PORTABLE CHANGEABLE MESSAGE SIGN  
 (SUGGESTED MESSAGES)  
 (LOCATE AS DIRECTED)  
 (3 REQUIRED)

- LEGEND
- WORK ZONE
  - DETOUR ROUTE
  - TEMPORARY TRAFFIC CONTROL SIGN
  - TEMPORARY TYPE 3 BARRICADE (BITT)

- TO DETERMINE SIGN SPACING, TAPER AND BUFFER LENGTHS, SEE ODOT STANDARD DRAWING NO. TM800.
- ADVANCE WARNING SIGN LOCATIONS MAY VARY BASED ON LIMITS OF ACTIVE CONSTRUCTION.
- FOR DETAILS NOT SHOWN, SEE ODOT STANDARD DRAWINGS NOS. TM800, TM810, TM820, TM821, TM822, TM840, TM841, TM844, AND TM850.
- ANY PROPOSED CHANGES TO DETOUR SHOWN TO BE APPROVED BY CLACKAMAS COUNTY DTD, AS REQUIRED.
- FULL CLOSURE WITH DETOUR OF HARDING ROAD AND FISCHERS MILL ROAD SECOND TRAFFIC ISLAND. THIS ONE SEGMENT OF THE TRAFFIC ISLAND SHALL BE CLOSED AT A TIME DURING CONSTRUCTION. USE THE OTHER SEGMENT OF THE TRAFFIC ISLAND AS THE DETOUR ROUTE.

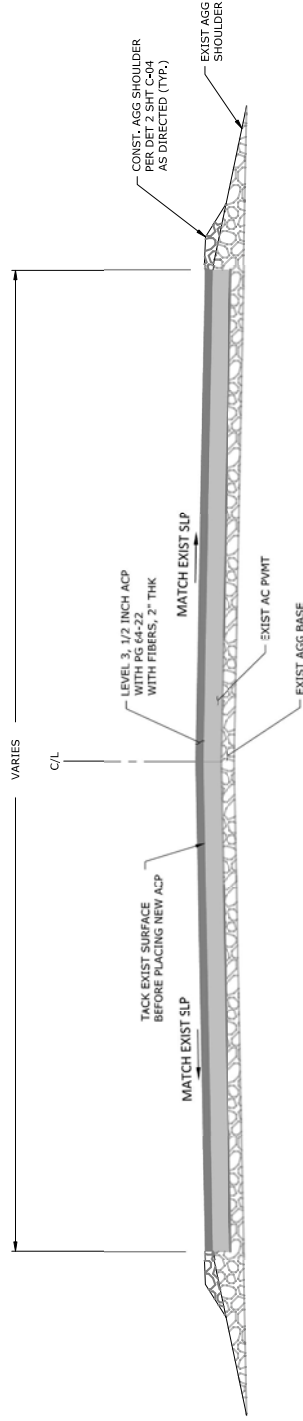


TYPICAL SECTION SHOWN  
(SEE SHEET C-05 THROUGH C-14 FOR LOCATIONS OF VARIATIONS TO SECTION WIDTHS AND DIMENSIONS)



TYPICAL SECTION: 2" OVERLAY - LEVEL 2 MIXTURE WITH FIBERS

SCALE: NTS



TYPICAL SECTION: 2" OVERLAY - LEVEL 3 MIXTURE WITH FIBERS

SCALE: NTS

NOTES:

1. PRIOR TO PAVEMENT OVERLAY OR FOLLOWING INITIAL COLD PLANE PAVEMENT REMOVAL OPERATIONS, THE INSPECTOR MAY DIRECT THE CONTRACTOR TO REMOVE EXISTING PAVEMENT TO THE UNDERLYING SUBGRADE TO THE EXISTING PAVEMENT DEPTH. THIS SHALL INCLUDE EXISTING INLAY DEPTH, ASPHALT CONCRETE PAVEMENT REPAIR OR SUBGRADE STABILIZATION. SEE PAVING DETAILS ON SHEET C-03 AND C-04.
2. GRADE ASPHALT TO MAINTAIN POSITIVE DRAINAGE.
3. CONSTRUCT ASPHALT CONCRETE PAVEMENT LEVELING COURSE AS SHOWN OR DIRECTED



RENEWS 6-30-25

TYPICAL SECTIONS  
FISHERS MILL ROAD  
PAVING PROJECT

DATE: APRIL 2024 PROJECT NO.: CL-C-3-23316

CLACKAMAS COUNTY  
DEPT. OF TRANSPORTATION AND DEVELOPMENT  
150 BEAVERCREEK ROAD  
OREGON CITY, OR 97045  
DAN JOHNSON  
DIRECTOR



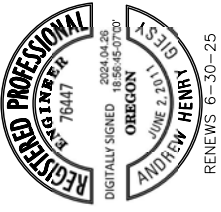
DESIGNED BY: AHC  
CHECKED BY: RPH  
DRAFTED BY: RPH  
DATE: \_\_\_\_\_

REVISIONS

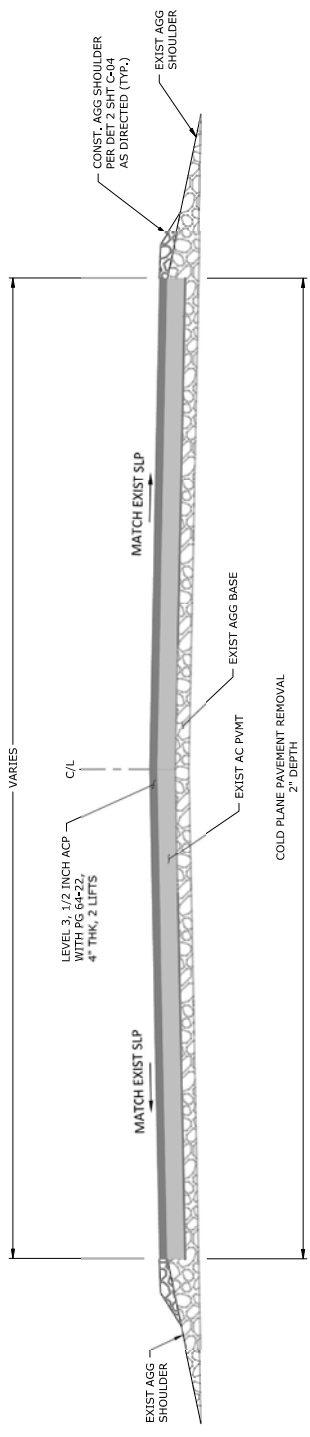
NO.	DATE:

Sheet No. C-01

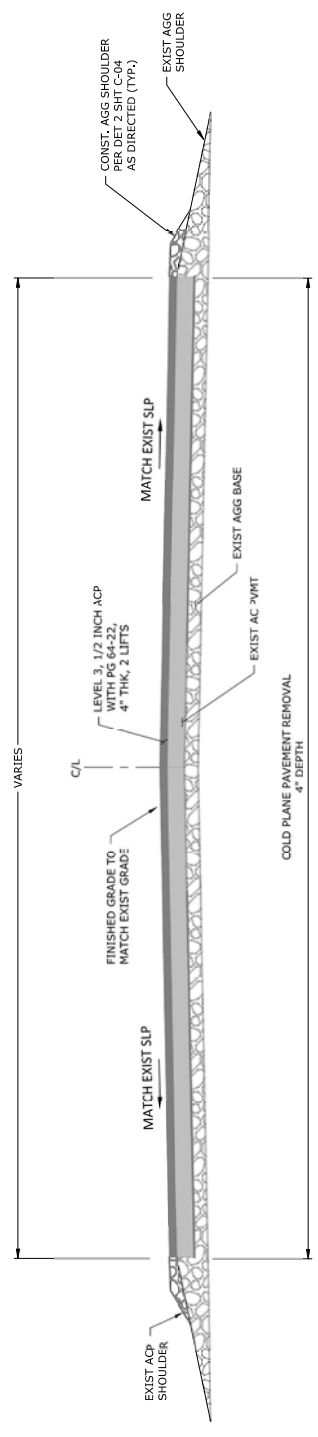




TYPICAL SECTION SHOWN  
 (SEE SHEET C-05 THROUGH C-14 FOR LOCATIONS OF VARIATIONS TO SECTION WIDTHS AND DIMENSIONS)



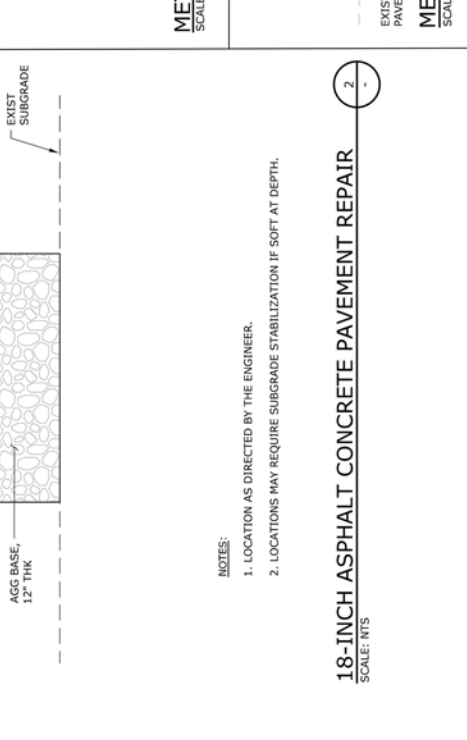
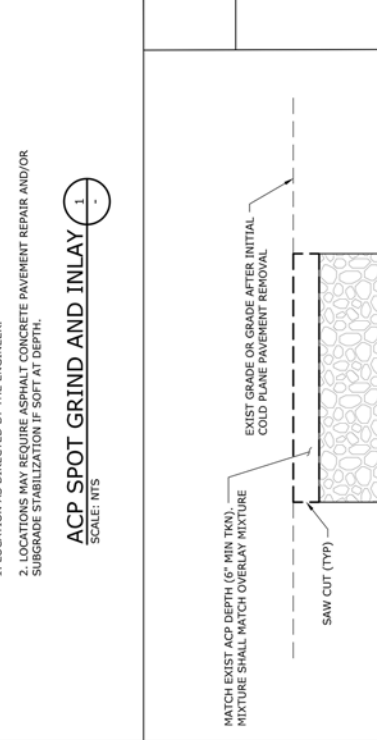
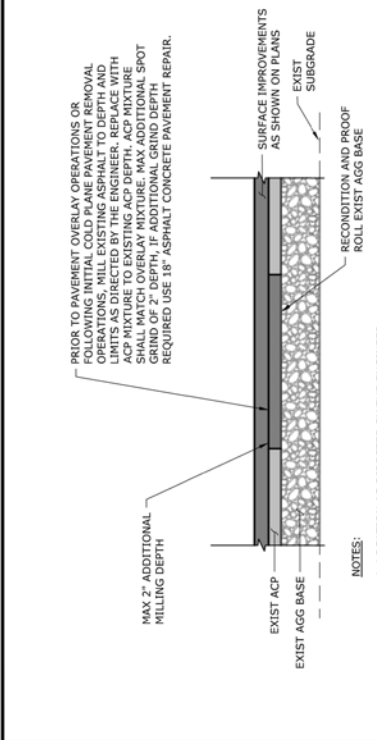
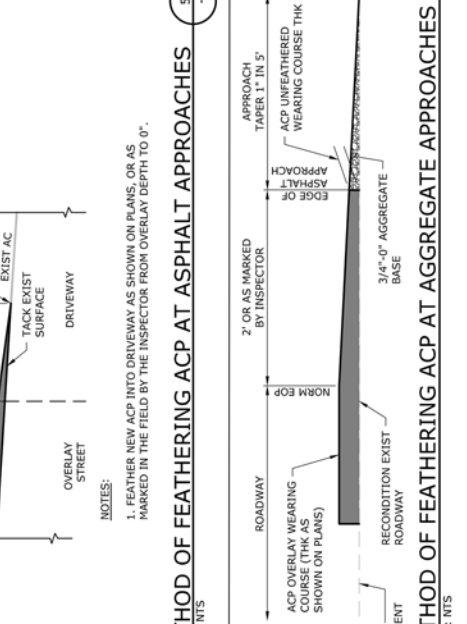
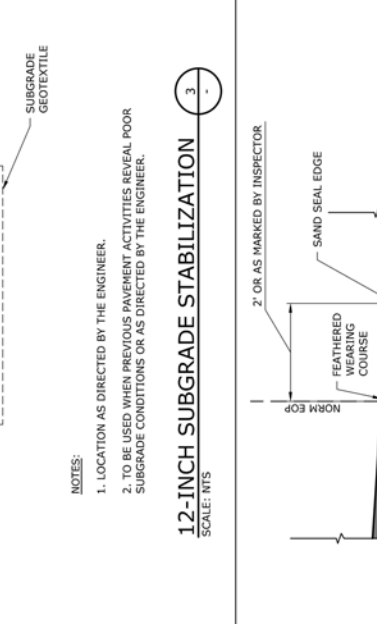
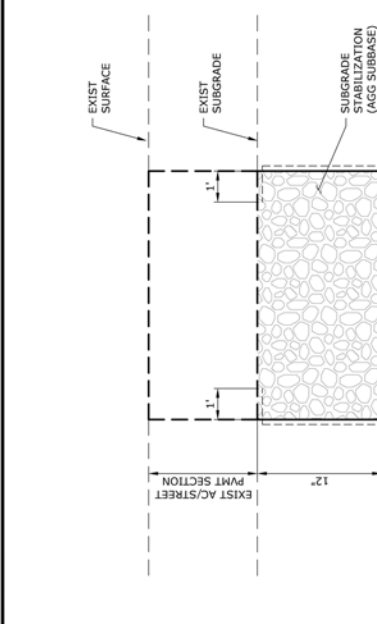
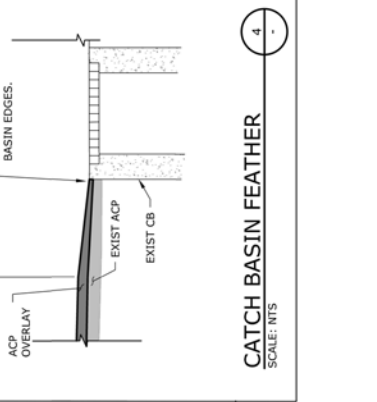
TYPICAL SECTION: 2" GRIND 4" INLAY - LEVEL 3 MIXTURE  
 SCALE: NTS



TYPICAL SECTION: 4" GRIND & INLAY - LEVEL 3 MIXTURE  
 SCALE: NTS

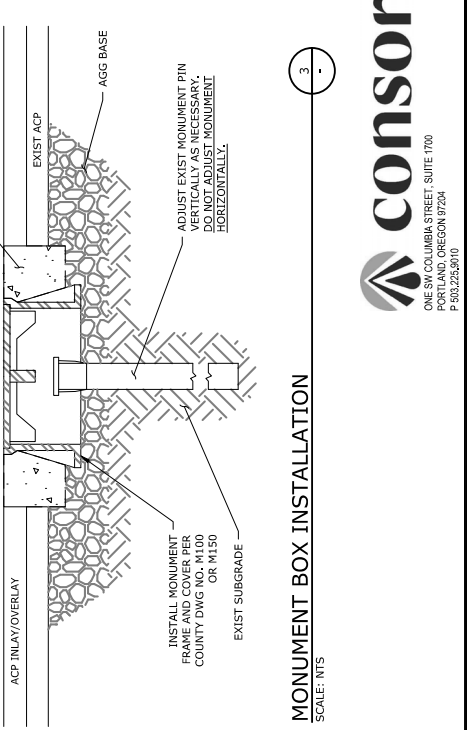
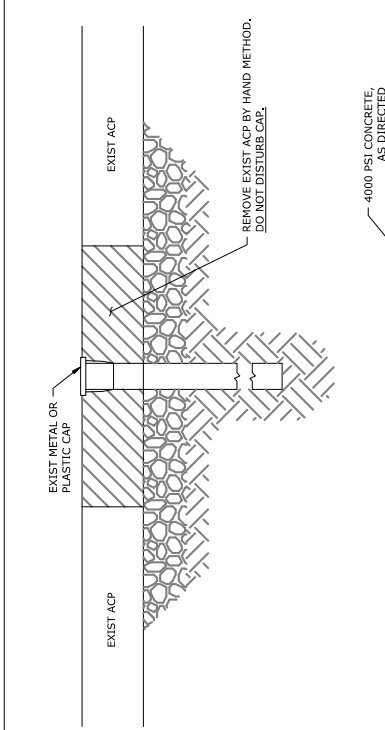
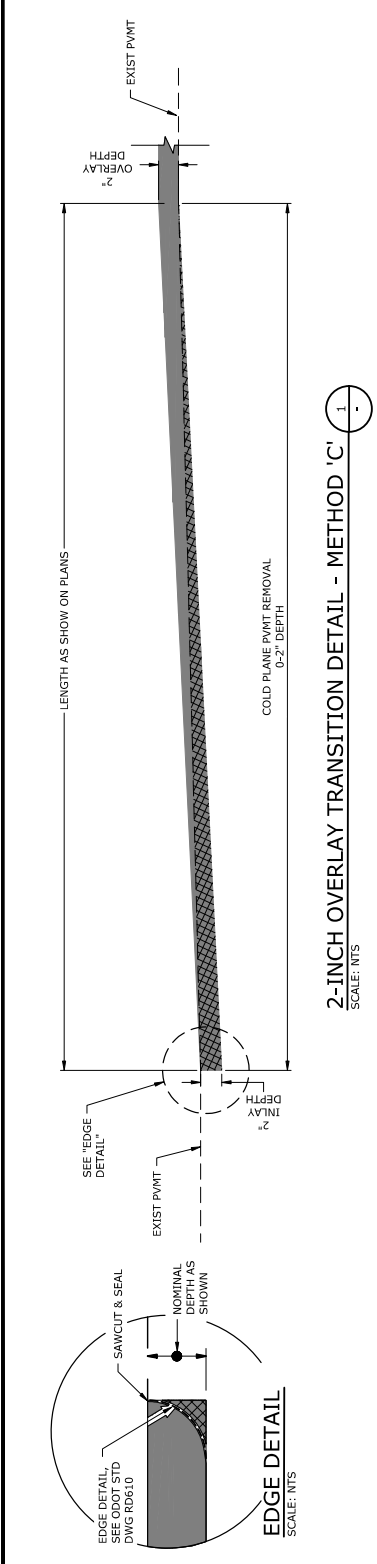
- NOTES:
- PRIOR TO PAVEMENT OVERLAY OR FOLLOWING INITIAL COLD PLANE PAVEMENT REMOVAL, CONDUCT SURVEY TO IDENTIFY AND ADDRESS ADDITIONAL RESTORATIONS AS NECESSARY TO ADDRESS EXISTING PAVEMENT DEFICIENCIES. WORK MAY INCLUDE SPOT GRIND AND INLAY DEPTH, ASPHALT CONCRETE PAVEMENT REPAIR OR SUBGRADE STABILIZATION. SEE PAVING DETAILS ON SHEET C-03 AND C-04.
  - GRADE ASPHALT TO MAINTAIN POSITIVE DRAINAGE.
  - CONSTRUCT ASPHALT CONCRETE PAVEMENT LEVELING COURSE AS SHOWN OR DIRECTED.







**REGISTERED PROFESSIONAL ENGINEER**  
 78447  
 2024.04.28  
 DIGITALLY SIGNED BY: 18-07100  
 OREGON  
 JUNE 2 2011  
**ANDREW HENLY GESSY**  
 RENEWS 6-30-25



**consor**  
 ONE SW COLUMBIA STREET, SUITE 1700  
 PORTLAND, OREGON 97204  
 P-302262670

**PAVING PLAN AND NOTES**

REVIEWS 6-30-25

**CONSTRUCTION NOTES:**

- FOR ROADWAY PAVING IMPROVEMENTS, SEE TYPICAL SECTION SHEET C-01 THRU C-02.
- PRIOR TO PAVEMENT OVERLAY OPERATIONS OR FOLLOWING PAVEMENT REMOVAL OPERATIONS, THE INSPECTOR MAY DIRECT ADDITIONAL RESTORATIONS TO BE MADE TO EXISTING DRIVEWAYS TO CORRECT DEFICIENCIES. WORK MAY INCLUDE SPOT GRIND AND INLAY DEPTH, ASPHALT CONCRETE PAVEMENT REPAIR OR SUBGRADE STABILIZATION. SEE PAVING DETAILS ON SHEET C-03.
- ASPHALT AND AGGREGATE DRIVEWAY TRANSITIONS SHOWN ON THE PLANS ARE VISUALS FOR ESTIMATING PURPOSES ONLY. DRIVEWAYS SHALL BE BUILT PER THE INSPECTOR'S FIELD LAYOUT. SEE PAVING DETAILS ON SHEET C-03.

**PAVEMENT MARKING NOTES:**

- INSTALL NEW PAVEMENT MARKINGS AS CALLED OUT WITH PER ODOT STD DWGS.
- RECORD EXISTING PAVEMENT MARKINGS AND RECORD EXISTING CURB LOCATIONS PRIOR TO PAVING AFTER PAVING UNLESS OTHERWISE SHOWN OR DIRECTED BY THE ENGINEER. CONTRACTOR SHALL COORDINATE LAYOUT WITH INSPECTOR PRIOR TO PLACEMENT.

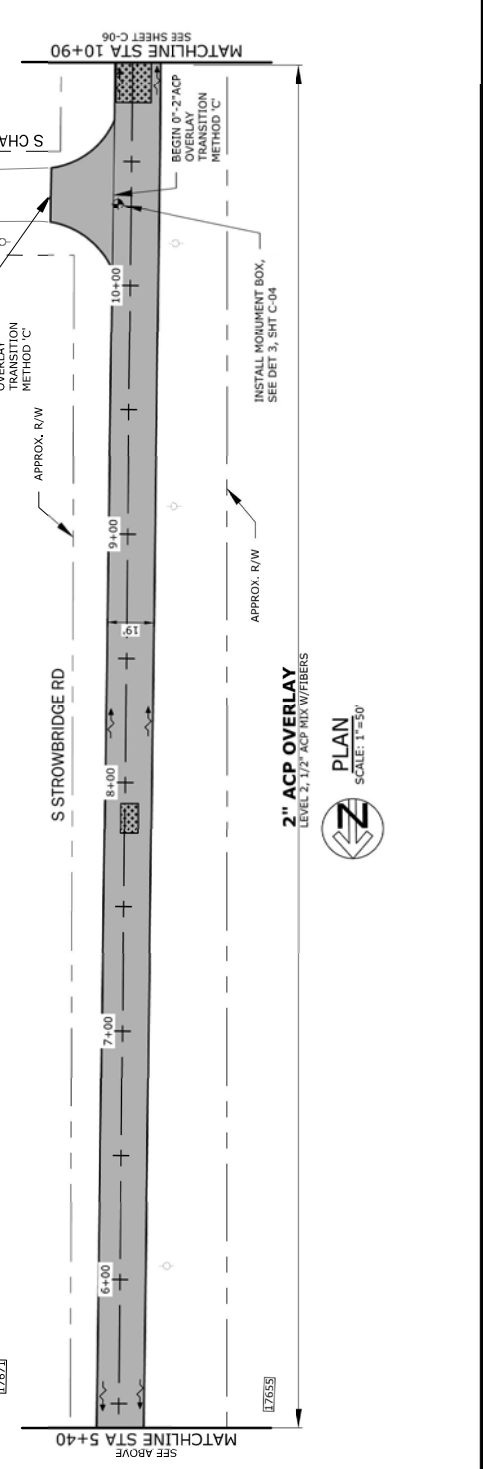
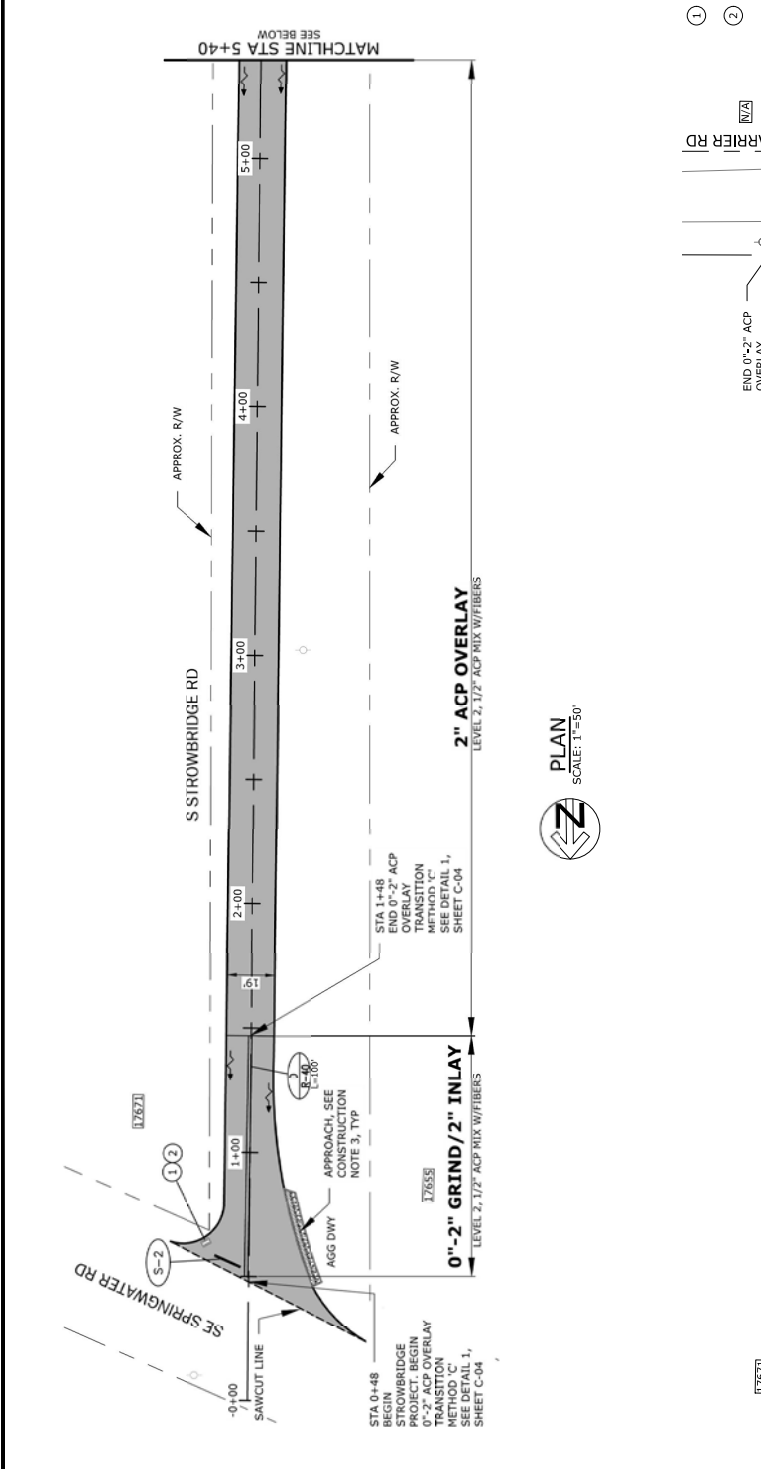
**KEY NOTES:**

- INSTALL TYPE 3 INLET PROTECTION. SEE ODOT STD DWG RD1010.
- MAINTAIN AND PROTECT EXIST CATCH BASIN. SEE DET 4, SHT C-03.

**PAVEMENT REHABILITATION LEGEND**

- ASPHALT CONCRETE PAVING. SEE TYPICAL SECTION, SHT C-01 TO C-02
- APPROXIMATE 2-IN SPOT GRIND AND INLAY RESTORATION AREA. SEE CONSTRUCTION NOTE 2 THIS SHT (TYP)
- GRADE ASPHALT OR BASE SECTION TO MAINTAIN POSITIVE DRAINAGE.
- AGGREGATE APPROACH. SEE DET 6 SHT C-03
- ACP APPROACH. SEE DET 5 SHT C-03

ONE SW COLUMBIA STREET, SUITE 700  
 PORTLAND, OREGON 97204  
 P-303.225.3010



PAVING PLAN AND NOTES

**REGISTERED PROFESSIONAL ENGINEER**  
 76447  
 2024.04.26  
 DIGITALLY SIGNED BY: ANDREW HENRY GIESY  
 OREGON  
 JUNE 2 2011

REVIEWS 6-30-25

**CONSTRUCTION NOTES:**

- FOR ROADWAY PAVING IMPROVEMENTS, SEE TYPICAL SECTION SHEET C-01 THRU C-04.
- PRIOR TO PAVEMENT OVERLAY OPERATIONS OR FOLLOWING PAVEMENT REMOVAL OPERATIONS, THE INSPECTOR MAY DIRECT ADDITIONAL RESTORATIONS TO BE MADE TO EXISTING DRIVEWAYS TO CORRECT DEFICIENCIES. WORK MAY INCLUDE SPOT GRIND AND INLAY DEPTH, ASPHALT CONCRETE PAVEMENT REPAIR OR SUBGRADE STABILIZATION. SEE PAVING DETAILS ON SHEET C-03.
- ASPHALT AND AGGREGATE DRIVEWAY TRANSITIONS SHOWN ON THE PLANS ARE VISUALS FOR ESTIMATING PURPOSES ONLY. DRIVEWAYS SHALL BE BUILT PER THE INSPECTOR'S FIELD LAYOUT. SEE PAVING DETAILS ON SHEET C-03.

**PAVEMENT MARKING NOTES:**

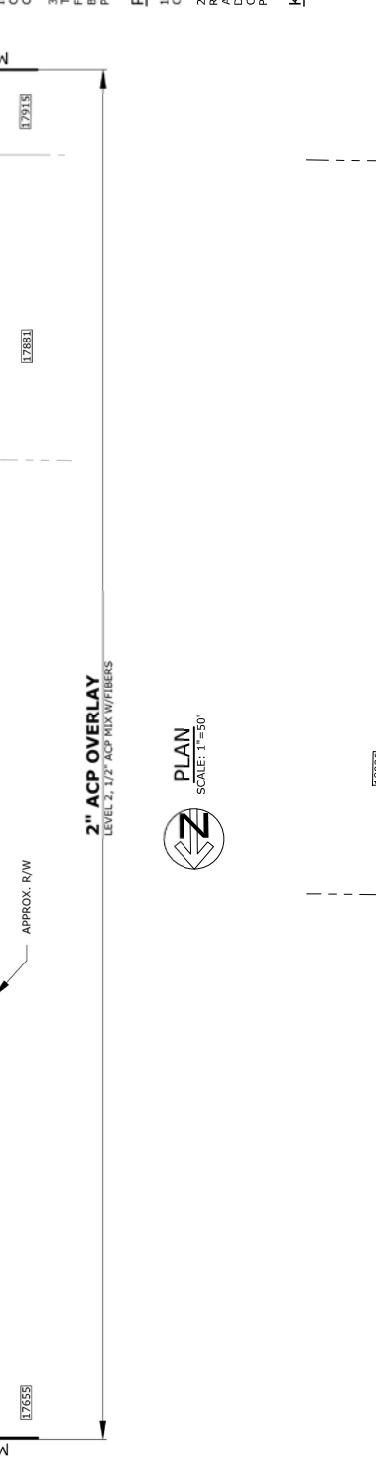
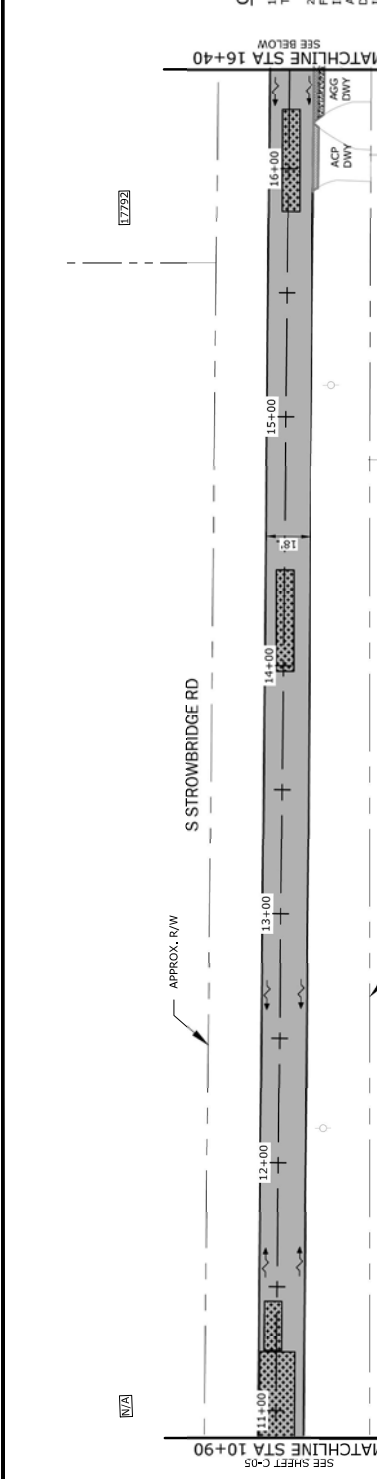
- INSTALL NEW PAVEMENT MARKINGS AS CALLED OUT WITH PER ODOT STD DWGS.
- RECORD EXISTING PAVEMENT MARKINGS AND RECORD THEM TO THE FIELD LAYOUT PRIOR TO PAVEMENT CONSTRUCTION.
- RECORD ALL FIELD CHANGES TO THE LAYOUT AFTER PAVING UNLESS OTHERWISE SHOWN OR DIRECTED BY THE ENGINEER. CONTRACTOR SHALL COORDINATE LAYOUT WITH INSPECTOR PRIOR TO PLACEMENT.

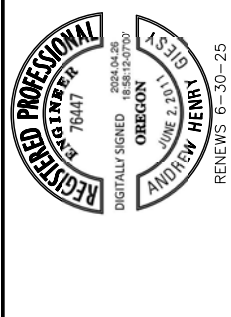
**KEY NOTES:**

**PAVEMENT REHABILITATION LEGEND**

- ASPHALT CONCRETE PAVING. SEE TYPICAL SECTION, SHT C-01 TO C-02
- APPROXIMATE 2 IN SPOT GRIND AND INLAY RESTORATION AREA. SEE CONSTRUCTION NOTE 2 THIS SHT (TYP)
- GRADE ASPHALT OR BASE SECTION TO MAINTAIN POSITIVE DRAINAGE.
- AGGREGATE APPROACH. SEE DET 6 SHT C-03
- ACP APPROACH. SEE DET 5 SHT C-03

**consor**  
 ONE SW COLUMBIA STREET, SUITE 700  
 PORTLAND, OREGON 97204  
 P-303.225.3010





REVIEWS 6-30-25

**CONSTRUCTION NOTES:**

- FOR ROADWAY PAVING IMPROVEMENTS, SEE TYPICAL SECTION SHEET C-01 THRU C-02.
- PRIOR TO PAVEMENT OVERLAY OPERATIONS OR FOLLOWING PAVEMENT REMOVAL OPERATIONS, THE INSPECTOR MAY DIRECT ADDITIONAL RESTORATIONS TO BE MADE TO EXISTING DRIVEWAYS TO CORRECT DEFICIENCIES. WORK MAY INCLUDE SPOT GRIND AND INLAY DEPTH, ASPHALT CONCRETE PAVEMENT REPAIR OR SUBGRADE STABILIZATION. SEE PAVING DETAILS ON SHEET C-03.
- ASPHALT AND AGGREGATE DRIVEWAY TRANSITIONS SHOWN ON THE PLANS ARE VISUALS FOR ESTIMATING PURPOSES ONLY. DRIVEWAYS SHALL BE BUILT PER THE INSPECTOR'S FIELD LAYOUT. SEE PAVING DETAILS ON SHEET C-03.

**PAVEMENT MARKING NOTES:**

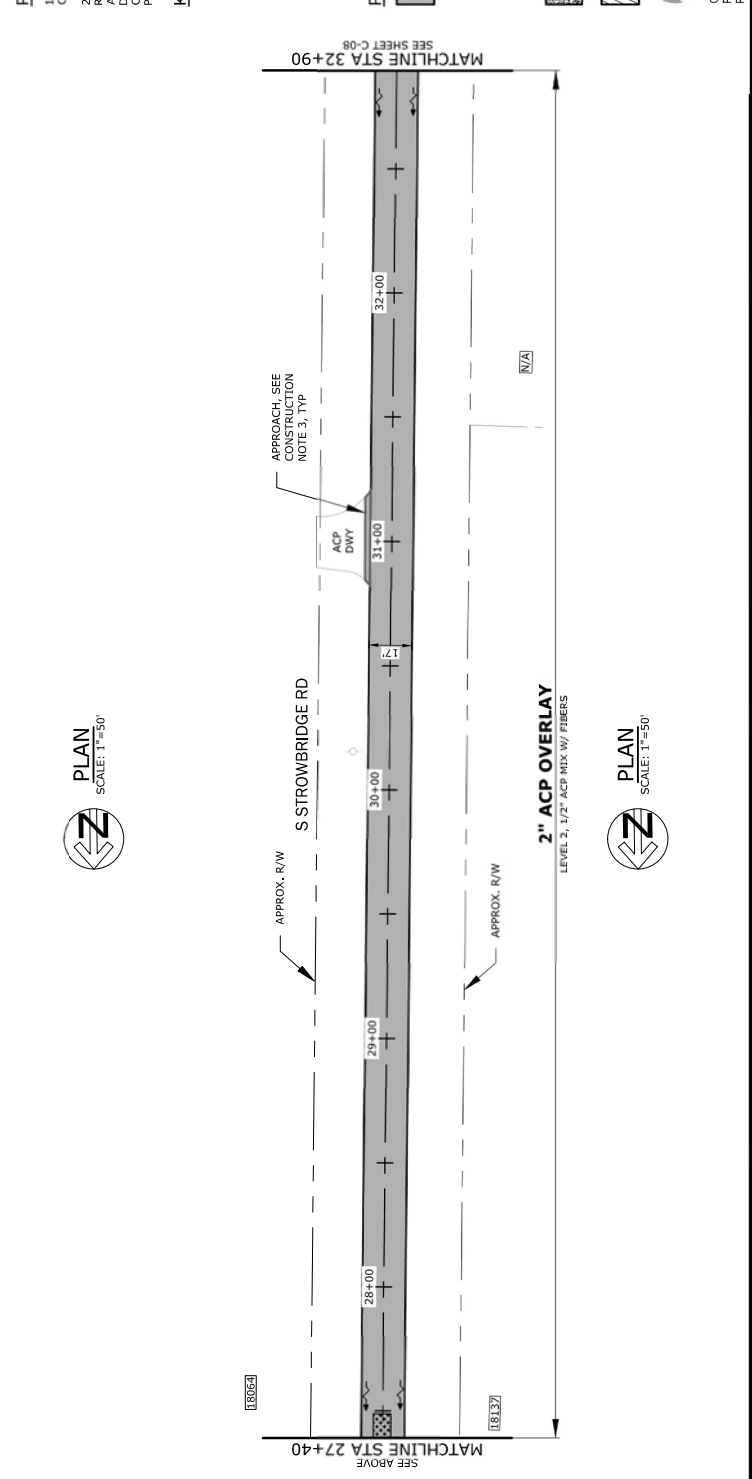
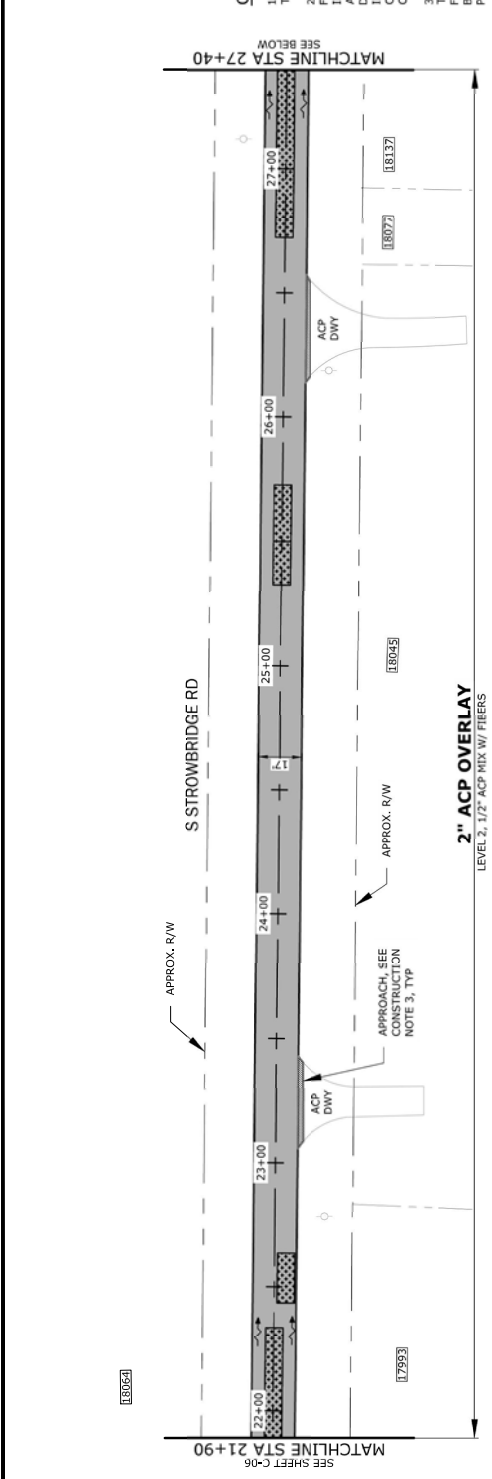
- INSTALL NEW PAVEMENT MARKINGS AS CALLED OUT WITH PER ODOT STD DWGS.
- RECORD EXISTING PAVEMENT MARKINGS AND RECORD THE LOCATION OF ANY CHANGES TO BE MADE AFTER PAVING UNLESS OTHERWISE SHOWN OR DIRECTED BY THE ENGINEER. CONTRACTOR SHALL COORDINATE LAYOUT WITH INSPECTOR PRIOR TO PLACEMENT.

**KEY NOTES:**

**PAVEMENT REHABILITATION LEGEND**

- ASPHALT CONCRETE PAVING. SEE TYPICAL SECTION, SHT C-01 TO C-02
- APPROXIMATE 2 IN SPOT GRIND AND INLAY RESTORATION AREA. SEE CONSTRUCTION NOTE 2 THIS SHT (TYP)
- GRADE ASPHALT OR BASE SECTION TO MAINTAIN POSITIVE DRAINAGE.
- AGGREGATE APPROACH. SEE DET 6 SHT C-03
- ACP APPROACH. SEE DET 5 SHT C-03

**consor**  
ONE SW COLUMBIA STREET, SUITE 700  
PORTLAND, OREGON 97204  
P-303.225.3010



PAVING PLAN AND NOTES

REGISTERED PROFESSIONAL ENGINEER  
 76447  
 OREGON  
 JUNE 2011  
 ANDREW HENRY GIESY

DIGITALLY SIGNED 2024.04.26  
 6353607700

REVISIONS

NO.	DATE:

PAVING PLAN AND NOTES

CONSTRUCTION NOTES:

- FOR ROADWAY PAVING IMPROVEMENTS, SEE TYPICAL SECTION SHEET C-01 THRU C-02.
- PRIOR TO PAVEMENT OVERLAY OPERATIONS OR FOLLOWING PAVEMENT REMOVAL OPERATIONS, THE INSPECTOR MAY DIRECT ADDITIONAL RESTORATIONS TO BE MADE TO ADDRESS DEFICIENCIES, INCLUDING BUT NOT LIMITED TO INLAY DEPTH, ASPHALT CONCRETE PAVEMENT REPAIR OR SUBGRADE STABILIZATION. SEE PAVING DETAILS ON SHEET C-03.
- ASPHALT AND AGGREGATE DRIVEWAY TRANSITIONS SHOWN ON THE PLANS ARE VISUALS FOR ESTIMATING PURPOSES ONLY. DRIVEWAYS SHALL BE BUILT PER THE INSPECTOR'S FIELD LAYOUT. SEE PAVING DETAILS ON SHEET C-03.

PAVEMENT MARKING NOTES:

- INSTALL NEW PAVEMENT MARKINGS AS CALLED OUT WITH PER ODOT STD DWG.
- RECORD EXISTING PAVEMENT MARKINGS AND REPLACE MARKINGS IN EXISTING CONFIGURATION AFTER PAVING OPERATIONS ARE COMPLETE. BE DIRECTED BY THE ENGINEER. CONTRACTOR SHALL COORDINATE LAYOUT WITH INSPECTOR PRIOR TO PLACEMENT.

KEY NOTES:

- REMOVE EXISTING GUARDRAIL - 105 FT
- STA 40+55 RT  
 CONSTRUCT MIDWEST GUARDRAIL SYSTEM - 160' (TYPE 2A)  
 W=2', F=0'  
 CONSTRUCT GUARDRAIL SYSTEMS - 26'  
 NON-FLARED TEST LEVEL 2 - (2) EA, L=25'  
 INSTALL TYPE 4 WHITE REFLECTIVE GUARDRAIL (PER ODOT STD DWG R0406, R0402, R0403, R0406, & TMS20)
- CLEAR AND GRUB EXIST AREA WITHIN RIGHT-OF-WAY AS NECESSARY FOR GUARDRAIL INSTALLATION. COORDINATE WITH INSPECTOR

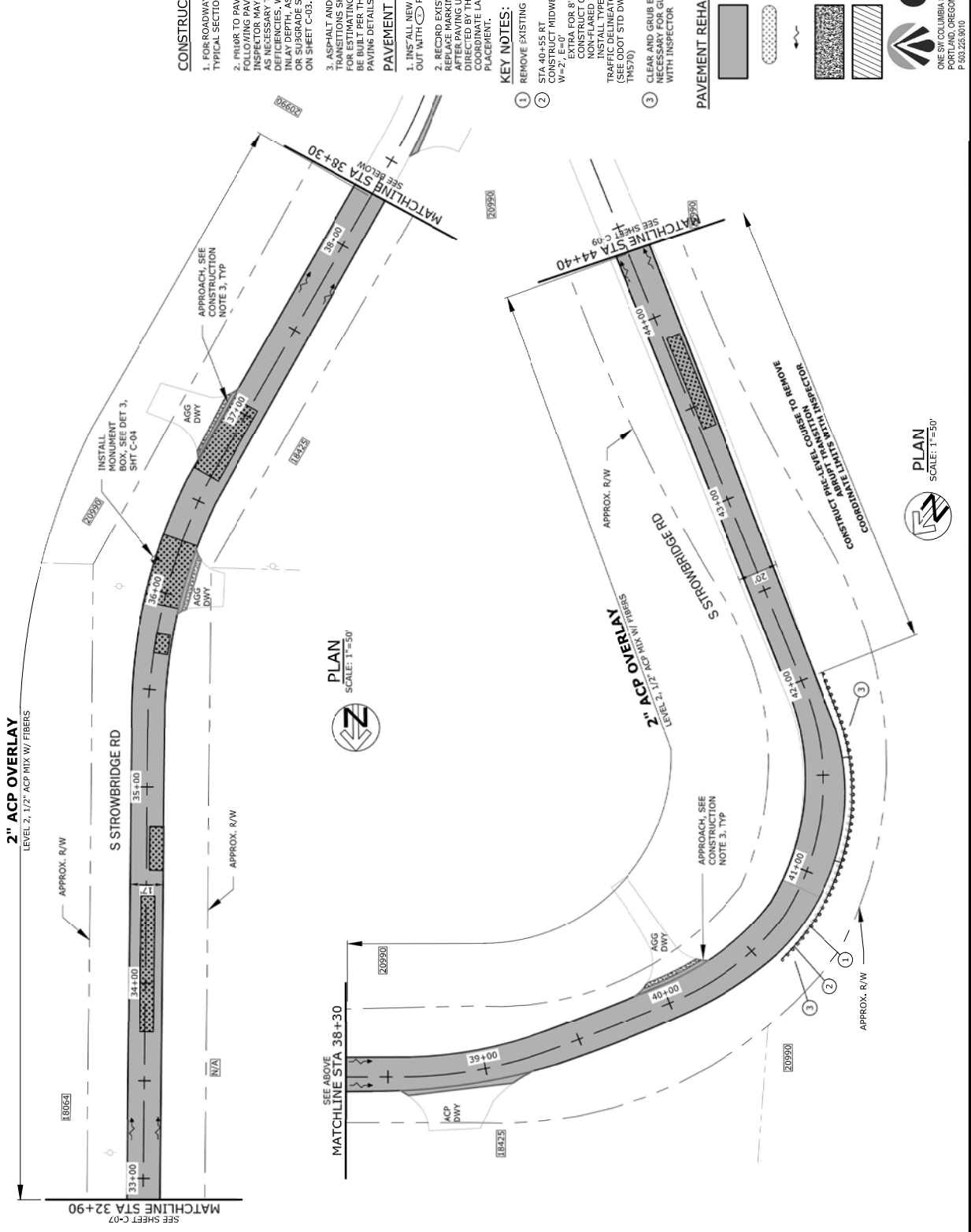
CLACKAMAS COUNTY

REGISTERED PROFESSIONAL ENGINEER  
 76447  
 OREGON  
 JUNE 2011  
 ANDREW HENRY GIESY

DIGITALLY SIGNED 2024.04.26  
 6353607700

REVISIONS

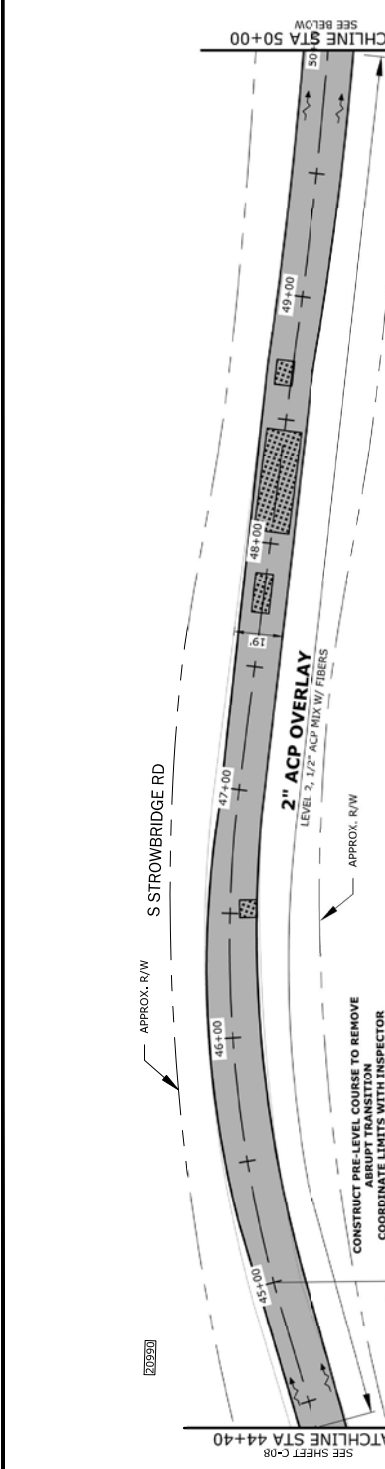
NO.	DATE:



PAVING PLAN AND NOTES

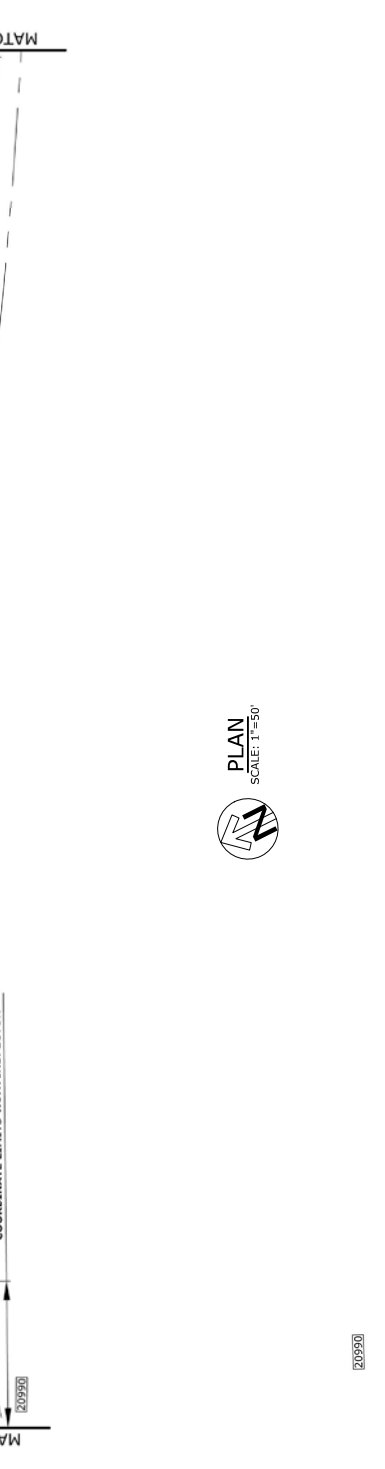
REGISTERED PROFESSIONAL ENGINEER  
 76447  
 OREGON  
 JUNE 2, 2011  
 ANDREW HENRY GIESY

DIGITALLY SIGNED 2024.04.26 16:53:17-0700



PAVEMENT REHABILITATION LEGEND

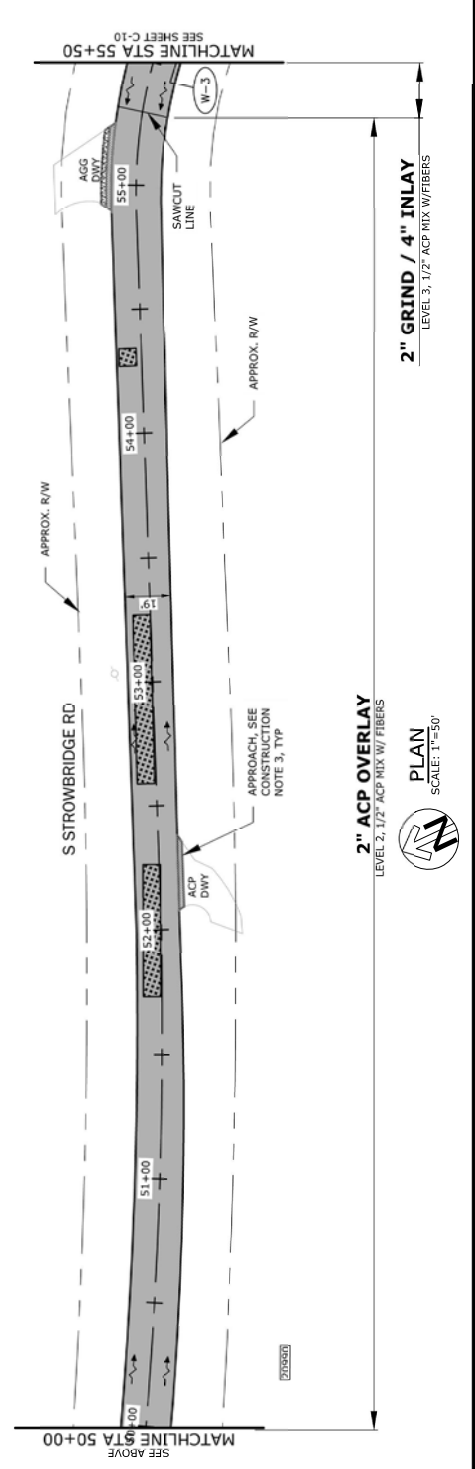
- ASPHALT CONCRETE PAVING, SEE TYPICAL SECTION, SHT C-01 TO C-02
- APPROXIMATE 2 IN SPOT GRIND AND INLAY RESTORATION AREA, SEE CONSTRUCTION NOTE 2 THIS SHT (TYP)
- GRADE ASPHALT OR BASE SECTION TO MAINTAIN POSITIVE DRAINAGE.
- AGGREGATE APPROACH, SEE DET 6 SHT C-03
- ACP APPROACH, SEE DET 5 SHT C-03



2" GRIND / 4" INLAY  
 LEVEL 3, 1/2" ACP MIX W/ FIBERS

2" ACP OVERLAY  
 LEVEL 2, 1/2" ACP MIX W/ FIBERS

consor  
 ONE SW COLUMBIA STREET, SUITE 1700  
 PORTLAND, OREGON 97204  
 P-503.225.9010



**REGISTERED PROFESSIONAL ENGINEER**  
 76447  
 OREGON  
 JUNE 2, 2011  
 NEW HENLY GIESY

DIGITALLY SIGNED 1:50:00.00  
 1:50:00.00 PM '24

REVISIONS 6-30-25

**PAVING PLAN AND NOTES**

**CONSTRUCTION NOTES:**

- FOR ROADWAY PAVING IMPROVEMENTS, SEE TYPICAL SECTION SHEET C-01 THRU C-02.
- PRIOR TO PAVEMENT OVERLAY OPERATIONS OR FOLLOWING PAVEMENT REMOVAL OPERATIONS, THE INSPECTOR MAY DIRECT ADDITIONAL RESTORATIONS AND REPAIRS TO CORRECT DEFICIENCIES AND DEFICIENCIES. WORK MAY INCLUDE SPOT GRIND AND INLAY DEPTH, ASPHALT CONCRETE PAVEMENT REPAIR OR SUBGRADE STABILIZATION. SEE PAVING DETAILS ON SHEET C-03.
- ASPHALT AND AGGREGATE DRIVEWAY TRANSITIONS SHOWN ON THE PLANS ARE VISUALS FOR ESTIMATING PURPOSES ONLY. DRIVEWAYS SHALL BE BUILT PER THE INSPECTOR'S FIELD LAYOUT. SEE PAVING DETAILS ON SHEET C-03.

**PAVEMENT MARKING NOTES:**

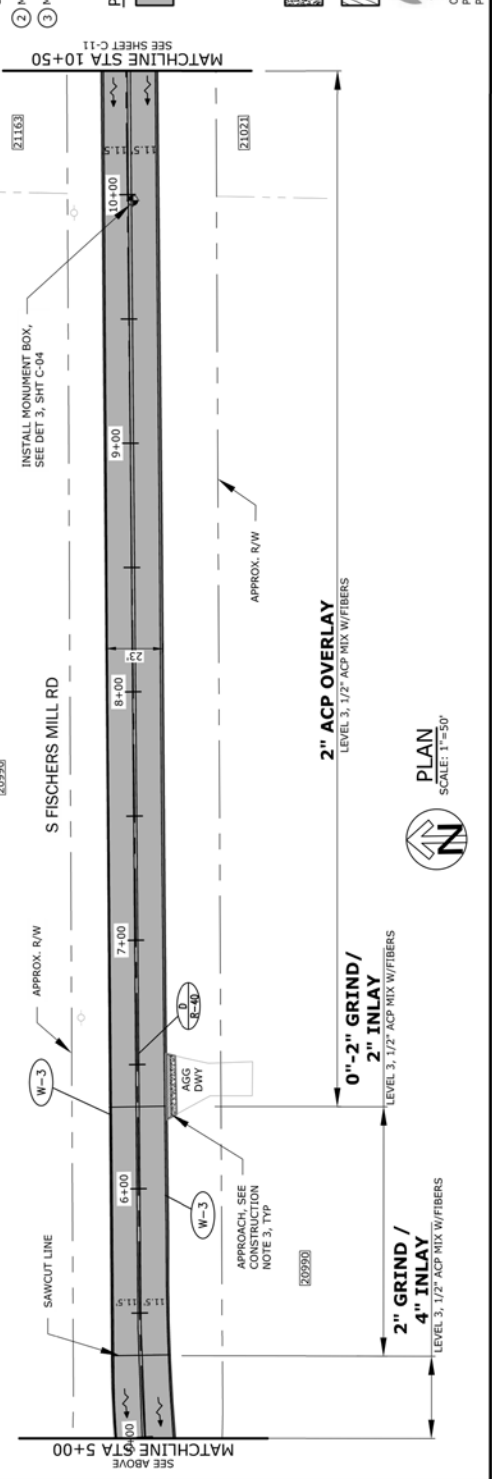
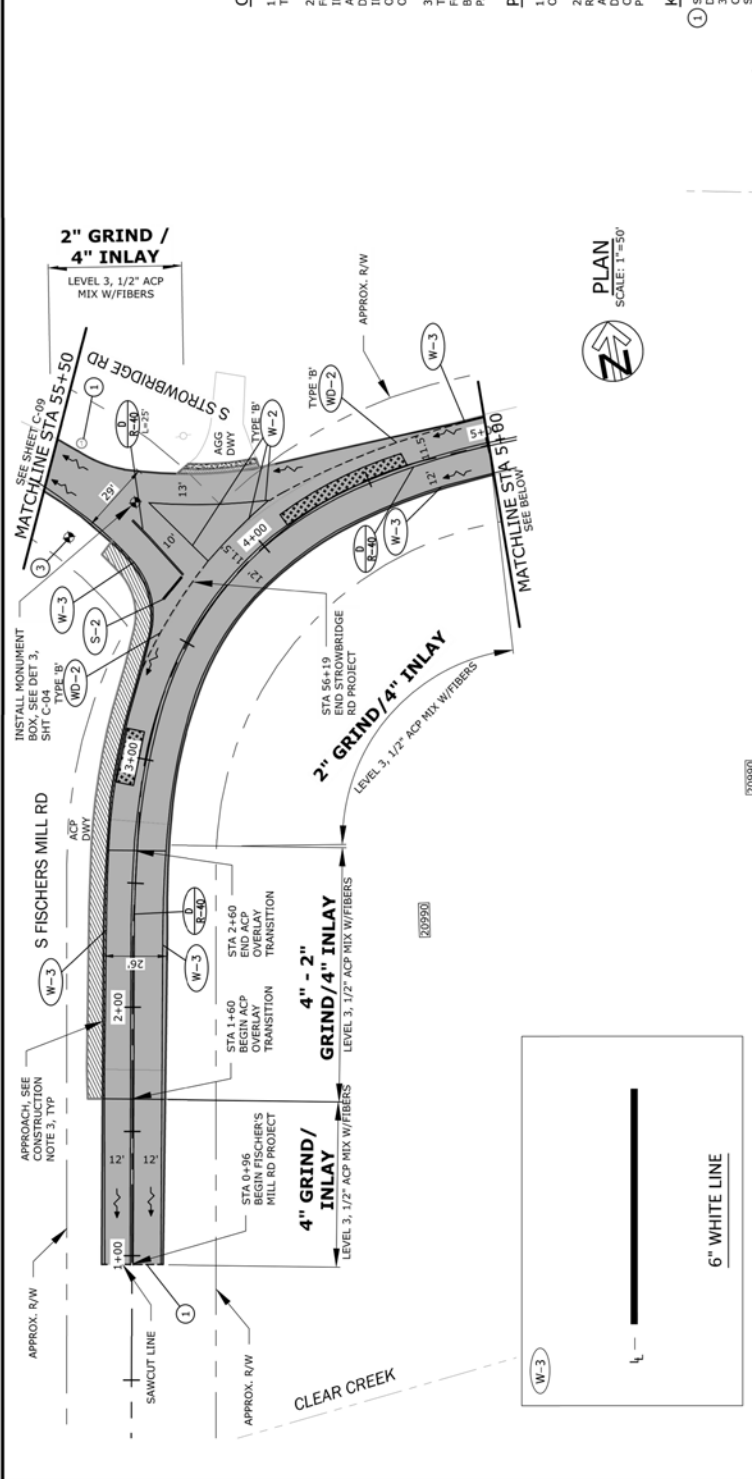
- INSTALL NEW PAVEMENT MARKINGS AS CALLED OUT WITH PER ODOT STD DWGS.
- RECORD EXISTING PAVEMENT MARKINGS AND REPORT TO THE INSPECTOR FOR REVIEW PRIOR TO PAVING UNLESS OTHERWISE SHOWN OR DIRECTED BY THE ENGINEER. CONTRACTOR SHALL COORDINATE LAYOUT WITH INSPECTOR PRIOR TO PLACEMENT.

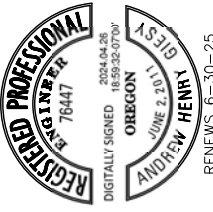
**KEY NOTES:**

- SAWCUT THE WEARING COURSE OF PAVEMENT DIRECTLY OVER THE BRIDGE END JOINT SAWCUT 3/8" WIDE & 1/8" BY 1 1/2" DEPTH, FILL THE SAWCUT WITH "HOT" BITUMINOUS JOINT SEALANT FROM THE QP.
- MAINTAIN AND PROTECT EXIST TELEPHONE MANHOLE
- MAINTAIN AND PROTECT SURVEY PIN

**PAVEMENT REHABILITATION LEGEND**

- ASPHALT CONCRETE PAVING. SEE TYPICAL SECTION, SHT C-01 TO C-02
- APPROXIMATE 2 IN SPOT GRIND AND INLAY RESTORATION AREA. SEE CONSTRUCTION NOTE 2 THIS SHT (TYP)
- GRADE ASPHALT OR BASE SECTION TO MAINTAIN POSITIVE DRAINAGE.
- AGGREGATE APPROACH, SEE DET 6 SHT C-03
- ACP APPROACH, SEE DET 5 SHT C-03





REVIEWS 6-30-25

**CONSTRUCTION NOTES:**

- FOR ROADWAY PAVING IMPROVEMENTS, SEE TYPICAL SECTION SHEET C-01 THRU C-02.
- PRIOR TO PAVEMENT OVERLAY OPERATIONS OR FOLLOWING PAVEMENT REMOVAL OPERATIONS, THE CONTRACTOR SHALL CONDUCT VISUAL INSPECTIONS AND NECESSARY ADDRESS EXISTING PAVEMENT DEFICIENCIES. WORK MAY INCLUDE SPOT GRIND AND INLAY DEPTH, ASPHALT CONCRETE PAVEMENT REPAIR OR SUBGRADE STABILIZATION. SEE PAVING DETAILS ON SHEET C-03.
- ASPHALT AND AGGREGATE DRIVEWAY TRANSITIONS SHOWN ON THE PLANS ARE VISUALS FOR ESTIMATING PURPOSES ONLY. DRIVEWAYS SHALL BE BUILT PER THE INSPECTOR'S FIELD LAYOUT. SEE PAVING DETAILS ON SHEET C-03.

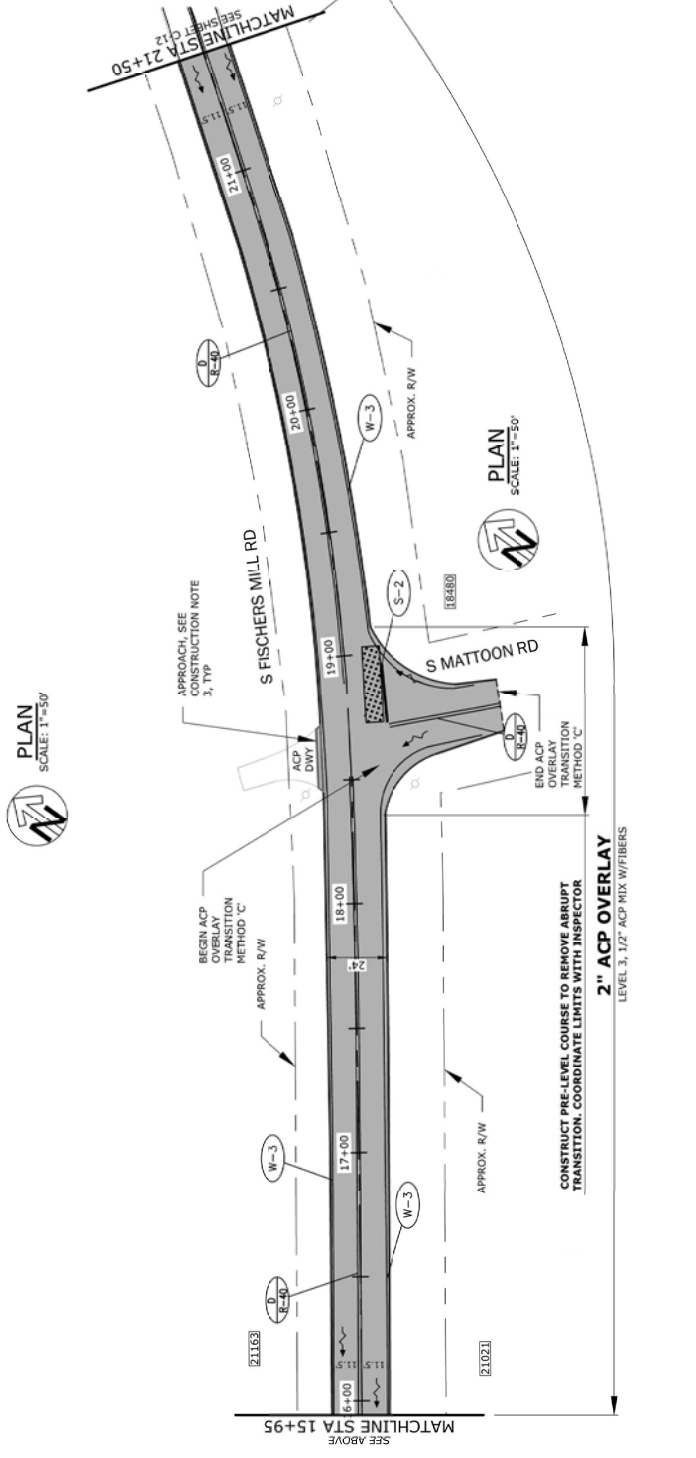
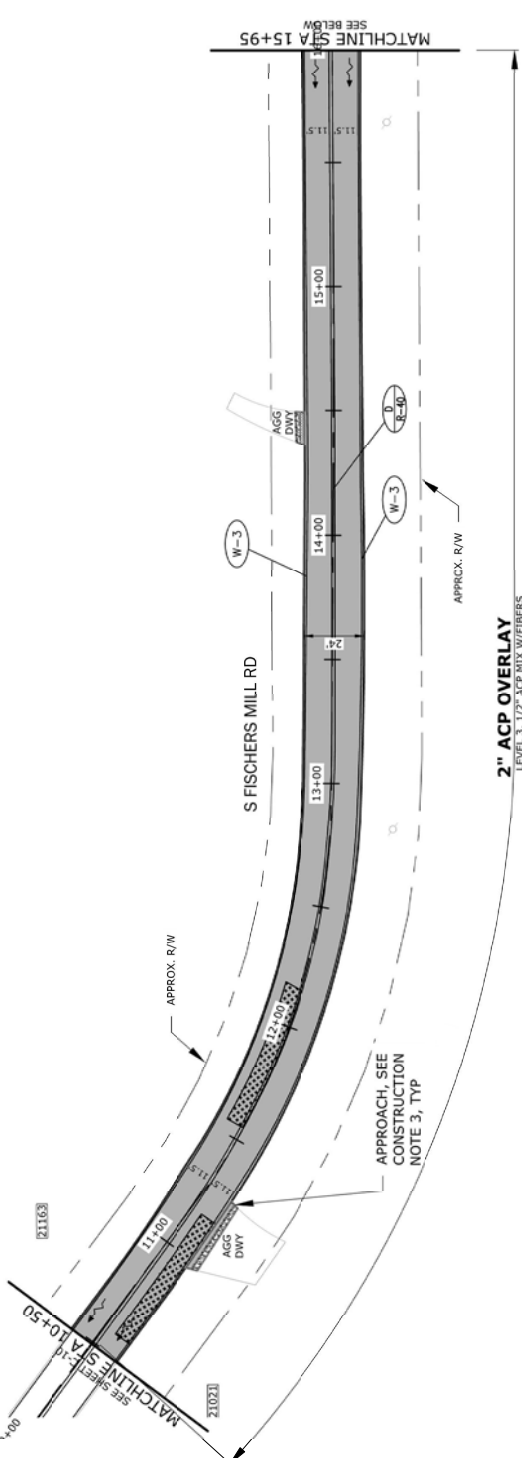
**PAVEMENT MARKING NOTES:**

- INSTALL NEW PAVEMENT MARKINGS AS CALLED OUT WITH PER ODOT STD DWGS.
- RECORD EXISTING PAVEMENT MARKINGS AND REPAIR MARKINGS IN EXISTING CONSTRUCTION AFTER PAVING UNLESS OTHERWISE SHOWN OR DIRECTED BY THE ENGINEER. CONTRACTOR SHALL COORDINATE LAYOUT WITH INSPECTOR PRIOR TO PLACEMENT.

**KEY NOTES:**

**PAVEMENT REHABILITATION LEGEND**

- ASPHALT CONCRETE PAVING. SEE TYPICAL SECTION, SHT C-01 TO C-02.
- APPROXIMATE 2 IN SPOT GRIND AND INLAY RESTORATION AREA. SEE CONSTRUCTION NOTE 2 THIS SHT (TYP)
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- AGGREGATE APPROACH. SEE DET 6 SHT C-03
- ACP APPROACH. SEE DET 5 SHT C-03



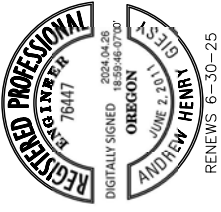


CLACKAMAS COUNTY  
 DEPT. OF TRANSPORTATION  
 150 BEAVERCREEK ROAD  
 OREGON CITY, OR 97045

DIRECTOR

DAN JOHNSON  
 CLACKAMAS COUNTY

DESIGNED BY:	ARC
DRAFTED BY:	RPH
CHECKED BY:	AHG
NO. DATE:	
SHEET NO.	C-12



RENEWS: 6-30-25

**CONSTRUCTION NOTES:**

- FOR ROADWAY PAVING IMPROVEMENTS, SEE TYPICAL SECTION SHEET C-01 THRU C-03.
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**PAVEMENT MARKING NOTES:**

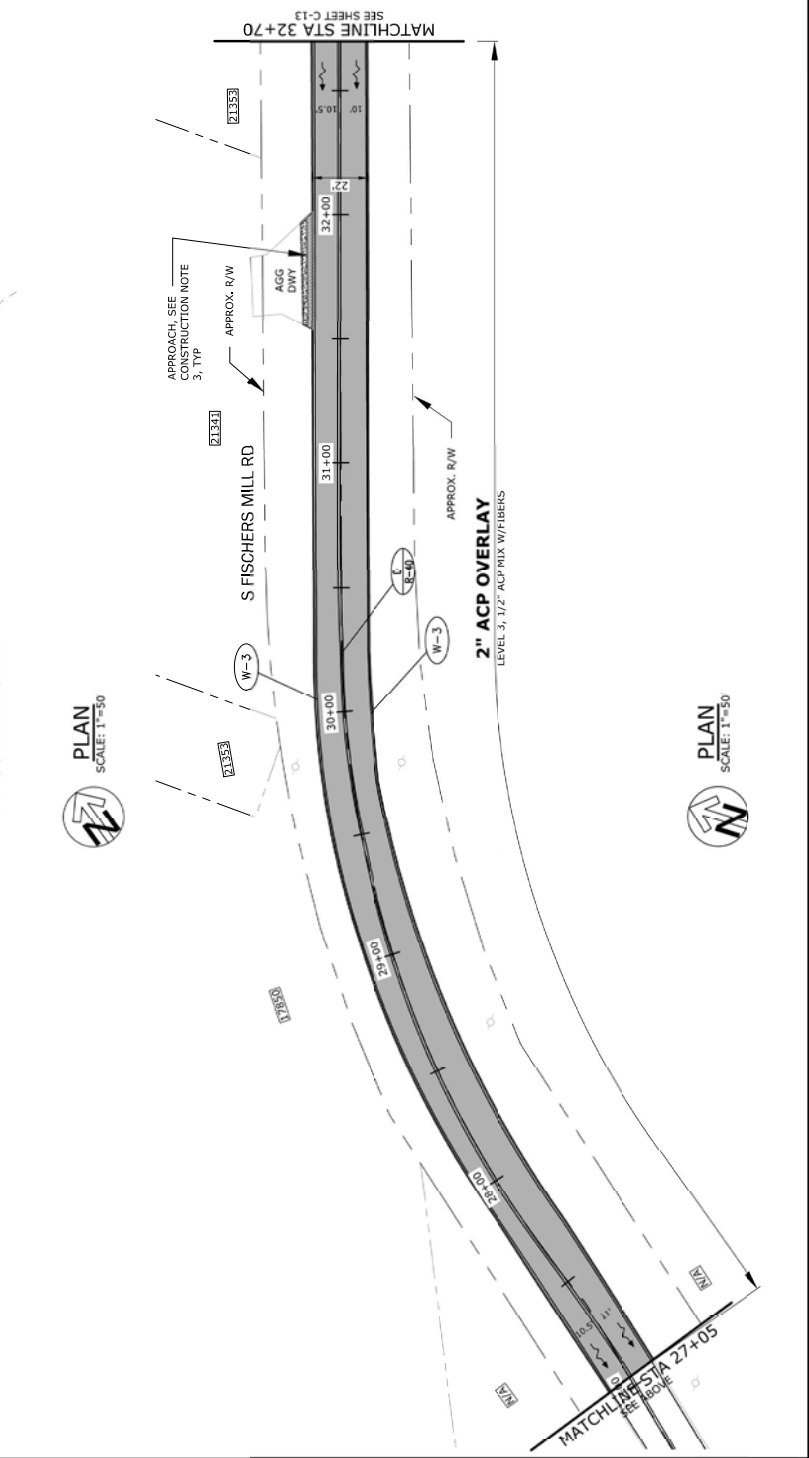
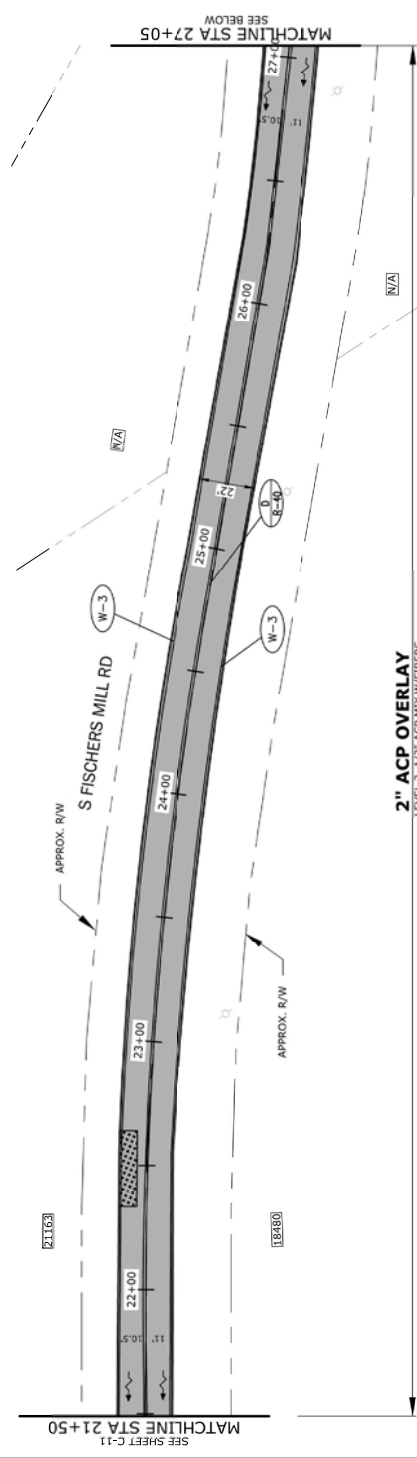
- INSTALL NEW PAVEMENT MARKINGS AS CALLED OUT WITH PER ODOT STD DWGS.
- RECORD EXISTING PAVEMENT MARKINGS AND REMOVE ALL MARKINGS PRIOR TO PAVING UNLESS OTHERWISE SHOWN OR DIRECTED BY THE ENGINEER. CONTRACTOR SHALL COORDINATE LAYOUT WITH INSPECTOR PRIOR TO PLACEMENT.

**KEY NOTES:**

**PAVEMENT REHABILITATION LEGEND**

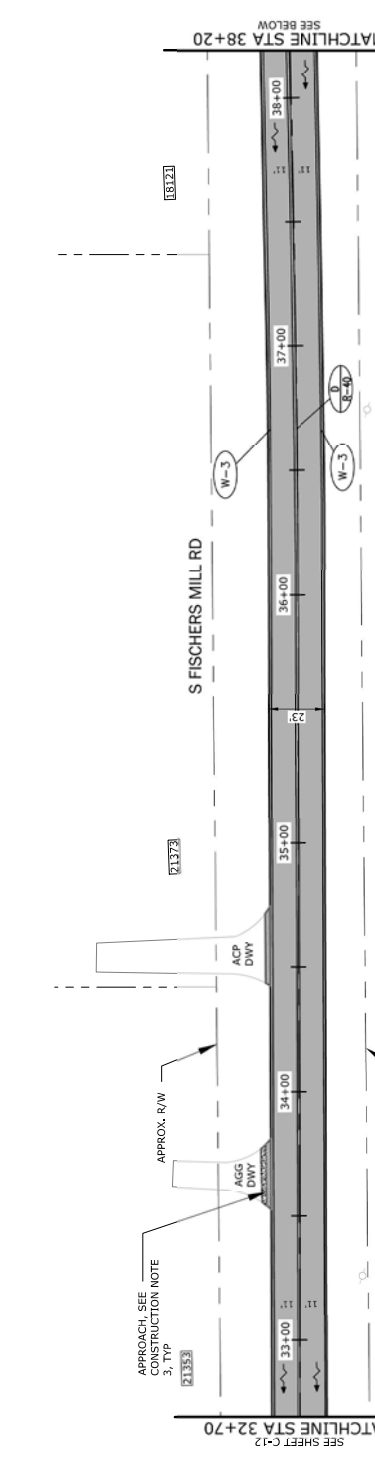
- ASPHALT CONCRETE PAVING. SEE TYPICAL SECTION, SHIT C-01 TO C-02
- APPROXIMATE 2 IN SPOT GRIND AND INLAY RESTORATION AREA. SEE CONSTRUCTION NOTE 2 THIS SHIT (TYP)
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- ACP APPROACH, SEE DET 5 SHIT C-03

ONE SW COLUMBIA STREET, SUITE 1700  
 PORTLAND, OREGON 97204  
 P-303.25.9010



**REGISTERED PROFESSIONAL ENGINEER**  
 76447  
 2004.04.26  
 10.0000.0700  
 OREGON  
 JUNE 2, 2011  
 ANTHONY HENRY GIESY

REVISIONS



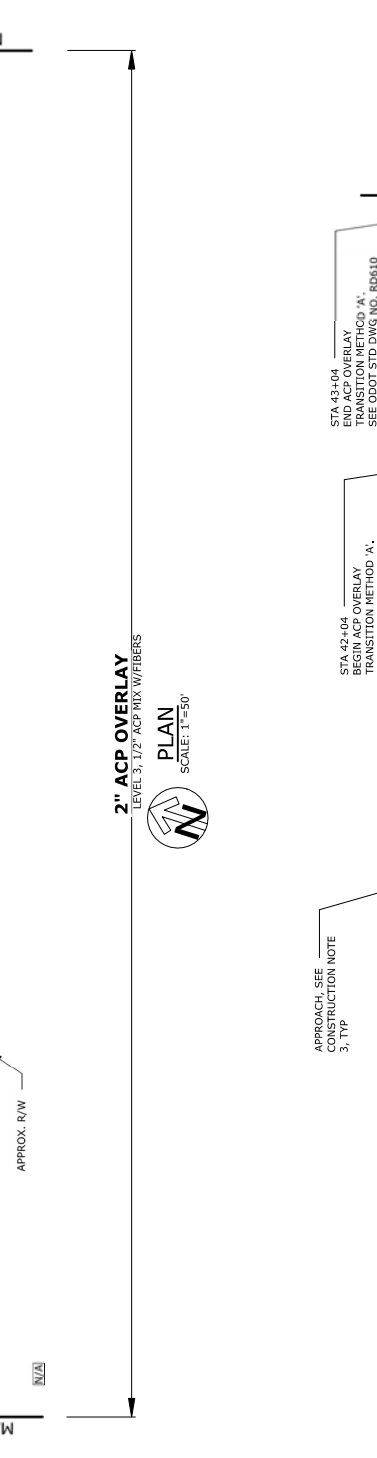
**CONSTRUCTION NOTES:**

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- ASPHALT AND AGGREGATE DRIVEWAY TRANSITIONS SHOWN ON THE PLANS ARE VISUALS FOR ESTIMATING PURPOSES ONLY. DRIVEWAYS SHALL BE BUILT PER THE INSPECTOR'S FIELD LAYOUT. SEE PAVING DETAILS ON SHEET C-03.

**PAVEMENT MARKING NOTES:**

- INSTALL NEW PAVEMENT MARKINGS AS CALLED OUT WITH PER ODOT STD DWGS.
- RECORD EXISTING PAVEMENT MARKINGS AND REPAIRS TO THE PLAN. ALL MARKINGS SHALL BE PLACED AFTER PAVING UNLESS OTHERWISE SHOWN OR DIRECTED BY THE ENGINEER. CONTRACTOR SHALL COORDINATE LAYOUT WITH INSPECTOR PRIOR TO PLACEMENT.

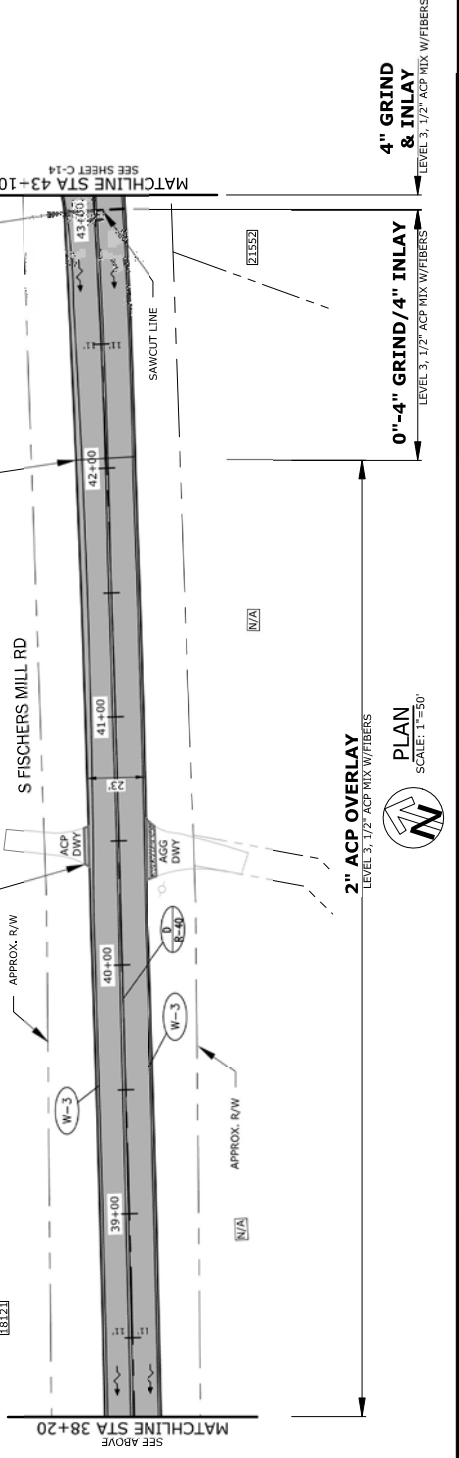
**KEY NOTES:**



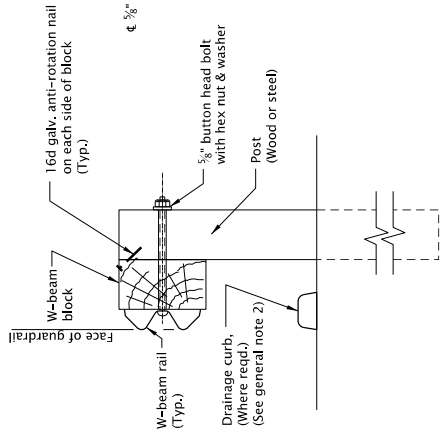
**PAVEMENT REHABILITATION LEGEND**

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- GRADE ASPHALT OR BASE SECTION TO MAINTAIN POSITIVE DRAINAGE.
- AGGREGATE APPROACH. SEE DET 6 SHT C-03
- ACP APPROACH. SEE DET 5 SHT C-03

**consor**  
 ONE SW COLUMBIA STREET, SUITE 700  
 PORTLAND, OREGON 97204  
 P-303.225.3910

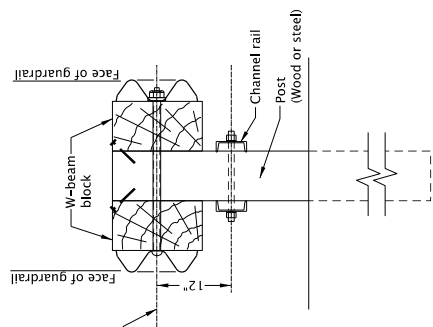






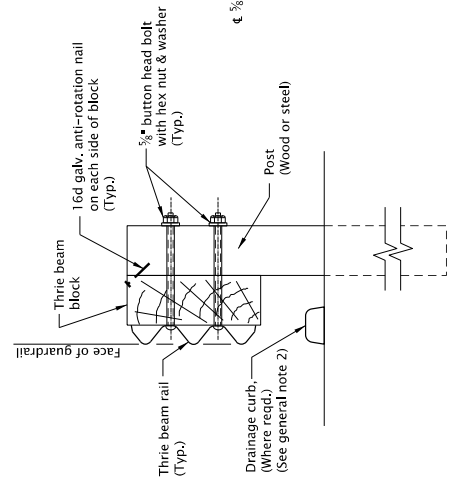
**TYPES 2A & 3**  
(For Type 3 use double thickness (2) rail elements)

**METAL MEDIAN BARRIER  
(DOUBLE SIDED W/ CHANNEL RAIL)**  
(See general note 3)



**W-BEAM GUARDRAIL**

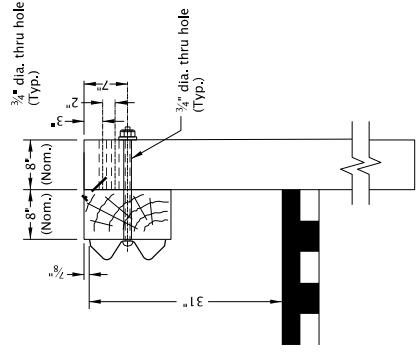
TYPE	RAIL	EFFECTIVE LENGTHS	GAUGE
2A	W-beam	6.25', 12.5', 25'	10 & 12
3	W-beam	6.25', 12.5', 25'	10 & 12
4	Thrie beam	6.25', 12.5', 25'	10 & 12
4 TRANSITION	Thrie beam	6.25'	10 & 12



**TYPE 4 & 4 TRANSITION**

**INITIAL INSTALLATION**

**THRIE BEAM GUARDRAIL**



**TYPICAL INSTALLATION**

**W-BEAM GUARDRAIL ASSEMBLY**

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. See appropriate guardrail standard drawing(s) for details not shown.
2. When required by the plans, Drainage curb alignment same as face of guardrail.
3. Orient post bolts with the button head located on the side nearest the traffic lane. The bolt's threaded portion is not permitted to extend beyond limits of 1/4" to 1/2" from the face of the tightened nut; trim the treated portion as needed.
4. Lap guardrail in direction of adjacent traffic.
5. Final paved surfacing to extend to face of post. Rail height measured from final paved surface at face of rail (Typical all types), 1" ± tolerance.
6. Wood block shall be toe-nailed to the post with 2 - 16d galvanized nails in top of block to prevent block rotation.
7. Wood blocks shown. Blocks of an approved alternate material may be used. See ODOT'S QPL.
8. Existing posts shall not be raised. Replace posts as necessary to achieve required guardrail height.

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**MIDWEST GUARDRAIL SYSTEM TYPES**

2021

DATE	REVISION	DESCRIPTION
07-2021		REVISED DETAILS AND NOTES

CALC. \_\_\_\_\_ SOR \_\_\_\_\_ DATE: 19-JUL-2021

BOOK NO. \_\_\_\_\_ N/A \_\_\_\_\_ RD402

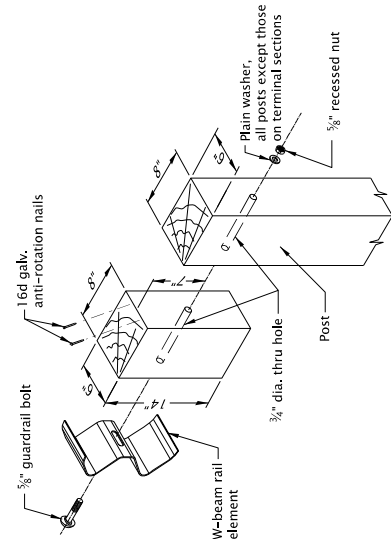
*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

Effective Date: June 1, 2023 - November 30, 2023

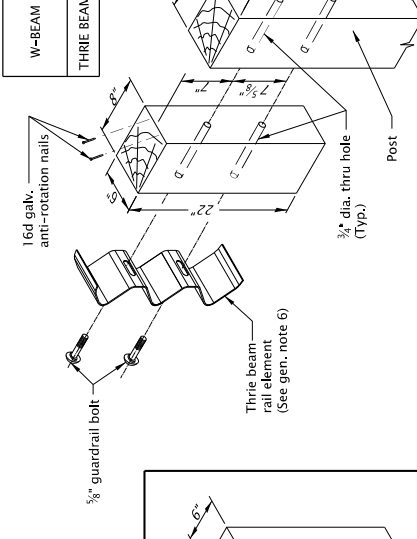
**GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**

- See appropriate guardrail standard drawing(s) for details not shown.
- See Bridge Dwg. for bridge transition guardrail post and block requirements.
- Lowest hole(s) required only when channel rail is to be installed. Drill 1/2" below top 3/4" or 13/16" hole(s) used.
- Dimensions shown are for nominal posts and blocks.
- Wood blocks shown. Blocks of an approved alternate material may be used. See ODOT's QPL.
- When required by the plans, nested thrie beam wood post shall be 8' x 8'.
- Wood block shall be toe-nail to the post with 2 - 16d galvanized nails in top of block to prevent block rotation.

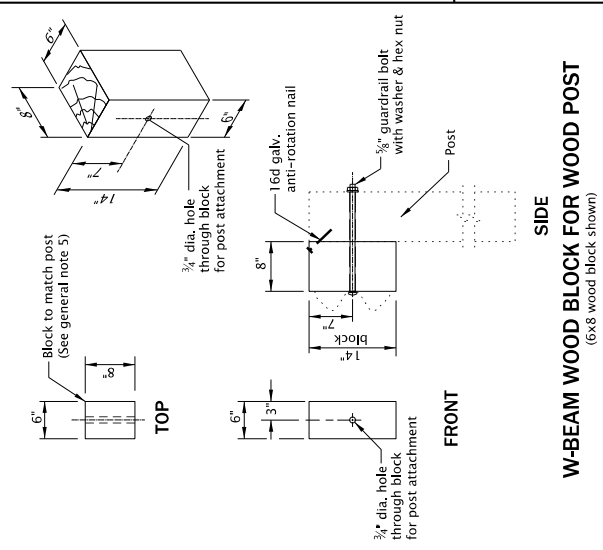
GUARDRAIL TYPE	POST SIZE	POST LENGTH	POST SPACING
2A	6'x8" or 8'x8"	6'-0"	6'-3"
3	8'x8"	6'-0"	3'-1 1/2"
Metal median barrier	8'x8"	6'-0"	6'-3"
4	6'x8" or 8'x8"	7'-0"	6'-3"
4 (Transition)	8'x8"	6'-0"	3'-1 1/2"



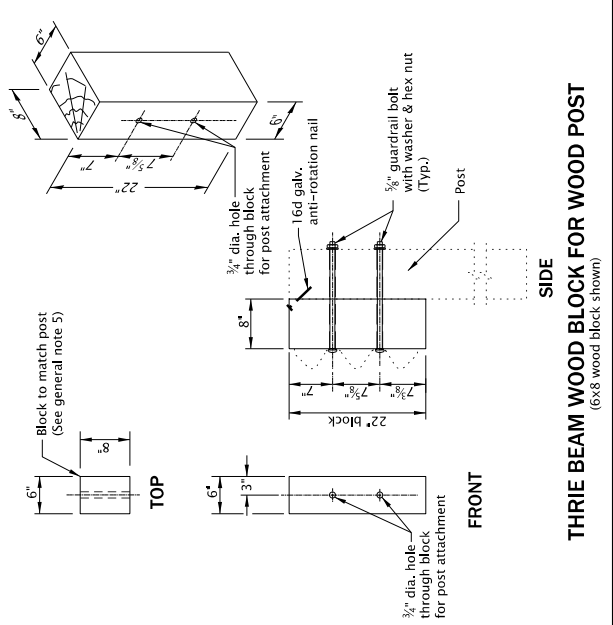
**W-BEAM ASSEMBLY DETAIL**  
(6x8 wood post and 6x8 wood block shown)



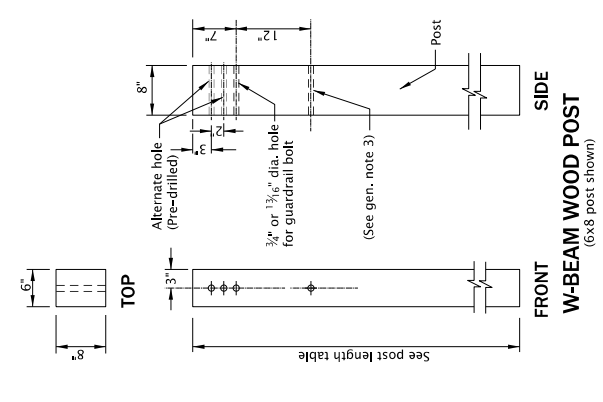
**THRIE BEAM ASSEMBLY DETAIL**  
(6x8 wood post and 6x8 wood block shown)



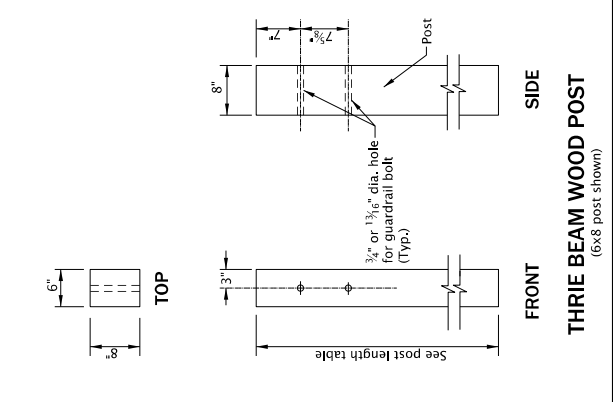
**W-BEAM WOOD BLOCK FOR WOOD POST**  
(6x8 wood block shown)



**THRIE BEAM WOOD BLOCK FOR WOOD POST**  
(6x8 wood block shown)



**W-BEAM WOOD POST**  
(6x8 post shown)



**THRIE BEAM WOOD POST**  
(6x8 post shown)

All materials shall be in accordance with the Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**MIDWEST GUARDRAIL SYSTEM**  
**WOOD POST AND BLOCK**

DATE: 07-2021  
REVISION DESCRIPTION:  
2021

CALC. BOOK NO. N/A  
SOR DATE: 19-JUL-2021

RD403

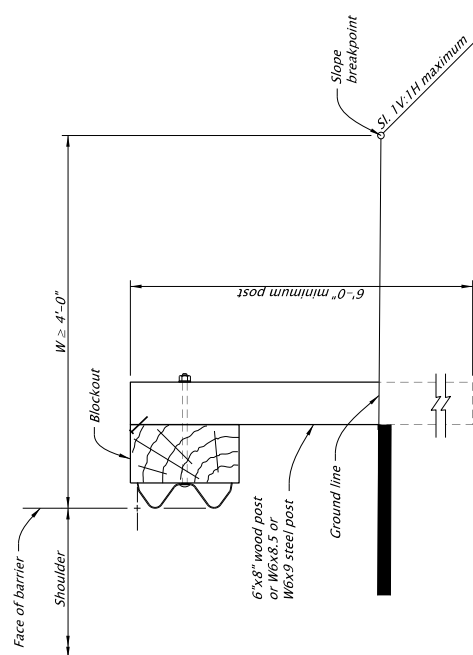
*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

Effective Date: June 1, 2023 - November 30, 2023

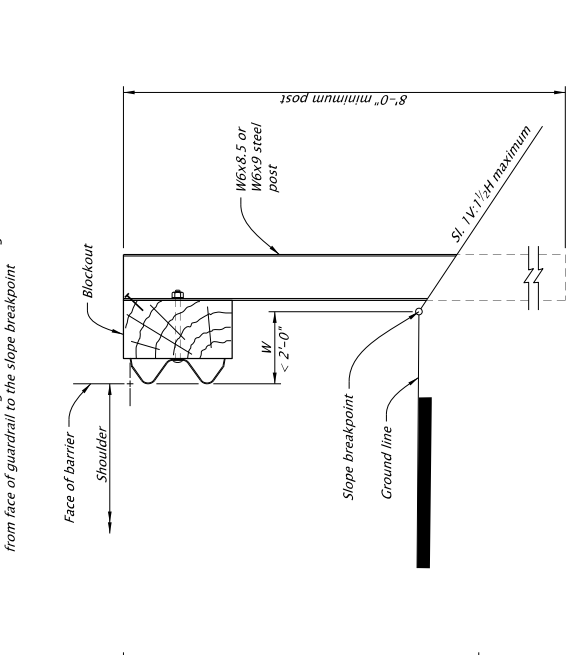
**GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**

1. See appropriate guardrail standard drawing(s) for details not shown.
2. Wood blocks shown. Blocks of an approved alternate material may be used. See ODOT's QPL.
3. All posts for guardrail run shall be of the same type: wood or steel.

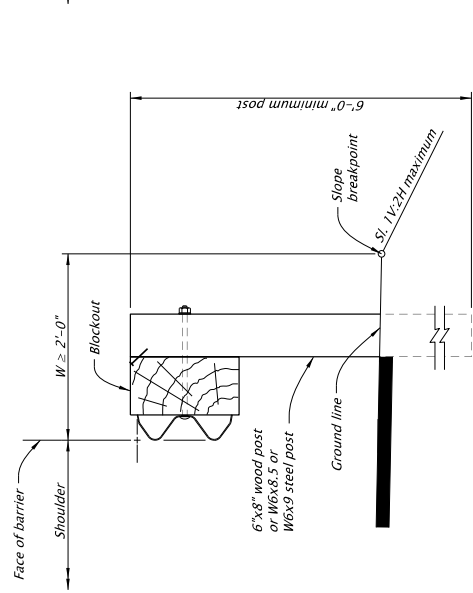
SLOPE / EMBANKMENT TABLE			
POST LENGTH (ft)	POST TYPE	SLOPE (V:H)	W (ft) (Face of barrier to slope of breakpoint)
6	Wood/Steel	1:2 or flatter	2'-0" minimum
6	Wood/Steel	1:1 or flatter	4'-0" minimum
8	Wood/Steel	1:1 or flatter	2'-6" minimum
8	Steel	1:1 1/2 or flatter	Less than 2'-0"



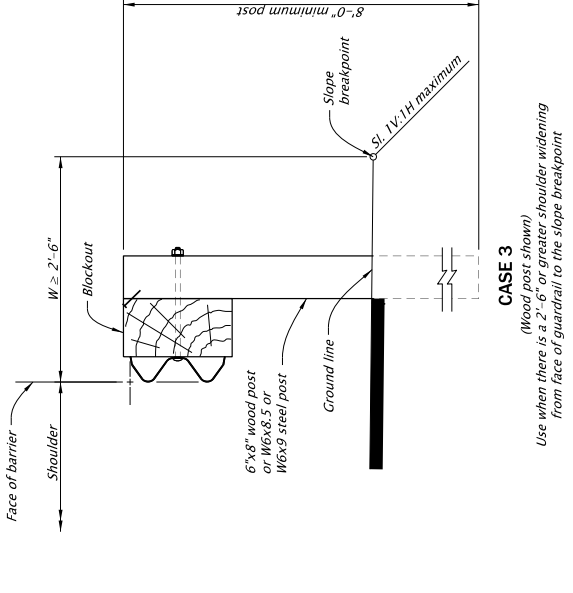
**CASE 1**  
(Wood post shown)  
Use when there is a 2'-6" or greater shoulder widening from face of guardrail to the slope breakpoint



**CASE 2**  
(Wood post shown)  
Use when there is a 4'-0" or greater shoulder widening from face of guardrail to the slope breakpoint



**CASE 3**  
(Wood post shown)  
Use when there is a 2'-6" or greater shoulder widening from face of guardrail to the slope breakpoint



**CASE 4**  
(Steel post shown)  
Do not use in weak soil conditions. Use when there is less than a 2'-0" shoulder widening from face of guardrail to the slope breakpoint

**OREGON STANDARD DRAWINGS**

**PLACEMENT OF GUARDRAILS ON SLOPES**

2021

DATE	REVISION DESCRIPTION
07-2021	NEW DRAWING CREATED
12-2022	REVISED NOTES
12-2022	REVISED NOTE

All materials shall be in accordance with the Oregon Standard Specifications.  
 The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

CAL.C. \_\_\_\_\_ SOR \_\_\_\_\_ DATE: 20-JAN-2023  
 BOOK NO. \_\_\_\_\_ N/A \_\_\_\_\_ RD406

**PLACEMENT OF GUARDRAIL ON SLOPES**

NOTE: Cases shown do not apply to terminals, transition sections or anchors.

Effective Date: June 1, 2023 – November 30, 2023

**GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**

- See appropriate guardrail standard drawing(s) for details not shown.
- For details of guardrail connections to structural handrails, see special details or Standard Drawings as called for on plans.
- All indicated welds shall attain the full strength of the section welded.
- Radius dimensions, in feet to the nearest 0.5 foot, shall be placed on the plate with a raised weld bead replacing the letters "HHH", shown on the Radius Identification Plate detail. Digits shall be 1 1/2" min. height and 3/4" max. width. Plate shall be galvanized after placement of digits.
- The guardrail radius identification plate is to be mounted on the back side of the rail element with the lowest splice bolt nearest the P.C. of the guardrail radius.
- When required by the plans, a Snow Load Post Washer shall be used on the backside of the post and a Snow Load Rail Washer shall be placed on rail element face. Snow Load Rail Washers shall not be installed on terminals.

**SUPPLEMENTARY NOTES:**

- Not required if Snow Load Post washer option is used.
- Use rectangular Snow Load Rail washer under bolt head and nut on Type C End Piece as shown.
- Furnished & installed by structure contractor when shown on structure plans.
- 6" min. penetration into concrete slabs other than bridge decks. Cast in place or core and install using approved resin bonding system.

All materials shall be in accordance with the Oregon Standard Specifications.

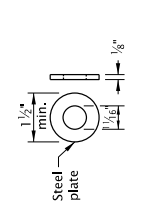
**OREGON STANDARD DRAWINGS**  
**MIDWEST GUARDRAIL SYSTEM**  
**STANDARD HARDWARE**  
**(NUTS, BOLTS, WASHERS AND MISC.)**

DATE	REVISION DESCRIPTION	2021
CALC. BOOK NO.	N/A	SOR 13-JAN-2020

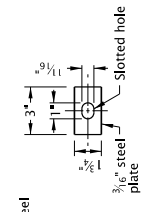
**RD416**

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

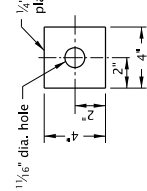
Effective Date: June 1, 2023 – November 30, 2023



**PLAIN WASHER**  
Use on back of post.



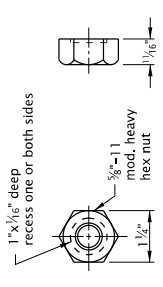
**SNOW LOAD RAIL WASHER**  
Use in area of heavy snow, as directed by the engineer (See general note 6)



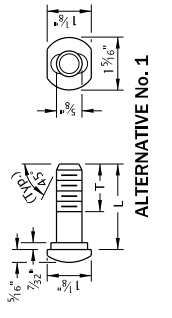
**SNOW LOAD POST WASHER**  
Use in area of heavy snow, as directed by the engineer (See general note 6)

**BOLT DIMENSION TABLE**

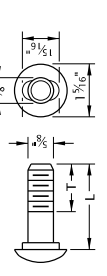
Length (L) (in.)	Thread Length (T) (in.)
1 1/4	1 1/2 min.
2	1 3/4 min.
10	4 min.
18	4 min.
25	4 min.



**5/8" DIA. RECESSED HEX NUT**

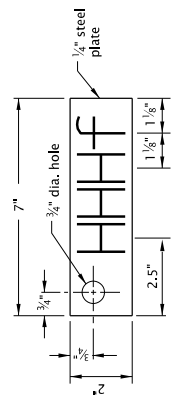


**ALTERNATIVE No. 1**

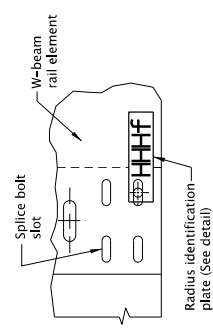


**ALTERNATIVE No. 2**

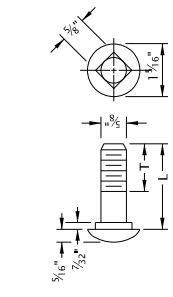
**5/8" GUARDRAIL POST/SPICE BOLT (BUTTON HEADED)**



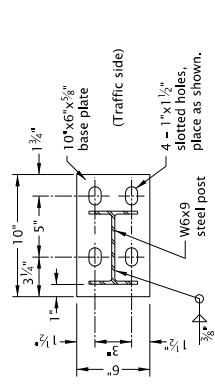
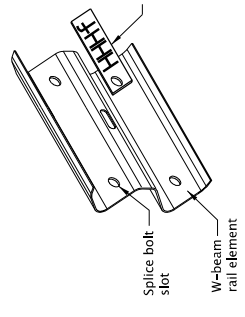
**RADIUS IDENTIFICATION PLATE**  
(See general note 4)



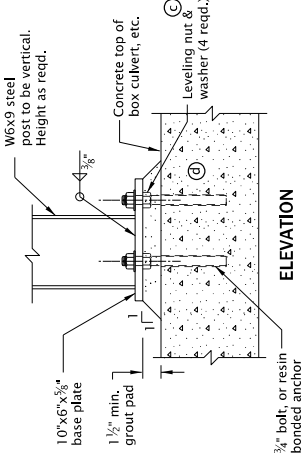
**RADIUS IDENTIFICATION PLATE MOUNTING DETAIL**  
(See general note 5)



**5/8" DIA. CARRIAGE BOLT**



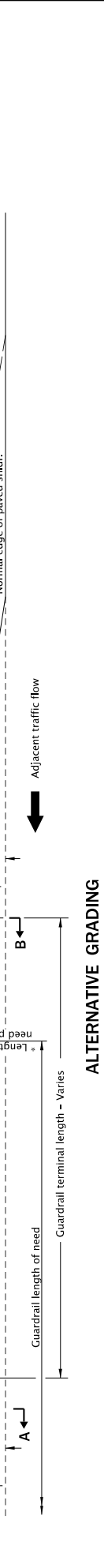
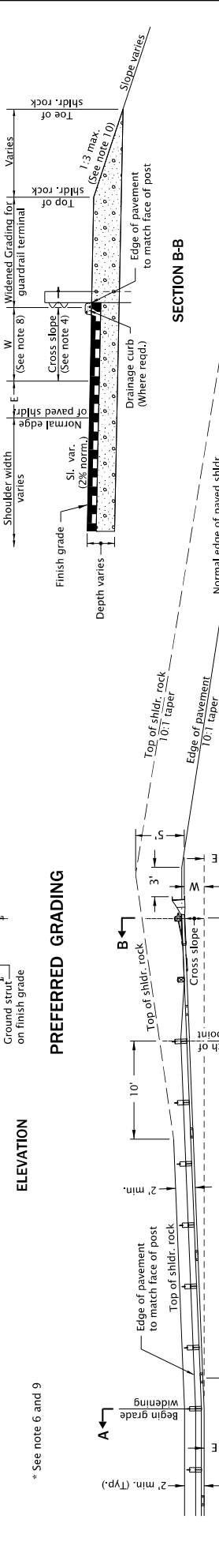
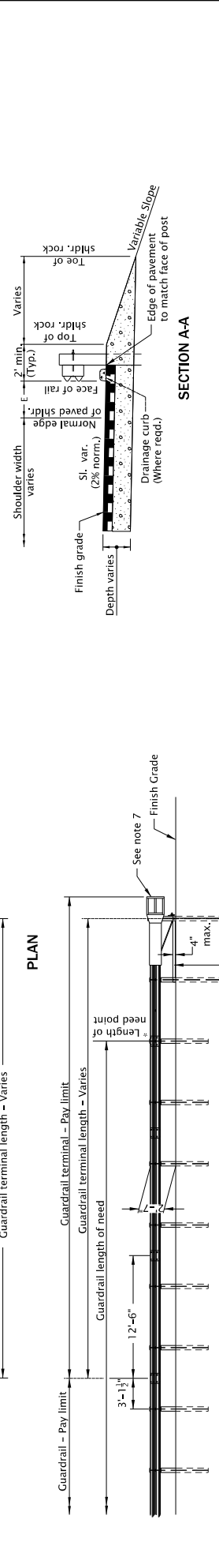
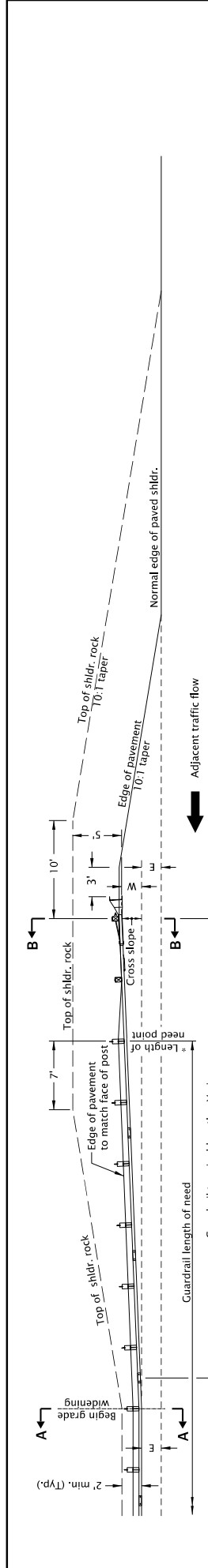
**PLAN**



**ELEVATION**

**BASE PLATE DETAILS**

(For additional details, see Std. Dwg. BR266)  
Use when depth of cover is less than normal for post installation.



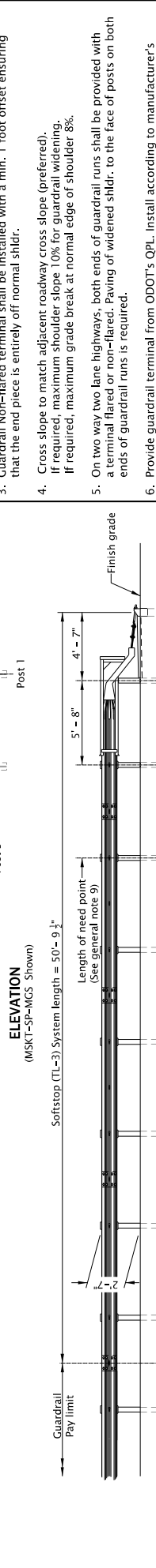
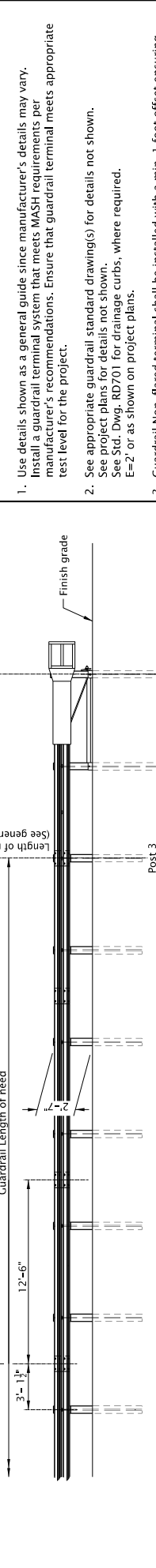
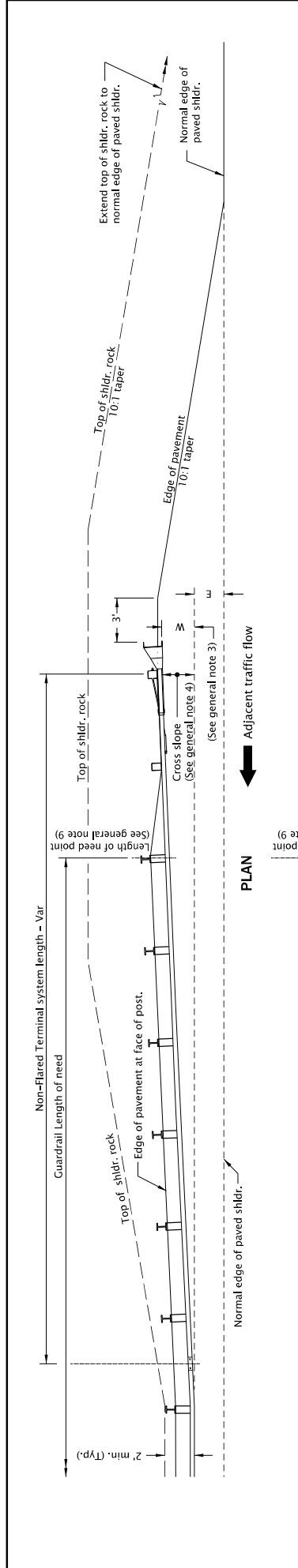
**GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**

- Use details shown as a general guide since manufacturer's details may vary. Install a guardrail terminal system that meets MASH requirements per manufacturer's recommendations. Ensure that guardrail terminal meets appropriate test level for the project.
- See appropriate guardrail standard drawing(s) for details not shown. See project plans for details not shown. See Std. Dwg. RD701 for drainage curbs, where required. E=2' or as shown on project plans.
- Guardrail Non-flared terminal shall be installed with a minimum 1 foot offset ensuring that the end piece is entirely off normal shoulder.
- Cross slope to match adjacent roadway cross slope (preferred). If required, maximum shoulder slope 10% for guardrail widening. If required, maximum grade break at normal edge of shoulder 8%.
- On two way two lane highways, both ends of guardrail runs shall be provided with a terminal flared or non-flared. Paving of widened shoulder to the face of posts on both ends of guardrail runs is required.
- Provide guardrail terminal from ODOT's QPL. Install according to manufacturer's recommendations (post count varies). Provide shop drawings to Engineer.
- Install a reflectorized object marker on head of every guard rail terminal with "W" 4 feet or less according to manufacturer's recommendations.
- "W" distance is measured to face of guardrail at end post, exclusive of end piece.
- Length of need post location varies by manufacturer.
- 1:1.4 slope or flatter-preferable, 1:3 maximum.

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications. <b>OREGON STANDARD DRAWINGS</b> <b>MIDWEST GUARDRAIL SYSTEM</b> <b>GRADING FOR TERMINALS</b>	
DATE	2021
REVISION	DESCRIPTION
CALC. BOOK NO.	N/A
SOR DATE	19-JUL-2021
RD419	





**GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**

1. Use details shown as a general guide since manufacturer's details may vary. Install a guardrail terminal system that meets MASH requirements per manufacturer's recommendations. Ensure that guardrail terminal meets appropriate test level for the project.
2. See appropriate guardrail standard drawing(s) for details not shown. See project plans for details not shown. See Std. Dwg. RD701 for drainage curbs, where required. E=2' or as shown on project plans.
3. Guardrail Non-flared terminal shall be installed with a min. 1 foot offset ensuring that the end piece is entirely off normal shldr.
4. Cross slope to match adjacent roadway cross slope (preferred). If required, maximum shoulder slope 10% for guardrail widening. If required, maximum grade break at normal edge of shoulder, 8%.
5. On two way two lane highways, both ends of guardrail runs shall be provided with a terminal flared or non-flared. Paving of widened shldr. to the face of posts on both ends of guardrail runs is required.
6. Provide guardrail terminal from ODOT's QPL. Install according to manufacturer's recommendations (post count varies). Provide shop drawings to Engineer.
7. Install a reflectorized object marker on head of every guard rail terminal with "W" 4 feet or less according to manufacturer's recommendations.
8. "W" distance is measured to face of guardrail at end post, exclusive of end piece.
9. Length of need post location varies by manufacturer.

All materials shall be in accordance with the Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**MIDWEST GUARDRAIL SYSTEM**

**NON-FLARED ENERGY-ABSORBING TERMINAL**

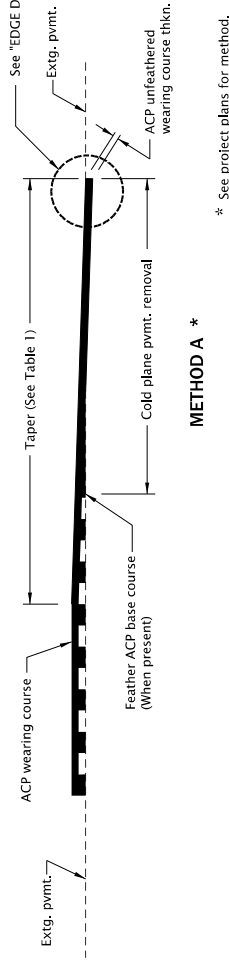
DATE	REVISION DESCRIPTION	2021
CALC. BOOK NO.	N/A	SOR 19-JUL-2021
		RD420

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

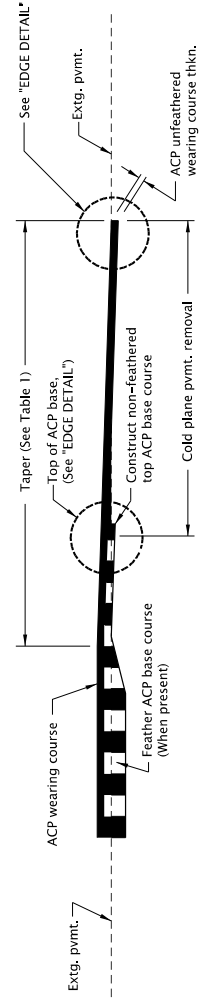
Effective Date: June 1, 2023 - November 30, 2023

**TABLE 1**

TAPER LENGTHS	
Posted Speed	Taper Length
< 45 mph	1" per 50'
≥ 45 mph	1" per 100'

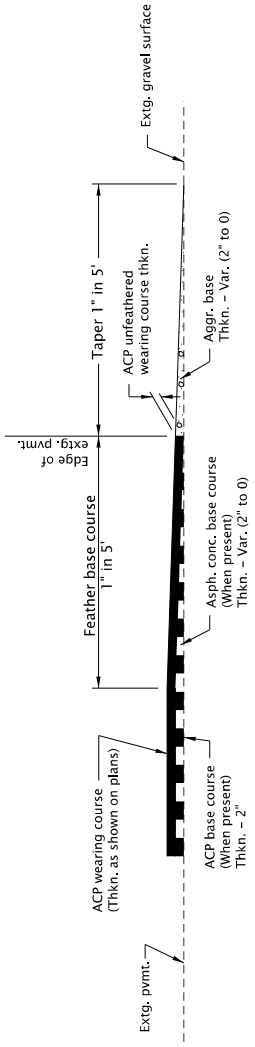


**METHOD A \***  
\* See project plans for method.

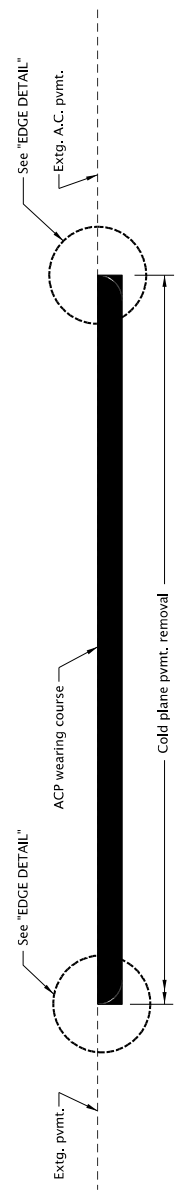


**METHOD B \***

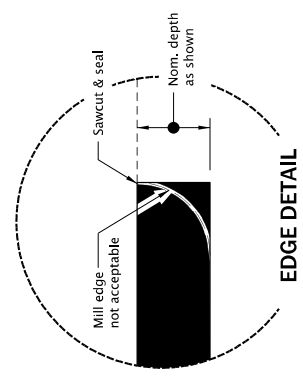
**ACP PAVEMENT MATCH AT PROJECT ENDS  
OR BRIDGE ENDS WHEN NOT OVERLAYING THE BRIDGE**



**METHOD OF FEATHERING ACP PAVEMENT  
AT GRAVEL APPROACHES**



**METHOD OF MATCHING EXTG. ACP INLAY SURFACING  
(Inlay to extg. asphalt conc. pvmt.)**



**EDGE DETAIL**

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**ASPHALT CONCRETE PAVEMENT (ACP) DETAILS**

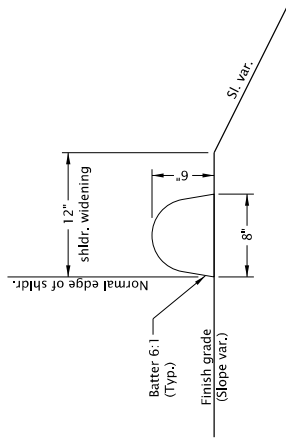
2021

DATE	REVISION DESCRIPTION

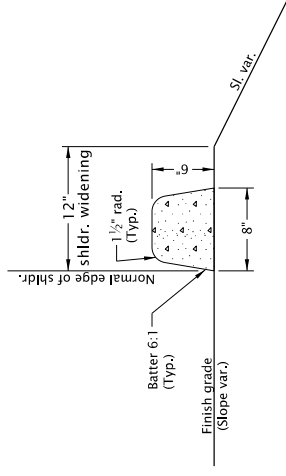
CALC. BOOK NO. N/A SOR. 25-JUL-2017 DATE

**GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**

1. For PCC drainage curbs, construct curb expansion joints at 200' maximum spacing, and at points of tangency.
2. For PCC drainage curbs, construct curb contraction joints at 15' maximum spacing.
3. Dimensions are nominal, vary to conform with curb machine approved by the engineer.
4. When bonding to dense graded ACP, apply epoxy cement between surfaces.
5. When drainage curb is required, curb alignment shall be the same as face of guardrail, as shown above. When a run of drainage curb, or any part thereof, is placed under guardrail, curb height shall be 4".
6. For other curb types, see Std. Dwg. RD700.
7. For guardrail details not shown, see Std. Dwg. RD400.

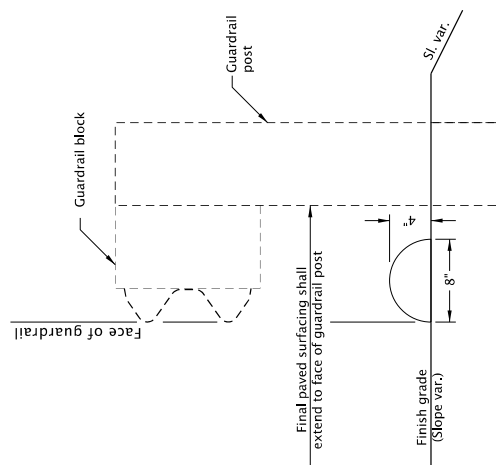


**ASPHALT CONCRETE**

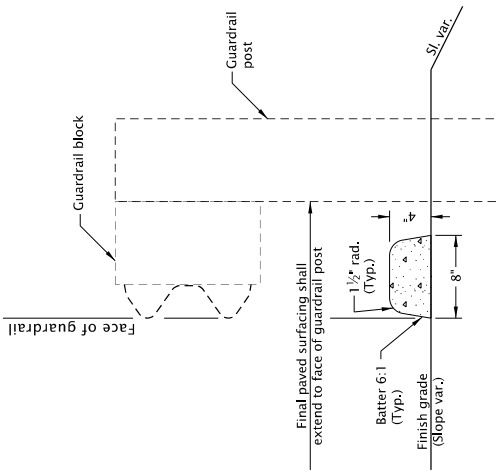


**PORTLAND CEMENT CONCRETE**

**DRAINAGE CURBS**  
(See general note 4)



**ASPHALT CONCRETE**



**PORTLAND CEMENT CONCRETE**

**DRAINAGE CURBS UNDER GUARDRAIL**  
(See general note 4)

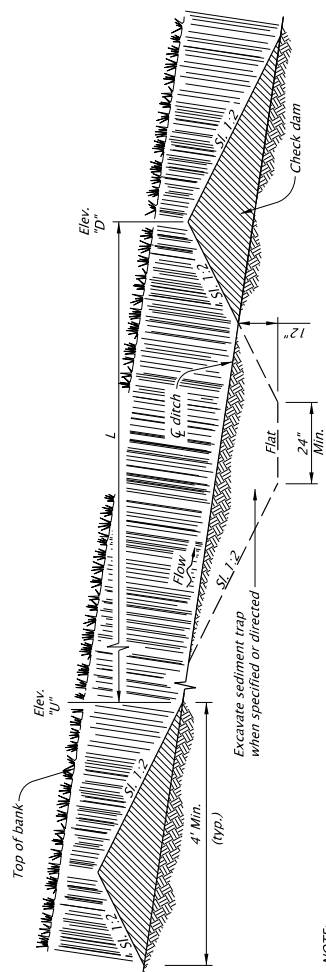
*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the Oregon Standard Specifications.  
**OREGON STANDARD DRAWINGS**

**DRAINAGE CURBS**

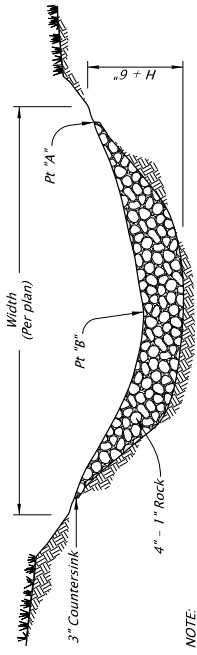
DATE	REVISION DESCRIPTION
	2021
CALC.	N/A
BOOK NO.	20-JUL-2020
DATE	RD701

Effective Date: June 1, 2023 - November 30, 2023



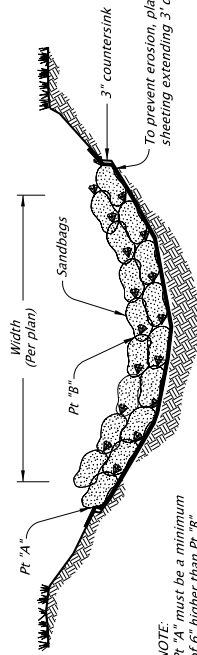
**TYPICAL PROFILE SECTION CHECK DAMS  
(SHOWN WITH AGGREGATE)**  
NOT TO SCALE

NOTE:  
L = Spacing along swale or ditch so that  
Elevation "U" equals Elevation "D".



**AGGREGATE CHECK DAM - TYPE 1**  
NOT TO SCALE

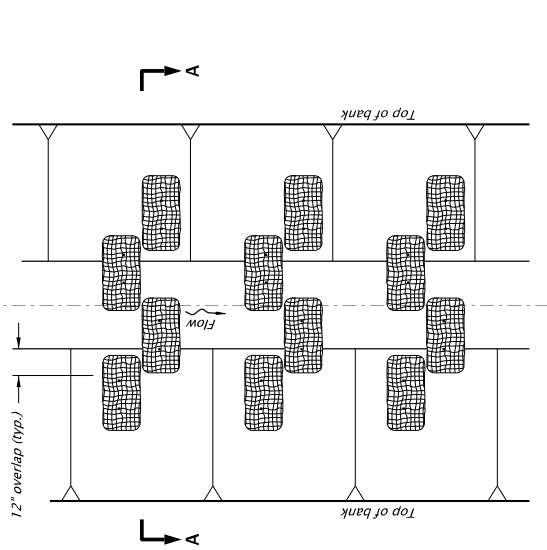
NOTE:  
Pt. "A" must be a minimum  
of 6" higher than Pt. "B"



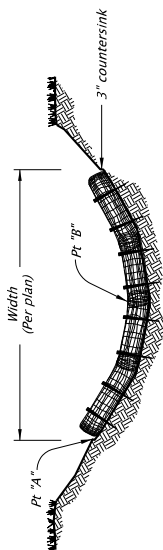
**SANDBAG CHECK DAM - TYPE 4**  
NOT TO SCALE

NOTE:  
Pt. "A" must be a minimum  
of 6" higher than Pt. "B"

- NOTES:
- Type 3 - stake biofilter bags with two 2"x2"x18" (minimum) wood stakes per bag. Drive stakes a minimum of 6" into the ground and flush with the top of the bags. Omit stakes if placed over paved surfaces. Overlap bags 12" minimum at each joint.
  - Type 4 - Tightly abut or overlap ends of sandbags at each joint.
  - Spacing between check dams for all check dam types shall comply with the typical profile section shown above.



**PLAN**



**SECTION A-A**

**BIOFILTER BAG CHECK DAM - TYPE 3**  
NOT TO SCALE

**MAXIMUM CHECK DAM SPACING "L"**

Ditch Grade	H=8"	H=12"	H=18"	H=24"
10%	**	**	15'	20'
9%	**	**	16'	22'
8%	**	**	18'	25'
7%	**	**	21'	28'
6%	**	**	25'	33'
5%	**	**	30'	40'
4%	**	**	37'	50'
3%	**	**	50'	66'
2%	**	**	75'	100'

\*\* Not allowed  
H = Min. dam height

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

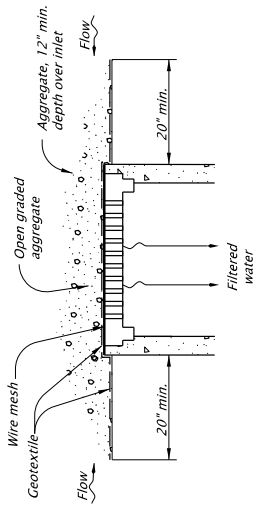
**CHECK DAMS  
TYPE 1, 3 AND 4**

DATE: 01-2021  
REMOVED CALC BOOK NUMBERS: 2021

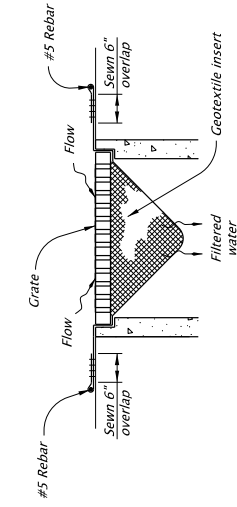
RYTKON DESCRIPTION: 2021

RD1005  
BOOK NO. N/A  
SOR DATE: 20-JAN-2021

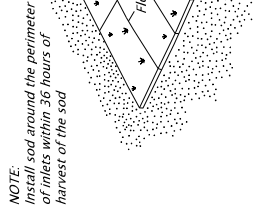
Effective Date: June 1, 2023 - November 30, 2023



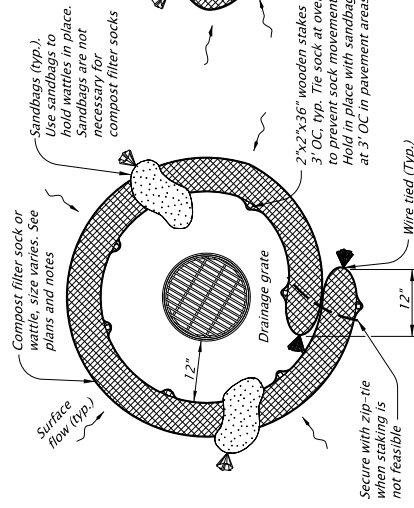
**GEOTEXTILE/WIRE MESH/AGGREGATE - TYPE 2**  
NOT TO SCALE



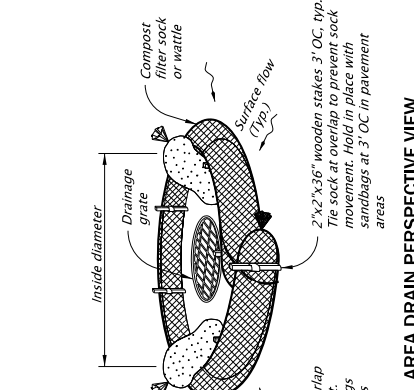
**PREFABRICATED FILTER INSERT - TYPE 3**  
NOT TO SCALE



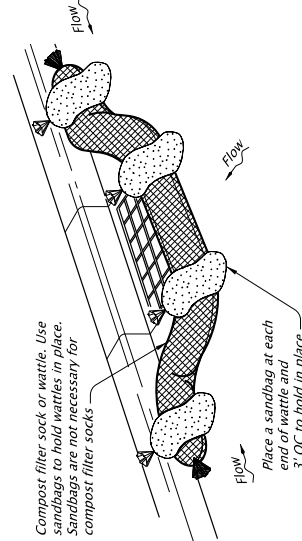
**SOD PROTECTION - TYPE 6**  
NOT TO SCALE



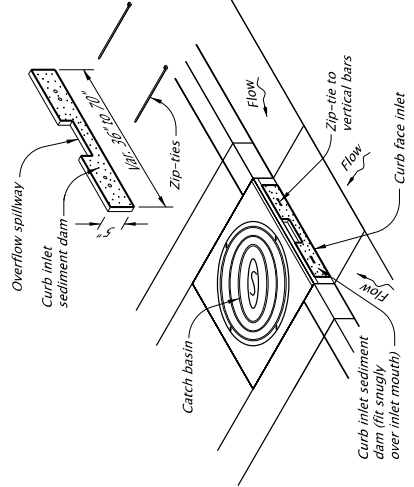
**AREA DRAIN PLAN**



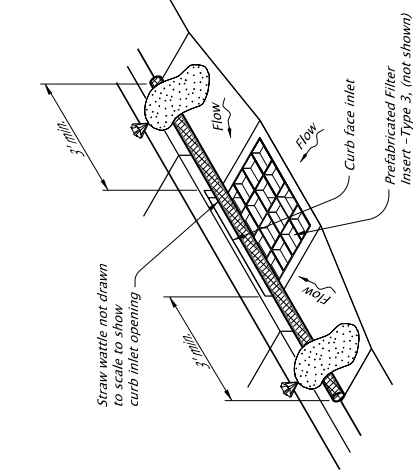
**AREA DRAIN PERSPECTIVE VIEW**



**COMPOST FILTER SOCK OR WATTLE - TYPE 7**  
NOT TO SCALE



**CURB INLET SEDIMENT DAM - TYPE 10**  
NOT TO SCALE



**WATTLE BARRIER WITH FILTER INSERT - TYPE 11**  
NOT TO SCALE

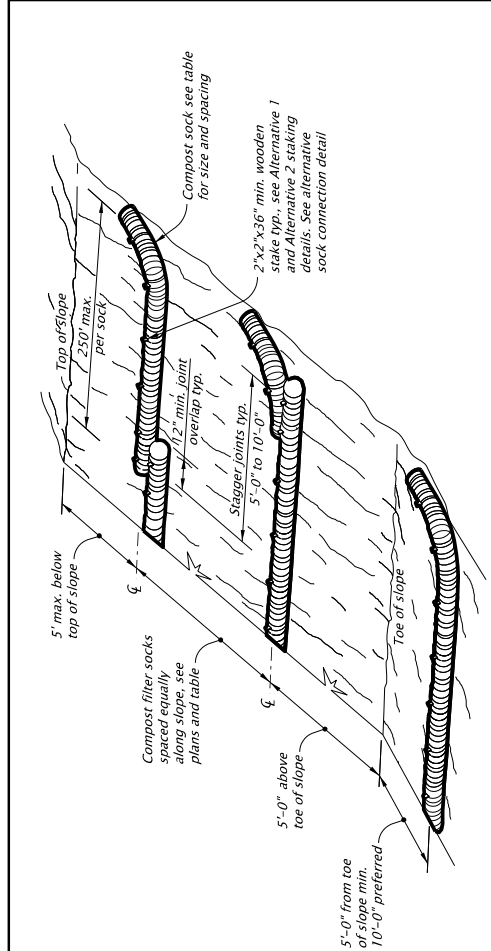
**NOTES:**  
Type 2 - Geotextile/wire mesh/aggregate type the wire mesh over the grade. Place as meant fence geotextile over the curb, mesh and perimeter area around structure.  
Install aggregate over the geotextile fabric.  
Type 3 - Prefabricated filter inserts install prefabricated filter inserts according to the plans, special provisions, and manufacturer recommendations.  
Prefabricated inserts with provisions for overflow are allowed only when accompanied by additional BMPs to prevent the potential of sediments entering project storm systems.  
Field fabricated inserts are not allowed.  
Type 7 - Compost filter sock Drive 2"x2" wood stakes a minimum of 6" into ground and flush with the top of the sock.  
Overlap ends of sock per manufacturer recommendations (12" min., 36" max.).  
Use 8" to 12" dia sock on curbside in traffic areas.

(Type 7 cont.)  
Use 12" to 18" dia sock in non-traffic areas or areas where the larger socks can be used.  
Use synthetic mesh socks for temporary installations.  
Type 10 - Curb inlet sediment dam Fit curb inlet sediment dam snugly into inlet mouth. Curb inlet sediment dam is required for use with inlet filter insert where at-grade inlet grate and curb inlet are combined at a catch basin.  
Type 11 - Wattle barrier with filter insert Install prefabricated filter insert per Type 3 detail.  
Install wattles over opening and 36" to each side of opening tight against curb. Adjust wattle to force storm water to flow through filter insert or wattle prior to leaving the site.  
Adjust, replace or modify the inlet protection as needed to prevent sediment laden water from entering the catch basin.

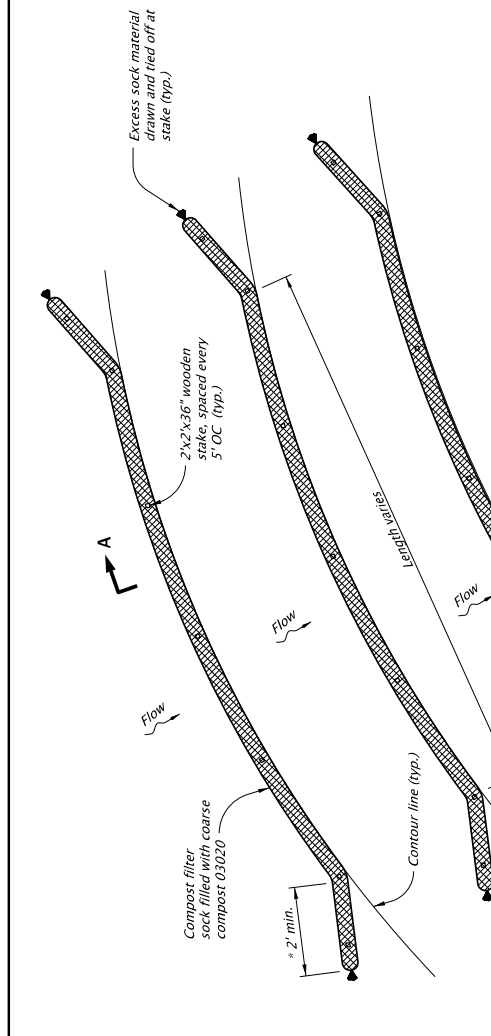
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the Oregon Standard Specifications.	
<b>OREGON STANDARD DRAWINGS</b>	
<b>INLET PROTECTION</b>	
<b>TYPE 2, 3, 6, 7, 10 AND 11</b>	
DATE	REVISION DESCRIPTION
01-2021	REVISED CALC BOOK NUMBERS
01-2021	REVISED NOTES TO PREVIOUS EDITIONS OF THIS SHEET BORDER
2024	
CALC. BOOK NO.	SOR DATE
	20-JAN-2021
RD1010	

Effective Date: June 1, 2024 - November 30, 2024



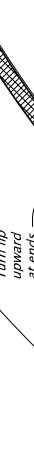
**SLOPE APPLICATION - PERSPECTIVE VIEW**



**PLAN**



**SECTION A-A**



**ALTERNATIVE 1 (Staking)**



**ALTERNATIVE 2 (Staking)**

COMPOST FILTER SOCK DIAMETER AND SPACING BASED ON SLOPE		
SLOPE	SPACING (ft)	DIAMETER (in)
<1:50	250	8
1:50 - 1:10	125	12
1:10 - 1:5	100	12
1:5 - 1:2	50	18
>1:2	25	18

**NOTE:**  
Fully biodegradable compost sock mesh is recommended for permanent installations. Where compost socks must be moved or removed, synthetic sock mesh should be used.

**COMPOST FILTER SOCK**  
NOT TO SCALE

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the most current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**SEDIMENT BARRIER**




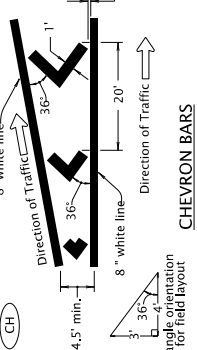
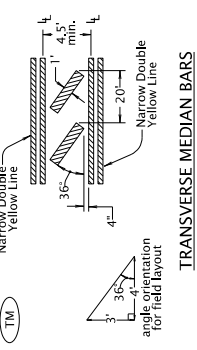
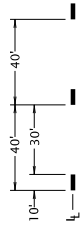
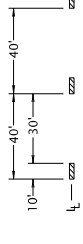
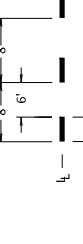

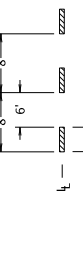
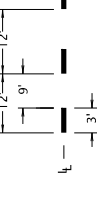
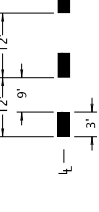
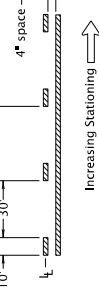
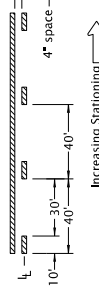
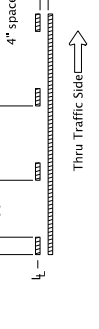
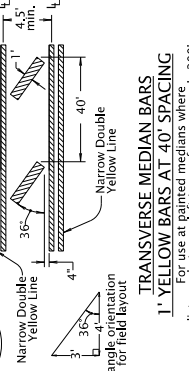
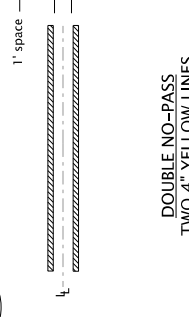
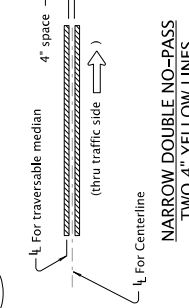
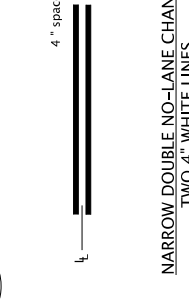
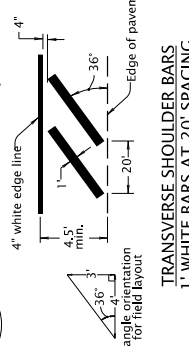
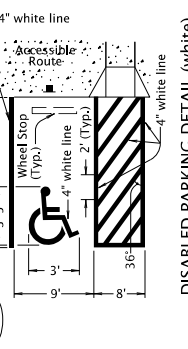
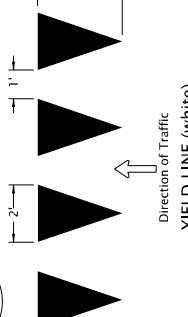
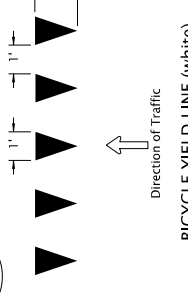
**TYPE 8**

2021

DATE	REVISION	DESCRIPTION
01-2021	REMOVED CALL BOOK NUMBERS	

CALC. BOOK NO.	SOR DATE	RD1032
		20-JAN-2021

Effective Date: June 1, 2023 - November 30, 2023

<p><b>W</b></p>  <p>4" WHITE LINE</p>	<p><b>W-2</b></p>  <p>8" WHITE LINE</p>	<p><b>Y</b></p>  <p>4" YELLOW LINE</p>	<p><b>CH</b></p>  <p>CHEVRON BARS 1" WHITE BARS AT 20' SPACING</p>	<p><b>TM</b></p>  <p>Narrow Double Yellow Line TRANSVERSE MEDIAN BARS 1" YELLOW BARS AT 20' SPACING</p>
<p><b>WB</b></p>  <p>4" WHITE BROKEN LINE</p>	<p><b>YB</b></p>  <p>8" WHITE BROKEN LINE</p>	<p><b>WD</b></p>  <p>4" WHITE DOTTED LINE For lane extensions</p>	<p><b>WD-2</b></p>  <p>8" WHITE DOTTED LINE For lane extensions and bike lane extensions</p>	<p><b>YD</b></p>  <p>4" YELLOW DOTTED LINE For lane extensions</p>
<p><b>DLL</b></p>  <p>4" WHITE DOTTED LANE LINE For lane lines in acceleration/deceleration lanes</p>	<p><b>DLL-2</b></p>  <p>8" WHITE DOTTED LANE LINE For lane lines in drop lanes</p>	<p><b>NPR</b></p>  <p>NO-PASS RIGHT 4" YELLOW LINES Increasing Stationing</p>	<p><b>NPL</b></p>  <p>NO-PASS LEFT 4" YELLOW LINES Increasing Stationing</p>	<p><b>TWL</b></p>  <p>TWO-WAY LEFT TURN 4" YELLOW LINES Thru Traffic Side</p>
<p><b>TM-40</b></p>  <p>TRANSVERSE MEDIAN BARS 1" YELLOW BARS AT 40' SPACING For use at painted medians where distance between left turn refuges exceeds 200'</p>	<p><b>D</b></p>  <p>DOUBLE NO-PASS TWO 4" YELLOW LINES</p>	<p><b>ND</b></p>  <p>NARROW DOUBLE NO-PASS TWO 4" YELLOW LINES</p>	<p><b>NDW</b></p>  <p>NARROW DOUBLE NO-LANE CHANGE TWO 4" WHITE LINES</p>	<p><b>TS</b></p>  <p>TRANSVERSE SHOULDER BARS 1" WHITE BARS AT 20' SPACING</p>
<p><b>HC</b></p>  <p>DISABLED PARKING DETAIL (white)</p>	<p><b>YLD</b></p>  <p>YIELD LINE (white)</p>	<p><b>BYLD</b></p>  <p>BICYCLE YIELD LINE (white)</p>	<p><b>LEGEND</b></p> <p>Direction of Traffic, Increasing Stationing Or Thru Traffic Side</p> <p>Lane line dimensions are shown on the striping plans</p>	

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**PAVEMENT MARKING STANDARD DETAIL BLOCKS**

2024

DATE	REVISION DESCRIPTION
07-2020	Changed line widths for CIL, TM, TM-40, and TS

CALC. \_\_\_\_\_ SDR \_\_\_\_\_ DATE \_\_\_\_\_

BOOK NO. \_\_\_\_\_ N/A \_\_\_\_\_

TM500

Effective Date: June 1, 2024 – November 30, 2024

<p><b>TRANSVERSE MEDIAN BAR SUBSTITUTION BUTTON</b></p>	<p><b>YELLOW BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 4" YELLOW BROKEN LINE</b></p>	<p><b>YELLOW BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 4" YELLOW BROKEN LINE</b></p>	<p><b>WHITE BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 4" WHITE BROKEN LINE</b></p>	<p><b>WHITE BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 4" WHITE BROKEN LINE</b></p>
<p><b>WHITE DOTTED LANE LINE SUPPLEMENTATION REFLECTORS WITH 4" WHITE DOTTED LANE LINE</b></p>	<p><b>YELLOW BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" YELLOW BROKEN LINE</b></p>	<p><b>YELLOW BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" YELLOW BROKEN LINE</b></p>	<p><b>WHITE BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" WHITE BROKEN LINE</b></p>	<p><b>WHITE BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" WHITE BROKEN LINE</b></p>
<p><b>DOUBLE NO-PASS POSITIONING GUIDE REFLECTORS WITH TWO 4" YELLOW LINES</b></p>	<p><b>YELLOW BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" YELLOW BROKEN LINE</b></p>	<p><b>YELLOW BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" YELLOW BROKEN LINE</b></p>	<p><b>WHITE BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" WHITE BROKEN LINE</b></p>	<p><b>WHITE BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" WHITE BROKEN LINE</b></p>
<p><b>DOUBLE NO-PASS POSITIONING GUIDE REFLECTORS WITH TWO 4" YELLOW LINES</b></p>	<p><b>YELLOW BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" YELLOW BROKEN LINE</b></p>	<p><b>YELLOW BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" YELLOW BROKEN LINE</b></p>	<p><b>WHITE BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" WHITE BROKEN LINE</b></p>	<p><b>WHITE BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" WHITE BROKEN LINE</b></p>
<p><b>DOUBLE NO-PASS POSITIONING GUIDE REFLECTORS WITH TWO 4" YELLOW LINES</b></p>	<p><b>YELLOW BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" YELLOW BROKEN LINE</b></p>	<p><b>YELLOW BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" YELLOW BROKEN LINE</b></p>	<p><b>WHITE BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" WHITE BROKEN LINE</b></p>	<p><b>WHITE BROKEN LINE SUPPLEMENTATION REFLECTORS WITH 8" WHITE BROKEN LINE</b></p>

General note:  
 1) Surface must be Raised Pavement Markers (RPMs) unless otherwise specified.

**LEGEND**

→ Direction Of Travel, Increasing Stationing or Thru Traffic Side

□ Lane line dimensions are shown on the striping plans

■ Mono-directional crystal white marker reflects white to the left in this symbol

□ Bi-directional yellow marker reflects yellow both left and right in this symbol

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All materials shall be in accordance with the Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**PAVEMENT MARKING STANDARD DETAIL BLOCKS**

2021

DATE	REVISION	DESCRIPTION
07-2020	Changed min. width of TMB from 8" to 4"	
01-2022	Removed DATE from Title Block	

CALC. \_\_\_\_\_ SDR \_\_\_\_\_ 04-03-2022

BOOK NO. \_\_\_\_\_ DATE \_\_\_\_\_

**TM502**



<p><b>CW</b></p> <p><b>STANDARD CROSSWALK TWO 1" WHITE BARS</b> Install per Standard Drawing TM530</p>	<p><b>W-50</b></p> <p><b>STAGGERED CONTINENTAL CROSSWALK TWO 1" WHITE BARS</b> Install per Standard Drawing TM530</p>	<p><b>S-2</b></p> <p><b>STOP BAR - LARGE 2" WHITE BAR</b> Install per Standard Drawing TM530</p>	<p><b>S-RM</b></p> <p><b>RAMP METER STOP BAR 1" &amp; 8" WHITE BARS</b> For multi-lane ramp meter applications</p>
<p><b>BR</b></p> <p><b>BIKE RIGHT TURN STENCIL (white)</b> Center marking within lane width For proportion details, see current version of Standard Highway Signs</p>	<p><b>BS</b></p> <p><b>BIKE LANE STANDARD STENCIL (white)</b> Center marking within lane width For proportion details, see current version of Standard Highway Signs</p>	<p><b>BL</b></p> <p><b>BIKE LEFT TURN STENCIL (white)</b> Center marking within lane width For proportion details, see current version of Standard Highway Signs</p>	<p><b>BLS</b></p> <p><b>BIKE LEFT TURN STRAIGHT STENCIL (white)</b> Center marking within lane width For proportion details, see current version of Standard Highway Signs</p>
<p><b>SLM</b></p> <p><b>SHARED LANE MARKING (white)</b> Center marking within lane width as shown For proportion details, see current version of Standard Highway Signs</p>	<p><b>B</b></p> <p><b>BIKE STENCIL (white)</b> Used for Intersection Bicycle Box applications Place marking within bicycle box, centered with motor vehicle lane width</p>	<p><b>BD</b></p> <p><b>BIKE DETECTOR MARKING (white)</b> Place Bicycle Detector Pavement Marking in optimum location where bicycle actuates the traffic signal</p>	<p><b>BLE-G</b></p> <p><b>GREEN SUPPLEMENTAL BICYCLE LANE DOTTED LINE EXTENSION (green)</b></p>
<p><b>BUS</b></p> <p><b>BUS (white)</b> Center marking within lane width For letter proportion details, see current version of Standard Highway Signs</p>	<p><b>ON</b></p> <p><b>ONLY (white)</b> Center marking within lane width For letter proportion details, see current version of Standard Highway Signs</p>	<p><b>SCH</b></p> <p><b>SCHOOL (white)</b> Center marking within lane width For letter proportion details, see current version of Standard Highway Signs</p>	<p><b>CRS-LG</b></p> <p><b>GREEN SUPPLEMENTAL BICYCLE LANE DOTTED LINE EXTENSION (green)</b></p>
<p><b>XNG</b></p> <p><b>X-ING (white)</b> Center marking within lane width For letter proportion details, see current version of Standard Highway Signs</p>	<p><b>P</b></p> <p><b>ON-STREET PARKING DETAIL (white)</b></p>	<p><b>SCH-LG</b></p> <p><b>SCHOOL - LARGE (white)</b> Center marking within width of two lanes For letter proportion details, see current version of Standard Highway Signs</p>	<p><b>CRS-LG</b></p> <p><b>CROSSING - LARGE (white)</b> Center marking within width of two lanes For letter proportion details, see current version of Standard Highway Signs</p>

General Note:  
1. Arrow, letter, and bike symbol dimensions nominal.

LEGEND  
↔ Direction of Travel

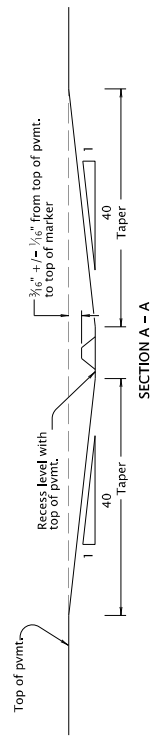
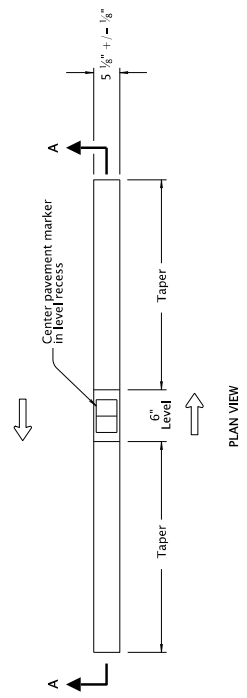
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS  
PAVEMENT MARKING  
STANDARD DETAIL BLOCKS  
2021

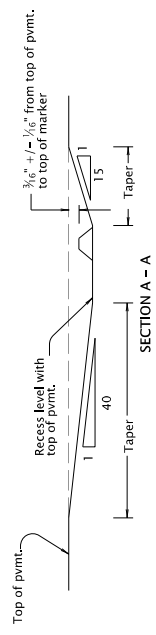
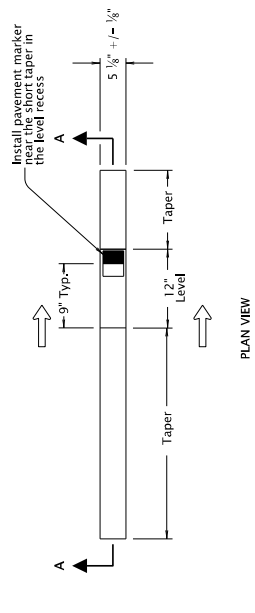
DATE: 07-2022  
REVISED: Added note for measurement of Standard Crosswalk.

BOOK NO. N/A  
SOR DATE: 07-08-2022

TM503



BI-DIRECTIONAL RECESSED PAVEMENT MARKER DETAIL



MONO-DIRECTIONAL RECESSED PAVEMENT MARKER DETAIL

To be accompanied by Standard Dwg. Nos. TM502 and TM515

All materials shall be in accordance with the current Oregon Standard Specifications.	
<b>OREGON STANDARD DRAWINGS</b>	
<b>RECESSED PAVEMENT MARKERS</b>	
DATE	2021
07-2021	Updated to better fit ODOT drafting standard.
CALC.	
BOOK NO.	N/A
SOR DATE	07-06-2021
	TM517

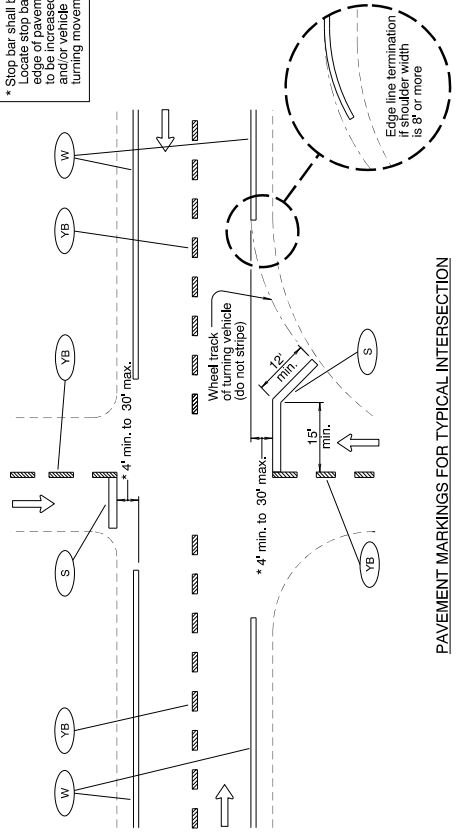
*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

**LEGEND**

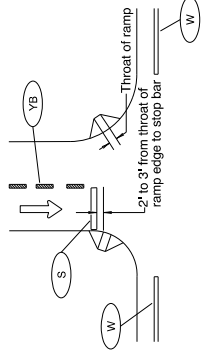
- Direction of Travel
- Bi-directional yellow marker reflects yellow both left and right in this symbol
- Mono-directional crystal white marker reflects white to the left in this symbol

Effective Date: June 1, 2023 - November 30, 2023

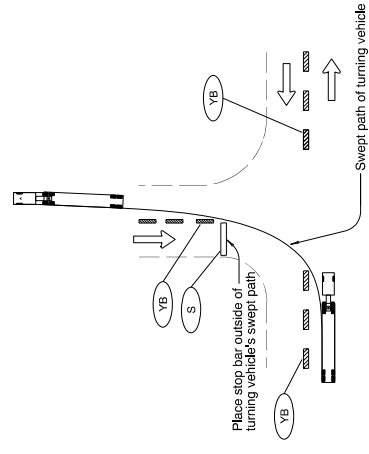
\* Stop bar shall be placed as near as possible to the intersecting traveled way. Locate stop bar 4' min. to 30' max. in advance of the extended fog line, edge of pavement, or curb face. Minimum stop bar distance may need to be increased, depending on location of pedestrian ramps (see Detail "A") and/or vehicle turn radii (see Detail "B"). Field verify sight distance and truck turning movements.



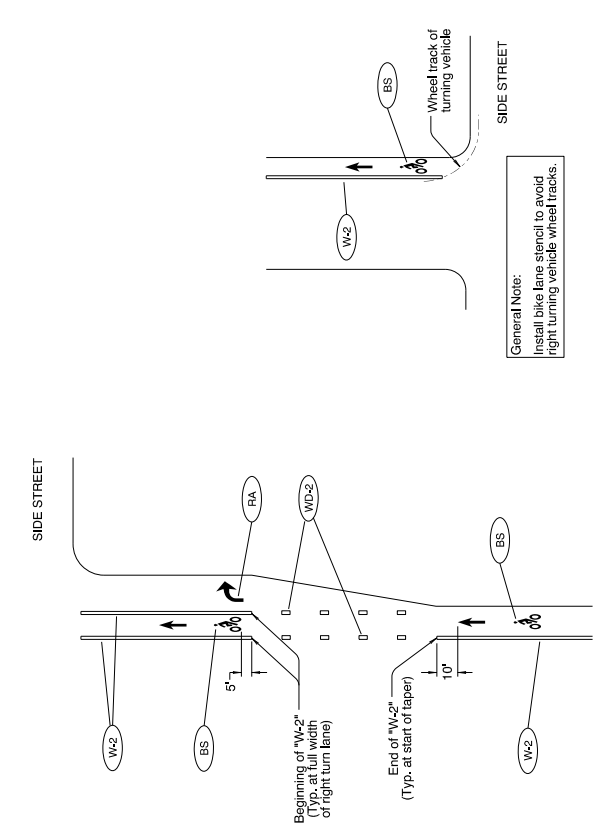
PAVEMENT MARKINGS FOR TYPICAL INTERSECTION



Detail "A"  
STOP BAR PLACEMENT WITH  
RESPECT TO PEDESTRIAN RAMP



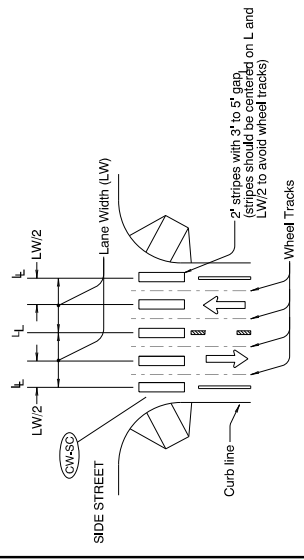
Detail "B"  
STOP BAR PLACEMENT WITH  
RESPECT TO TURN RADI



INSTALLATION OF BIKE LANE STENCILS  
FOR BIKE LANE SEPARATED BY RIGHT-TURN LANE

General Note:  
Install bike lane stencil to avoid  
right turning vehicle wheel tracks.

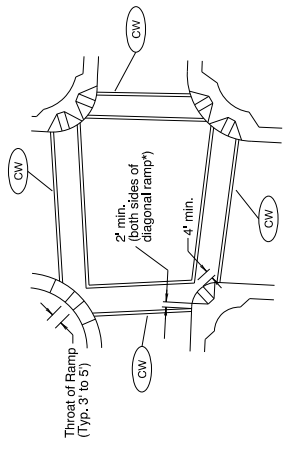
INSTALLATION OF BIKE LANE STENCILS  
FOLLOWING INTERSECTIONS



STAGGERED CONTINENTAL LAYOUT

General Note:  
1. Install crosswalk bars such that the throat of  
the ADA ramp is entirely within crosswalk markings,  
or 6' back of extended fog line, edge of pavement, or curb face.

LEGEND  
Direction of Travel  
L - Lane line dimensions are  
shown on the striping plans



STANDARD CROSSWALK BARS  
AT INTERSECTION  
\* = Refer to Std Dwg RD916

To be accompanied by Standard Dwg. Nos. TM500 thru TM504

All materials shall be in accordance with the Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**INTERSECTION PAVEMENT MARKINGS (CROSSWALK, STOP BAR & BIKE LANE STENCIL)**

DATE: 07-2022  
REVISED: Allied Roadway Standard Drawing reference to detail for clarity

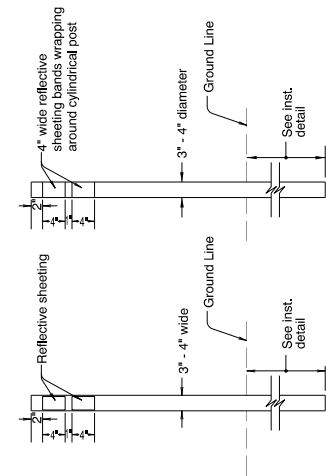
2021

CALC. BOOK NO. N/A SDR DATE: 06-JUL-2022

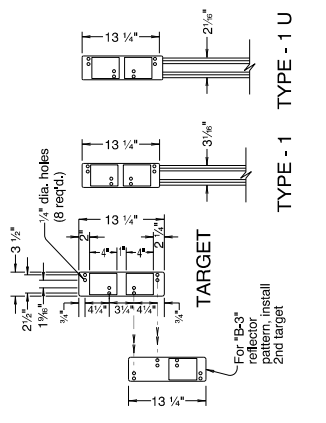
TM530

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

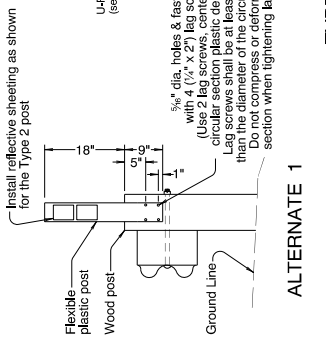
Effective Date: June 1, 2023 - November 30, 2023



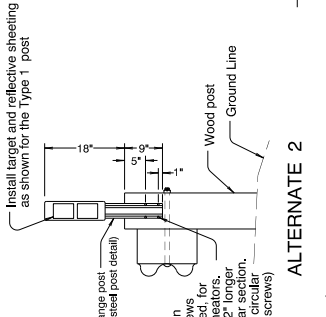
TYPE - 2  
FLEXIBLE PLASTIC POSTS



TYPE - 1 U

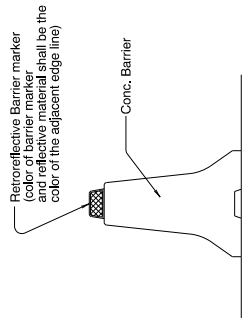


ALTERNATE 1

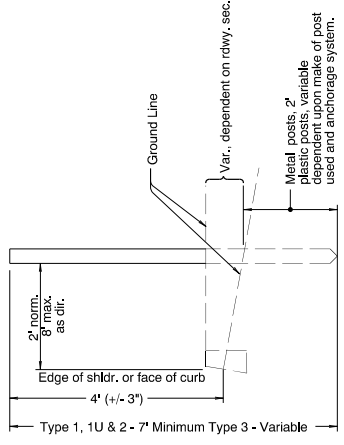


ALTERNATE 2

TYPE - 5  
CONCRETE BARRIER AREAS  
(Install barrier markers at 50' spacing unless otherwise noted in plans)



STEEL POSTS



INSTALLATION DETAIL

NOTES:  
POST:  
Galv. steel, nominal weight Type 1, 2 lb/ft.  
Type 1 U, 1.12 lb/ft.  
See Standard Drawing TM571 for steel post dimensions and details.  
TARGET:  
Aluminum sheet, nominal thickness .050". Fasten to post with 7/8\"/>

GENERAL NOTES:  
1. Spacing shall be measured along the shoulder.  
2. On roads with less than 500 vehicle ADT, delineators are not to be used except where situations such as sharp horizontal curves, etc. exist.  
3. To clear driveways, crossroads, etc., or for required adjustments at ramps and at intersections, either:  
(a) vary placement of that post up to 25% of spacing shown, or  
(b) eliminate said post if limit of variation must be exceeded.  
4. Judgment should be exercised in the installation of delineators in cut section, particularly on roads constructed to older standards where ditches are narrow and where delineators tend to hamper maintenance operations.  
5. On horizontal curves place delineators nearly opposite each other.  
6. At guard rail locations the delineators are to be installed behind the rail and shall be located adjacent to guard rail posts as shown for Type 4 Delineators.  
7. Install all delineators with reflectors facing adjacent oncoming traffic.  
8. Offset delineators an additional 4' in areas of heavy snow removal operations.  
9. Backside Delineators may be used in frequently snow plowed areas where use of snow poles is not justified. When Backside Delineators are specified, substitute "W-1" and "W-2" with "W-1B" and "W-2B" respectively, on Type 1 steel posts. Do not install Backside Delineators on one-way sections of roadway, freeways and ramps, or on radius sections.  
10. Refer to TM 222 for bracket assembly details for Backside Reflector Pattern.

Color Type	Color Of Reflector And Target Or Post	Number Of Reflectors	Color Of Reflector And Target Or Post On Backside	Number Of Reflectors On Backside
Standard	White	1	White	2
	White	2	White	2
	White	1	White	2
	White	2	White	2
	Yellow	1	Yellow	2
	Yellow	2	Yellow	2
	Blue	1	Blue	2
	Blue	2	Blue	2
	Blue	3	Blue	2
	Red	1	Red	2
	Red	2	Red	2

TANGENT	HORIZONTAL CURVES		
	▲ MAX. SPACING EACH SIDE OF ROADWAY IN FEET	ON CURVE	IN ADVANCE OF & BEYOND CURVE
400	Lower Than 1	300	300
	1	230	300
	2	160	300
	3	130	260
	4	110	220
	5	100	200
	6	90	180
	7 - 8	80	160
	9 - 11	60	140
	12 - 16	50	120
	17 - 24	40	100
	25 - 34	30	80
	35 - 53	20	60
	54 & Higher	20	40

(Min. spacing 20 feet)  
▲ Install "W-1" reflective pattern unless otherwise noted. See Standard Drawings TM575 thru TM577 for spacing, layout, and reflective pattern of delineators at interchange ramps, channelized intersections, lane reductions, emergency escape ramps and freeway crossovers.)

DELINEATOR SPACING TABLE FOR TYPES 1, 1U, 2, and 4

To be accompanied by Dwg. No. TM571, TM575, TM576, and/or TM577 as specified.  
All materials shall be in accordance with the Oregon Standard Specifications.  
OREGON STANDARD DRAWINGS  
TRAFFIC DELINEATORS

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

DATE	REVISION DESCRIPTION
	2021

TAPER	FORMULA
Merging (Lane Closure)	"L"
Shifting	"L"/2 or 1/2"L"
Shoulder Closure	"L"/3 or 1/2"L"
Flagging (See Dwg. TM850)	50' - 100'
Downstream (Termination)	Varies (See Drawings)

★ Use Pre-Construction Posted Speed to select the Speed from the Tables below.

★ SPEED (mph)	MINIMUM FLARE RATE
≤ 30	8:1
35	9:1
40	10:1
45	12:1
50	14:1
55	16:1
60	18:1
65	19:1
70	20:1

MINIMUM LENGTHS TABLE

★ SPEED (mph)	"L" VALUE FOR TAPERS (ft)			BUFFER "B" (ft)
	W = Lane or Shoulder Width being closed or shifted	W = 14	W = 16	
25	105	125	145	165
30	150	180	210	240
35	205	245	285	325
40	265	320	375	430
45	450	540	630	720
50	500	600	700	800
55	550	660	770	880
60	600	720	840	960
65	650	780	910	1000
70	700	840	980	1000
FREEWAYS				
55	1000	1000	1000	1000
60	1000	1000	1000	1000
65	1000	1000	1000	1000
70	1000	1000	1000	1000

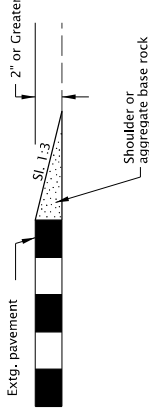
NOTES:  
 ● For Lane closures where  $W < 10'$ , use "L" value for  $W = 10'$ .  
 ● For Shoulder closures where  $W < 10'$ , use "L" value for  $W = 10'$  or calculate "L" using formula, for Speeds  $\geq 45$ ;  $L = WS$ , Speeds  $< 45$ ;  $L = S^2W/60$ ,  $S =$  Speed,  $W =$  Width

★ SPEED (mph)	Sign Spacing (ft)			Max. Channelizing Device Spacing (ft)
	A	B	C	
20 - 30	100	100	100	20
35 - 40	350	350	350	20
45 - 55	500	500	500	40
60 - 70	700	700	700	40
Freeway	1000	1500	2640	40

NOTES:  
 ● Place traffic control devices on 10 ft. spacing for intersection and access radii.  
 ● When necessary, sign spacing may be adjusted to fit site conditions.  
 ● Limit spacing adjustments to 30% of the "A" dimension for all speeds.

NOTES:

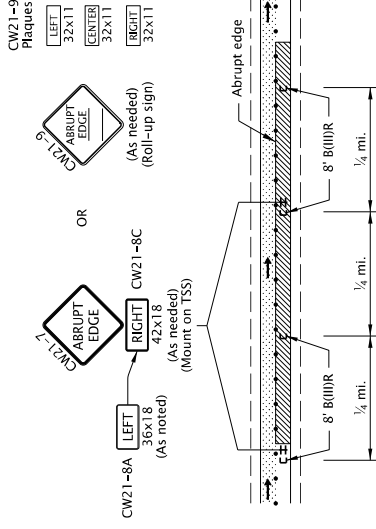
- When paved shoulders adjacent to excavations are less than four feet wide protect longitudinal abrupt edge as shown.
- Use aggregate wedge when abrupt edge is 2 inches or greater.



EXCAVATION ABRUPT EDGE

NOTES:

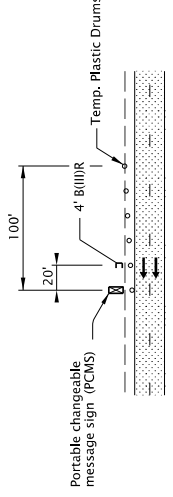
- Abrupt edges may be created by paving, operations, excavations or other roadway work. Use abrupt edge signing for longitudinal abrupt edges of 1 inch or greater.
- If the excavation is located on left side of traffic, replace the 8' 8(111)R barricades with 8' 8(111)R barricades and replace the "RIGHT" (CW21-8C) signs with "LEFT" (CW21-8A) signs.
- Continue signing and other traffic control devices throughout excavation area at spacings shown.
- If roll-up signs are used, attach the correct (CW21-9) plaques to the sign face using hook and loop fasteners. Place roll-up signs in advance of barricades.



TYPICAL ABRUPT EDGE DELINEATION

NOTES:

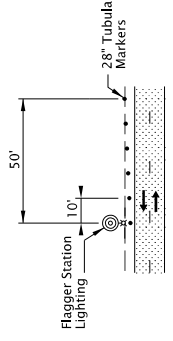
- Install PCMS beyond the outside shoulder, when possible.
- Use the appropriate type of barricade panels for PCMS location. Right shoulder, use Type 8(111)R Left shoulder, use Type 8(111)L
- Use six drums in shoulder taper on 20' spacing. The drums and barricade may be omitted when PCMS is placed behind a roadside barrier.
- Detail as shown for trailered and non-crashworthy components of:
  - Portable Traffic Signs
  - Smart Work Zone Systems



PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) INSTALLATION

NOTES:

- Install Flagger Station Lighting beyond the outside shoulder, where practical.
- Use six tubular markers in shoulder taper on 10' spacing.
- Place cart / generator / power supply off of the shoulder, as far as practical.



FLAGGER STATION LIGHTING DELINEATION

GENERAL NOTES FOR ALL TCP DRAWINGS:

- Signs and other Traffic Control Devices (TCD) shown are the minimum required.
- Place a barricade approx. 20' ahead of all sequential arrow boards.
- Arrows shown in roadway are directional arrows to indicate traffic movements.
- All signs are 48" x 48" unless otherwise shown. Use fluorescent orange sheeting for the background of all temporary warning signs.
- All diamond shaped warning signs mounted on barrier sign supports shall be 36" by 36". All other signs mounted on barrier sign supports shall not exceed 12 sq. ft. in total sign area.
- Low speed highways have a pre-construction posted speed of 40 mph or less. High speed highways have a pre-construction posted speed of 45 mph or higher.
- Do not locate sign supports in locations designated for bicycle or pedestrian traffic.
- Combine drawing details to complete temporary traffic control for each work activity.
- Coordinate and control pedestrian movements through a Temporary Accessible Route using Flaggers, Traffic Control Measures, or as directed.
- To be accompanied by Dwg. Nos. TM820 & TM821.

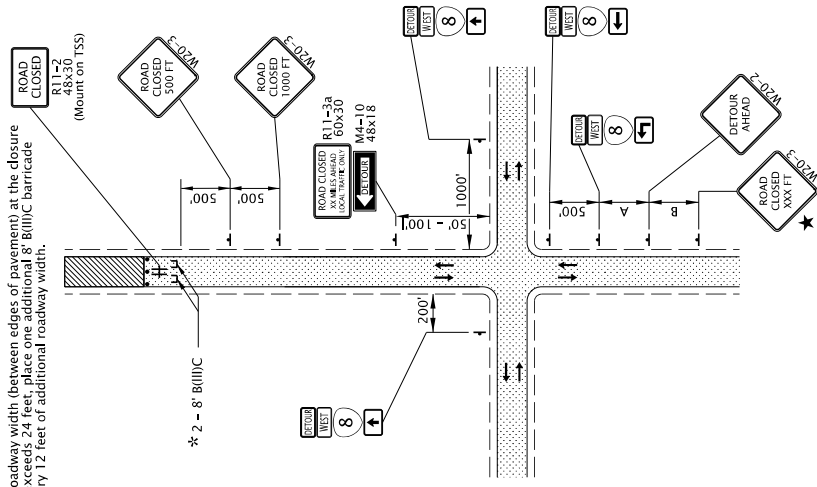
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS	
DATE	REVISION DESCRIPTION
07-2022	Added a note for TMS.
2024	
CALC.	
BOOK NO.	N/A
SOR DATE	05-JUL-2022
TM800	

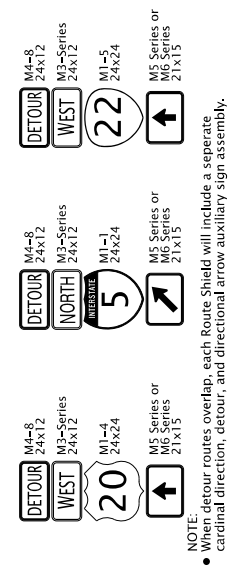
All materials shall be in accordance with the Oregon Standard Specifications.

Effective Date: June 1, 2024 - November 30, 2024

NOTES:  
 \* If the roadway width (between edges of pavement) at the closure point exceeds 24 feet, place one additional 8' B(III)C barricade for every 12 feet of additional roadway width.  
 \* If the roadway width (between edges of pavement) at the closure point is less than 1500 ft. from nearest intersection, use a "ROAD CLOSED 500 FT" sign in place of the "ROAD CLOSED XX MILES AHEAD" sign.  
 \* If the roadway width (between edges of pavement) at the closure point exceeds 24 feet, place one additional 8' B(III)C barricade for every 12 feet of additional roadway width.

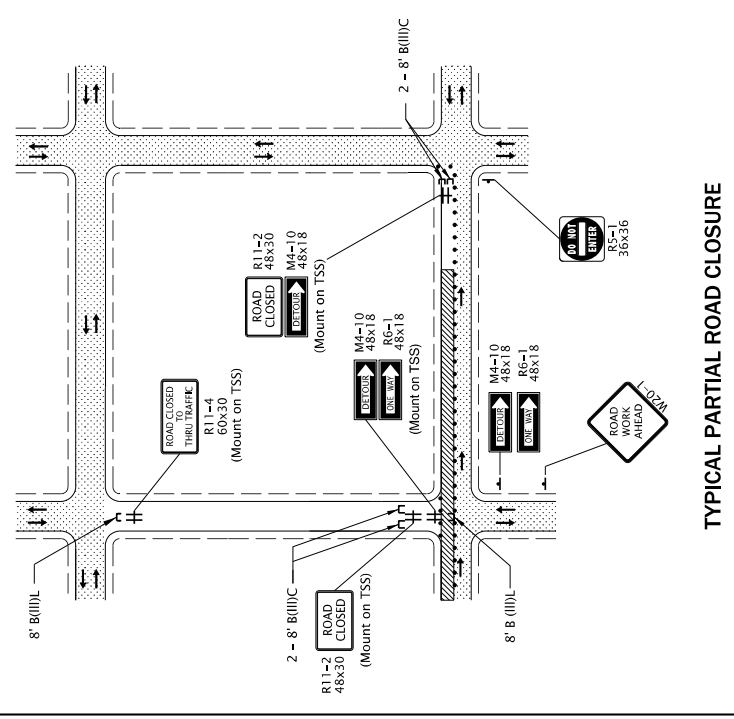


**TYPICAL ROAD CLOSURE WITH DETOUR**

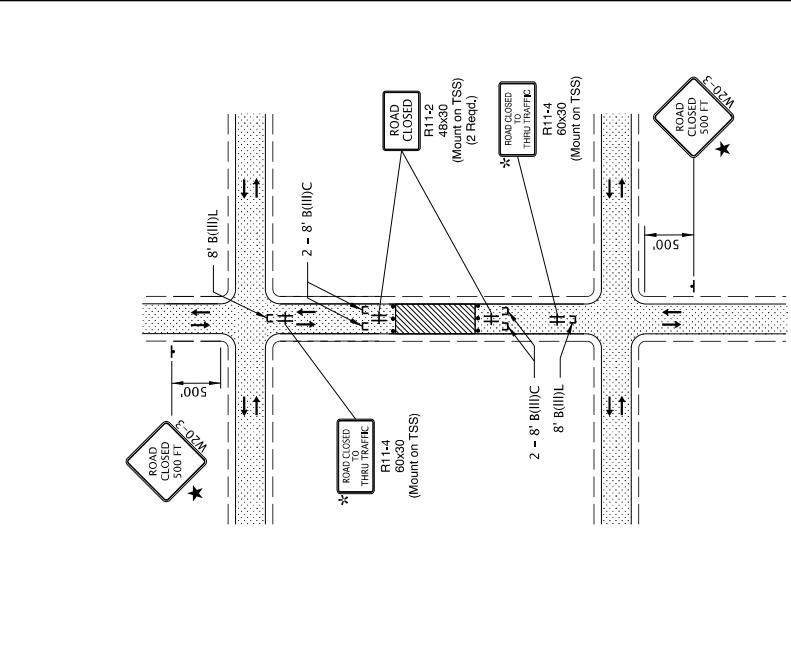
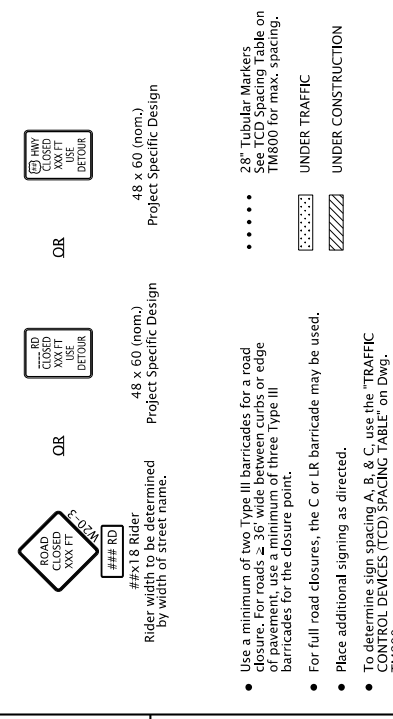


**TYPICAL TRAILBLAZER ASSEMBLY**

NOTE:  
 \* When detour routes overlap, each Route Shield will include a separate cardinal direction, detour, and directional arrow auxiliary sign assembly.

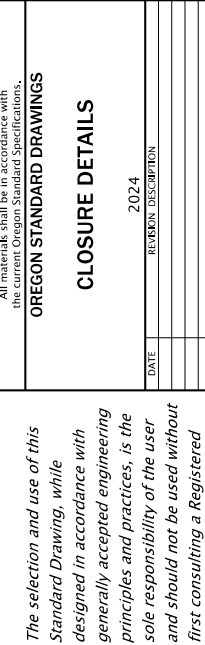


**TYPICAL PARTIAL ROAD CLOSURE**



NOTE:  
 \* If accesses exist between intersection and point of closure, install "ROAD CLOSED TO THRU TRAFFIC" sign as shown.

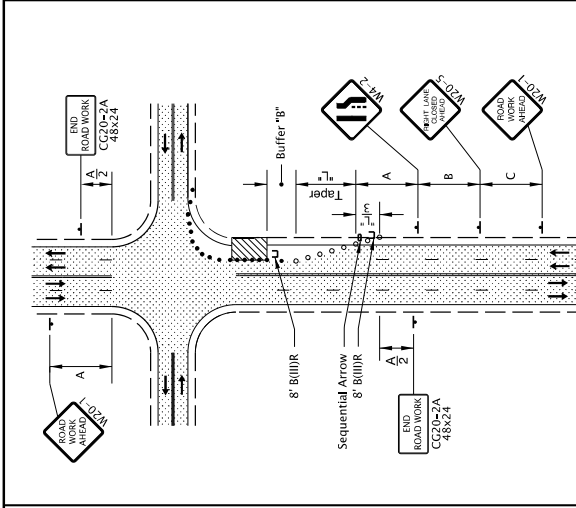
**TYPICAL ROAD CLOSURE**



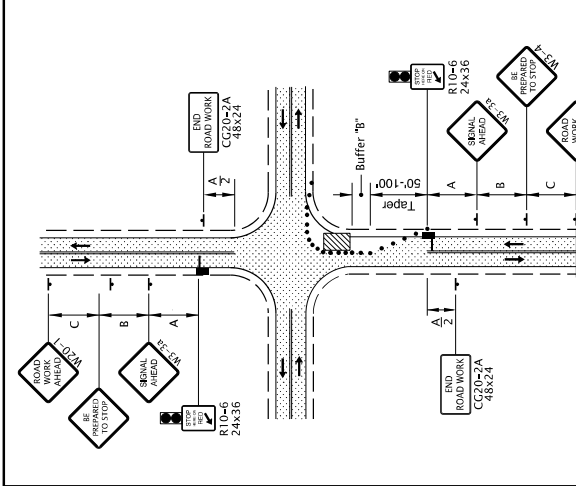
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS	
CLOSURE DETAILS	
DATE	REVISION DESCRIPTION
2024	
CALC.	
BOOK NO.	N/A
SOR	05-JUL-2020
DATE	
<b>TM840</b>	

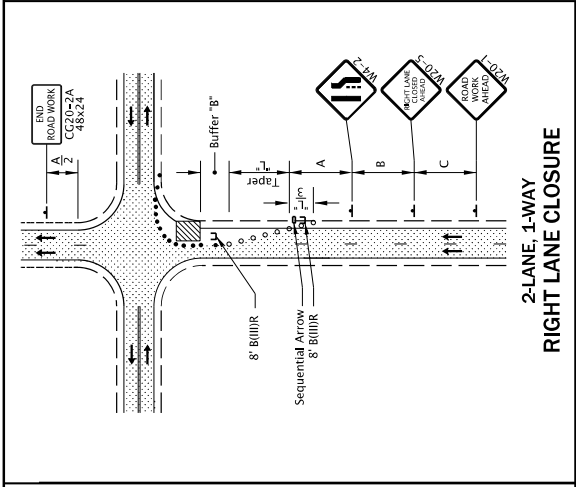
Effective Date: June 1, 2024 – November 30, 2024



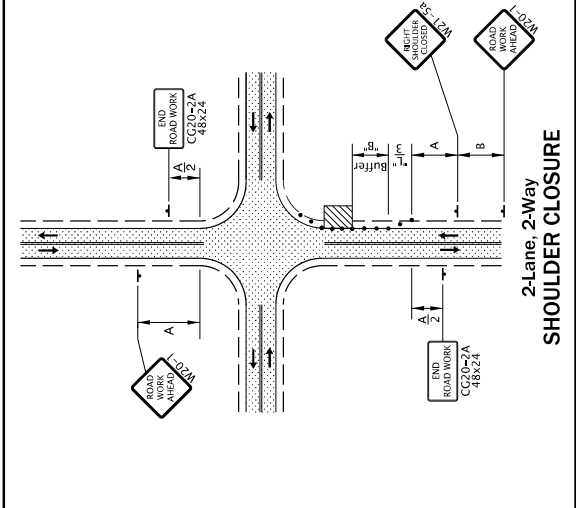
2-Lane, 2-Way  
SHOULDER CLOSURE



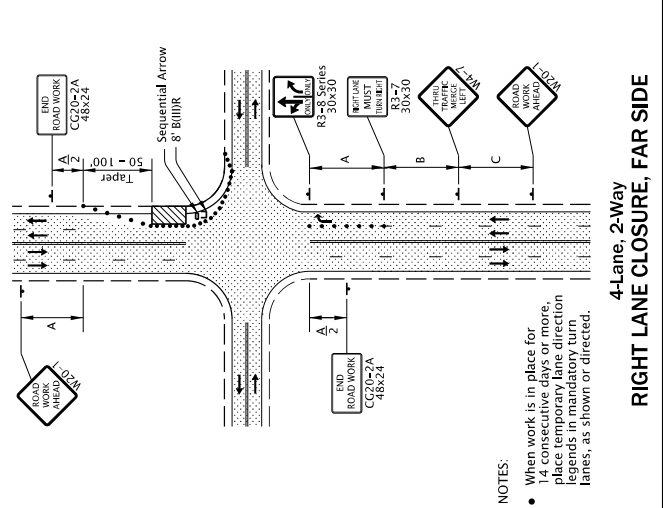
2-LANE, 1-WAY  
RIGHT LANE CLOSURE



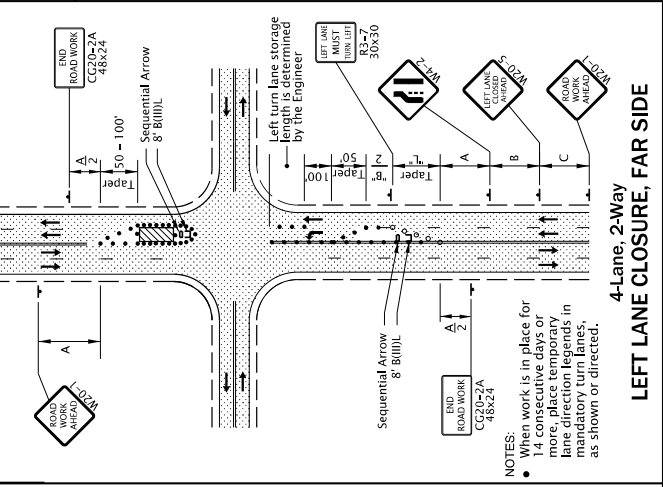
2-Lane, 2-Way  
ONE LANE CLOSURE



4-Lane, 2-Way  
RIGHT LANE CLOSURE, NEAR SIDE



4-Lane, 2-Way  
RIGHT LANE CLOSURE, FAR SIDE



4-Lane, 2-Way  
LEFT LANE CLOSURE, FAR SIDE

**GENERAL NOTES FOR ALL DETAILS:**

- Additional Traffic Control Measures (TCM) may be required for all legs of the intersection.
- The "SIGNAL AHEAD" (W3-3a) sign may be substituted with the signal ahead symbol (W3-3) sign.
- To determine Taper Length ("L") and Buffer Length ("B"), use the "MINIMUM LENGTHS TABLE" on Dwg. TM800.
- For left lane or shoulder work, place TCD to close left lane or shoulder. Use "LEFT LANE CLOSED AHEAD" (W20-5) sign, "LEFT LANE ENDS" (W4-2L) symbol sign, or "LEFT SHOULDER CLOSED" (W21-5a) sign, where applicable.
- To determine sign spacing A, B, and C, use "TRAFFIC CONTROL DEVICES (TCD) SPACING TABLE" on Dwg. TM800.
- When a through road intersects within the work zone, place a "ROAD WORK AHEAD" (W20-1) sign in advance of the intersection at sign spacing A.
- Tubular markers may be used in lane closure tapers where posted speed is 40 mph or less.
- Where shoulder width is limited, Sequential Arrow may be placed within the lane closure taper.
- Place channelizing devices around intersection radii, business accesses and driveways at 10' spacing.
- Install a "BICYCLES ON ROADWAY" (CW11-1) sign in advance of the closure when a bike lane is closed, or when the shoulder is closed and bikes are expected.
- To be accompanied by Dwg. Nos. TM820, TM82, TM840 & TM854.

**INTERSECTION WORK ZONE DETAILS**

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DATE	REVISION DESCRIPTION
2024	

UNDER TRAFFIC  
 UNDER CONSTRUCTION

All materials shall be in accordance with the Oregon Standard Specifications.  
**OREGON STANDARD DRAWINGS**

**INTERSECTION WORK ZONE DETAILS**

Automated Flagging Assistance Device (AFAD)  
 28" Tubular Markers See TCD Spacing Table on TM800 for max. spacing.  
 Temp. Plastic Drums See TCD Spacing Table on TM800 for max. spacing.

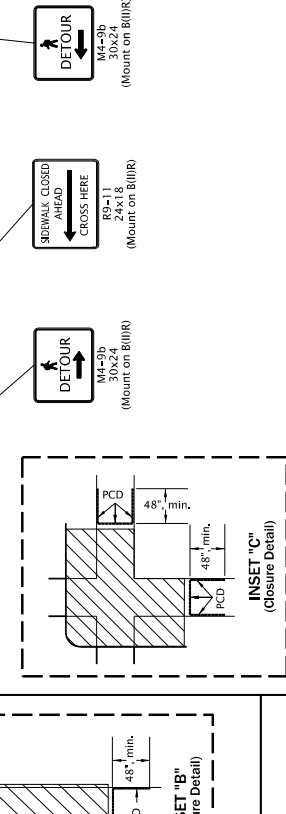
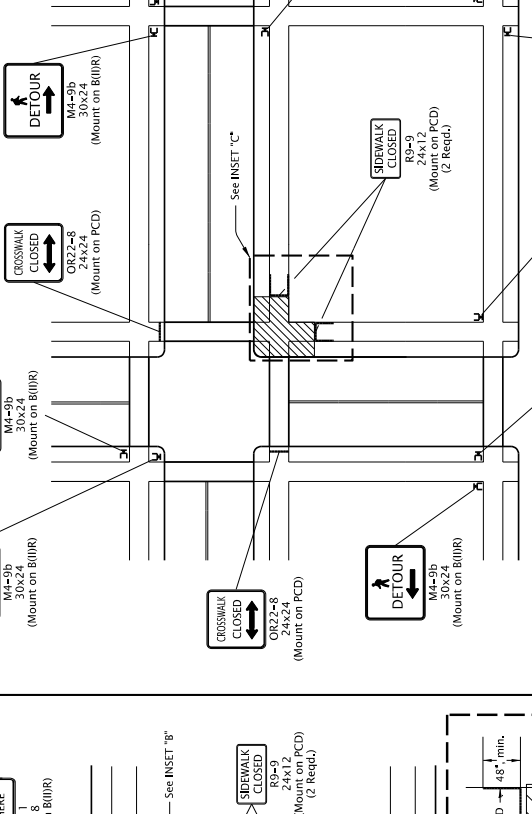
CALC.	SOR	DATE
	N/A	05-JUL-2022

**TM841**

Effective Date: June 1, 2024 – November 30, 2024

NOTE:

- Limit work to one corner at a time to minimize pedestrian distraction and detour length.



**SIDEWALK CLOSURE, CORNER**

All materials shall be in accordance with the Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

**TEMPORARY PEDESTRIAN ACCESSIBLE ROUTES**

2021

DATE	REVISION DESCRIPTION
01-2022	Revised notes for temporary sidewalk comp.

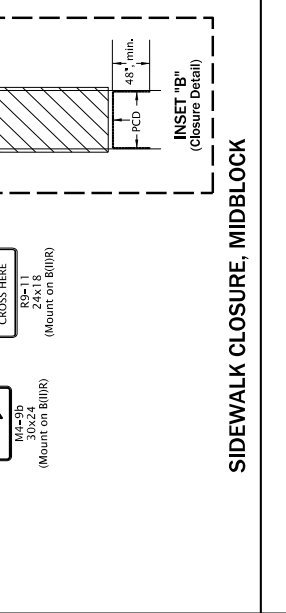
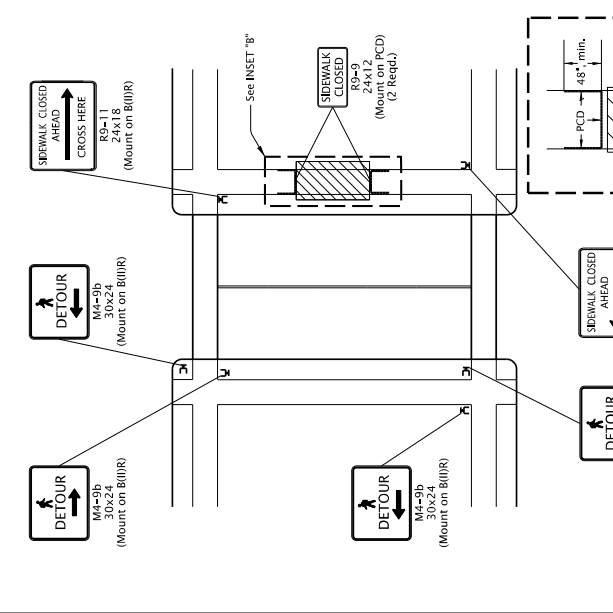
CALC.	SOR	DATE
	N/A	04-JAN-2022

BOOK NO. \_\_\_\_\_ DATE: \_\_\_\_\_

TM844

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

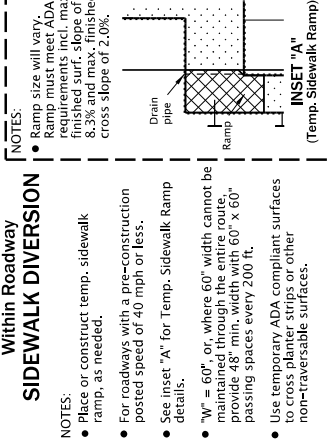
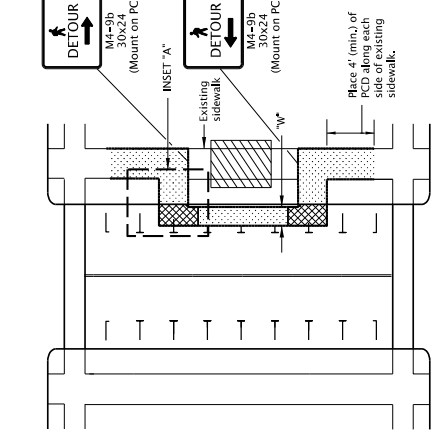
- UNDER PEDESTRIAN TRAFFIC
- UNDER CONSTRUCTION
- PEDESTRIAN CHANNELIZING DEVICE (PCD)



**SIDEWALK CLOSURE, MIDBLOCK**

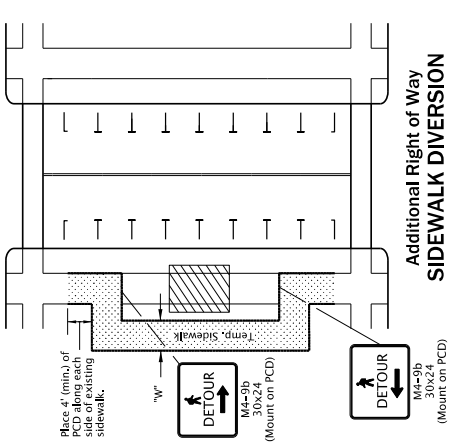
GENERAL NOTES FOR ALL DETAILS:

- When closing or relocating crosswalks or other pedestrian facilities provide ADA compliant facilities. Include accessibility features consistent with existing pedestrian facilities by providing adequate slope transitions and surfacing.
- Provide non-slip, 60 inch minimum wide surface through entire pedestrian route. If not possible, provide 48" min. width with 60" x 60" passing spaces every 200 feet along the route.
- Only TCD for pedestrians are shown. Other devices may be necessary to control vehicular traffic.
- Stage work, as necessary, to provide a temporary pedestrian access route at all times. For roadways with no available detours, maintain one open sidewalk at all times.
- Minimize pedestrian out-of-direction travel.
- To be accompanied by Dwg. Nos. TM820 & TM821.



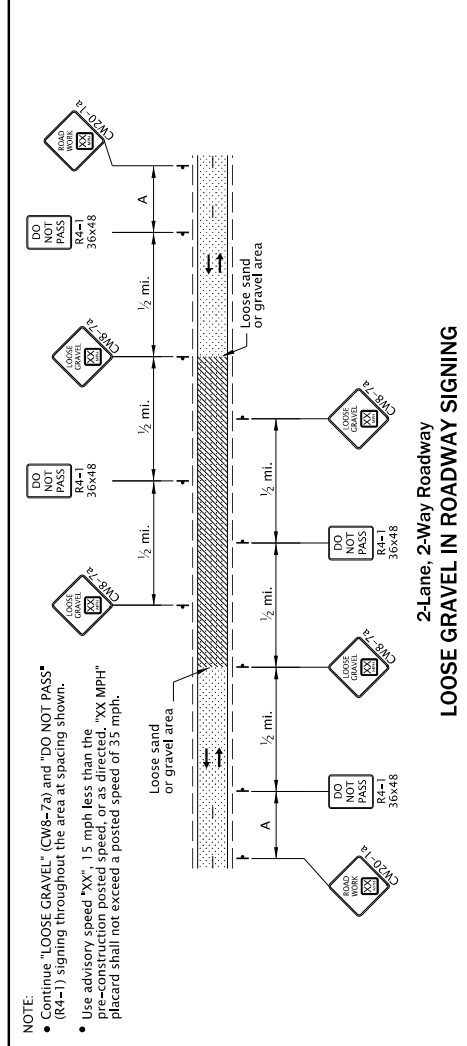
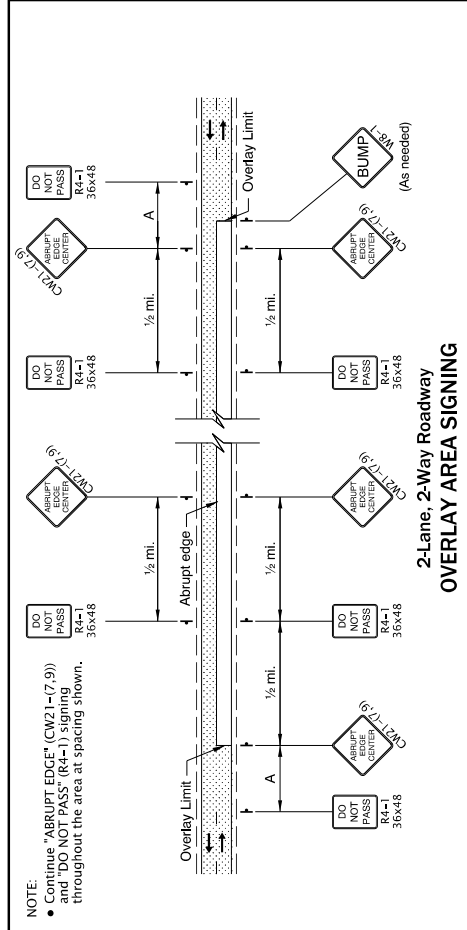
**Within Roadway SIDEWALK DIVERSION**

- NOTES:
- Ramp size will vary. Ramp must meet ADA requirements incl. max. 8.3% max. slope for 8.3% max. finished cross slope of 2.0%.
  - For roadways with a pre-construction posted speed of 40 mph or less.
  - See inset "A" for Temp. Sidewalk Ramp details.
  - "W" = 60", or, where 60" width cannot be provided, the minimum width shall be 48" with 60" x 60" passing spaces every 200 ft.
  - Use temporary ADA compliant surfaces to cross planter strips or other non-traversable surfaces.



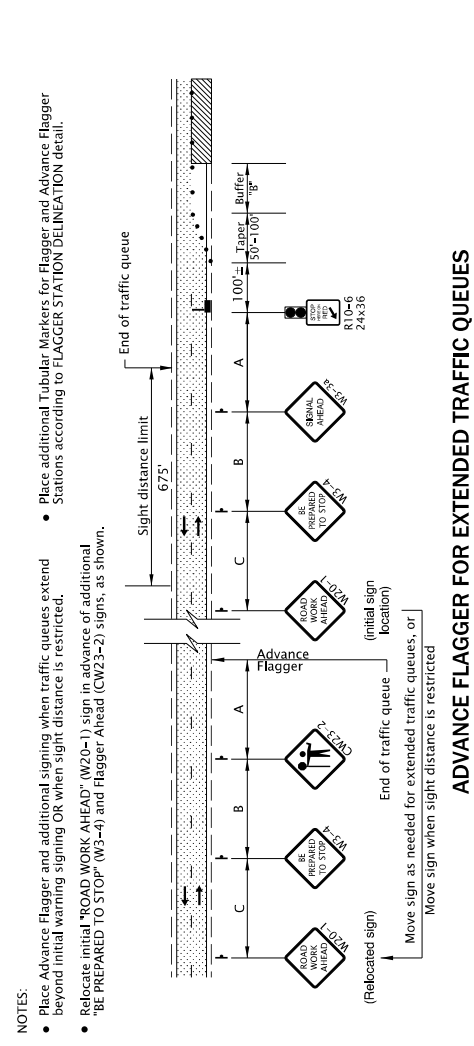
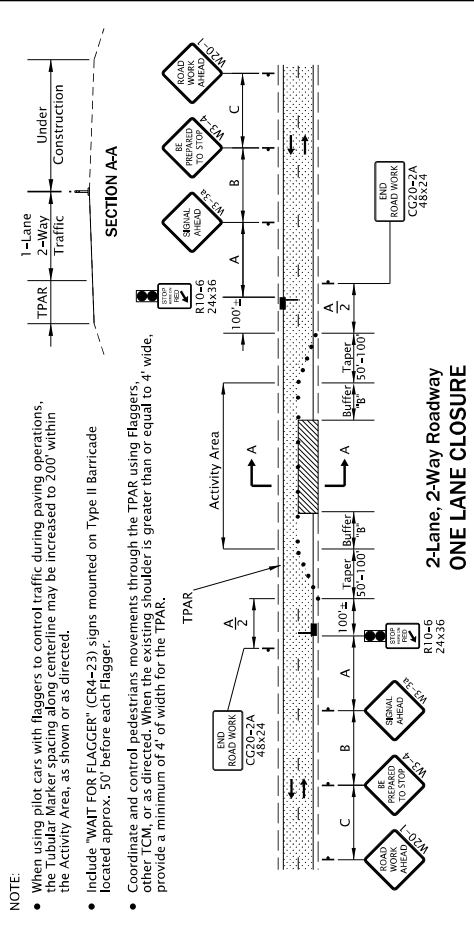
**Additional Right of Way SIDEWALK DIVERSION**





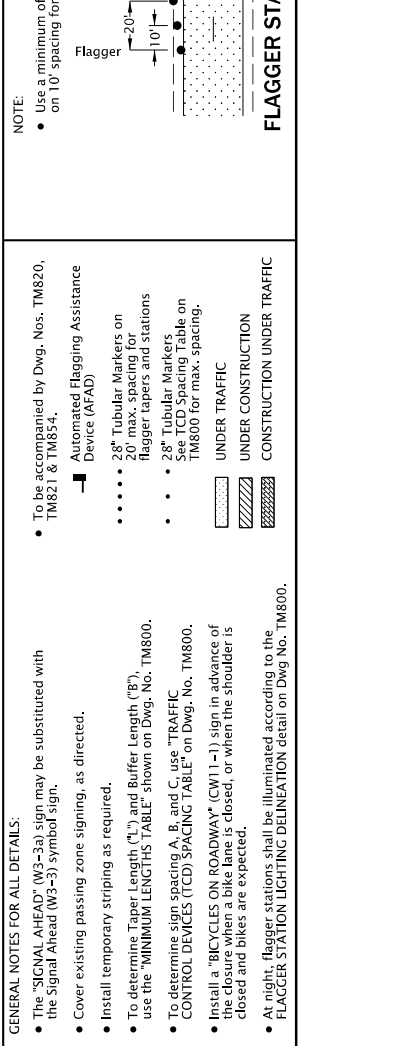
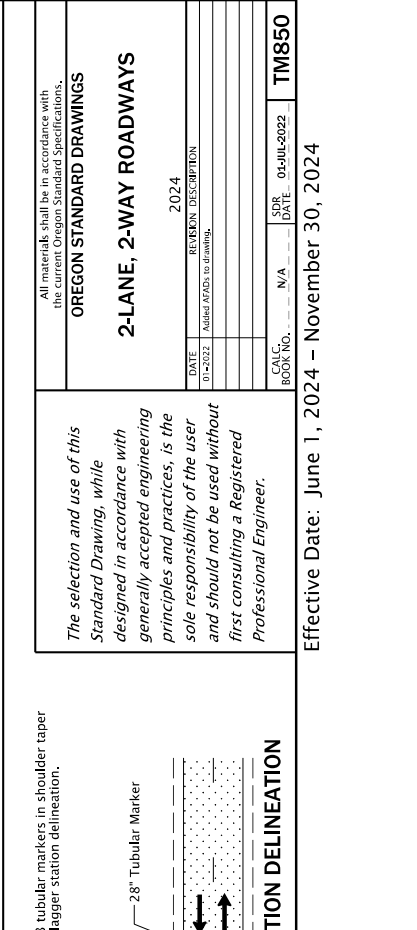
**NOTE:**

- Continue "LOOSE GRAVEL" (CW8-7a) and "DO NOT PASS" (R4-1) signing throughout the area at spacing shown.
- Use advisory speed "XX" 15 mph less than the posted speed of "XX MPH".
- Placard shall not exceed a posted speed of 35 mph.



**NOTE:**

- Place Advance Flagger and additional signing when traffic queues extend beyond initial warning signing OR when sight distance is restricted.
- Relocate initial "ROAD WORK AHEAD" (W3-3) sign in advance of additional "BE PREPARED TO STOP" (W3-4) and Flagger Ahead (CW23-2) signs, as shown.



**GENERAL NOTES FOR ALL DETAILS:**

- The "SIGNAL AHEAD" (W3-3a) sign may be substituted with the Signal Ahead (W3-3) symbol sign.
- Cover existing passing zone signing, as directed.
- Install temporary striping as required.
- To determine Taper Length (TL) and Buffer Length (BL), use the "MINIMUM LENGTHS TABLE", shown on Dwg. No. TM800.
- CONTROL DEVICES (TCD) SPACING TABLE on Dwg. No. TM800.
- Install a "BICYCLES ON ROADWAY" (CW11-1) sign in advance of the closure when a bike lane is closed, or when the shoulder is closed and bikes are expected.
- At night, flagger stations shall be illuminated according to the FLAGGER STATION LIGHTING DELINEATION detail on Dwg No. TM800.

**NOTE:**

- Continue "ABRUPT EDGE" (CW21-(7,9)) and "DO NOT PASS" (R4-1) signing throughout the area at spacing shown.
- Includes "WAIT FOR FLAGGER" (CW4-23) signs mounted on Type II Barricade located approx. 50' before each flagger.
- Coordinate and control pedestrians movements through the TPAR using flaggers, other TCM, or as directed. When the existing shoulder is greater than or equal to 4' wide, provide a minimum of 4' of width for the TPAR.

**NOTE:**

- To be accompanied by Dwg. Nos. TM820, TM821 & TM854.
- Automated Flagging Assistance Device (AFAD)
- 28" Tubular Markers on 20' max. spacing for flagger tapers and stations
- 28" Tubular Markers See TCD Spacing Table on TM800 for max. spacing.
- UNDER TRAFFIC
- UNDER CONSTRUCTION
- CONSTRUCTION UNDER TRAFFIC

**OREGON STANDARD DRAWINGS**

**2-LANE, 2-WAY ROADWAYS**

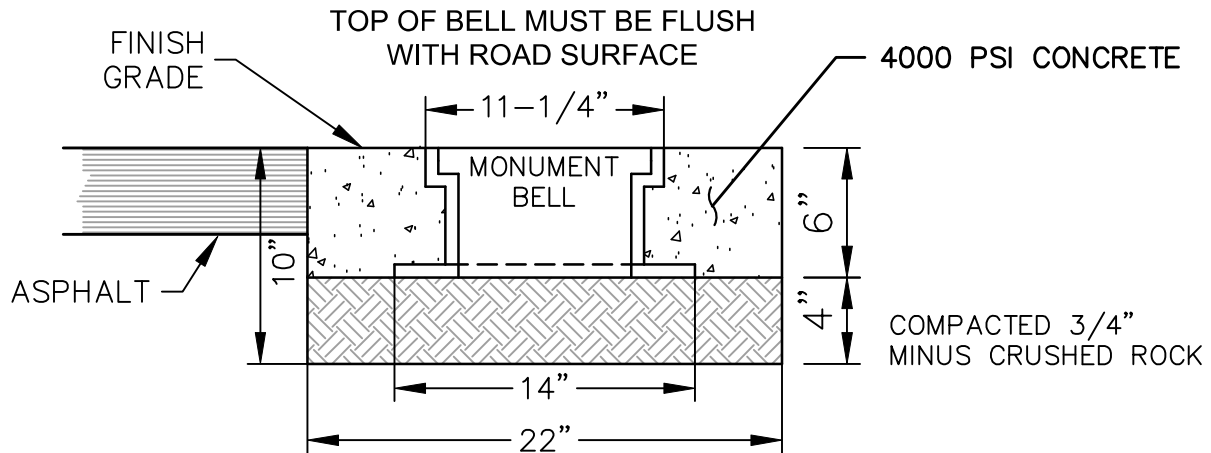
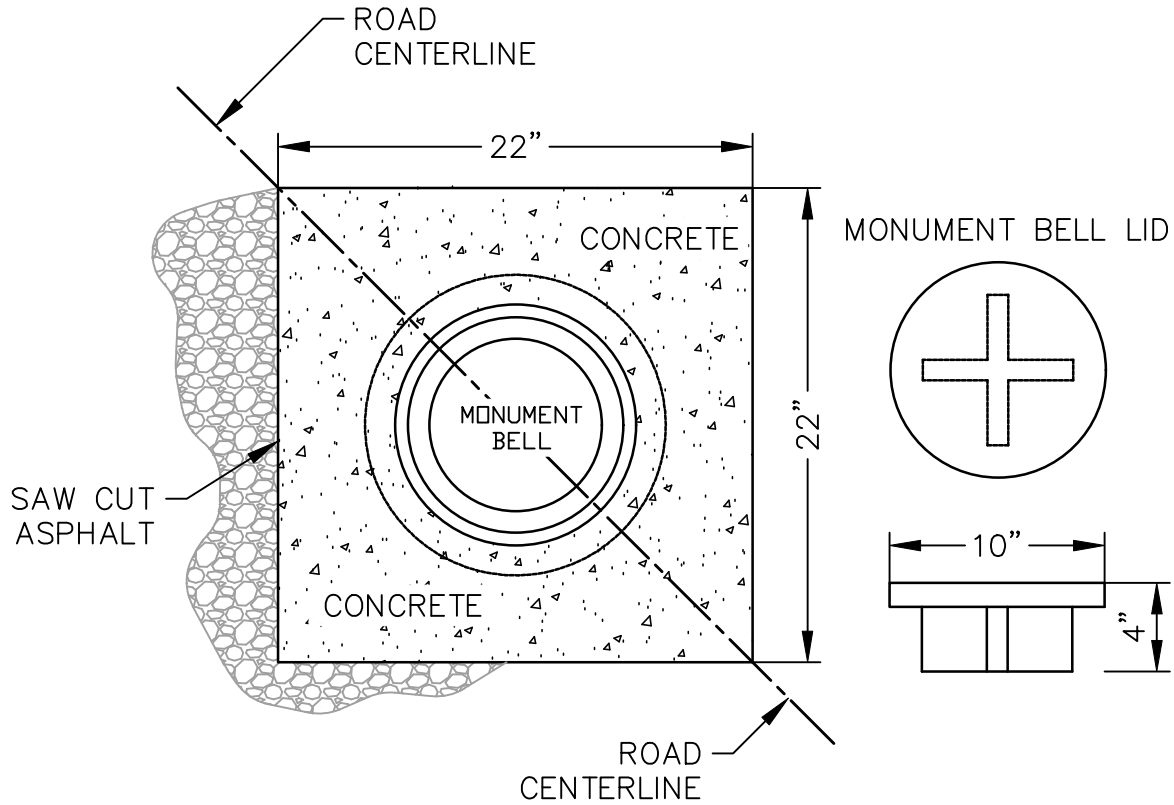
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

DATE: 01-2022 / Added / PDS to drawing. RETURN DESCRIPTION: 2024

CALC. BOOK NO. N/A SOR DATE: 05-JUL-2022

Effective Date: June 1, 2024 – November 30, 2024

TM850.dgn 01-JUL-2022



NOTE:  
 MONUMENT BOXES TO BE CAST  
 IRON OR ALLOY SUITABLE FOR  
 HEAVY TRAFFIC LOADING. #1036  
 OR #1033 EAST JORDAN IRON  
 WORKS #3680 OR EQUIVILANT.

REVISION	DATE	BY
REVISION	11/19	RM
REVISION	3/20	RM

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



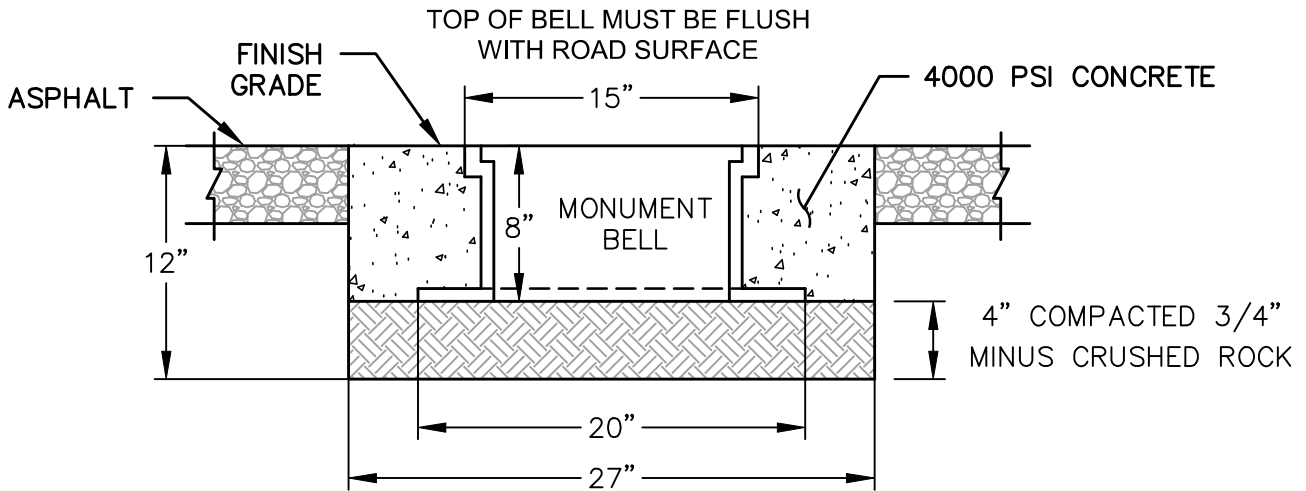
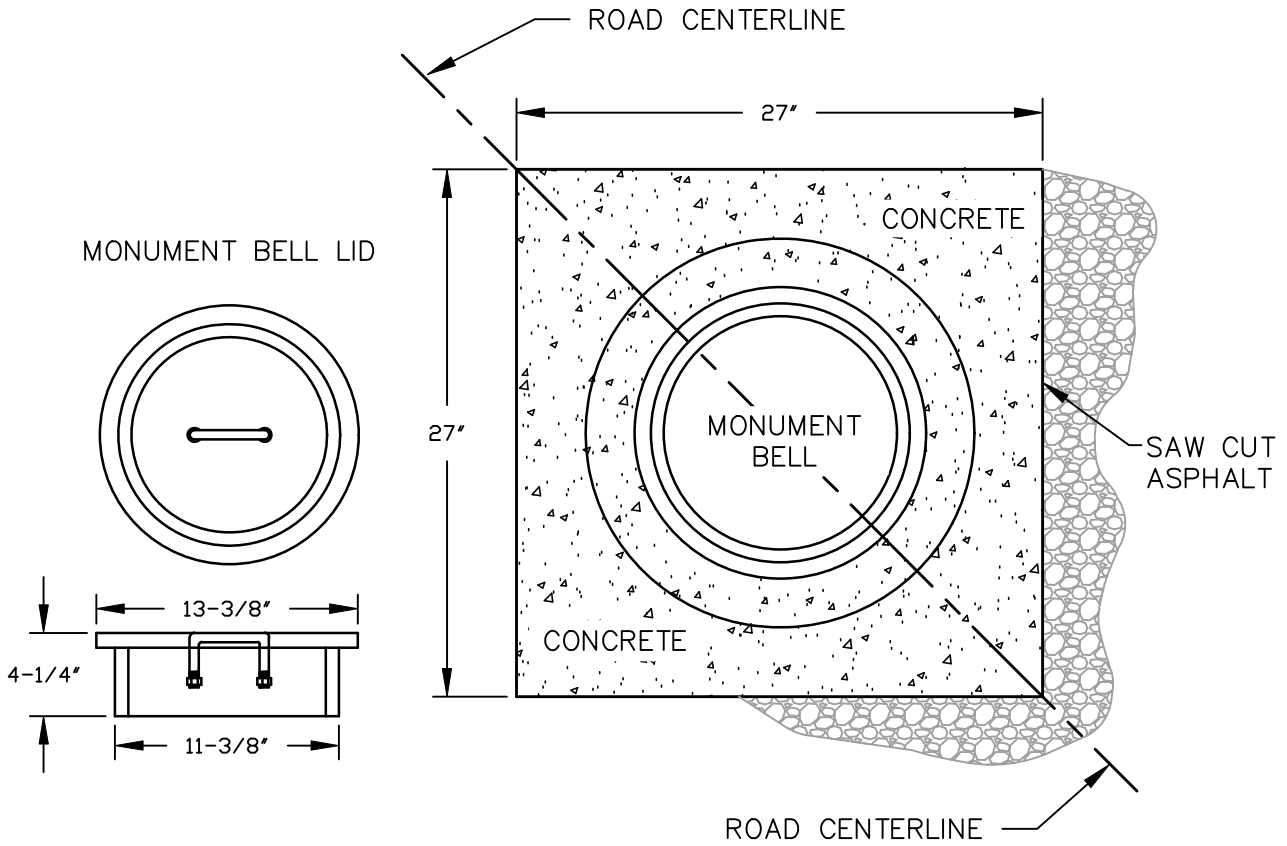
APPROVAL DATE: 6/1/2020

SCALE: N.T.S.

STANDARD  
 DRAWING

MONUMENT BOX  
 35 MPH OR LESS

M100



NOTE:  
 MONUMENT BOXES TO BE CAST  
 IRON OR ALLOY SUITABLE FOR  
 HEAVY TRAFFIC LOADING. #1036  
 OR #1033 EAST JORDAN IRON  
 WORKS #3680 OR EQUIVILANT.

REVISION	DATE	BY
REVISION	11/19	RM
REVISION	3/20	RM

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



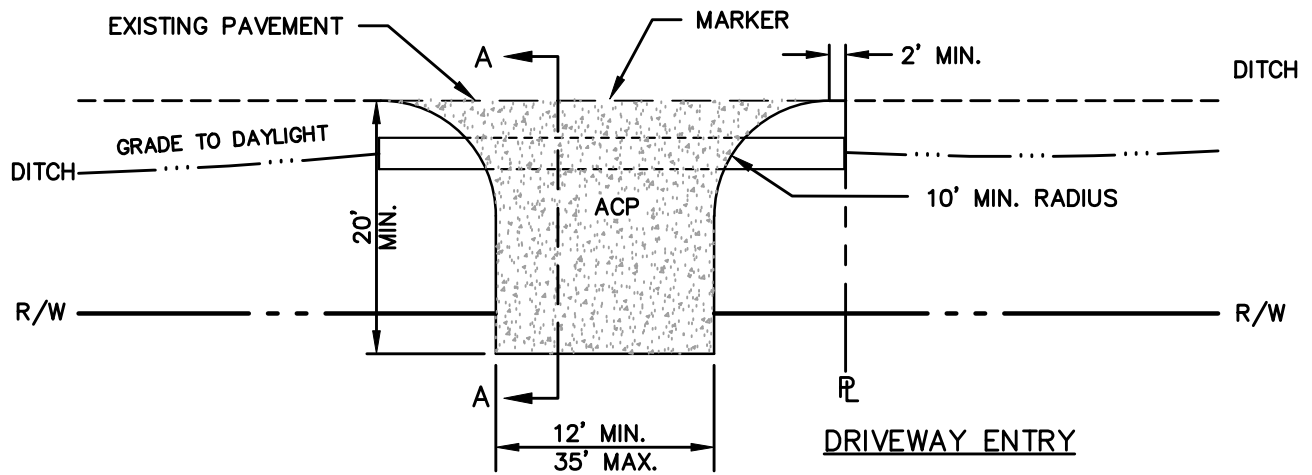
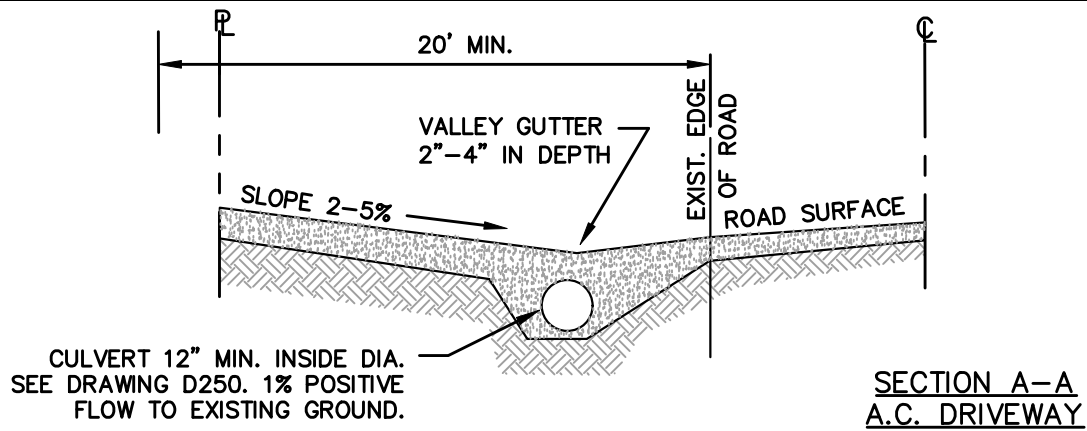
APPROVAL DATE: 6/1/2020

SCALE: N.T.S.

STANDARD  
 DRAWING


**MONUMENT BOX  
 GREATER THAN 35 MPH**

**M150**



**NOTES**

1. LOCATION AND DIMENSIONS TO BE APPROVED BY THE COUNTY ON A SITE SPECIFIC BASIS. PLACE A MARKER, AS INDICATED, AT THE CENTER OF THE PROPOSED DRIVEWAY FOR INITIAL INSPECTION BY THE COUNTY. NO PORTION OF THE DRIVEWAY MAY BE PLACED ON AN ADJOINING FRONTAGE.
2. SPECIFICATIONS FOR MATERIALS USED IN CONSTRUCTION SHALL CONFORM TO CURRENT ODOT/APWA STANDARD SPECIFICATIONS.
3. AT CORNER LOTS, DRIVEWAY ENTRANCE MUST BE PLACED ON THE SECONDARY ROADWAY IN URBAN AREAS AND ON ROADS WITH MORE THAN 7,500 ADT IN THE RURAL AREA.
4. SEE SECTION 220 FOR ACCESS SPACING BETWEEN DRIVEWAYS, TO AN INTERSECTION AND TO A PROPERTY LINE ALSO FOR MULTIPLE ACCESSES TO ON PROPERTY.
5. MEET SPACING STANDARDS PER SECTION 220.
6. IF A CULVERT IS REQUIRED, INSTALL CULVERT PIPE PER STANDARD DRAWING D250.
7. PROVIDE SIGHT DISTANCE PER SECTION 240.
8. DRIVEWAY SHALL INTERSECT ROAD AT A 90 DEGREE ANGLE.
9. DRIVEWAY APPROACH SHALL MEET STRUCTURAL SECTION PER R100.

REVISION	DATE	BY	DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT		APPROVAL DATE: 6/1/2020	SCALE: N.T.S.	STANDARD DRAWING <b>D500</b>
REVISED	11/19	AAR			150 BEAVERCREEK ROAD OREGON CITY, OR 97045	STANDARD DRIVEWAY ENTRY ONTO PAVED COUNTY ROADS WITH NO CURBS	