

**BID BOOKLET  
FOR HIGHWAY CONSTRUCTION**



**LINN COUNTY ROAD DEPARTMENT  
ALBANY, OREGON**

**COVERED BRIDGE REHABILITATION  
THOMAS CREEK, RICHARDSON GAP ROAD (SHIMANEK)**

**COVERED BRIDGE REHABILITATION**

**LINN COUNTY**

**JANUARY 18, 2022**

**CLASS OF PROJECT** COUNTY  
**CLASS OF WORK** BRIDGES AND STRUCTURES  
**BID OF** \_\_\_\_\_

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**DESCRIPTION OF WORK**

COVERED BRIDGE REHABILITATION  
Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Linn County

**TIMES AND PLACES OF RECEIVING BIDS (BID CLOSING)**

Bid Closing for the work described above will be 9:15:00 a.m. on the 18th day of January, 2022.

Before 9:15:00 a.m. on the day of Bid Closing, Bids shall be submitted to:

Darrin Lane, County Administrative Officer, Linn County Courthouse, 300 Fourth Avenue S.W., Room 201, Albany, Oregon 97321

Bids, Bid modifications, and Bid withdrawals will not be accepted on or after 9:15:00 a.m. on the day of Bid Closing.

**PLACE, TIME, AND DATE OF READING BIDS (BID OPENING)**

Bid Opening for the work described above will be opened and read at the Linn County Courthouse, Board of Commissioners, 300 Fourth Avenue S.W., Room 201, Albany, Oregon, beginning at approximately 9:35 a.m. on the day of Bid Closing.

**COMPLETION TIME LIMIT**

See Special Provisions Subsection 00180.50(h).

**CLASS OF PROJECT**

This is a County Project. Richardson Gap Road is a Rural Major Collector.

**CLASS OF WORK**

The Class of Work for this Project is Bridges and Structures.

**APPLICABLE SPECIAL PROVISIONS**

The Special Provisions booklet applicable to the above-described work, for which Bids will be opened at the place, time, and date stated above, is that which contains the exact information as shown above on this page.

Bidders are cautioned against basing their Bids on a booklet bearing any different description, date(s), class of project, or class of work.

**BID SECTION**

The Bid Section can be found as Appendix B of the Special Provisions.

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**INSTRUCTIONS FOR MODIFYING BID**

**General** - Bid modifications must be received in writing by hand delivery, mail, parcel delivery service, email, or by electronic facsimile (FAX) transmission prior to the time designated for Bid Closing. Bid modifications received after Bid Closing will not be considered. **Incomplete or late transmittals will not be accepted, regardless of reason.**

Bids will be modified at the Bid Opening according to the information received.

**Instructions and Format** - Make modifications to Bids according to the "Letter Format for Modifying Bid" document located in this Bid Booklet and the following:

- Prepare the modifications on the Bidder's letterhead stationery.
- Include the Project title and the Bidder's company name.
- Make changes (increase/decrease statement) for each affected Bid Item. (*Lumping the changes into one Bid Item may result in the Bid Item being unbalanced, causing the Bid to be considered irregular and constituting grounds for Bid rejection.*)
- List all decreased-in-Bid items in numerical order first, then list all increased-in-Bid items.
- Show the total difference in the Bid last. (*Do not refer to your original Bid total. Do not show a new Bid total. Do not include a new Bid Schedule.*)
- Print name and sign the letter by an individual authorized to execute Bids.

**Hand Delivery, Mail, or Parcel Delivery Service** - If delivering by hand, mail or parcel delivery service deliver to:

Darrin Lane, County Administrative Officer, Linn County Courthouse, 300 Fourth Avenue S.W., Room 201, Albany, Oregon 97321

**FAX Transmittals** - If using FAX as transmission, send them according to the following:

- Send the FAX to the FAX telephone number 541-926-8228. FAX transmittals will be accepted only at this number. (*Contractors will be responsible for the payment for the transmission of Bid modifications.*)
- The time of receipt of FAX transmittals by the County will be determined by the time which is electronically imprinted upon the Bid change by the County facsimile machine.
- The Agency is not responsible for any failed or partial FAX transmissions of Bid changes, caused by whatever reason, mechanical failure or otherwise.
- **Complete Bids will not be accepted by FAX.**

**Email** - If using email as transmission, send them according to the following:

- Send scanned document to the email address: [roads.bidding@co.linn.or.us](mailto:roads.bidding@co.linn.or.us). Emails will be accepted only at this email address.
- In the subject line of the email, include the words "Modification to Bids for (Project Title)"
- The time of receipt of email by the County will be determined by the time which is electronically imprinted upon the email receipt of Bid changes received at the County email address.
- The Agency is not responsible for any failed or partial email transmissions of Bid changes, caused by whatever reason, mechanical failure or otherwise.
- **Complete Bids will not be accepted by email.**

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**LETTER FORMAT FOR MODIFYING BID**

(NOTE: Text shown as "italic-underline" are instructions for preparing the letter for modifying Bids.)

(Prepare on Bidders Letterhead Stationery)

(Bid Opening Date)

Attn: Darrin Lane, County Administrative Officer

Hand Delivery, Mail, or Parcel Delivery Service Address:

Linn County Courthouse  
300 Fourth Avenue S.W., Room 201  
Albany, Oregon 97321

SUBJECT: Modifications to Bid

(Project Title)

(Bidders Company Name)

**(For a decrease in a Bid amount: Copy and paste the following line for each Bid Item reduction.)**

Reduce Bid Item No. \_\_\_\_\_ by \$ \_\_\_\_\_ per \_\_\_\_\_ (Indicate unit of measurement, e.g., ton, cu. yd., sq. ft., etc.)

**(For an increase in a Bid amount: Copy and paste the following line for each Bid Item increase.)**

Increase Bid Item No. \_\_\_\_\_ by \$ \_\_\_\_\_ per \_\_\_\_\_ (Indicate unit of measurement, e.g., ton, cu. yd., sq. ft., etc.)

This will (increase/decrease) our total Bid by \$ \_\_\_\_\_. (Only show the total increase or decrease of your Bid. Do not show a new Bid total.)

\_\_\_\_\_  
(Printed name of individual signing below.)

\_\_\_\_\_  
(Signed by an individual authorized to sign Bids and execute documents.)

**SPECIAL PROVISIONS  
FOR HIGHWAY CONSTRUCTION**



**LINN COUNTY ROAD DEPARTMENT  
ALBANY, OREGON**

**COVERED BRIDGE REHABILITATION  
THOMAS CREEK, RICHARDSON GAP ROAD (SHIMANEK)**

**COVERED BRIDGE REHABILITATION**

**LINN COUNTY**

**JANUARY 18, 2022**

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**DESCRIPTION OF WORK**

COVERED BRIDGE REHABILITATION  
Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge  
Linn County

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**START DATE**

No work included in this contract shall begin prior to the Preconstruction Meeting. Other Job Site Restrictions may apply as shown in Section 00130.80 and 00180.40(b) of these Specifications.

**COMPLETION TIME LIMIT**

See Subsection 00180.50(h).

**CLASS OF PROJECT**

This is a County Project. Rural Major Collector

**CLASS OF WORK**

The Class of Work for this Project is Bridges and Structures.

**PROJECT INFORMATION**

Information pertaining to this Project may be obtained from the following:

Kevin Groom, P.E., Project Engineer, Linn County Road Department,  
3010 Ferry St, S.W., Albany, Oregon 97322; Phone 541-967-3919, Fax 541-924-0202.  
Email: kgroom@co.linn.or.us

Daineal Malone, P.E., County Engineer, Linn County Road Department,  
3010 Ferry St, S.W., Albany, Oregon 97322; Phone 541-967-3919, Fax 541-924-0202.  
Email: daineal.malone@co.linn.or.us

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

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**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**ASSIGNED DBE CONTRACT GOAL**

The minimum Assigned DBE Contract Goal for this Project is **0%**.

A Certification Directory of DBEs is available from the Certification Office of Business Inclusion and Diversity (COBID) website at:

<https://oregon4biz.diversitysoftware.com/FrontEnd/VendorSearchPublic.asp>

or by telephone at 503-986-0075.

**PROJECT WAGE RATES**

**Minimum Wage Requirements** - This Project is subject to State prevailing wage rate requirements. Not less than the applicable State prevailing wage rates shall be paid to workers according to 00170.65(b) and 00170.65(e).

**Applicable Wages** - Prevailing wage rates published in the wage determinations and any applicable modifications or amendments apply to this Project and are incorporated by reference:

Oregon Bureau of Labor and Industries (BOLI), "Prevailing Wage Rates for Public Works Contracts in Oregon".

The applicable State prevailing wage rates last published prior to the time of Bid Opening, which is stated on the Description of Work page, apply to this Project.

**Wage Rates are Internet-Accessible** - The applicable BOLI wage rates can be found on the Oregon Bureau of Labor and Industries website. (See 00110.05(e))

**Wage Rates are Subject to Change** - Modifications or amendments to the BOLI wage rates applicable to this Project may occur at any time before Bid Opening. Bidders are responsible to monitor the web page(s) for modifications and amendments up until Bid Opening.

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM INSTRUCTIONS**

The First-tier Subcontractor Disclosure Form is included in the Bid Section or can be downloaded from the County website listed in 00110.05(e).

**Instructions for Submitting Form**

Submit the First-Tier Subcontractor Disclosure form not later than two working hours after the time set for Bid Closing (For example, before 11:00 a.m. after a 9:00 a.m. Bid Closing.) by any of the following methods:

- By filling out the Subcontractor Disclosure Form included in the Bid Booklet and submitting it together with the Bid at the time designated for receipt of Bids.
- Hand delivering it to: The Linn County Courthouse, 300 Fourth Avenue S.W., Room 201, Albany, OR 97321, or
- FAX it to 541-924-0202
- Email to: [roads.bidding@co.linn.or.us](mailto:roads.bidding@co.linn.or.us)

The Department is not responsible for partial, failed, illegible, or partially legible email or FAX transmissions or electronic submissions.

**Instructions for First-Tier Subcontractor Disclosure**

Without regard to the amount of a Bidder's Bid, if the Agency's cost range for a public improvement Project in the "Notice to Contractors", or in other advertisement or solicitation documents is greater than \$100,000 Bidders are required to disclose information about first-tier Subcontractors that will furnish labor or labor and materials (See ORS 279C.370). Specifically, when the contract amount of a first-tier Subcontractor is greater than or equal to: (1) 5% of the total project Bid, but at least \$15,000, or (2) \$350,000 regardless of the percentage of the total project Bid, you must disclose the following information about that Subcontractor not later than two working hours after the time set for opening Bids:

- The name of the Subcontractor
- The category of work that the Subcontractor will be performing
- The dollar amount of the subcontract

Total all work for each Subcontractor in making this determination.

If the Agency's cost range is greater than \$100,000 and you will not be using any first-tier Subcontractors, you are still required to submit the form, with the appropriate box checked or enter "NONE" on the first line.

If the Agency's cost range is greater than \$100,000 and you are not subject to the above disclosure requirements, you are still required to submit the form, with the appropriate box checked or enter "NONE" on the first line.

**THE AGENCY MUST REJECT BIDS if the Bidder fails to submit the disclosure form with this information by the stated deadline.**

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

LINN COUNTY ROAD DEPARTMENT


SPECIAL PROVISIONS

FOR

COVERED BRIDGE REHABILITATION

Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Linn County

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

<p>Seal w/signature</p>  <p>Daineal Malone, PE</p> <p><small>Digitally signed by Daineal Malone, PE DN: cn=Daineal Malone, PE, o=Linn County Road Department, ou=County Engineer, email=daineal.malone@co.linn.or.us, c=US Date: 2021.12.16 15:53:29 -0800</small></p>	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for General Conditions, Environmental. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Sections 00100, 00110, 00120, 00130, 00140, 00150, 00160, 00165, 00170, 00180, 00190, 00195, 00196, 00197, 00199</p>
<p>Date Signed: <u>12/16/2021</u></p>	

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

LINN COUNTY ROAD DEPARTMENT

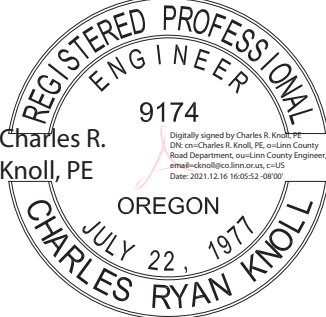
SPECIAL PROVISIONS

FOR

COVERED BRIDGE REHABILITATION

Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Linn County

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

<p>Seal w/signature</p>  <p>Expires: 6/30/23</p>	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for General Conditions, Environmental. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Sections 00245, 00280, 00290, 00294, 00296, 01030, 01040</p>
<p>Date Signed: <u>December 16, 2021</u></p>	

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

LINN COUNTY ROAD DEPARTMENT


SPECIAL PROVISIONS

FOR

COVERED BRIDGE REHABILITATION

Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Linn County

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

<p>Seal w/signature</p>  <p>Digitally signed by Kevin M. Groom Date: 2021.12.16 13:42:52 -08'00'</p> <p>Expires: 6/30/23</p>	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for Containment, Shimanek Covered Bridge, Earthwork and Painting. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Sections 00210, 00220, 00221, 00222, 00223, 00226, 00252, 00253, 00305, 00310, 00320, 00330, 00350, 00390, 00501, 00504, 00510, 00520, 00530, 00535, 00540, 00550, 00560, 00570, 00574, 00575, 00576, 00588, 00592, 00620, 00640, 00730, 00744, 00850, 00855, 00860, 00867, 00905, 00930, 00940, 02001, 02050, 02510, 02530, 02560, 02690</p>
<p>Date Signed: <u>12/16/2021</u></p>	

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**SPECIAL PROVISIONS**

**WORK TO BE DONE**

The Work to be done under this Contract consists of the following:

1. Construct temporary work bridge (if necessary)
2. Remove existing main span and set in staging area for rehabilitation work
3. Remove remaining spans and substructure
4. Construct new substructure and riprap scour protection
5. Rehabilitate main truss span
6. Construct new approach spans
7. Set rehabilitated main span on new piers
8. Install new deck system
9. Install new roof system
10. Install fall arrest anchors
11. Install new siding
12. Chemically fumigate existing truss
13. Install steel backed timber rail
14. Paint bridge and steel backed timber rail
15. Tune truss to desired camber
16. Construct approach roadways
17. Install pavement markings and signing
18. Perform additional and incidental work as called for by the Specifications and Plans

**APPLICABLE SPECIFICATIONS**

The Specifications that are applicable to the Work on this Project are the December 1, 2021 edition of the "General Conditions for Construction for the Linn County Road Department" and the 2021 edition of the "Oregon Standard Specifications for Construction", as modified by these Special Provisions. All Sections in Part 00100 apply, whether or not modified or referenced in the Special Provisions.

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

**CLASS OF PROJECT**

This is a County Project. Richardson Gap Road is a Rural Major Collector.

**SECTION 00100 - GENERAL CONDITIONS**

Comply with Section 00100 of the General Conditions for Construction for the Linn County Road Department modified as follows:

**SECTION 00110 - ORGANIZATION, CONVENTIONS, ABBREVIATIONS AND DEFINITIONS**

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

**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

## Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation Covered Bridge Rehabilitation

- Equipment Watch  
[www.equipmentwatch.com](http://www.equipmentwatch.com)
- Linn County Road Department Bidding documents  
[www.co.linn.or.us/Roads/ContractConst.asp](http://www.co.linn.or.us/Roads/ContractConst.asp) - Project Title
- Linn County Road Department Plan Holders' Registration  
[www.co.linn.or.us/Roads/Register.asp](http://www.co.linn.or.us/Roads/Register.asp)
- ODOT Office of Civil Rights  
[www.oregon.gov/ODOT/Business/OCR/Pages/Forms.aspx](http://www.oregon.gov/ODOT/Business/OCR/Pages/Forms.aspx)
- ODOT Construction Section  
[www.oregon.gov/odot/construction/pages/index.aspx](http://www.oregon.gov/odot/construction/pages/index.aspx)
- ODOT Construction Section - Qualified Products List (QPL)  
[www.oregon.gov/ODOT/Construction/Pages/Qualified-Products.aspx](http://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 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)
- Oregon Bureau of Labor and Industries (BOLI)  
[www.oregon.gov/boli/WHD/PWR/Pages/index.aspx](http://www.oregon.gov/boli/WHD/PWR/Pages/index.aspx)

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**SECTION 00120 - BIDDING REQUIREMENTS AND PROCEDURES**

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

**00120.05 Request for Plans, Special Provisions, and Bid Booklets** - Add the following to the end of this subsection:

The Plans, which are applicable to the Work to be performed under the Contract, bear title and date as follows:

Covered Bridge Rehabilitation  
Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Linn County Bridge No. BR0637-0070  
ODOT Bridge No. 12965  
January 2022

**SECTION 00130 - AWARD AND EXECUTION OF CONTRACT**

Comply with Section 00130 of the Standard Specifications.

**SECTION 00140 - SCOPE OF WORK**

Comply with Section 00140 of the Standard Specifications.

**SECTION 00150 - CONTROL OF WORK**

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

Add the following subsection:

**00150.50(f) Utility Information (No Anticipated Relocations)** - Within the Project limits, there are no anticipated relocations with the Utilities listed in Table 00150-1. The Contractor shall contact those Utilities having buried facilities and request that they locate and mark them for their protection prior to construction.

**Table 00150-1**

<b>Utility</b>	<b>Contact Person's Name and Phone Number</b>
Scio Mutual Telephone	Duane Toewes, (503) 394-3366
Pacific Power	Dan Miles, (503) 813-5782

The Contractor shall notify, in writing, the Utilities listed above, with a copy to the Engineer, at least 14 Calendar Days before beginning Work on the Project.

**Pacific Power - Power Suppliers** - Energized power lines overhang portions of the Work with a minimum vertical clearance of 18 feet. The Contractor shall maintain at least 10 feet of safety clearance. Exceptions require written approval from the Power Supplier(s) and may require an on-site safety watcher, at no cost to the Contractor. The Contractor shall provide the Engineer a copy of the written approval of exception before beginning Work.

The Contractor shall coordinate with Pacific Power to perform crane related activities including: bridge removal, pile driving, slab setting, moving of the truss, or any other activities with the potential of coming within 18 feet of the overhead lines.



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The Contractor shall notify the Power Supplier(s) in writing, with a copy to the Engineer, at least 14 Calendar Days before beginning Work within 10 feet of the power line(s).

**Scio Mutual Telephone - Telecommunication Utilities** - The Contractor shall obtain written approval from Telecommunication Utilities that have fiber optic communication cable facilities, for excavating within 10 feet of a buried fiber optic communications cable. Telecommunication Utilities may require an on-site safety representative at no cost to the Contractor for monitoring purposes. The Contractor shall provide the Engineer a copy of the written approval before beginning Work.

The Contractor shall notify, in writing, Scio Mutual Telephone at least 4 weeks before beginning excavation or pile driving within 10 feet of Scio Mutual Telephone buried lines.

**SECTION 00160 - SOURCE OF MATERIALS**

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

**SECTION 00165 - QUALITY OF MATERIALS**

Comply with Section 00165 of the Standard Specifications.

**SECTION 00170 - LEGAL RELATIONS AND RESPONSIBILITIES**

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

**00170.70(a) Insurance Coverages** - Add the following to the end of this subsection:

The following insurance coverages and dollar amounts are required pursuant to this subsection:

<b>Insurance Coverages</b>	<b>Combined Single Limit per Occurrence</b>	<b>Annual Aggregate Limit</b>
Commercial General Liability	\$2,000,000	\$4,000,000
Commercial Automobile Liability	\$1,000,000	(aggregate limit not required)
Employee Liability	\$1,000,000	(aggregate limit not required)
*Pollution Liability	\$1,000,000	(aggregate limit not required)

\*With Lead Liability Endorsement or separate coverage

**00170.70(d) Additional Insured** - Add the following paragraphs to the end of this section:

The liability insurance coverage, except Professional Liability, Errors and Omissions, or workers' Compensation, if included, required for performance of the resulting contract will include State and its divisions, officers and employees as Additional Insured but only with respect to the Contractor's activities to be performed under the resulting contract. Coverage shall be primary and non-contributory with any other insurance and self-insurance.

**00170.70(f) Notice of Cancellation or Change** – Add the following paragraphs to the end of this section:

There shall be no cancellation, material change, potential exhaustion of aggregate limits or non-renewal of insurance coverage(s) without thirty (30) days written notice from the Contractor or its insurer(s) to State. Any failure to comply with the reporting provisions of this clause shall constitute

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a material breach of the resulting contract and shall be grounds for immediate termination of the resulting contract and this Agreement.

**00170.70(g) Certificate(s) of Insurance** – Replace the bullet that begins “List the “State of Oregon, the Oregon Transportation...” with the following bullet:

- List the “State of Oregon, the Oregon Transportation Commission and the Department of Transportation, and their respective officers, members, agents and employees” as a Certificate holder and endorse as an Additional Insured;

**00170.72 Indemnity/Hold Harmless** - Add the following paragraph to the end of this subsection:

The Contractor(s) and subcontractor(s) shall indemnify, defend, save and hold harmless the State of Oregon, Oregon Transportation Commission and its members, Oregon Department of Transportation and its officers, employees and agents from and against any and all claims, actions, liabilities, damages, losses, or expenses, including attorneys' fees, arising from a tort, as now or hereafter defined in ORS30.260 (Claims), to the extent such Claims are caused, or alleged to be caused by the negligent or willful acts or omissions of Agency's contractor or any of the officers, agents, employees or subcontractors of the contractor. It is the specific intention of the Parties that State shall, in all instances, except to the extent Claims arise from the negligent or willful acts or omissions of the State, be indemnified from and against all Claims caused or alleged to be caused by the contractor or subcontractor.

Any such indemnification shall also provide that neither Agency's contractor and subcontractor nor any attorney engaged by Agency's contractor and subcontractor shall defend any claim in the name of the State of Oregon or any agency of the State of Oregon, nor purport to act as legal representative of the State of Oregon or any of its agencies, without the prior written consent of the Oregon Attorney General. The State of Oregon may, at any time at its election assume its own defense and settlement in the event that it determines that Agency's contractor is prohibited from defending the State of Oregon, or that Agency's contractor is not adequately defending the State of Oregon's interests, or that an important governmental principle is at issue or that it is in the best interests of the State of Oregon to do so. The State of Oregon reserves all rights to pursue claims it may have against Agency's contractor if the State of Oregon elects to assume its own defense.

**00170.79 Third Party Beneficiary** – Replace this subsection, except for the subsection number and title, with the following:

Contractor; and Agency shall name State as a third party beneficiary of the resulting contract.

Contractor shall indemnify, defend and hold harmless State from and against all claims, suits, actions, losses, damages, liabilities, costs and expenses of any nature whatsoever resulting from, arising out of, or relating to the activities of Contractor or its officers, employees, sub-contractors, or agents under the resulting contract.

### **SECTION 00180 - PROSECUTION AND PROGRESS**

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

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:

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<b>Limitations</b>	<b>Subsection</b>
Cooperation with Utilities .....	00150.50
Contract Time .....	00180.50(h)
Regulated Work Areas .....	00290.34(a)
Noise Control .....	00290.32

The Contractor shall be aware of and subject to schedule limitations in the Standard Specifications that are not listed in this subsection.

Add the following subsection:

**00180.50(h) Contract Time** - There is one Contract Time on this Project as follows:

The Contractor shall complete all Work to be done under the Contract no later than October 31, 2022.

**00180.85(b) Liquidated Damages** - Add the following to the end of this subsection:

The liquidated damages for failure to complete the Work on time required by 00180.50(h) will be \$1,180 per Calendar Day \*.

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

**SECTION 00190 - MEASUREMENT OF PAY QUANTITIES**

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

**SECTION 00195 - PAYMENT**

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

**00195.12(d) Steel Materials Pay Item Selection** - Add the following paragraph to the end of this subsection:

No Pay Items under this Contract qualify for the steel escalation/de-escalation program for this Project.

**SECTION 00196 - PAYMENT FOR EXTRA WORK**

Comply with Section 00196 of the Standard Specifications.

**SECTION 00197 - PAYMENT FOR FORCE ACCOUNT WORK**

Comply with Section 00197 of the Standard Specifications.

**SECTION 00199 - DISAGREEMENTS, PROTESTS, AND CLAIMS**

Comply with Section 00199 of the Standard Specifications.

**SECTION 00210 - MOBILIZATION**

Comply with Section 00210 of the Standard Specifications.

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**SECTION 00220 - ACCOMMODATIONS FOR PUBLIC TRAFFIC**

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

**00220.03(b) Closures** - Add the following to the end of the Section:

The “SHIMANEK COVERED BRIDGE CLOSED (DATE) TO (DATE)” signs shall be installed for a minimum period of 14 Calendar Days prior to the road closure.

**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 Richardson Gap Road no earlier than 7 calendar days prior to substantial work on the project commences.

Add the following subsection:

**00220.42 Bridge Site Road Closure** - Close the road to traffic at the Bridge site during reconstruction of the Bridge. Do not close the road until all Materials and Equipment are on hand or guaranteed to be delivered so that the Work can be done in an efficient manner with a minimum period of road closure.

The road closure will not be allowed until the area and the detour route are signed according to the TCP and the requirements of Section 00221 and Section 00222.

Add the following subsection:

**00220.45 Load Restrictions on Bridges** - Limit the combined weight of Equipment, vehicles, and supplies placed in a closed Traffic Lane or Shoulder on the Bridge according to 00253.46.

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

Comply with Section 00221 of the Standard Specifications.

**SECTION 00222 - TEMPORARY TRAFFIC CONTROL SIGNS**

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

**00222.80 Measurement** – Replace this section with the with the following:

No measurement will be made for the payment of temporary signs. Temporary signs will be considered incidental to Temporary Work Zone Traffic Control (Section 00221).

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

Comply with Section 00223 of the Standard Specifications.

**00223.31(b) Traffic Control Inspection Without TCS** - Replace the bullet that begins “Prepares and signs a daily “Traffic Control Inspection Report”...” with the following bullet:

- Prepares and signs a “Traffic Control Inspection Report” (Form No. 734-2474) upon the initial installation of TCM and each working day when any modification, removal, or reinstallation of TCM are made, or as directed by the Engineer. Submit completed reports to the Engineer no later than the end of the next working day.

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

Comply with Section 00226 of the Standard Specifications modified as follows:

**00226.80 Measurement** – Replace this section with the with the following:

No measurement will be made for the payment of water filled barriers. Water filled barriers will be considered incidental to Temporary Work Zone Traffic Control (Section 00221).

**SECTION 00245 - TEMPORARY WATER MANAGEMENT**

Section 00245, which is not a Standard Specification, is included in this Project by Special Provision.

**Description**

**00245.00 Scope** - This Work consists of furnishing, installing, operating, maintaining, and removing temporary water management facilities in regulated Work areas.

**00245.01 Abbreviations:**

**TWM** - Temporary Water Management  
**TWMF** - Temporary Water Management Facility  
**TWMP** - Temporary Water Management Plan

**00245.02 Definitions:**

**Temporary Water Management Facility** - A TWMF that conveys water around or through Work areas, removes water from Work areas, and treats and discharges water at locations outside Work areas.

**00245.03 Temporary Water Management Plan** - The Agency TWMP is a concept plan. 28 Calendar Days before beginning Work in regulated Work areas, submit stamped Working Drawings of a Contractor-developed TWMP, according to 00150.35, based on either the Agency's concept plan or an independent plan that meets water quality, environmental guideline requirements and permit requirements, and does not negatively affect neighboring properties or water rights.

Permits which include permit and environmental guideline requirements applicable to this project are listed under 00290.00.

As provided, permits have been provided to allow for temporary water management which is anticipated for installation and removal of temporary piling for the temporary work bridge.

Include the following minimum information in the TWMP:

- The sequence and schedule for dewatering and re-watering. This sequence and schedule must include when to contact the Engineer prior to dewatering and re-watering.
- How the Work area is isolated from the active stream flow upstream, through, and downstream.
- How the stream flow is routed and conveyed around or through the isolated Work area.
- How fish passage is provided around the Work area, if required.
- How the isolated Work area is de-watered, if required
- How the pumped water is treated, if necessary, before it is discharged downstream.
- Description of all construction stages, including appropriate contact points for each stage.
- A list of on-site backup Materials and Equipment.

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- Provide the name of the TWM Subcontractor (if applicable) and Contractor's superintendent, and their 24-hour contact phone number 10 Days before the pre-Work meeting. If changes in the appointment of the TWM Subcontractor or Contractor's superintendent occur during the term of the Contract, provide written notice to the Engineer within 5 Calendar Days of the change.
- Calculations of water withdraw pump's capacity.
- Details of the proposed water intake screen used to isolate in-water Work area and how it meets the requirements of 00290.34(c)(3).

Any change to the TWMP during construction requires approval prior to implementation.

Obtain the Engineer's written approval before beginning Work in in-water Work areas.

**00245.04 Pre-Work Meeting** - Before beginning any TWM Work, attend a pre-work meeting at the Project Site with the Engineer no more than 8 Calendar Days prior to implementation of TWM. Required meeting attendees include:

- Engineer
- Contractor
- TWM Subcontractor (if applicable)
- Agency Environmental Coordinator or their appointed representative

The pre-Work meeting agenda typically includes the method of TWM, the TWMP, fish salvage plan and strategy, describe environmental risks, turbidity monitoring, energy dissipation, dewatering and re-watering plan and strategy, site clean-up expectations, and the circumstances under which contacting the Engineer is required.

### Materials

**00245.10 Materials** - Furnish Materials meeting the following requirements:

Sandbags .....	00820.15(a)
Water Intake Screening.....	00290.34(a)
Plastic Sheeting.....	00280.14(a)

Furnish pumps that are:

- Self-priming.
- Equipped with a variable speed governor.
- Equipped with a power source.
- Able to pump water that contains soft and hard solid.

### Construction

**00245.40 Fish Removal** – As designed and permitted, fish removal is not anticipated for this project. If necessary, the Agency will remove fish and aquatic life from the isolated work areas. Coordinate fish removal with the Engineer at least 28 Calendar Days before beginning Work in regulated Work areas. Allow access into the isolation Work areas before, during and after installation of the TWMP to perform the specified tasks as follows:

- **Before Installation of TWMP** - Before any in-water Work, including installing TWMP, qualified personnel will remove fish and other native aquatic organisms from within the proposed isolated Work area.

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- **After Installation of TWMF** - After installing TWMF and the reduction of the water level through the isolated Work area has begun, qualified personnel will remove all fish and aquatic organisms as the water level is reduced. Do not completely de-water the isolation area until all fish and aquatic organisms have been removed.

**00245.41 Installation** - During installation of the temporary water management facility, maintain a downstream water flow rate of at least 50 percent of the upstream water flow rate.

**00245.42 Operation** - Operate temporary water management as follows:

- Protect fish and fish habitat according to 00290.34.
- Maintain and control water flow downstream of the isolated Work area for the duration of the diversion to prevent downstream de-watering.
- Clean, maintain and repair water intake screening to ensure adequate flows and protection of aquatic organisms.

### **Maintenance**

**00245.60 Maintenance** - Monitor water turbidity according to 00290.30(a)(8).

### **Finishing and Cleaning Up**

**00245.70 Removal** - Remove the TWMF and re-water and restore the stream flow when approved by the Engineer. Maintain downstream water flow during removal of the facility.

### **Measurement**

**00245.80 Measurement** - No measurement of quantities will be made for temporary water management facilities. Sandbags and plastic sheeting will be considered incidental to temporary water management.

Turbidity monitoring will be measured according to 00290.80.

### **Payment**

**00245.90 Payment** - Temporary water management will be incidental to the cost of the project.

No separate or additional payment will be made for TWMP, maintaining, operating, monitoring, moving, or removing the facility.

## **SECTION 00252 - TEMPORARY WORK BRIDGES**

Section 00252, which is not a Standard Specification, is included in this Project by Special Provision.

### **Description**

**00252.00 Scope** - This Work consists of designing (if applicable), constructing, maintaining, and removing temporary work bridges or trestles necessary to construct the new structure.

### **Materials**

**00252.10 Material** - Provide materials for temporary work bridges or trestles meeting the requirements of the applicable Sections of Part 00500.

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## Construction

**00252.40 Construction** - Provide stamped Working Drawings and calculations of the work bridges or trestles according to 00150.35.

Design work bridges or trestles according to AASHTO *Guide Design Specifications for Bridge Temporary Works*.

Construct work bridges or trestles at the locations shown and according to AASHTO *Construction Hand Book for Bridge Temporary Works*.

Construct the work bridges or trestles so they satisfy all the requirements of applicable permitting agencies.

As provided in the permits and requirements, there are specific requirements as it pertains to temporary work bridges. The permits also indicate that in-water work for constructing, using and removal of a work bridge may occur from May 1 to November 15. All other in-water work is to be completed between July 15 and September 1.

## Maintenance

**00252.60 Maintenance** - Maintain work bridges or trestles in a safe and functional condition.

Provide and place suitable approved barriers on or near the work bridges or trestles to prevent public access.

## Finishing and Cleaning Up

**00252.70 Structure Removal** - When the temporary work bridges or trestles are no longer needed, remove them according to Section 00310.

Satisfy all requirements of applicable permitting agencies during work bridge or trestle removal.

Restore all areas occupied by the work bridges or trestles to original condition.

## Measurement

**00252.80 Measurement** - No measurement of quantities will be made for Work performed under this Section.

## Payment

**00252.90 Payment** - The accepted quantities of Work performed under this Section will be paid for at the Contract lump sum amount for the item "Temporary Work Bridges".

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.

No separate or additional payment will be made for designing, constructing, maintaining, or removing temporary work bridges.



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## SECTION 00253 - TEMPORARY WORK ACCESS AND CONTAINMENT

Comply with Section 00253 of the Standard Specifications modified as follows:

**00253.00 Scope** - Add the following paragraph to the end of this subsection:

On Structure No. 12965, provide temporary work access and containment for rehabilitation work on the main span (Span 2), and the replacement of the approach spans (Spans 1, 3 & 4).

**00253.03 Submittals** - Add the following bullet to the end of the bullet list:

- Stamped calculations showing that equipment, vehicles, and supplies placed in a closed lane do not exceed 30 tons.

Add the following subsection:

**00253.09 Work Platform, Scaffolding and Containment Structural Design Requirements** -

Design work platforms, scaffolding, and containment structures for dead load, live load, and wind load with a basic wind speed of 72 mph, applied in the most critical direction. For structures with fundamental frequency less than 1 Hz, design for wind loads accounting for structural dynamic effects.

Provide designs with a factor of safety of at least six for wire ropes and connecting hardware and at least four for all other components for containment structure and work platform components.

Verify structural adequacy of the bridge with added loading from containment structures and work platforms using AASHTO *Standard Specifications for Highway Bridges*, Group II, III, V, and VI load combinations.

For containment structures positioned on Span 2, design calculations for the bridge structural members are not required if all of the following conditions are satisfied:

- Total combined live load and dead load of all work platforms and containment structures supported by the span, including all personnel, equipment, materials, and collected debris or water, does not exceed 15 pounds per square foot.
- Point loads do not exceed 1,000 pounds at each point and point loads are spaced at least 15 feet in both horizontal directions. Point loads are applied to deck within one foot of a girder, cross beam, or diaphragm, or directly to a girder, cross beam or diaphragm.
- Containment and work platforms do not extend more than 6.0 feet below bottom of existing structure or Elevation 357.0 unless approved by the Engineer. This will provide 7 feet of clearance above OHW for passage under the bridge with water vessels and recreational vessels.
- Any temporary structures in place over winter months must have soffit elevations above the 100 year flood elevation shown on the project plans.

For movable containment structures, provide positive restraint to prevent movement except when containment structures are being relocated.

If removal of containment walls is used to comply with projected area limits at high wind speed, removal is required when actual wind speed or predicted wind speed exceeds allowable limits. 24-hour weather watch is required during non-work times. Predicted wind speeds are obtained from:

[forecast.weather.gov/MapClick.php?lat=44.71756&lon=-122.69225&unit=0&lg=english&FcstType=graphical](http://forecast.weather.gov/MapClick.php?lat=44.71756&lon=-122.69225&unit=0&lg=english&FcstType=graphical)

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Actual wind speeds are measured using a handheld wind speed measuring instrument with certified accuracy 3% of reading.

Add the following subsection:

**00253.46 Staging Area** – Staging shall occur in the areas shown on the project plans. No staging shall occur on the bridge.

All staging areas shall be returned to original or better condition.

**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. A copy of the General Construction Permit, NPDES 1200CA, is available at the Linn County Road Department, 3010 Ferry Street, SW, Albany, Oregon 97322, and will also be made available, on site for review, by the Linn County Road Department inspector.

Permit and environmental guideline requirements will also be followed for this project.

The following permits which include permit and environmental guidelines requirements are referenced as follows:

- Oregon Department of State Lands Permit No. 63365-GP dated September 7, 2021
- U. S. Army Corps of Engineers Permit No NWP-2-21-305 dated August 16, 2021
- U. S. Army Corps of Engineers Approval of In-water Work Extension – Memo dated September 27, 2021
- Application of Approved In-water work Variance Request – Application dated 09/17/2021
- Linn County’s 1200CA Permit

**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.

**00280.91 Payment** - Add the following to the end of this subsection:

Add the following pay item at the end of the Sediment Control pay item list:

(p) Floating Silt Curtain..... Foot

Add the following paragraph to the end of the subsection:

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For item (p), no separate or additional payment will be made for construction laps, seams, joints, wraps, overlaps, joint overlaps, or patches unless the Engineer orders additional amounts in excess of the minimum. For laps, wraps, or overlaps that have been ordered by the Engineer and exceed the minimum or specified length or width, payment will be made for the added lap, overlap, or wrap length or width at the Contract unit price.

### **SECTION 00290 - ENVIRONMENTAL PROTECTION**

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

**00290.00 Scope** – Add the following paragraph to the end of this section:

Permit and environmental guideline requirements will be followed for this project.

The following permits have been obtained for this project which include specific permit and environmental guidelines requirements for this project in addition to those provided by Section 00290 are referenced as follows:

- Oregon Department of State Lands Permit No. 63365-GP dated September 7, 2021
- U. S. Army Corps of Engineers Permit No NWP-2021-305 dated August 16, 2021
- U. S. Army Corps of Engineers Approval of In-water Work Extension – Memo dated September 27, 2021
- Application of Approved In-water work Variance Request – Application dated 09/17/2021

Inspect and clean all equipment prior to operating it within 150 feet of the Regulated Work Area. Check all equipment for fuel leaks.

Maintain hazardous material containment kits and spill containment kits on-site to facilitate the cleanup of hazardous material spills for both dry-land spill and spills that could reach nearby waterways. Install hazardous material containment kits in instances where there is a potential for release of petroleum or other toxicants.

**00290.10 Staging and Disposal Sites** – Add the following to this subsection:

All treated timbers removed from the bridge and project site shall be disposed at a solid waste landfill permitted by DEQ to receive the material. The Linn County Road Department permit will be used to dispose treated timbers at Coffin Butte Landfill, located north of Corvallis, Oregon. The treated timbers shall be transported to and disposed of at this landfill.

Construction staging will be limited to the paved road and gravel shoulder surface of the existing Richardson Gap Drive Roadway and within the right of way and construction easement shown on the plans.

No other sites may be used on this project. Delineate the limits of the site with orange plastic mesh fencing from the QPL for the duration of the Project. Remove the fencing when the project is complete and the site has been restored to preconstruction conditions.

Restore the site by:

- Removing all imported fabric, rock, and other construction debris
- Smoothing the ground
- Reseeding all disturbed earth.

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**00290.20(c)(2) Clean Fill** - Add the following paragraph to the end of this subsection:

Manage all excavated soil according to Section 00294.

Add the following subsection:

### **00290.30(a)(7) Water Quality:**

- Do not discharge any water, including drilling fluids and waste, or water contained within a work area isolation, directly into any waters of the State or U.S. until it has been satisfactorily treated (using a best management practice such as a filter, settlement pond, bio-bag, dirt-bag, or pumping to a vegetated upland location).
- Do not use permanent stormwater quality treatment facilities to treat construction runoff unless prescribed by an ESCP approved under Section 00280
- If construction discharge water is released using an outfall or diffuser port, do not exceed velocities more than 4 feet per second, and do not exceed an aperture size of 1 inch.
- Do not use explosives under water.
- Implement containment measures adequate to prevent pollutants or construction and demolition materials, such as waste spoils, fuel or petroleum products, concrete cure water, silt, welding slag and grindings, concrete saw cutting by-products and sandblasting abrasives, from entering waters of the State or U.S.
- Implement containment measures adequate to prevent flowing stream water from coming into contact with concrete or grout within the first 24 hours after placement.
- Do not end-dump riprap into the waters of the State or U.S. Place riprap from above the ordinary high water line.
- Cease Project operations under high flow conditions that may result in inundation of the Project area, except for efforts to avoid or minimize resource damage.
- The Engineer retains the authority to temporarily halt or modify the Work in case of excessive turbidity or damage to natural resources.
- If Work activities violate permit conditions or any requirement of this subsection, stop all in-water work activities and notify the Engineer.

**00290.30(a)(8) Meter Turbidity Monitoring** - In addition to any turbidity monitoring required by 00280.62(c) to comply with NPDES 1200 series requirements, monitor turbidity using a turbidity meter every two hours during in-water work according to the following:

- Use a turbidity meter that has been maintained and calibrated according to the manufacturer's specifications.
- Measure stream turbidity before beginning each day's in-water work to establish pre-construction turbidity levels.
- Measure upcurrent and downcurrent turbidity at two-hour intervals during in-water work and perform work based on turbidity measurements according to the following:
  - Take upcurrent samples at a location representative of background turbidity approximately 100 feet from the in-water work area.
  - Take downcurrent samples at a location approximately 100 feet from the in-water work area at approximately mid-depth of the water body and within any visible turbidity plume.
  - If the downcurrent reading is less than 5 nephelometric turbidity units (NTU) higher than the upcurrent reading, continue to work and take readings every two hours.

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- If the downcurrent reading is greater than or equal to 5 and less than 30 NTU higher than the upcurrent reading, modify work procedures and repair or implement best management practices (BMP), continue work, and continue to take readings every two hours. If after four hours the downcurrent reading is still greater than or equal to 5 NTU higher than the upcurrent reading, stop all in-water work and repair or implement additional BMP. Resume in-water work activities only after the downcurrent reading is less than 5 NTU above the upcurrent reading.
- If the downcurrent reading is greater than or equal to 30 and less than 50 NTU higher than the upcurrent reading, modify work procedures, repair or implement BMP and continue work. If, at the subsequent two-hour reading, the downcurrent reading is still more than 30 NTU higher than the upcurrent reading, stop all in-water work and repair or implement additional BMP. Resume in-water work activities only after the downcurrent reading is less than 5 NTU above the upcurrent NTU reading.
- If the downcurrent reading is 50 NTU or more higher than the upcurrent reading, stop all in-water work, repair or implement additional BMP, and inform the Agency. Resume in-water work activities only after the downcurrent reading is less than 5 NTU above the upcurrent NTU, as determined by continued readings made at least every two hours, or the next day's initial turbidity reading.
- Document all turbidity monitoring observations on form 734-2755, "Turbidity Monitoring Report", or another form approved by the Agency. Submit reports to the Engineer weekly during in-water work and keep copies of the reports at the Project Site.

**00290.32 Noise Control** – Replace the first bullet with the following:

- Do not perform construction operations, including staging, within 1000 feet of any occupied dwelling unit on Sundays, legal holidays and between the hours of 8:00 P.M. and 7:00 A.M. on weekdays and between the hours of 8:00 P.M. and 8:00 A.M. on Saturdays, unless otherwise approved by the Engineer.

**00290.34 Protection of Fish and Fish Habitat** - Add the following paragraph:

Meet with the Agency Engineer, Project Manager, and inspector on site, before moving equipment on-site or beginning any work, to ensure that all parties understand the locations of sensitive biological sites and the measures that are required to be taken to protect them.

**00290.34(a) Regulated Work Areas** - Add the following to the end of this subsection:

The regulated work area is the area at or below the ordinary high water (OHW) elevation shown on the plans.

Perform work within the regulated work area only during the in-water work period. The in-water work period is from July 15<sup>th</sup> to August 31<sup>st</sup>.

The total volume of material filled or discharged into waters of the State and waters of the U.S. shall not exceed 131.5 cubic yards.

The total volume of material excavated from the waters of the State and waters of the U.S. shall not exceed 131.5 cubic yards.

Submit a schedule to complete all work within the regulated work area within the in-water work period at least 10 days prior to the preconstruction conference.

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An extended in-water work period has also been obtained by permits from the U S Army Corps of Engineers for placement of piling associated with construction of the temporary work bridge. This extended in-water work period is from May 1 to November 15.

**00290.34(b) Prohibited Operations** - Add the following to the end of this subsection:

- Allow entry within the regulated work area.
- Install steel piles greater than 24 inches in diameter or H-pile larger than designation HP 24 within the regulated work area.

Add the following subsection:

**00290.34(c) Aquatic Species Protection Measures Required by Environmental Permits:**

**(1) General Requirements:**

- Do not install fish ladders (for example: pool and weirs, vertical slots, fishways) or fish trapping systems.
- Do not apply surface fertilizer within 50 feet of any stream channel.

Use heavy equipment as follows:

- Choice of equipment must have the least adverse effects on the environment (for example: minimally sized, low ground pressure).
- Secure absorbent material around all stationary power equipment (for example: generators, cranes, drilling equipment) operated within 150 feet of wetlands, waters of the State, waters of the U. S., drainage ditches, or water quality facilities to prevent leaks, unless suitable containment is provided to prevent spills from entering waters of the State or waters of the U.S.
- Do not cross directly through a stream for construction access, unless shown or approved. If shown or approved, cross perpendicular to the stream and do not block stream flow. When a crossing is no longer needed, completely remove the crossing and restore the soils and vegetation to the original condition.
- Store fuel and maintain all equipment in staging areas that are at least 150 feet away from any waters of the State, waters of the U.S., or storm inlet or on an impervious surface that is isolated from any waters of the State, waters of the U.S., or storm inlet.
- If temporary access roads are needed within 150 feet of any body of water, use existing routes unless new routes are shown or approved.
- Before beginning work on temporary access routes that are not shown, submit a proposal to the Engineer for approval.

**(2) Work Area Isolation** - Provide work isolation according to Section 00245. Provide safe passage around or through the isolated work area for adult and juvenile migratory fish unless passage did not previously exist.

**(3) Water Intake Screening** - Install, operate, and maintain fish screens on each water intake used for project construction, including pumps used to isolate an in-water work area. When drawing or pumping water from any stream, protect fish by equipping intakes with screens having a minimum 27 percent open area and meeting the following requirements:

- Perforated plate openings shall be 3/32 inch or smaller.
- Mesh or woven wire screen openings shall be 3/32 inch or smaller in the narrowest direction.
- Profile bar screen or wedge wire openings shall be 1/16 inch or smaller in the narrow direction.

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Choose size and position of screens to meet the following criteria in Table 00290-1:

**Table 00290-1**

Type	Approach Velocity <sup>1</sup> (Ft./Sec.)	Sweeping Velocity <sup>2</sup> (Ft./Sec.)	Wetted Area of Screen (Sq. Ft.)	Comments
Ditch Screen	≤ 0.4	Shall exceed approach velocity	Divide max. water flow rate (cfs) by 0.4 fps	If screen is longer than 4 feet, angle 45° or less to stream flow
Screen with proven self-cleaning system	≤ 0.4	–	Divide max. water flow rate (cfs) by 0.4 fps	–
Screen with no cleaning system other than manual	≤ 0.2	–	Divide max. water flow rate (cfs) by 0.2 fps	Pump rate 1 cfs or less
<sup>1</sup> Velocity perpendicular to screen face at a distance of approximately 3 inches <sup>2</sup> Velocity parallel to screen				

Provide ditch screens with a bypass system to transport fish safely and rapidly back to the stream.

**(4) Site Restoration** - Restore damaged streambanks to a natural slope, pattern, and profile suitable for establishment of permanent woody vegetation unless precluded by pre-project conditions (for example: natural rock substrate):

- Replant all damaged streambanks before the first April 15 following construction.
- If use of large wood, native topsoil, or native channel material is required for the site restoration according to the roadside development plans, stockpile all large wood, native vegetation, weed-free topsoil, and native channel material displaced by construction. Cut trees or large wood and trees into pieces of no less than 20 feet in length, or as shown on the roadside development plans or as directed. Stockpiled native wood and vegetation remain the property of the Agency.
- Stabilize all disturbed soils, including obliteration of temporary access roads, following any break in work unless construction will resume in 4 Calendar Days.

**(5) Surface Water Diversions** - Surface water may be diverted to meet construction needs other than work area isolation, consistent with Oregon law, only if water from sources that are already developed, such as municipal supplies, small ponds, reservoirs, or tank trucks, is unavailable or inadequate, and meeting the following conditions:

- When alternative surface sources are available, divert from the stream with the greatest flow.
- Install, operate, and maintain a temporary fish screen.
- Do not exceed a pumping rate and volume of 10 percent of the available flow. For streams with less than 5 cubic feet per second, do not exceed drafting of 18,000 gallons per day. Do not use more than one pump for each site.

**(6) Hydro-Acoustic** - Unless otherwise shown or approved, steel piling may be installed below the ordinary high water as follows:

- Minimize the number and diameter of pilings, as feasible.

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- Repairs, upgrades, and replacement of existing pilings consistent with these conditions are allowed. In addition, up to 5 single pilings or 1 dolphin consisting of 3 to 5 pilings may be added to an existing facility.
- Whenever feasible, use vibratory hammer for piling installation. Otherwise, use the smallest drop or impact hammer necessary to complete the job, and set the drop height to the minimum necessary to drive the piling.
- For all pile installed or removed, maintain a pile installation and removal log and submit the log when the related work is completed. Include types, sizes, locations, installation or removal methods, and dates in the log.
- Requirements indicated in permits obtained for this project shall be followed.
- When using an impact hammer to drive or proof steel piling within a body of water, or as directed, use one of the following sound attenuation devices to effectively dampen sound:
  - Completely isolate the pile from the waters of the State and waters of the U.S. by dewatering the area around the pile according to Section 00245.
  - If water velocity is 1.6 feet per second or less, surround the pile being driven with a bubble curtain that distributes small air bubbles around 100 percent of the piling perimeter for the full depth of the water column and is in accordance to the guidance in the Appendix of The ODOT-FHWA Federal Aid Highway Program Programmatic User's Guide titled *NMFS and USFWS Impact Pile Driving Sound Attenuation Specifications*. The FAHP User's Guide is available on the Agency's website at:

<https://www.oregon.gov/ODOT/GeoEnvironmental/Pages/Manuals.aspx>

- If water velocity is greater than 1.6 feet per second, surround the piling being driven by a confined bubble curtain (for example: a bubble ring surrounded by a fabric or metal sleeve) that will distribute air bubbles around 100 percent of the piling perimeter for the full depth of the water column and is in accordance to the guidance in the Appendix of The ODOT-FHWA FAHP User's Guide titled *NMFS and USFWS Impact Pile Driving Sound Attenuation Specifications*.

### **(7) Drilling, Boring, or Jacking** - If drilling, boring, or jacking is used, the following conditions apply:

- Design, build, and maintain facilities to collect and treat all construction and drilling discharge water using the best available technology applicable to site conditions. Provide treatment to remove debris, nutrients, sediment, petroleum hydrocarbons, metals, and other pollutants likely to be present. An alternate to treatment is collection and proper disposal offsite.
- Isolate drilling operations from wetted stream to prevent drilling fluids from contacting waters of the State or waters of the U.S.
- Use casing to prevent loss of drilling fluid to the subsurface formation. Do not drill without a containment method to keep drilling fluids and slurry isolated.
- If it is necessary to drill through an over-water bridge deck, use containment measures to prevent drilling debris from entering the stream channel.
- If drilling fluid or waste is released to surface water, wetland or other sensitive environment, cease all drilling pending written approval from appropriate regulatory agencies through the Project Manager to resume drilling.
- Recover all waste and spoils if precipitation is falling or imminent. Recover, recycle, or dispose of all drilling fluids and waste to prevent entry into flowing water.
  - Recycle drilling fluids using a tank instead of drill recovery/recycling pits, whenever feasible.



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- When drilling is completed, make attempts to remove the remaining drilling fluid from the sleeve (for example: by pumping) to reduce turbidity when the sleeve is removed.

**(8) Treated Wood** - Treated wood includes any wood treated with any pesticide or wood preservatives. Do not use lumber, pilings, or other wood products that are treated or preserved with pesticidal compounds below the ordinary high water (OHW) or as part of an in-water or over-water structure, except as described below:

- Store treated wood shipped to the Project out of contact with standing water and wet soil, and protected from precipitation.
- Visually inspect each load and piece of treated wood. Reject for use in or above aquatic environments if visible residues, bleeding of preservative, preservative-saturated sawdust, contaminated soil, or other matter is present.
- Use pre-fabrication to the extent feasible. When field fabrication is necessary, all cutting and drilling of treated wood, and field preservative treatment of wood exposed by cutting and drilling, shall occur above the OHW. Use tarps, plastic tubs, or similar devices to contain the bulk of any fabrication debris, and wipe off any excess field preservative.
- All treated wood structures, including pilings, shall have design features to avoid or minimize impacts and abrasion by livestock, pedestrians, vehicles, vessels, and floats.
- Treated wood may be used to construct a bridge, over-water structure or an in-water structure, with the exception of the work containment system, provided that all surfaces exposed to leaching by precipitation, overtopping waves, or submersion are coated with a water-proof seal or barrier are maintained. Apply and contain coatings and paint-on field treatment to prevent contamination. Surfaces that are not exposed to precipitation or wave attack, such as parts of a timber bridge completely covered by the bridge deck, are exempt from this requirement.
- During demolition of treated wood, ensure that no treated wood debris falls into the water. If treated wood debris does fall into the water, remove it immediately.
- Store removed treated wood debris in appropriate dry storage areas, at least 150 feet away from the regulated work area.

**(9) Piling Removal** - Remove temporary or permanent piling according to the following:

- Dislodge the piling with a vibratory hammer, whenever feasible.
- Once loose, place the piling onto the construction barge or other appropriate dry storage site.

**a. Non-Treated Piling** - Use the following methods to remove non-creosote piling:

- If a pile in uncontaminated sediment cannot be removed or breaks, cut or push the pile or stump off at least 3 feet below the surface of the sediment and cover with a cap of clean, native substrates that match surrounding streambed materials.
- Fill holes left by each pile with clean, native sediments whenever feasible.
- Do not excavate to remove piling.

**b. Treated Piling** - To minimize toxic release, sediment disturbance, and total suspended solids, use the following methods to remove treated piling:

- Install a floating surface boom to capture floating surface debris.
- Keep all equipment out of the water, grip piles above the waterline, and complete all work during low water and low current conditions.
- Dislodge the piling with a vibratory hammer, whenever feasible. Do not intentionally break a pile by twisting or bending.

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- Slowly lift the pile from the sediment and through the water column.
- Place the pile in a containment basin on a barge deck, pier, or shoreline without attempting to clean or remove any adhering sediment.
- If a pile in uncontaminated sediment cannot be removed or breaks, cut or push the pile or stump at least 3 feet below the surface of the sediment and cover with a cap of clean, native substrates that match surrounding streambed materials.
- If a pile in contaminated sediment cannot be removed or breaks above the sediment line, cut the pile or stump off at the sediment line. If the pile breaks below the sediment line, make no further effort to remove it.
- Fill the hole left by each removed or partially removed pile with clean, native sediments and cap with clean, native substrates that match surrounding streambed materials immediately after removal.
- Dispose of all removed piles, floating surface debris, contaminated supplies, and sediment spilled on work surfaces at a permitted upland disposal site.

**(10) Ditch and Culvert Cleaning** - Complete ditch cleaning, culvert and trash rack cleaning by working from the top of bank, unless work area isolation would result in less habitat disturbance.

- Do not work more than 20 feet upstream or downstream the culvert or trash rack.
- Remove only the minimum amount of wood, sediment, or other natural debris necessary to maintain the facility's function, without disturbing spawning gravel or changing the configuration of the original ditch, unless the new configuration is part of the project design.
- Place all large wood, cobbles, and gravels recovered from during culvert and trash rack cleaning downstream from the structure.
- Complete drift removal in the following priority, as directed:
  - Pull and release whole logs or trees downstream.
  - Pull whole logs and trees and place in the riparian area, as directed.
  - Remove whole logs or trees only if roadside development plans have been developed for replacement in-kind.
  - Pull, cut only as necessary, and release logs and trees downstream.

**(11) Floating Structures** - The following types of over-water or in-water structures are not allowed:

- boat house
- boat ramp made of asphalt
- buoy or float in an active anchorage or fleeting area
- covered moorage
- floating storage unit
- houseboat
- marine
- pier
- non-water related facilities (including staging areas) inside riparian management areas
- any other over-water structure more than 6-feet wide unless otherwise approved in writing by appropriate regulatory agencies through the Project Manager

The following conditions apply to over-water or in-water structures:

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- Concrete boat ramps that consist of pre-cast concrete slabs below the ordinary high water elevation, and higher elevation portions that are completed in the dry so that no wet concrete that has cured less than 24 hours is allowed to contact any wetland or waters of the State or waters of the U.S.
- Rock may be used to construct a boat ramp footing, or other protection necessary to prevent scouring, down-cutting, or failure of the boat ramp, provided that the rock does not extend further than 4 feet from the edge of the ramp in any direction.
- Any replacement roof, wall, or garage door for covered moorages and boat houses must be made of translucent materials or skylights. In addition, each side, except the door, of the boat house shall have windows at least 4 feet wide installed the length of the boat house, subject to breaks only for structural support.
- An existing marina may be modified within the existing footprint of the moorage, or in the water more than 50 feet from the shoreline and more than 20 feet deep, except do not place structures in areas that support aquatic vegetation or areas where boat operations may damage aquatic vegetation.
- Fit all pilings, mooring buoys, and navigational aids with devices to prevent perching by piscivorous birds.
- Permanently encapsulate all synthetic flotation material to prevent breakup into small pieces and dispersal in water.
- Install small temporary floats less than 7 Calendar Days before a scheduled event, remove them 5 Days after a scheduled event is concluded, and do not leave them in place longer than 21 Calendar Days.
- Install mooring buoys and temporary floats (for example: shellfish traps) more than 300 feet from native submerged aquatic vegetation, more than 50 feet from the shoreline, and in water deeper than 20 feet deep at all times, or as necessary to ensure that gear does not ground out unnecessarily, and boats do not prop wash the bottom.

**(12) Temporary Power, Communication and Water Lines** - Before installing temporary power, communication, or water lines across streams or bodies of water, submit a proposed plan to the Engineer for approval. Do not begin installation before receiving approval from the Engineer. Proposed plans for installation of temporary power, communication, and water lines and stream crossings shall utilize the following design methods in the listed order of priority:

1. Aerial lines, including lines hung from existing bridges.
2. Directional drilling, boring and jacking that spans the channel migration zone and any associated wetland.
3. Trenching, which is restricted to intermittent streams and may only be used when the stream is naturally dry. For all sections of trenches below the ordinary high water line, backfill with native material and cap with clean gravel suitable for fish use in the project area.

Align each crossing as perpendicular to the watercourse as possible. For drilled, bored, or jacked crossings, ensure that the line is below the total scour prism. Return any large wood displaced by trenching or plowing as nearly as possible to its original position, or otherwise arranged to restore habitat functions.

**(13) Injured Fish Notification** - If a dead or injured fish is found in the project area, immediately notify the Agency. If the injured fish is in a location where further injury or stress may take place, attempt to move the fish to a safer location, if one is available, near the capture site while keeping the fish in the water and reducing its stress as much as possible. Do not disturb the fish after it has been

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moved. If the fish is dead or dies while being captured or moved, save the fish and any tags. The Agency will notify appropriate regulatory agencies about the injured or dead fish and provide additional direction to the Contractor.

**00290.36(a) Migratory Birds** - Add the following to the end of this subsection:

Do not disturb migratory bird nesting habitat (shrubs, trees, and structures), or clear vegetation from March 1 to September 1 of each year without prior written approval from the Engineer. Notify the Engineer, in writing, a minimum of 10 calendar days prior to starting activities that could harm nesting birds.

**00290.36(a)(1) Bird Management** – Bird management activities to comply with the Migratory Bird Treaty Act (16 U.S.C. 703-712) have been performed by the Agency in preparation for construction of this project. This has included removal of vegetation from the project site and monitoring for prevention of nesting within the project site. Bird management activities will continue to be performed by the Agency on behalf of the Contractor during the contract.

The Contractor will attend an on-site pre-construction meeting with Agency environmental staff and its permitted agents to review activities that could harm nesting birds. The Contractor will notify the Engineer, in writing, a minimum of 10 calendar days prior to starting activities that could harm nesting birds during the March 1st through September 1st nesting season.

The Contractor shall ensure that Agency and its permitted agents have access to the project areas as needed to prevent migratory bird nesting. Nesting prevention may include daily bird management activities including the installation and maintenance of devices that exclude birds.

Add the following subsection:

**00290.36(c) Wildlife Avoidance/Harassment (High Noise)** - For purposes of this project, "high noise" is defined as sound pressure levels greater than 10 dBA above the ambient as measured by the  $L_{AFmax}$  and  $L_{AFeq}$  at sensitive habitat as shown:

- Blasting and high-noise producing activities are allowed only between September 1 and October 31.

**00290.41 Protection of Waters of the U.S. or State** - Add the following to the end of this subsection:

Permits have been obtained for this project from the US Army Corps of Engineers (USACE Permit No NWP-2021-305 and in-water work period extension approval memo September 27, 2021) and the Department of State Lands (DSL Permit No 63364-GP"). Keep a copy of Corps and DSL permits and approval memo at the project site during construction. Changes to the project that may increase the amount of fill placed or material removed in waters of the U.S. or State, or the acreage of waters impacted are not authorized. The following waters of the U.S. or State are present and have been determined to be unavoidable as indicated in Table 00290-2:

**Table 00290-2**

Impact Waters of the US or State	Removal Volume (Cu Yds)	Fill Volume (Cu Yds)	Station	Duration of Impact (Temporary or Permanent)	Area of impact (Sq. Ft.)
Thomas Creek	74.1	74.1	See Plans	Permanent	450 sq. ft.
Wetland A	1.8	1.8	See Plans	Permanent	16 sq. ft.
Thomas Creek	19.7	19.7	See Plans	Temporary	177 sq. ft.

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Add the following subsection:

**00290.42 Work Containment Plan** - A Work Containment Plan (WCP) is required on this Project for bridge work activities.

Develop and submit a WCP for approval at least 28 Calendar Days prior to mobilization for bridge work activities. Maintain a copy of the WCP on the Project Site at all times during construction, readily available to employees and inspectors. Ensure that all employees comply with the provisions of the WCP. Design the WCP to avoid or minimize disturbance to protected features (sensitive cultural or natural resources, regulated work areas, aquatic life or habitat in regulated work areas) related to Contractor operations.

Before developing the WCP, meet with Agency to review the Contractor’s activities that require the WCP to ensure that all parties understand the locations of protected features to be avoided and the measures needed to avoid and protect them.

Notify the Project Manager at least 10 Calendar Days before beginning work access or containment construction activities.

The Agency reserves the right to stop Work and require the Contractor to change the WCP methods and Equipment before any additional Contract Work, at no additional cost to the Agency, if and when, in the opinion of the Agency, such methods jeopardize sensitive cultural or natural resources, regulated work areas, or aquatic life or habitat in regulated work areas.

The WCP shall identify how the Contractor's construction operations will protect regulated features during mobilization, construction, maintenance, and demolition. Include a narrative describing compliance with Section 00290 as related to construction, operation, and demolition activities specified in Section 00253.

Design, construct, maintain, and remove temporary work access and containment systems according to Section 00253.

**00290.80 Measurement** – Replace this subsection, except for the subsection number and title, with the following:

No measurement of quantities will be made for work performed under this section, except for work zone fencing.

Work zone fencing will be measured on the length basis, along the line and grade of the fencing placed.

**00290.90 Payment** – Add the following paragraphs to the end of this subsection:

The work containment plan and the work containment system will be paid for at the Contract lump sum amount for the item "Work Containment Plan and System".

Partial Payments will be made as follows:

- When the initial WCP and WCS is approved.....20%
- When WCS has been installed.....40%
- When WCS has been removed and all equipment and materials have been removed from the site.....40%

Payment will be payment in full for furnishing all materials, equipment, labor, and incidentals necessary to complete the work as specified. Payment includes providing and updating the work containment plan

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and for designing, constructing, maintaining, and removing the containment system.

Add the following pay item to the pay item list:

<b>Pay Item</b>	<b>Unit of Measurement</b>
(a) Work Zone Fencing.....	Foot

Add the following paragraph to the end of this subsection:

Item (a) includes furnishing, installing, maintaining and removing the fencing.

**SECTION 00294 - CONTAMINATED MEDIA**

Section 00294, which is not a Standard Specification, is included in this Project by Special Provision.

**Description**

**00294.00 Scope** - In addition to the requirements of Section 00290 and the Specifications, this Work consists of the following:

- Based on the potential for contaminated soil in this project site, all excavated soil except that which will be used for construction at the project site will be transported to and disposed in the Brock Pit Quarry operated by Linn County Road Department. Brock Pit Quarry is located on Brock Drive that is within 10 miles of the project site. Contact the Engineer seven (7) days in advance of transporting the soil to Brock Pit Quarry.
- Prepare a Health and Safety Plan (HASP) for work within the contaminated areas of the Project.
- Prepare a written lead compliance plan for work within contaminated areas of the Project.

The April 2019 Linn County Report, titled *Modified Hazardous Materials Corridor Study – Thomas Creek (Richardson Gap Drive) Shimanek Covered Bridge*, documenting analyses of soils and other materials is available from the Engineer.

**00294.01 Definitions:**

**Contaminated Soil** - Soil that does not meet the DEQ definition of "Clean Fill", as defined by OAR 340-093-0030(18). This contaminated Soil is a regulated waste, subject to OAR 340-093-0005 through OAR 340-093-0290. If the grubbing material has been determined to be contaminated, it will be considered and treated as contaminated Soil for the purposes of this Section.

**Shoulder Soil** - Soil outside of the existing Highway Pavement and within Highway Right-of-Way generated during Highway maintenance or construction activities. This definition applies to excess Soil generated to a maximum depth of 1.5 feet below ground surface.

**00294.02 Testing of Contaminated Soil and Groundwater** - When additional testing of contaminated Soil or groundwater is required to characterize the material for reuse, recycle, or disposal, conduct the tests according to 00290.20(c).

Use analytical methods meeting DEQ's Clean Fill Guidance Screening Levels for each analyte. Contaminated Soil and groundwater sampling must be conducted by an Oregon Registered Geologist or Professional Engineer who has experience characterizing contaminated media.

**00294.03 Submittals** - Submit the following documents:

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- A Project-specific written lead compliance plan, meeting the project applicable requirements of 29 CFR 1926.62(e)(2), at least 10 Calendar Days before the pre-construction conference. When applicable, include compliance procedures for cadmium and chromium VI, according to 29 CFR 1926.1127 and 29 CFR 1926.1126.
- Modifications to the written lead compliance plan that are requested by the Engineer within 7 Calendar Days of the request.
- A site specific HASP at least 10 Calendar Days before the pre-construction conference.
- Modifications to the HASP that are requested by the Engineer within 7 Calendar Days of the request.
- Current employee training certificates and medical surveillance information before beginning Work within the contaminated areas.

Submit the following documents within 48 hours of removal of contaminated media:

- Permits, permit applications, and documentation of compliance.
- All reuse, recycled, and disposal receipts.
- Final quantities of Soil reused, recycled, and disposed and their final location.
- All analytical test results.

### **Labor**

**00294.30 Personnel Qualifications** - Provide employees meeting the following requirements:

- For removal of contaminated Soil, provide employees trained in:
  - Lead awareness according to 29 CFR 1926.62(l).
  - Chromium according to 29 CFR 1926.1126(j)(2).
  - Cadmium according to 29 CFR 1926.1127(m)(4).

### **Construction**

**00294.40 Contaminated Soil Excavation** - Excavate and handle contaminated Soil from Project excavations according to the following:

- Notify the Engineer 3 Calendar Days before beginning excavation of soil activities begin.
- Allow the Agency to collect Soil and groundwater samples during excavation activities.
- Load contaminated Soil directly into trucks and transport directly to Brock Pit Quarry or, when approved by the Engineer, temporarily store contaminated Soil on-site in covered water tight containers or place contaminated Soil on minimum 6 mil thick polyethylene sheeting that has an impermeable berm around the edge. Cover the contaminated Soil with minimum 6 mil thick polyethylene sheeting. Do not allow rainwater to enter the excavated contaminated Soil. Label all stored material with the type of material, the contaminants, and the dates of accumulation.
- Remove contaminated media from the exterior of all vehicles before they leave the Project Site
- Cover trucks transporting contaminated materials to prevent spillage during transit to the disposal facility according to OAR 340-093-0220.
- Where over excavation is required, backfill the excavation according to 00330.42.

**00294.41 Contaminated Soil Management** - Reuse, recycle, or dispose of contaminated Soil according to any of the following:

#### **(a) Landfill Disposal:**

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- Obtain the Engineer's approval of the disposal facility before disposing of the contaminated Soil.
- Transport the contaminated Soil to a DEQ permitted municipal solid waste landfill or to Brock Pit Quarry, which is a permitted construction and demolition landfill for disposal. Dispose of temporarily stored contaminated Soils within 30 Days of beginning excavation work or before Second Notification, whichever occurs first.
- Complete and sign all manifests and bill-of-lading forms for handling, loading, transporting, and disposing of the contaminated Soil.
- Pay all filing and permit fees.

**(b) Reuse On-Site:**

- Temporarily stockpile the contaminated Soil from Streambed Excavation.
- Reuse the Steam bed Excavated Soil on the Project for construction of the Pier Protection as shown in the engineering plans.
- Within 30 Calendar Days of completing on-site reuse or before Second Notification, whichever occurs first, transport all contaminated Soil that is not reused on the Project to a DEQ permitted municipal solid waste landfill or Brock Pit Quarry which is a permitted construction and demolition landfill.

**Measurement**

**00294.80 Measurement** - Work performed under this Section will be measured according to the following:

No measurement of quantities will be made for the following:

- HASP.
- Lead compliance plan.

Clearing and grubbing will be measured according to 00320.80.

**Payment**

**00294.90 Payment** - 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>Unit of Measurement</b>
(a) Health and Safety Plan .....	Lump Sum
(b) Lead Compliance Plan.....	Lump Sum
(e) Contaminated Soil Disposal.....	Lump Sum

Item (e) includes all costs involved with the disposal of Soil (contaminated or uncontaminated) at a recycling or disposal facility.

No separate or additional payment will be made for excavation of contaminated Soil. Payment will be included in payment made for the appropriate items under which excavation of contaminated Soils is required.

Clearing and grubbing will be paid for according to 00320.90.



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Payment will be payment in full for removing and disposing of all Materials, and for furnishing all Equipment, labor, Plans, test results, and Incidentals necessary to complete the Work as specified.

### SECTION 00296 - PAINT AND PAINTED MATERIALS

Section 00296, which is not a Standard Specification, is included in this Project by Special Provision.

#### Description

**00296.00 Scope** - In addition to the requirements of Section 00290, remove lead, chromium, and cadmium based paints, and materials coated with lead, chromium, and cadmium based paints, according to the following Specifications.

Lead, chromium and cadmium based paints coat the wood on the siding, housing, and railing on the Shimanek Covered Bridge. Analysis of a paint and wood sample collected from this Bridge detected concentrations of total lead, cadmium and chromium in the paint indicated in the table below:

Sample Location and Material	Total Lead (mg/kg)	Total Chromium (mg/kg)	Total Cadmium (mg/kg)
Wood Siding Sample	1.8	ND, <1.4 mg/kg	ND, <1.1mg/kg

ND = not detected above the laboratory detection limit.

The April 2019 Linn County Cascade Earth Sciences report, titled *Modified Hazardous Materials Corridor Study – Thomas Creek (Richardson Gap Drive) Shimanek Covered Bridge*, documenting these analyses, is available from the Engineer.

The surface of the paint indicated non-detectable levels of Lead by colorimetric testing.

Unless otherwise tested with the approval of the engineer, and due to the potential of the presence of lead containing paint, assume that all coatings contain lead, chromium, and cadmium and handle paint and painted materials accordingly during demolition.

**00296.03 Submittals** - Submit the following documents:

- A job specific written compliance program, according to 29 CFR 1926.62(e)(2), at least 10 Calendar Days before the pre-construction conference. When applicable, include compliance procedures for cadmium and chromium VI, according to 29 CFR 1926.1127 and 29 CFR 1926.1126.
- Modifications to the written compliance program within 7 Calendar Days of the modifications.
- Current employee training certificates and medical surveillance information before beginning work that disturbs paint containing lead, cadmium or chromium.
- Within 48 hours of completing or receiving them:
  - Disposal and recycling facility permits.
  - Transport manifests and bill-of-ladings.
  - All reuse, recycling, and disposal receipts.
  - All analytical test results.

**00296.04 Documentation** - Include paint and painted materials management and planned reuse, recycling, and disposal information in the pollution control plan. Obtain Engineer approval for the specific reuse, recycling, and disposal methods for all materials before beginning demolition work.

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Complete, sign and pay all required fees for all required permits, manifests, and bill-of-lading forms for transport and disposal of the paint and painted materials.

### **Labor**

**00296.30 Personnel Qualifications** - Provide employees trained in lead awareness, according to 29 CFR 1926.62(l), and also trained according to 29 CFR 1926.1126(j)(2) for chromium and 29 CFR 1926.1127(m)(4) for cadmium, during demolition of painted portions of the structures.

### **Construction**

**00296.40 Handling** - Minimize employee exposure to the metals contained in the paint. Provide containment that prevents release of paint chips to the environment. Do not remove or separate paint from painted substrates, unless required to accomplish repair activities.

**00296.43 Painted Metal Management** - Reuse, recycle, or dispose of painted metal according to any of the following:

- **Reuse by Others** - Provide or sell painted non-structural scrap metal to the following:
  - Provide or sell to contractors for their reuse.

Obtain the recipients signature on the attached disclaimer form, acknowledging their awareness that the scrap metal does or may contain lead, chromium, and cadmium based paint before giving them possession.

- **Recycle at Recycling Facility** - Transport the painted scrap metal along with the paint analytical results to a recycling facility. Obtain the recipients signature on the attached disclaimer form, acknowledging their awareness that the scrap metal contains lead, chromium and cadmium based paint.
- **Dispose of at Landfill** - Dispose of the painted scrap metal at a permitted municipal solid waste landfill or a permitted construction and demolition landfill.

**00296.44 Painted Wood Management** - Dispose of painted wood at a permitted municipal solid waste landfill or a permitted construction and demolition landfill, according to the DEQ "Hazardous Waste/Toxics Reduction Policy Clarification: Management of Building Demolition Waste" Policy 1997-PO-002A.

**00296.45 Non-Hazardous Waste Paint Management** - When non-hazardous paint is separated from its substrate, contain all the paint waste and dispose of it at a permitted municipal solid waste landfill.

**00296.46 Hazardous Waste Paint Management** - When hazardous waste paint is separated from its substrate, store all the separated paint waste in labeled, sealed, watertight containers and handle the hazardous waste according to 00290.20(d).

### **Measurement**

**00296.80 Measurement** - No measurement of quantities will be made for Work performed under this Section.

### **Payment**

**00296.90 Payment** - No separate or additional payment will be made for Work performed under this Section. Payment will be included in payment made for the appropriate items under which this Work is required.

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**Attachment A  
Lead, Chromium, and Cadmium Based Paint Acknowledgement Form**

[Contractor] \_\_\_\_\_  
[Bridge Identification] \_\_\_\_\_  
[Description of Scrap Metal] \_\_\_\_\_

\_\_\_\_\_ [Recipient] acknowledges that they are aware that metal and materials received from \_\_\_\_\_ [Contractor] on \_\_\_\_\_ [Date(s)] may contain lead, chromium, or cadmium based paint. Recipient further acknowledges that it is aware of the risk to human health and the environment posed by exposure to lead, chromium and cadmium based paint. All storage, use, sale, and disposal of materials containing lead, chromium or cadmium based paint and any removal of lead, chromium, or cadmium based paint from the materials by Recipient will be conducted in compliance with all applicable Federal and State statutes and regulations, including but not limited to 40 CFR 262 through 265 and OAR Chapter 340, Divisions 100 through 106. Recipient acknowledges that they are solely responsible for any liability or damages resulting from the storage, use, sale, and disposal of the materials and removal of lead, chromium or cadmium based paint by Recipient and Recipient will indemnify and hold harmless the Contractor and the Oregon Department of Transportation from any such claims of liability or damages.

\_\_\_\_\_ [Signature]  
\_\_\_\_\_ [Title]  
\_\_\_\_\_ [Date]

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## SECTION 00305 - CONSTRUCTION SURVEY WORK

Section 00305, which is not a Standard Specification, is included for this Project by Special Provision.

### Description

**00305.00 Scope** - This work consists of all surveying activities necessary to control the many phases of work required to construct the Project to the lines and grades as shown, specified, or established.

Make all supporting computations and field notes required for control of the work and as necessary to establish the exact position, orientation, and elevation of the work from control stations, including furnishing and setting construction stakes and marks, reference marks, and additional control stations.

Plans, specifications and other data necessary to lay out the work will be available for inspection at the Project Manager's office. The Contractor will be furnished a copy of these documents.

### 00305.01 Definitions:

**Confidence Points** - Random points measured in the field within the boundary of a digital terrain model (DTM), the purposes of which are to verify the accuracy of the DTM and to provide evidence just prior to construction that the DTM is a reasonable representation of the original ground for computation of volumes and pay quantities. Similarly, confidence points are used to verify that a constructed grade has been built according to the design DTM. Additional information is available from the Engineer.

Confidence point locations follow these guidelines:

- Randomly selected without regard for the location of DTM points or triangles
- Evenly distributed over the entire DTM area to be validated
- Proportionately distributed between confidence point classifications as applicable
- At a density sufficient to validate the surface, generally ten per instrument location as used in collecting DTM data or if not applicable, as in data collected photogrammetrically, 2% of DTM points

**Control Network** - An array of control stations either established by the Contractor or provided by the Agency.

**Control Station** - Any item identified in the Project records as having a position and/or elevation on the Project datum and intended to be used to control the many phases of the construction work.

**Digital Terrain Model (DTM)** - An electronic computer model of the shape of the ground.

**Reference Stakes** - Stakes set away from but with information relating back to the intended location and/or grade.

**Slope Catch** - The location where a design slope intersects the existing ground and where excavation or embankment work should begin to provide the intended earthwork.

**Slope Staking** - The process of using measurements and calculations in the field to determine the slope catch. Slope staking shall normally include setting stakes to mark the slope catch and setting a reference stake for every catch stake.

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**Stakes** - Stakes, nails, marks, string lines, or other devices or mechanisms set or established for the purpose of indicating or controlling the location, orientation, or grade of any feature intended for construction, or for the purpose of limiting or influencing the construction work.

**Staking** - The act of placing stakes.

**Subgrade Area** – The area of Subgrade from Subgrade shoulder to Subgrade shoulder.

**Survey Marker** - Any survey monument, control station, or stake.

**Survey Monument** - Any natural or man-made item specified or identified in a property deed, boundary survey, government document, or other instrument of public record, when the purpose of said item is to mark or reference a property boundary, geographical location, elevation, or other position.

**Surveyor** - The individual designated by the Contractor and licensed in the state of Oregon as a Professional Land Surveyor and placed in "responsible charge" of the survey work as defined in ORS 672.002(6)(b).

**Temporary Bench Mark (TBM)** - A control station established for the purpose of providing vertical control for the Project. A TBM may or may not have an established horizontal position.

**00305.02 Pre-Survey Conference** -The prime Contractor, subcontractors, surveyor, survey crew leader, and all surveying personnel who are to be involved in the survey work shall be present at the preconstruction meeting or shall schedule to meet with the Project Manager two weeks prior to beginning survey work. The purpose of this meeting will be to discuss methods and practices of accomplishing required survey work.

**00305.03 Review by the Engineer** -The Engineer may periodically review the notes, calculations and layout work, including field locations, for compliance with these specifications. Survey work that does not meet the tolerances in 00305.40 may be rejected, and the work redone at the Contractors expense to meet the tolerances.

Review by the Engineer does not constitute approval or acceptance of the work, nor does it relieve the Contractor of responsibility for performing work in conformance with the plans and specifications.

**00305.04 Agency Responsibilities** - The Agency Shall perform or provide the following items of work:

- Perform and provide a Pre-Construction Survey.
- Provide copies of plans and specifications.
- Establish initial horizontal and vertical control stations in the proximity of the Project.
- Provide horizontal and vertical alignment data.
- Provide cross section grade elevations to establish lines, grades, slopes, cross sections, and curve superelevation for each phase of roadwork.
- Evaluate grade for acceptance at each course of material.
- Perform measurements and calculations for pay quantities.
- Review Contractor's work and records periodically.

**00305.05 Contractor Responsibilities** - The Contactor shall perform or provide the following items of work:

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- Make calculations, field notes and survey drawings for the layout and control of the work as are necessary to construct the Project as specified
- Provide original or copies of notes, calculations and drawings as requested.
- Preserve survey monuments and control stations according to 00305.71 and as governed by applicable law.
- Give the Engineer such facilities and assistance in establishing lines, grades and points as the Engineer may require.
- In the case of alterations, which involve any changes in stakes, the Contractor shall cooperate with the Engineer and facilitate the prompt re-establishment of field control for the altered or adjusted work.
- Replace and augment control stations as necessary to control the Project.
- Establish additional control stations as necessary to control the Project.
- Perform slope staking necessary for construction of earthwork including intersections and matchlines.
- Set stakes defining limits for clearing. Set stakes defining approximate right-of-way and easements.
- Set stakes to define construction centerline, centerline offsets, detour lines, or other lines necessary for control of the Project work.
- Set stakes to define the work, that may include but is not limited to the following:
  - Roadway location and grade. Set stakes and/or hubs at 50-foot intervals on tangents and 25-foot intervals on curves
  - Controls for sanitary and domestic water system
  - Fences and gates.
  - Guardrail, barrier, barricades, and associated features.
  - Traffic delineators, reflectors, and guide devices.
  - Temporary and permanent signing \*
  - Temporary and permanent pavement striping and pavement marking devices.
  - Poles and footings, cabinets, junction boxes, sensors, and other features associated with illumination and signal facilities \*
  - Curbs, walks, ADA ramps, stairs, walls, mailboxes, and other miscellaneous structures.\*
  - Pipes, manholes, inlets, weirs, settlement basins and other storm water, drainage and water quality structures and facilities \*

\*This includes field verification of fit and functionality or as instructed by the Engineer.

  - Landscaping items.
  - Earthwork features including guardrail flares and mounds, berms, and mounds
  - Buildings and other structures and facilities.
  - Environmental impact mitigation features.
  - Other incidental survey Work common to this type of construction project.
- Remove and dispose of all flagging, lath, stakes and other temporary staking material after the Project is completed.
- Perform final "as constructed" measurements.

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- Complete a Post-Construction survey of monuments and control stations and submit as-built documentation to Linn County Surveyor's Office.

For bridge work, supply survey drawings depicting the location and elevations of the elements of substructure and superstructure and place stakes for features including, but not limited, to the following:

### **Substructure:**

- Piling
- Footings
- Columns, walls, and abutments
- Pile caps and cross beams
- Bearing pads or devices

### **Superstructure:**

- Horizontal alignment and deck edges
  - Soffit grades
  - Seismic restraints
  - Wing walls and retaining walls
  - Bridge end panels
  - Deck elevations
  - Railings
  - Deck drains and other bridge drainage facilities
- Set reference stakes and elevations in the vicinity of the structure work, as are necessary for the Engineer to check the layout. This may include establishment of a control network.

**00305.06 Survey Methods** - Survey procedures shall be appropriate for the equipment being used and be according to current Agency practices.

New survey procedures that are not according to current Agency practices shall be submitted to the Engineer for review 21 days prior to conducting the work. The surveyor may be required to demonstrate the capabilities, accuracy, and reliability of the intended procedure. The Engineer will evaluate the procedure and intended application and provide approval or rejection within 21 days. Work may proceed immediately upon approval of procedures by the Engineer.

Survey equipment must be properly calibrated and kept in good repair.

**00305.07 Survey Work Records** - Contractor's survey personnel shall maintain a Project daily record of work performed by the survey crew. The daily record shall contain the date, crew names, type and location of work, and work accomplished. Upon request, furnish a copy of diary entries to the Engineer. Furnish a final copy of the diary when the Project is complete.

Contractor's survey personnel shall make all field notes and calculations in a manner consistent with current Agency practices and on forms provided or approved by the Engineer. Computations, survey notes and other records necessary to accomplish the work shall be neat, legible and complete. Furnish copies of computations, notes and other records when requested by the Engineer.

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When a Project affects any permanent change to vertical clearances within the traveled way, complete and submit a Standard Vertical Clearance form (Form 734-2614) within 30 days of the change to the vertical clearance.

When a Project temporarily restricts any vertical clearances submit a Standard Vertical Clearance form (Form 734-2614) 28 days before the restriction takes effect.

For bridges, furnish all computations, layout notes, and drawings of the structure to the Engineer for review 7 Calendar Days before beginning construction.

Upon completion of construction staking and prior to final acceptance of the Contract, furnish to the Engineer, computations, survey notes, Project records and other data used to accomplish the work. Include an itemized list of the data.

All data and original documentation associated with the Project will become the property of the Agency.

**00305.08 Communication with the Surveyor** - The Engineer has the right to communicate directly with the surveyor.

**00305.09 Electronic Data** - The Engineer will not be responsible for any data translations. Compressed data provided by the Engineer or the Contractor will be in a "self-expanding executable" format. The method of exchange of electronic data will be mutually agreed upon at the pre-survey conference.

**00305.10 File Formats for Digital Data Exchange** - Below are the preferred formats for data exchanged between the Agency and the Contractor. Other formats may be used, but must be pre-approved by the Engineer.

- **CAD (graphics) Files** - AutoCAD Civil 3D 2012 (.DWG) format.
- **Alignments (Horizontal and Vertical)** - AutoCAD Civil 3D 2012 (.DWG) format.
- **Elevations** - ASCII Elevation File format.
- **DTM Data** - AutoCAD Civil 3D DTM or AutoCAD Civil 3D (.DWG) format.
- **Coordinates of Miscellaneous Survey Points Set** - ASCII Coordinate File format.

**00305.12 Other Documents** - Adobe Acrobat Portable Document Format (pdf) is the preferred format for exchanging documents such as reports, drawings and maps.

### **Materials**

**00305.20 Materials** - Furnish all materials including supplies, clothing, and incidentals required to accomplish the work. Use materials of good quality and suitable for the purpose intended. Stakes, hubs, and guinnies are to be of sufficient length to provide a solid set in the ground. Mark the stakes in such a way as to remain legible for the intended duration. Provide and use safety equipment required by State and federal regulations.

### **Equipment**

**00305.30 Survey Equipment** - Furnish survey equipment required to accomplish the work that meets the following requirements:

- Components designed to work together.
- Suitable for the purpose intended.
- Capable of achieving specified tolerances.



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- In good operating condition.
- Maintained to meet manufacturers specifications.
- Kept in proper adjustment throughout the duration of the Project.

Submit documentation on survey equipment that is new to the industry, to the Engineer for review 21 days prior to its use. The Engineer will evaluate the equipment and intended application and provide approval or rejection within 21 days. Equipment may be used immediately upon approval by the Engineer.

### Labor

**00305.40 Personnel** - Provide technically qualified personnel capable of performing required tasks in a timely and accurate manner. Perform work under the direction and review of the Surveyor.

The Surveyor is responsible for:

- Maintaining registration as a Professional Land Surveyor in the State of Oregon.
- Performing or validating requirements for procedures and testing of equipment.
- Maintaining familiarity with the site conditions and progress of the Project.
- Becoming familiar with the plans and specifications.
- Determining notes and documentation required for types of survey work.
- Determining the accuracy required for each survey stake.
- Using appropriate equipment and methods.
- Keeping close communication with the Project inspector(s), Project Manager, and Agency survey crews working on the Project.
- Being familiar with the varying construction survey requirements of each aspect of the Project, including the various bridge construction techniques when applicable.
- Notifying the Project inspector of conflicts and changes necessary due to utilities, match point variations, design revisions, or other variables.

The survey crew leader is responsible for:

- Becoming familiar with the plans and specifications.
- Keeping close communication with the Project inspector(s), Project Manager working on the Project.
- Notifying the Project inspector of conflicts and changes necessary due to utilities, match point variations, design revisions, or other variables.

### Construction

**00305.50 Construction Staking Tolerances** - Set stakes or other devices at an adequate frequency and within the following tolerances:

Item	Horizontal	Vertical
Box Culverts	± 0.10 ft	± 0.05 ft
Bridge Substructures	± 0.03 ft	± 0.03 ft
Bridge Superstructures	± 0.02 ft	± 0.02 ft
Clearing and Grubbing Stakes	± 1.00 ft	n/a

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<b>Item Cont.</b>	<b>Horizontal</b>	<b>Vertical</b>
Construction Centerline Control Points	± 0.05 ft	n/a
Construction Centerline Station Points	± 0.10 ft	n/a
Curbs, Ramps, Walks, and Bike Paths	± 0.03 ft	± 0.02 ft
Engineering Stationing	± 1.00 ft	n/a
Grade Stakes - Roadway Subgrade	± 0.20 ft	± 0.05 ft
Grade Stakes - Top of Rock	± 0.20 ft	± 0.03 ft
All ACP Courses	± 0.10 ft	± 0.02 ft
Manholes, Inlets, and Culverts	± 0.10 ft	± 0.03 ft
PCC Pavement	± 0.10 ft	± 0.02 ft
Slope Stakes and References	± 0.30 ft	± 0.10 ft
Traffic Markings	± 0.20 ft	n/a
Walls - Retaining, MSE, Sound, etc.	± 0.10 ft	± 0.05 ft
Wetland Mitigation Control Stakes	± 0.20 ft	± 0.20 ft
Luminaire and Signal Poles (incl. footings)	± 0.20 ft	± 0.03 ft

Stakes for miscellaneous items not listed above will have a horizontal and vertical tolerance of 0.20 foot, unless otherwise directed. Features that are to be constructed flush to another surface should take on the same tolerance as that surface.

Staking tolerances for special circumstances will be discussed at the pre-construction meeting. These staking tolerances are not cumulative to the construction tolerances identified for the appropriate items in which construction tolerances are required.

In constructing the work, the contractor shall meet the appropriate construction tolerances for the material as specified in the special provisions or standard specifications, regardless of the construction staking tolerances, specific to the work item.

**00305.51 Slope Stakes and References** - Set slope stakes and references at even design stationing on both sides of centerline at 50-foot stations on tangents, at 25-foot stations on curves, and at terrain breaks and changes in the typical section. Establish slope stakes in the field as the actual point of intersection of the design roadway slope with the existing ground line. Direct staking of the theoretical (computer generated) slope stake catch point requires prior approval of the Engineer.

Set slope stake references farther out from centerline than the actual catch point. Include all reference point and slope stake information on the reference stakes.

If an automated slope staking routine is intended to be used, the system shall be able to perform the proper superelevation, lane transitions, and benching, as well as duplicate other details in the design surface. The system shall record field modifications made to the final catch slopes. Any modifications shall be recorded and provided to the Engineer.

Record the actual as staked (three dimensional) position of the slope and reference stakes. Prepare field notes showing slope stake and reference information, and provide to the Engineer.

**00305.52 Clearing Limits** - Set clearing limit stakes according to Section 00320. Space clearing limit stakes at intervals not greater than 50 feet on tangents and not greater than 25 feet on curves, or as directed.

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**00305.53 Grade Stakes** - Set grade stakes or other control for grade elevation and horizontal alignment. Set grade stakes at each grade break line. Set additional points at intervals, as necessary, not to exceed the width of the grading equipment, or as approved by the Engineer. Set these rows at 50-foot stations on tangents and at 25-foot stations on curves, or as required in special situations, as in road connections and other areas where conditions require tighter spacing of grade stakes to assure grade and alignment.

Stakes and hubs shall be checked by the inspector as a representative of the Engineer. Do not begin placement of the next material course until the Engineer has accepted the grade and approval is given to proceed.

**00305.54 Walls** - Set stakes or other devices to control the location and elevation of walls, including retaining walls, geotextile walls, wing walls, sound walls and other walls as specified. Provide horizontal and vertical control for elements of wall(s) including but not limited to footings, leveling pads, batter slope and direction, and top elevation. Stake drainage facilities, electrical conduits water pipes and other items shown or identified that are to be integrated into the construction of the wall(s).

**00305.55 Pipes and Culverts** - Stake pipes and culverts to fit field conditions. Their location may be different from the plans. Perform the following:

- Determine the roadbed slope catch points at the inlet and outlet of pipes and culverts.
- Set reference point offsets to pipes and culverts. Record information necessary to determine structure length and end treatments.
- Stake ditches or grade to make pipes and culverts functional.
- Complete and submit a Culvert Data Sheet (Form 734-3247)
- Submit a copy of the field notes to the Engineer by the next working day following completion of the staking work.

**00305.56 Manholes and Inlets** - Determine the location of manholes, inlets, siphon boxes, slope protectors, and other similar structures. This may require an approved field adjustment to the planned location in order to avoid obstacles or assure placement at the low point. Determine the elevation of the center of the grate.

Set a stake referencing the center of the structure. Set a guard stake with the following information written on it:

- Type of structure
- Centerline station
- Centerline offset
- Reference distance
- Cut or fill to top of structure
- Center of structure elevation

Establish a reference line to control the alignment of the structure. Record data on the Culvert Data Sheet (Form 734-3247) containing staking information for the outlet pipe from the specific drainage structure.

**00305.57 Box Culverts** - Set stakes or other devices to control the location and elevation of box culverts as specified. Provide horizontal and vertical control for elements of the box culvert(s) including but not limited to footing, side walls, wing walls, weirs, fish ladders, apron and top elevation. Stake other drainage facilities, electrical conduits, water pipes, and other items shown or identified that are to be integrated into the construction of the box culvert(s). Stake ditches to make the box culverts(s) functional.

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**00305.58 Engineering Stationing** - When required, establish engineering stationing at required intervals for the length of the project along the shoulder of the highway. The stationing shall be visible and maintained throughout the construction of the project.

**00305.60 Horizontal Control** - Establish horizontal control stations using Theodolite/EDM network or static GPS techniques. Least squares adjustments shall be applied to either method. The use of traverses will be permitted only if approved by the Engineer.

Preserve all Agency provided and Contractor established horizontal control stations for the life of the Project. If the horizontal control network cannot be preserved in its original position during construction or if the Agency provided control stations are not of adequate quantity or location, establish a secondary horizontal control network using the original control as a basis. This secondary control network may then be used by the Contractor to layout all construction items and may be used by the Agency for right-of-way monumentation and for other purposes.

**(a) General Specifications** - Horizontal control networks shall conform to these general requirements in addition to Theodolite/EDM or GPS specifications to follow.

### **(1) Equipment:**

- Use tripods for all occupations with theodolite, target, or GPS antenna.
- Test all components and adjust according to manufacturer specifications.

### **(2) Procedures:**

- Include in field notes a detailed point description and vicinity sketch for each control station and survey monument established or used.
- Perform a minimally and fully constrained Least Squares adjustment.
- Prior to using 2 points for the basis of bearing, perform an analysis to verify that the points are actually those indicated in the record.
- Control station monuments shall conform to the requirements of the Agency "Right-of-Way Monumentation Policy" available from the Engineer.
- If available, include at least three existing control stations in establishing any control network.
- Establish a point identifier for each control point within the range of 1 - 399. Alphanumeric point identifiers up to eight characters may be used. Inscribe the point identifier on the monument.

**(3) Acceptance Standards** - At least squares adjustment shall be accepted based on the following criteria for all specified tolerances.

- Two-thirds of all values shall be within the total tolerance.
- 100% of all values shall be within 3 times the total tolerance.
- Tolerance for confidence regions at the 95% level is 0.05 feet + 50 ppm based on the shortest distance to the nearest unadjusted control station.

### **(4) Data Requirements:**

- Field notes containing a detailed point description and vicinity sketch for each control station and survey monument established or used.

### **(b) Terrestrial Networks:**

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### (1) Equipment:

- Use Theodolites with a maximum angular standard of error no greater than  $\pm 6$  seconds.
- Use EDMs with a maximum distance standard error no greater than  $\pm 0.02$  feet  $\pm 5$  ppm.
- All components shall be of compatible accuracy and designed to be used together.

### (2) Field Procedures:

- Include distance measurements with all observations unless impractical.
- Have at least one redundant observation for every point in the network.
- Triangulation, trilateration, and resection methods are acceptable.

### (3) Acceptance Tolerances:

- Tolerance for angle residuals is  $\pm 3$  seconds.
- Tolerance for distance residuals is  $\pm 0.02$  feet  $\pm 2$  ppm.

### (4) Data Requirements - Provide the following to the Engineer for each network or circuit established:

- **Raw Data Files** - These are electronic data files containing original measurements produced by the Theodolite (total station). The file shall contain:
  - Observation data for each measurement, including:
    - point identifier
    - direction, plate reading, or horizontal angle
    - vertical or zenith angle
    - slope distance
  - Supplemental measurement data, including:
    - distance units recorded
    - angular units recorded
    - curvature and refraction correction applied
    - atmospheric correction applied
    - prism correction applied
  - Codes or instructions to the processing software on how to process the data.
  - Atmospheric conditions at the time of the survey.
  - Angular and distance units recorded, and whether the distance has been corrected for curvature and refraction and/or atmospheric conditions.
- **Set Reduction Report** - This report summarizes the reduction of the angle sets and mean distances.
- **Least Squares Adjustment Report** – These reports contain details of the least squares adjustment, including a list of all angular and distance residuals, confidence region values at a 95% confidence level, and final adjusted coordinates.

### (c) GNSS Networks:

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### (1) Equipment:

- GNSS receivers shall be dual frequency geodetic receivers with a manufacturer-specified accuracy of  $\pm 0.02$  feet  $\pm 1$  ppm or better.
- All components shall be of compatible accuracy and designed to be used together.

### (2) Field Procedures:

- Ensure that satellite geometry during the field observation phase is sufficient to produce accurate results. The geometric dilution of precision (GDOP) shall not be greater than 8.
- The number of healthy satellites being observed at any time shall be four or more.
- The elevation mask shall be not less than 15 degrees.
- Horizontal survey measurements, once completed, shall form a closed figure, and shall be connected to at least two existing horizontal control stations.
- Network shall be comprised entirely of independent baselines.
- Adjacent stations shall have direct connections.
- Every station shall be connected to two or more stations.
- Receiver documentation shall be followed for observation times and epoch intervals.
- Each control station shall be occupied no less than twice, of which two occupations shall be separated from each other by time. Separation shall be measured start-time to start-time. Separation shall be 90 minutes or more from initial occupation and 90 minutes or more from any 12-hour multiple thereafter for 30 days. Additional occupations beyond two are not subject to time restrictions.
- Back-to-back occupations of 90 minutes or more shall be separated by off leveling and re-setting the tripod and rotation of the tribrach or leveling equipment by 120 degrees or more.
- Stations closer together than 1,500 feet shall be connected with terrestrial observations.
- Inter-visible stations closer together than 3,000 feet shall be connected with terrestrial observations.

### (3) Acceptance Tolerances:

- Tolerance for linear residuals in latitude, longitude, and elevation is  $\pm 0.05$  feet.

### (4) Data Requirements - Provide the following to the Engineer for each network established:

- **Receiver Independent Exchange (RINEX) Data Files** - These are industry-standard non-proprietary electronic data files containing original data collected by the receiver. The provided files shall contain all data supported by both the RINEX file format and the equipment and software employed in the survey. Files provided shall include as a minimum:
  - GNSS observation data file
  - GNSS navigation message file
- **Observation Log Sheet** - This log includes, for each observation, start and stop times, and antenna height including measurement procedure.

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- **Least Squares Adjustment Report** – These reports contain details of the least squares adjustment, including a list of all angular and distance residuals, confidence region values at a 95% confidence level, and final adjusted coordinates.

### (d) Traverses:

#### (1) Equipment:

- Identical to requirements for Theodolite/EDM networks.

#### (2) Field Procedures:

- Include distance measurements with all observations unless impractical.
- Close both traverse for angle and distance.

**(3) Acceptance Standards** - Closure shall be a minimum of 1:20,000 after angular adjustment and prior to coordinate adjustment.

**(4) Data Requirements** - Provide the following to the Engineer for each traverse established:

- **Adjustment Report** - This report contains details of the traverse adjustment, including adjusted coordinates.
- **Other Reports** - All data required for Theodolite/EDM networks except least squares adjustment report.

**00305.61 Vertical Control** - Establish vertical control stations using differential leveling and third order or better equipment and techniques. The development of vertical control by techniques other than differential leveling must be approved by the Engineer. A least squares adjustment shall be applied to each network of acceptable level circuits.

The Agency provided and Contractor established vertical control stations shall be preserved for the life of the Project. If the vertical control network cannot be preserved in its original position during construction or if the Agency provided control stations are not of adequate quantity or location, establish a secondary vertical control network using the original control as a basis. This secondary control network would then be used to layout all construction items and may be used by the Agency for other purposes.

### (a) Field Procedures:

- Use a compensated (or "automatic") optical level or compensated digital level.
- Use precise non-adjustable rod(s) unless otherwise directed. Do not use "Lenker" or self-computing rods.
- Use a rod level with each rod.
- Include a minimum of two published bench marks in each circuit unless otherwise directed.
- If the circuit between benches does not close within the tolerance stated below, close circuit back to the starting point.
- If the use of one benchmark is approved, close circuit back to the starting point.
- Select turning points that are firm, solid objects with a defined high point. Set a nail, spike, or stake if no existing items are acceptable. Turning plates with a weight of not less than 4.5 pounds may be used.
- Balance backsight and foresight distances to within 30 feet on each setup and to within 30 feet on the entire circuit.

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- Make a record of the rod reading(s) and the observation distance on each sighting
- Set TBMs near significant construction items (bridges, intersections, and other locations where elevations will be needed) and not more than 1,000 feet apart throughout the Project.
- Select TBM monuments that are firm, solid objects with a defined high point, not likely to be moved by human or natural influences, readily identifiable, and out of the path of construction. Do not use fire hydrants, guardrails, highway signs, or nails or spikes in utility poles or fence posts.
- Include detailed point descriptions and vicinity sketch in field notes.
- Take field notes when recording measurements electronically. Include data and information not electronically measured and recorded.
- Apply a vertical least squares adjustment to allowable errors. The use of proportional distribution of error may be used if approved by the Engineer.

**(b) Acceptance Standards** - Each leveling circuit shall be accepted based on the "point-to point" or "closed-loop" limits described below. A single least squares adjustment shall be applied to the observation in the leveling circuits meeting the acceptance standards.

- Accept point to point circuit based on the following. Error of closure shall be no greater than:

$$\text{Allowable Error} = 0.05 \text{ ft. } \sqrt{D}$$

D = Shortest level line distance in miles

- If a closed loop, the error of closure shall be no greater than:

$$\text{Allowable Error} = 0.035 \text{ ft. } \sqrt{E}$$

E = Perimeter of level loop in miles

**(c) Data Requirements** - Provide the following to the Engineer for each network or circuit established:

- **Raw Data** - These are hand written field notes or hand-written field notes accompanied by electronic data files containing original measurements produced by the level. The file shall contain:
  - Data for each measurement, including a:
    - point identifier (within a range of 400 - 499 and also inscribed on the monument)
    - rod reading
    - observation distance.
  - Supplemental measurement data, including:
    - distance units recorded
    - curvature and refraction correction applied
- **ASCII Point Elevation Data File**

**00305.62 Bridges** - Set stakes, nails, or other devices to control the location and elevation of the various parts of bridges and progressive phases of construction. Provide horizontal and vertical control for all elements of bridge construction. Stake drainage facilities, electrical conduits, water and sewer pipes,



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pedestrian and bicycle facilities, traffic signal and sign supports, illumination devices, and other items shown or identified that are to be integrated into the construction of the bridge.

Identify marks or provide field notes or reports to the Engineer. Such provision of information shall be adequate for the Engineer to review the location and elevation of the mark for the intended purpose prior to incorporating material that is based on the mark.

**(a) Bridge Survey Control Stations** - Use the smallest number of original Project control stations as is practical for establishing positions and reference points for bridge construction on one bridge. Use of multiple control stations will increase the probability of incorporating error into the construction. Use control stations that are as closely related mathematically as practical. The Contractor may establish additional control stations as necessary to complete the survey work. Additional control stations shall be established in such a manner as to provide the accuracy needed to meet the tolerances in Section 00305.

Original Project stations shall be used only after the following evaluation is completed for each bridge:

- Supply a list of original Project horizontal and vertical control stations intended by the Contractor to be used in establishing positions on a given bridge.
- Measure relative positions of original Project horizontal control stations intended to be used.
- Measure elevation differences between original Project vertical control stations intended to be used.
- Supply horizontal and vertical measurement data to the Engineer
- Compare measured values with those computed from original horizontal network coordinates and vertical network elevations.
- Any discrepancy of concern to either the Contractor or the Engineer will be resolved before that combination of control stations is used.

### **(b) Layout Marks and Reference Points:**

**(1) Substructure** - Stake, reference, or otherwise identify locations, orientations, and elevations necessary for placement of substructure components, including but not limited to cofferdams, piling (including batter), drilled shafts, footings, columns, abutments, caps, cross beams, bearing devices, temporary supports or falsework, and excavations and embankments associated with any of the above.

Verify and document the locations, elevations and spatial relationships with adjacent substructure components. On bridges where prefabricated beams will be used, measure and document span lengths between bearing devices at each beam location as soon as practical. Supply a copy of such documentation to the Engineer for review before the next stage of construction.

Compute the final elevations after studying the plans, specifications, and shop drawings. Adjust the grades as needed to compensate for camber or prefabricated beams, chording of beams across the low side of superelevations, width of flat beams on superelevated surfaces, and any other factor resulting from design or construction methods.

**(2) Superstructure** - Stake, reference, or otherwise identify locations, orientations, and elevations necessary for placement of superstructure components, including but not limited to beams, girders, diaphragms, earthquake restraints, deck, rails, structure mounted traffic control and illumination devices, and concrete forms, temporary supports or falsework, and excavations and embankments associated with any of the above.

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Stake alignment of structure as needed at each stage of construction. Stake alignment of poured-in-place items at 10-foot stations or as established by the Engineer. Stake alignment for the following items as needed to maintain the horizontal tolerance defined in section 00305.50:

- Outside edge of girder(s)
- Face(s) or centerline(s) of internal girders or stem walls
- Edge of deck
- Alignment of grade breaks
- Pedestrian and bicycle facilities
- Rails and railings

Stake grades at each stage of construction. Stake grade of poured-in-place items 10-foot stations, or as established by the Engineer. Apply corrections to design grades based on the dynamics of the evolving structure. Corrections that may be required depend upon the design of the bridge and the construction methods employed. Provide correction values to the Engineer at least 15 working days prior to incorporating into the structure. The following list is examples of possible corrections:

- Design camber (upward adjustment to compensate for anticipated deflection)
- Structural deflection (deflection of the bridge under its own increasing weight)
- Structural shifting (dynamics of the bridge under eccentric loading)
- Falsework deflection (deflection of falsework beams under increasing weight)
- Falsework crush (compression of falsework supports under increasing weight)
- Form crush (compression of forms under increasing weight)
- Equipment deflection (deflection of deck finishing machine or deck rails)
- Other adjustments to staked value to achieve the design grade.

**(c) Bridge Deck Grades** - Set stakes or other devices to control the deck grade elevations. The exact process will depend upon the type of deck and the equipment being used.

**(1) Portland Cement Concrete Deck** - The surveyor and survey crew leader shall attend the first of the two deck pre-placement conferences, described in the Oregon Standard Specifications for Construction, subsection 00540.02(a), required for each deck placement.

Control of a PCC deck may involve significant work with the deck placement crew to establish control for a deck finishing machine. Rails for supporting the deck finishing machine are generally set up on either side of the deck. Each rail is held up by adjustable supports every 5 feet. Adjust the rail at each support to the desired grade while the rail is supporting the weight of the finishing machine. Corrections may need to be applied as listed in subsection 00305.52(c-2)

**(2) Asphalt Concrete Deck** - Control of an AC deck will not generally involve as many variables as PCC. An AC deck serves as a wearing surface, but not a structural component. Asphaltic concrete will frequently be used as filler to create the desired superelevations when flat beams form the superstructure. Stake control of the finish grade like any asphalt finish grade. Under some circumstances, design camber and structural deflection may need to be considered.

**00305.63 Pavements** - Set stakes or other control devices to control the location and elevation of asphalt and PCC pavement as shown. Provide surveying or survey-related activity necessary to control grade, thickness, and smoothness as required.

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**00305.64 Signs, Signals, Illumination and Fabricated Items** - Determine the exact location and their relative location to roadway and bridge features as appropriate such as edge of pavement, curbs, islands, sidewalks, sidewalk ramps, lane lines, bridge columns, bridge decks, and other existing features for the following items:

- Posts and poles including foundations
- Cabinets
- Junction boxes
- Detectors
- Other similar sign, signal, and illumination appurtenances
- New fabricated items

Provide the following documentation to the Engineer before submitting working drawings:

- Field verified length of poles, posts, mast arms, and tenon locations
- Field verified orientation of triangular bases for poles
- Field verified measurements of all existing features including orientation and relationship to all other new appurtenances and new fabricated items.
- Plan, elevation, and side views
- Identification of all obstacles

Field adjustment to the planned location may be required in order to avoid obstacle and to ensure its placement in a functional location. Do not submit working drawings until the Engineer returns the field verified documents. The Engineer will return field verified documents within 21 Calendar Days after receipt of the documents.

Set a stake referencing the center of the item. Set a guard stake with the following information written on it:

- Description of item (by plan number if applicable)
- Centerline station
- Centerline offset
- Cut or fill from reference point (and what point the cut or fill is to)
- Intended elevation

If the orientation of the item is significant and is not clear, establish a reference line for the skew of the item.

Have bridge layout and roadway layout features staked, including referencing, no more than seven calendar days before submitting field verification documents.

**00305.70 Temporary Protection and Direction of Traffic** - For survey activities outside of the projects traffic control plan and lasting 3 days or less, provide work zone traffic control according to ODOT's "Oregon Temporary Traffic Control Handbook".

For survey activities outside of the projects traffic control plan and lasting longer than 3 days, provide work zone traffic control according to Oregon Standard Specifications for Construction Section 00225.

**00305.71 Preservation of Survey Markers:**

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**(a) Project Control Points Established by the Engineer** - Maintain, relocate or replace existing survey monuments, control points, and stakes, as determined by the Engineer. Perform the work to produce the same level of accuracy as the original monument(s) in a timely manner, and at no additional cost to the Agency.

**(b) Monuments of Record** - Preserve survey monuments according to subsection 00170.82(c), ORS 209.140 and ORS 209.150. If such monuments are to be disturbed or destroyed, comply with requirements of these ORS at no additional cost to the Agency.

**(c) Post Construction Survey** - At the completion of the project, file a post construction survey with the Linn County Surveyor's Office. Provide the Engineer with a copy of the approved survey.

If no monuments were disturbed or destroyed during construction activities submit stamped, written verification to the Engineer.

**00305.72 Project Monumentation** - The Contractor will not be responsible for performing right-of-way monumentation.

**00305.73 Pre-Construction Survey** - The Contractor will not be responsible for performing a pre-construction Survey.

### **Measurement**

**00305.80 Measurement** - No measurement of quantities will be made for work performed under this section.

### **Payment**

**00305.90 Payment** - The accepted quantities of construction survey work will be paid for at the Contract lump sum amount for the item "Construction Survey Work".

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

No separate or additional payment will be made for temporary protection and direction of traffic measures including flaggers and signing necessary for the performance of the construction survey work.

No separate or additional payment will be made for preparing surveying documents including but not limited to office time, preparing and checking survey notes, and all other related preparation work.

The amount to be allowed for "Construction Survey Work" in the progress payments will not be in excess of the reasonable value of the surveying work performed under this specification as said reasonable value is estimated by the Engineer.

Costs incurred as a result of survey errors will be borne by the Contractor. Such costs include price adjustments for failure to meet requirements of the construction specifications, repair or removal and replacement of deficient product, and over-run of material.

In cases where changes, not due to the Contractor's operations, necessitate redesign of the work, increased Contractor survey costs due to these changes will be paid for as Extra Work.

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

Comply with Section 00310 of the Standard Specifications.

**SECTION 00320 - CLEARING AND GRUBBING**

Comply with Section 00320 of the Standard Specifications.

**00320.01 Areas of Work** - Replace this subsection, except for the subsection number and title, with the following:

Clearing and grubbing will be required to the extents needed to complete the work unless otherwise shown on the plans or directed by the Engineer.

**SECTION 00330 - EARTHWORK**

Comply with Section 00330 of the Standard Specifications modified as follows:

**00330.03 Basis of Performance** - Add the following paragraph to the end of this subsection:

Perform all earthwork under this Section on the embankment basis.

**00330.41(a)(5) Waste Materials** - Replace this subsection, except for the subsection number and title, with the following:

Unless otherwise specifically allowed and subject to the requirements of Section 00280, dispose of materials, classed as waste materials in 00330.41(a)(3), outside and beyond the limits of the Project and Agency controlled property according to 00290.20. Do not dispose of materials on Wetlands, either public or private, or within 300 feet of rivers or streams.

**00330.42(c)(3) Embankment Slope Protection** - Add the following paragraph:

Construct the outer 12 inches of embankments with suitable materials to establish slope stabilization through permanent seeding. If suitable material is not available, provide suitable materials from a Contractor-provided source which conforms to the requirements of 00330.11 or 00330.13 and provides favorable conditions for germination of seed and growth of grass.

**SECTION 00350 - GEOSYNTHETIC INSTALLATION**

Comply with Section 00350 of the Standard Specifications.

**SECTION 00390 - RIPRAP PROTECTION**

Comply with Section 00390 of the Standard Specifications.

**SECTION 00501 - BRIDGE REMOVAL**

Comply with Section 00501 of the Standard Specifications modified as follows:

**00501.00 Scope** - Add the following paragraph(s) to the end of this subsection:

Remove portions of the existing bridge over Thomas Creek as shown.

Add the following subsection:

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**00501.02 Plans** - Plans of the existing structure are available for viewing at the office of the Engineer. Prints of these plans are available upon request.

Add the following subsection:

**00501.03 Submittals** - Submit unstamped bridge removal plans according to 00150.35 21 Calendar Days before beginning removal work.

Include the following information in the submittal:

- Removal sequence, including contractor staging and traffic staging.
- Detailed schedule of bridge removal work.
- Type of equipment that will be used, including size and capacity.
- Equipment location during removal operations.

Do not begin bridge removal work until the bridge removal plans have been approved.

**SECTION 00504 - CONCRETE DECK SURFACE PREPARATION**

Comply with Section 00504 of the Standard Specifications.

**SECTION 00510 - STRUCTURE EXCAVATION AND BACKFILL**

Comply with Section 00510 of the Standard Specifications modified as follows:

**00510.80(b)(1) Lump Sum** - Add the following to the end of this subsection:

The estimated quantity of structure excavation is:

<b>Location</b>	<b>Structure Excavation (Cubic Yard)</b>
BR 12965	174.0

**00510.80(d)(1) Lump Sum** - Add the following to the end of this subsection::

The estimated quantity of granular structure backfill is:

<b>Location</b>	<b>Granular Structure Backfill (Cubic Yard)</b>
BR 12965	13.0

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**SHORING DESIGN CHECKLIST**

**Instructions** - This shoring design checklist was developed to facilitate the design, review, and erection of shoring to be used for ODOT construction projects. This checklist is intended to act as a reminder to design or check for specific important aspects of this construction. It is not a substitute for plan and/or design criteria or specification requirements.

The Checklist is to be completed by the shoring design engineer. Answer every question. Attach to the Checklist an explanation of any negative responses.

Submit this Shoring Design Checklist for each stage and phase of the project, along with the shoring design summary, Working Drawings and calculations according to 00510.04.

	YES	NO	N/A
<b>A. General</b>			
1. Are the shoring Working Drawings and supporting calculations prepared, stamped, and signed by an engineer registered to practice in the state of Oregon?	_____	_____	_____
2. Are the temporary shoring installation plans, construction sequence, and removal plan compatible with the project construction staging/phasing?	_____	_____	_____
<b>B. Design Standards</b>			
1. Does the shoring design comply with standards identified in ODOT GDM 15.3.26.3 and related sections?	_____	_____	_____
2. Is the design standard and edition identified in the shoring design calculations?	_____	_____	_____
<b>C. Loading</b>			
1. Have the design loads, including special loading conditions (e.g. cranes, stockpiles, etc.), used for shoring design of all members been noted in the design calculations?	_____	_____	_____
2. Have the appropriate load and resistance factors or factors of safety on the shoring system been identified, for all applicable load combinations or load cases?	_____	_____	_____
3. If public traffic is near or directly above the shoring system, has a minimum traffic live load surcharge of 250 psf been applied?	_____	_____	_____
4. Have the loads from actual construction equipment and not less than 250 psf been included in the shoring system design?	_____	_____	_____
5. Have the construction loads for different stages of construction been considered and included in the calculations?	_____	_____	_____

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- 6. Have the effects of any construction activities adjacent to the shoring system on the stability/performance of the shoring system been addressed in the shoring design (e.g., excavation or soil disturbance in front of the wall or slope, excavation dewatering, vibrations and soil loosening due to soil modification/construction activities)? \_\_\_\_\_
- 7. Have earth pressure diagrams been included? \_\_\_\_\_
- 8. Does the shoring design consider the effect of water saturated soil pressure acting on the full height of the shoring? \_\_\_\_\_

**D. Geotechnical and Structural Analysis**

- 1. Has internal stability been evaluated? \_\_\_\_\_
- 2. Has eccentricity/overturning stability been evaluated? \_\_\_\_\_
- 3. Has sliding been evaluated? \_\_\_\_\_
- 4. Has overall/global stability been evaluated? \_\_\_\_\_
- 5. Has bearing capacity been evaluated? \_\_\_\_\_
- 6. Have displacement constraints or other performance objectives of the shoring system been identified and evaluated? \_\_\_\_\_
- 7. Has each stage of the shoring system construction been evaluated to carry traffic and construction loads and ensure internal and external stability through the construction and loading sequence? \_\_\_\_\_
- 8. Are the allowable stress and the calculated stress listed in the summary for each different shoring member? \_\_\_\_\_
- 9. Have steel beams been checked for bending, shear, web crippling and buckling of the compression flange? \_\_\_\_\_
- 10. Have connections for all phases of construction and removal been designed for all interim loading? \_\_\_\_\_
- 11. Has buckling, bracing strength, and stiffness been evaluated for all compression members? \_\_\_\_\_

**E. Materials**

- 1. Are all soil, rock, and other material properties used for the design of the shoring system provided and consistent with GDM and the subsurface field and lab data? \_\_\_\_\_
- 2. Are timber grades noted on shoring drawings and in accompanying calculations? \_\_\_\_\_



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- 3. Are the minimum lumber dimensions shown in the calculations and noted on the Working Drawings? \_\_\_\_\_
- 4. Are steel structural shapes, bolts, connections, and plates identified by ASTM number on the shoring Working Drawings and in the calculations? \_\_\_\_\_

**F. Shoring Working Drawings**

- 1. Is the field verified ground topography above and below the shoring wall shown? \_\_\_\_\_
- 2. Are all existing, adjusted or new utilities, structures, and “no work zones” in proximity to the proposed shoring shown on the shoring Working Drawings and is protection of these items addressed? \_\_\_\_\_
- 3. Are horizontal and vertical clearance requirements identified and shown on the shoring Working Drawings? \_\_\_\_\_
- 4. Are plan view, elevation and cross sections drawn to scale, with dimensions defining location and size of the temporary shoring, components, and excavation limits? \_\_\_\_\_
- 5. Are the magnitude and location of all loads, equipment and personnel that will be supported by the shoring shown or noted on the shoring Working Drawings? \_\_\_\_\_
- 6. Has a dewatering plan been shown? \_\_\_\_\_
- 7. Have all connections been detailed? \_\_\_\_\_
- 8. Has bracing been detailed? \_\_\_\_\_

**G. Testing and Monitoring**

- 1. If a “yes” response to No. D-6, is a monitoring plan provided to verify adequate performance of the shoring system throughout the design life of the system? \_\_\_\_\_
- 2. Has a load testing program been provided for soil nails, tiebacks, or other applicable elements of the shoring system? \_\_\_\_\_

\_\_\_\_\_  
Design Engineer of Record Signature

\_\_\_\_\_  
Date

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**SECTION 00520 - DRIVEN PILES**

Comply with Section 00520 of the Standard Specifications modified as follows:

**00520.11 Engineer's Estimated Length List** - Add the following to the end of this subsection:

The Engineer's estimated lengths of steel piling are:

Location	Number	Length (feet)	Type and Size	Coating Top Elevation <sup>1</sup>	Coating Bottom Elevation <sup>1</sup>
Bent 1	4	25.3	PP12.75x0.375	N/A	N/A
Bent 2	7	15.0	PP12.75x0.375	N/A	N/A
Bent 3	7	19.0	PP12.75x0.375	N/A	N/A
Bent 4	4	24.0	PP12.75x0.375	N/A	N/A
Bent 5	4	27.6	PP12.75x0.375	N/A	N/A

<sup>1</sup> Protective coating system and color requirements according to 00594.10.

**00520.41(d) Preboring** - Add the following sentence to the end of this subsection:

Use augering, wet-rotary drilling or other approved methods of preboring as directed.

**00520.43(c) End Treatment** - Add the following sentence to the end of this subsection:

Install steel pipe piles open-ended with tip treatment as shown.

**00520.90 Payment** – Add the following pay items to the pay items list:

Pay Item	Unit of Measurement
(m) Furnish Drilling Equipment.....	Lump Sum
(n) Install PP12.75 x 0.375 Pipe Piles .....	Each

Add the following paragraph to the end of the subsection:

Item (n) includes placement of the steel piles in the pre-bored holes and placement of the cement grout.

**SECTION 00530 - STEEL REINFORCEMENT FOR CONCRETE**

Comply with Section 00530 of the Standard Specifications modified as follows:

**00530.80(a) Lump Sum** - Add the following to the end of this subsection:

The estimated quantity of reinforcement is:

Structure Number	Uncoated Reinforcement Quantity (Pound)			
	Grade 60	Grade 80	Grade 100	Stainless Steel Grade _____
12965	16,600	N/A	N/A	N/A

The weight of miscellaneous metal, based on weights listed in 00530.80(b) and Project quantities, is included in the estimated quantity of uncoated reinforcement.

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**SECTION 00535 - RESIN BONDED ANCHOR SYSTEMS**

Replace Section 00535 of the Standard Specifications with the following Section 00535:

**SECTION 00535 - POST-INSTALLED ANCHOR SYSTEMS**

**Description**

**00535.00 Scope** - This Work consists of drilling and preparing holes in hardened concrete and providing and installing anchor bolts and/or reinforcement using a resin bonded anchor system or a mechanical anchor system as shown.

**00535.01 Required Submittals** - For resin bonded anchor installation horizontally or upwardly inclined submit personnel qualifications according to 00535.30 at least 21 Calendar Days before starting Work.

**Materials**

**00535.10 Materials** - Provide the Engineer with:

- Certification, according to 00165.35, that the anchor system meets all requirements for the Project.
- Mill test certificates verifying the strengths of material used in the manufacture of the anchors.

**(a) Resin Bonded Anchor System** - Furnish anchor bolts meeting the requirements of 02560.30 and reinforcing steel meeting the requirements of Section 02510 as shown. High strength anchor bolts meeting the requirements of ASTM A193, Grade B7 may be substituted in place of these specified in 02560.30(b).

Furnish a polyester, vinyl ester, or epoxy resin bonding system from the QPL that sustains the minimum pullout force shown. Resin used for installation of the anchor system as shown shall be the same lot used for testing according to 00535.45(a)(1).

Unless shown otherwise, do not install anchors larger than 1 inch in diameter using a resin-bonded anchor system.

Unless shown otherwise, galvanize all anchors which have any portion of the anchor exposed. Galvanize according to AASHTO M 232 (ASTM A153) or AASHTO M 298 (ASTM B695), Class 50. When within 25 aerial miles of the Pacific Ocean, galvanize according to AASHTO M 232 (ASTM A153) only. Anchors that become completely encased in concrete will not require galvanizing.

Provide thread lengths as shown. If thread lengths are not shown and the anchor is not rebar, provide threads on the resin-bonded end of the anchor for at least 80 percent of the embedment depth shown.

**(b) Mechanical Anchor System** - Furnish a mechanical anchor system from the QPL that sustains the minimum pullout force and is not longer than the embedment depth shown. Anchors used for installation shall be the same lot used for testing according to 00535.45(a)(2). Unless shown otherwise, provide galvanized mechanical anchors according to AASHTO M 232 (ASTM A153).

**Labor**

**00535.30 Qualified Personnel** - Provide ACI/CRSI adhesive anchor certified personnel for installation of resin bonded anchors horizontally or upwardly inclined (including vertically overhead). Contact Oregon Chapter of ACI, (503) 753-3075, [www.oregonaci.org](http://www.oregonaci.org)

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### Construction

**00535.40 Construction** - Install the anchor system according to the Manufacturer's Printed Installation Instructions (MPII) and to the embedment depths shown.

**(a) General** - Locate existing reinforcing bars. If existing reinforcement is encountered, adjust the hole location to avoid conflicts as shown or as directed. Avoid installing anchors in cracked concrete. Patch abandoned holes with a PCC repair material meeting the requirements of Section 02015 and according to the manufacturer's recommendations.

Clean holes with a nonmetallic brush, compressed air, and water. Remove excess water from the hole. The cleaned hole may be damp, but shall be free of concrete dust, foreign matter, and standing water. Protect drilled and cleaned hole from contamination. If the drilled hole becomes contaminated, as determined by the Engineer, re-clean the hole.

Do not install anchors until concrete has cured for 21 Calendar Days.

Provide components connected to the installed anchors with the same metal type or provide electrical isolation when metal type of the components is dissimilar or unknown.

**(b) Resin Bonded Anchor System** - Unless stated otherwise in the manufacturer's instructions, use a drill bit diameter 1/8 inch larger than the nominal anchor diameter for AASHTO M 314 anchors and 5/64 inch larger than the out-to-out diameter for rebar.

Install horizontally inclined, upwardly inclined, or vertically overhead resin bonded anchors using a piston plug method.

Do not install resin bonded anchors when the concrete temperature is below 50 °F, unless otherwise advised by the resin manufacturer's recommendations.

For anchors resisting sustained tension loads do not load or torque anchors until 24 hours after the manufacturer's minimum full cure time.

For resin bonded anchor system with anchor bolts and nuts, after the resin is fully cured, mark the position of the nut with a felt tip pen or similar marker. Rotate the nut of each anchor bolt past snug-tight by no more than 1/6 turn, unless shown otherwise, to avoid unintended damage.

**00535.45 Testing** - Perform demonstration tests and production tests on anchors as specified in the anchor test summary at the frequency in the MFTP.

Perform demonstration tests before installing the anchor system and perform production tests during anchor installation Work at agreed upon locations.

Do not incorporate demonstration test anchors into the Work. Do not begin installing the anchor system until the installation process is approved. Test results with the average load meeting or exceeding the minimum pullout force will be acceptable. If any test anchor has a capacity less than 95 percent of the minimum pullout force, the anchor lot will be rejected.

**(a) Demonstration Tests** - Demonstrate the installation process for each lot of post-installed anchor system and each anchor type and size.

Install three test anchors using the same materials and methods that will be used for installing the anchor system. One demonstration test includes 3 test anchors.

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**(1) Resin Bonded Anchor System** - Test the anchors according to ASTM E488 as confined tension tests up to the minimum pullout force shown. When the pullout force and embedment depth are not shown, install the anchors to the embedment depth and test the anchors using the minimum pullout force in Table 00535-1.

**Table 00535-1**

Minimum Pullout Force							
Dia. (inch)	Anchor Bolts			Embed Depth (inch)*	Rebar		
	Grade 36	Grade 55	Grade 105		Grade 60	Size	Force (Pounds)
1/2	7,400	9,700	15,300	4.50	3		
5/8	11,700	16,900	24,300	6.00	4	14,400	5.25
3/4	17,300	22,500	36,000	7.50	5	22,300	6.50
7/8	24,000	31,200	49,900	9.25	6	31,700	7.50
1	31,700	40,900	65,400	11.00	7	43,800	8.75
					8	56,700	10.25

\*± 1/8 inch

**(2) Mechanical Anchor System** - Test the anchors according to ASTM E488 as unconfined tension tests up to the minimum pullout force shown.

**(b) Production Tests** - Use anchors from the same lot used for the demonstration tests. Perform production tests during installation of the anchor system, after the installation is finished, and for the Resin Bonded Anchor System the resin has cured according to the Manufacturer’s recommendations. One production test includes 1 test anchor. Maintain the test load at the required load level for a minimum of 10 seconds. Test anchors shall not have measurable displacement. If the Engineer suspects improper installations, more testing may be required.

**(1) Resin Bonded Anchor System** - Test anchors according to ASTM E488 as confined tension tests to 50 percent of the minimum pullout force shown.

For bent rebar anchors (#5 or smaller), furnish and test a straight bar at the required location. After the Engineer accepts test results, cold bend the bar to dimensions as shown. For epoxy coated rebar, inspect for damage to coating and repair damaged coated areas according to 00530.45. For threaded rods and larger reinforcing bars, furnish and install a sacrificial straight test anchor at a minimum distance of 1.5 times embedment depth away from the required location.

**(2) Mechanical Anchor System** - Test anchors according to ASTM E488 as unconfined tension tests to 40 percent of the minimum pullout force shown.

**Measurement**

**00535.80 Measurement** - No measurement of quantities will be made for post-installed anchor systems.

**Payment**

**00535.90 Payment** - No separate or additional payment will be made for post-installed anchor systems. Payment will be included in payment made for the appropriate items under which this Work is required.

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**SECTION 00540 - STRUCTURAL CONCRETE**

Comply with Section 00540 of the Standard Specifications.

**FALSEWORK DESIGN CHECKLIST**

**Instructions** - This checklist was developed to facilitate the design, review, and erection of falsework to be used for Oregon Department of Transportation bridge construction projects. This checklist is intended to act as a reminder to design or check for specific important aspects of this construction. It is not a substitute for plan and/or design criteria or specification requirements.

The Checklist is to be completed and signed by the Falsework Design Engineer. Answer every question. Attach to the Checklist an explanation of any negative responses.

Submit the Checklist according to 00540.41(a).

	<b>YES</b>	<b>NO</b>	<b>N/A</b>
<b>A. Contract Plans, Specifications, Permits, Etc.</b>			
1. Are the falsework plans prepared, stamped and signed by an engineer registered to practice in Oregon?	_____	_____	_____
2. Have three complete sets (five if railroad approval is required) of the design calculations been included with the falsework drawings submittal?	_____	_____	_____
3. Are falsework plans in compliance with the requirements of the construction plans general notes?	_____	_____	_____
4. Are falsework plans in compliance with contract plan structural details?	_____	_____	_____
5. Are falsework plans in compliance with the requirements of the Oregon Standard Specifications for Construction, subsection 00150.35?	_____	_____	_____
6. Are all existing, adjusted or new utilities in proximity with the proposed falsework shown on the falsework plans and is protection of these utilities addressed?	_____	_____	_____
7. Are clearance requirements satisfied and shown on the falsework plans?	_____	_____	_____
8. For construction in or over navigable waters have all requirements for construction of falsework that are called for in the Coast Guard Permit been incorporated in the falsework design?	_____	_____	_____
9. Has possible damage from traffic been considered in the falsework design?	_____	_____	_____

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- 10. Has damage from stream drift been considered in the falsework design? \_\_\_\_\_
- 11. Is the concrete placing sequence shown and is it consistent with the contract plans? \_\_\_\_\_

**B. Foundation Requirements**

- 1. Are driven falsework piling provided as called for on the contract plans? \_\_\_\_\_
  - a. Is a minimum pile tip elevation or penetration indicated on the drawings? \_\_\_\_\_
  - b. If timber falsework piles are specified, are the recommended order lengths sufficient to virtually eliminate the possibility of pile splices? \_\_\_\_\_
  - c. Is a detailed static pile capacity analysis included in the calculations? \_\_\_\_\_
  - d. If lateral loads are applied to the piling by equipment, dead loads, flowing water, or drift, is a detailed lateral load analysis included in the calculations? \_\_\_\_\_
  - e. When piling are in an active waterway, have the potential effects of scour on axial and lateral pile support been addressed in the calculations? \_\_\_\_\_
  - f. Does the proposed falsework pile hammer meet the minimum field energy requirements as listed in 00520.20(d)(2)? \_\_\_\_\_
  - g. Will a driving criteria graph [FHWA Gates Equation, in 00520.42(b)] plotting blow count versus stroke for an acceptable pile hammer be provided for the project inspector? \_\_\_\_\_
- 2. Is falsework supported on spread footings or mud sills? \_\_\_\_\_
  - a. Are the spread footing elevations shown on the drawings? \_\_\_\_\_
  - b. Has a rational method for determining the ultimate bearing capacity of the foundation materials been presented and described in the calculations? \_\_\_\_\_

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- c. Have the soil parameters used in calculating the ultimate bearing capacity been listed and confirmed by the designer? \_\_\_\_\_
- d. Has an appropriate Factor of Safety been used for calculating the allowable bearing capacity of the foundation materials? \_\_\_\_\_
- e. Are spread footing settlement estimates included in the calculations? \_\_\_\_\_
- f. Have effective stresses been used in the calculations, when applicable? \_\_\_\_\_
- g. When spread footings are founded near the top of a slope or in a slope, have the ultimate bearing capacity calculations been modified accordingly? \_\_\_\_\_
- h. When spread footings may be subjected to flowing water, have the potential effects of scour on ultimate bearing capacity been addressed in the calculations? \_\_\_\_\_

**C. Loads**

- 1. Are the magnitude and location of all loads, equipment and personnel that will be supported by the falsework shown and noted on the falsework plans? \_\_\_\_\_
- 2. Has the mass of specific equipment units to be supported by the falsework been included in the calculations or on the falsework plans? \_\_\_\_\_
- 3. Is the deck finishing machine supported in a manner that will not impose load on concrete forms except deck overhang brackets? \_\_\_\_\_
- 4. Are design loads and material properties used to determine design stresses for each different falsework member shown on the falsework plans? \_\_\_\_\_
- 5. Is the worst loading and member property condition, rather than the average condition, used to obtain design loads? \_\_\_\_\_
- 6. Are deck forms for concrete box girders supported from the girder stem and not from the bottom slab? \_\_\_\_\_
- 7. Are diaphragm loads or other concentrated loads included in the analysis of supporting beams? \_\_\_\_\_
- 8. If sloping structural members exert horizontal forces on the falsework, is bracing or ties used to resist these loads? \_\_\_\_\_



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**D. Allowable Stresses**

- 1. Has the method used for falsework design of all members except for manufactured assemblies been noted in the design calculations? \_\_\_\_\_
- 2. Are manufactured assemblies identified as to manufacturer, model, rated working capacity and ultimate capacity? \_\_\_\_\_
- 3. Is the allowable stress and the calculated stress listed in the summary for each different falsework member, except for manufactured assemblies? \_\_\_\_\_

**E. Timber Falsework Construction**

- 1. Are timber grades consistent with material to be delivered to the construction site, and noted on falsework drawings, and in accompanying calculations for all timber falsework material? \_\_\_\_\_
- 2. If "rough" lumber is specified for falsework by the falsework designer are the actual lumber dimensions used in calculations shown? \_\_\_\_\_
- 3. If plywood spans are governed by the strength of the plywood, are the allowable stress and the calculated stress shown on the submitted calculations? \_\_\_\_\_
- 4. If plywood spans are governed by the allowable spacing of supporting joists, are the allowable and the proposed spacing shown on the falsework plans? \_\_\_\_\_
- 5. Have timber stringers been checked for bending, shear, bearing stresses, and 1/240 of the span length deflection? \_\_\_\_\_
- 6. Are joists identified as being continuous over 3 or more spans when they are not analyzed as simple spans? \_\_\_\_\_
- 7. Have stringers and cap beams been checked for bearing stresses perpendicular to the grain as well as for bending and shear stresses? \_\_\_\_\_
- 8. Have posts been checked as columns as well as for compression parallel to the grain? \_\_\_\_\_

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**F. Steel Falsework Construction**

- 1. Are steel structural shapes and plates identified by ASTM number on the falsework plans and in the calculations? \_\_\_\_\_
- 2. Have steel beams been checked for bending, shear, web crippling and buckling of the compression flange? \_\_\_\_\_
- 3. Has horizontal plane bracing been shown where required to limit compression flange buckling? \_\_\_\_\_

**G. Deflections and Settlement**

- 1. Is falsework deflection for concrete dead load shown on the plans for all falsework spans? \_\_\_\_\_
- 2. Is falsework deflection from concrete dead load limited to 1/240 of the span length for all falsework spans? \_\_\_\_\_
- 3. Do stringers supporting cast-in-place concrete compensate for estimated camber? \_\_\_\_\_
- 4. For beam spans with cantilevers, has the upward deflection of the cantilevers due to load placed on the main spans been investigated? \_\_\_\_\_
- 5. Are provisions shown for taking up falsework settlement? \_\_\_\_\_

**H. Compression Members, Connections and Bracing**

- 1. Has general buckling been evaluated for all compression members? \_\_\_\_\_
- 2. Has bracing been provided at all points of assumed support for compression members? \_\_\_\_\_
- 3. Was bracing in each direction considered in establishing the effective length used to check post capacity? \_\_\_\_\_
- 4. Is bracing strength and stiffness sufficient for the intended purpose? \_\_\_\_\_
- 5. If temporary bracing is required during intermediate stages of falsework erection, is it shown on the falsework plans? \_\_\_\_\_
- 6. Have all connections been designed and detailed? \_\_\_\_\_
- 7. Are web stiffeners required on steel cap beams to resist eccentric loads? \_\_\_\_\_
- 8. Are wedges required between longitudinal beams and cap beams to accommodate longitudinal slope or to reduce eccentric loading? \_\_\_\_\_

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- 9. Has the width to height ratio of wedge packs been verified to fall within the limits given in the special provisions? \_\_\_\_\_
- 10. If overhang brackets are attached to unstiffened girder webs, has the need for temporary bracing to prevent longitudinal girder distortion been investigated? \_\_\_\_\_
- 11. Have beams and stringers with height/width ratios greater than 2.5:1 been checked for stability? \_\_\_\_\_
- 12. Have sloping falsework members that exert horizontal forces on the falsework been braced or tied to resist these loads? \_\_\_\_\_
- 13. If beams supporting cast-in-place concrete have cantilever spans, have the falsework plans been noted to require the main spans be loaded before loading the cantilever spans? \_\_\_\_\_
- 14. Have timber headers set on shoring towers been checked for eccentric loads, and for shear and bending stresses produced by the eccentricity? \_\_\_\_\_

**I. Highway and Railroad Traffic Openings (For falsework over or adjacent to highway or railroad traffic openings.)**

- 1. Do falsework plans satisfy construction clearances shown on the contract plans? \_\_\_\_\_
- 2. Are posts designed for 150% of the calculated vertical loading and increased or readjusted for loads caused by prestressing forces? \_\_\_\_\_
- 3. Are mechanical connections 2,000 pounds minimum capacity shown at the bottom of posts to footing connections? \_\_\_\_\_
- 4. Are mechanical connections 1,000 pounds minimum capacity shown at the top of the post to cap connections? \_\_\_\_\_
- 5. Are beam tie downs 500 pounds minimum capacity shown for all beams? \_\_\_\_\_
- 6. Are 5/8 inch or larger diameter bolts used at connections for timber bracing? \_\_\_\_\_
- 7. Are temporary erection and removal bracing shown? \_\_\_\_\_

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**J. Additional Requirements for Railroad Traffic Openings**

- 1. Do falsework plans show collision posts as shown on the contract plans? \_\_\_\_\_
- 2. Do posts adjacent to the openings have a minimum section modulus of?
  - a. steel - 9.5 cubic inches \_\_\_\_\_
  - b. timber - 250 cubic inches \_\_\_\_\_
- 3. Are soffit and deck overhang forming details shown? \_\_\_\_\_
- 4. Are falsework bents within 20 feet of centerline of the track sheathed solid between 3 feet and 17 feet above top of rail with 5/8 inch thick minimum plywood and properly blocked at the edges? \_\_\_\_\_
- 5. Is bracing on the bents within 20 feet of the centerline of the track adequate to resist the required assumed horizontal load or minimum 5,000 pounds, whichever is greater? \_\_\_\_\_

\_\_\_\_\_  
Designer's Signature                      Date

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**SECTION 00550 - PRECAST PRESTRESSED CONCRETE MEMBERS**

Comply with Section 00550 of the Standard Specifications.

**SECTION 00560 - STRUCTURAL STEEL BRIDGES**

Comply with Section 00560 of the Standard Specifications modified as follows:

**00560.80 Measurement** - Add the following to the end of this subsection:

The estimated quantity of structural steel is:

<b>Structure</b>	<b>Steel Type</b>	<b>Quantity (Pound)</b>
Bridge No. 12965	Side Plates and Hardware	3350

All other structural steel used for stringer connections, portal framing, etc. will be considered incidental.

**00560.90 Payment** - Add the following pay item to the pay item list:

<b>Pay Item</b>	<b>Unit of Measurement</b>
(i) Structural Steel – Side Plates and Hardware .....	Lump Sum

Add the following paragraph to the end of this subsection:

Item (i) includes lower truss chord splice plates and all hardware associated with the installation of the lower truss chord splice plates.

**SECTION 00570 - TIMBER STRUCTURES**

Comply with Section 00570 of the Standard Specifications modified as follows:

**00570.10 Materials** - Add the following to the end of this subsection:

Furnish timber and lumber meeting the following grading requirements:

- All glue-laminated timber for the bottom chord repair shall be Douglas-fir 24F-V8, S4S finish. All longitudinal joints shall be staggered and edge-glued.
- All glue-laminated timber for the exterior deck stringers shall be Douglas-fir 24F-V4, S4S finish. All longitudinal joints shall be staggered. Top and bottom longitudinal joints shall be edge-glued.
- Lumber used for the roof rafters, rafter ties and rafter support beam shall be Douglas-fir Select Structural or better as graded under the WWPA or WCLIB grading rules.
- Lumber used for the roofing nailers shall be Douglas-fir No. 1 or better as graded under the WWPA or WCLIB grading rules.
- Lumber used for the transverse decking shall be Douglas-fir Select Structural or better as graded under the WWPA or WCLIB grading rules.
- Lumber used for the longitudinal decking shall be Douglas-fir No. 1 or better as graded under the WWPA or WCLIB grading rules.
- Timber used for main siding and battens shall be Douglas-fir Select Structural or better as graded under the WWPA or WCLIB grading rules.

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- Portal siding shall be Douglas-fir grade C & BTR, and have the pattern WC-105 for the nominal 1x6 size as defined in the current edition of the Grading Rules for West Coast Lumber, Standard No. 17.
- All other timber and lumber used shall be Douglas-fir No. 1 or better as graded under the WWPA or WCLIB grading rules.

All timber and lumber members except truss members, siding and battens, shall be S4S dimension as called for on the plans or as required to match existing sizes and dimensions. Main siding shall be kiln dried  $\frac{3}{4}$ " net x  $1\frac{1}{4}$ " (S2E), and battens shall be kiln dried  $\frac{3}{4}$ " x  $3\frac{1}{2}$ " (S2E), smooth face and resawn back, graded for the smooth face. Protect all siding and battens from moisture after drying and before installation. Install main siding with smooth face of siding and batten toward the interior of the house.

Glue-laminated timber shall be in accordance with the current edition of the Standard Specifications for Structural Glue Laminated Timber of Softwood Species, AITC 117-Design. Wane is not permitted in any of the laminations used in the manufacturing of the glue-laminated members.

Preservative treatment of timber is required. The types of treatments that are allowed are described in 00570.40.

**00570.11 Metal Parts** - Add the following to the end of this subsection:

Galvanized connectors are allowed on CA-C treated timber only when the timbers are kiln dried to 19 percent after treatment. If CA-C treated timber is not kiln dried, use stainless steel connectors only. Galvanized connectors are allowed on all oil borne Copper Naphthenate treated timber.

**00570.40 Treated Timber** - Add the following to the end of this subsection:

Treat all new lower truss chord members, transverse and longitudinal decking, stringer blocking, siding nailers and nailer supports, and portal outlookers with CA-C off-site after fabrication. Minimum net retention of preservative shall be 0.15 lbs/cu. ft. CA-C treated wood used for truss and longitudinal decking shall include a pigment to simulate the natural color of the wood treated. Submit color sample to Engineer for approval prior to treatment. Treat all glue laminated timber with oil borne Copper Naphthenate off-site after fabrication with a minimum net retention of 0.075 lbs/cu. ft.

Make all cuts, holes, and shear plate recesses, except for field cut daps in lower chord, prior to treatment. Dry fit lower chord splices prior to treatment.

Treatment shall comply with Standards U1-16 and T1-16 of the American Wood Protectors Association (formerly the American Wood Preservers Association). Treat according to the Western Wood Preservers Institute "Best Management Practices" (BMP).

Apply a clear waterproof sealer to all preservative-treated timbers after preservative treatment. If applying on-site, perform application at least 150 feet from the Regulated Work Area.

Implement containment measures adequate to prevent spilled or run-off sealant from entering the Regulated Work Area.

Add the following subsection:

**00570.48 Field Repair** - Field-treat newly-exposed wood surfaces from boring, field fabrication and/or handling abuse per Section 02190 and instructions shown on the plans. In the absence of plan instructions, apply per the manufacturer's instructions by brushing, dipping, soaking or pouring the

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preservative over the exposed areas until saturated. Use adequate containment measures to prevent preservative from entering the stream.

Add the following subsection:

**00570.49 Epoxy Repair of Timber Truss** – Perform epoxy repair on members identified in the contract plans and upon direction of the Engineer. Remove any visible signs of decay, if present, plus additional adjacent wood in the grain direction as directed by, and under the observation of, the Engineer to ensure removal of all possible extensions of infecting fungi. Thoroughly clean all dirt and debris so that an acceptable bond can be achieved between the wood and epoxy. Seal repair area with plastic wrap, tape, or other method as required to prevent epoxy from seeping from the repair area. Fill the repair area with epoxy meeting the requirements of 00570.15. Final epoxy repair shall be flush with wood surface prior to painting.

**00570.80 Measurement** – Add the following to the end of this subsection:

The estimated quantity of Epoxy Repair is:

Structure	Quantity (Gallons)
12965.....	4.80

**00570.90 Payment** – Add the following pay items to the pay item list:

Pay Item	Unit of Measurement
(c) Timber and Lumber, Roof System .....	MFBM
(d) Timber and Lumber, Decking .....	MFBM
(e) Timber and Lumber, Siding .....	MFBM
(f) Timber and Lumber, Portal Framing.....	MFBM
(g) Timber and Lumber, Lower X-Bracing.....	MFBM
(h) Timber and Lumber, Miscellaneous.....	MFBM
(i) Glue Laminated Timber, Truss Repair.....	MFBM
(j) Glue Laminated Timber, Span 2 Stringers.....	MFBM
(k) Epoxy Repair of Timber Truss .....	LS

Add the following paragraphs to the end of this subsection:

Item (c) includes rafters, rafter ties, ridge beam, barge boards, rafter support beams & supports, roofing nailers, fall arrest bridging, all fasteners, and light gauge steel connectors and supports necessary to install the rafter system.

Item (d) includes all transverse and longitudinal decking, and all required fasteners.

Item (e) includes all timber boards, battens, window slats and framing, and all fasteners necessary for installation.

Item (f) includes all timber necessary for framing the end portals & flares, and all hardware and fasteners necessary for installation.

Item (g) includes new end bay lower X-bracing, and all hardware and fasteners necessary for installation.

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Item (h) includes siding nailers and supports, skirting nailers and blocking, skirting plywood, pressure treated portal outlookers, and pressure treated stringer blocking.

Item (i) includes timber for all lower chord sections, spacers, corbels, corbel spacer blocks, and all hardware not included in the lower truss chord splices.

Item (j) includes exterior deck system stringers and all the hardware and fasteners necessary for installation.

### **SECTION 00574 - RE-ROOF BRIDGE**

Section 00574, which is not in the Standard Specifications, is included in this project by special provision.

**00574.00 Scope** - The work shall include removing the existing roof, disposal of all debris, and re-roofing in accordance with these specifications and plans.

The work under this Section also consists of furnishing and installing fall arrest anchors according to the plans and specifications.

#### **Materials**

**00574.10 General** – Roofing material shall be new No. 1 grade, 24-inch ("royal") red cedar shingles, re-buttet and re-sawn, pre-impregnated with fire-retardant polymers to a Class B standard, according to ASTM E 108, UIL-790, NFPA-256, and UBC Standard 15-2.

Fall arrest anchors shall have an ultimate load capacity of at least 5,000 lbf in any direction in which a load may be applied. Fall arrest anchors shall be purpose-built units, made of Type 304 stainless steel conforming to ASTM A 240, not less than 1/8-inch thick. Submit manufacturer's literature for approval. Ten fall arrest anchors are required.

Furnish white, baked-enamel 24-ga. galvanized steel flashing.

#### **Construction**

**00574.40 General** –Install roofing according to the manufacturer's recommendations, these Special Provisions, and as directed. Do not use felt underlayment. The exposure to the weather shall be 7½ inches.

Fasten each shingle, including ridge shingles, to the sheathing with two pneumatically driven stainless steel ring shank nails. Staples will not be accepted. Fasteners must penetrate sheathing at least ⅝ inch but must not protrude through bottom face of nailers. Install shingles only at ambient temperatures above 50°F.

Install fall-arrest anchor flashing according to manufacturer's recommendations.

Install manufactured ridge cap pieces according to manufacturer's recommendations.

No broken or cracked shingles will be allowed in the completed roof.

Flashing shall be installed as specified for wood shingles in Chapter 15 of the International Building Code.

The Contractor shall have provisions for temporary covering of the roof area should weather conditions exist that, as determined by the Engineer, are detrimental to the structural components of the bridge.



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All old roofing materials shall become the property of the Contractor for disposal.

### Measurement

**00574.80 Lump Sum Basis** – There will be no measurement for the work performed under this Section. The estimated area to be re-roofed is 5,520 square feet.

### Payment

**00574.90 General** – The accepted quantities of work performed under this Section will be paid for at the Contract Lump Sum amount for the item "Re-Roof Bridge".

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.

No separate or additional payment will be made for fasteners, flashing, or fall protection systems.

## SECTION 00575 - CHEMICAL FUMIGANT TREATMENT

Section 00575, which is not in the Standard Specifications, is included in this project by Special Provision.

**00575.00 Scope** – This work consists of field-treating the existing truss with a chemical fumigant applied internally by placing the chemical in predrilled holes.

### Materials

#### 00575.10 Materials:

(a) **Fumigants** - Provide one of the following fumigants, or approved equal:

- **SmartFume**, Distributed by SmartFume Col, 770 NE Granger Ave., Corvallis, OR 97330, ph: (541) 745-3029
- **MITC Fume**, Distributed by Osmose Utilities Services, Inc., 635 Highway 74 S, Peachtree City, GA, 30269, ph: (770) 632-6700

(b) **Plugs** – Furnish plastic plugs specifically manufactured for this use. Submit sample and manufacturer's literature for approval.

### Labor

**00575.30 Applicators** - Furnish the services of personnel licensed by the ODA for application of chemical fumigants.

### Construction

**00575.40 Pre-drilling** - Use existing holes in previously-treated members to the extent feasible. In new untreated members, pre-drill sufficient holes to obtain good distribution of the fumigant, staggered along the length of the member, and alternating between the top and side of the member. The spacing of the predrilled holes, quantity of fumigant used, and all other application procedures shall conform to the manufacturer's directions for use. Test each hole, to the extent practicable, with water to ensure against leakage prior to applying fumigant. Plug holes that are unacceptable for fumigant with plastic plugs as directed.

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**00575.42 Application** - Apply fumigant according to the manufacturer's recommendations. It is the responsibility of the Fumigant Contractor to ensure strict compliance with all EPA, ODA, OSHA and other rules and regulations pertaining to the use of chemical fumigants.

**Measurement**

**00575.80 Lump Sum Basis** - There will be no measurement of the work of this Section.

**Payment**

**00575.90 General** - Payment for all work performed under this Section will be made at the Contract lump sum amount for the pay item "Chemical Fumigant Treatment,"

Payment will be payment in full for furnishing and installing all materials, equipment, labor, and incidentals required to treat the structure as specified and/or as directed.

**SECTION 00576 - PAINTING COVERED BRIDGES**

Section 00576, which is not in the Standard Specifications, is included in this Project by Special Provision.

**Description**

**00576.00 Scope** – This work includes preparing and sealing all surfaces and ends of siding, battens, portal wrap-arounds and trim, and painting all exposed surfaces, edges and ends of the same. All surfaces with existing paint shall be painted under this item. It also includes sealing all sides of treated timber.

**Materials**

**00576.10 Paint** – Provide the following materials

**(a) Primer/Paint** – Furnish white primer and white top coat paints from one of the following manufacturers or approved equal:

Primer	Sherwin-Williams	A-100 Exterior Oil Stain Blocking Primer
Top Coat	Sherwin-Williams	A-100 Exterior Latex Satin

Primer	Glidden	Stain Stomper Exterior Primer Sealer 2110-1200N
Top Coat	Glidden	FORTIS 350 Exterior Satin Paint 2402

Primer	Miller Paint	Pure Paint Primer
Top Coat	Miller Paint	Acri-Lite Satin 7400 Series

**(1) Colors:**

Outside Face of Siding & Wrap Arouns

Primer..... White  
Top Coat ..... Red (SAE AMS-STD-595 Color 21136)

Inside Face of Siding, Truss, Windows & Trim

Primer..... White  
Top Coat ..... White

## Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation Covered Bridge Rehabilitation

Submit topcoat color sample for approval before ordering.

Acceptance of material will be according to 00165.35.

**(b) Sealer** – Provide a clear, aqueous, acrylic copolymer wood sealer to non-painted pressure treated wood having the following characteristics:

VOC (as packaged)..... 1.25 lbs/gal  
Weight per gallon .....8.7 lbs  
Flash Point .....240 °F  
Packaged Viscosity .....19 sec. Zahn cup #2  
Solids (average)..... by weight: 30.2 ±2%  
by volume: 26.8 ±2%

### Construction

**00576.40 Preparation** – Prepare areas to be sealed or painted by removing dust, dirt, and other substances that would prevent proper adhesion of new paint. Hand-scrape areas that exhibit low adhesion and pressure wash and dry all areas to be painted. Employ containment measured as needed to prevent debris from falling into Thomas Creek. See 00290.30(a) for containment requirements.

**00576.41 Containment** – Prevent paint material or construction debris from entering the waterway. For painting the exterior of the bridge, over the water, the following precautions or equivalent precautions are required:

- Construct a scaffold or equivalent structure on each side of the bridge to support a woven mesh (Eagle Enclosures Debris Netting or equivalent) below the bridge, extending outside of the exterior of the bridge.
- Place a fine geo-textile woven material (Eagle Enclosures GEOscreen Tarp or equivalent) inside the bottom and sides of the woven mesh material to catch any paint spray or droppings or construction debris.
- When cleaning the exterior of the bridge with a pressure washer, contain wash water and remove from the site or treat to the satisfaction of the Engineer.
- Use vacuums or other approved method to remove waste paint material from the mesh.

**00576.42 Application** – Apply sealer and paint by brush, airless sprayer, or roller and back-brushing. New surfaces shall receive one coat of primer and two coats of top paint.

Do not apply paint when air temperature is below 50 °F unless recommended by the manufacturer, or when the air is misty, or when in the opinion of the Engineer the conditions are not favorable. Do not apply paint to damp or frosted surfaces. Clean all paint overspray from surfaces not intended to receive paint.

**00576.44 Spills and Releases** – In the event of a spill of paint, solvent or other substance harmful when release into the environment, immediate notify the Engineer and Linn County Road Department at (541) 967-3919. See 00290.20(g).

### Measurement

**00576.80 Lump Sum Basis** – There will be no separate measurement of work performed under this Section.

The estimated area to be painted is 35,500 square feet.

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### Payment

**00576.90 Payment** - Payment will be made at the contract lump sum amount for the pay item "Paint Bridge."

Payment includes preparing surfaces to be painted, containing and properly disposing of debris, applying paint, cleaning up, and all materials, equipment, labor and incidentals required to perform the work as specified.

### SECTION 00588 - STEEL BACKED TIMBER GUARDRAIL

Section 00588, which is not a Standard Specification, is included in this Project by Special Provision.

### Description

**00588.00 Scope** - This work consists of constructing steel backed timber guardrail to the lines and grades shown and established.

**00588.02 Submittals** - For areas where horizontal and vertical alignments vary from the supplemental drawings, provide unstamped working drawings that show detailed connections at post installations according to 00150.35.

### Materials

#### 00588.10 Materials:

**(a) Timber** - Furnish rough sawn lumber for timber rail, posts, and blocks of Douglas fir, Hem-fir, or Southern Yellow Pine having a stress grade of at least 1,500 psi and meeting the requirements of AASHTO M 168 and the following:

##### (1) Grading:

- **Douglas Fir** - Conform to the requirements of either paragraph 80.11 of the current WWPA Grading Rules, or paragraph 131-b of the current WCLIB Grading Rules.
- **Hem-fir** - Conform to the requirements of either paragraph 80.10 of the current WWPA Grading Rules, or paragraph 131-a of the current WCLIB Grading Rules.
- **Southern Yellow Pine** - Conform to the requirements of section 402 of the current Southern Pine Inspection Bureau (SPIB) Grading Rules.

**(2) Preservative Treatment** - Treat timber rail, posts, and blocks, after boring all through holes, according to Section 02190.

**(b) Steel Rail and Plates** - Furnish steel rail, steel splice plates, steel bearing plates, and steel plate washers meeting the requirements of AASHTO M 270, Grade 50W (ASTM A 709, Grade 50W). Galvanize them according to AASHTO M 111 (ASTM A 123).

**(c) Fasteners and Hardware** - Furnish bolts, nuts, washers, lag screws, and nails meeting the requirements of ASTM A 307. Galvanize them according to AASHTO M 232.

**(d) Coatings** - Furnish white primer and white top coat paints for all timber elements from one of the following manufacturers:

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Primer	Sherwin-Williams	A-100 Exterior Oil Stain Blocking Primer
Top Coat	Sherwin-Williams	A-100 Exterior Latex Satin
Primer	Glidden	Stain Stomper Exterior Primer Sealer 2110-1200N
Top Coat	Glidden	FORTIS 350 Exterior Satin Paint 2402
Primer	Miller Paint	Pure Paint Primer
Top Coat	Miller Paint	Acri-Lite Satin 7400 Series

Use the same manufacturer's paint for the primer and the top coat.

For the steel elements furnish a shop coating, 3 coat system from the QPL. Provide a white top-coat color the same color used for the timber elements.

Acceptance of material will be according to 00165.35.

### Construction

**00588.40 General** - Coordinate construction of steel backed timber guardrail to hold disturbance of bases, surfacings, and pavements to a minimum.

In areas of new installations, do not leave posts exposed to traffic for more than 24 hours before installing the steel and timber rail elements and anchors.

In areas where existing guardrail will be removed and replaced with new steel backed timber guardrail, either install the new steel backed guardrail the same working shift the existing guardrail is removed or protect the area with temporary precast concrete barrier with appropriate end treatment until the new steel backed timber guardrail is installed.

**00588.41 Excavation and Backfill** - Excavate to the lines, grades, and depths shown or established. Make cuts through pavement with knife-edge cutters or rotary drills. Make cuts below the pavement with augers or other methods that will not disturb abutting areas. Do not damage existing bases and pavements. Remove water and unsuitable material that would impair stability of the backfill, from areas to be backfilled.

In areas of aggregate and paved surface areas, backfill with like materials to the same thickness and density as the adjacent materials. In other areas, backfill with granular backfill materials meeting the requirements of 00330.14. Place all backfill in layers not exceeding 6 inches and compact each layer to a firm, dense condition.

Remove, replace, repair, or restore adjoining areas that become misshapen or disturbed during excavating and backfilling operations. Dispose of excess materials according to 00330.41(a-4).

**00588.42 Installation of Posts and Anchors** - Place posts and anchors as shown. Set approach posts in excavated holes or drive them in place. If posts are driven through the bases, surfacings, or pavement, repair all damage. Remove and replace posts or anchors damaged during installation with new components. Set all posts to the line, grade, and spacing shown and within a tolerance of  $\pm 1/2$  inch.

**00588.43 Installation of Steel and Timber Rails** - Install steel and timber rails as shown. Field cut timber elements as shown. Coat all field cuts with 3 brush coats of a wood field preservative from the QPL. Do not field cut steel elements.

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**00588.44 Coating** - After installation, apply coatings to the entire exposed timber elements of the steel backed timber guardrail assembly according the manufacturer's recommendations.

- For timber treated, except ACZA, apply coating as follows:
  - Prime with one coat of oil based primer.
  - Finish with two coats of acrylic latex paint.
- For ACZA treated timber, do the following:
  - Prepare a test section to determine the number of coats required.
  - At a minimum:
    - Prime with two coats of oil based primer.
    - Finish with two coats of acrylic latex paint.

**Measurement**

**00588.80 Measurement** - The quantities of steel backed timber guardrail will be measured on the length basis from end of rail at terminal anchor to end of rail at terminal anchor. The quantities of steel backed terminal concrete anchors will be measured on the unit basis.

**Payment**

**00588.90 Payment** - 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>Unit of Measurement</b>
(a) Steel Backed Timber Guardrail.....	Foot

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

**SECTION 00592 - ROLLED WATERPROOFING MEMBRANE**

Comply with Section 00592 of the Standard Specifications modified as follows

**00592.03 Submittals** - Replace the bullet that begins “The manufacturer’s test certificate required...” with the following bullet:

- The manufacturer’s test certificate required in 00592.10.

Replace the bullet that begins “Submit a primer application plan...” with the following bullet:

- Submit a primer application plan according to 00592.42(c), which includes a manufacturer’s letter indicating primer is compatible with the rolled membrane.

**00592.42(a)(2) ACP Base Course** - Replace this subsection, except for the subsection number and title, with the following:

Place hot asphalt cement tack coat on the two inch ACP Base Course to cover a maximum area of 75 square feet per gallon (0.12 gallons per square yard). Primer may be substituted for the hot asphalt cement tack coat on the ACP Base Course according to 00592.42(c).

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**SECTION 00620 - COLD PLANE PAVEMENT REMOVAL**

Comply with Section 00620 of the Standard Specifications.

**SECTION 00640 - AGGREGATE BASE AND SHOULDERS**

Comply with Section 00640 of the Standard Specifications modified as follows:

**00640.10 Materials** - Replace this subsection, except for the subsection number and title, with the following:

Aggregates shall be 1"-0 or ¾"-0 (as the Contractor elects) crushed quarry rock only. Crushed river rock will not be allowed. Base and shoulder aggregates shall meet the applicable requirements of Sections 02630 and 02640, respectively.

**SECTION 00730 - EMULSIFIED ASPHALT TACK COAT**

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

**00730.80 Measurement** - Replace this subsection, except for the subsection number and title, with the following:

No measurement of quantities will be made for Work performed under this Section.

**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.

**SECTION 00744 - ASPHALT CONCRETE PAVEMENT**

Comply with Section 00744 of the Standard Specifications modified as follows:

**00744.11(a) Asphalt Cement** - Add the following to the end of this subsection:

Provide PG 64-22 grade asphalt cement for this Project.

**00744.90 Payment** - In the paragraph that begins "No separate or..." add the following bullet:

- Asphalt tack coat
- Unused, remaining, or excess ACP
- Reflective tape or temporary flexible overlay pavement markings

Add the following to the end of this subsection:

Payment will be made for the actual material placed. A weigh ticket shall be provided for any material not used on the project. If a weigh ticket is not provided, the Engineer will make an appropriate determination on the amount of Asphalt that was not used.

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

Comply with Section 00850 of the Standard Specifications.

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**SECTION 00855 - PAVEMENT MARKERS**

Comply with Section 00855 of the Standard Specifications, modified as follows:

**00855.90 Payment** – Add the following pay items to the pay item list:

<b>Pay Item</b>	<b>Unit of Measurement</b>
(k) Bi-Directional White Type I Markers .....	Each

**SECTION 00860 - LONGITUDINAL PAVEMENT MARKINGS - PAINT**

Comply with Section 00860 of the Standard Specifications.

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

Comply with Section 00867 of the Standard Specifications modified as follows:

**008637.45 Installation** - In the sentence that begins "Apply one or more..." add the following bullet to the end of the bullet list:

- **Type E: Paint** - Apply painted markings according to 00860.45

**SECTION 00905 - REMOVAL AND REINSTALLATION OF EXISTING SIGNS**

Comply with Section 00905 of the Standard Specifications.

**SECTION 00930 - METAL SIGN SUPPORTS**

Comply with Section 00930 of the Standard Specifications modified as follows:

**00930.80 Measurement** - Replace this subsection, except for the subsection number and title, with the following:

No measurement of quantities will be made for metal sign supports.

**00930.90 Payment** – Replace this subsection, except for the subsection number and title, with the following:

No payment for metal sign supports will be made. This item shall be incidental to the installation of signs under 00940.

**SECTION 00940 - SIGNS**

Comply with Section 00940 of the Standard Specifications.

**SECTION 01030 - SEEDING**

Comply with Section 01030 of the Standard Specifications modified as follows:

**01030.13(f) Types of Seed Mixes** - Add the following to the end of this subsection:

Provide the following seed mix formulas:

- **Permanent Seeding:**



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<b>Botanical Name (Common Name)</b>	<b>PLS (lb/acre)</b>	<b>÷</b>	<b>(% Purity (minimum)</b>	<b>x</b>	<b>% Germination) (minimum)</b>	<b>=</b>	<b>Amount (lb/acre)</b>
<u>Festuca rubra</u> (Creeping Red Fescue)	<u>175</u>		_____		_____		_____
<u>Lolium perenne</u> (Perennial Ryegrass)	<u>20</u>		_____		_____		_____
<u>Deschampsia cespitosa</u> (Tufted Hairgrass)	<u>50</u>		_____		_____		_____
* Oregon Certified Seed							

**01030.15 Mulch** - Add the following paragraphs and bullets to the end of this subsection:

Furnish straw mulch for all temporary roadside erosion control seeding, except hydromulch may be used under the following conditions:

- Spring planting west of the Cascades between March 1 and May 15.
- Slopes are steeper than 1V to 1.5H and longer than 16 feet.
- Residential or commercial sites with low erosion potential such as sidewalk, median, or parking lot planter strips.

Projects that have variable slopes may include straw mulch and hydromulch when approved.

**SECTION 01040 - PLANTING**

Comply with Section 01040 of the Standard Specifications.

**SECTION 02001 - CONCRETE**

Comply with Section 02001 of the Standard Specifications modified as follows:

**02001.02 Abbreviations and Definitions:** Replace the sentence that begins “**Pozzolans** - Fly ash, silica fume...” with the following sentence:

**Pozzolans** - Fly ash, natural Pozzolans, silica fume, and high-reactivity Pozzolans.

Replace the sentence that begins “**Supplementary Cementitious Materials** - Fly ash, silica fume...” with the following sentence:

**Supplementary Cementitious Materials** - Pozzolans and ground granulated blast furnace slag.

**02001.15(a) Current Mix Designs** - Replace this subsection, except for the subsection number and title, with the following:

Mix designs that meet the requirements for the specified class of concrete and are currently being used or have been used within the past 24 months on any project, public or private, may be submitted for review. Provide individual test results that comprise the average if more than one data point exists. For paving designs the flexural strength testing must be from within the last two years. For HPC designs the length change and permeability tests must be from within the last two years.

**02001.20(a) Strength** - Replace Table 2001-1 with the following Table 2001-1:

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<b>Table 02001-1</b>		
<b>Concrete Strength and Water/Cementitious Material (w/cm) Ratio</b>		
<b>Type of Concrete</b>	<b>Strength <math>f'_c</math> (psi)</b>	<b>Maximum w/cm Ratio</b>
Structural	3300	0.50
	3300 (Seal)	0.45
	4000	0.48
	4000 (Drilled Shaft)	
	HPC4500	0.40
	HPC(IC)4500	
	5000 +	
Paving	4000	0.44
<b>PPCM's</b> (with cast-in-place decks and no entrained air)	5000	0.48
	5500	0.44
	6000 +	0.42

**02001.30(e)(1) HPC Coarse Aggregate Content** - Delete the paragraph that begins “Two or more Aggregate products or sources...”

**SECTION 02050 - CURING MATERIALS**

Comply with Section 02050 of the Standard Specifications modified as follows:

**02050.10 Liquid Compounds** - Replace the paragraph that begins “Furnish liquid membrane-forming curing...” with the following paragraph:

Furnish liquid membrane-forming curing compounds from the QPL and meeting the requirements of ASTM C309. Before use, submit a one quart sample from each lot for testing. Samples will be tested according to ODOT TM 721. Samples are not required for curing compounds used on Commercial Grade Concrete.

**SECTION 02510 - REINFORCEMENT**

Comply with Section 02510 of the Standard Specifications modified as follows:

**02510.11(c) Coated Reinforcement Ties and Supports** - Replace this subsection, except for the subsection number and title, with the following:

Ties and supports for coated reinforcement, including ties for coated to uncoated reinforcement connections, shall be nonmetallic coated.

**SECTION 02530 - STRUCTURAL STEEL**

Comply with Section 02530 of the Standard Specifications modified as follows:

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**002530.10 Structural Steel for Bridges** - Replace this subsection, except for the subsection number and title, with the following:

Structural steel for Bridges shall conform to the following, as shown or specified:

- AASHTO M 270, Grade 36 (ASTM A709, Grade 36)
- AASHTO M 270, Grade 50 (ASTM A709, Grade 50)
- AASHTO M 270, Grade 50W (ASTM A709, Grade 50W)
- AASHTO M 270, Grade HPS 70 (ASTM A709 Grade HPS 70)
- AASHTO M 270, Grade HPS 70W (ASTM A709 Grade HPS 70W)

Impact test requirements, for both non-fracture-critical tension components (T), and fracture-critical tension components (F), are to be according to Zone 2 requirements of AASHTO M 270 Tables 11 and 12, respectively.

### **SECTION 02560 - FASTENERS**

Comply with Section 02560 of the Standard Specifications modified as follows:

**02560.30(b) High Strength Tie Rods, Anchor Bolts and Anchor Rods** - Add the following paragraph to the end of this subsection:

End stamp all ASTM F1554, Grade 105 according to ASTM F1554 Supplementary Requirements S2 and S3. If the end of the bolt is to be embedded in concrete, the projecting end from the concrete shall be the marked end.

### **SECTION 02690 - PCC AGGREGATES**

Comply with Section 02690 of the Standard Specifications modified as follows:

**02690.20(e) Grading and Separation by Sizes for Prestressed Concrete** - Replace this subsection with the following subsection:

**02690.20(e) Grading and Separation by Sizes** - Sampling shall be according to AASHTO R 90. Sieve analysis shall be according to AASHTO T 27 and AASHTO T 11. Provide aggregates meeting the gradation requirements of Table 02690-1 for structural concrete. Provide a CAgT to perform sampling and testing when required.

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**Table 02690-1**  
Gradation of Coarse Aggregates  
Percent passing (by Weight)

Size Number	Nominal Size Square Openings	Sieve Size											
		(2½ in.)	(2 in.)	(1½ in.)	(1 in.)	(¾ in.)	(½ in.)	(¾ in.)	(No. 4)	(No. 8)	(No. 16)	(No. 50)	(No. 200)
3	(2 to 1 in.)	100	90 to 100	35 to 70	0 to 15	—	0 to 5	—	—	—	—	—	**
357*	(2 in. to No. 4)	100	95 to 100	—	35 to 70	—	10 to 30	—	0 to 5	—	—	—	**
4	(1½ to ¾ in.)	—	100	90 to 100	20 to 55	0 to 15	—	0 to 5	—	—	—	—	**
467*	(1½ to No. 4)	—	100	95 to 100	—	35 to 70	—	10 to 30	0 to 5	—	—	—	**
5	(1 to ½ in.)	—	—	100	90 to 100	20 to 55	0 to 10	0 to 5	—	—	—	—	**
56	(1 to ¾ in.)	—	—	100	90 to 100	40 to 85	10 to 40	0 to 15	0 to 5	—	—	—	**
57	(1 to No. 4)	—	—	100	95 to 100	—	25 to 60	—	0 to 10	0 to 5	—	—	**
6	(¾ to ¾ in.)	—	—	—	100	90 to 100	20 to 55	0 to 15	0 to 5	—	—	—	**
67	(¾ to No. 4)	—	—	—	100	90 to 100	—	20 to 55	0 to 10	0 to 5	—	—	**
68	(¾ to No. 8)	—	—	—	100	90 to 100	—	30 to 65	5 to 25	0 to 10	0 to 5	—	**
7	(½ to No. 4)	—	—	—	—	100	90 to 100	40 to 70	0 to 15	0 to 5	—	—	**
78	(½ to No. 8)	—	—	—	—	100	90 to 100	40 to 75	5 to 25	0 to 10	0 to 5	—	**
8	(¾ to No. 8)	—	—	—	—	—	100	85 to 100	10 to 30	0 to 10	0 to 5	—	**
89	(¾ to No. 16)	—	—	—	—	—	100	90 to 100	20 to 55	5 to 30	0 to 10	0 to 5	**

\* Use two or more separated sizes which when combined meet these gradation limits.

\*\* See 02690.20(a). Do Not evaluate material passing the No. 200 sieve according to 00165.40.

**02690.20(f) Grading and Separation by Sizes for Other Concrete** - Delete this subsection.

**02690.30(g) Grading** - In the paragraph that begins “Sampling shall be according to...”, replace the words “AASHTO T 2” with the words “AASHTO R 90”.

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**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**APPENDIX A - PROJECT PLANS**

**Under Separate Cover**

The Plans, which are applicable to the Work to be performed under this Contract, bear title and date as follows:

Covered Bridge Rehabilitation  
Thomas Creek - Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Richardson Gap Road  
Linn County Bridge No. BR0637-0070  
ODOT Bridge No. 12965  
January 2022

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**APPENDIX B - BID SECTION**

**ATTENTION:**

DO NOT INCLUDE THE PLANS AND SPECIFICATIONS WHEN SUBMITTING YOUR BID PROPOSAL. SUBMIT ONLY THE ITEMS INCLUDED IN THE BID SECTION AND ANY ADDENDUM THAT MAY HAVE BEEN ISSUED FOR THIS PROJECT.

**INCLUDED IN THIS SECTION:**

- BID SCHEDULE
- PROPOSAL
- BID PROPOSAL BOND
- FIRST TIER SUBCONTRACTOR DISCLOSURE FORM

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**BID SCHEDULE**

Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation

**Bid Opening: January 18, 2022 at 9:35 a.m., P.D.T.**

ITEM	UNIT	QUANT.	UNIT PRICE	TOTAL
1. Mobilization	LS	All	\$	\$
2. Temporary Work Zone Traffic Control, Complete	LS	All	\$	\$
3. Temporary Work Bridges	LS	All	\$	\$
4. Temporary Work Access and Containment	LS	All	\$	\$
5. Erosion Control	LS	All	\$	\$
6. Sediment Barrier	FT	310	\$	\$
7. Floating Silt Curtain	FT	130	\$	\$
8. Pollution Control Plan	LS	All	\$	\$
9. Work Containment Plan	LS	All	\$	\$
10. Work Zone Fencing	FT	185	\$	\$
11. Health and Safety Plan	LS	All	\$	\$
12. Lead Compliance Plan	LS	All	\$	\$
13. Contaminated Soil Disposal	TON	2.2	\$	\$
14. Construction Survey Work	LS	All	\$	\$
15. Removal of Structures and Obstructions	LS	All	\$	\$
16. Clearing and Grubbing	LS	All	\$	\$
17. Embankment In Place	CUYD	66.3	\$	\$
18. Subgrade Geotextile	SQYD	77.5	\$	\$
19. Riprap Geotextile, Type 2	SQYD	384.0	\$	\$
20. Loose Riprap, Class 700	TON	590	\$	\$
21. Bridge Removal Work	LS	All	\$	\$
22. Structure Excavation	LS	All	\$	\$
23. Granular Structure Backfill	LS	All	\$	\$
24. Furnish Drilling Equipment	LS	All	\$	\$
25. Furnish PP12.75 x 0.375 Steel Piles	FT	545.0	\$	\$
26. Preboring Piles	FT	494.0	\$	\$
27. Install PP12.75 x 0.375 Steel Piles	EA	26	\$	\$
28. Reinforcement, Grade 60	LS	All	\$	\$
29. General Structural Concrete, Class 3300	CUYD	177.0	\$	\$

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**BID SCHEDULE [CONT.]**

<b>ITEM</b>	<b>UNIT</b>	<b>QUANT.</b>	<b>UNIT PRICE</b>	<b>TOTAL</b>
30. 15"x36" Precast Prestressed Slabs	FT	191.3	\$	\$
31. 15"x48" Precast Prestressed Slabs	FT	392.7	\$	\$
32. Structural Steel – Side Plates and Hardware	LS	All	\$	\$
33. Timber and Lumber, Roof System	MBFM	12.24	\$	\$
34. Timber and Lumber, Decking	MBFM	18.27	\$	\$
35. Timber and Lumber, Siding	MBFM	11.31	\$	\$
36. Timber and Lumber, Portal Framing	MBFM	1.92	\$	\$
37. Timber and Lumber, Lower X-Bracing	MBFM	0.52	\$	\$
38. Timber and Lumber, Miscellaneous	MBFM	5.30	\$	\$
39. Glue Laminated Timber, Truss Repair	MBFM	13.37	\$	\$
40. Glue Laminated Timber, Span 2 Stringers	MBFM	1.99	\$	\$
41. Epoxy Repair of Timber Truss	LS	All	\$	\$
42. Re-Roof Bridge	LS	All	\$	\$
43. Chemical Fumigant Treatment	LS	All	\$	\$
44. Paint Bridge	LS	All	\$	\$
45. Steel Backed Timber Guardrail	FT	661	\$	\$
46. Rolled Waterproof Membrane	SQFT	2105	\$	\$
47. Cold Plane Removal 0 to 2" Deep	SQYD	153.2	\$	\$
48. Aggregate Base	TON	134.3	\$	\$
49. Level 3, 1/2" ACP Mixture	TON	71.5	\$	\$
50. Bi-Directional White Type I Markers	EA	66	\$	\$
51. Longitudinal Pavement Markings, Paint	FT	295.0	\$	\$
52. Pavement Bar, Type E	SQFT	20.0	\$	\$
53. Remove Existing Signs	LS	All	\$	\$
54. Signs, Standard Sheeting, Sheet Aluminum	SQFT	25.8	\$	\$
55. Permanent Seeding	ACRE	0.04	\$	\$
56. Topsoil	CUYD	61.1	\$	\$
<b>PROJECT TOTAL</b>			\$	



**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**BID SCHEDULE [CONT.]**

\_\_\_\_\_  
Authorized Signature

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Print

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
City State Zip Code

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Fax Number

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Phone Date

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Email

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Oregon Construction Contractors Board Number

**Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation  
Covered Bridge Rehabilitation**

**BID PROPOSAL**

TO: COUNTY BOARD OF COMMISSIONERS, LINN COUNTY, OREGON

**The undersigned, as bidder, declares that:**

This bid is for the work described on the "Description of Work" sheet bound in this bid.

This bid has been prepared from documents obtained from Linn County Road Department website at: <http://www.co.linn.or.us/Roads/ContractConst.asp> - Project Title

The only persons or parties interested in this bid as principals are those named in this bid.

The bidder submits this bid in accordance with and subject to the terms and conditions stated in Sections 00120 and 00130 of the specifications.

Bidder shall check one box: Bidder  is  is not a resident bidder as defined in ORS 279A.120.

The bidder has obtained and become acquainted with the applicable standard specifications, special provisions, plans, and other required provisions applicable to the particular work for which the bid is submitted.

The bidder has personally inspected the location and the site of the work and has become acquainted with all conditions, local and otherwise, affecting it.

The bidder has obtained and become acquainted with the forms of contract and bond which are to be signed by the successful bidder.

The bidder is satisfied as to the quantities and conditions and understands that in signing this bid the bidder waives all right to claim any misunderstanding regarding these quantities and conditions.

The bid guaranty submitted with this bid, if a bid bond, is by this reference made a part of this bid.

**The bidder also proposes and agrees that:**

If this bid is accepted, the bidder will execute the contract form furnished by the Agency, will provide all necessary machinery, equipment, tools, apparatus, labor and other means of construction, and will do all work and furnish all the materials specified in or called for by the contract in the manner and time prescribed in the contract and according to the requirements of the Engineer as given in the contract.

The bidder will accept, as full payment for the work performed and the materials, labor, equipment, machinery, tools, apparatus and other means of construction furnished, the amount earned under the contract as computed in the manner described in the specifications from the quantities of the various classes of work performed and the respective unit prices bid as these prices are given in the "Bid Schedule" bound in this bid.

Any contract awarded to the bidder shall include the provisions required by ORS 279C.830 or 40 U.S.C. 276a.

**The bidder also certifies to the following:**

A. Noncollusion:

## **Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation Covered Bridge Rehabilitation**

The price(s) and amount of this bid have been arrived at independently and without consultation, communication, or agreement with any other contractor, bidder, or potential bidder except as disclosed on a separately attached statement.

Neither the price(s) nor the amount of this bid, and neither the approximate price(s) nor approximate amount of this bid has been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before the opening of bids.

No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, to submit a bid higher than this bid, or to submit any intentionally high or noncompetitive bid or other form of complementary bid.

This bid is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive bid.

The bidder, its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted of or found liable for any act, prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract except as described on a separately attached statement.

The bidder understands and acknowledges that the above representations are material and important and will be relied on by the Agency, in awarding the contract(s) for which this bid is submitted. The bidder understands that any misstatement in this certification is and shall be treated as fraudulent concealment from the Agency, of the true facts relating to the submission of bids for this contract.

### **B. Noninvolvement in Any Debarment and Suspension:**

The bidder, its owners, directors, principals and officers:

Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.

Have not within a three-year period preceding this bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in the preceding paragraph of this certification.

Have not within a three-year period preceding this bid had one or more public transactions (Federal, State, or local) terminated for cause or default.

Where the prospective primary participant is unable to certify to any of the statements in this certification, the prospective primary participant shall attach an explanation to this bid.

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List exceptions. (For each exception noted, indicate to whom the exception applies, initiating agency, and dates of action. If additional space is required, attach another page with the following heading: Certification Exceptions continued, Bid Insert.)

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

### C. Lobbying Activities:

To the best of my knowledge and belief, that:

No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying" to the Agency.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting their bid that they shall require that the language of this certification be inserted in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

### D. Compliance With Oregon Tax Laws:

By signature on this bid, the undersigned hereby certifies under penalty of perjury that the undersigned is authorized to act on behalf of bidder, that the undersigned has authority and knowledge regarding bidder's payment of taxes, and that bidder is, to the best of the undersigned's knowledge, not in violation of any Oregon Tax Laws. For purposes of this

certification, "Oregon Tax Laws" means a state tax imposed by ORS 320.005 to 320.150 (Amusement Device Taxes), ORS 403.200 to 403.250 (Tax For Emergency Communications), and ORS Chapters 118 (Inheritance Tax), 314 (Income Tax), 316 (Personal Income Tax), 317 (Corporation Excise Tax), 318 (Corporation Income Tax), 321 (Timber And Forestland Tax), 323 (Cigarettes And Tobacco Products Tax), and any local taxes administered by the Department of Revenue under ORS 305.620.

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**E. Employee Drug Testing Program:**

Pursuant to ORS 279C.505(2), that the bidder has an employee drug testing program in place, and will maintain such program for the entire period of this contract. Failure to maintain such program shall constitute a material breach of contract.

**F. Nondiscrimination:**

Pursuant to ORS 279A.110, that the bidder has not discriminated and will not discriminate against a disadvantaged business enterprise, a minority-owned business, a woman-owned business, a business that a service-disabled veteran owns, or an emerging small business in obtaining any required subcontracts. The bidder understands that it may be disqualified from bidding on this public improvement project if the Agency finds that the bidder has violated subsection (1) of ORS 279A.110.

The Bidder certifies that it has a written policy and practice that meets the requirements described in ORS 279A.112 (House Bill 3060, 2017) of preventing sexual harassment, sexual assault and discrimination against employees who are members of a protected class.

**G. Use of Registered Subcontractors:**

That all subcontractors performing work on this public improvement contract will be registered with the Construction Contractors Board or licensed by the State Landscape Contractors Board in accordance with ORS Chapter 701 before the subcontractors commence work under this contract.

**H. Incorporation of All Addenda:**

The bidder has incorporated into this bid all addenda issued for this Project.

The bidder understands and acknowledges that the Agency will provide all addenda only by publishing them on the Agency's website. Addenda may be downloaded from the Agency's website.

The bidder shall be responsible for diligently checking the Agency's website for addenda. Bidders should check the website at least weekly until the week of Bid Closing and daily during the week of Bid Closing.

By submitting this bid, the bidder assumes all risks associated with its failure to access all addenda and waives all claims, suits, and actions against the Agency, State, the Transportation Commission, the Department of Transportation and their members, officers, agents, and employees that may arise out of the bidder's failure to access all addenda, in spite of any contingencies such as website failure, down-time, service interruptions, and corrupted, inaccurate, or incomplete addenda or information.

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The party by whom this proposal is submitted, and by whom the contract will be entered into in case the award is made to bidder is:

\_\_\_\_\_ [“An Individual,” “A Partnership,” “A Corporation,” “An Association”]

doing business under the name of \_\_\_\_\_

at \_\_\_\_\_  
[Street] [City] [State] [Zip Code]

which address is the address to which all communications concerning this bid and the contract should be sent.

The name of the surety by which the Performance Bond and Payment Bond covering the contract, if awarded, will be furnished and the name and address of the surety's local agent are as follows:

Name of Surety \_\_\_\_\_

Name of Agent \_\_\_\_\_

Accompanying this proposal is a \_\_\_\_\_  
[“Proposal Bond,” “Cashier's Check,” “Certified Check”, or  
“Irrevocable Letter of Trust”]

in the amount of 10 percent of the bid.

The bidder further proposes to accept as full payment for the work proposed herein the amount computed under the provision of the contract documents and based on the unit price amounts, under Bid Schedule bound herein, it being expressly understood that the unit prices are independent of the exact quantities involved. The bidder agrees that the unit prices represent a true measure of the labor and materials required to perform the work, including all allowances for overhead and profit for each type and unit of work called for in these contract documents.

If this proposal shall be accepted and the undersigned shall fail or neglect to contract as aforesaid, and to give bonds in the amount specified, with surety satisfactory to the Linn County Board of Commissioners, within ten (10) days [not including Sunday], from the date of receiving from the Board of Commissioners the contract and prepared and ready for execution, the Board of Commissioners may, at its option, determine that the bidder has abandoned the contract, and thereupon forfeiture of the guaranty accompanying the bid shall operate and the same shall be the property of the Linn County Board of Commissioners.

\_\_\_\_\_  
Bidder

Dated \_\_\_\_\_, 20\_\_

By: \_\_\_\_\_

By: \_\_\_\_\_



# FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

**Project Name** Thomas Creek, Richardson Gap Road (Shimanek) Covered Bridge Rehabilitation

**Highway** Richardson Gap Road

**County** Linn

**Bid Opening Date** January 18, 2022

**Name of Bidding Contractor** \_\_\_\_\_

**Email Address** \_\_\_\_\_

*CHECK THIS BOX IF YOU WILL NOT BE USING ANY FIRST-TIER SUBCONTRACTORS OR IF YOU ARE NOT SUBJECT TO THE DISCLOSURE REQUIREMENTS (SEE INSTRUCTIONS).*

## FIRST-TIER SUBCONTRACTORS

Firm Name	Dollar Amount
Category of Work	

Firm Name	Dollar Amount
Category of Work	

Firm Name	Dollar Amount
Category of Work	

Firm Name	Dollar Amount
Category of Work	

Firm Name	Dollar Amount
Category of Work	

Firm Name	Dollar Amount
Category of Work	

Firm Name	Dollar Amount
Category of Work	

(Attach additional sheets as necessary)