

**CONTRACT AND BONDS  
FOR HIGHWAY CONSTRUCTION**



**OREGON DEPARTMENT OF TRANSPORTATION  
SALEM, OREGON**



**GRADING, DRAINAGE, STRUCTURES, PAVING, SIGNING, STRIPING,  
AND ROADSIDE DEVELOPMENT**

**CEDAR CREEK/ TONQUIN TRAIL: OR99W – SW PINE ST (SHERWOOD)**

**PACIFIC HIGHWAY WEST**

**WASHINGTON COUNTY**

**CONTRACT NUMBER 15264**

**EXPENDITURE ACCOUNT NUMBER CON04247**

**CLASS OF PROJECT 6710(005)**

**CONTRACTOR LEGACY CONTRACTING INC.**

**DATE OF AWARD \_\_\_\_\_**

**SPECIFIED COMPLETION SEE SUBSECTION 00180.50(h)**

**Key # 18026**

**Bid Date 03-04-21  
Ad Date 01-28-21**

**CONTRACT AND BONDS  
FOR HIGHWAY CONSTRUCTION**

**OREGON DEPARTMENT OF TRANSPORTATION  
SALEM, OREGON**

**OREGON TRANSPORTATION COMMISSION**

<b>BOB VAN BROCKLIN</b>	<b>Commission Chair</b>
<b>ALANDO SIMPSON</b>	<b>Commissioner</b>
<b>MAURICE HENDERSON</b>	<b>Commissioner</b>
<b>JULIE BROWN</b>	<b>Commissioner</b>
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<b>KRIS STRICKLER</b>	<b>Director of Transportation</b>



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DESCRIPTIONS OF PARTS OF CONTRACT WHICH ARE NOT BOUND HEREIN BUT  
WHICH ARE PART OF THE CONTRACT

**(1) Standard Specifications**

The "2021 Oregon Standard Specifications for Construction," as published by the Oregon Department of Transportation.

Copies of the 2021 Oregon Standard Specifications for Construction may be purchased by visiting the Oregon Department of Transportation, Specifications website at:

[https://www.oregon.gov/ODOT/Business/Pages/Standard\\_Specifications.aspx](https://www.oregon.gov/ODOT/Business/Pages/Standard_Specifications.aspx)

**(2) Plans**

Applicable Plans, either separate from the Special Provisions or included within the Special Provisions.

Copies of Plans will be furnished by the Project Manager.



**SECTION I. SPECIAL PROVISIONS**

On the attached or inserted sheets which follow is given a description of the work to be performed under this Contract, together with required provisions bound herein, and Special Provisions, and instructions bound herein which supplement and modify the published "2021 Oregon Standard Specifications for Construction" book, making them part of this Contract and applicable to the particular work to be done.

**DESCRIPTION OF WORK**

Grading, Drainage, Structures, Paving, Signing, Striping, and Roadside Development  
Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)  
Pacific Highway West  
Washington County

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

Bid Closing for the work described above will be at 9:00:00 a.m. on the 4th day of March, 2021. Bids will be received by Marie Wright, Construction Contracts Manager at the following time and places:

Before 9:00:00 a.m. on the day of Bid Closing.

For Bids submitted by mail or parcel delivery service, send to:

ODOT Procurement Office - Construction Contracts Unit, MS# 2-2  
3930 Fairview Industrial Drive SE  
Salem, Oregon 97302-1166.

For Bids submitted by hand delivery, date stamp the Bid with the provided date stamping device and place into the ODOT Procurement Office Bid Box located at the following address:

Oregon Department of Transportation  
3930 Fairview Industrial Drive SE  
Salem, Oregon 97302.

Bids, Bid modifications, and Bid withdrawals will not be accepted at or after 9:00:00 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 at the following address: Oregon Department of Transportation, 3930 Fairview Industrial Drive SE, Salem, Oregon, beginning at 9:00:00 a.m. on the day of Bid Closing.

**COMPLETION TIME LIMIT**

See Subsection 00180.50(h).

**CLASS OF PROJECT**

This is a Federal-Aid Project.

**CLASS OF WORK**

The Class of Work for this Project is Either: A) Earthwork and Drainage, or B) Bridges and Structures



**PROJECT INFORMATION**

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

John Schnaderbeck, Project Manager, Jacobs Engineering, 2020 SW 4<sup>th</sup> Ave, Portland 97201; Email [John.Schnaderbeck@jacobs.com](mailto:John.Schnaderbeck@jacobs.com), or Fax 503-736-2000. All requests for information must be in writing with reference to the Project name.

Rob Wattman, ODOT Transportation Project Manager, Local Agency Program Liaison, 123 Flanders, Portland 97209; Email [Robert.K.WATTMAN@odot.state.or.us](mailto:Robert.K.WATTMAN@odot.state.or.us), or Fax 503-731-8531. All requests for information must be in writing with reference to the Project name.



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BID SCHEDULE



**REQUIRED CONTRACT PROVISIONS  
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

**ATTACHMENTS**

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

**I. GENERAL**

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

**II. NONDISCRIMINATION**

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

**1. Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

**2. EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

**3. Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

**4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

**5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

**6. Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

**7. Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

**8. Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

**9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

**10. Assurance Required by 49 CFR 26.13(b):**

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

**11. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

### III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

### IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

#### 1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

## 2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

## 3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.



(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### 4. Apprentices and trainees

##### a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

##### b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

**6. Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

**9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

**10. Certification of eligibility.**

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

**V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

**3. Withholding for unpaid wages and liquidated damages.** The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

**4. Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

## VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

## VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

## VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

#### **IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

#### **X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

##### **1. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

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## 2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal 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;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

## 2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

\*\*\*\*\*

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

\*\*\*\*\*

**XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. 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 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 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.

b. 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," in accordance with its instructions.

2. 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 31 U.S.C. 1352. 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.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

**ON-SITE WORKFORCE AFFIRMATIVE ACTION REQUIREMENTS  
FOR WOMEN AND MINORITIES ON FEDERAL-AID CONTRACTS**

Pursuant to 41 CFR 60-4.6 (see also 41 CFR 60-4.2(a)) the following notice concerning Affirmative Action Requirements for Women and Minorities shall be included in, and shall be a part of, all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of \$10,000 to be performed in geographical areas designated by the United States Department of Labor (USDOL) Director. The USDOL, Office of Federal Contract Compliance Programs (OFCCP) has made the following statement concerning Goals, Timetables and Good Faith Efforts:

"Numerical goals are established based on the availability of qualified applicants in the job market or qualified candidates in the employer's work force. Executive Order [E.O. 11246] numerical goals do not create set-asides for specific groups, nor are they designed to achieve proportional representation or equal results. Rather, the goal-setting process in affirmative action planning is used to target and measure the effectiveness of affirmative action efforts to eradicate and prevent discrimination. The Executive Order and its supporting regulations do not authorize OFCCP to penalize contractors for not meeting goals. The regulations at 41 CFR 60-2.12(e), 60-2.30 and 60-2.15, specifically prohibit quota and preferential hiring and promotions under the guise of affirmative action numerical goals. In other words, discrimination in the selection decision is prohibited."

For purposes of these "On-Site Workforce Affirmative Action Requirements for Women and Minorities on Federal-Aid Contracts", "Good Faith Effort" means affirmative action measures designed to implement the established objectives of an Affirmative Action Plan 23 CFR 230.407(o).

**A. AFFIRMATIVE ACTION REQUIREMENTS**

**Notice of Requirement for Affirmative Action To Ensure Equal Employment Opportunity (Executive Order 11246)**

1. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

**Goal and Timetable for Female Utilization Statewide**

<b>Timetable</b>	<b>Goal (Percent)</b>
From Apr. 1, 1980 until further notice .....	6.9



## Goals for Minority Utilization by County

### Goal (Percent)

Clackamas, Multnomah, and Washington Counties .....	4.5
Marion and Polk Counties .....	2.9
Benton, Clatsop, Columbia, Crook, Deschutes, Hood River, Jefferson, Lincoln, Linn, Sherman, Tillamook, Wasco, and Yamhill Counties .....	3.8
Lane, Coos, Curry, Douglas, Jackson, Josephine, Klamath, and Lake Counties .....	2.4
Baker, Gilliam, Grant, Morrow, Umatilla, Union, Wallowa, and Wheeler Counties .....	3.6
Harney and Malheur Counties.....	4.4

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

**2.** The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 business days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

**3.** As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the county or counties shown in the Solicitation Documents. In cases where the work is two or more counties covered by different percentage goals, the highest percentage will govern.

**B. STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)****1. As used in these specifications:**

- a. "Covered area" means the geographical area, described in the solicitation from which this contract resulted;
- b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
- d. "Minority" includes:
  - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
  - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
  - (iii) Asian American and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
  - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

**2.** Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitation from which this contract resulted.

**3.** A contractor participating, either individually or through an association, in an approved Hometown Plan (including heavy highway affirmative action plans) shall comply with its affirmative action obligations under Executive Order 11246 by complying with its obligations under the plan; provided, that each contractor or subcontractor participating in an approved plan is individually required to comply with the equal opportunity clause set forth in 41 CFR 60-1.4; to make a good faith effort to achieve the goals for each trade participating in the plan in which it has employees; and that the overall good performance by other contractors or subcontractors toward a goal in an approved plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the plan's goals and timetables.

**4.** The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minorities and female utilization the Contractor should

reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is performed. Goals are published periodically in the Federal Register in notice form, and such notices maybe obtained from any Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

**5.** Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

**6.** In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

**7.** The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

**a.** Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minorities and female individuals working at such sites or in such facilities.

**b.** Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.

**c.** Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or a community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.

**d.** Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the

Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

**e.** Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

**f.** Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc., by specific review of the policy with all management personnel and with all minority and female employees at least once a year, and by posting the Contractor's EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

**g.** Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

**h.** Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

**i.** Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

**j.** Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

**k.** Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

**l.** Conduct, at least annually, an inventory and evaluation at least of all minority and female employees for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

**m.** Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

**n.** Ensure that all facilities and Contractor's activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

**o.** Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

**p.** Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

**8.** Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor union, contractor-community; or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through 7p of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

**9.** A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

**10.** The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex or national origin.

**11.** The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

**12.** The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

**13.** The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

**14.** The contractor will designate an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so. Additionally, the contractor EEO Officer shall ensure that the company EEO policy is being carried out, to submit reports relating to the specifications hereof as may be required by the Agency and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.

**15.** Nothing herein provided shall be construed as a limitation upon the application of other laws, which establish different standards of compliance, or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

**16.** The Office of Federal Contract Compliance Programs (OFCCP) may conduct compliance evaluations to determine if the contractor maintains nondiscriminatory hiring and employment practices and is taking affirmative action to ensure that applicants are employed and that employees are placed, trained, upgraded, promoted, and otherwise treated during employment without regard to race, color, religion, sex, or national origin. In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.



## **EQUAL EMPLOYMENT OPPORTUNITY PROVISIONS**

As used in these provisions, "Engineer" means the Chief Engineer of the Oregon Department of Transportation acting either directly or through authorized representatives. "Good Faith Efforts" means "affirmative action measures designed to implement the established objectives of an Affirmative Action Plan" 23 CFR 230.407(o).

Section 140 of Title 23, United States Code, EQUAL EMPLOYMENT OPPORTUNITY, as in effect on May 1, 1982, is incorporated by this reference and made a part of these provisions.

### **Written Notification**

The Contractor shall provide to the Engineer within two weeks of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the Contract resulting from this solicitation written notification with the following information: the name, address and telephone number of the Subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

The Contractor shall provide immediate written notification to the Engineer when (1) the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor minorities or women that the Contractor sent to the union, or (2) the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its equal opportunity obligations. This is in addition to the notification required in item 7d in the "On-Site Workforce Affirmative Action Requirements for Women and Minorities on Federal-Aid Contracts".

### **Monthly Report**

The Contractor and each Subcontractor (on contracts that require certified payrolls) shall submit each month to the Engineer a "Monthly Employment Utilization Report" (Form 731-0668). The electronic form is available at:

<https://www.oregon.gov/ODOT/Business/OCR/Pages/Forms.aspx>

### **Annual Report**

Each July for the duration of the Project, each Contractor and Subcontractor shall submit Form FHWA-1391. This report shall be sent directly to the ODOT Office of Civil Rights.



PURSUANT TO 23 CFR PART 230, SUBPART D, THE STATE HIGHWAY AGENCY HAS A RESPONSIBILITY TO ASSURE COMPLIANCE BY CONTRACTORS WITH THE REQUIREMENTS OF FEDERAL-AID CONSTRUCTION CONTRACTS, 23 CFR 230.405(b). THEREFORE, THE STATE HIGHWAY AGENCY HAS THE FOLLOWING OBLIGATIONS CONCERNING MONITORING AND COMPLIANCE, INCLUDING SHOW CAUSE NOTICE REQUIREMENTS.

### **Monitoring and Compliance**

The Agency will maintain a vigorous monitoring process to ensure nondiscrimination and affirmative action on all federally funded Projects. Monitoring shall include at a minimum, monthly meetings to review the "Monthly Employment Utilization Report" (Form 731-0668) with the Contractor's Equal Employment Opportunity (EEO) Officer and quarterly reviews of the Contractor's Good Faith Efforts as outlined in FHWA 1273.

The Agency shall determine the Contractor's compliance with equal opportunity requirements including:

- Non-discrimination in selection and retention of subcontractors, material suppliers and vendors;
- Maintenance of non-segregated facilities;
- Adequate representation and utilization of minorities and women (by craft and trade) in the Contractor's workforce;
- Good Faith Efforts in meeting on-the-job training and training special provisions contained in FHWA 1273;
- Fair treatment in all terms and conditions of employment; and,
- Adherence (where applicable) to Indian preference provisions.

If the Agency or the FHWA becomes aware of any possible violations of Executive Order 11246 or 41 CFR 60, each has the authority and the responsibility to notify the Office of Federal Contract Compliance Programs. The Contractor has the responsibility either to meet all the craft goals set forth in the applicable "Covered Area" of "On-Site Workforce Affirmative Action Requirements for Women and Minorities on Federal-Aid Contracts" or demonstrate Good Faith Efforts to meet these goals (as specified in paragraphs 7a through 7p of the "On-Site Workforce Affirmative Action Requirements for Women and Minorities on Federal-Aid Contracts").

### **Show Cause Notice**

If an investigation or review reveals that a Contractor or Subcontractor has not complied with these EEO Provisions, the Agency shall issue a Show Cause Notice to initiate efforts to bring the Contractor or Subcontractor into compliance. This written notice shall state the deficiencies found during the review, and shall advise the Contractor or Subcontractor to show cause within 30 Calendar Days why the Agency shall not impose administrative

sanctions. The Contractor or Subcontractor must then show good cause or must provide an acceptable agreement for corrective action within 30 Calendar Days.

If the Contractor or Subcontractor does not provide this information by the end of the 30 Calendar Days, the Engineer shall withhold all project progress payments in process as of the date the Show Cause Notice was issued and will continue to withhold project progress payments until the Contractor or Subcontractor responds in an acceptable manner. If the Contractor or Subcontractor fails to meet the conditions of the corrective action agreement, no further Show Cause Notice is required; the Agency shall immediately initiate enforcement proceedings.

If a Contractor's prequalification certification is revoked or disqualified because the Contractor has been found on at least two occasions to be in breach of these EEO Provisions of Federal-Aid highway construction contracts, the Contractor must be determined to be in compliance with these EEO Provisions prior to the Contractor's prequalification certificate being reinstated.



## EQUAL EMPLOYMENT OPPORTUNITY-ASPIRATIONAL TARGET PROVISIONS

See the EQUAL EMPLOYMENT OPPORTUNITY PROVISIONS incorporated in this Contract for notifying the Engineer, monthly and annual reporting, monitoring, and compliance.

### Aspirational Diversity Targets

**ODOT Aspirational Diversity Targets** - While Aspirational Diversity Targets are not requirements for this Contract and are not binding on the Contractor, ODOT desires to encourage the highest possible participation of minorities and women in the work force. Therefore, ODOT has established aspirational targets on all federally funded Projects:

#### Covered Areas

Area	Aspirational
ODOT Region 1	Women 14% - Minority 20%
ODOT Region 2, 3, 4, & 5	Women 14% - Minority 14%

Neither the Contractor nor its subcontractors are under any obligation to meet any aspirational targets.



**Oregon Department of Transportation**  
**Policy Statement**  
**Disadvantaged Business Enterprise (DBE) Program**

The Oregon Department of Transportation (ODOT) is committed to a Civil Rights Program that includes participation of Disadvantaged Business Enterprises (DBEs) in ODOT contracting opportunities. ODOT has established a DBE program in accordance with U.S. Department of Transportation (USDOT) regulations 49 CFR Part 26, as amended in 2014 and effective as of November 3, 2014.

It is ODOT's policy never to exclude any person from participation in, deny any person the benefits of, or otherwise discriminate on the basis of race, color, sex, national origin, or disability in the award and administration of USDOT-assisted contracts. It is ODOT's policy to ensure DBEs, as defined in 49 CFR Part 26, have an equal opportunity to receive and participate in USDOT-assisted contracts. It is also our policy to:


1. Ensure nondiscrimination in the award and administration of USDOT-assisted contracts;
2. Create a level playing field on which DBEs can compete fairly for USDOT-assisted contracts;
3. Ensure the DBE program is narrowly tailored in accordance with applicable law;
4. Ensure only firms that fully meet 49 CFR Part 26 eligibility standards are permitted to participate as DBEs;
5. Help remove barriers to the participation of DBEs in USDOT-assisted contracts;
6. Promote the use of DBEs in all types of federally-assisted contracts and procurement activities conducted by recipients
7. Assist the development of firms that can compete successfully in the marketplace outside the DBE program; and
8. Provide appropriate flexibility to recipients of Federal financial assistance in establishing and providing opportunities for DBEs.

The Director of ODOT establishes the DBE policy for the department. The Manager of the Office of Civil Rights (OCR) is delegated as the DBE Liaison Officer. In that capacity, the Manager of OCR, in coordination with all ODOT personnel, is responsible for implementing all aspects of the DBE program. Implementation of the DBE program is accorded the same priority as compliance with all other legal obligations incurred by ODOT in its financial assistance agreements with the USDOT. It is the expectation of the Director that all ODOT personnel shall adhere to the intent as well as the provisions and procedures of the DBE Program.

ODOT circulates this policy to the following in accordance with the DBE program: (1) The Oregon Transportation Commission, (2) ODOT personnel involved with USDOT-assisted work, (3) Members of the DBE and non-DBE business communities that perform or are interested in performing work on ODOT contracts. The complete DBE Program and the overall goal calculation reports are available for review at:

ODOT Office of Civil Rights  
 3930 Fairview Industrial Drive, MS-23  
 Salem, OR 97302  
<https://www.oregon.gov/odot/Business/OCR/Pages/Disadvantaged-Business-Enterprise.aspx>

For questions or further information, please contact:  
 Angela M. Crain, Manager  
 Office of Civil Rights  
 (T) 503-986-4353  
 (F) 503-986-6382  
[Angela.M.Crain@odot.state.or.us](mailto:Angela.M.Crain@odot.state.or.us)

  
 Kristopher Strickler, Director  
 Oregon Department of Transportation

6/4/2020

Date



**DISADVANTAGED BUSINESS ENTERPRISE (DBE)  
SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS**

**01.00 DBE Policy and Authorities:**

**(a) DBE Policy, Required Assurance, and Applicability** - As required by 49 CFR Part 26, the Oregon Department of Transportation (ODOT) and the Contractor agree to abide by and take all necessary and reasonable steps to comply with the policy set out below:

**(1) DBE Policy** - It is the policy of the United States Department of Transportation (USDOT) to practice nondiscrimination on the basis of race, color, sex and/or national origin in the award and administration of USDOT assisted contracts. Consequently, the Disadvantaged Business Enterprise (DBE) requirements of 49 CFR part 26 apply to this agreement.

**(2) DBE Required Assurance** - The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of USDOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as ODOT deems appropriate. Each subcontract the Contractor signs with a subcontractor must include the assurance in this paragraph (see 49 CFR 26.13(b)).

**(3) DBE Applicability** - This applies to all public improvement projects financed in whole or in part with federal funds received from FHWA, FTA and FAA through ODOT. ODOT and its Contractors shall conform to all applicable civil rights laws, orders, and regulations. ODOT and its Contractors shall not discriminate on the basis of race, age, sex, color, religion, national origin, mental or physical disability, political affiliation, or marital status in the award and performance of ODOT contracts.

**(b) Authorities** - These DBE Supplemental Required Contract Provisions are authorized by the following laws, rules, regulations and guidelines, which, in conjunction with any pertinent policy memoranda or procedures issued by the FHWA, all of which are incorporated by reference into the provisions, govern ODOT's administration of the DBE Program.

**(1)** The USDOT Regulations (49 CFR Part 26) published in the Federal Register, effective March 4, 1999, established a requirement that all recipients of USDOT funds establish a DBE Program. The regulations are applicable both to ODOT's Federal-aid construction and to its non-construction activities.

**(2)** The USDOT's legal authority for its DBE regulations includes Executive Order 11625 (October 13, 1971), which required that federal executive agencies develop comprehensive plans and programs to encourage minority business participation. USDOT requires ODOT to establish a DBE Program as a condition for receiving USDOT federal funds.



(3) Title VI, Civil Rights Act of 1964. This Act concerns non-discrimination in federally assisted programs or activities on the grounds of race, color, sex or national origin.

(4) The Program is also subject to the following laws: Section 30 of the Airport and Airway Development Act of 1970 and Section 520 of the Airport and Airway Improvement Act of 1982, as amended by the Airport and Airway Safety Capacity Expansion Act of 1987; Section 905 of the Railroad Act of 1978 (45 USC 903); and Section 19 of the Urban Mass Transportation Act of 1964, as amended (Public Law 95-599).

(5) Oregon Revised Statutes, Chapters 200 and 279.

(6) Oregon Administrative Rules, Chapter 123, Division 200, Certification Procedures.

(7) The Contractor agrees that these Disadvantaged Business Enterprise (DBE) Supplemental Required Contract Provisions (including all references) shall be incorporated into all subcontracts, regardless of tier, and into any agreements with Committed DBEs, regardless of form of agreement.

**02.00 Abbreviations and Definitions** - Abbreviations and definitions of words and phrases used in connection with the DBE Program are as follows:

**(a) Abbreviations:**

**COBID** - State of Oregon Certification Office of Business Inclusion and Diversity, which is authorized to certify DBE firms according to federal regulations

**DBE** - Disadvantaged Business Enterprise

**FAA** - Federal Aviation Administration

**FHWA** - Federal Highway Administration

**FTA** - Federal Transit Administration

**ODOT** - Oregon Department of Transportation (also referred to as 'Agency')

**USDOT** - United States Department of Transportation

**(b) Definitions:**

**Assigned DBE Contract Goal** - An assigned numerical percentage value of the total dollar amount of a Contract Award that is allocated solely for DBE participation. For a DBE to count towards participation it must be certified by COBID under the commodity codes of the work it is contracted to perform.

**Broker** - A business firm that provides a bona fide service, such as professional, technical, consultant or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, or supplies required for the performance of the contract.

**Certification Directory of DBEs** - A publication (available in paper or Internet) listing all DBEs which are currently certified by the COBID. The Directory is provided to the Contractor for use in identifying DBE firms whose participation on a contract may be counted toward achievement of the assigned DBE contract goal.

**Certified Disadvantaged Business Enterprise (DBE)** - A business firm certified by the COBID, indicating that it:

- Meets the criteria outlined in 49 CFR part 26 regarding certification as a DBE; and
- Possesses the required resources and expertise to perform designated types of work.

**Commercially Useful Function (CUF)** - The definition is consistent with 49 CFR 26.55(c) and describes how ODOT counts DBE participation towards DBE goals:

A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, you must evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.

**Committed DBE** - A Committed DBE firm is one that was identified by the Contractor to meet an assigned DBE contract goal as a condition of Contract Award, and includes any substitute DBE that has been approved by ODOT in accordance with 49 CFR 26.53(f) and section 10.00 of the Disadvantaged Business Enterprise (DBE) Supplemental Required contract Provisions in exhibit C-5 that has subsequently been committed work to meet the assigned DBE contract goal. A non-Committed DBE is one that was hired on a race- and gender-neutral basis and has not been identified as a substitute Committed DBE.

**Commodity Codes** - Codes assigned by the COBID to indicate the standard types of services, labor, materials, or work the DBE provides. Services and commodity codes reflect information provided by the certified DBE firms and are not used as prequalification factors by ODOT.

**Contractor's DBE Liaison Officer** - The individual designated by the Contractor to assist the Contractor in meeting the Contractor's responsibility of compliance with the legal requirements of the DBE program and with the contractual obligations imposed by these supplementary provisions including but not limited to assuring that the DBE subcontractors on this project perform a commercially useful function.

**DBE Eligibility** - A firm is eligible to participate as a DBE if it meets the criteria as established by the federal DBE regulations in 49 CFR part 26 and enforced by the certifying agency, which in Oregon is COBID, applies these regulations to make

certification decisions. A firm will no longer be able to participate as a DBE on current or future contracts when it receives notification of decertification, denial of recertification, or notice of graduation by the certifying agency.

**Equipment** - All machinery, tools, and apparatus needed to complete the contract.

**Federal-Aid Contract** - For the purposes of these Disadvantaged Business Enterprise (DBE) Supplemental Required Contract Provisions, any contract including consultant agreements or modifications of a contract between ODOT and a Contractor which is paid for in whole or in part with USDOT financial assistance from FHWA, FTA or FAA.

**Good Faith Efforts** - Efforts required to obtain and support DBE participation that could reasonably be expected to produce and maintain a level of DBE participation sufficient to meet the assigned DBE contract goal. Good faith efforts are required before Bid Opening, upon Contract Award, and continue throughout the performance of the contract to maximize DBE participation. See 49 CFR 26.53 and 49 CFR Part 26, Appendix A.

**Joint Venture DBE** - An ODOT certified enterprise consisting of one or more firms of which at least one is a certified DBE, formed to carry out a single, for-profit business enterprise, for which the parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks and profits of the joint venture are commensurate with its ownership interest of the business. (see Section 8.00).

**Managerial Control** - Consistent with normal industry practice, management shall include scheduling work operations, ordering equipment and materials (if materials are part of the contract), preparing and submitting payrolls and all other required reports and forms, and hiring and firing employees, including supervisory employees.

**Manufacturer** - A firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the Contractor.

**Operational Control** - Consistent with normal industry practice, the DBE shall supervise the daily operations of the work contracted. There are only two acceptable ways for the DBE to supervise the daily operations. The DBE owner shall act as superintendent and directly supervise the work or the DBE owner shall supervise the work of and employ a skilled and knowledgeable superintendent. If the latter is used, the DBE owner shall be actively involved in making the operational and managerial decisions of the firm; wherein the DBE owner can continue operations should the skilled and knowledgeable superintendent's employment be discontinued.

**Regular Dealer** - A DBE firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of a contract are bought, kept in stock, and regularly sold to the public in the usual course of business. To be a regular dealer, the DBE firm shall engage in, as its principal business and in its own name, the purchase and sale of the products in question. A regular dealer in such items as steel, cement, gravel, stone, and petroleum products need not keep such products in stock if it owns and operates distribution equipment. Any supplementing of a regular dealer's own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis, and such equipment shall be operated by

the DBE's own employees. Brokers and packagers shall not be regarded as regular dealers within the meaning of this definition.

**Subcontract** - A subcontracting arrangement is generally considered to exist when a person or firm assumes an obligation to perform a part of the contract work and the following conditions are present:

- Compensation for performance of work is on a unit price or lump sum basis.
- The subcontractor exercises full control and authority over the subcontracted work, including the furnishing of labor and equipment and choice of work methods, with only general supervision being exercised by the Contractor.
- Personnel involved in the operation are under the direct supervision of the subcontractor and are included on the subcontractor's payroll.
- ODOT has provided written consent to the subcontract arrangement, regardless of tier.

All conditions involved should be considered and no one condition alone will normally determine whether a subcontract actually exists. (See 00180.21.)

**Type of Work** - Specific descriptions of work which the DBE is certified in the Certification Directory of DBEs as having the expertise and resources necessary to perform.

**03.00 Assigned DBE Contract Goal** - For any project with an assigned DBE contract goal for DBE participation, the Contractor is required to select a portion of work available on the project for DBE participation. The Contractor may use DBE subcontractors, suppliers, manufacturers or professional service providers to fulfill the assigned DBE contract goal as long as the DBE is certified in the types of work selected. The assigned DBE contract goal on a project remains in effect throughout the life of the contract. Dollar values of participation shall be credited toward meeting the assigned DBE contract goal based on DBE gross earnings.

According to 49 CFR 26.87(j)(2), if a Contractor has executed a subcontract with a firm before ODOT notifies the firm of its ineligibility, the Contractor may continue to use the firm on the contract and may continue to receive credit toward its assigned DBE contract goal for the firm's work. If ODOT awards the contract to a DBE prime Contractor that is later ruled ineligible, the portion of the ineligible firm's performance of the contract remaining after ODOT issued the notice of ineligibility shall not count toward the ODOT overall goal, but may count toward the assigned DBE contract goal. There is an exception under 49 CFR 26.87(j)(3) if the DBE's ineligibility is caused solely by its having exceeded the size standard during the performance of the contract, ODOT may continue to count its participation on the contract toward overall and assigned DBE contract goals.

In determining whether a DBE Contractor has met an assigned DBE contract goal, only the work the DBE has committed with its own forces as well as the work that it has committed to be performed by DBE subcontractors and DBE suppliers will be counted.

According to 49 CFR 26.71(n), DBE firms are certified only for specific types of work. If a DBE firm has not been certified prior to Bid Opening, for the type of work it is intending to

perform on a given contract, then the firm's participation on that contract cannot count toward assigned DBE contract or overall goals.

The assigned DBE contract goal for the project is listed on the "Assigned DBE Contract Goal" sheet at the end of these provisions.

#### **04.00 Subcontracting Limitations:**

**(a) DBE Subcontractors** - All DBE subcontractors committed to perform a function or service as a condition of contract award, or for replacing the performance of a Committed DBE, shall perform a commercially useful function according to Section 09.00. If it is determined by ODOT that the DBE subcontractor is unable to perform a commercially useful function, ODOT will notify the Contractor prior to subcontract approval. The Contractor shall either provide evidence that the DBE subcontractor is able to perform a commercially useful function, or replace the DBE subcontractor with another DBE who has been certified to perform the bid item subcontracted according to Section 10.00(c). If the Contractor cannot provide sufficient evidence that the DBE subcontractor has the ability to perform a CUF, and/or refuses to replace the DBE, the Contractor may be declared in default and the contract could be terminated according to the Oregon Standard Specifications for Construction subsection 00180.90(a).

**(b) Second Tier DBE Subcontracts** - Second tier DBE subcontracts may be counted toward the Contractor's assigned DBE contract goal provided the subcontract was listed in the original DBE commitment prior to bid award. The proportion of participation or work performed by a second-tier DBE subcontract may not be double counted and may only be counted towards the DBE goal in accordance with 49 CFR Part 26.

#### **05.00 DBE Subcontract, Sub-Subcontract(s), and Other Agreement Documents:**

**(a) Committed DBEs** - All work committed to a DBE toward meeting an assigned DBE contract goal, including work to be performed by a substitute Committed DBE, shall be performed under a written agreement according to 00160.01 and 00180.21. The agreement shall fully describe any partial pay item work committed to be performed by DBE firms.

**(b) Non-Committed DBEs** - Work to be performed by a non-Committed DBE shall be in accordance with 00160.01, 00180.20, and 00180.21.

**06.00 Good Faith Efforts Requirements** - The Contractor is required to exercise good faith efforts during the entire life of the contract to meet the assigned DBE contract goal. Good faith efforts shall be made to secure DBE participation sufficient to meet the assigned DBE contract goal. The Contractor shall also make every reasonable effort during the course of the project to enable DBE firms to perform those portions of the contract work for which they have been committed.

If the Contractor determines that the committed DBE is unable or unwilling to perform under the subcontract, unable to perform a commercially useful function, or has changed its ownership and/or control, the Contractor shall make good faith efforts to replace with another

DBE. Section 10.00 discusses the procedures that shall be followed to terminate a Committed DBE and replace the firm with a substitute.

The Engineer may request the Contractor to submit evidence of Good Faith Efforts at any time during the course of the contract and the Contractor shall promptly submit such evidence.

**07.00 DBE Work Plan Proposal Form** - The Contractor shall require each DBE participating on the project as a subcontractor and each Committed DBE, regardless of work type or form of agreement, to complete the "Disadvantaged Business Enterprise Work Plan Proposal - Form 3A" (Form 734-2165A). The form shall be filled-in electronically, then printed, and signed by an authorized representative of the DBE and of the Contractor. The Contractor shall submit the completed form to the Engineer. Form 734-2165A is available on the ODOT Office of Civil Rights website at:

<https://www.oregon.gov/ODOT/Business/OCR/Pages/Forms.aspx>

For Committed DBEs, the Contractor shall submit the completed DBE Work Plan Proposals to the Engineer at or before the pre-construction conference. For non-Committed DBE subcontractors, the Contractor shall submit the completed forms to the Engineer in time for review of the Contractor's request for consent to use the DBE subcontractor on the project.

The purpose of the DBE Work Plan Proposal is to preview whether the proposed activities and type of work identified will comply with DBE program regulations, particularly with respect to commercially useful function and crediting rules. The Contractor shall ensure the form is completed with sufficient information about the DBE's intended work, personnel, equipment, materials, and performance to allow the Agency to determine whether the DBE's proposed performance will meet commercially useful function requirements. Additional information and documentation may be requested by the Agency as needed to alleviate program compliance concerns and must be provided promptly according to 49 CFR 26.109.

The DBE Work Plan Proposal specifically solicits information regarding the following:

- (a) **Type of Work** - List the types of work the DBE will perform.
- (b) **Personnel Required** - List the names and/or craft classifications for personnel who will perform. Indicate whether the individual is regularly employed by the DBE, or the source from which the individual was or is to be recruited.
- (c) **Equipment Required** - List the items of equipment that will be used on the project. Indicate whether the equipment is owned, rented or leased. If rented or leased, consent to the rental or lease shall be obtained from the Agency prior to beginning of the work.
- (d) **Supplies and Materials Required** - List the supplies and materials that will be used on the project. Indicate the source, by name, address, and phone number, from which supplies and materials will be obtained. For a DBE supplier committed to meet an assigned DBE contract goal, attach documentation showing how the DBE meets manufacturer, regular dealer, or broker requirements, as applicable to the credit being claimed and provide any additional explanation needed regarding ordering, scheduling, and delivery according to subsection (f) below.

**(e) Prime Contractor Resources** - Discuss any plans for the DBE to share any resources of the Contractor, e.g. personnel, equipment, tools, or facilities.

**(f) Additional Information** - Provide comments or explanation of any of the information provided above. Include information related to joint check arrangements or any plans the DBE has to subcontract work to a lower tier or perform work through a specialty contractor.

The Engineer and Office of Civil Rights (OCR) Field Coordinator will review the proposals and may provide written comments as to whether the activities and type of work identified in the proposals complies with program regulations. In those instances where proposed activity and type of work violates applicable regulations, written comments will be offered as to corrective action required in order to comply with the regulations.

**08.00 Contractor Pre-construction Conference Reporting** - The Contractor shall deliver the following information to the Engineer at or before the Pre-construction Conference:

- The name of the DBE liaison officer who will administer the Contractor's DBE program. Said officer or the officer's designee shall attend the conference.
- Contractor's project schedule showing the work commencement date and estimated completion date for each DBE that will perform work on the project.
- "Disadvantaged Business Enterprise Work Plan Proposal - Form 3A" for all Committed DBEs that are performing work on the project regardless of contracting tier.

**09.00 Commercially Useful Function** - The Contractor is responsible for ensuring that DBE firms working on the project perform a commercially useful function (CUF). The Contractor shall receive credit toward meeting the assigned DBE contract goal and payment for DBE commercially useful function performed work only.

ODOT may perform an on-site review to ascertain whether the DBE is actively performing, managing, and supervising the work. All DBEs shall employ a labor force which is separate and apart from that employed by the Contractor, and which is independently recruited by the DBE according to standard industry practice. The DBE shall supervise and manage the work or independently hire a supervisor, who may not be a supervisor employed by the Contractor or any other subcontractor on the project.

With regard to the Federal-aid share, if an investigation reveals that there has been a violation of the CUF provisions, that portion of the work found to be in violation would not be counted toward goal achievement for either the Contractor or the Agency.

When a DBE is presumed not to be performing a CUF as described in this section, the DBE may present evidence through the Contractor to the Agency to rebut that presumption.

**(a) The DBE (Not Some Other Business Entity) Shall Actually Perform the Subcontract** - The DBE's utilization of labor, supervisory personnel, equipment and material in the performance of the subcontract shall be consistent with industry standards and shall demonstrate that the DBE and not some other business entity is actually performing the subcontract. For example, when a DBE associates itself too closely with

another business entity or entities, in acquiring a labor force, supervisors, equipment or materials to an extent inconsistent with industry standards, the DBE can no longer be said to be actually performing the subcontract because a partnership or joint venture, of which the DBE is a member, is the actual performer of the subcontract.

**(b) DBE's Work Force** - The DBE shall solicit, hire, place on its payroll, direct, and control all workers performing work under its contract. The DBE owner or its superintendent shall, on a full-time basis, supervise and control the work of the contract. The DBE may with the prior written consent of the Engineer augment its work force with personnel of another firm. The Engineer shall approve the request only when:

- Specialized skills are required, and
- The use of such personnel is for a limited time period.

**(c) DBE Equipment** - The DBE is expected to perform the work with equipment that is owned, being purchased, or leased by the DBE under a written lease agreement that has been consented to by the Engineer prior to the DBE starting work. No credit will be given, nor payment made for the cost of equipment leased or rented and used in the DBE firm's work when payment for those costs is made by a deduction from the Contractor's payment(s) to the DBE firm.

The DBE may lease specialized equipment, provided a written rental agreement, separate from the subcontract specifying the terms of the lease arrangement, is consented to by the Engineer prior to the DBE starting work. The Engineer will consent to the lease agreement only when:

- The equipment is of a specialized nature,
- The equipment is readily available at the job site,
- The operation of the equipment is under the full control of the DBE,
- The lease arrangement is for a short term,
- The lease arrangement for the specialized equipment in question is a normal industry practice, and
- The DBE shall hire, direct, supervise, control and carry the operator of the equipment on the DBE payroll.

**(d) DBE Trucking Firms** - Whenever a DBE trucking firm has been committed to meet an assigned DBE contract goal, the Contractor shall ensure that the Committed DBE individually identifies each truck intended for use on the Project on its "Disadvantaged Business Enterprise Work Plan Proposal - Form 3A" or an attached list.

The Contractor shall furnish a daily log of all trucking work performed under the Committed DBE's subcontract. The "Daily DBE Trucking Log" (Form 734-2916), (or an approved equal that contains all the information on the ODOT form, including the certification) shall be completed for each day work is performed under the DBE's subcontract. The Daily DBE Trucking Log shall identify all trucks under the management and supervision of the DBE subcontractor used on the Project.



The Contractor shall submit the Daily DBE Trucking Log to the Engineer on a weekly basis and no later than 14 Calendar Days after the first recorded date in the logs. For owner-operator trucks, the Contractor shall comply with 00170.65(b-4).

The following factors will be used to determine if a DBE Trucking firm is performing a CUF:

- The DBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.
- The DBE shall itself own and operate at least one fully licensed, insured and operational truck used on the contract.
- The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
- The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
- According to 49 CFR 26.55(d)(5) the DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit for the total value of the transportation services provided by the non-DBE lessees not to exceed the value of transportation services provided by DBE-owned trucks on the contract. Additional participation by non-DBE lessees receives credit only for the fee or commission it receives as a result of the lease arrangements.
- For the purposes of this paragraph, a lease shall indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks shall display the name and identification number of the DBE.

**(e) DBE Flagging Firms** - DBE flagging firms shall be responsible for ensuring all their dispatched employees meet the required certification and licensing requirements and for furnishing their employees with equipment (in this case, paddles and radios) to perform the committed work. This does not preclude the DBE's employees from supplementing with their own equipment.

**10.00 Termination and Substitution of DBEs** - The Contractor must comply with the requirements and procedures under 49 CFR 26.53(f). The Contractor shall use the specific DBEs listed in response to a contract goal to perform the work and supply the materials for which each is listed unless the contractor obtains ODOT's prior written consent, coordinated with the ODOT Office of Civil Rights. Without ODOT consent, the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE. Contractor must provide the DBE with written notice and supporting documentation of its good cause reasons they wish to terminate and/or substitute the DBE with a copy to the Engineer and the ODOT Office of Civil Rights. The DBE must be given 5 days to respond to the termination request, copying the ODOT Office of Civil Rights.

ODOT may provide such written consent only if it agrees, for reasons stated in its concurrence document, that the prime contractor has good cause to terminate the DBE firm because the DBE is unable, unwilling or ineligible to perform. To initiate the termination, substitution, removal or replacement process with a Committed DBE contractor/supplier (regardless of the tier), the Contractor or lower tier contractor/subcontractor must do the following:

**(a) Contractor Notice of Termination of a Non-Committed DBE** - The Contractor shall notify the Agency in writing of plans to terminate a non-Committed DBE. Include the name of the non-Committed DBE to be terminated, a brief explanation of the reason for termination, and the adjusted DBE subcontract or agreement amount.

**(b) Contractor Written Request to Terminate a Committed DBE** - All Contractor requests to terminate, substitute or replace a Committed DBE, including a partial termination or substitution of work committed to a DBE, shall be in writing and shall include the following information:

- Date the Contractor determined the DBE to be unwilling, unable or ineligible to perform.
- Projected date Contractor will require substitution or replacement DBE to commence work if consent is granted to the request.
- Brief statement of facts describing and citing specific actions or inaction by the DBE giving rise to the Contractor's assertion that the DBE is unwilling, unable or ineligible to perform.
- Brief statement of the affected DBE's capacity and ability to perform the work as determined by Contractor.
- Brief statement of facts regarding actions taken by Contractor that are believed to constitute good faith efforts toward enabling the DBE to perform.
- To date percentage of work completed on each bid item by the DBE.
- The total dollar amount paid, per bid item, to date for work performed by the DBE.
- The total dollar amount, per bid item, remaining to be paid to the Committed DBE for work completed, but for which the DBE has not received payment and with which the Contractor has no dispute.
- The total dollar amount, per bid item, remaining to be paid to the DBE for work completed, but for which the DBE has not received payment and over which the Contractor and/or the DBE have dispute.
- A written, signed statement from the DBE, provided the DBE concurs with request to terminate, indicating its unwillingness or inability to perform.

**(c) Contractor Written Notice to Committed DBE of Pending Request to Terminate and Substitute with Another DBE** - The Contractor shall send a copy of the request to terminate and substitute letter to the affected Committed DBE in conjunction to submitting the request to the Engineer. The affected DBE firm may submit a response letter to the Engineer within five Calendar Days of receiving the notice from the Contractor. The affected DBE firm may explain its position concerning performance on the committed work. The Engineer will consider both the Contractor's request and DBE's response and explanation before approving the Contractor's termination and substitution request. If the Contractor is unsuccessful in notifying the affected DBE firm, after trying its best to deliver

a copy of its request letter, the Agency may determine that the affected Committed DBE is unable or unwilling to continue the contract and a substitution will be immediately approved by the Engineer. Contractor must provide the DBE with written notice and supporting documentation of its good cause reasons they wish to terminate and/or substitute the DBE with a copy to the Engineer and the ODOT Office of Civil Rights. The DBE must be given 5 days to respond to the termination request, copying the ODOT Office of Civil Rights.

**(d) Proposed Substitution of Another Certified DBE** - When a Committed DBE substitution shall occur, the Contractor may submit another eligible DBE firm to replace the original committed firm in writing. The Contractor shall submit the name of the DBE firm, the proposed work to be performed, and the dollar amount of the work. The Contractor shall give pertinent information including bid item, item description, bid quantity and unit, unit price, and total price. In addition, the Contractor shall submit a written DBE Work Plan for the requested substitute DBE according to Section 07.00. The dollar value of work to be performed by the substitute DBE shall be in an amount equal to the dollar value of the amount committed to the terminated DBE, minus the value of work performed to date by the DBE, prior to the request for substitution. Should the Contractor be unable to commit the required dollar value to the substitute DBE, the Contractor shall provide written evidence of good faith efforts made to obtain the substitute value requirement. The Agency will review the quality and intensity of those efforts. Efforts that are merely superficial are not good faith efforts to meet the assigned DBE contract goal. The Contractor shall document the steps taken to obtain participation which demonstrate the good faith efforts outlined below:

- Evidence that the Contractor attended any pre-solicitation or prebid meetings that were scheduled by ODOT to inform DBE firms of contracting and subcontracting or material supply opportunities available on the project;
- Evidence that the Contractor identified and selected specific economically feasible units of the project to be performed by DBE firms in order to increase the likelihood of participation by DBE firms;
- Evidence that the Contractor advertised in general circulation, trade association, minority and trade oriented, women-focus publications, concerning the subcontracting or supply opportunities;
- Evidence that the Contractor provided written notice to a reasonable number of specific DBE firms, identified from the DBE Directory of Certified Firms for the selected subcontracting or material supply work, in sufficient time to allow the enterprises to participate effectively;
- Evidence that the Contractor followed up initial solicitations of interest by contacting the enterprises to determine with certainty whether the enterprises were interested. The Contractor should provide the following information as evidence:
  - The names, addresses, and telephone numbers of DBE firms who were contacted, the dates of initial contact and whether initial solicitations of interest were followed up by contacting the DBE firms to determine with certainty whether the DBE firms were interested;
  - A description of the information provided to the DBE firms regarding the plans and specifications and estimated quantities for portions of the work to be performed;

- Documentation of each DBE contacted, but rejected and the reasons for the rejection.
- Evidence that the Contractor provided interested DBE firms with adequate information about the plans, specifications and requirements for the selected subcontracting or material supply work;
- Evidence that the Contractor negotiated in good faith with the enterprises, and did not without justifiable reason reject as unsatisfactory bids prepared by any DBE;
- Evidence that the Contractor advised and made efforts to assist interested DBE firms in obtaining bonding, lines of credit, or insurance required by ODOT or Contractor;
- Evidence that the Contractor's efforts to obtain DBE participation were reasonably expected to produce a level of participation sufficient to meet the assigned DBE contract goal or requirements of ODOT;
- Evidence that the Contractor used the services of minority community organizations, minority organizations identified by the Advocate for Minority and Women Business that provide assistance in the recruitment and placement of disadvantaged, minority, or women business enterprises; and
- Evidence that the Contractor used the services of ODOT's Supportive Services Contractor(s).

**11.00 Changes in Work Committed to DBEs** - The Agency will consider the impact on DBE participation in instances where the Agency changes, reduces, or deletes work committed to a DBE at the time of contract award. In such instances, the Contractor shall not be required to replace the work but is encouraged to do so. If the prime Contractor proposes any changes that involve a Committed DBE, the Contractor shall notify the affected DBE of the proposed change, reduction, or deletion of any work committed at the time of contract award prior to executing the change order. The Contractor shall enable the affected DBE to participate in the change order request and will make every effort to maintain the Committed DBE percentage that was the condition of contract award. Documentation of this effort and a letter from the DBE agreeing to the change shall be included with the request.

**12.00 Contractor Payments to Subcontractors and Suppliers:**

**(a) DBE-Related Records** - The Contractor shall maintain records of all subcontracts or other agreements entered into with DBE firms and records of materials purchased from DBE suppliers. Such records shall show the name and business address of each DBE subcontractor or vendor and the total dollar amount actually paid to each DBE subcontractor or vendor.

**(b) Prompt Payment and Release of Retainage** - The Contractor shall pay each subcontractor for satisfactory performance of its contract no later than 10 Calendar Days from receipt of each payment the Contractor receives from ODOT. If retainage is withheld the Contractor shall also return retainage payments to each subcontractor within 10 Calendar Days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Engineer. This policy applies to both DBE and non-DBE contractors.

**(c) Paid Summary Reports** - The Contractor shall submit a "Paid Summary Report" (Form 734-2882) to the Engineer certifying payments made to all of the following:

- All subcontractors
- Committed DBE suppliers
- Non-Committed DBE suppliers and service providers with estimated total payments for the Project over \$10,000.

The Contractor shall submit the completed and signed Paid Summary Report to the Engineer within 20 days of receipt of payment from the Agency for each month in which payments were made to each subcontractor, each Committed DBE supplier, and each non-Committed DBE supplier or service provider with estimated total payments for the Project over \$10,000. At the completion of the project, submit Form 734-2882 recapping the total amounts paid to each subcontractor, and each Committed DBE supplier, and each non-Committed DBE supplier or service provider with estimated total payments for the Project over \$10,000.

The Contractor shall require each subcontractor at every tier to comply with the requirement to submit Form 734-2882 within 20 days of receipt of payment from its controlling contractor and provide a recap of the total amounts paid at the completion of the project or completion of their Work.

Forms shall be submitted to an email address provided to the Contractor at the Preconstruction Conference.

***The participation of a DBE subcontractor will not be credited towards the Contractor's assigned DBE contract goal, or the overall goal, until the amount being counted toward the goal, and any retainage held by the Contractor has been paid to the DBE.***

**13.00 Remedies** - Failure of any Contractor to meet the requirements cited in Section 01.00(b) constitutes a breach of contract for which the imposition of the following sanctions could occur:

- Temporarily withholding progress payments until the Contractor complies with these provisions through future performance.
- Permanently withholding payment for work already performed in a manner that constitutes a breach of contract.
- Suspension of work according to the Oregon Standard Specifications for Construction, subsections 00150.00 and 00180.70.

Any Bidder or Contractor or subcontractor on a public contract that violates the provisions of ORS 200.075 shall have its right to bid on or participate in any public contract suspended for up to 90 days for a first violation, up to one year for a second violation and up to five years for a third violation.

Each violation shall remain on record for five years. After five years, the violation shall no longer be considered in reviewing future violations.

Failure of a Bidder, Contractor, or subcontractor to comply with the requirements cited in Section 01.00(b) when there appears to be evidence of criminal conduct, shall be referred to the Oregon Department of Justice and/or the FHWA Inspector General for criminal investigation, and if warranted, prosecution.

**14.00 Records and Reports** - The Contractor shall keep such project records as are necessary to determine compliance with these DBE Supplemental Required Contract Provisions, including but not limited to records on equipment usage, fuel consumption, invoicing, and payments. Such records shall include written reports from the DBE Liaison Officer to the Contractor as to the performance of the committed DBE and its performance of a commercially useful function. Contractor shall provide the Engineer with records on equipment and fuel logs and other records needed to verify compliance with commercially useful function and DBE crediting requirements.

**15.00 Further Information** - The Disadvantaged Business Enterprise Supplemental Required Contract Provisions shall be incorporated into and attached to all agreements and contracts on projects financed in whole or in part with federal funds.

For further information concerning Disadvantaged Business Enterprise participation, including confirmation of certification for type of work, contact, in writing, the DBE Program Manager not later than one week prior to the project Bid Opening at [ocrinforequest@odot.state.or.us](mailto:ocrinforequest@odot.state.or.us).

Other requests may be directed to:

Oregon Department of Transportation  
Office of Civil Rights MS 23  
3930 Fairview Industrial Dr., S.E.  
Salem, OR 97302  
Phone: 503-986-4350  
Fax: 503-986-6382  
[ocrinforequest@odot.state.or.us](mailto:ocrinforequest@odot.state.or.us)



**ASSIGNED DBE CONTRACT GOAL**

The minimum Assigned **DBE** Contract Goal for this Project is **8%**.

(Overall DBE program goal for ODOT is set at 15.37% for FHWA funded Contracts for federal fiscal years 2020, 2021 and 2022.)

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.





**REIMBURSABLE FEDERAL ON-THE-JOB and APPRENTICESHIP TRAINING**

This Section for Reimbursable Federal On-the-Job Training and Apprenticeship Training supersedes subparagraph B(7-e) of the "On-Site Workforce Affirmative Action Requirements for Women and Minorities on Federal Aid Contracts," and is in implementation of 23 U.S.C. 140(a). All other provisions apply.

**SECTION 1: ABBREVIATIONS AND DEFINITIONS****(a) Abbreviations**

**BOLI** - Bureau of Labor and Industries for the State of Oregon

**EEO** - Equal Employment Opportunity

**OCR** - Office of Civil Rights

**OJT** - On-the-Job Training

**(b) Definitions**

**Affirmative Action** - Contractor's efforts exerted towards achieving equal opportunity through positive, aggressive, and continuous result-oriented measures to correct past and present discriminatory practices and their effects on the conditions and privileges of employment. These measures include, but are not limited to, recruiting, hiring, promotion, upgrading, demotion, transfer, termination, compensation, and training.

**Apprenticeship Training Program** - A specific Apprenticeship Training Program, approved by BOLI, which provides a combination of field and classroom trade specific experience under the supervision of journey level workers. For this Contract, this is a Race and Gender Neutral program.

**OJT Program** - A specific on-the-job training program, approved by the Agency and FHWA, which provides a combination of field, and limited classroom, trade specific experience under the supervision of journey level workers. This is an Affirmative Action program that targets women and minorities.

**Qualified Hours** - Specific On-Site training hours (may include some classroom hours) completed by a properly registered and enrolled trainee consistent with the Contractor's OJT Program or an apprentice consistent with the Apprenticeship Training Program. The Contractor reports these Qualified Hours to the Agency for the OJT and Apprenticeship Training Goal.

**Race and Gender Neutral** - Employment and contracting practices where the ethnicity and the sex of a person are not considered in the evaluation of candidates for employment or bids for the Contract.

**Training Goal** - A fixed quantity of Qualified Hours set by the Agency and included in the bid schedule.

## **SECTION 2: POLICY STATEMENT**

In order to increase the number of trained and skilled workers in highway construction the Agency will set a Training Goal for the Project.

It is the policy of the Agency that the Contractor shall take all necessary and reasonable steps to ensure that trainees and apprentices have the opportunity to participate on highway construction projects and to develop as journey-level workers in the given trade or job classification employed, and to meet this Training Goal.

The Contractor shall adopt the following policy:

It shall be the policy of the Contractor to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, or national origin, age or disability. Such action shall include employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and on-the-job training.

The Training Goal is not intended, and shall not be used to discriminate against any applicant, whether members of a minority group or not.

## **SECTION 3: APPRENTICESHIP TRAINING PROGRAM**

### **(a) General**

Apprentices shall be paid the appropriate rates approved in connection with their stage in the Apprenticeship Training Program.

A valid certification by an appropriate apprenticeship committee that the Contractor is an approved training agent shall be prima facie proof of compliance.

### **(b) EEO Requirements**

The Contractor shall ensure that, without discrimination, minorities and women have an equal employment opportunity to compete for and participate as apprentices while supporting a diverse workforce that is representative of the population.

Apprenticeship training is Race and Gender Neutral, however, the Contractor is still obligated to comply with all applicable EEO requirements.

### **(c) Reports**

The Contractor and each Subcontractor with an Apprenticeship Training Program shall complete and submit the following reports to the Engineer, according to the instructions provided in the respective forms:

- The "Training Program Approval Request (TPAR)" (Form 734-2880) shall be submitted prior to or at the preconstruction conference.
- Before an apprentice begins work, an "Apprentice/Trainee Approval Request (ATAR)" (Form 734-2878) shall be submitted.
- Each month the Contractor shall submit the "Monthly Employment Utilization Report" (Form 731-0668). This report is required of the Contractor and Subcontractors who have contracts that require certified payrolls, regardless of their participation in the apprenticeship.
- Each month the Contractor shall submit an "Apprentice/Trainee Monthly Progress Report (MPR)" (Form 734-2879) for each apprentice. This Form is used to report Qualified Hours for apprentices and will be the source document for estimated monthly progress payments to the Contractor.

Forms are published on the ODOT OCR website at:

<https://www.oregon.gov/ODOT/Business/OCR/Pages/Forms.aspx>

## **SECTION 4: OJT PROGRAM**

### **(a) EEO Requirements**

The Contractor shall make every effort to enroll minority and women trainees by conducting systematic and direct, meaningful recruitment through public and private sources likely to yield minority and women trainees within a reasonable area of recruitment.

Whenever minorities or women are not placed in OJT positions, the Contractor shall provide documented evidence of Affirmative Action recruitment efforts. The Agency will review the documents of the Contractor's systematic and direct, meaningful recruitment efforts to determine whether the Contractor has complied with the criteria in "Required Contract Provisions Federal-Aid Construction Contracts" (FHWA Form 1273), Section II Nondiscrimination.

When filling OJT positions Contractors are encouraged to hire previously approved trainees who have not yet completed their training.

### **(b) Training Requirements**

The intent of these provisions is to provide real and meaningful training in the construction crafts. Off-Site training is permissible only when it is an integral part of an approved training program and does not comprise a significant part of the overall training. In addition:

- A Contractor, not registered as a training agent, may choose to adopt a standardized OJT Program. Standardized OJT Programs are published at the OCR website at: <https://www.oregon.gov/ODOT/Business/OCR/Pages/Workforce-Development.aspx>
- Some job classifications such as flagger, bookkeeper, clerk/typist or secretary are prohibited from OJT Programs.
- OJT Programs shall always maintain the approved ratio of trainees to journey level workers On-Site.

- OJT Programs shall always maintain the approved types and numbers of equipment On-Site.
- No employee shall be registered as a trainee in any job classification the employee has completed leading to journey level status, or for any job classification in which the employee has been employed as a journey level worker. The Contractor shall keep records, and provide to the Agency, if requested, documents on each trainee.
- Trainees shall be pre-approved by the Agency.

OJT Program trainees shall be paid the journey level rate specified in the contract for the type of work performed.

### (c) Reports

The Contractor and each Subcontractor with an OJT Program shall complete and submit the following reports to the Engineer according to the instructions on their respective forms:

- The training program forecast using the "Training Program Approval Request (TPAR)" (Form 734-2880) shall be submitted prior to or at the preconstruction conference.
- Before the trainee begins work, an "Apprentice/Trainee Approval Request (ATAR)" (Form 734-2878) shall be submitted. Attach a copy of the "Training Program Approval Request (TPAR)" (Form 734-2880) to the "Apprentice/Trainee Approval Request (ATAR)" (Form 734-2878). The Contractor and trainee must sign and return a copy of the training program that will be utilized. The Contractor shall provide certification to the trainee upon completion of the OJT Program and also submit a copy to OCR. Upon completion of the Contract, a certification shall be given to each trainee and to the Agency to document the number of hours and training completed by the individual.
- Each month the Contractor shall submit the "Monthly Employment Utilization Report" (Form 731-0668). This report is required of the Contractor and Subcontractors (for contracts that require certified payrolls), regardless of their participation in the Apprenticeship or On-the-Job Training programs.
- Each month the Contractor shall submit an "Apprentice/Trainee Monthly Progress Report (MPR)" (Form 734-2879) for each trainee. This form is used to report Qualified Hours for trainees and will be the source document for estimated monthly progress payments to the Contractor.

Forms are published on the ODOT OCR website at:

<https://www.oregon.gov/ODOT/Business/OCR/Pages/Forms.aspx>

## **SECTION 5: MONITORING AND COMPLIANCE**

The Contractor has the primary responsibility to monitor compliance levels throughout the Contract and to ensure the Training Goal is met. If the Contractor decides any of the training hours are to be provided by a Subcontractor, the Contractor shall ensure that the Subcontract contains the appropriate training clauses that obligate the Subcontractor. This shall not relieve the Contractor of the Contractor's primary responsibility.

At the request of the Agency, the Contractor will meet with the Agency to review records related to training. The Agency, through meetings and progress records provided by the Contractor, will provide the Contractor with informational compliance and reimbursement data including:

- The Contractor's training forecasts compared with the actual Qualified Hours achieved.
- Total Qualified Hours and payment reimbursement summary.
- For information purposes only, consolidated summary reports by OJT craft and apprenticeship crafts.

The Agency will track training activities provided by Contractor for the OJT trainees and apprentices.

## **SECTION 6: MEASUREMENT AND PAYMENT**

### **(a) General**

The quantity of Qualified Hours will be paid for at the Contract unit price of \$20 per hour for the item "Training."

No separate or additional payment will be made for failure to achieve the Training Goal. See (b) below for Disincentive.

No separate or additional payment will be made for Qualified Hours achieved in excess of 150% of the Training Goal. No Disincentive applies.

If the Contractor achieves from 100% to 150% of the Training Goal, the Agency will reimburse the Contractor for Qualified Hours.

After the Second Notification, the Agency will review the final reports required and make adjustments. Any additional reimbursements will be paid on the next Contract payment voucher.

### **Examples of achieving the Training Goal:**

Example A: Training Goal = 1,000 hours; Pay Item = \$20/hr; Contractor achieves 100% of the Qualified Hours (fulfilled the goal): therefore 1,000 hours x \$20.00/hr = \$20,000 reimbursed (during progress of the Contract).

Example B: Training Goal = 1,000 hours; Pay Item = \$20/hr; Contractor achieves 150% of the Qualified Hours or 1,500 hours (exceeded the goal): therefore 1,500 hours x \$20.00/hr = \$30,000 reimbursed (during progress of the Contract).

Example C: Training Goal = 1,000 hours; Pay Item = \$20/hr; Contractor achieves an actual 1,525 Qualified Hours (exceeded even 150% of the goal): therefore 1,500 hours x \$20.00/hr = pay of \$30,000 reimbursed (during progress of the Contract).

**(b) Disincentive**

If, at the Second Notification, the Contractor has not achieved the Training Goal there will be no payment (disincentive) to the Contractor and no Qualified Hours as follows:

Regardless of all prior partial payments for the Pay Item "Training," a correction equal to 100% of the Pay Item goal times the Pay Item price will be subtracted from the final payment due the Contractor on the next Contract payment voucher.

**Examples of *not* achieving the Training Goal:**

Example A: Training Goal = 1,000 hours; Pay Item = \$20/hr; Contractor achieves an actual 500 Qualified Hours (failed to meet the goal): A disincentive applies; therefore  $1,000 \text{ hours} \times \$20.00/\text{hr} = \text{line item deduction}$  of \$20,000 will show on the next Contract payment voucher. The previously paid qualified hours ( $500 \times \$20 = \$10,000$ ) under the pay item on vouchers will remain and the net impact in this example will be the \$20,000 deduction offset by the \$10,000 qualified and paid hours for a net reduction of \$10,000.

Example B: Training Goal = 1,000 hours; Pay Item = \$20/hr; Contractor achieves zero Qualified Hours (failed to meet the goal): A disincentive applies; therefore  $1,000 \text{ hours} \times \$20.00/\text{hr} = \text{line item deduction}$  of \$20,000 will show on the next Contract payment voucher.

If, as a result of a line item deduction, a net amount is due the Agency, the Contractor shall pay the Agency within 45 Calendar Days of notice of such deficiency.

# Project Wage Rates



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## PREFACE

**Minimum Wage Requirements** - This Project is subject to both federal and State prevailing wage rate requirements. Not less than the higher of the applicable federal or existing State prevailing wage rates shall be paid to workers according to 00170.65(b) and 00170.65(e). The applicable federal prevailing wage rates and the existing State prevailing wage rates last published prior to the time of Bid Opening apply to this Project.

**Applicable Wages** - Prevailing wage rates published in the following wage determinations and any applicable modifications or amendments apply to this Project and are included below:

- (1) U.S. Department of Labor, "General Wage Determinations Issued under the Davis-Bacon and Related Acts: Oregon Highway Construction Projects", and
- (2) Oregon Bureau of Labor and Industries (BOLI), "Prevailing Wage Rates for Public Works Contracts in Oregon".

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U.S. Department of Labor

**General Wage  
Determinations Issued under  
the Davis-Bacon and Related  
Acts: Oregon Highway  
Construction Projects**

"General Decision Number: OR20210001 02/12/2021

Superseded General Decision Number: OR20200001

State: Oregon

Construction Type: Highway

Counties: Oregon Statewide.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/01/2021
1	02/12/2021

BROR0001-006 06/01/2020

BAKER, BENTON (NORTH), CLACKAMAS, CLATSOP, COLUMBIA, GILLIAM, HARNEY, HOOD RIVER, LINCOLN (NORTH), LINN (NORTH), MALHEUR (NORTH), MARION, MORROW, MULTNOMAH, POLK, SHERMAN, TILLAMOOK, UMATILLA, UNION, WALLOWA, WASCO (NORTH), WASHINGTON AND YAMHILL COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 41.20	22.39

BROR0001-007 06/01/2020

BENTON (SOUTH), CROOK, DESCHUTES, GRANT, JACKSON, JEFFERSON, KLAMATH, LAKE, LANE, LINCOLN (SOUTH), LINN (SOUTH), MALHEUR (SOUTH), WASCO (SOUTH) AND WHEELER COUNTIES

Rates	Fringes
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BRICKLAYER.....\$ 41.20

22.39

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CARP9001-001 06/01/2020

ZONE 1:

Rates Fringes

Carpenters:

CARPENTERS.....	\$ 42.31	18.30
DIVER STANDBY.....	\$ 53.37	18.30
DIVERS TENDERS.....	\$ 47.14	18.30
DIVERS.....	\$ 91.14	18.30
MANIFOLD AND/OR DECOMPRESSION CHAMBER OPERATORS.....	\$ 47.14	18.30
MILLWRIGHTS.....	\$ 43.26	18.30
PILEDRIVERS.....	\$ 42.87	18.30

DEPTH PAY:

50 to 100 feet	\$2.00 per foot over 50 feet
101 to 150 feet	3.00 per foot over 50 feet
151 to 200 feet	4.00 per foot over 50 feet
over 220 feet	5.00 per foot over 50 feet

Zone Differential (Add to Zone 1 rates):

- Zone 2 - \$1.25
- Zone 3 - 1.70
- Zone 4 - 2.00
- Zone 5 - 3.00
- Zone 6 - 5.00
- Zone 7 - 10.00

ZONE 1 - All jobs or projects located within 30 miles of the respective City Hall

ZONE 2 - More than 30 miles and less than 40 miles from the respective City Hall

ZONE 3 - More than 40 miles and less than 50 miles from the respective City Hall

ZONE 4 - More than 50 miles and less than 60 miles from the respective City Hall

ZONE 5 - More than 60 miles and less than 70 miles from the respective City Hall

ZONE 6 - More than 70 miles from the respective City Hall.

ZONE 7 - More than 100 miles from the respective City Hall.

BASEPOINTS CITIES FOR CARPENTERS (EXCLUDING MILLWRIGHTS, PILEDRIVERS AND DIVERS)

ALBANY	ASTORIA	BAKER
BEND	BROOKINGS	BURNS
COOS BAY	CORVALLIS	EUGENE
GOLDENDALE	GRANTS PASS	HERMISTON
HOOD RIVER	KLAMATH FALLS	LAGRANDE
LAKEVIEW	LONGVIEW	MADRAS
MEDFORD	McMINNVILLE	NEWPORT
OREGON CITY	ONTARIO	PENDLETON
PORTLAND	PORT ORFORD	REEDSPORT
ROSEBURG	SALEM	ST. HELENS

THE DALLES                      TILLAMOOK                      VANCOUVER

BASEPOINTS FOR MILLWRIGHTS

EUGENE                              NORTH BEND                      LONGVIEW  
PORTLAND                            MEDFORD                            THE DALLES  
VANCOUVER

BASEPOINTS FOR PILEDRIVERS AND DIVERS

ASTORIA                              BEND                                      COOS BAY  
EUGENE                                KLAMATH FALLS                      LONGVIEW  
MEDFORD                                NEWPORT                                PORTLAND  
ROSEBURG                                SALEM                                      THE DALLES

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\* ELEC0048-006 01/01/2021

CLACKAMAS, CLATSOP, COLUMBIA, HOOD RIVER, MULTNOMAH, TILLAMOOK, WASCO, WASHINGTON, SHERMAN AND YAMHILL (NORTH) COUNTIES

	Rates	Fringes
CABLE SPLICER.....	\$ 44.22	21.50
ELECTRICIAN.....	\$ 50.35	25.48

HOURLY ZONE PAY:

Hourly Zone Pay shall be paid on jobs located outside of the free zone computed from the city center of the following listed cities:

Portland, The Dalles, Hood River, Tillamook, Seaside and Astoria

Zone Pay:

- Zone 1: 31-50 miles \$1.50/hour
- Zone 2: 51-70 miles \$3.50/hour
- Zone 3: 71-90 miles \$5.50/hour
- Zone 4: Beyond 90 miles \$9.00/hour

\*These are not miles driven. Zones are based on Delorme Street Atlas USA 2006 plus.

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ELEC0112-001 06/01/2020

BAKER, GILLIAM, GRANT, MORROW, UMATILLA, UNION, WALLOWA, AND WHEELER COUNTIES

	Rates	Fringes
CABLE SPLICER.....	\$ 50.45	22.27
ELECTRICIAN.....	\$ 48.05	22.12

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ELEC0280-003 01/01/2020

BENTON, CROOK, DESCHUTES, JEFFERSON, LANE (EAST OF A LINE RUNNING NORTH AND SOUTH FROM THE NORTHEAST CORNER OF COOS COUNTY TO THE SOUTHEAST CORNER OF LINCOLN COUNTY), LINN, MARION, POLK AND YAMHILL (SOUTHERN HALF) COUNTIES

	Rates	Fringes
CABLE SPLICER.....	\$ 49.51	19.79
ELECTRICIAN.....	\$ 45.01	19.79

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ELEC0291-006 06/06/2020

MALHEUR COUNTY

	Rates	Fringes
CABLE SPLICER.....	\$ 35.32	6%+13.76
ELECTRICIAN.....	\$ 32.11	6%+13.76

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\* ELEC0659-004 02/01/2019

DOUGLAS (EAST OF A LINE RUNNING NORTH AND SOUTH FROM THE NE CORNER OF COOS COUNTY TO THE SE CORNER OF LINCOLN COUNTY), HARNEY, JACKSON, JOSEPHINE, KLAMATH AND LAKE COUNTIES

	Rates	Fringes
CABLE SPLICER.....	\$ 59.09	20.22
ELECTRICIAN.....	\$ 35.19	16.80

ZONE PAY: BASE POINTS ARE FROM THE DOWNTOWN POST OFFICE IN GRANTS PASS, KLAMATH FALLS, ROSEBURG AND MEDFORD.

ZONE 1:	0-20 MILES	\$0.00 PER HOUR
ZONE 2:	> 20-30 MILES	\$1.50 PER HOUR
ZONE 3:	>30-40 MILES	\$3.30 PER HOUR
ZONE 4:	>40-50 MILES	\$5.00 PER HOUR
ZONE 5:	>50-60 MILES	\$6.80 PER HOUR
ZONE 6:	>60 MILES	\$9.50 PER HOUR

\*THESE ARE NOT MILES DRIVEN. ZONES ARE BASED ON DELORNE STREET ATLAS USA 5.0.

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ELEC0932-004 01/01/2020

COOS, CURRY, LINCOLN, DOUGLAS AND LANE COUNTIES (AREA LYING WEST OF A LINE NORTH AND SOUTH FROM THE N.E. CORNER OF COOS COUNTY TO THE S.E. CORNER OF LINCOLN COUNTY)

	Rates	Fringes
ELECTRICIAN.....	\$ 40.53	20.27

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ENGI0701-005 01/01/2020

ZONE 1:

POWER EQUIPMENT OPERATORS (See Footnote C)

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 45.90	15.35
GROUP 1A.....	\$ 48.06	15.35
GROUP 1B.....	\$ 50.22	15.35
GROUP 2.....	\$ 43.99	15.35
GROUP 3.....	\$ 42.84	15.35



GROUP 4.....	\$ 41.01	15.35
GROUP 5.....	\$ 39.77	15.35
GROUP 6.....	\$ 36.55	15.35

Zone Differential (add to Zone 1 rates):

Zone 2 - \$3.00

Zone 3 - \$6.00

For the following metropolitan counties: MULTNOMAH; CLACKAMAS; MARION; WASHINGTON; YAMHILL; AND COLUMBIA; CLARK; AND COWLITZ COUNTY, WASHINGTON WITH MODIFICATIONS AS INDICATED:

All jobs or projects located in Multnomah, Clackamas and Marion Counties, West of the western boundary of Mt. Hood National Forest and West of Mile Post 30 on Interstate 84 and West of Mile Post 30 on State Highway 26 and West of Mile Post 30 on Highway 22 and all jobs or projects located in Yamhill County, Washington County and Columbia County and all jobs or projects located in Clark & Cowlitz County, Washington except that portion of Cowlitz County in the Mt. St. Helens ""Blast Zone"" shall receive Zone I pay for all classifications.

All jobs or projects located in the area outside the identified boundary above, but less than 50 miles from the Portland City Hall shall receive Zone II pay for all classifications.

All jobs or projects located more than 50 miles from the Portland City Hall, but outside the identified border above, shall receive Zone III pay for all classifications.

For the following cities: ALBANY; BEND; COOS BAY; EUGENE; GRANTS PASS; KLAMATH FALLS; MEDFORD; ROSEBURG

All jobs or projects located within 30 miles of the respective city hall of the above mentioned cities shall receive Zone I pay for all classifications.

All jobs or projects located more than 30 miles and less than 50 miles from the respective city hall of the above mentioned cities shall receive Zone II pay for all classifications.

All jobs or projects located more than 50 miles from the respective city hall of the above mentioned cities shall receive Zone III pay for all classifications.

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

Group 1

Concrete Batch Plan and or Wet mix three (3) units or more; Crane, Floating one hundred and fifty (150) ton but less than two hundred and fifty (250) ton; Crane, two hundred (200) ton through two hundred ninety nine (299) ton with two hundred foot (200') boom or less (including jib, inserts and/or attachments); Crane, ninety (90) ton through one hundred ninety nine (199) ton with over two hundred (200') boom Including jib, inserts and/or attachments); Crane, Tower Crane with one hundred seventy five foot (175') tower or less and with less than two hundred foot (200') jib; Crane, Whirley ninety (90) ton and over; Helicopter when used in erecting work

## Group 1A

Crane, floating two hundred fifty (250) ton and over; Crane, two hundred (200) ton through two hundred ninety nine (299) ton, with over two hundred foot (200') boom (including jib, inserts and/or attachments); Crane, three hundred (300) ton through three hundred ninety nine (399) ton; Crane, Tower Crane with over one hundred seventy five foot (175') tower or over two hundred foot (200') jib; Crane, tower Crane on rail system or 2nd tower or more in work radius

## Group 1B

Crane, three hundred (300) ton through three hundred ninety nine (399) ton, with over two hundred foot (200') boom (including jib, inserts and/or attachments); Floating crane, three hundred fifty (350) ton and over; Crane, four hundred (400) ton and over

## Group 2

Asphalt Plant (any type); Asphalt Roto-Mill, pavement profiler eight foot (8') lateral cut and over; Auto Grader or "Trimmer"; Blade, Robotic; Bulldozer, Robotic Equipment (any type); Bulldozer, over one hundred twenty thousand (120,000) lbs. and above; Concrete Batch Plant and/or Wet Mix one (1) and two (2) drum; Concrete Diamond Head Profiler; Canal Trimmer; Concrete, Automatic Slip Form Paver (Assistant to the Operator required); Crane, Boom Truck fifty (50) ton and with over one hundred fifty foot (150') boom and over; Crane, Floating (derrick barge) thirty (30) ton but less than one hundred fifty (150) ton; Crane, Cableway twenty-five (25) ton and over; Crane, Floating Clamshell three (3) cu. Yds. And over; Crane, ninety (90) ton through one hundred ninety nine (199) ton up to and including two hundred foot (200') of boom (including jib inserts and/or attachments); Crane, fifty (50) ton through eighty nine (89) ton with over one hundred fifty foot (150') boom (including jib inserts and/or attachments); Crane, Whirley under ninety (90) ton; Crusher Plant; Excavator over one hundred thirty thousand (130,000) lbs.; Loader one hundred twenty thousand (120,000) lbs. and above; Remote Controlled Earth Moving Equipment; Shovel, Dragline, Clamshell, five (5) cu. Yds. And over; Underwater Equipment remote or otherwise, when used in construction work; Wheel Excavator any size

## Group 3

Bulldozer, over seventy thousand (70,000) lbs. up to and including one hundred twenty thousand (120,000) lbs.; Crane, Boom Truck fifty (50) ton and over with less than one hundred fifty foot (150') boom; Crane, fifty (50) ton through eighty nine (89) ton with one hundred fifty foot (150') boom or less (including jib inserts and/or attachments); Crane, Shovel, Dragline or Clamshell three (3) cu. yds. but less than five (5) cu. Yds.; Excavator over eighty thousand (80,000) lbs. through one hundred thirty thousand (130,000) lbs.; Loader sixty thousand (60,000) lbs. and less than one hundred twenty thousand (120,000) lbs.

## Group 4

Asphalt, Screed; Asphalt Paver; Asphalt Roto-Mill, pavement profiler, under eight foot (8') lateral cut; Asphalt, Material Transfer Vehicle Operator; Back Filling Machine;

Backhoe, Robotic, track and wheel type up to and including twenty thousand (20,000) lbs. with any attachments; Blade (any type); Boatman; Boring Machine; Bulldozer over twenty thousand (20,000) lbs. and more than one hundred (100) horse up to seventy thousand (70,000) lbs.; Cable-Plow (any type); Cableway up to twenty five (25) ton; Cat Drill (John Henry); Chippers; Compactor, multi-engine; Compactor, Robotic; Compactor with blade self-propelled; Concrete, Breaker; Concrete, Grout Plant; Concrete, Mixer Mobile; Concrete, Paving Road Mixer; Concrete, Reinforced Tank Banding Machine; Crane, Boom Truck twenty (20) ton and under fifty (50) ton; Crane, Bridge Locomotive, Gantry and Overhead; Crane, Carry Deck; Crane, Chicago Boom and similar types; Crane, Derrick Operator, under one hundred (100) ton; Crane, Floating Clamshell, Dragline, etc. Operator, under three (3) cu. yds. Or less than thirty (30) ton; Crane, under fifty (50) ton; Crane, Quick Tower under one hundred foot (100') in height and less than one hundred fifty foot (150') jib (on rail included); Diesel-Electric Engineer (Plant or Floating); Directional Drill over twenty thousand (20,000) lbs. pullback; Drill Cat Operator; Drill Doctor and/or Bit Grinder; Driller, Percussion, Diamond, Core, Cable, Rotary and similar type; Excavator Operator over twenty thousand (20,000) lbs. through eighty thousand (80,000) lbs.; Generator Operator; Grade-all; Guardrail Machines, i.e. punch, auger, etc.; Hammer Operator (Piledriver); Hoist, stiff leg, guy derrick or similar type, fifty (50) ton and over; Hoist, two (2) drums or more; Hydro Axe (loader mounted or similar type); Jack Operator, Elevating Barges, Barge Operator, self-unloading; Loader Operator, front end and overhead, twenty five thousand (25,000) lbs. and less than sixty thousand (60,000) lbs.; Log Skidders; Piledriver Operator (not crane type); Pipe, Bending, Cleaning, Doping and Wrapping Machines; Rail, Ballast Tamper Multi-Purpose; Rubber-tired Dozers and Pushers; Scraper, all types; Side-Boom; Skip Loader, Drag Box; Strump Grinder (loader mounted or similar type); Surface Heater and Planer; Tractor, rubber-tired, over fifty (50) HP Flywheel; Trenching Machine three foot (3') depth and deeper; Tub Grinder (used for wood debris); Tunnel Boring Machine Mechanic; Tunnel, Mucking Machine; Ultra High Pressure Water Jet Cutting Tool System Operator; Vacuum Blasting Machine Operator; Water pulls, Water wagons

#### Group 5

Asphalt, Extrusion Machine; Asphalt, Roller (any asphalt mix); Asphalt, Roto-Mill pavement profiler ground man; Bulldozer, twenty thousand (20,000) lbs. or less, or one hundred (100) horse or less; Cement Pump; Chip Spreading Machine; Churn Drill and Earth Boring Machine; Compactor, self-propelled without blade; Compressor, (any power) one thousand two hundred fifty (1,250) cu. ft. and over, total capacity; Concrete, Batch Plant Quality control; Concrete, Combination Mixer and compressor operator, gunite work; Concrete, Curb Machine, Mechanical Berm, Curb and/or Curb and Gutter; Concrete, Finishing Machine; Concrete, Grouting Machine; Concrete, Internal Full Slab Vibrator Operator; Concrete, Joint Machine; Concrete, Mixer single drum, any capacity; Concrete, Paving Machine eight foot (8') or less; Concrete, Planer; Concrete, Pump; Concrete, Pump Truck; Concrete, Pumpcrete Operator (any type); Concrete, Slip Form Pumps, power driven hydraulic lifting device for concrete forms; Conveyored Material Hauler; Crane, Boom Truck under twenty (20) tons; Crane, Boom Type lifting

device, five (5) ton capacity or less; Drill, Directional type less than twenty thousand (20,000) lbs. pullback; Fork Lift, over ten (10) ton or Robotic; Helicopter Hoist; Hoist Operator, single drum; Hydraulic Backhoe track type up to and including twenty thousand (20,000) lbs.; Hydraulic Backhoe wheel type (any make); Laser Screed; Loaders, rubber-tired type, less than twenty five thousand (25,000) lbs.; Pavement Grinder and/or Grooving Machine (riding type); Pipe, cast in place Pipe Laying Machine; Pulva-Mixer or similar types; Pump Operator, more than five (5) pumps (any size); Rail, Ballast Compactor, Regulator, or Tamper machines; Service Oiler (Greaser); Sweeper Self-Propelled; Tractor, Rubber-Tired, fifty (50) HP flywheel and under; Trenching Machine Operator, maximum digging capacity three foot (3') depth; Tunnel, Locomotive, Dinkey; Tunnel, Power Jumbo setting slip forms, etc.

Group 6

Asphalt, Pugmill (any type); Asphalt, Raker; Asphalt, Truck Mounted Asphalt Spreader, with Screed; Auger Oiler; Boatman; Bobcat, skid steed (less than one (1) yard); Broom, self-propelled; Compressor Operator (any power) under 1,250 cu. ft. total capacity; Concrete Curing Machine (riding type); Concrete Saw; Conveyor Operator or Assistant; Crane, Tugger; Crusher Feederman; Crusher Oiler; Deckhand; Drill, Directional Locator; Fork Lift; Grade Checker; Guardrail Punch Oiler; Hydrographic Seeder Machine, straw, pulp or seed; Hydrostatic Pump Operator; Mixer Box (CTB, dry batch, etc.); Oiler; Plant Oiler; Pump (any power); Rail, Brakeman, Switchman, Motorman; Rail, Tamping Machine, mechanical, self-propelled; Rigger; Roller grading (not asphalt); Truck, Crane Oiler-Driver

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 IRON0029-004 07/01/2020

	Rates	Fringes
IRONWORKER.....	\$ 39.10	29.75

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 LAB00737-001 06/01/2019

	Rates	Fringes
Mason Tender/Hod Carrier Tenders to Bricklayers, Tile Setters, Marble Setters and Terrazzo Workers, Topping for Cement Finishers and Mortar Mixers.....	\$ 31.56	14.60

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 LAB00737-008 06/01/2018

ZONE 1:

LABORERS (SEE FOOTNOTE C)

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 29.70	13.82
GROUP 2.....	\$ 30.81	13.82
GROUP 3.....	\$ 25.77	13.82

## Zone Differential (Add to Zone 1 rates):

Zone 2 - \$0.85  
 Zone 3 - 2.00  
 Zone 4 - 3.00  
 Zone 5 - 5.00

ZONE 1 - All jobs or projects located within 30 miles of the respective City Hall

ZONE 2 - More than 30 miles and less than 40 miles from the respective City Hall

ZONE 3 - More than 40 miles and less than 50 miles from the respective City Hall

ZONE 4 - More than 50 miles and less than 80 miles from the respective City Hall

ZONE 5 - More than 80 miles from the respective City Hall.

## BASEPOINTS:

ALBANY	ASTORIA	BAKER CITY
BEND	BURNS	COOS BAY
EUGENE	GRANTS PASS	HERMISTON
KLAMATH FALLS	MEDFORD	PENDLETON
PORTLAND	ROSEBURG	SALEM
THE DALLES		

## LABORER CLASSIFICATIONS

GROUP 1: Applicator (including Pot Tender for same) applying protective material by hand or nozzle on utility lines or storage tanks on project, Asphalt Plant; Asphalt Spreader; Batch Weighman; Broomers; Brush Burners and Cutters; Choker Setter; Choker Splicer; Clary Power Spreader; Clean-up Laborer; Clean up Nozzleman (concrete, rock, etc); Concrete Laborer; Crusher Feeder; Curing, Concrete; Demolition, wrecking, and moving; Dopping and Wrapping Pipe; Dumpman (for Grading Crew); Erosion Control Specialist; Fine Graders; Fence Builders; Form Strippers; Guard Rail, Median Rail, Barriers, Reference Post, Guide Post, Right of Way Marker; Remote Control (Dry Pack Machine, Jackhammer, Chipping Guns, Compaction, Paving Breakers, Hand Held Concrete Saw, Demo Saw, Core Drill); Precast Concrete Setter; Pressure Washer; Railroad Track Laborer; Ribbon Setter; Rip Rap Map; Sand Blasting (Wet); Scaffold Tender; Self Propelled Concrete Buggy; Sewer Laborer; Sign Erector; Signalman; Scissor and Manlift; Skipman; Slopers; Sprayman; Stake Chaser; Stake Setter; Tamper; Timber Faller and Bucker; Tool Operators (Hand Held, Walk Behind)

GROUP 2: Asbestos Removal; Asphalt Rakers, Bit Grinder, Concrete Core Drill, Concrete Pump Nozzleman, Concrete Saw Operator (Walk Behind, Walk Saw, Rail Mounted, Wire); Drill Operator; Grade Checker; Guniting Nozzleman; Hazardous Waste Laborer; High Scalars; Laser Beam (Pipe Laying); Loop Installation; Manhole Builder; Mold Remediation Laborer; Nippers and Timberman; Pipelayer; Powderman; Power Saw Operators (Bucking and Falling); Pumpcrete Nozzleman; Sand Blasting (Dry); Sewer Timberman; Tugger Operator; Vibrators; Water Blaster

GROUP 3: Final Clean-up(detailed clean-up, limited to

cleaning up floors, ceilings, walls, windows-prior to acceptance by the owner); Fire Watch; Landscaper; Traffic Flagger

FOOTNOTE C:

HANDLING OF HAZARDOUS WAST MATERIALS - Personnel in all craft classifications subject to working inside a federally designated Hazardous Waste perimeter shall be eligible for compensation in accordance with the following group schedule relative to the level of Hazardous Waste as outline in the specific Hazardous Waste Project Site Safety Plan:

H-1 Base Wage Rate when on a hazardous waste site when not outfitted with protective clothing.

H-2 Class "C" Suit - Basic hourly wage rate plus \$1.00 per hour, fringes plus \$0.15.

H-3 Class "B" Suit - Basic hourly wage rate plus \$1.50 per hour, fringes plus \$0.15.

H-4 Class "A" Suit -Basic hourly wage rate plus \$2.00 per hour, fringes plus \$0.15.

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PAIN0055-002 07/01/2019

	Rates	Fringes
PAINTER		
HIGHWAY & PARKING LOT		
STRIPER.....	\$ 35.45	12.56

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PAIN0055-033 07/01/2020

	Rates	Fringes
PAINTER		
Area 1: CLACKAMAS,		
CLATSOP, COLUMBIA,		
GILLIAM, HOOD RIVER,		
MARION, MULTNOMAH, MORROW,		
POLK, SHERMAN, TILLAMOOK,		
UMATILLA, UNION, WALLOWA,		
WASCO, WASHINGTON, and		
YAMHILL Counties		
Painters.....	\$ 27.14	13.34
Area 2: BAKER, BENTON,		
CROOK, DESCHUTES, GRANT,		
HARNEY, JEFFERSON, LAKE,		
LANE, LINN, LINCOLN,		
MALHEUR, and WHEELER		
Counties		
Painters.....	\$ 24.14	13.34
Area 3: COOS, CURRY,		
DOUGLAS, JACKSON,		
JOSEPHINE, and KLAMATH		
Counties		
Painters.....	\$ 22.14	13.34

All high work over 60 ft. = base rate + \$0.75

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PLAS0555-001 07/01/2020

ZONE 1:

	Rates	Fringes
Cement Masons: (ZONE 1)		
CEMENT MASONS DOING BOTH COMPOSITION/POWER MACHINERY AND SUSPENDED/HANGING SCAFFOLD..	\$ 37.32	19.42
CEMENT MASONS ON SUSPENDED, SWINGING AND/OR HANGING SCAFFOLD.....	\$ 36.58	19.42
CEMENT MASONS.....	\$ 35.52	19.42
COMPOSITION WORKERS AND POWER MACHINERY OPERATORS...	\$ 36.58	19.42

Zone Differential (Add To Zone 1 Rates):

- Zone 2 - \$0.65
- Zone 3 - 1.15
- Zone 4 - 1.70
- Zone 5 - 3.00

BASE POINTS: BEND, CORVALLIS, EUGENE, MEDFORD, PORTLAND,  
SALEM, THE DALLES, VANCOUVER

ZONE 1: Projects within 30 miles of the respective city hall

ZONE 2: More than 30 miles but less than 40 miles from the  
respective city hall.

ZONE 3: More than 40 miles but less than 50 miles from the  
respective city hall.

ZONE 4: More than 50 miles but less than 80 miles from the  
respective city hall.

ZONE 5: More than 80 miles from the respective city hall

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TEAM0037-004 06/01/2020

ZONE 1:

TRUCK DRIVERS (See Footnote C):

	Rates	Fringes
Truck drivers:		
GROUP 1.....	\$ 29.08	16.40
GROUP 2.....	\$ 29.20	16.40
GROUP 3.....	\$ 29.34	16.40
GROUP 4.....	\$ 29.62	16.40
GROUP 5.....	\$ 29.85	16.40
GROUP 6.....	\$ 30.03	16.40
GROUP 7.....	\$ 30.24	16.40

Zone Differential (add to Zone 1 rates):

- Zone 2 - \$0.65
- Zone 3 - 1.15
- Zone 4 - 1.70
- Zone 5 - 2.75

Zone 1 - All jobs or projects located within 30 miles of the respective City Hall

Zone 2 - More than 30 miles and less than 40 miles from the respective City Hall

Zone 3 - More than 40 miles and less than 50 miles from the respective City Hall

Zone 4 - More than 50 miles and less than 80 miles from the respective City Hall

Zone 5 - More than 80 miles from the respective City Hall

BASEPOINTS:

ALBANY	ASTORIA	BAKER
BEND	BINGEN	BROOKINGS
BURNS	COOS BAY	CORVALLIS
EUGENE	GOLDENDALE	GRANTS PASS
HERMISTON	HOOD RIVER	KLAMATH FALLS
LAGRANDE	LAKEVIEW	LONGVIEW
MADRAS	MEDFORD	MCMINNVILLE
OREGON CITY	NEWPORT	ONTARIO
PENDLETON	PORTLAND	PORT ORFORD
REEDSPORT	ROSEBURG	SALEM
THE DALLES	TILLAMOOK	VANCOUVER

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: A-frame or hydra-lift truck w/load bearing surface; Articulated dump truck; Battery rebuilders; Bus or manhaul driver; Concrete buggies (power operated); Concrete pump truck; Dump trucks, side, end and bottom dumps, including semi-trucks and trains or combinations thereof: up to and including 10 cu. yds.; Lift jitneys, fork lifts (all sizes in loading, unloading and transporting material on job site); Loader and/or leverman on concrete dry batch plant (manually operated); Lubrication man, fuel truck driver, tireman, wash rack, steam cleaner or combination; Pilot car; Pickup truck; Slurry truck driver or leverman; Solo flat bed and misc. body truck, 0-10 tons; Team drivers; Tireman; Transit mix and wet or dry mix trucks: 5 cu yds. and under; Water wagons (rated capacity) up to 3,000 gallons

GROUP 2: Boom truck/hydra-lift or retracting crane; Challenger; Dumpsters or similar equipment-all sizes; Dump trucks/articulated dumps 6 cu to 10 cu.; Flaherty spreader driver or leverman; Low bed equipment, flat bed semi-truck and trailer or doubles transporting equipment or wet or dry materials; Lumber carrier, driver-straddle carrier (used in loading, unloading and transporting of materials on job site); Oil distributor driver or leverman; Transit mix and wet or dry mix trucks: over 5 cy yds and including 7 cu. yds; Vacuum trucks; Water Wagons (rated capacity) over 3,000 to 5,000 gallons

GROUP 3: Ammonia nitrate distributor driver; Dump trucks, side, end and bottom dumps, including semi-trucks and trains or combinations thereof: over 10 cu. yds. and including 30 cu. yds., includes articulated dump trucks; Self-Propelled street sweeper; Transit mix and wet or dry mix trucks, over 7 cu. yds. and including 11 cu. yds.; truck mechanic-Welder-Body repairman; Utility and clean-up truck; Water wagons (rated capacity) 5,000 to 10,000



gallons.

GROUP 4: Asphalt Bruner; Dump trucks, side, end and bottom dumps, including semi-trucks and trains or combinations thereof: over 30 cu. yds. and including 50 cu. yds. includes articulated dump trucks; Fire guard; Transit Mix and Wet or Dry Mix Trucks, over 11 cu. yds. and including 15 cu. yds.; Water Wagon (rated capacity) over 10,000 gallons to 15,000 gallons

GROUP 5: Composite Crewman; Dump trucks, side, end and bottom dumps, including semi-trucks and trains or combinations thereof: over 50 cu. yds. and including 60 cu. yds., includes articulated dump trucks

GROUP 6: Bulk cement spreader w/o auger; Dry Pre-Batch concrete mix trucks; Dump trucks, side, end and bottom dumps, including semi-trucks and trains of combinations thereof: over 60 cu. yds. and including 80 cu. yds. and includes articulated dump trucks; Skid truck

GROUP 7: Dump trucks, side, end and bottom dumps, including semi-trucks and trains or combinations thereof: over 80 cu. yds. and including 100 cu. yds. includes articulated dump trucks; Industrial lift truck (mechanical tailgate)

FOOTNOTE C:

HANDLING OF HAZARDOUS WAST MATERIALS -(LABORERS, POWER EQUIPMENT OPERATORS, AND TRUCK DRIVERS): Personnel in all craft classifications subject to working inside a federally designated Hazardous Waste perimeter shall be eligible for compensation in accordance with the following group schedule relative to the level of Hazardous Waste as outline in the specific Hazardous Waste Project Site Safety Plan:

H-1 Base Wage Rate when on a hazardous waste site when not outfitted with protective clothing.

H-2 Class "C" Suit - Basic hourly wage rate plus \$1.00 per hour, fringes plus \$0.15.

H-3 Class "B" Suit - Basic hourly wage rate plus \$1.50 per hour, fringes plus \$0.15.

H-4 Class "A" Suit -Basic hourly wage rate plus \$2.00 per hour, fringes plus \$0.15.

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SUOR1991-003 04/01/1991

	Rates	Fringes
Timber Sales Roads:		
LABORERS.....	\$ 8.35	4.30
OPERATING ENGINEERS.....	\$ 10.37	4.15
POWER SAW, DRILLER,		
POWDERMAN.....	\$ 9.12	4.30
TEAMSTERS.....	\$ 9.74	3.74

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all

rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request

review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"



# Oregon Bureau of Labor and Industries

## **Prevailing Wage Rates for Public Works Contracts**

Val Hoyle  
Labor Commissioner  
Rates Effective January 1, 2021







91/343

VAL HOYLE  
Labor Commissioner

In this rate book are the new prevailing wage rates for Oregon non-residential public works projects, effective January 1, 2021.

Prevailing wage rates are the minimum hourly wages that must be paid to all workers employed on all public works projects. These rates are determined using data collected from a statewide construction industry survey of occupations and crafts performing commercial building and heavy and highway construction in 14 geographic regions of the state.

Thank you for your engagement in the process and commitment to Oregon law.

Our team is ready to help support you with any questions you have. We also offer regular, FREE informational seminars and webinars for contractors and public agencies. Contact us at [pwremail@boli.state.or.us](mailto:pwremail@boli.state.or.us) or (971) 673-0838.

Val Hoyle  
Labor Commissioner

#### More information about prevailing wage rates:

The Oregon Bureau of Labor & Industries publishes the prevailing wage rates (PWR) that are required to be paid to workers on non-residential Oregon public works projects. Rates are published each year in January and July, with updates generally in April and October.

A separate document, [Definitions of Covered Occupations for Public Works Contracts in Oregon](#), provides occupational definitions used to classify the duties performed on public works projects. These definitions are used to find the correct prevailing wage rate.

The rate book and definition publications are available online at [www.oregon.gov/boli](http://www.oregon.gov/boli), as well as additional information and supporting documents and forms.

Please contact us at [pwremail@boli.state.or.us](mailto:pwremail@boli.state.or.us) or (971) 673-0839, for additional information such as:

- Applicable prevailing wage rates for projects (Generally, the rates in effect at the time the bid specifications are first advertised are those that apply for the duration of the project.)
- Federal Davis-Bacon rates (In cases where projects are subject to both state PWR and federal Davis-Bacon rates, the higher wage must be paid.)
- Required PWR provisions for specifications and contracts
- Apprenticeship rates

To receive email updates when rates are amended or to request copies of the PWR rate book, definitions book, or PWR law handbook, please email us at [pwremail@boli.state.or.us](mailto:pwremail@boli.state.or.us).







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Forms necessary to comply with ORS 279C.800 through ORS 279C.870 may be found in the back of this booklet. Contractors are encouraged to use and keep on file the forms provided as master copies for use on future prevailing wage rate projects.

**All of the information in this booklet can be accessed and printed from the Internet at: [www.oregon.gov/BOLI](http://www.oregon.gov/BOLI)**

Pursuant to ORS 279C.800 to ORS 279C.870, the prevailing wage rates contained in this booklet have been adopted for use on public works contracts in Oregon. Additional copies of this booklet are available at cost, plus postage.



## **Required Postings for Prevailing Wage Contractors and Subcontractors**

### **PREVAILING WAGE RATES**

Every contractor and subcontractor engaged in work on a public works must post the applicable prevailing wage rates for that project in an obvious place on the worksite so workers have ready access to the information.

### **DETAILS OF FRINGE BENEFIT PROGRAMS**

When a contractor or subcontractor provides or contributes to a health and welfare plan or a pension plan, or both, for employees who are working on a public works project, the details of all fringe benefit plans or programs must be posted on the worksite.

The posting must include a description of the plan or plans, information about how and where claims can be made and where to obtain more information. The notice must be posted in an obvious place on the work site in the same location as the prevailing wage rates.

### **WORK SCHEDULE**

Contractors and subcontractors must give workers the regular work schedule (days of the week and number of hours per day) in writing before beginning work on the project.

Contractors and subcontractors may provide the schedule at the time of hire, prior to starting work on the contract, or by posting the schedule in a location frequented by employees, along with the prevailing wage rate information and any fringe benefit information.

If an employer fails to give written notice of the worker's schedule, the work schedule will be presumed to be a five-day schedule. The schedule may only be changed if the change is intended to be permanent and is not designed to evade the PWR overtime requirements.

*ORS 279C.840(4); OAR 839-025-0033(1). ORS 279C.840(5); OAR 839-025-0033(2).  
ORS 279C.540(2); OAR 839-025-0034.*

## PUBLIC WORKS BONDS

**Every** contractor and subcontractor who works on public works projects subject to the prevailing wage rate (PWR) law is required to file a \$30,000 **"PUBLIC WORKS BOND"** with the Construction Contractors' Board (CCB). This includes flagging and landscaping companies, temporary employment agencies, and sometimes sole proprietors.

The key elements of ORS 279C.830(2) and ORS 279C.836 specify that:

- Specifications for every contract for public works must contain language stating that the contractor and every subcontractor must have a public works bond filed with the CCB before starting work on the project, unless otherwise exempt.
- Every contract awarded by a contracting agency must contain language requiring the contractor:
  - To have a public works bond filed with the CCB before starting work on the project, unless otherwise exempt; and
  - To include in every subcontract a provision requiring the subcontractor to have a public works bond filed with the CCB before starting work on the project unless otherwise exempt
- Every subcontract that a contractor or subcontractor awards in connection with a public works contract between a contractor and a public agency must require any subcontractor to have a public works bond filed with the CCB before starting work on the public works project, unless otherwise exempt.
- Before permitting a subcontractor to start work on a public works project, contractors must first verify their subcontractors either have filed the bond, or have elected not to file a public works bond due to a bona fide exemption.
- The PWR bond is to be used exclusively for unpaid wages determined to be due by the Bureau of Labor & Industries.
- The bond is in effect continuously (you do not have to have one per project).
- A public works bond is in addition to any other required bond the contractor or subcontractor is required to obtain.

### **Exemptions:**

- Allowed for a disadvantaged business enterprise, a minority-owned business, woman-owned business, a business that a service-disabled veteran owns or an emerging small business certified under ORS 200.055, for the first FOUR years of certification;
  - Exempt contractor must still file written verification of certification with the CCB, and give the CCB written notice that they elect not to file a bond.
  - The prime contractor must give written notice to the public agency that they elect not to file a public works bond.
  - Subcontractors must give written notice to the prime contractor that they elect not to file a public works bond.
- For projects with a total project cost of \$100,000 or less, a public works bond is not required. (Note this is the total project cost, not an individual contract amount.)
- Emergency projects, as defined in ORS 279A.010(f).

## **Prevailing Wage Survey Wage Rate Appeal Process**

1. To challenge or appeal a survey rate determination, you must submit a request in writing to the Labor Commissioner. You can send this to [pwremail@boli.state.or.us](mailto:pwremail@boli.state.or.us).
2. The appeal should include:
  - a complete description of the issue, including the affected trade(s), and documentation or evidence (if available) supporting why the rate determination is incorrect
  - recommendations for how the rate could be more accurately determined
3. The written appeal will be reviewed by the Wage and Hour Division, which will recommend to the Labor Commissioner a course of action and proposed time frame for addressing the issue (such as a recommendation that further information be obtained, an investigation or study of the matter be conducted, a rate amendment or correction be issued, the next survey be modified, etc.).
4. The Labor Commissioner will review the division's recommendation and either approve, disapprove or modify the recommendation. The Prevailing Wage Advisory Committee may be consulted in some matters as deemed appropriate.
5. The requesting party will be notified of the Labor Commissioner's decision.

## PREVAILING WAGE RATES

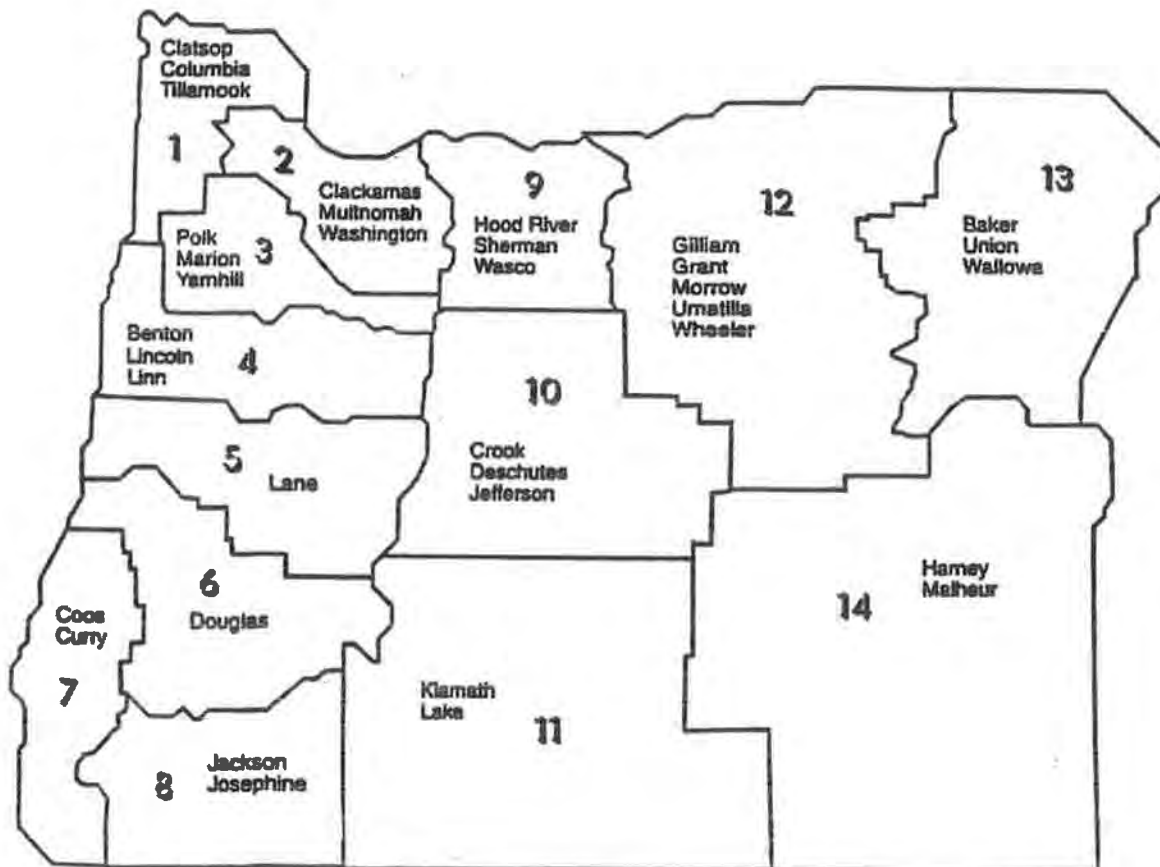
### FINDING THE CORRECT PREVAILING WAGE RATE

To find the correct rate(s) required on your project, you will need:

- the date the project was first advertised for bid
- the region your project is in
- the duties of workers on the job

Generally, the rate you should look for is based on the date the project was first advertised for bid. (See OAR 839-025-0020(8) for information about projects that contract through a CM/GC, or contract manager/general contractor.)

Use this map to determine the region for your project:



#### Determine the duties that are being performed by each worker

Use the booklet *Definitions of Covered Occupations* to find the definition that most closely matches the actual work performed by the worker. You can find this publication online at <https://www.oregon.gov/boli/employers/Pages/occupational-definitions.aspx>.

If you have any questions about work classifications, contact the Bureau of Labor & Industries at [pwremail@boli.state.or.us](mailto:pwremail@boli.state.or.us) or (971) 673-0839.

**Find the correct rate in this rate book**

1. Look up the region page
2. Find the correct occupation
3. Use the rate listed (see below for more information)

*Is there a rate listed next to the occupation?*

If so, that is the prevailing wage rate for this region and occupation. The prevailing wage rate is made up of an hourly base rate and an hourly fringe rate. The combination of these two amounts must be paid to each worker.

*If the book directs you to "See Appendix," go to the back of the book and use the rate listed in the Appendix pages. It may include a group number, shift differential, hazard pay and/or zone pay which are added to the hourly base rate.*

*Apprentices must be paid the full fringe rate in those regions where the appendix rate does not apply. However, if the book directs you to "See Appendix," and the worker is registered in a bona fide apprenticeship program, contact the Bureau of Labor & Industries at (971) 673-0839 or [pwremail@boli.state.or.us](mailto:pwremail@boli.state.or.us) for the applicable hourly fringe rate.*

*For specific information or questions regarding the prevailing wage law, you may obtain a "Prevailing Wage Rate Laws" handbook by contacting us. An order form is also available in the back of this booklet.*

We are happy to help you. More information is available on our website, <https://www.oregon.gov/boli/employers/pages/prevailing-wage.aspx>. You are welcome to contact us at [pwremail@boli.state.or.us](mailto:pwremail@boli.state.or.us) or (971) 673-0839.



Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	<u>See Appendix</u>	<u>See Appendix</u>
Bricklayer/Stonemason	<u>See Appendix</u>	<u>See Appendix</u>
Bridge and Highway Carpenter (See Carpenter Group 5)	<u>See Appendix</u>	<u>See Appendix</u>
Carpenter Group 1 & 2	<u>See Appendix</u>	<u>See Appendix</u>
Cement Mason	<u>See Appendix</u>	<u>See Appendix</u>
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	<u>See Appendix</u>	<u>See Appendix</u>
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	<u>See Appendix</u>	<u>See Appendix</u>
Drywall Taper (See Painter & Drywall Taper)	<u>See Appendix</u>	<u>See Appendix</u>
Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Elevator Constructor, Installer and Mechanic	<u>See Appendix</u>	<u>See Appendix</u>
Fence Constructor (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Laborer Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	<u>See Appendix</u>	<u>See Appendix</u>
Hazardous Materials Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	\$26.11	\$8.20
Ironworker	\$35.94	\$23.35
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Line Constructor	<u>See Appendix</u>	<u>See Appendix</u>
Marble Setter	<u>See Appendix</u>	<u>See Appendix</u>
Millwright (See Carpenter Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Painter	\$24.06	\$8.78
Piledriver (See Carpenter Group 6)	<u>See Appendix</u>	<u>See Appendix</u>
Plasterer and Stucco Mason	\$30.51	\$17.22
Plumber/Pipefitter/Steamfitter	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>

Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Rofer	\$29.11	\$11.91
Sheet Metal Worker	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Soft Floor Layer	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Sprinkler Fitter	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Tender to Plasterer and Stucco Mason	\$26.12	\$12.29
Testing, Adjusting, and Balancing (TAB) Technician	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Tilesetter/Terrazzo Worker: Hard Tilesetter	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Tile, Terrazzo, and Marble Finisher	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Truck Driver – All Groups	\$24.64	\$5.91

Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	\$38.43	\$23.09
Bricklayer/Stonemason	<u>See Appendix</u>	<u>See Appendix</u>
Bridge & Highway Carpenter (See Carpenter Group 5)	<u>See Appendix</u>	<u>See Appendix</u>
Carpenter Group 1 & 2	<u>See Appendix</u>	<u>See Appendix</u>
Cement Mason	<u>See Appendix</u>	<u>See Appendix</u>
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	<u>See Appendix</u>	<u>See Appendix</u>
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	<u>See Appendix</u>	<u>See Appendix</u>
Drywall Taper (See Painter & Drywall Taper)	<u>See Appendix</u>	<u>See Appendix</u>
Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Elevator Constructor, Installer and Mechanic	<u>See Appendix</u>	<u>See Appendix</u>
Fence Constructor (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Laborer Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	<u>See Appendix</u>	<u>See Appendix</u>
Hazardous Materials Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	\$26.11	\$8.20
Ironworker	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	\$31.64	\$10.26
Line Constructor	<u>See Appendix</u>	<u>See Appendix</u>
Marble Setter	<u>See Appendix</u>	<u>See Appendix</u>
Millwright (See Carpenter Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Painter	\$24.06	\$8.78
Piledriver (See Carpenter Group 6)	<u>See Appendix</u>	<u>See Appendix</u>
Plasterer and Stucco Mason	<u>See Appendix</u>	<u>See Appendix</u>
Plumber/Pipefitter/Steamfitter	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>

Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Sheet Metal Worker	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Soft Floor Layer	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Sprinkler Fitter	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Tender to Plasterer and Stucco Mason	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Testing, Adjusting, and Balancing (TAB) Technician	\$37.29	\$14.60
Tilesetter/Terrazzo Worker: Hard Tilesetter	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Tile, Terrazzo, and Marble Finisher	<a href="#">See Appendix</a>	<a href="#">See Appendix</a>
Truck Driver – All Groups	\$24.64	\$5.91

Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	\$38.43	\$23.09
Bricklayer/Stonemason	<u>See Appendix</u>	<u>See Appendix</u>
Bridge and Highway Carpenter (See Carpenter Group 5)	<u>See Appendix</u>	<u>See Appendix</u>
Carpenter Group 1 & 2	<u>See Appendix</u>	<u>See Appendix</u>
Cement Mason	<u>See Appendix</u>	<u>See Appendix</u>
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	<u>See Appendix</u>	<u>See Appendix</u>
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	<u>See Appendix</u>	<u>See Appendix</u>
Drywall Taper (See Painter & Drywall Taper)	<u>See Appendix</u>	<u>See Appendix</u>
Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Elevator Constructor, Installer and Mechanic	<u>See Appendix</u>	<u>See Appendix</u>
Fence Constructor (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Laborer Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	<u>See Appendix</u>	<u>See Appendix</u>
Hazardous Materials Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	\$26.11	\$8.20
Ironworker	\$35.94	\$23.35
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	\$31.64	\$10.26
Line Constructor	<u>See Appendix</u>	<u>See Appendix</u>
Marble Setter	<u>See Appendix</u>	<u>See Appendix</u>
Millwright (See Carpenter Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Painter	\$24.06	\$8.78
Piledriver (See Carpenter Group 6)	<u>See Appendix</u>	<u>See Appendix</u>
Plasterer and Stucco Mason	<u>See Appendix</u>	<u>See Appendix</u>
Plumber/Pipefitter/Steamfitter	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>

Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	<u>See Appendix</u>	<u>See Appendix</u>
Sheet Metal Worker	\$37.92	\$16.17
Soft Floor Layer	<u>See Appendix</u>	<u>See Appendix</u>
Sprinkler Fitter	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Plasterer and Stucco Mason	\$26.12	\$12.29
Testing, Adjusting, and Balancing (TAB) Technician	<u>See Appendix</u>	<u>See Appendix</u>
Tilesetter/Terrazzo Worker: Hard Tilesetter	<u>See Appendix</u>	<u>See Appendix</u>
Tile, Terrazzo, and Marble Finisher	<u>See Appendix</u>	<u>See Appendix</u>
Truck Driver – All Groups	\$24.64	\$5.91



Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	<u>See Appendix</u>	<u>See Appendix</u>
Bricklayer/Stonemason	<u>See Appendix</u>	<u>See Appendix</u>
Bridge and Highway Carpenter (See Carpenter Group 5)	<u>See Appendix</u>	<u>See Appendix</u>
Carpenter Group 1 & 2	<u>See Appendix</u>	<u>See Appendix</u>
Cement Mason	<u>See Appendix</u>	<u>See Appendix</u>
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	\$42.22	\$14.33
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	<u>See Appendix</u>	<u>See Appendix</u>
Drywall Taper (See Painter & Drywall Taper)	<u>See Appendix</u>	<u>See Appendix</u>
Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Elevator Constructor, Installer and Mechanic	\$50.16	\$38.26
Fence Constructor (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Labor Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	<u>See Appendix</u>	<u>See Appendix</u>
Hazardous Materials Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	\$26.11	\$8.20
Ironworker	\$35.94	\$23.35
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	\$31.64	\$10.26
Line Constructor	\$51.43	\$20.25
Marble Setter	<u>See Appendix</u>	<u>See Appendix</u>
Millwright (See Carpenter Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Painter	\$24.06	\$8.78
Piledriver (See Carpenter Group 6)	<u>See Appendix</u>	<u>See Appendix</u>
Plasterer and Stucco Mason	<u>See Appendix</u>	<u>See Appendix</u>
Plumber/Pipefitter/Steamfitter	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>

Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	<u>See Appendix</u>	<u>See Appendix</u>
Sheet Metal Worker	<u>See Appendix</u>	<u>See Appendix</u>
Soft Floor Layer	<u>See Appendix</u>	<u>See Appendix</u>
Sprinkler Fitter	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Plasterer and Stucco Mason	\$26.12	\$12.29
Testing, Adjusting, and Balancing (TAB) Technician	\$37.29	\$14.60
Tilesetter/Terrazzo Worker: Hard Tilesetter	<u>See Appendix</u>	<u>See Appendix</u>
Tile, Terrazzo, and Marble Finisher	<u>See Appendix</u>	<u>See Appendix</u>
Truck Driver – All Groups	\$24.64	\$5.91



Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	<u>See Appendix</u>	<u>See Appendix</u>
Bricklayer/Stonemason	<u>See Appendix</u>	<u>See Appendix</u>
Bridge and Highway Carpenter (See Carpenter Group 5)	<u>See Appendix</u>	<u>See Appendix</u>
Carpenter Group 1 & 2	<u>See Appendix</u>	<u>See Appendix</u>
Cement Mason	<u>See Appendix</u>	<u>See Appendix</u>
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	<u>See Appendix</u>	<u>See Appendix</u>
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	<u>See Appendix</u>	<u>See Appendix</u>
Drywall Taper (See Painter & Drywall Taper)	<u>See Appendix</u>	<u>See Appendix</u>
Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Elevator Constructor, Installer and Mechanic	<u>See Appendix</u>	<u>See Appendix</u>
Fence Constructor (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Laborer Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	<u>See Appendix</u>	<u>See Appendix</u>
Hazardous Materials Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	\$26.11	\$8.20
Ironworker	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	\$31.64	\$10.26
Line Constructor	<u>See Appendix</u>	<u>See Appendix</u>
Marble Setter	<u>See Appendix</u>	<u>See Appendix</u>
Millwright (See Carpenter Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Painter	\$24.06	\$8.78
Piledriver (See Carpenter Group 6)	<u>See Appendix</u>	<u>See Appendix</u>
Plasterer and Stucco Mason	<u>See Appendix</u>	<u>See Appendix</u>
Plumber/Pipefitter/Steamfitter	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>

Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	<u>See Appendix</u>	<u>See Appendix</u>
Sheet Metal Worker	<u>See Appendix</u>	<u>See Appendix</u>
Soft Floor Layer	<u>See Appendix</u>	<u>See Appendix</u>
Sprinkler Fitter	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Plasterer and Stucco Mason	\$26.12	\$12.29
Testing, Adjusting, and Balancing (TAB) Technician	\$37.29	\$14.60
Tilesetter/Terrazzo Worker: Hard Tilesetter	<u>See Appendix</u>	<u>See Appendix</u>
Tile, Terrazzo, and Marble Finisher	<u>See Appendix</u>	<u>See Appendix</u>
Truck Driver – All Groups	\$24.64	\$5.91

Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	<u>See Appendix</u>	<u>See Appendix</u>
Bricklayer/Stonemason	<u>See Appendix</u>	<u>See Appendix</u>
Bridge and Highway Carpenter (See Carpenter Group 5)	<u>See Appendix</u>	<u>See Appendix</u>
Carpenter Group 1 & 2	<u>See Appendix</u>	<u>See Appendix</u>
Cement Mason	\$30.21	\$13.18
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	\$42.22	\$14.33
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	\$37.41	\$16.91
Drywall Taper	\$34.13	\$14.58
Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Elevator Constructor, Installer and Mechanic	<u>See Appendix</u>	<u>See Appendix</u>
Fence Constructor (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Laborer Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	<u>See Appendix</u>	<u>See Appendix</u>
Hazardous Material Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	<u>See Appendix</u>	<u>See Appendix</u>
Ironworker	\$35.94	\$23.35
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	\$31.64	\$10.26
Line Constructor	\$51.43	\$20.25
Marble Setter	\$37.17	\$17.25
Millwright (See Carpenter Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Painter	<u>See Appendix</u>	<u>See Appendix</u>
Piledriver (See Carpenter Group 6)	<u>See Appendix</u>	<u>See Appendix</u>
Plasterer and Stucco Mason	\$30.51	\$17.22
Plumber/Pipefitter/Steamfitter	\$47.40	\$27.17
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>

Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	\$29.11	\$11.91
Sheet Metal Worker	<u>See Appendix</u>	<u>See Appendix</u>
Soft Floor Layer	\$27.28	\$11.29
Sprinkler Fitter	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	\$31.54	\$11.80
Tender to Plasterer and Stucco Mason	\$26.12	\$12.29
Testing, Adjusting, and Balancing (TAB) Technician	\$37.29	\$14.60
Tilesetter/Terrazzo Worker: Hard Tilesetter	\$31.85	\$19.33
Tile, Terrazzo, and Marble Finisher	<u>See Appendix</u>	<u>See Appendix</u>
Truck Driver – All Groups	\$24.64	\$5.91

Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	\$38.43	\$23.09
Bricklayer/Stonemason	<u>See Appendix</u>	<u>See Appendix</u>
Bridge and Highway Carpenter (See Carpenter Group 5)	<u>See Appendix</u>	<u>See Appendix</u>
Carpenter Group 1 & 2	<u>See Appendix</u>	<u>See Appendix</u>
Cement Mason	\$30.21	\$13.18
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	<u>See Appendix</u>	<u>See Appendix</u>
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	\$37.41	\$16.91
Drywall Taper	\$34.13	\$14.58
Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Elevator Constructor, Installer and Mechanic	<u>See Appendix</u>	<u>See Appendix</u>
Fence Constructor (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Laborer Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	<u>See Appendix</u>	<u>See Appendix</u>
Hazardous Materials Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	\$26.11	\$8.20
Ironworker	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Line Constructor	<u>See Appendix</u>	<u>See Appendix</u>
Marble Setter	\$37.17	\$17.25
Millwright	\$31.56	\$11.74
Painter	<u>See Appendix</u>	<u>See Appendix</u>
Piledriver (See Carpenter Group 6)	<u>See Appendix</u>	<u>See Appendix</u>
Plasterer and Stucco Mason	\$30.51	\$17.22
Plumber/Pipefitter/Steamfitter	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>

Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	\$29.11	\$11.91
Sheet Metal Worker	<u>See Appendix</u>	<u>See Appendix</u>
Soft Floor Layer	\$27.28	\$11.29
Sprinkler Fitter	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Plasterer and Stucco Mason	<u>See Appendix</u>	<u>See Appendix</u>
Testing, Adjusting, and Balancing (TAB) Technician	\$37.29	\$14.60
Tilesetter/Terrazzo Worker: Hard Tilesetter	<u>See Appendix</u>	<u>See Appendix</u>
Tile, Terrazzo, and Marble Finisher	<u>See Appendix</u>	<u>See Appendix</u>
Truck Driver – All Groups	\$24.64	\$5.91

Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	<u>See Appendix</u>	<u>See Appendix</u>
Bricklayer/Stonemason	\$37.63	\$18.43
Bridge and Highway Carpenter (See Carpenter Group 5)	<u>See Appendix</u>	<u>See Appendix</u>
Carpenter Group 1 & 2	\$32.88	\$13.06
Cement Mason	\$30.21	\$13.18
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	<u>See Appendix</u>	<u>See Appendix</u>
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	\$37.41	\$16.91
Drywall Taper	\$34.13	\$14.58
Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Elevator Constructor, Installer and Mechanic	<u>See Appendix</u>	<u>See Appendix</u>
Fence Constructor (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Laborer Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	<u>See Appendix</u>	<u>See Appendix</u>
Hazardous Materials Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	\$26.11	\$8.20
Ironworker	\$35.94	\$23.35
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	\$31.64	\$10.26
Line Constructor	<u>See Appendix</u>	<u>See Appendix</u>
Marble Setter	<u>See Appendix</u>	<u>See Appendix</u>
Millwright	\$31.56	\$11.74
Painter	\$24.06	\$8.78
Piledriver (See Carpenter Group 6)	<u>See Appendix</u>	<u>See Appendix</u>
Plasterer and Stucco Mason	\$30.51	\$17.22
Plumber/Pipefitter/Steamfitter	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>



Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	\$29.11	\$11.91
Sheet Metal Worker	\$37.92	\$16.17
Soft Floor Layer	\$27.28	\$11.29
Sprinkler Fitter	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	\$31.54	\$11.80
Tender to Plasterer and Stucco Mason	\$26.12	\$12.29
Testing, Adjusting, and Balancing (TAB) Technician	\$37.29	\$14.60
Tilesetter/Terrazzo Worker: Hard Tilesetter	\$31.85	\$19.33
Tile, Terrazzo, and Marble Finisher	\$25.65	\$14.40
Truck Driver – All Groups	\$24.64	\$5.91



Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	<u>See Appendix</u>	<u>See Appendix</u>
Bricklayer/Stonemason	<u>See Appendix</u>	<u>See Appendix</u>
Bridge and Highway Carpenter (See Carpenter Group 5)	<u>See Appendix</u>	<u>See Appendix</u>
Carpenter Group 1 & 2	<u>See Appendix</u>	<u>See Appendix</u>
Cement Mason	\$30.21	\$13.18
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	<u>See Appendix</u>	<u>See Appendix</u>
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	<u>See Appendix</u>	<u>See Appendix</u>
Drywall Taper (See Painter & Drywall Taper)	<u>See Appendix</u>	<u>See Appendix</u>
Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Elevator Constructor, Installer and Mechanic	<u>See Appendix</u>	<u>See Appendix</u>
Fence Constructor (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Laborer Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	<u>See Appendix</u>	<u>See Appendix</u>
Hazardous Materials Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	\$26.11	\$8.20
Ironworker	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Line Constructor	<u>See Appendix</u>	<u>See Appendix</u>
Marble Setter	<u>See Appendix</u>	<u>See Appendix</u>
Millwright (See Carpenter Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Painter	\$24.06	\$8.78
Piledriver (See Carpenter Group 6)	<u>See Appendix</u>	<u>See Appendix</u>
Plasterer and Stucco Mason	\$30.51	\$17.22
Plumber/Pipefitter/Steamfitter	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>

Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	\$29.11	\$11.91
Sheet Metal Worker	<u>See Appendix</u>	<u>See Appendix</u>
Soft Floor Layer	\$27.28	\$11.29
Sprinkler Fitter	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Plasterer and Stucco Mason	\$26.12	\$12.29
Testing, Adjusting, and Balancing (TAB) Technician	<u>See Appendix</u>	<u>See Appendix</u>
Tilesetter/Terrazzo Worker: Hard Tilesetter	<u>See Appendix</u>	<u>See Appendix</u>
Tile, Terrazzo, and Marble Finisher	<u>See Appendix</u>	<u>See Appendix</u>
Truck Driver – All Groups	\$24.64	\$5.91

Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	\$38.43	\$23.09
Bricklayer/Stonemason	<u>See Appendix</u>	<u>See Appendix</u>
Bridge and Highway Carpenter (See Carpenter Group 5)	<u>See Appendix</u>	<u>See Appendix</u>
Carpenter Group 1 & 2	<u>See Appendix</u>	<u>See Appendix</u>
Cement Mason	<u>See Appendix</u>	<u>See Appendix</u>
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	<u>See Appendix</u>	<u>See Appendix</u>
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	<u>See Appendix</u>	<u>See Appendix</u>
Drywall Taper (See Painter & Drywall Taper)	<u>See Appendix</u>	<u>See Appendix</u>
Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Elevator Constructor, Installer and Mechanic	\$50.16	\$38.26
Fence Constructor (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Laborer Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	\$38.53	\$20.11
Hazardous Materials Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	<u>See Appendix</u>	<u>See Appendix</u>
Ironworker	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	\$31.64	\$10.26
Line Constructor	<u>See Appendix</u>	<u>See Appendix</u>
Marble Setter	<u>See Appendix</u>	<u>See Appendix</u>
Millwright	\$31.56	\$11.74
Painter	\$24.06	\$8.78
Piledriver (See Carpenter Group 6)	<u>See Appendix</u>	<u>See Appendix</u>
Plasterer and Stucco Mason	\$30.51	\$17.22
Plumber/Pipefitter/Steamfitter	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>

Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	\$29.11	\$11.91
Sheet Metal Worker	<u>See Appendix</u>	<u>See Appendix</u>
Soft Floor Layer	<u>See Appendix</u>	<u>See Appendix</u>
Sprinkler Fitter	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	\$31.54	\$11.80
Tender to Plasterer and Stucco Mason	<u>See Appendix</u>	<u>See Appendix</u>
Testing, Adjusting, and Balancing (TAB) Technician	\$37.29	\$14.60
Tilesetter/Terrazzo Worker: Hard Tilesetter	\$31.85	\$19.33
Tile, Terrazzo, and Marble Finisher	\$25.65	\$14.40
Truck Driver – All Groups	\$24.64	\$5.91

Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	<u>See Appendix</u>	<u>See Appendix</u>
Bricklayer/Stonemason	<u>See Appendix</u>	<u>See Appendix</u>
Bridge and Highway Carpenter	\$38.22	\$15.60
Carpenter Group 1 & 2	\$32.88	\$13.06
Cement Mason	\$30.21	\$13.18
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	<u>See Appendix</u>	<u>See Appendix</u>
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	\$37.41	\$16.91
Drywall Taper	\$34.13	\$14.58
Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Elevator Constructor, Installer and Mechanic	<u>See Appendix</u>	<u>See Appendix</u>
Fence Constructors (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Laborer Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	<u>See Appendix</u>	<u>See Appendix</u>
Hazardous Materials Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	\$26.11	\$8.20
Ironworker	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	\$31.64	\$10.26
Line Constructor	<u>See Appendix</u>	<u>See Appendix</u>
Marble Setter	<u>See Appendix</u>	<u>See Appendix</u>
Millwright (See Carpenter Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Painter	\$24.06	\$8.78
Piledriver (See Carpenter Group 6)	<u>See Appendix</u>	<u>See Appendix</u>
Plasterer and Stucco Mason	\$30.51	\$17.22
Plumber/Pipefitter/Steamfitter	\$47.40	\$27.17
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>

Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	\$29.11	\$11.91
Sheet Metal Worker	\$37.92	\$16.17
Soft Floor Layer	<u>See Appendix</u>	<u>See Appendix</u>
Sprinkler Fitter	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	\$31.54	\$11.80
Tender to Plasterer and Stucco Mason	\$26.12	\$12.29
Testing, Adjusting, and Balancing (TAB) Technician	\$37.29	\$14.60
Tilesetter/Terrazzo Worker: Hard Tilesetter	<u>See Appendix</u>	<u>See Appendix</u>
Tile, Terrazzo, and Marble Finisher	<u>See Appendix</u>	<u>See Appendix</u>
Truck Driver – All Groups	\$24.64	\$5.91

Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	<u>See Appendix</u>	<u>See Appendix</u>
Bricklayer/Stonemason	<u>See Appendix</u>	<u>See Appendix</u>
Bridge and Highway Carpenter (See Carpenter Group 5)	<u>See Appendix</u>	<u>See Appendix</u>
Carpenter Group 1 & 2	<u>See Appendix</u>	<u>See Appendix</u>
Cement Mason	<u>See Appendix</u>	<u>See Appendix</u>
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	<u>See Appendix</u>	<u>See Appendix</u>
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	<u>See Appendix</u>	<u>See Appendix</u>
Drywall Taper (See Painter & Drywall Taper)	<u>See Appendix</u>	<u>See Appendix</u>
Electrician	<u>See Appendix</u>	<u>See Appendix</u>
Elevator Constructor, Installer and Mechanic	\$50.16	\$38.26
Fence Constructor (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Laborer Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	\$38.53	\$20.11
Hazardous Materials Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	<u>See Appendix</u>	<u>See Appendix</u>
Ironworker	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	\$31.64	\$10.26
Line Constructor	<u>See Appendix</u>	<u>See Appendix</u>
Marble Setter	<u>See Appendix</u>	<u>See Appendix</u>
Millwright (See Carpenter Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Painter	<u>See Appendix</u>	<u>See Appendix</u>
Piledriver (See Carpenter Group 6)	<u>See Appendix</u>	<u>See Appendix</u>
Plasterer and Stucco Mason	\$30.51	\$17.22
Plumber/Pipefitter/Steamfitter	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>



Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	\$29.11	\$11.91
Sheet Metal Worker	<u>See Appendix</u>	<u>See Appendix</u>
Soft Floor Layer	\$27.28	\$11.29
Sprinkler Fitter	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Plasterer and Stucco Mason	\$26.12	\$12.29
Testing, Adjusting, and Balancing (TAB) Technician	<u>See Appendix</u>	<u>See Appendix</u>
Tilesetter/Terrazzo Worker: Hard Tilesetter	\$31.85	\$19.33
Tile, Terrazzo, and Marble Finisher	<u>See Appendix</u>	<u>See Appendix</u>
Truck Driver – All Groups	\$24.64	\$5.91



Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	\$38.43	\$23.09
Bricklayer/Stonemason	<u>See Appendix</u>	<u>See Appendix</u>
Bridge and Highway Carpenter	\$38.22	\$15.60
Carpenter Group 1 & 2	\$32.88	\$13.06
Cement Mason	\$30.21	\$13.18
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	<u>See Appendix</u>	<u>See Appendix</u>
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	\$37.41	\$16.91
Drywall Taper (See Painter & Drywall Taper)	<u>See Appendix</u>	<u>See Appendix</u>
Electrician	\$45.69	\$18.34
Elevator Constructor, Installer and Mechanic	<u>See Appendix</u>	<u>See Appendix</u>
Fence Constructor (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Laborer Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	<u>See Appendix</u>	<u>See Appendix</u>
Hazardous Materials Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	\$26.11	\$8.20
Ironworker	\$35.94	\$23.35
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	\$31.64	\$10.26
Line Constructor	\$51.43	\$20.25
Marble Setter	<u>See Appendix</u>	<u>See Appendix</u>
Millwright (See Carpenter Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Painter	\$24.06	\$8.78
Piledriver (See Carpenter Group 6)	<u>See Appendix</u>	<u>See Appendix</u>
Plasterer and Stucco Mason	\$30.51	\$17.22
Plumber/Pipefitter/Steamfitter	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>

*Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.*

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	\$29.11	\$11.91
Sheet Metal Worker	<u>See Appendix</u>	<u>See Appendix</u>
Soft Floor Layer	\$27.28	\$11.29
Sprinkler Fitter	\$39.57	\$20.00
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	\$31.54	\$11.80
Tender to Plasterer and Stucco Mason	\$26.12	\$12.29
Testing, Adjusting, and Balancing (TAB) Technician	\$37.29	\$14.60
Tilesetter/Terrazzo Worker: Hard Tilesetter	\$31.85	\$19.33
Tile, Terrazzo, and Marble Finisher	<u>See Appendix</u>	<u>See Appendix</u>
Truck Driver – All Groups	\$24.64	\$5.91

Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	<u>See Appendix</u>	<u>See Appendix</u>
Boilermaker	<u>See Appendix</u>	<u>See Appendix</u>
Bricklayer/Stonemason	\$37.63	\$18.43
Bridge and Highway Carpenter	\$38.22	\$15.60
Carpenter Group 1 & 2	\$32.88	\$13.06
Cement Mason	\$30.21	\$13.18
Diver	<u>See Appendix</u>	<u>See Appendix</u>
Diver Tender	<u>See Appendix</u>	<u>See Appendix</u>
Dredger	<u>See Appendix</u>	<u>See Appendix</u>
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	\$37.41	\$16.91
Drywall Taper	\$34.13	\$14.58
Electrician	\$45.69	\$18.34
Elevator Constructor, Installer and Mechanic	<u>See Appendix</u>	<u>See Appendix</u>
Fence Constructor (Non-metal)	\$28.24	\$11.01
Fence Erector (Metal)	\$22.10	\$4.13
Flagger (See Laborer Group 3)	<u>See Appendix</u>	<u>See Appendix</u>
Glazier	\$38.53	\$20.11
Hazardous Materials Handler/Mechanic	\$21.83	\$9.48
Highway and Parking Striper	<u>See Appendix</u>	<u>See Appendix</u>
Ironworker	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Laborer Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Landscape Laborer/Technician	\$19.92	\$4.96
Limited Energy Electrician	\$31.64	\$10.26
Line Constructor	<u>See Appendix</u>	<u>See Appendix</u>
Marble Setter	<u>See Appendix</u>	<u>See Appendix</u>
Millwright	\$31.56	\$11.74
Painter	\$24.06	\$8.78
Piledriver	\$41.20	\$16.90
Plasterer and Stucco Mason	\$30.51	\$17.22
Plumber/Pipefitter/Steamfitter	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1A	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 1B	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 2	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 3	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 4	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 5	<u>See Appendix</u>	<u>See Appendix</u>
Power Equipment Operator Group 6	<u>See Appendix</u>	<u>See Appendix</u>

Using the booklet, *Definitions of Covered Occupations*, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	\$29.11	\$11.91
Sheet Metal Worker	<u>See Appendix</u>	<u>See Appendix</u>
Soft Floor Layer	\$27.28	\$11.29
Sprinkler Fitter	<u>See Appendix</u>	<u>See Appendix</u>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	\$31.54	\$11.80
Tender to Plasterer and Stucco Mason	\$26.12	\$12.29
Testing, Adjusting, and Balancing (TAB) Technician	\$37.29	\$14.60
Tilesetter/Terrazzo Worker: Hard Tilesetter	\$31.85	\$19.33
Tile, Terrazzo, and Marble Finisher	<u>See Appendix</u>	<u>See Appendix</u>
Truck Driver – All Groups	\$24.64	\$5.91



# APPENDIX

JANUARY 1, 2021

## Collectively Bargained Rates

(To be used only when referred to in the Regions pages 6-33)



**JANUARY 1, 2021 APPENDIX**

*The Appendix rates are Collectively Bargained Rates to be used **ONLY** for Regions/Trades specified in pages 6 through 33. Refer to pages 6 through 33 **BEFORE** using rates in this section. Rates in this section may include premium pay such as shift differential, hazard pay and/or a zone pay differential, which is added to the hourly base rate.*

*Using the booklet, Definitions of Covered Occupations, find the definition and group number, if applicable, that most closely matches the actual work being performed by the worker.*

Asbestos Worker/Insulator .....	38
Boilermaker .....	38
Bricklayer/Stonemason .....	38
Bridge and Highway Carpenter (See Carpenter Group 5) .....	38
Carpenter .....	38
Cement Mason .....	39
Diver .....	39
Diver Tender .....	39
Dredger .....	40
Drywall, Lather, Acoustical Carpenter & Ceiling Installer .....	40
Drywall Taper (See Painter & Drywall Taper) .....	45
Electrician .....	41
Elevator Constructor, Installer and Mechanic .....	43
Glazier .....	43
Hazardous Materials Handler .....	43
Highway/Parking Striper .....	43
Ironworker .....	43
Laborer .....	43
Limited Energy Electrician .....	44
Line Constructor .....	45
Marble Setter .....	45
Millwright Group 1 (See Carpenter Group 3) .....	38
Painter & Drywall Taper .....	45
Piledriver (See Carpenter Group 6) .....	38
Plasterer and Stucco Mason .....	45
Plumber/Pipefitter/Steamfitter .....	46
Power Equipment Operator .....	46
Roofer .....	48
Sheet Metal Worker .....	48
Soft Floor Layer .....	49
Sprinkler Fitter .....	49
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier) .....	49
Tender to Plasterer and Stucco Mason .....	49
Testing and Balancing (TAB) Technician .....	50
Tilesetter/Terrazzo Worker: Hard Tilesetter .....	50
Tile, Terrazzo, and Marble Finisher .....	50
Truck Driver .....	50
MAP: Power Equipment Operator, Zone 1 .....	51



TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE	TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE
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**ASBESTOS WORKER/INSULATOR**

**52.77 22.67**

Firestop Containment **37.73 15.84**

**BOILERMAKER** **38.51 30.29**

**BRICKLAYER/STONEMASON**

**41.20 21.12**

(This trade is tended by "Tenders to Mason Trades")

(Add \$1.00 per hour to Fringe for Refractory repair work)

**CARPENTER**

Zone A (Base Rate)

Group 1	<b>41.75</b>	<b>18.30</b>
Group 2	<b>41.91</b>	<b>18.30</b>
Group 3	<b>43.26</b>	<b>18.30</b>
Group 4	<b>Eliminated</b>	
Group 5	<b>42.31</b>	<b>18.30</b>
Group 6	<b>42.87</b>	<b>18.30</b>

Zone Differential for Carpenters  
(Add to Zone A Base Rate)

Zone B	<b>1.25</b> per hour
Zone C	<b>1.70</b> per hour
Zone D	<b>2.00</b> per hour
Zone E	<b>3.00</b> per hour
Zone F	<b>5.00</b> per hour
Zone G	<b>10.00</b> per hour

Zone A: Projects located within 30 miles of the respective city hall of the cities listed.

Zone B: More than 30 miles but less than 40 miles.

Zone C: More than 40 miles but less than 50 miles.

Zone D: More than 50 miles but less than 60 miles.

Zone E: More than 60 miles but less than 70 miles.

Zone F: More than 70 miles but less than 100 miles.

Zone G: More than 100 miles.

**CARPENTER** (continued)

Reference Cities for Group 1 and 2 Carpenters

Albany	Goldendale	Madras	Roseburg
Astoria	Grants Pass	Medford	Salem
Baker City	Hermiston	Newport	The Dalles
Bend	Hood River	Ontario	Tillamook
Brookings	Klamath Falls	Pendleton	Vancouver
Burns	La Grande	Portland	
Coos Bay	Lakeview	Port Orford	
Eugene	Longview	Reedsport	

Group 3  
(Millwright)

Zones for Group 3 Carpenter are determined by the distance between the project site and **either**

- 1) The worker's residence; **or**
- 2) City Hall of a reference city listed for the appropriate group shown, whichever is closer

Reference Cities for Group 3 Carpenters

Eugene	Medford	Portland	Vancouver
Longview	North Bend	The Dalles	

Group 5  
(Bridge & Highway Carpenter)

Group 6  
(Piledriver)

Zones for Groups 5 and 6 Carpenter are determined by the distance between the project site and **either**

- 1) The worker's residence; **or**
- 2) City Hall of a reference city listed for the appropriate group shown, whichever is closer

Reference Cities for Group 5 and 6 Carpenters

Bend	Longview	North Bend
Eugene	Medford	Portland

**Note:** All job or project locations shall be computed (determined) on the basis of road miles and in the following manner. A mileage measurement will start at the entrance to the respective city hall, facing the project (if possible), and shall proceed by the normal route (shortest time, best road) to the geographical center on the highway, railroad, and street construction projects (end of measurement). On all project contracts, the geographical center where the major portion of the construction is located, shall be considered the center of the project (end measurement).

TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE	TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE
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**CARPENTER** (continued)

Welders shall receive a 5% premium per hour over their group's journeyman wage rate, with an eight (8) hour minimum.

When working with creosote and other toxic, treated wood and steel material, workers shall receive \$.25/hour premium pay for minimum of eight (8) hours.

When working in sheet pile coffer dams or cells up to the external water level, Group 6 workers shall receive \$.15/hour premium pay for minimum of eight (8) hours.

**CEMENT MASON**

(This trade is tended by "Concrete Laborer")

Base Rate

Group 1	<b>35.52</b>	<b>21.42</b>
Group 2	<b>36.29</b>	<b>21.42</b>
Group 3	<b>36.29</b>	<b>21.42</b>
Group 4	<b>37.05</b>	<b>21.42</b>

Zone Differential for Cement Mason  
(Add to Basic Hourly Rate)

Zone A	<b>3.00</b> per hour
Zone B	<b>5.00</b> per hour
Zone C	<b>10.00</b> per hour

Zone A: Projects located 60-79 miles of the respective city hall of the Reference Cities listed below.

Zone B: Projects located 80-99 miles of the respective city hall of the Reference Cities listed below.

Zone C: Projects located 100 or more miles of the respective city hall of the Reference Cities listed below.

Reference Cities for Zones A-C (Cement Mason)

Bend	Medford	Salem
Corvallis	Pendleton	The Dalles
Eugene	Portland	Vancouver

When a contractor takes current employees to a project that is located more than 59 miles from the city hall of the Reference City that is closest to the contractor's place of business, Zone Pay is to be paid for the distance between the city hall of the identified Reference City and the project site.

**CEMENT MASON** (continued)

"Contractor's place of business" shall include not only contractor's principal place of business but also contractor's area office(s) that support contractor's operations in a geographical region. Such area office(s) shall not include project offices(s) established for the duration of a particular project.

**Note:** All miles are to be determined on the basis of road miles using the normal route (shortest time – best road), from the city hall of the Reference City closest to the contractor's place of business and the project.

**DIVER & DIVER TENDER**

Zone 1 (Base Rate)

<b>DIVER</b>	<b>91.14</b>	<b>18.30</b>
<b>DIVER TENDER</b>	<b>47.14</b>	<b>18.30</b>

- 1) For those workers who reside within a reference city below, their zone pay shall be computed from the city hall of the city wherein they reside.
- 2) For those workers who reside nearer to a project than is the city hall of any reference city below, the mileage from their residence may be used in computing their zone pay differential.
- 3) The zone pay for all other projects shall be computed from the city hall of the nearest reference city listed below.

Zone Differential for Diver/Diver Tender  
(Add to Zone 1 Base Rate)

Zone 2	<b>1.25</b> per hour
Zone 3	<b>1.70</b> per hour
Zone 4	<b>2.00</b> per hour
Zone 5	<b>3.00</b> per hour
Zone 6	<b>5.00</b> per hour
Zone 7	<b>10.00</b> per hour

- Zone 1: Projects located within 30 miles of city hall of the reference cities listed.
- Zone 2: More than 30 miles, but less than 40 miles.
- Zone 3: More than 40 miles, but less than 50 miles.
- Zone 4: More than 50 miles, but less than 60 miles.
- Zone 5: More than 60 miles, but less than 70 miles.
- Zone 6: More than 70 miles, but less than 100 miles.
- Zone 7: More than 100 miles from the city hall of employee's home local.

See References Cities on Page 40

TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE	TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE
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**DIVER & DIVER TENDER** (continued)

Reference Cities for Diver/Diver Tender

Bend	Medford
Eugene	North Bend
Longview	Portland

**Note:** All job or project locations shall be computed (determined) on the basis of road miles and in the following manner. A mileage measurement will start at the entrance to the respective city hall, facing the project (if possible), and shall proceed by the normal route (shortest time, best road) to the geographical center on the highway, railroad, and street construction projects (end of measurement). On all project contracts, the geographical center where the major portion of the construction is located, shall be considered the center of the project (end measurement).

Diver Depth Pay:

<u>Depth of Dive</u>	<u>Daily Depth Pay</u>
50-100 ft.	\$2.00 per foot over 50 feet
101-150 ft.	\$3.00 per foot over 100 feet
151-220 ft.	\$4.00 per foot over 150 feet
Over 220 ft.	\$5.00 per foot over 220 ft.

Depth shall be figured from the surface to the actual depth where the diving work is being performed.

Diver Enclosure Pay (working without vertical escape):

Distance Traveled

<u>In the Enclosure</u>	<u>Daily Enclosure Pay</u>
0 - 25ft.	N/C
25 - 300 ft.	\$1.00 per foot from the entrance
300 - 600 ft.	\$1.50 per foot beginning at 300 ft.
Over 600 ft.	\$2.00 per foot beginning at 600 ft.

**DREDGER**

Zone A (Base Rate)

Leverman (Hydraulic & Clamshell)	<b>50.96</b>	<b>15.65</b>
Assistant Engineer (Watch Engineer, Mechanic Machinist)	<b>47.80</b>	<b>15.65</b>
Tenderman (Boatman Attending Dredge Plant) Fireman	<b>46.31</b>	<b>15.65</b>
Fill Equipment Operator	<b>45.14</b>	<b>15.65</b>
Assistant Mate	<b>42.44</b>	<b>15.65</b>

Zone Differential for Dredgers  
(Add to Zone A Base Rate)

Zone B	<b>3.00</b> per hour
Zone C	<b>6.00</b> per hour

Zone mileage based on road miles:

- Zone A: Center of jobsite to no more than 30 miles from the city hall of Portland.
- Zone B: More than 30 miles but not more than 60 miles.
- Zone C: Over 60 miles.

**DRYWALL, LATHER, ACOUSTICAL CARPENTER & CEILING INSTALLER**

Zone 1 (Base Rate)

1. DRYWALL INSTALLER	<b>42.04</b>	<b>18.01</b>
2. LATHER, ACOUSTICAL CARPENTER & CEILING INSTALLER	<b>42.04</b>	<b>18.01</b>

See Zone Differential on page 41

TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE	TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE
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**DRYWALL, LATHER, ACOUSTICAL CARPENTER & CEILING INSTALLER** (continued)

Zone Differential for Drywall, Lather, Acoustical Carpenter & Ceiling Installer

(Add to Zone 1 Base Rate)

Zone mileage based on road miles:

Zone B	61-80 miles	6.00 per hour
Zone C	81-100 miles	9.00 per hour
Zone D	101 or more	12.00 per hour

The correct transportation allowance shall be based on AAA road mileage from the City Hall of the transportation reference cities herein listed.

Reference Cities for Drywall, Lather, Acoustical Carpenter & Ceiling Installer

Albany	Coquille	Medford	Roseburg
Astoria	Eugene	Newport	Salem
Baker	Grants Pass	North Bend	Seaside
Bandon	Hermiston	Pendleton	The Dalles
Bend	Klamath Falls	Portland	Tillamook
Brookings	Kelso-Longview	Reedsport	Vancouver

**ELECTRICIAN**

**Area 1**

Electrician	32.71	15.92
Cable Splicer	35.98	16.12

Reference Counties Area 1

Malheur

**Area 2**

Electrician	48.05	22.12
Cable Splicer	50.45	22.19

Reference Counties Area 2

Baker	Grant	Umatilla	Wallowa
Gilliam	Morrow	Union	Wheeler

Add 50% of the base rate when workers are required to work under the following conditions:

**ELECTRICIAN** (continued)

- 1) Under compressed air with atmospheric pressure exceeding normal pressure by at least 10%.
- 2) From trusses, swing scaffolds, bosun's chairs, open platforms, unguarded scaffolds, open ladders, frames, tanks, stacks, silos and towers where the workman is subject to a direct fall of (a) more than 60 feet or (b) into turbulent water under bridges, powerhouses or spillway faces of dams.

**Area 3**

Electrician	41.63	21.20
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Reference Counties Area 3

Coos Curry	Douglas (a) Lane (a)	Lincoln
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(a) Those portions of Lane and Douglas lying west of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County.

Shift Differential

1 <sup>st</sup> Shift "day"	Between the hours of 8:00am and 4:30pm	8 hours pay for 8 hours work
2 <sup>nd</sup> Shift "swing"	Between the hours of 4:30pm and 1:00am	8 hours pay for 8 hours work plus 17% for all hours worked
3 <sup>rd</sup> Shift "graveyard"	Between the hours of 12:30am and 9:00am	8 hours pay for 8 hours work plus 31% for all hours worked.

When workers are required to work under compressed air or where gas masks are required, or to work from trusses, all scaffolds including mobile elevated platforms, any temporary structure, bosun's chair or on frames, stacks, towers, tanks, within 15' of the leading edges of any building at a distance of:

50 – 75 feet to the ground	Add 1 ½ x the base rate
75+ feet to the ground	Add 2 x the base rate

**OREGON DETERMINATION 2021-01**

TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE	TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE
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**ELECTRICIAN** (continued)

High Time is not required to be paid on any permanent structure with permanent adequate safeguards (handrails, mid-rails, and toe guards). Any vehicle equipped with outriggers are exempted from this section.

**Area 4**

Electrician	<b>46.19</b>	<b>20.11</b>
Cable Splicer	<b>50.81</b>	<b>20.24</b>
Lighting Maintenance/ Material Handlers	<b>21.53</b>	<b>10.10</b>

Reference Counties Area 4

Benton	Jefferson	Marion
Crook	Lane (b)	Polk
Deschutes	Linn	Yamhill (c)

(b) That portion of Lane County lying **east** of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County.

(c) South half

Shift Differential

1 <sup>st</sup> Shift "day"	Between the hours of 8:00am and 4:30pm	8 hours pay for 8 hours work
2 <sup>nd</sup> Shift "swing"	Between the hours of 4:30pm and 1:00am	8 hours pay for 8 hours work plus 17% for all hours worked
3 <sup>rd</sup> Shift "graveyard"	Between the hours of 12:30am and 9:00am	8 hours pay for 8 hours work plus 31.4% for all hours worked.

**Area 5**

Electrician	<b>50.35</b>	<b>26.78</b>
Electrical Welder	<b>55.39</b>	<b>26.93</b>
Material Handler/ Lighting Maintenance	<b>28.70</b>	<b>17.59</b>

Reference Counties Area 5

Clackamas	Hood River	Tillamook	Yamhill (d)
Clatsop	Multnomah	Wasco	
Columbia	Sherman	Washington	

(d) North Half

**ELECTRICIAN** (continued)

Shift Differential

1 <sup>st</sup> Shift "day"	Between the hours of 8:00am and 4:30pm	8 hours pay for 8 hours work
2 <sup>nd</sup> Shift "swing"	Between the hours of 4:30pm and 1:00am	8 hours pay for 8 hours work plus 17.3% for all hours worked
3 <sup>rd</sup> Shift "graveyard"	Between the hours of 12:30am and 9:00am	8 hours pay for 8 hours work plus 31.4% for all hours worked.

**Zone Pay for Area 5 Electrician and Electrical Welder**

(Add to Basic Hourly Rate)

Zone mileage based on air miles:

Zone 1	31-50 miles	<b>1.50</b> per hour
Zone 2	51-70 miles	<b>3.50</b> per hour
Zone 3	71-90 miles	<b>5.50</b> per hour
Zone 4	Beyond 90	<b>9.00</b> per hour

There shall be a 30-mile free zone from downtown Portland City Hall and a similar 15-mile free zone around the following cities:

Astoria	Seaside	Tillamook
Hood River	The Dalles	

Further, the free zone at the Oregon coast shall extend along Hwy 101 west to the ocean Hwy 101 east 10 miles if not already covered by the above 15-mile free zone.

**Area 6**

Electrician	<b>38.49</b>	<b>17.74</b>
Lighting Maintenance and Material Handlers	<b>18.29</b>	<b>10.00</b>

Reference Counties Area 6

Douglas (e)	Jackson	Klamath
Harney	Josephine	Lake

(e) That portion of Douglas County lying **east** of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County.

See Shift Differential on page 43

**OREGON DETERMINATION 2021-01**

TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE	TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE
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**ELECTRICIAN** (continued)

Shift Differential

1 <sup>st</sup> Shift "day"	Between the hours of 8:00am and 4:30pm	8 hours pay for 8 hours work
2 <sup>nd</sup> Shift "swing"	Between the hours of 4:30pm and 1:00am	8 hours pay for 8 hours work plus 7.5% for all hours worked
3 <sup>rd</sup> Shift "graveyard"	Between the hours of 12:30am and 9:00am	8 hours pay for 8 hours work plus 15% for all hours worked.

When workers are required to work under compressed air or to work from trusses, scaffolds, swinging scaffolds, bosun's chair or on building frames, stacks or towers at a distance, the following should be added to base rate.

50 – 90 feet to the ground	Add 1 ½ x the base rate
90+ feet to the ground	Add 2 x the base rate

**ELEVATOR CONSTRUCTOR, INSTALLER AND MECHANIC**

**Area 1**

Mechanic	<b>55.86</b>	<b>40.97</b>
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Reference Counties Area 1

Baker	Umatilla	Union	Wallowa
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**Area 2**

Mechanic	<b>57.98</b>	<b>42.27</b>
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Reference Counties Area 2

All remaining Counties

<b><u>GLAZIER</u></b>	<b>42.10</b>	<b>23.62</b>
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(Add \$1.00 to base rate when employee works from a swing stage, scaffold, suspended contrivance or mechanical apparatus from the third floor up or thirty feet of free fall (whichever is less), and employee is required to wear a safety belt.)

(Add \$4.00 to base rate when employee works from a bosun chair (non-motorized single-man apparatus), regardless of height.)

**HAZARDOUS MATERIALS HANDLER**

<b>26.03</b>	<b>12.68</b>
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**HIGHWAY/PARKING STRIPER**

<b>35.87</b>	<b>13.50</b>
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Shift Differential

Add \$1.85 to base rate for shifts that start between 3:00pm and 4:00am.

**IRONWORKER**

<u>Zone 1 (Base Rate):</u>	<b>39.10</b>	<b>27.50</b>
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Zone Differential for Ironworker  
(Add to Basic Hourly Rate)

Zone 2	<b>5.63/hr.</b> or \$45.00 maximum per day
Zone 3	<b>8.75/hr.</b> or \$70.00 maximum per day
Zone 4	<b>11.25/hr.</b> or \$90.00 maximum per day

Zone 1: Projects located within 45 miles of city hall in the reference cities listed below.

- Zone 2: More than 46 miles, but less than 60 miles.
- Zone 3: More than 61 miles, but less than 100 miles.
- Zone 4: More than 100 miles.

**Note:** Zone pay for Ironworkers shall be determined using the quickest route per Google Maps and computed from the city hall or dispatch center of the reference cities listed below or the residence of the employee, whichever is nearer to the project.

Reference Cities and Dispatch Center

Medford	Portland
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**LABORER**

Zone A (Base Rate):

Group 1	<b>31.83</b>	<b>15.40</b>
Group 2	<b>33.01</b>	<b>15.40</b>
Group 3	<b>27.56</b>	<b>15.40</b>

**Note:** A Hazardous Waste Removal Differential must be added to the base rate if work is performed inside the boundary of a Federally Designated Hazardous Waste Site. A Group 1 base rate is used for General Laborer on such a site. For further information on this, call the Prevailing Wage Rate Coordinator at (971) 673-0839.

See Zone Differential on page 44

TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE	TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE
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**LABORER** (continued)

Zone Differential for Laborers  
(Add to Zone A Base Rate)

Zone B	.85 per hour
Zone C	1.25 per hour
Zone D	2.00 per hour
Zone E	3.00 per hour
Zone F	5.00 per hour

Zone A: Projects located within 30 miles of city hall in the reference cities listed.

Zone B: More than 30 miles but less than 40 miles.

Zone C: More than 40 miles but less than 50 miles.

Zone D: More than 50 miles but less than 80 miles.

Zone E: More than 80 miles but less than 100 miles.

Zone F: More than 100 miles.

Reference Cities for Laborer

Albany	Burns	Hermiston	Roseburg
Astoria	Coos Bay	Klamath Falls	Salem
Baker City	Eugene	Medford	The Dalles
Bend	Grants Pass	Portland	

**Note:** All job or project locations shall be computed (determined) on the basis of road miles and in the following manner. A mileage measurement will start at the entrance to the respective city hall, facing the project (if possible), and shall proceed by the normal route (shortest time, best road) to the geographical center on the highway, railroad, and street construction projects (end of measurement). On all other project contracts, the geographical center where the major portion of the construction is located, shall be considered the center of the project (end measurement).

**LIMITED ENERGY ELECTRICIAN**

<b>Area 1</b>	<b>21.00</b>	<b>11.41</b>
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Reference Counties Area 1

Malheur

<b>Area 2</b>	<b>31.45</b>	<b>14.50</b>
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Reference Counties Area 2

Baker	Grant	Umatilla	Wallowa
Gilliam	Morrow	Union	Wheeler

**LIMITED ENERGY ELECTRICIAN** (continued)

<b>Area 3</b>	<b>32.16</b>	<b>18.24</b>
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Reference Counties Area 3

Coos	Douglas (a)	Lincoln
Curry	Lane (a)	

(a) Those portions of Lane and Douglas lying **west** of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County.

<b>Area 4</b>	<b>34.93</b>	<b>16.00</b>
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Reference Counties Area 4

Benton	Jefferson	Marion
Crook	Lane (b)	Polk
Deschutes	Linn	Yamhill (c)

(b) That portion of Lane County lying **east** of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County.

(c) South half

<b>Area 5</b>	<b>41.55</b>	<b>21.95</b>
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Reference Counties Area 5

Clackamas	Hood River	Tillamook	Yamhill (d)
Clatsop	Multnomah	Wasco	
Columbia	Sherman	Washington	

(d) North Half

<b>Area 6</b>	<b>31.06</b>	<b>14.23</b>
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Reference Counties Area 6

Douglas (e)	Jackson	Klamath
Harney	Josephine	Lake

(e) That portion of Douglas County lying **east** of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County.

<b>TRADE</b>	<b>HOURLY BASE RATE</b>	<b>HOURLY FRINGE RATE</b>	<b>TRADE</b>	<b>HOURLY BASE RATE</b>	<b>HOURLY FRINGE RATE</b>
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**LINE CONSTRUCTOR**

**Area 1**

Group 1	<b>60.28</b>	<b>22.11</b>
Group 2	<b>53.82</b>	<b>21.82</b>
Group 3	<b>30.65</b>	<b>13.72</b>
Group 4	<b>46.29</b>	<b>18.28</b>
Group 5	<b>40.37</b>	<b>16.12</b>
Group 6	<b>33.37</b>	<b>15.80</b>
Group 7	<b>18.68</b>	<b>11.22</b>

Reference Counties Area 1

All counties except Malheur County

**Area 2**

Cable Splicer	<b>54.57</b>	<b>17.87</b>
Journeyman Lineman	<b>49.41</b>	<b>17.36</b>
Line Equip. Operator	<b>41.09</b>	<b>16.45</b>
Groundman	<b>29.17</b>	<b>14.05</b>

Reference County Area 2

Malheur County

**MARBLE SETTER**                      **42.20**      **21.12**

(This trade is tended by "Tile, Terrazzo, & Marble Finishers")

**PAINTER & DRYWALL TAPER**

COMMERCIAL PAINTING	<b>26.56</b>	<b>13.51</b>
INDUSTRIAL PAINTING	<b>28.36</b>	<b>13.51</b>
BRIDGE PAINTING	<b>34.23</b>	<b>13.51</b>

(Add \$0.75 to base rate for work over 60 ft. high on swing stage, mechanical climber, spider or bucket truck for all wage classifications)

DRYWALL TAPER

Zone A (Base Rate)

**40.42**      **17.63**

**PAINTER & DRYWALL TAPER** (continued)

Zone Differential for Drywall Taper  
(Add to Zone A Base Rate)

Zone B	<b>6.00</b> per hour
Zone C	<b>9.00</b> per hour
Zone D	<b>12.00</b> per hour

Dispatch Cities for Drywall Taper

Albany	Coquille	Medford	Roseburg
Astoria	Eugene	Newport	Salem
Baker	Grants Pass	North Bend	Seaside
Bandon	Hermiston	Pendleton	The Dalles
Bend	Klamath Falls	Portland	Tillamook
Brookings	Kelso-Longview	Reedsport	Vancouver

Zone A: Projects located less than 61 miles of the respective city hall of the dispatch cities listed.

Zone B: Projects located 61 miles to 80 miles.

Zone C: Projects located 81 miles to 100 miles.

Zone D: Projects located 101 miles or more.

Note: Zone pay is based on AAA Road Mileage.

**PLASTERER AND STUCCO MASON**

(This trade is tended by "Tenders to Plasterers")

Zone A (Base Rate)

Plasterer	<b>38.09</b>	<b>18.83</b>
Swinging Scaffold	<b>39.09</b>	<b>18.83</b>
Nozzleman	<b>40.09</b>	<b>18.83</b>

Zone Differential for Plasterer and Stucco Mason  
(Add to Zone A Base Rate)

Zone B	<b>6.00</b> per hour
Zone C	<b>9.00</b> per hour
Zone D	<b>12.00</b> per hour

See Zone Differential mileage on page 46





TRADE

HOURLY BASE RATE  
HOURLY FRINGE RATE

TRADE

HOURLY BASE RATE  
HOURLY FRINGE RATE

**POWER EQUIPMENT OPERATOR** (continued)

**Note:** A Hazardous Waste Removal Differential must be added to the base rate if work is performed inside the boundary of a Federally Designated Waste Site. For information on this differential, call the Prevailing Wage Rate Coordinator at (971) 673-0839.

(Add \$0.40 to the base rate for any and all work performed underground, including operating, servicing and repairing of equipment)

(Add \$0.50 to the base rate per hour for any employee who works suspended by a rope or cable)

(Add \$0.50 to the base rate for employees who do "pioneer" work (break open a cut, build road, etc.) more than one hundred fifty (150) feet above grade elevation)

Shift Differential

**Two-Shift Operations:**

On a two shift operation, when the second shift starts after 4:30 p.m., second-shift workers shall be paid the base hourly wage rate plus 5% for all hours worked.

When the second shift starts at 8:00 p.m. or later, the second-shift workers shall be paid at the base hourly wage rate plus 10% for all hours worked.

**Three-Shift Operations:**

On a three-shift operation, the base hourly wage rate plus five percent (5%) shall be paid to all second-shift workers for all hours worked, and the base hourly wage rate plus ten percent (10%) shall be paid to all third shift workers for all hours worked.

Zone Pay Differential for Power Equipment Operator  
(Add to Zone 1 Base Rate)

Zone 2	3.00 per hour
Zone 3	6.00 per hour

**For projects in the following metropolitan counties:**

Clackamas	Marion	Washington
Columbia	Multnomah	Yamhill

**POWER EQUIPMENT OPERATOR** (continued)

**See map on page 51 for Zone 1 of this classification**

(A) All jobs or projects located in Multnomah, Clackamas and Marion counties, West of the western boundary of Mt. Hood National Forest and West of Mile Post 30 on Interstate 84 and West of Mile Post 30 on State Hwy 26 and West of Mile Post 30 on Hwy 22 and all jobs located in Yamhill County, Washington County and Columbia County shall receive Zone 1 pay for all classifications.

(B) All jobs or projects located in the area outside the *identified boundary* above, but less than 50 miles from the Portland City Hall shall receive Zone 2 pay for all classifications.

(C) All jobs or projects located more than 50 miles from the Portland City Hall, but outside the identified border above, shall receive Zone 3 pay for all classifications.

**Reference cities for projects in all remaining counties:**

Albany	Coos Bay	Grants Pass	Medford
Bend	Eugene	Klamath Falls	Roseburg

(A) All jobs or projects located within 30 miles of the respective city hall of the above mentioned cities shall receive Zone 1 pay for all classifications.

(B) All jobs or projects located more than 30 miles and less than 50 miles from the respective city hall of the above mentioned cities shall receive Zone 2 for all classifications.

(C) All jobs or projects located more than 50 miles from the respective city hall of the above mentioned cities shall receive Zone 3 pay for all classifications.

**Note:** All job or project locations shall be computed (determined) on the basis of road miles and in the following manner. A mileage measurement will start at the entrance to the respective city hall, facing the project (if possible), and shall proceed by the normal route (shortest time-best road) to the geographical center on the highway, railroad, and street construction projects (end of measurement). On all other project contracts, the geographical center where the major portion of the construction is located, shall be considered the center of the project (end measurement).

**OREGON DETERMINATION 2021-01**

TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE	TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE
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**ROOFER**

**Area 1**

Roofer	<b>36.23</b>	<b>19.77</b>
Handling coal tar pitch	<b>39.85</b>	<b>19.77</b>
Remove fiberglass insulation	<b>39.85</b>	<b>19.77</b>

Reference Counties Area 1

Baker	Gilliam	Multnomah	Washington
Clackamas	Grant	Sherman	Wheeler
Clatsop	Hood River	Tillamook	
Columbia	Jefferson	Wasco	

**Area 2**

Roofer	<b>30.87</b>	<b>16.04</b>
Handling coal tar pitch	<b>32.87</b>	<b>16.04</b>
Remove fiberglass insulation	<b>32.37</b>	<b>16.04</b>

Reference Counties Area 2

Benton	Douglas	Lake	Marion
Coos	Harney	Lane	Polk
Crook	Jackson	Lincoln	Yamhill
Curry	Josephine	Linn	
Deschutes	Klamath	Malheur	

**Area 4**

Roofers	<b>28.68</b>	<b>13.26</b>
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Reference Counties Area 4

Umatilla	Union	Wallowa
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(Add \$2.25 to basic hourly rate for employees working with irritable bituminous materials)

(Add \$2.00 to basic hourly rate for employees removing fiberglass insulation)

**Area 5**

Roofers	<b>28.85</b>	<b>13.06</b>
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Reference County for Area 5

Morrow
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(Add \$3.25 to base rate for employees working with irritable and pitch bituminous materials)

**SHEET METAL WORKER**

**Area 1**

<b>42.30</b>	<b>23.13</b>
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Reference Counties Area 1

Benton	Grant	Multnomah	Washington
Clackamas	Hood River	Polk	Wheeler
Clatsop	Lincoln	Sherman	Yamhill
Columbia	Linn	Tillamook	
Gilliam	Marion	Wasco	

(Add \$1.00 to base rate for work performed on any swinging platform, swinging chair or swinging ladder)

(Add \$1.00 to base rate for work where a worker is exposed to resins, chemicals or acid)

**Area 2**

<b>28.00</b>	<b>19.54</b>
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Reference Counties Area 2

Baker	Malheur
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(Add \$2.21 to base rate for work performed in an area where epoxy resins or other injurious chemicals are being applied)

**Area 3**

<b>41.35</b>	<b>22.12</b>
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Reference Counties Area 3

Morrow	Umatilla	Union	Wallowa
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(Add \$1.00 to base rate for work where it is necessary to wear a chemically activated type face mask)

**Area 4**

<b>34.98</b>	<b>20.79</b>
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Reference Counties Area 4

Douglas	Lane
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(Add \$1.00 to base rate for work performed on any swinging platform, swinging chair or swinging ladder)

(Add \$1.00 to base rate for work where a worker is exposed to resins, chemicals or acid)



TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE	TRADE	HOURLY BASE RATE	HOURLY FRINGE RATE
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**TESTING AND BALANCING (TAB) TECHNICIAN**

Air-Handling Equipment, Ductwork

See SHEET METAL WORKER

Water Distribution Systems

See PLUMBER/PIPEFITTER/STEAMFITTER

**TILESETTER/TERRAZZO WORKER: Hard Tilesetter**

**35.35 19.36**

(This trade is tended by "Tile, Terrazzo, & Marble Finisher")

(Add \$1.00 to base rate if work involves epoxy, furnane, alklor or acetylene black grouting)

**TILE, TERRAZZO, AND MARBLE FINISHER**

1. TILE, TERRAZZO FINISHER

**26.94 14.11**

(Add \$1.00 to base rate if work involves epoxy, furnane, alklor or acetylene black grouting)

2. BRICK AND MARBLE FINISHER

**26.94 14.24**

(Add \$1.00 to base rate for Refractory work)

**TRUCK DRIVER**

Zone A (Base Rate)

Group 1	<b>29.33</b>	<b>16.35</b>
Group 2	<b>29.46</b>	<b>16.35</b>
Group 3	<b>29.60</b>	<b>16.35</b>
Group 4	<b>29.89</b>	<b>16.35</b>
Group 5	<b>30.13</b>	<b>16.35</b>
Group 6	<b>30.31</b>	<b>16.35</b>
Group 7	<b>30.53</b>	<b>16.35</b>

Zone differential for Truck Drivers  
(Add to Zone A Base Rate)

Zone B	<b>.65</b> per hour
Zone C	<b>1.15</b> per hour
Zone D	<b>1.70</b> per hour
Zone E	<b>2.75</b> per hour

**TRUCK DRIVER** (continued)

Zone A: Projects within 30 miles of the cities listed.  
Zone B: More than 30 miles but less than 40 miles.  
Zone C: More than 40 miles but less than 50 miles.  
Zone D: More than 50 miles but less than 80 miles.  
Zone E: More than 80 miles.

Reference Cities

Albany	Eugene	Madras	Reedsport
Astoria	Goldendale	Medford	Roseburg
Baker	Grants Pass	McMinnville	Salem
Bend	Hermiston	Newport	The Dalles
Bingen	Hood River	Ontario	Tillamook
Brookings	Klamath Falls	Oregon City	Vancouver
Burns	LaGrande	Pendleton	
Coos Bay	Lakeview	Portland	
Corvallis	Longview	Port Orford	

**Note:** All job or project locations shall be computed (determined) on the basis of road miles and in the following manner. A mileage measurement will start at the entrance to the respective city hall, facing the project (if possible), and shall proceed by the normal route (shortest time-best road) to the geographical center on the highway, railroad, and street construction projects (end of measurement). On all other project contracts, the geographical center where the major portion of the construction is located, shall be considered the center of the project (end measurement).

TRADE

HOURLY BASE RATE  
HOURLY FRINGE RATE

TRADE

HOURLY BASE RATE  
HOURLY FRINGE RATE

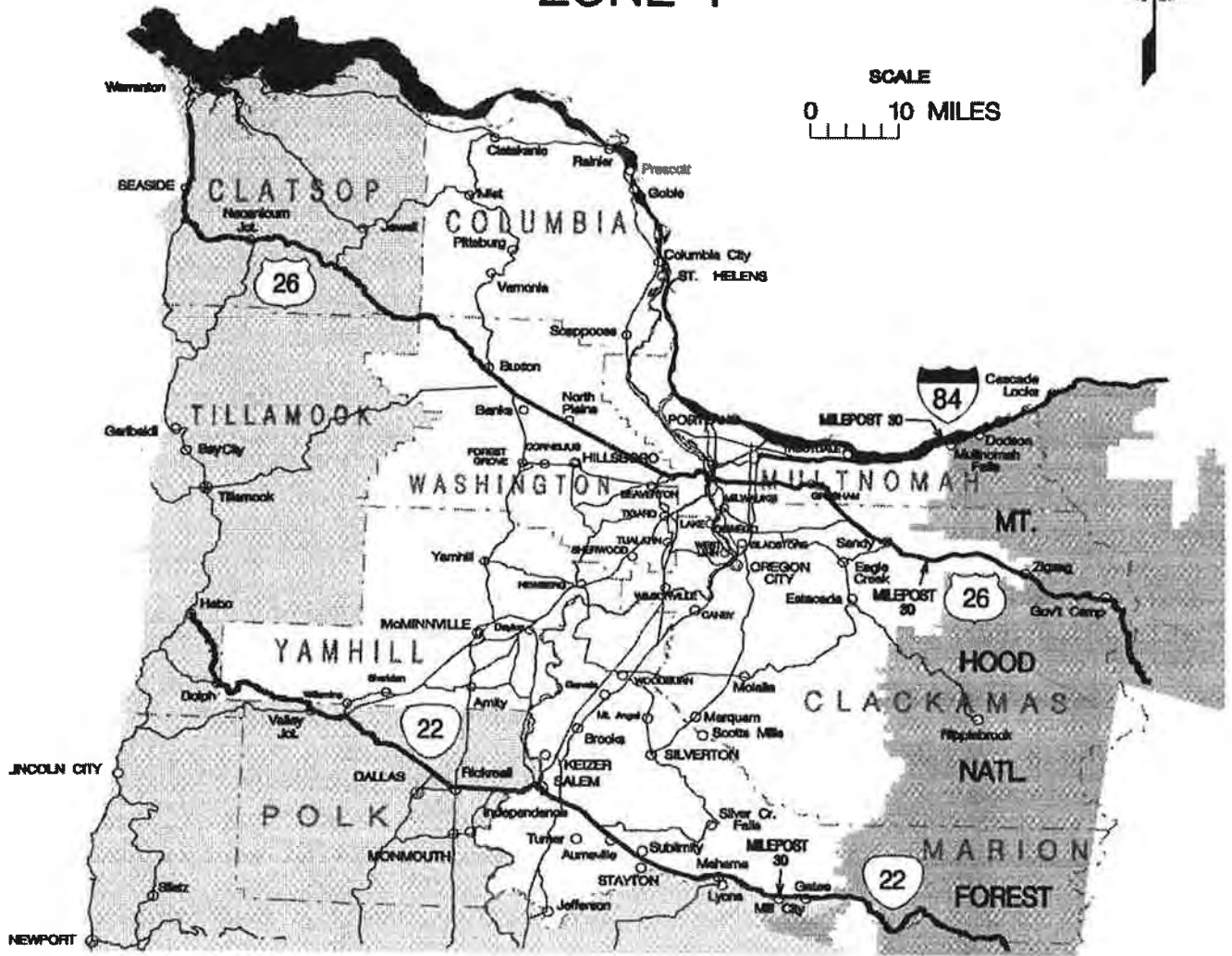
# POWER EQUIPMENT OPERATOR

## ZONE 1



SCALE

0 10 MILES





**LIST OF CONTRACTORS INELIGIBLE  
TO RECEIVE PUBLIC WORKS CONTRACTS  
PUBLICATION DATE: JANUARY 1, 2021**

147/343

**To: All Oregon Contracting Agencies**

Pursuant to ORS 279C.860, contractors on this list are ineligible to receive public works contracts subject to the Prevailing Wage Rate Law. These contractors and subcontractors, as well as any firm, corporation, partnership or association in which the contractor or subcontractor has a financial interest are ineligible to receive public works contracts until removed from this list.

If you have questions regarding the list or for the most current information regarding persons ineligible to receive prevailing wage contracts, please contact the Prevailing Wage Rate Coordinator in Portland at (971) 673-0839.

	<b><u>CONTRACTOR NAME</u></b>	<b><u>DATE PLACED</u></b>	<b><u>REMOVAL DATE</u></b>
1.	<b>A1 Dumptruck Services LLC</b> 703 N Hayden Meadows Dr., #206 Portland, OR 97213 731 N Hayden Meadows Dr., #206 Portland, OR 97217 2408 NE 164 <sup>th</sup> Avenue Vancouver, WA 98684	February 24, 2020	February 23, 2027
2.	<b>Atila, Inc.</b> 5305 River Road N., Ste. B Keizer, OR 97303	August 3, 2018	August 2, 2021
3.	<b>Kimberly Bell-Eddy</b> 8535 Woodard Ave SE Salem, OR 97317	January 12, 2016	January 11, 2023
4.	<b>Cameron Creations</b> <b>Steven Cameron</b> <b>Nancy Cameron</b> PO Box 2 Lowell, OR 97452	May 25, 2000	Not to be Removed
5.	<b>Canell's Flagging LLC</b> 731 N Hayden Meadows Dr., Ste 107 Portland, OR 97217	November 24, 2020	November 23, 2023
6.	<b>Angela Canell</b> 2416 NE 11 <sup>th</sup> Avenue Portland, OR 97212 529 SE Grand #307 Portland, OR 97214	November 24, 2020	November 23, 2023
7.	<b>Gentry Ceniga</b> 20949 Knott Road Bend, OR 97702	August 14, 2018	August 13, 2021
8.	<b>CJ Construction, Inc.</b> 2969 Ferguson St NW Salem, OR 97304 846 55 <sup>th</sup> Ave, Salem, OR 97304	December 11, 2020	November 6, 2023



**LIST OF CONTRACTORS INELIGIBLE  
TO RECEIVE PUBLIC WORKS CONTRACTS  
PUBLICATION DATE: JANUARY 1, 2021**

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	<u>CONTRACTOR NAME</u>	<u>DATE PLACED</u>	<u>REMOVAL DATE</u>
9.	<b>Jennifer Friedman</b> 2526 Ellen Lane NW Salem, OR 97304 4400 Shaw St NW Salem, OR 97304 4400 Salem-Dallas Hwy Salem, OR 97304 PO Box 5172 Salem, OR 97304	December 11, 2020	October 10, 2023
10.	<b>Scott Friedman</b> 2969 Ferguson St NW Salem, OR 97304 4400 Dallas Hwy Salem, OR 97304 PO Box 5172 Salem, OR 97304	December 11, 2020	October 10, 2023
11.	<b>G &amp; K Masonry Inc.</b> 20949 Knott Road Bend, OR 97702	August 14, 2018	August 13, 2021
12.	<b>GNC Construction Services, LLC</b> 309 S. McLoughlin Blvd. Oregon City, OR 97045	July 21, 2018	July 20, 2021
13.	<b>Eugene Graeme</b> 169 SE Cody Lane Madras, OR 97741	July 3, 2017	July 2, 2027
14.	<b>Green Thumb Landscape and Maintenance, Inc., aka Green Thumb Landscaping, aka GT General Contracting</b> 4400 Dallas Hwy Salem, OR 97304 PO Box 5172 Salem, OR 97304	December 11, 2020	October 10, 2023
15.	<b>Green Thumb LLC, aka Green Thumb Contracting</b> 4400 Salem-Dallas Hwy Salem, OR 97304 4400 Shaw St NW Salem, OR 97304 PO Box 5172 Salem, OR 97304	December 11, 2020	October 10, 2023
16.	<b>High-N-Shine Concrete Floor, Inc.</b> 9024 Silver Star Ave Vancouver, WA 98664	February 3, 2020	February 2, 2023

**LIST OF CONTRACTORS INELIGIBLE  
TO RECEIVE PUBLIC WORKS CONTRACTS  
PUBLICATION DATE: JANUARY 1, 2021**

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	<u>CONTRACTOR NAME</u>	<u>DATE PLACED</u>	<u>REMOVAL DATE</u>
17.	<b>Lisa Hoang,</b> <b>aka Kim Lien Hoang,</b> <b>aka Lien Kim Hoang,</b> <b>aka Kim Hope,</b> <b>aka Lisa K Ryan,</b> <b>aka Ryan Lien Hoang,</b> <b>aka Kim L Hoang,</b> <b>aka Lien Hoang Ryan,</b> <b>aka Lien K Hoang-Ryan,</b> <b>aka Hoang K Lien,</b> <b>aka Lisa Hall,</b> <b>aka Lisa Kim Ryan,</b> <b>aka Lien Ryan,</b> <b>aka Lien Hoang Ryan,</b> <b>aka Kim Hoang Lien,</b> <b>aka K Lisa Hoang</b> 703 N Hayden Meadows Dr., #206 Portland, OR 97213 731 N Hayden Meadows Dr., #206 Portland, OR 97217 2408 NE 164 <sup>th</sup> Avenue Vancouver, WA 98684	February 24, 2020	February 23, 2027
18.	<b>Kim Bell Flagging, Inc.</b> 8535 Woodard Ave SE Salem, OR 97317	January 12, 2016	January 11, 2023
19.	<b>David P. Miller</b> 731 NW Naito Parkway, #215 Portland, OR 97209	June 17, 2020	Not to be Removed
20.	<b>Sang In Nam dba</b> <b>Cornerstone Janitorial Services</b> 130 NE Danbury Ave Hillsboro, OR 97124	September 20, 2016	Not to be Removed
21.	<b>Hai T. Nguyen</b> 9024 Silver Star Ave Vancouver, WA 98664	February 3, 2020	February 2, 2023
22.	<b>NW Flagging LLC</b> 703 N Hayden Meadows Dr., #206 Portland, OR 97213 731 N Hayden Meadows Dr., #206 Portland, OR 97217 2408 NE 164 <sup>th</sup> Avenue Vancouver, WA 98684	February 24, 2020	February 23, 2027
23.	<b>Oregon Building &amp; Landscaping Services LLC</b> 703 N Hayden Meadows Dr., #206 Portland, OR 97213 731 N Hayden Meadows Dr., #206 Portland, OR 97217 2408 NE 164 <sup>th</sup> Avenue Vancouver, WA 98684	February 24, 2020	February 23, 2027

**LIST OF CONTRACTORS INELIGIBLE  
TO RECEIVE PUBLIC WORKS CONTRACTS  
PUBLICATION DATE: JANUARY 1, 2021**

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	<u>CONTRACTOR NAME</u>	<u>DATE PLACED</u>	<u>REMOVAL DATE</u>
24.	<b>Pacific NW Drywall &amp; Accoustics LLC</b> aka <b>Pacific NW Drywall &amp; Accoustics</b> 731 NW Naito Parkway, #215 Portland, OR 97209	June 17, 2020	Not to be Removed
25.	<b>Phoenix Construction Group, Inc.</b> 309 S. McLoughlin Blvd. Oregon City, OR 97045	August 24, 2018	August 23, 2021
26.	<b>Pacharee Polson</b> 9024 Silver Star Ave Vancouver, WA 98664	February 3, 2020	February 2, 2023
27.	<b>Portland Safety Equipment, LLC</b> 309 S. McLoughlin Blvd. Oregon City, OR 97045	August 24, 2018	August 23, 2021
28.	<b>R.B. Development Corporation Inc.</b> 14634 Kasel Court NE Aurora, OR 97002	August 3, 2018	August 2, 2021
29.	<b>Regional Traffic Management LLC</b> 703 N Hayden Meadows Dr., #206 Portland, OR 97213 731 N Hayden Meadows Dr., #206 Portland, OR 97217 2408 NE 164 <sup>th</sup> Avenue Vancouver, WA 98684	February 24, 2020	February 23, 2027
30.	<b>SBG Construction Services LLC</b> 309 S. McLoughlin Blvd. Oregon City, OR 97045	August 24, 2018	August 23, 2021
31.	<b>Irma Anita Starr</b> 14634 Kasel Court NE Aurora, OR 97002	August 3, 2018	August 2, 2021
32.	<b>Norman James Starr</b> 14634 Kasel Court NE Aurora, OR 97002	August 3, 2018	August 2, 2021
33.	<b>Alan Tatom</b> 168 Clearwater Avenue NE Salem, OR 97301	July 10, 2015	July 9, 2025
34.	<b>Phillip Walker</b> 580 Market Street NE Salem, OR 97301	July 10, 2015	July 9, 2025
35.	<b>WCI Construction LLC</b> 169 SE Cody Lane Madras, OR 97741	July 3, 2017	July 2, 2027

**LIST OF CONTRACTORS INELIGIBLE  
TO RECEIVE PUBLIC WORKS CONTRACTS  
PUBLICATION DATE: JANUARY 1, 2021**

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	<b><u>CONTRACTOR NAME</u></b>	<b><u>DATE PLACED</u></b>	<b><u>REMOVAL DATE</u></b>
36.	<b>WWJD Traffic Control, Inc.</b> 168 Clearwater Avenue NE Salem, OR 97301	July 10, 2015	July 9, 2025

**VAL HOYLE, COMMISSIONER  
BUREAU OF LABOR AND INDUSTRIES**



# **PREVAILING WAGE RATE FORMS**

<b>WH-38</b>	<b>Certified Payroll Form</b>
<b>WH-39</b>	<b>Public Works Fee Information Form</b>
<b>WH-40</b>	<b>Public Works Fee Adjustment Form</b>
<b>WH-81</b>	<b>Notice of Public Works</b>
<b>WH-118</b>	<b>Planned Public Improvement Summary</b>
<b>WH-119</b>	<b>Capital Improvement Cost Comparison Estimate</b>





## OREGON BUREAU OF LABOR & INDUSTRIES, PREVAILING WAGE RATE

### INSTRUCTIONS FOR COMPLETING THE PREVAILING WAGE RATE PAYROLL/CERTIFIED STATEMENT FORM (WH-38)

The Payroll/Certified Statement form (WH-38) may be used by contractors for reporting their payroll as required by ORS 279C.845 on public works projects subject to the Prevailing Wage Rate (PWR) Law. Although the U.S. Department of Labor (US DOL) has not officially approved this form, it is designed to meet the requirements of the federal Davis-Bacon Act. For projects associated with the U.S. Department of Housing and Urban Development (HUD), contact the public agency (owner) associated with the project for assistance with payroll reporting.

Contractors are not required to use the WH-38 form in reporting their payroll; however, the contractor must provide all of the information contained in the form, including the certified statement on page two. The contractor must sign the certified statement, certifying the accuracy of the information reported on the payroll, including representations pertaining to the provision of fringe benefits to employees by third parties, and submit it with each weekly payroll report. Detailed instructions concerning the preparation of the form follow:

Complete the top third of the form. Be sure to enter the date the contract was first advertised for bid. If you are not sure of this date, contact the public agency (owner) associated with the project. The "Payroll No." is a US DOL requirement and represents the number of weeks the contractor performed work on the project.

**Column 1 – NAME AND ADDRESS:** Write the employee's full name on each payroll submitted. The employee's address must be included on the first payroll submitted. The address need not be shown on subsequent payrolls submitted unless the address changes. The US DOL requires an employee identification number for each individual employee, on each payroll submitted. This number may be, but does not have to be, the last four digits of the employee's social security number.

**Column 2 – CLASSIFICATION:** For assistance in determining the correct classification, use the Oregon Bureau of Labor & Industries' (BOLI's) publication "Definitions of Covered Occupations for Public Works Contracts in Oregon." On the WH-38, list the classification that is most descriptive of the work actually performed by the employee. Give the group number for those classifications that include such information. Indicate which workers are apprentices, if any, and give their current percentage, classification, and group number when applicable. If an employee works in more than one classification, use the highest rate for all hours worked, or use separate line entries to show hours worked and hourly rates for each classification.

**Column 3 – DAY AND DATE:** Enter the day of the week (M, T, W, Th, F, S, and Sn) in the top row of boxes, and the corresponding date below.

**HOURS WORKED EACH DAY:** Enter the total number of straight time hours worked in the row marked "ST." Generally, hours worked over eight (8) in a day or work performed on Saturdays, Sundays, and legal holidays should be entered as overtime ("OT") hours worked. Contractors who have adopted and followed a written work schedule of four consecutive ten-hour days (Monday through Thursday or Tuesday through Friday) may enter hours worked over ten (10) in a day as overtime hours. For more information on overtime requirements, see the Contractor Responsibilities section of OR Bureau of L&I's publication, "[Prevailing Wage Rate Laws](#)."

Check the correct work schedule box to indicate the employee's weekly work schedule: 5/8 or 4/10. Enter the employee's regular hourly schedule for the week being reported next to the "Reg. Hrly. Schd: \_\_\_\_ to \_\_\_\_." For example: 7:00 a.m. to 4:30 p.m.

**Column 4 – TOTAL HOURS:** Enter separately the total number of straight time and overtime hours worked by the employee (in each classification, if applicable) on the PWR project during the week. Enter the total number of straight time hours worked in the lower box ("ST"); enter the total number of overtime hours worked in the top box ("OT").

**Column 5 – HOURLY BASE RATE:** Enter the hourly base rate (plus zone pay, if any) and the hourly overtime rate (plus zone pay, if any) paid to the employee in the appropriate straight time and overtime



boxes. (Payment of not less than one and one half times the base rate of pay, including zone pay, but not including fringe benefits, is required to be paid for overtime hours pursuant to ORS 279C.540). Generally, use the appropriate prevailing wage rates in effect at the time the project was first advertised for bid by the public agency. If this date is not known, or if the project was not advertised for bid, contact the public agency (owner) associated with the project for assistance with applicable rates.

**Column 6 – HOURLY FRINGE BENEFIT AMOUNT PAID AS WAGES TO THE EMPLOYEE:** Enter hourly fringe benefit amounts paid directly to the employee as wages. (For overtime hours worked, it is not necessary to pay time and one half for the fringe benefit portion of the prevailing wage rate.)

**Column 7 – GROSS AMOUNT EARNED:** Enter the gross amount earned for work on the PWR project during the week. If part of the employee's wages for the pay period were earned on projects other than the project described on the WH-38, or if the employee is paid less often than on a weekly basis, enter in column 7 first the gross amount earned on the PWR project for the week, then the total gross amount earned for the pay period. For example: \$567.84 / \$1,267.27.

**Column 8 – ITEMIZED DEDUCTIONS, FICA, FED, STATE, ETC.:** Enter deductions withheld from wages for the pay period. All deductions must be in accordance with the provisions of ORS 652.610 (and as defined in Regulations, Part 3 (29 CFR Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. Stat. 967, 76 Stat. 357; 40 U.S.C 276c) on projects subject to Davis-Bacon Act). For projects subject to the Davis-Bacon Act, itemize the deductions.

**Column 9 – NET WAGES PAID:** Enter the total amount of net wages actually paid to the employee for the pay period. Calculate this figure by subtracting the total deductions reported in Column 8 from the gross amount of wages for the pay period reported in the bottom portion of Column 7.

**Column 10 – HOURLY FRINGE BENEFITS PAID TO BENEFIT PARTY, PLAN, FUND OR PROGRAM:** Enter the hourly amount of fringe benefits paid to each individually approved party, plan, fund, or program, for each employee. List these amounts separately on the lines provided. Any contractor who is making payments to approved parties, plans, funds or programs in amounts less than the required hourly fringe benefit is obligated to pay the difference directly to the employee as wages in lieu of fringe benefits, and to show that amount in Column 6 of this form. For information on how to calculate hourly fringe benefit credits, see Appendix A in OR L&I's publication, "Prevailing Wage Rate Laws."

**Column 11 – NAME OF BENEFIT PARTY, PLAN, FUND OR PROGRAM:** Enter the name of the party, plan, fund, or program that corresponds to the amount paid as an hourly fringe benefit in Column 10.

#### **CALCULATION CHECK**

In order to determine whether the wages and fringe benefits paid are sufficient to meet prevailing wage rate requirements, perform the following check:

1. For each classification listed in column 2, compute the sum of:
  - a) the hourly base rate of pay shown in Column 5,
  - b) the hourly fringe benefit amount paid as wages to employee shown in Column 6, and
  - c) the hourly fringe benefits paid to benefit party, plan, fund or program shown in Column 10.
2. This sum must equal or exceed the total of the hourly base rate (including zone pay) and the hourly fringe benefit rate for that classification as listed in the appropriate issue of OR Bureau of L&I's publication, "Prevailing Wage Rates for Public Works Contracts in Oregon."

IF YOU HAVE QUESTIONS REGARDING COMPLETION OF THIS FORM, CONTACT THE PREVAILING WAGE RATE UNIT OF THE OREGON BUREAU OF LABOR & INDUSTRIES AT (971) 673-0838.

**NOTE: PAYROLL/CERTIFIED STATEMENTS ARE ONLY REQUIRED TO BE SUBMITTED TO THE PUBLIC AGENCY ASSOCIATED WITH THE PROJECT.**

**CERTIFIED PAYROLL AND OTHER FORMS ARE AVAILABLE ON OUR WEBSITE:  
WWW.OREGON.GOV/BOLI**







CONTRACT FEE SECTION  
PREVAILING WAGE RATE UNIT  
BUREAU OF LABOR & INDUSTRIES  
800 N.E. OREGON ST., #1045  
PORTLAND, OR 97232-3601  
PHONE: (971) 673-0852  
FAX: (971) 673-0769

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For Office Use Only:

Project DB #: \_\_\_\_\_

## PUBLIC WORKS FEE INFORMATION FORM

For use by public agencies that have contracted with a contractor on a public works project regulated by ORS 279C.800 to 279C.870, in compliance with ORS 279C.825. Also for use by public agencies that are a party to a public works project pursuant to ORS 279C.800(6)(a)(B), (C) (D) or (E).

**PUBLIC AGENCIES:** Please complete and mail this form to the Bureau of Labor & Industries (BOLI) at the above address, along with the public works fee of one-tenth of one percent of the contract price (contract amount x .001), payable to "Bureau of Labor and Industries." **The minimum fee is \$250.00; the maximum fee is \$7,500.00.** BOLI may be unable to properly credit you for payment received without the following completed information.

**PUBLIC AGENCY:** \_\_\_\_\_ **AGENCY #:** \_\_\_\_\_

**AGENCY MAILING ADDRESS:** \_\_\_\_\_

**CITY, STATE, ZIP** \_\_\_\_\_

**AGENCY CONTACT PERSON:** \_\_\_\_\_ **PHONE: ( )** \_\_\_\_\_

**PROJECT MANAGER NAME:** \_\_\_\_\_ **PHONE: ( )** \_\_\_\_\_

**PROJECT NAME:** \_\_\_\_\_

**CONTRACT NAME (if part of larger project):** \_\_\_\_\_

**PROJECT LOCATION:** \_\_\_\_\_

**PROJECT NO:** \_\_\_\_\_ **DATE CONTRACT FIRST ADVERTISED:** \_\_\_\_\_

**DATE CONTRACT AWARDED:** \_\_\_\_\_ **CONTRACTOR CCB#:** \_\_\_\_\_

**CONTRACTOR BUSINESS NAME (DBA):** \_\_\_\_\_

**CONTRACTOR ADDRESS:** \_\_\_\_\_

**CITY, STATE ZIP** \_\_\_\_\_

**CONTRACT AMOUNT: \$** \_\_\_\_\_ **FEE AMOUNT DUE/PAID: \$** \_\_\_\_\_

If less than \$50K, is it part of a larger project?  yes  no

Contract amount x .001 = fee due

(Please duplicate this form for future use.)



**CONTRACT FEE SECTION  
PREVAILING WAGE RATE UNIT  
BUREAU OF LABOR & INDUSTRIES  
800 N.E. OREGON ST., #1045  
PORTLAND, OR 97232-3601  
PHONE: (971) 673-0852  
FAX: (971) 673-0769**

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<b>For Office Use Only:</b> Project DB #: _____
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**PUBLIC WORKS FEE ADJUSTMENT FORM**

**USE THIS FORM FOR RECONCILIATION OF FEES UPON COMPLETION OF  
PUBLIC WORKS PROJECTS**

(As required by ORS 279C.825 and OAR 839-025-0210)

**PUBLIC AGENCIES:** Complete and mail this form to the Bureau of Labor & Industries at the above address after completion of the public work project and not less than 30 days after the final progress payment is made to the contractor. Public agencies are required to determine the final contract price, including all change orders or other adjustments to the original contract price, and to calculate the adjusted prevailing wage rate fee based on the revised contract price. Documentation must be included to support the final contract price. Documentation of the final contract price may consist of change orders or other contract documents substantiating the amount of the contract. The prevailing wage rate fee of one-tenth of one percent (.001) shall be applied to the final contract price, with credit taken for fees already submitted. The public agency must submit any additional fee payable to "Bureau of Labor and Industries," or submit any request for refund, with this adjustment form. **THE MINIMUM FEE IS \$250.00; THE MAXIMUM FEE IS \$7,500.00. NO ADDITIONAL FEE IS REQUIRED TO BE PAID, AND REFUNDS WILL NOT BE MADE, IF THE BALANCE DUE OR THE REFUND DUE IS LESS THAN \$100.00.**

**PUBLIC AGENCY:** \_\_\_\_\_ **AGENCY #:** \_\_\_\_\_

**AGENCY CONTACT PERSON:** \_\_\_\_\_ **PHONE :** (\_\_\_\_) \_\_\_\_\_

**MAILING ADDRESS:** \_\_\_\_\_

**PROJECT NAME:** \_\_\_\_\_

**CONTRACT NAME (if part of larger project):** \_\_\_\_\_

**PROJECT NUMBER:** \_\_\_\_\_ **PROJECT LOCATION:** \_\_\_\_\_

**CONTRACTOR/BUSINESS NAME (DBA):** \_\_\_\_\_

**CONTRACTOR CCB#:** \_\_\_\_\_ **DATE AWARDED:** \_\_\_\_\_

**FINAL CONTRACT/PROJECT AMOUNT:** \_\_\_\_\_ **FINAL FEE DUE:** \_\_\_\_\_  
(Include all change orders and adjustments to the contract price) (Final Contract amount X .001)

**ORIGINAL CONTRACT AMOUNT:** \_\_\_\_\_ **INITIAL FEE PAID:** \_\_\_\_\_  
(Original Contract amount X .001)

**TOTAL ADJUSTMENT:** \_\_\_\_\_ **BALANCE DUE\*:** \_\_\_\_\_  
or  
**REFUND DUE\*:** \_\_\_\_\_  
\*Final contract fee less initial fee paid

<b>Sample Calculation:</b>			
<b>Final Contract Amount:</b>	<b>\$ 400,000.00</b>	<b>Final Fee Due:</b>	<b>\$ 400.00</b>
<b>Original Contract Amount:</b>	<b>- 300,000.00</b>	<b>Initial Fee Paid:</b>	<b>- 300.00</b>
<b>Total Adjustment:</b>	<b>\$ 100,000.00</b>	<b>Additional Amount Due:</b>	<b>\$ 100.00</b>



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**BUREAU OF LABOR AND INDUSTRIES  
NOTICE OF PUBLIC WORKS**  
(For use by public agencies in complying with ORS 279C.835)

**For Office Use Only:**  
Project DB #: \_\_\_\_\_

**NOTE: ORS 279C.835 requires that public contracting agencies include with this form a copy of the disclosure of first-tier subcontractors submitted pursuant to ORS 279C.370.**

**PUBLIC AGENCY INFORMATION**

Agency Name: \_\_\_\_\_  
Agency Division: \_\_\_\_\_ Agency # (if known): \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, Zip: \_\_\_\_\_  
Email Address: \_\_\_\_\_  
Agency Representative: \_\_\_\_\_ Phone: \_\_\_\_\_

**SECTION A:** To be completed when a public agency awards a contract to a contractor for a public works project, including CM/GC projects. (See reverse for public works projects in which no public agency awards a contract to a contractor.)

**CONTRACT INFORMATION:**

Project Name: \_\_\_\_\_  
Contract Name (if part of larger project): \_\_\_\_\_  
Project #: \_\_\_\_\_ Contract #: \_\_\_\_\_  
Project Manager Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Project Location (Street(s), City): \_\_\_\_\_ Project County: \_\_\_\_\_  
Date specifications first advertised for bid (if not advertised, date of RFP or first contact with contractor): \_\_\_\_\_  
**OR** If CM/GC contract, date contract became a public works contract (see OAR 839-025-0020(8)): \_\_\_\_\_  
Contract Amount: \$ \_\_\_\_\_  
Is this contract part of a larger project? YES  NO  If yes, total project amount: \$ \_\_\_\_\_  
If yes, **INITIAL** date specifications for project advertised for bid (see OAR 839-025-0020(6)(b)): \_\_\_\_\_  
Will project use federal funds that require compliance with the Davis-Bacon Act? YES  NO   
Date Contract Awarded: \_\_\_\_\_ Date Work Expected to Begin: \_\_\_\_\_ Date Work Expected to be Complete: \_\_\_\_\_

**PRIME CONTRACTOR INFORMATION:**

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State Zip: \_\_\_\_\_ Phone: \_\_\_\_\_  
Construction Contractors Board Registration #: \_\_\_\_\_  
Name of Bonding Company for Payment Bond: \_\_\_\_\_  
Address: \_\_\_\_\_  
Agent Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Payment Bond #: \_\_\_\_\_

Copy of first-tier subcontractors attached (see NOTE above).

Signature of agency representative completing form: \_\_\_\_\_  
Printed Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Date: \_\_\_\_\_  
Email Address: \_\_\_\_\_

**THIS FORM WILL BE RETURNED TO THE PUBLIC AGENCY FOR CORRECTION AND RESUBMITTAL IF INCOMPLETE.**

Notice of Public Works – Page 2

Complete this page for public works projects in which NO PUBLIC AGENCY AWARDS A CONTRACT TO A CONTRACTOR. Complete the CONTRACT INFORMATION AND SECTION B, C, D or E, whichever applies to the project.

**CONTRACT INFORMATION:**

Name of Project Owner: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Project Name: \_\_\_\_\_ Project #: \_\_\_\_\_  
 Project Location (Street(s), City): \_\_\_\_\_ Project County: \_\_\_\_\_  
 Total Project Cost: \$ \_\_\_\_\_ Amount of Public Funds Provided for the Project: \$ \_\_\_\_\_  
 Name(s) of Public Agency(ies) Providing Public Funds: \_\_\_\_\_  
 Will project use federal funds that require compliance with the Davis-Bacon Act? YES  NO   
 Date Work Expected to Begin: \_\_\_\_\_ Date Work Expected to be Complete: \_\_\_\_\_

**SECTION B: To be completed when a project is a public works pursuant to ORS 279C.800(6)(a)(B)** (a project for the construction, reconstruction, major renovation or painting of a road, highway, building, structure or improvement of any type that uses \$750,000 or more of funds of a public agency).

Date the public agency or agencies committed to the provision of funds for the project: \_\_\_\_\_

**SECTION C: To be completed when a project is a public works pursuant to ORS 279C.800(6)(a)(C)** (a project for the construction of a privately owned road, highway, building, structure or improvement of any type that uses funds of a private entity and in which 25 percent or more of the square footage of the completed project will be occupied or used by a public agency).

Total square footage of privately owned road, highway, building, structure or improvement: \_\_\_\_\_

Percent of total square footage of the completed project that will be occupied or used by a public agency: \_\_\_\_\_

Date the public agency or agencies entered into an agreement to occupy or use the completed project: \_\_\_\_\_

**SECTION D: To be completed when a project is a public works pursuant to ORS 279C.800(6)(a)(D)** (a project that includes the construction or installation of a device, structure or mechanism that uses solar radiation on public property, regardless of project cost or whether the project uses funds of a public agency).

Date the public agency entered into an agreement for the project: \_\_\_\_\_

**SECTION E: To be completed when a project is a public works pursuant to ORS 279C.800(6)(a)(E)** (a project for the construction, reconstruction, major renovation or painting of a road, highway, building, structure, or improvement of any type that occurs, with or without using funds of a public agency, on real property that a public university listed in ORS 352.002 owns).

Date the public agency entered into an agreement for the project: \_\_\_\_\_

Signature of agency representative completing form: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Date: \_\_\_\_\_

Email Address: \_\_\_\_\_

**THIS FORM WILL BE RETURNED TO THE PUBLIC AGENCY FOR CORRECTION AND RESUBMITTAL IF INCOMPLETE.**

## RETURN THIS COMPLETED FORM TO:

Prevailing Wage Rate Unit • Bureau of Labor & Industries • 800 NE Oregon Street, #1045 • Portland, OR 97232-3601  
 Telephone (971) 673-0852 • FAX (971) 673-0769 • [pwremail@boli.state.or.us](mailto:pwremail@boli.state.or.us)



## PLANNED PUBLIC IMPROVEMENT SUMMARY

FISCAL YEAR: \_\_\_\_\_ PAGE \_\_\_\_\_ OF \_\_\_\_\_  
 (Name of State or Local Government Agency)

Project Number, if applicable	Project Name	Project Location	Estimated Total On-site Construction Costs	Work Performed by Contractor or Agency?

ORS 279C.305 requires that not less than 30 days prior to adoption of its budget for the subsequent budget period, or before starting to construct a public improvement, each contracting agency shall prepare and file with the Commissioner of the Bureau of Labor and Industries a list of every public improvement that the contracting agency plans to fund in the budget period, identifying each improvement by name and estimating the total on-site construction costs. The list must also state whether the contracting agency intends to perform the construction through a private contractor. If the contracting agency intends to use the contracting agency's own equipment or personnel to perform construction work on a public improvement, and the estimated value of the construction work that the contracting agency intends to perform with the contracting agency's own equipment or personnel exceeds \$200,000 (or \$125,000 if the public improvement involves the resurfacing of highways, roads or streets at a depth of two or more inches), the contracting agency shall file with the commissioner not later than 180 days before construction begins on the public improvement an analysis that shows that the contracting agency's decision conforms to the state's policy that contracting agencies make every effort to construct public improvements at the least cost to the contracting agency. Public agencies are required to keep and preserve a full, true and accurate account of the costs of performing the work, including all categories of costs described in ORS 279C.305(3)(b). The final account of the costs is a public record.

Use this form (WH-118) to list planned public improvements. Use form WH-119 (Public Improvement Project Cost Analysis) to report the agency's cost analysis.

Mail completed forms to:      Prevailing Wage Rate Unit  
    Bureau of Labor & Industries  
    800 N.E. Oregon St., #1045  
    Portland, OR 97232-2180

\_\_\_\_\_  
 (Name of Agency Official)

\_\_\_\_\_  
 (Signature of Agency Official)





The 2018 edition of the **Prevailing Wage Rate Laws Handbook** is now available. One complimentary hard copy of each Prevailing Wage Rate (PWR) publication is available upon request by emailing Oregon BOLI Labor & Industries at [pwremail@boli.state.or.us](mailto:pwremail@boli.state.or.us) or calling (971) 673-0838. Additional copies are available at cost, plus postage.

In addition to providing this and other PWR publications, Oregon BOLI Labor & Industries' PWR Unit regularly offers free, informational seminars for both public agencies and contractors. The current schedule is available online at <https://www.oregon.gov/boli/employers/Pages/prevailing-wage-seminars.aspx>.

Prior to responding below, please consider that all PWR-related information is available online at <http://www.oregon.gov/BOLI/WHD/PWR/Pages/index.aspx>. If you are interested in receiving the handbook and/or being included on our mailing lists for future seminar notifications, please complete the form below and return it to the PWR Unit. You may mail this form to the address on the opposite side of the form, or fax it to (971) 673-2372.

- 
- Please send me the 2018 edition of the **Prevailing Wage Rate Laws Handbook**.
- Please add me to the mailing list to receive information about OR BOLI PWR seminars/webinars.
- Please add me to the e-mailing list to receive information about OR BOLI PWR seminars/webinars.

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AGENCY OR CONTRACTOR BUSINESS NAME and PHONE NUMBER (Required)

---

AGENCY OR CONTRACTOR BUSINESS E-MAIL ADDRESS (Please print clearly)

---

MAILING ADDRESS

---

CITY, STATE, ZIP

---

NAME OF REPRESENTATIVE and PHONE NUMBER if different from above.

166/343

place  
stamp  
here

OREGON BUREAU OF LABOR & INDUSTRIES  
PREVAILING WAGE RATE UNIT  
800 NE OREGON #1045  
PORTLAND, OR 97232


OREGON DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISIONS

FOR

Grading, Drainage, Structures, Paving, Signing, Striping, and Roadside Development  
Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)  
Pacific Highway West  
Washington County

**PROFESSIONAL OF RECORD CERTIFICATION:**

<p>Brian Dearing</p>  <p>EXPIRES: 12/31/2021</p>	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for _Traffic Control. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Section(s) 00220, 00221, 00222, 00223, 00224, 00225, 00226, 00227, 00228, 00850, 00855, 00856, 00865, 00867, 00868, 00905, 00910, 00920, 00930, 00940</p>
<p>Date Signed: <u>12/22/2020</u></p>	




OREGON DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISIONS

FOR

Grading, Drainage, Structures, Paving, Signing, Striping, and Roadside Development  
 Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)  
 Pacific Highway West  
 Washington County

**PROFESSIONAL OF RECORD CERTIFICATION:**

<p>J.P. Loomis</p>  <p>REGISTERED PROFESSIONAL ENGINEER          94835PE  <i>Digitally Signed</i> Jan 8, 2021, 8:36 AM          OREGON          MAY 14, 2019          JOHN P. LOOMIS</p> <p>EXPIRES: DEC. 31, 2022</p>	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for Bridge and Boardwalk. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Section(s) 00440, 00450, 00513, 00530, 00535, 00540, 00541, 00543, 00570, 00571, 00598, 02001, 02150, 02690</p>
<p>Date Signed: <u>1/8/2021</u></p>	




OREGON DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISIONS

FOR

Grading, Drainage, Structures, Paving, Signing, Striping, and Roadside Development  
Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)  
Pacific Highway West  
Washington County

PROFESSIONAL OF RECORD CERTIFICATION:

<p>Matt Little</p>  <p>EXP. 12-31-2022</p>	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for Mobilization, Erosion Control, Roadwork, Grading, Drainage, ADA sidewalk ramps, and Fencing. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Section(s) 00245, 00280, 00294, 00305, 00310, 00320, 00330, 00340, 00350, 00390, 00405, 00415, 00430, 00445, 00450, 00470, 00490, 00596A, 596D, 00598, 00620, 00641, 00730, 00744, 00749, 00759, 01010, 01050, 01069, 01091, 01095, 02830</p>
<p>Date Signed: January 14, 2021</p>	






OREGON DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISIONS

FOR

Grading, Drainage, Structures, Paving, Signing, Striping, and Roadside Development  
Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)  
Pacific Highway West  
Washington County

PROFESSIONAL OF RECORD CERTIFICATION:

<p>Mike Rose</p> 	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for Planting. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Section(s) 01030, 01040</p>
<p>Date Signed: 12/17/2020</p>	




OREGON DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISIONS

FOR

Grading, Drainage, Structures, Paving, Signing, Striping, and Roadside Development  
Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)  
Pacific Highway West  
Washington County

**PROFESSIONAL OF RECORD CERTIFICATION:**

<p>Rajiv Ali</p>  <p>EXPIRES: 12/31/21</p>	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for MSE Walls, Reinforced Soil Slope Walls, Soil Nail Walls, and Pinned Anchor Mesh Walls. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Section(s) 00399, 00513, 00596A, 00596D, 00598</p>
<p>Date Signed: <u>12/28/2020</u></p>	




OREGON DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISIONS

FOR

Grading, Drainage, Structures, Paving, Signing, Striping, and Roadside Development  
Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)  
Pacific Highway West  
Washington County

**PROFESSIONAL OF RECORD CERTIFICATION:**

<p>Steve Boice</p>  <p>REGISTERED PROFESSIONAL ENGINEER 74,348 OREGON JUNE 12, 2013 STEVEN J. BOICE</p> <p>EXPIRES: 12/31/2021</p>	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for Signals and Illumination. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Section(s) 00440, 00950, 00960, 00962, 00970, 00990</p>
<p>Date Signed: <u>12/8/2020</u></p>	



## **SPECIAL PROVISIONS**

### **WORK TO BE DONE**

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

1. Construct Paved Multi-Use Trail
2. Construct Pedestrian Bridge and Boardwalk
3. Construct Signalized crosswalk across OR99W at intersection with Meineke Pkwy
4. Construct Storm Drain and Culvert Piping including Open Bottom Arch Culvert
5. Construct Retaining Walls along Multi-Use Trail
6. Perform additional and Incidental Work as called for by the Specifications and Plans.

### **AUTHORITY OF CONSULTANT**

The consultant will be directly in charge of the Project. However, the consultant's authority on this Project is as designated in the official "Consultant Agreement" for this Project, and as designated by the Engineer. This does not include authority to approve Contract changes or semifinal and Final Inspection of the Project.

### **APPLICABLE SPECIFICATIONS**

The Specifications that are applicable to the Work on this Project is 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 Federal-Aid Project.



**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****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](http://www.atssa.com)
- BidExpress  
[www.bidx.com](http://www.bidx.com)
- 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 Electronic Bidding Information Distribution System (eBids)  
(Also referred to as ODOT eBids website)  
[ecm.odot.state.or.us/cf/EBIDS/](http://ecm.odot.state.or.us/cf/EBIDS/)
- ODOT Estimating  
[www.oregon.gov/ODOT/Business/Pages/Steel.aspx](http://www.oregon.gov/ODOT/Business/Pages/Steel.aspx)
- Oregon Legislative Counsel  
[www.oregonlegislature.gov/lc](http://www.oregonlegislature.gov/lc)
- ODOT Procurement Office - Conflict of Interest Guidelines and Disclosure Forms  
[www.oregon.gov/ODOT/Business/Procurement/Pages/PSK.aspx](http://www.oregon.gov/ODOT/Business/Procurement/Pages/PSK.aspx)
- ODOT Procurement Office - Construction Contracts Unit Notice of Intent  
[www.oregon.gov/ODOT/Business/Procurement/Pages/NOI.aspx](http://www.oregon.gov/ODOT/Business/Procurement/Pages/NOI.aspx)
- ODOT Procurement Office - Construction Contracts Unit prequalification forms  
[www.oregon.gov/odot/business/procurement/pages/bid\\_award.aspx](http://www.oregon.gov/odot/business/procurement/pages/bid_award.aspx)
- Oregon Secretary of State: State Archives  
[sos.oregon.gov/archives/Pages/default.aspx](http://sos.oregon.gov/archives/Pages/default.aspx)
- ODOT Traffic Control Plans Unit  
[www.oregon.gov/ODOT/Engineering/Pages/Work-Zone.aspx](http://www.oregon.gov/ODOT/Engineering/Pages/Work-Zone.aspx)
- ODOT Traffic Standards  
[www.oregon.gov/ODOT/Engineering/Pages/Signals.aspx](http://www.oregon.gov/ODOT/Engineering/Pages/Signals.aspx)

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****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:

"Grading, Drainage, Structures, Paving, Signing, Striping, and Roadside Development  
Cedar Creek/Tonquin Trail:  
OR 99W – SW Pine St (Sherwood)  
Pacific Highway West  
Washington County  
March 2021"

**00120.70 Rejection of Nonresponsive Bids** - Add the following bullet to the end of the bullet list:

- The Agency determines that any Pay Item is significantly unbalanced to the potential detriment of the Agency.

**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:

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

The Engineer will perform the Agency responsibilities described in the *Construction Surveying Manual for Contractors*, Chapter 1.5 (see Section 00305).

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

The Contractor shall perform the Contractor responsibilities described in the *Construction Surveying Manual for Contractors*, Chapter 1.6 (see Section 00305).

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

The Contractor shall perform slope staking including intersections and set stakes defining limits for clearing which approximate Right-of-Way and easements.

**00150.50(c) Contractor Responsibilities** – Replace the bullet that begins "Protect from damage or disturbance any Utility that remains..." with the following bullet:

- Protect from damage or disturbance any Utility that remains within the area in which Work is being performed. Maintain and re-establish location marks according to OAR 952-001-0090(3)(a). Coordinate re-establishment of the location marks with the associated Utility;

Replace the bullet that begins "Determine the exact location before excavating within ..." with the following bullet:

- Determine the exact location before excavating within the tolerance zone according to OAR 952-001-0090(3)(c);

Replace the bullet that begins " In addition to the notification required in OAR 952-001-0090(5), notify the Engineer..." with the following bullet:

- In addition to the notification required in OAR 952-001-0090(6), notify the Engineer and the Utility as soon as the Contractor discovers any previously unknown Utility conflicts or issues. Contrary to the OAR, stop excavating until directed by the Engineer and allow the Utility a minimum of two weeks to relocate or resolve the previously unknown Utility issues; and

Add the following bullet to the end of the bulleted list:

- Hold a Utility scheduling meeting and monthly Utility coordination meetings (see also 00180.42)

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, Address, Email, and Phone Number</b>
Northwest Natural	Rich Girard 220 NW 2 <sup>nd</sup> Ave Portland, OR 97209 <a href="mailto:Richard.Girard@nwnatural.com">Richard.Girard@nwnatural.com</a> 503-226-4211 x.2967
Clean Water Services	Steve Olson

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

	2550 SW Hillsboro Hwy, Hillsboro, OR 97123 <a href="mailto:OlsonS@cleanwaterservices.org">OlsonS@cleanwaterservices.org</a> 503-681-4474
Comcast	Alexander Silantiev 11308 SW 68 <sup>th</sup> Parkway Tigard, OR 97223 <a href="mailto:Alexander_Silantiev@comcast.com">Alexander_Silantiev@comcast.com</a> 503-596-3733

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.

**Northwest Natural - Gas Utilities -**

The Gas Utility operates a gas pipeline within the Project limits and may require an on-site safety watcher, at no cost to the Contractor.

In the event of an emergency, and in addition to the calls required by the Utilities notification system, the Contractor shall call:

- Northwest Natural Gas 1-800-882-3377; or

Add the following subsection:

**00150.50(g) Utility Information (Anticipated Relocations):**

The organizations list in Table 00150-2 may be adjusting Utilities within the limits of the Project during the period of the Contract with relocation Work estimated to be completed by the following dates and times:

**Table 00150-2**

<b>Subsection</b>	<b>Utility</b>	<b>Contact Person's Name, Address, Email, and Phone Number</b>	<b>Estimated Completion Date</b>
00150.50(g)(1)	Portland General Electric	Nikee Weber <a href="mailto:Nikee.Weber@pge.com">Nikee.Weber@pge.com</a> 503-672-5455	During Construction
00150.50(g)(2)	ODOT Electrical	Duc Phan <a href="mailto:Duc.V.PHAN@odot.state.or.us">Duc.V.PHAN@odot.state.or.us</a> Or Lisa Demers <a href="mailto:Lisa.C.DEMERS@odot.state.or.us">Lisa.C.DEMERS@odot.state.or.us</a>	During Construction
00150.50(g)(3)	Zipty Fiber	Eric Rettger 4155 SW Cedar Hills Blvd Beaverton, OR 97005 <a href="mailto:Eric.Rittger@Zipty.com">Eric.Rittger@Zipty.com</a> 503-812-9078 or Scott Binney	January 1, 2021

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

		4155 SW Cedar Hills Blvd Beaverton, OR 97005 <a href="mailto:Scott.Binney@Ziplay.com">Scott.Binney@Ziplay.com</a> 503-643-0371  Ziplay work order for reference = WO866695	
00150.50(g)(4)	City of Sherwood	Rich Sattler 15527 SW Willamette Street Sherwood, OR 97140 <a href="mailto:sattler@sherwoodoregon.gov">sattler@sherwoodoregon.gov</a> 503-925-2319	During Construction

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.

**(1) Portland General Electric - "Power Supplier":**

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 12 feet of the power line(s).

The Contractor shall notify the Power Supplier in writing, with a copy to the Engineer, 14 Calendar Days before the Contractor's estimated completion of Earthwork for electrical relocation. After the Contractor has completed this Work or 14 Calendar Days after the Power Supplier receives the notification, whichever occurs later, the Contractor shall then allow the Power Supplier 14 Calendar Days to schedule and complete the relocation and adjustment work.

Energized power lines overhang portions of the Work with a minimum vertical clearance of 18 feet. The Contractor shall maintain at least 12 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 the Power Supplier(s) to perform Work within 12 feet of the aerial power line. The Power Supplier(s) cannot de energize the power facility.

**(2) ODOT Electrical and Intelligent Transportation Systems (ITS):**

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

**(3) Ziplay Fiber - "Telecommunication Utility":**

The Contractor shall notify the Telecommunication Utility in writing, with a copy to the Engineer, at least 14 Calendar Days before beginning Work within 10 feet of the Telecommunication Utility facilities.

The Contractor shall notify the Telecommunication Utility in writing, with a copy to the Engineer, 14 Calendar Days before the Contractor is scheduled to begin performing trail construction. After the Telecommunication Utility receives the notification, the Contractor

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

shall then allow the Telecommunication Utility 7 Calendar Days to schedule and complete the relocation and adjustment work before the Contractor begins performing trail construction.

**(4) City of Sherwood - "Water Utility":**

The Contractor shall notify the Water Utility in writing, with a copy to the Engineer, at least 14 Calendar Days before beginning Work within 10 feet of the Water Utility facilities.

The Contractor shall notify the Water Utility in writing, with a copy to the Engineer, 21 Calendar Days before the Contractor is scheduled to begin performing trail construction between Station 40+00 and 44+00. After the Water Utility receives the notification, the Contractor shall then allow the Water Utility 14 Calendar Days to schedule and complete the relocation and adjustment work before the Contractor begins performing trail construction between Station 40+00 and 44+00.

**00150.55 Cooperation with Other Contractors** - Add the following to the end of this subsection:

The following contract work will be ongoing within the Project site during the following times:

<b>Contract Name (Contractor's Name)</b>	<b>Estimated Times (From - To)</b>
Parkway Plaza OR99W Frontage Improvements	Feb 2021 – Mar 31, 2021

**SECTION 00160 - SOURCE OF MATERIALS**

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

**00160.21 Cargo Preference Act Requirements** - Add the following to the end of this subsection:

Additional information may be available at the following websites:

- <https://www.fhwa.dot.gov/construction/cqit/cargo.cfm>
- <https://www.fhwa.dot.gov/construction/cqit/cargo/qa.cfm>.

**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:

Add the following subsection:

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

**00170.06 Federal-Aid Participation** - This Project is to be conducted according to the regulations applying to Federal-Aid Highway Projects.

**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	\$5,000,000
Commercial Automobile Liability	\$1,000,000	(aggregate limit not required)

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

Add the following as Additional Insureds under the Contract:

- Jacobs Engineering

**00170.70(k) Builder's Risk Installation Floater** - Replace this subsection, except for the subsection number and title, with the following:

If specified by Special Provision, the Contractor shall obtain, at its expense, and keep in effect during the term of the Contract, Builder's Risk Installation Floater Insurance covering the Contractor's Materials and Equipment to be used for completion of the Work performed under the Contract. The minimum amount of coverage to be carried shall be equal to the full amount of the Contractor's Equipment, Materials, or fixtures to be installed, in-transit, or stored off-site during the performance of the Contract. This insurance shall include as loss payees the State of Oregon, the Owner, the Contractor and Subcontractors as their interests may appear.

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

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

- Jacobs Engineering

## **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:

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

<b>Limitations</b>	<b>Subsection</b>
Cooperation with Utilities .....	00150.50
Cooperation with Other Contractors .....	00150.55
Contract Time .....	00180.50(h)
Right-of-Way and Access Delays .....	00180.65
Closed Lanes .....	00220.40(e)(1)
Regulated Work Areas .....	00290.34(a)
Noise Control .....	00290.32
MBTA Permit .....	00290.36(a)(1)
Maintenance Under Traffic .....	00620.43

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

**00180.41 Project Work Schedules** - After the paragraph that begins "One of the following Type..." add the following paragraph:

In addition to the "look ahead" Project Work schedule, a Type A schedule as detailed in the Standard Specifications is required on this Contract.

**00180.42 Preconstruction Conference** - Add the following to the end of this subsection:

The Contractor shall conduct a group Utilities scheduling meeting with representatives from the Utility companies involved with this Project and the Engineer before the preconstruction conference. The Contractor shall incorporate the Utilities time needs into the Contractor's schedule submitted at the preconstruction conference.

Add the following subsection:

**00180.50(h) Contract Time** - There are two Contract Times on this Project as follows:

- (1) The Contractor shall complete all Work to be done under the Contract, within the regulated work area, not later than September 30, 2021.
- (2) The Contractor shall complete all Work to be done under the Contract, except for seeding establishment and plant establishment, not later than December 6, 2021.

**00180.85(b)(2) Multiple Contract Times** - Add the following paragraph and bullet list to the end of this subsection:

The Agency determined percentages of the value of Work required to be complete by the Contract Times listed under 00180.50(h) are as follows:

- For Contract Time 00180.50(h)(1) the Agency determined percentage of Work is 80 percent.
- For Contract Time 00180.50(h)(2) the Agency determined percentage of Work is 100 percent.



**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****SECTION 00190 - MEASUREMENT OF PAY QUANTITIES**

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

**00190.20(f)(2) Scale Without Automatic Printer** - Replace the paragraph that begins " If the scales require manual entry of gross weight ..." with the following paragraph:

If the scales require manual entry of gross weight information, the Agency may periodically have a representative weigh witness at the scales to observe the weighing procedures. The Contractor shall inform the Engineer of its intent to use a scale without an automatic printer at least 3 working days before weighing begins or before the Contractor changes to a scale that does not have an automatic printer. The Contractor shall pay costs for the weigh witness. The hourly cost of the weigh witness will be as stated in the Special Provisions. In addition, the Engineer may periodically check the weight for a load of Materials by directing the haul vehicle to reweigh on a different scale that has been inspected and certified according to 00190.20(b) and 00190.20(d).

Add the following paragraph after the paragraph that begins " If the scales require manual entry...":

Pay costs for the weigh witness at \$35.00 per hour.

**00190.20(g) Agency-Provided Weigh Technician** - Add the following paragraph to the end of this subsection:

Pay costs for the weigh technician at \$35.00 per hour.

**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**

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

Comply with Section 00199 of the Standard Specifications.

**SECTION 00210 - MOBILIZATION**

Comply with Section 00210 of the Standard Specifications.

**SECTION 00220 - ACCOMMODATIONS FOR PUBLIC TRAFFIC**

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

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

- When performing trench excavation or other excavation across or adjacent to a Traffic Lane on a roadway having a pre-construction posted speed greater than 35 mph, backfill the excavation, install surfacing, and open the roadway to traffic by the end of each work shift. Install a "BUMP" (W8-1-48) sign approximately 100 feet before the backfilled area and a "ROUGH ROAD" (W8-8-48) sign approximately 500 feet ahead of the "BUMP" sign. If this requirement is not met, maintain all necessary lane or shoulder closures and provide additional TCM, including flagging, at no additional cost to the Agency. Do not use temporary steel plating to reopen the roadway.
- Before activating a modified traffic signal, revising lane usage, implementing new roadway geometry, or removing a "STOP" sign, protect traffic by installing "NEW TRAFFIC PATTERN AHEAD" (W23-2) signing according to 00222.40. Keep the signs in place for 30 Calendar Days after completing the modifications.
- When an abrupt edge is created by excavation, protect traffic according to the "Excavation Abrupt Edge" and the "Typical Abrupt Edge Delineation" configurations shown on the Standard Drawings.
- Protect pedestrians in pole base excavation areas by placing approved covers over all pole base excavations. Place a minimum of two B(II)LR barricades adjacent to and on either side of the excavated area, facing pedestrian traffic, or place covers and barricades as directed.

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

One Lane in each direction may be closed on the Pacific Highway West OR99W when allowed, shown, or directed during the following periods of time except as specified in 00220.40(e)(2):

- Nightly, Sunday Night through Friday Morning, between 8:00 p.m. and 6:00 a.m.

One Lane in one direction may be closed on the SW Meinecke Pkwy when allowed, shown, or directed during the following periods of time except as specified in 00220.40(e)(2):

- Nightly, Sunday Night through Friday Morning, between 8:00 p.m. and 6:00 a.m.

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****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:

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

- At least ten Calendar Days before closing the sidewalks, place a "SIDEWALK CLOSED, Full Time" (CW11-4) sign in advance of each future closure point. Locate the sign so it is legible from the nearest alternate pedestrian pathway facing incoming pedestrian traffic. The sign may be mounted between the panels of a Type II barricade or on a single-post TSS. Do not place the sign or sign support such that it narrows the pedestrian pathway to a width of less than 4 feet.
- Before opening the TPAR, place TPAR signing and other TCM as shown, or as directed. Maintain the "SIDEWALK CLOSED, Full Time" (CW11-4) signs while the TPAR is open to pedestrian traffic.
- At least ten Calendar Days prior to the start of work, place a "SIDEWALK OPEN" (CW11-3) sign in advance of each end of the Work Area. Locate the sign so it is legible from the nearest alternate pedestrian pathway facing incoming pedestrian traffic. The sign may be mounted between the panels of a Type II barricade, or on a single-post TSS. Do not place the sign or support such that it narrows the pedestrian pathway to a width less than 4 feet.
- Before starting work, place pedestrian-specific TCM as shown in the TCP, or as directed. Maintain "SIDEWALK OPEN" (CW11-3) signs while work is affecting the pedestrian pathway.
- Place a "PEDESTRIANS ON ROADWAY" (CW11-2) sign at the beginning of each end of the Work Area, facing incoming traffic as shown, or as directed.
- Install a 54-inch "TRUCKS LEAVING HIGHWAY XXXX FT" sign in advance of each entrance point to the Work Area at sign spacing "A" from the "TCD Spacing Table" shown on the Standard Drawings. Install a 54-inch "TRUCKS ENTERING HIGHWAY XXXX FT" sign in advance of each exit point from the Work Area at sign spacing "A" from the "TCD Spacing Table" shown on the Standard Drawings.
- Install a "PROJECT IDENTIFICATION" (CG20-8) sign with an "ODOT" logo rider on the Pacific Highway West. Place the sign according to sign spacing "A" from the "TCD Spacing Table" shown on the Standard Drawings or as modified by the Supplemental Drawings, in advance of the "ROAD WORK AHEAD" sign at each end of the Project, facing incoming traffic. The Engineer will determine the sign legend.

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- Install "ROAD WORK AHEAD" (W20-1-48) signs with a 36 by 24-inch "FINES DOUBLE" (R2-6aP) rider on the Pacific Highway West, according to the "TCD Spacing Table" shown on the Standard Drawings or as modified by the Plans except do not install the "FINES DOUBLE" rider on concrete barrier mounted signs.
- Install beyond each end of the Project, facing outgoing traffic, an "END ROAD WORK" (CG20-2A-24) sign a distance of (A + 2) according to the "TCD Spacing Table" shown on the Standard Drawings or as modified by the Plans.
- Install two sign flag boards, as shown on the Standard Drawings, above the following detour and road closed advance warning signs, where applicable:
  - "DETOUR AHEAD", "DETOUR XXXX FT", "DETOUR X/X MILE" (W20-2) signs.
  - "ROAD CLOSED AHEAD", "ROAD CLOSED XXXX FT", "ROAD CLOSED X/X MILE" (W20-3) signs.
- For each leg of the intersection affected by changes to the traffic signal, install the following warning signs:
  - A "Signal Ahead" (W3-3) symbol sign approximately 500 feet in advance of the intersection, shown on the Standard Drawings or as modified by the Plans.
- When construction requires bicycles to use the Traffic Lanes, install a "Bicycle ON ROADWAY" (CW11-1) symbol sign on 1/2 mile spacing through the affected area. Keep the signs in place until completion of the Shoulder or bikeway final surface.
- Install a 72 by 24-inch "CONSTRUCTION VEHICLE DO NOT FOLLOW" (CW23-14) sign on rigid substrate on the back of all material or Equipment delivery vehicles.

**00222.45(b) Portable Changeable Message Signs** - Add the following bullets to the end of this subsection:

- During paving operations, provide one 2-line PCMS on the finish roller. Display the following messages on the PCMS:
 

<b>Panel 1</b>	<b>Panel 2</b>
WORKERS	SLOW TO
IN ROAD	XX MPH
- During paving operations, provide one 2-line PCMS on the intermediate roller. Display the following messages on the PCMS:
 

<b>Panel 1</b>	<b>Panel 2</b>
SLOW FOR	WORKERS
WORKERS	IN ROAD
- At least seven Calendar Days before the \_\_\_\_\_ closure, place one or more PCMS displaying the following message as shown, or as directed:
 

<b>Panel 1</b>	<b>Panel 2</b>
(Name/# of highway)	CLOSURE
(Location)	(Time Frame)
CLOSURE	(Time Frame)

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****00222.90 Payment -**

Add the following to the end of this subsection:

Payment will be made for not more than one sets of Work Area signs. All additional sets of Work Area signs will be at no additional cost to the Agency.

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

Comply with Section 00223 of the Standard Specifications.

**SECTION 00224 - TEMPORARY TRAFFIC CHANNELIZING DEVICES**

Comply with Section 00224 of the Standard Specifications.

**SECTION 00225 - TEMPORARY PAVEMENT MARKINGS**

Comply with Section 00225 of the Standard Specifications.

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

Comply with Section 00226 of the Standard Specifications.

**SECTION 00227 - TEMPORARY TRAFFIC SIGNALS AND ILLUMINATION**

Comply with Section 00227 of the Standard Specifications.

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

Comply with Section 00228 of the Standard Specifications

**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

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**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 and environmental guideline requirements and does not negatively affect neighboring properties or water rights.

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.
- 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.
- 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

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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:

Pipe .....	00445.11
Plastic Sheeting .....	00280.14(a)
Riprap .....	00390.11
Sandbags .....	00280.15(a)
Water Intake Screening.....	00290.34(c)

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** - Qualified Agency, ODFW, or ODOT consultant biologists will remove fish and other aquatic organisms from the isolation 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 TWMF to perform the specified tasks as follows:

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

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- In the event of containment failure immediately notify the Engineer so arrangements can be made to remove fish and aquatic organisms from the isolation Work areas prior to the continuation of Work within the ordinary high water limits.

**Maintenance**

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

**Finishing and Cleaning Up**

**00245.70 Removal** - Prior to removal of the TWMF, obtain approval from the Engineer after completion of all Work within ordinary high water limits. Remove the TWMF and re-water and restore the stream flow. Maintain downstream water flow during removal of the facility. Staged or metered re-watering may be required and will be determined by the Engineer.

**Measurement**

**00245.80 Measurement** - No measurement of quantities will be made for temporary water management facilities.

The estimated quantities of Materials required for the temporary water management facility are:

Temporary Water Management Facility at Station 17+97:

Pipe .....	120 Feet
Plastic Sheeting .....	100 Square Yard
Riprap .....	20 Cubic Yard
Sandbags.....	3,000 Each

The quantities of bypass pump monitoring will be measured on the time basis, of the actual number of Days the bypass pump is in operation and a daily monitoring report is received.

Turbidity monitoring will be measured according to 00290.80.

**Payment**

**00245.90 Payment** - The accepted quantities of temporary water management facilities will be paid for at the Contract lump sum amount for the item "Temporary Water Management Facility at Station 17+97".

The location of the facility will be inserted in the blank.

The accepted quantities of bypass pump monitoring will be paid for at the Contract unit price, per Day, for the item "Bypass Pump Monitoring".

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.

Turbidity monitoring will be paid for according to 00290.90.



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

**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 not applicable to the Project. Before beginning Work on the Project, complete and submit a 1200-CN transfer form to obtain ownership of the project's 1200-CN permit.

**00280.14(e) Slope and Channel Liner Matting** – Replace this subsection, except for the subsection number and title, with the following;

Furnish matting for anchored mesh walls meeting the requirements of Section 00399. For other areas, furnish matting from the QPL that meets the following performance criteria categories:

- **Type A** – Slope protection mat, fully biodegradable, for Clay Soil Slopes 1V:3H or flatter.
- **Type B** – Slope protection mat, fully biodegradable, for sandy Soil Slopes 1V:3H or flatter.
- **Type C** – Slope protection mat, fully biodegradable, for Clay Soil Slopes steeper than 1V:3H.
- **Type D** – Slope protection mat, fully biodegradable, for sandy Soil Slopes steeper than 1V:3H.

Where shown, furnish hydraulically applied bonded fiber matrix slope protection matting that consists of fully biodegradable long fiber strands held together by a water resistant bonding agent.

**00280.15(f)(1) Filter Sock Material** - Add the following sentence to the end of this subsection:

Furnish filter sock material with a diameter of 18 inches.

**00280.30 Erosion and Sediment Control Manager** – Replace the paragraph beginning with “If the Agency’s NPDES 1200-CA...” with the following paragraph:

Designate and provide an ESCM who possess a valid ODOT ESCM certificate or who has successfully completed an erosion control training that is acceptable to the Engineer.

**00280.48 Emergency Materials** - Add the following paragraphs after the paragraph that begins "Provide, stockpile, and protect...":

Provide and stockpile the following emergency materials on the Project site:

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Item	Quantity
Sediment Fence.....	400 LF
Sediment Barrier, Type 2, Biofilter Bags.....	50 EA
Sediment Barrier, Type 3, Fiber Rolls .....	200 LF
Plastic Sheeting .....	100 SY

**SECTION 00290 - ENVIRONMENTAL PROTECTION**

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

Add the following subsection:

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

- Do not discharge contaminated or sediment-laden 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.

Add the following subsection:

**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.

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- 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.
  - 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** - Add the following paragraphs to the end of this subsection:

Review City of Sherwood Code Chapter 9.52 (*Prohibiting of Noise*), which describes noise control regulations. Comply with the applicable noise control requirements of the permit for Project Work.

Copies of the noise variance permit for this Project are available from the Engineer.

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

Meet with the Agency Biologist, Resource Representative, Engineer, 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:

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The regulated work area is the area at or below the ordinary high water (OHW) elevation shown on the plans. The regulated work area shall also include the area within the wetland boundaries as described in the project's Joint Permit Application (JPA).

Perform work within the regulated work area only during the in-water work period. The in-water work period is from July 15 to September 30.

The total volume of material filled or discharged into waters of the State and waters of the U.S. shall not exceed the values listed in Table 290-2.

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.

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

- Allow entry within the regulated work area or between stations 37+50 and 37+75
- 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.

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**(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.

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) Special Aquatic Habitats** - The following exploration or construction activities are not allowed in special aquatic habitats:

- Use of pesticides and herbicides, unless allowed according to Section 01030.
- Use of short pieces of plastic ribbon to determine flow patterns.
- Temporary roads or drilling pads built on steep slopes, where grade, soil type, or other features suggest a likelihood of excessive erosion or slope failure.

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- Exploratory drilling in estuaries that cannot be conducted from a work barge, or an existing bridge, dock, or wharf.
- Installation of a fish screen on any permanent water diversion or intake that is not already screened.
- Drilling or sampling in an EPA-designated Superfund Site, a state-designated clean-up area, or the likely impact zone of a significant contaminant source, as identified by historical information, U. S. Army Corps of Engineers representative, or the Agency.

**(5) 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.

**(6) 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.

**(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.

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- 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 Engineer 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.
- 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) 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.

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- 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.

**(10) 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 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.

**(1) Bird Management** - Bird management activities to comply with the Migratory Bird Treaty Act will be performed by Washington County and its permitted agents, as documented in the Washington County MBTA permit. Ensure that Washington County and its permitted agents have access to the project area as needed to prevent migratory bird nesting. Nesting prevention may include daily bird harassment and the installation and maintenance of devices that exclude birds.

Do not disturb migratory bird nesting habitat (shrubs, trees and structures) or clear vegetation from March 1 to September 1 each calendar 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.

**00290.41 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 (Corps) and the Department of State Lands (DSL). Keep a copy of Corps and DSL permits 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**



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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)
Wetland 3	16.3	7.6	33+55	Permanent	241
Tributary 6	9.8	11.1	15+40	Permanent	96
Tributary 7	34.0	39.0	17+97	Permanent	486
Tributary 7 (Temp)	126.0			Temporary	
Tributary 8	2.7	0.4	27+64	Permanent	56
Tributary 12	12.3	13.4	39+50	Permanent	314

Add the following subsection:

**00290.42 Work Containment Plan** - A Work Containment Plan (WCP) is required on this Project for in-water work activity(ies).

Develop and submit a WCP for approval at least 28 Calendar Days prior to mobilization for in-water work activity(ies). 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 Engineer 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.

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

**00290.51 Protection of Sensitive Cultural Sites** - Add the following to the end of this subsection:

There are no known sensitive cultural sites on this Project. At the time of preparation of the Plans, no sites were identified.

The Region Environmental Coordinator for this Project is Sarah Eastman (503-731-3103).

The Agency Archaeology Representative for this Project is Roy Watters (503-986-3375).

All contact with the Agency Archaeology Representative and the Region Environmental Coordinator shall be through the Engineer.

An Inadvertent Discovery Plan (IDP) has been developed for this project. The IDP is available from the Engineer.

**00290.90 Payment** - Add the following paragraph(s) to the end of this subsection:

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

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.

The accepted quantities of turbidity monitoring will be paid for at the Contract lump sum amount for the item "Turbidity Monitoring".

Payment for turbidity monitoring 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 work zone 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:

- Collect representative surface material samples within unpaved areas along OR99W shoulder and where ADA ramps and crosswalk will be constructed at the locations listed in Table 00294-1.
- Test samples and determine if surface material at those locations meets the DEQ definition of Clean Fill, as defined by OAR 340-093-0030(18).

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- Surface material, including grubbing, that does not meet the DEQ definition of Clean Fill shall be excavated, segregated, stockpiled, transported, and disposed according to 00294.40.

**Suspected Contaminated Soil Location Table 00294-1**

Location/Station	Depth below grade (feet)	Approximate Quantity (tons)	Suspected Contaminants
Within OR99W shoulder and bottom of roadside ditch from Sta 47+00 to 50+14	0-0.5'	53	Petroleum hydrocarbons, metals, and polynuclear aromatic hydrocarbons
Between existing sidewalk and OR99W edge of pavement from Sta 50+14 to 51+14	0-0.5'	14	
Traffic island and ADA ramp work in the OR99W and Meineke Rd intersection	0-0.5'	7	
<b>Approximate Total Quantity</b>		74 tons	
<b>Quantity to be reused on Project</b>		0 tons	
<b>Quantity to be disposed at landfill</b>		74 tons	

- In areas where excavation is not required, leave contaminated material and grubbing material in place.

**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. This definition does not apply to Soil that is covered by existing impervious surfaces, including but not limited to curbs, sidewalks and parking lots constructed of asphalt or concrete.

**ODOT Beneficial Use Determination (ODOT BUD)** - The statewide ODOT Beneficial Use Determination (ODOT BUD), approved by DEQ (No. BUD-20181204), outlines a series of pre-approved non-residential reuse options for excess Soil materials that do not meet DEQ's Clean Fill Standards in some circumstances. These options may vary based on project scope and location, and documentation may vary, as directed by the Engineer.

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- If lead is present in soil at concentrations exceeding the DEQ clean fill limit of 28 mg/kg then provide 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 beginning excavation activities within contaminated areas. 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 2 Calendar Days of the request.
- Current employee training certificates and medical surveillance information before beginning Work within the contaminated areas.
- Work plan for sample collection and analytical testing described in 00294.31.
- Summary report for sample collection and analytical testing described in 00294.31.

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

- Permits, permit applications, and documentation of compliance.
- All 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 containing lead, provide employees trained in:
  - Lead awareness according to 29 CFR 1926.62(l).
  - Provide an Oregon Registered Geologist with 2-years of experience assessing contaminated material and collecting samples for clean fill determination.

**00294.31 Soil Sample Collection and Analytical Testing** – An Oregon Registered Geologist will conduct the following:

- Prepare a work plan for sampling nonhazardous surface material within the alignment of the three segments listed in Table 00294-1. Surface material samples shall be representative of the surface layers within each segment. Samples shall be collected within unpaved areas where new ADA ramps or walkway will be constructed. Submit work plan for Agency review at least 5 days prior to sample collection.
- Collect one composite sample representative of surface material from 0-0.5' below grade within Sta 47+00 to 50+14.
- Collect one composite sample representative of surface material from 0-0.5' below grade within Sta 50+14 to 51+14.
- Collect one composite sample representative of surface material from 0-0.75' below grade within the Traffic Island and ADA ramp work areas in the OR99W and Meineke Rd intersection.
- Submit all composite samples to an ORELAP accredited laboratory and analyze each sample for total metals according to EPA Method 6020, PAHs according to EPA Method 8270 SIM, and total petroleum hydrocarbons according to NWTPH-Dx. Total

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metals shall include arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, antimony, copper, and zinc. If the Total Lead concentration exceeds 100 mg/kg in any sample then that sample will also be analyzed for TCLP Lead.

- Provide a summary report (not to exceed two pages) presenting the laboratory results and comparison with DEQ clean fill screening levels. Attach copies of the final laboratory report, tables summarizing laboratory results, and figure(s) showing where samples were collected.

**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 activities within contaminated areas.
- Allow the Agency to collect Soil samples during excavation activities.
- Segregate non-contaminated Soil from contaminated Soil during excavation activities, based on material testing results described in 00294.31.
- Load contaminated Soil directly into trucks and transport directly to the recycling or disposal facility or, when approved by the Engineer, temporarily store contaminated Soil on-site.
- Store contaminated Soil 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 precipitation run-off 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** - Dispose of contaminated Soil according to the following:

**(a) Landfill Disposal:**

- 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 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.

**Measurement**

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**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:

- Lead compliance plan.

Soil sample and analytical testing will be measured on the unit basis for each sample submitted and tested according to 00294.02 when test results are submitted according to 00294.03.

The quantities of contaminated Soil disposed will be measured on the weight basis, based on weigh tickets from the recycling or disposal facility.

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>
(b) Lead Compliance Plan.....	Lump Sum
(d) Soil Sample Collection and Analytical Testing .....	Each
(e) Contaminated Soil Disposal.....	Ton

Item (d) includes mobilization, Soil sampling, testing, analyses, and preparation of work plans and reports required in 00294.31. Additional testing beyond that listed in 00294.31 will only be paid if authorized by the Engineer.

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

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

Clearing and grubbing will be paid for according to 00320.90.

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 00305 - CONSTRUCTION SURVEY WORK**

Comply with Section 00305 of the Standard Specifications.

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****SECTION 00310 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

Comply with Section 00310 of the Standard Specifications modified as follows:

**00310.90 Payment** - Add the following to the end of this subsection:

No separate or additional payment will be made for removal or disposal Work included in Section 00330 according to 00310.02.

**SECTION 00320 - CLEARING AND GRUBBING**

Comply with Section 00320 of the Standard Specifications.

**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.

**00330.42(c)(3) Embankment Slope Protection** - Add the following paragraph to the end of this subsection:

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 00340 - WATERING**

Comply with Section 00340 of the Standard Specifications.

**SECTION 00350 - GEOSYNTHETIC INSTALLATION**

Comply with Section 00350 of the Standard Specifications.

**SECTION 00390 - RIPRAP PROTECTION**

Comply with Section 00390 of the Standard Specifications modified as follows:

**00390.42 Filter Blanket Construction** - Replace the sentence that begins "If required, place the filter..." with the following sentence:

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Place the filter blanket on the prepared area to the full specified thickness in one operation, using methods which do not cause segregation.

**00390.43 Riprap Backing** - Delete this subsection.

**00390.80(b) Riprap Backing** - Delete this subsection.

**00390.90 Payment** - Delete Pay Item (b) from the Pay Item list:

### **SECTION 00399 - ANCHORED MESH WALL SOIL SLOPE STABILIZATION**

Section 00399, which is not in the Standard Specifications, is included in this project by special provision.

**00399.00 Scope** - This Work consists of furnishing and installing Anchored mesh wall soil slope stabilization systems, in close conformity to the lines, grades, and dimensions shown or established for Walls PM-01 through PM-08.

#### **00399.02 Definitions -**

**Anchored High Tensile Strength Wire Mesh Slope Protection** - A system of woven, diamond-patterned mesh made of a single type of high tensile strength wire, supported by wire ropes secured with wire rope anchors, and held against the slope with a pattern of anchor rods, soil nails, spike plates, and boundary ropes.

**Anchor Rod** - A steel rod inserted into a predrilled or self-drilled hole in Soil or Rock, with a mechanical connection to the wire mesh, in an anchored high tensile strength steel wire mesh slope protection system. It is used to secure the wire mesh directly to the slope along the top boundary.

**Boundary Rope** - A component of an anchored high tensile strength steel wire mesh slope protection system. It is secured by rope anchors, and assists in holding the wire mesh against the slope under tension.

**Rope Anchors:** A Spiral rope, 2-stranded, with two hot dip galvanized steel tubes in the loop area inserted in a pre-drilled hole in soil or rock filled with grout. It is used to secure the border rope laterally. In order to be able to tension the border ropes sufficiently by sections, the spiral rope anchors should be no further than 75 feet apart from each other.

**Soil Nail** - A steel rod inserted into a predrilled or self-drilled hole in Soil or Rock, with a mechanical connection to the wire mesh, in an anchored high tensile strength steel wire mesh slope protection system. It is used to secure the wire mesh directly to the slope.

**Spike Plate** - A diamond-shaped steel plate used with an anchor rod or soil nail in an anchored wire mesh slope protection system to structurally connect the wire mesh to the anchor rod or soil nail.

**Supplemental Soil Nail** - An soil nail installed between regular pattern of soil nails to improve the fit of the wire mesh to the slope contours as part of an anchored wire mesh slope protection system.



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**Supplemental Anchor rod** - An anchor rod installed between regular pattern of anchor rods.

**Support Rope** - A wire rope along the top of a wire mesh slope protection system. It is secured by slope protection anchors, and supports the upper edge of the wire mesh.

**Wire Mesh Slope Protection** - Collective term referring to high tensile strength wire mesh slope protection systems, anchored high tensile wire mesh slope protection systems.

**00399.03 Required Submittals:**

**(a) Anchored High Tensile Strength Wire Mesh Slope Protection Submittals** - Submit a stamped detailed work plan according to 00150.35 to the Engineer for approval, at least 10 Calendar Days before the preconstruction conference. Include the following:

- Submit detailed layout and shop drawings of the proposed system, prepared by the manufacturer of the anchored mesh stabilization system. Do not begin fabrication until the shop drawings have been reviewed and comments have been resolved.
- Submit calibration curves for anchor testing equipment including jacks, pressure gages, and load cells in accordance with 00598.47(c). Refer to Section 00598 for details on soil nail testing.
- Documentation demonstrating satisfactory performance of the steel mesh furnished by this Supplier in other projects completed for use as part of an anchored high tensile strength steel mesh system where the site conditions were similar to the conditions on this Project.
- An inclusive list, with catalogue cuts, of all system appurtenances including anchor rods, soil nails, spike plates, grout, lacing wire rope, wire rope clips, wire rope thimbles, ferrules, slope protection anchors, and other fastening hardware.
- Mill certificates for the wire rope.
- Procedures for temporarily securing mesh at the top of the slope during installation, including the type(s) of temporary anchor and the plan for removal of temporary support that is not incorporated into the final Work.
- Equipment and procedures for installing and anchoring the system boundary ropes.
- Equipment and procedures for installing the high tensile strength steel mesh.
- Procedures for attaching mesh panels to each other and to boundary ropes, and for placing the mesh panels at the design location on the slope.
- Procedures for installing anchor rods, soil nails and spike plates.
- Calibration data for torque wrenches, including a graph of torque versus tension for each torque wrench to be used.
- Color(s) for powder coating or otherwise coloring all wire rope and cable to match the mesh color, if mesh color is specified or shown. Conform to Federal Standard 595C.
- Manufacturer's data sheets for materials to restore corrosion protection on exposed steel.

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The Engineer will respond within 21 Calendar Days after receipt of the work plan. Do not proceed with the Work until the Engineer has authorized the work plan in writing.

**(b) Personnel Submittals** - Submit documentation showing the qualifications of drill operators, installers, and on-site supervisor according to 00598.02 and 00399.30. The Engineer will respond within 21 Calendar Days after receipt of the submittal. Do not proceed with the Work until the Engineer has approved the submittal in writing.

**Materials**

**00399.18 Anchored High Tensile Strength Steel Wire Mesh Slope Protection – Powder coat all mesh and components, except anchor rod or soil nails.**

**(a) Anchor Rods /Soil Nails (Predrilled)** - Provide Grade 75 all-thread rods, Grade 75 bolts, or equivalent, of the diameter shown, with a corrosion allowance of 0.079-inch zinc galvanization included in their diameter. Provide nails with a minimum ultimate strength of 55,000 psi that are groutable using a tremie tube grouting system and capable of being post-tensioned to the minimum design load shown. Required minimum nail length is shown. Provide centralizers every 5 feet along each nail and a tremie tube for grouting.

**(b) Anchor Rods/Soil Nails (Self-Drilling)** - Provide self-drilling, hollow-core anchor rod or soil nails of the diameter shown, that comply with ASTM A615, and are supplied with a 3-inch diameter sacrificial bit. Make self-drilling anchor rod or soil nails from high-strength steel with a minimum ultimate strength of 55,000 psi, groutable and capable of being post-tensioned to the minimum design load shown.

**(c) High Tensile Strength Steel Wire Mesh** - Furnish a diamond mesh of woven construction, consisting of a single type of wire, with the ends of each wire formed into a loop and twisted. Fasten the loops of the wire mesh together to prevent unraveling of the mesh. Hot-dip galvanize the wire with a zinc/aluminum coating, with a minimum weight of 0.40 ounce per square foot for Level 3 drawn Zn5 Al wire. Provide wire that is alloyed high strength carbon steel wire with a minimum tensile strength of 256,000 psi. Use wire mesh with an opening of approximately 1.88 inches by 3.75 inches and the depth of the mesh of 0.27 inches.

Use Tecco® Steel Wire Mesh G65/3mm from the manufacturers listed below (Alternate material meeting these minimum specifications can be submitted by the contractor).

GeoBrugg        North  
America  
22 Centro Algodones.  
Algodones, New Mexico,  
87001  
505-771-4080

**(d) Connection Clips** – Fabricate connection clips from high-strength steel wire with a minimum diameter of 0.15 inch and a minimum ultimate tensile strength of 4,900 pounds according to ASTM A1007 (Level 3 drawn Zn5 Al wire), measure 2.36 by 0.83 inches and have two reversed end hooks on one side of the clamp. Galvanize wire with a 95 percent

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zinc and 5 percent aluminum coating, with a minimum weight of 0.49 ounce per square foot. Connection clips are used to connect individual mesh sheets.

Hog ring connectors are not allowed.

**(e) Spike Plates** - Provide diamond-shaped spike plates made from 0.4-inch steel with a width of 7.48 inches and a length of 13 inches. Hot-dip galvanized Spike Plates according to ASTM A123 (ASTM A123M) with a minimum layer thickness of 85 microns.

**(f) Compression Claws** – Use 0.24-inch diameter carbon steel bar, hot dipped galvanized Compression claws or press claws with minimum layer thickness of 85 microns. Use Type 2 compression claws to fasten the mesh to the boundary ropes.

**(g) Boundary Ropes** - Provide galvanized 1/2-inch diameter wire rope for attaching the mesh at installation boundaries. Provide Type 1, general purpose rope, Class 2, 6x19 IWRC, with a minimum breaking strength of 23,940 pounds, conforming to Federal Specification RR-W-410 or equivalent, including galvanizing. Provide anchor rods for boundary rope according to 00399.18(a) or (b).

**(h) High Early Strength Grout** - Provide non-shrink, Type III Portland cement grout capable of attaining a minimum unconfined compressive strength of 4,000 psi in not more than 3 Days, as confirmed according to AASHTO T 106. Test non-shrink properties according to AASHTO T 160. Do not exceed 0.05 percent length change at 28 Days for water-cured samples. Add fluidifying agents as needed.

**(i) Nail Grout:** Neat cement or sand/cement mixture with a minimum 3-day compressive strength of 1,500 psi and a minimum 28-day compressive strength of 3,000 psi when tested according to AASHTO T 106.

**(j) Miscellaneous Materials** – Provide compatible system components for high tensile strength steel wire and miscellaneous materials for system installation, such as wire rope clips, thimbles, and other miscellaneous items from the same Supplier.

**(k) Supplemental Anchor Rod /Soil Nails** - Provide anchor rods conforming to 00399.18(a) or (b) with a minimum length of 10 feet. Provide soil nails conforming to 00399.18(a) or (b) with a minimum length of 15 feet.

### Equipment

**00399.20 Anchor Rod/ Soil Nail Equipment** - Provide all Equipment necessary to install anchors/soil nails in their holes, and to tighten nuts, eyes and other hardware to the manufacturer's required tension as required in 00598.04.

Provide and maintain in good working condition the necessary torque wrenches and related Equipment for the installation of anchors/soil nails.

**00399.21 Anchor Rod /Soil Nail Testing Equipment** - Furnish all torque wrenches, jacks, pressure gauges and other Equipment required to perform proof testing of installed anchors/soil nails. Use pressure gauges and load cells of the types and sizes commonly used in the testing of anchors/soil nails.

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Calibrate torque wrenches, jacks, and pressure gauges before use. Perform calibration tests, using an independent testing laboratory, within 60 Calendar Days of the date calibration data is submitted. Achieve torque wrench capacity at least 20 percent greater than the manufacturer's recommended torque to verify the design and test loads. Provide torque wrenches with an accuracy of at least  $\pm 2$  percent of the full-scale reading, and a resolution of at least 1 percent of the full-scale reading.

**Labor**

**00399.30 Measurement Assistance** - Furnish labor, at no additional cost to the Agency, to assist with the measurement of quantities of wire mesh slope protection systems and cable net slope protection system placed on the slopes. Furnish personnel skilled in the construction of anchored mesh slope stabilization system. Provide on-site qualified representative from the wire mesh manufacturer as needed during construction.

**Construction**

**00399.40 General** - Construct the kinds and types of soil slope protection at the locations shown or directed. Verify existing ground elevations, anchor/soil nail locations, elevations, and alignments prior to construction. Do not begin construction prior to receipt of the Engineer's written authorization.

**00399.41 Preparation Work** - Clear and grub the area according to Section 00320. Remove all shrubs, brush, snags, downed timber, and other obstacles, including trees up to 6 inches in diameter that interfere with construction. If directed, preserve trees and geographic features at the top of anchored mesh by adjusting anchor rods and anchor/soil nail locations to miss them.

Dispose of materials, including excess excavation, according to 00290.20.

**00399.52 Anchored Wire Mesh Slope Protection** - Install high tensile strength steel mesh at the locations shown.

**(a) General** - Complete clearing and grubbing prior to placing mesh, to maximize contact with the ground surface and prevent bridging on exposed vegetation between anchor rods and soil nails. Locate all anchor rods, soil nails and rope anchors. Prior to installation of anchor rods, soil nails, prepare a hollow 8-12 inches deep and large enough to fit the spike plates for insertion of the spike plates.

**(b) Anchor Rods / Soil Nail Installation** - The general layout and spacing pattern of the anchor rods and soil nails is as shown. Adjust the final constructed pattern to fit the slope shape and stabilization requirements, as directed. Determine the type of anchor rods and soil nails (predrilled or self-drilling) appropriate for the subsurface conditions encountered. Document the anchor rods and soil nails type installed at each location and provide this documentation to the Engineer when requested.

Install supplemental anchor rods and soil nails in areas where the roughness of the surface is not achieved to press the mesh against the slope. Supply supplemental anchors and soil nails with all hardware, spike plates, nuts, and any other required to fasten to the mesh.

Provide on-site qualified representative from the wire mesh manufacturer as needed during construction and a minimum of one site visit during construction of each anchored mesh wall soil slope stabilization.

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Maintain a driller's log for each anchor rod and soil nail installation, recording drilling rate, and groundwater conditions. Provide driller's log to the Engineer on a weekly basis.

For anchors rods and soil nails to be installed in predrilled holes, drill a nominal 6-inch diameter hole perpendicular to the slope surface. Over-drill each hole a minimum of 6 inches beyond the required length of the nail.

Grout the nails by placing grout through a tremie tube attached to the side of the nail until the grout is approximately 8 inches below the ground surface.

For self-drilling anchors rods and soil nails, use the sacrificial drill bit to advance the nail to the prescribed depth. Inject cement grout as the nail is advanced, in order to fully encapsulate the nail.

For installations through soil, excavate a nominal 14-inch diameter by 8-inch deep hole around each nail head to accommodate the diamond plate and to ensure optimal load transfer from the nail head to the mesh.

Clean grout remnants from the threads of the nail so that proper tensioning can be achieved. Install spike plates, washers, nuts and associated hardware according to the manufacturer's recommendations and as shown.

**(d) Anchor Rods / Soil Nail Verification Testing** – Perform verification testing on one soil nail at each of the wall locations as specified in 00598.47(d).

**(e) Anchor Rods / Soil Nail Proof Testing** – Perform proof testing on 5% of the soil nails or a minimum of one test per soil nail row, whichever is greater. Perform proof testing on 5% of the anchor roads or a minimum of one test, whichever is greater. The tests should be performed as specified in 00598.47(e).

**(f) Anchor Rods / Soil Nail Torque Testing** - Once the cement grout has achieved its initial set at three days, install the spike plate and nut, and tension each anchor rod or soil nail to the load capacity shown. After 10 minutes, test the tension in the anchor/soil nail with the calibrated torque wrench for use as part of the approved work plan submittal. If a nail fails this test, replace the nail with an additional nail installed in a separate hole. If testing indicates that the required tension cannot be achieved, increase drill hole depth and/or diameter as required to obtain a successful test.

After testing, cut off any excess nail, so that no more than 3 inches extends beyond the nut. Treat the cut steel according to 02530.71.

**(g) Supplemental Anchor Rod / Soil Nails** - Supplemental anchors may be needed to accommodate slope geometry. Obtain the Engineer's approval of supplemental anchor rod or soil nail locations. Install and test supplemental anchor rod or soil nails as described above. Supplemental anchor rods / soil nails do not replace pattern anchor rod or soil nails and will not be accepted as replacements for rejected pattern anchor rod or soil nails.

**(h) Mesh Installation** – Install mesh so as to conform to the slope surface and to the elevations shown, to the extent practicable. Provide a minimum of 3 feet mesh coverage above the crest of the cut slope to fully accommodate a minimum of one row of anchor rods. Adjust final row nail spacing to properly secure the bottom of the mesh.

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Install Geobrugg Erosion Control Mat “TECMAT” or approved equivalent erosion control mat prior to installing wire mesh.

Lay the high strength wire mesh on the slope by unrolling from the top down. Rolls may be shortened or lengthened by removing or adding sections. Overlap the mesh panels by a minimum of one mesh segment. Fasten overlapped mesh panels with connection clips at each mesh segment in accordance with manufacturer recommendations.

During installation, temporarily secure the mesh at the top of the slope, as needed, to facilitate installation. Construct any required temporary anchoring according to the Contractor’s approved work plan.

Install the required boundary ropes and fasten the wire mesh to the boundary ropes with Type 2 compression claws, minimum of one compression claw at each mesh. Tighten boundary ropes and pull tight against the slope.

Install spike plates over anchors. Use hydraulic wrench supplied by the manufacturer, tighten the nuts and push the spike plates and wire mesh into the hollows in order to tension the anchored wire mesh to (minimum) 6.7 kips. Torque the nuts to the values in accordance with manufacturers recommendations.

No Equipment operation is allowed on slope areas that have been covered with mesh.

Diagonal cutting of the high tensile strength mesh is not allowed. If needed, use spreading tools obtained from the manufacturer to facilitate the passage of drill bits through the mesh openings.

**Measurement**

**00399.80 Measurement** - The quantities of Work performed under this Section will be measured according to the following:

**(a) Area Basis** - The Anchored wire mesh slope protection will be measured on the area basis, along the lines and grades on the slope, for installed wire mesh fabric.

**(b) Unit Basis** - Supplemental anchor rods and soil nails will be measured on the unit basis.

**Payment**

**00399.90 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 item:

Pay Item	Unit of Measurement
(a) Anchored Mesh Wall Soil Slope Stabilization.....	Square Foot
(b) Supplemental Anchor/soil Nail.....	Each
(c) Supplemental Anchor Rods.....	Each

Payment includes equipment, materials, labor material tests, field tests and incidentals necessary to fabricate and construct the anchored mesh wall system. Payment includes all components of the walls including anchor rods, soil nails, rope anchors, mesh, hardware,

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ropes, erosion control matting, load testing and any other miscellaneous items required to complete the construction.

Payment for wall alignment, and soil nail drill hole survey work will be in accordance with Section 00305.

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.

**SECTION 00405 - TRENCH EXCAVATION, BEDDING, AND BACKFILL**

Comply with Section 00405 of the Standard Specifications.

**SECTION 00415 - VIDEO PIPE INSPECTION**

Comply with Section 00415 of the Standard Specifications modified as follows:

**00415.42(a) Remote Video Inspection with Laser Profiler** - Replace the paragraph that begins "Use video inspection equipment meeting..." with the following paragraph:

Use video inspection equipment meeting the requirements of 00415.22. Calibrate the laser profiler according to the manufacturer's specifications and ASTM F3080 Section 9.

**SECTION 00430 - SUBSURFACE DRAINS**

Comply with Section 00430 of the Standard Specifications.

**SECTION 00440 - COMMERCIAL GRADE CONCRETE**

Comply with Section 00440 of the Standard Specifications.

**SECTION 00445 - SANITARY, STORM, CULVERT, SIPHON, AND IRRIGATION PIPE**

Comply with Section 00445 of the Standard Specifications.

**SECTION 00450 - STRUCTURAL PLATE SHAPED STRUCTURES**

Comply with Section 00450 of the Standard Specifications.

**SECTION 00470 - MANHOLES, CATCH BASINS, AND INLETS**

Comply with Section 00470 of the Standard Specifications modified as follows:

**00470.41(c) Grates, Frames, Covers and Fittings** - Replace this subsection, except for the subsection number and title, with the following:

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Set metal frames for manholes on full non-shrink grout beds to prevent infiltration of surface water or groundwater between the frame and the concrete of the manhole section. If concrete is to be poured around the frames, coat the portion of the frame that will contact the concrete with hot asphalt before placing the concrete. Set frames, covers and grates true to the locations and grades established. Clean bearing surfaces and provide uniform contact. The use of a bolt adjustment system for frames from the QPL is allowed. Secure all fastenings. Construct all mortared, sanitary sewer manhole necks and all riser ring joints made with non-shrink grout using an approved commercial concrete bonding agent applied to all cured concrete surfaces being grouted.

**00470.42 Precast Concrete Catch Basins and Inlets** - Add the following sentence to the end of this subsection:

Grade adjustments using a bolt system from the QPL is allowed.

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

Comply with Section 00490 of the Standard Specifications.

**SECTION 00513 – AUGER-CAST PILES (CFA Piles)**

Section 00513, which is not a Standard Specification, is included in this Project by Special Provision.

**00513.00 Scope** - This Work consists of constructing Auger-Cast piles (CFA piles) as shown or specified. The Auger-Cast (CFA) Pile Contractor is responsible for furnishing all materials, products, accessories, tools, equipment, services, transportation, labor and supervision, and manufacturing techniques required for installation and testing of Auger-Cast piles (CFA piles) and pile cap connections for this Project. Install Auger-Cast piles (CFA piles) as indicated, without damage to existing nearby structures.

**00513.01 Definitions:**

**Auger-Cast piles (CFA piles)** - Any foundation that is made by rotating a hollow-stem auger into the ground to the specified pile depth. Grout is injected through the auger shaft under continuous positive pressure, as the auger is being withdrawn, in order to exert a positive upward pressure on the earth-filled auger flights as well as lateral pressure on the soil surrounding the placed grout column. Reinforcing steel, as specified, is inserted into the column of fluid grout following the completion of grout placement. Auger-Cast piles (CFA piles) as defined herein include: a) traditional continuous flight auger piles; b) drilled displacement piles intended to install a cast-in-place pile with full displacement and minimal soil spoil; and, c) partial displacement piles which may displace some soil but not act as a full displacement pile.

**Auger-Cast (CFA) Pile Contractor** - The firm responsible for performing the Auger-Cast piles (CFA piles) work.



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**Auger Refusal** - Auger penetration rate of less than 1 foot per minute of drilling applicable for a power unit of suitable type and size when operating according to the manufacturer's specifications, wherein to continue drilling particular piling would be impractical.

**Unexpected Obstruction** - Any natural or manmade object encountered that was not revealed by the Agency's site investigation, and that would cause a significant decrease in the rate of advancement if removed using the techniques and Equipment used successfully to excavate the Auger-Cast (CFA) pile. The Engineer will be the sole judge of the significance of any reduced rate of shaft advancement and the classification of any unexpected obstructions. Removal of unexpected obstructions from the shaft excavation will be paid according to 00195.20.

**00513.02 Reference Codes and Standards** - All designs and workmanship shall conform to the following standards where applicable:

- AASHTO *Standard Specification for Highway Bridges*, current Edition, including current interim specifications
- FHWA-HIF-07-03 - Geotechnical Engineering Circular No. 8, *Design and Construction of Continuous Flight Auger (CFA) Piles*

**00513.03 Submittals** - At least 60 Calendar Days before the planned start of Auger-Cast (CFA) pile construction, submit complete construction submittals to the Engineer in accordance with Subsection 00150.35.

Provide the following submittals to the Engineer:

- (a) Pile Installation Plan** – Provide a Pile Installation Plan to demonstrate, to the satisfaction of the Engineer, the dependability of the equipment, techniques, and source of materials to be used on the project. Reference to successful completion of projects with similar pile sizes in similar soil conditions using the proposed equipment and procedures should be included. Include the following items:
- List and sizes of proposed equipment, including drilling rigs, augers and other drilling tools, pumps for grout or concrete, mixing equipment, automated monitoring equipment, and similar equipment to be used in construction, including details of procedures for calibrating equipment as required;
  - Step-by-step description of pile installation procedures;
  - A plan of the sequence of pile installation;
  - Target drilling and grouting parameters (along with acceptable ranges) for pile installation, including auger rotation speed, drilling penetration rates, torque, applied crowd pressures, grout pressures, and grout volume factors;
  - Submit unstamped working drawings in accordance with Subsection 00150.35 that include reinforcing steel shop drawings and details of methods of reinforcement placement, including support for reinforcing cages at the top of the pile and methods for centering the cages within the grout or concrete column.

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Include details on the type, number, and placement of spacers and other devices for ensuring the reinforcing cage position is maintained during construction;

- Mix designs for all grout or concrete to be used on the project, including slump loss vs. time curves and strength development vs. time curves for mixes with fly ash and/or slag;
- Evidence that the proposed materials and grout mix design conform to all applicable Specifications.
- Equipment and procedures for monitoring and recording auger rotation speed, auger penetration rates, auger depths, and crowd pressures during installation;
- Equipment and procedures for monitoring and recording grout or concrete pressures and volumes placed during installation;
- Contingency plans for equipment failures during drilling or grouting operations (grout pump, monitoring equipment, etc.);
- Procedures for protecting adjacent structures, on or off the Right-of-Way, that may be adversely affected by foundation construction operations;
- Any additional information to show that the Plans and Specification requirements will be met;

**(b) Grout Mix Design** – Prior to submittal of the Pile Installation Plan, submit the proposed grout mix design and any supporting documentation identified in 00513.03(a) to the Engineer for approval.

### **Materials**

**00513.10 Materials** – Furnish Materials meeting the following requirements:

- (a) Reinforcement – Use reinforcement complying with Sections 00530 and 02510.
- (b) Grout – Use a Portland cement grout complying with Section 02080.
- (c) Water - Use water complying with Section 02020.
- (d) Fine and coarse aggregate -Use aggregates complying with Section 02690.
- (e) Mineral admixtures (Fly Ash) - Use fly ash complying with 02030.10.
- (f) Chemical admixtures - Use chemical admixtures complying with Section 02040.
- (g) Grout flow testing (flow cone) - ASTM C 939, CRD-611-94
- (h) Grout cube samples - ASTM C 109
- (i) Grout cube testing - ASTM C 109, ASTM C 942

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**00513.30 Personnel Qualifications** - Provide documentation of a minimum of 3 projects that the Auger Cast Pile Contractor has performed in the three-year period preceding the bid date in which Auger-Cast piles (CFA piles) were installed successfully under subsurface and project conditions similar to those of the current project. Provide documentation showing the designated job site supervisor (foreman or crew chief) has had a minimum of 3 years of experience in supervision of the installation of Auger-Cast piles (CFA piles). Provide drill rig operator documentation of 3 years' minimum experience installing Auger-Cast piles (CFA piles).

Assign an Auger-Cast (CFA) Pile Contractor Project Manager to supervise the work that has a minimum of 3 years' experience with Auger-Cast piles (CFA piles) projects of similar size and scope. Do not use consultants or manufacturers' representatives to satisfy the Project Manager requirements of this section.

Submit completed project reference list and personnel list by the Auger-Cast (CFA) Pile Contractor at least 60 Calendar Days before the planned start of Auger-Cast piles (CFA piles) construction. Include a brief project description of each project and the owner's contact person's name and current phone number and load test reports. Identify the Auger-Cast (CFA) Pile Contractor, project manager, drill rig operators, and job site supervisor to be assigned to the project. Provide a complete summary of each individual's experience for the Engineer to determine whether each individual satisfies the required qualifications.

Only personnel listed on the submittals shall perform the work. If personnel changes need to be made during the course of the project, suspend work until the replacement personnel are approved by the Engineer. Replace or resubmit incomplete or unacceptable submittals at no additional cost to the Agency.

The Engineer will respond within 21 Calendar Days of receipt of the submittal. The Engineer may suspend auger-cast pile construction if the Contractor substitutes unapproved personnel during construction at no additional cost to the Agency. Do not begin work until the qualifications have been approved. Submit requests for substitution of either onsite supervisors or auger operators to the Engineer, who will have 7 Calendar Days to respond to each request. Additional costs resulting from the suspension of Work due to the changing of personnel is the Contractor's responsibility, and no adjustment in Contract Time resulting from the suspension of Work will be allowed.

**Construction**

**00513.41 Auger-cast (CFA) Pile Coordination Meeting** – Hold a coordination meeting at least 7 Calendar Days before beginning and pile construction work onsite. This meeting will be scheduled by the Engineer and held prior to the start of Auger-Cast (CFA) pile construction. Meeting attendance is required for the Engineer, prime Contractor, Auger-Cast (CFA) Pile contractor project manager, job-site supervisor and drill-rig operator, Inspectors, excavation contractor, and Geotechnical Instrumentation Specialist (if applicable). The pre-construction meeting will be conducted to clarify the construction requirements for the work, to coordinate the construction schedule activities and identify contractual relationships and delineation of responsibilities among the prime Contractor and various Subcontractors. Main aspects involving multiple subcontractors may include those pertaining with excavation for

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Auger-Cast (CFA) pile structures, anticipated subsurface conditions, Auger-Cast (CFA) pile installation and testing, Auger-Cast (CFA) pile structure survey control, and site drainage control.

If the Contractor's key personnel change, or if the Contractor proposes a significant revision to the approved methods of pile construction, hold an additional meeting before any additional auger-cast (CFA) pile construction operations are performed.

**00513.42 Site Preparation and Protection of Adjacent Structures** – Remove or treat any muck, organics, soft clay, or other unsuitable materials encountered within 5 feet of the ground surface to prevent problems with pile top construction. Complete excavation of unsuitable surface material and backfilling to the Engineer's satisfaction, or as required in the Contract Documents, prior to the construction of Auger-Cast (CFA) piles. Immediately advise the Engineer if more than 5 feet of unsuitable surface material is encountered, and proceed with work as directed by the Engineer. Should the Auger-Cast (CFA) Pile Contractor suspect during construction "unexpected contamination", follow the procedure as specified in 00290.20(f).

The Auger-Cast (CFA) Pile contractor and the Contractor are solely responsible for evaluating the need for, design of, and monitoring of measures to prevent damage to adjacent structures or underground utilities. These measures include, but are not limited to, selection of construction methods and procedures that will prevent over-excavation and excessive migration of grout through the ground, monitoring and controlling the vibrations from construction activities and protecting utilities. Monitor structures located within a horizontal distance equal to the planned length of the pile for vertical and horizontal movement in a manner approved by the Engineer within an accuracy of 0.01 inch.

Stop installation, notify the Engineer, and take immediate remedial measures as soon as any cumulative movements greater than 0.125 inches in any direction are detected in adjacent structures, to prevent damage to the adjacent structures. The Auger-Cast (CFA) Pile contractor, the Contractor and the Engineer will collectively review the current installation procedures. If revisions to the installation procedures are deemed necessary, submit a revised installation plan for approval by the Engineer before resuming work. Repair all damage caused to existing Structures, utilities, or other facilities resulting from auger-cast (CFA) pile construction activities, at no additional cost to the Agency.

**00513.43 Grout** - The grout property requirements listed below are determined from samples taken during Auger-Cast (CFA) pile construction. Proportion and mix Portland cement, fly ash, water, fine aggregate (sand), fluidifier, and if necessary, retarder so that the grout will exhibit the following properties:

- 1) All solids are to remain in suspension in the grout without voids, segregation, or rock pockets.
- 2) Test the grout for fluid consistency using a flow cone in accordance with the modifications made to ASTM C 939. The flow cone outlet should be modified from a 1/2inch diameter outlet to a 3/4 inch diameter outlet. A range of acceptable fluid consistency expressed as efflux time of 15 to 25 seconds per standard volume is acceptable.

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- 3) Do not exceed grout shrinkage of 0.15 percent in the vertical direction, as tested in accordance with ASTM C 1090, housed in a 100 % humidity room at a temperature of 68° F to 74° F (20° C to 23° C), or as otherwise specified by the Engineer.
- 4) A minimum grout compressive strength of 4,000 psi 28 Days after casting, as required by the design.
- 5) Include curves of viscosity loss versus time with the submitted mix design . Designate grout so as to maintain the range of acceptable fluid consistency for a period of at least 2 hours or longer, if required by the project-specific pile installation plan.
- 6) Provide strength development versus time curves/data for times beyond 28 Days as required for mixes that include fly ash, silica fume, or slag.

**00513.44 Field Operations -**

- 1) Remove all oil, rust inhibitors, residual drilling slurries and similar foreign materials from holding tanks/hoppers, stirring devices, pumps and lines, and all other equipment in contact with the grout before use.
- 2) Batch all grout at an ODOT approved facility, and deliver to the Project Site. Water may be added to the grout mix at the Project Site only if allowed by the approved mix design.
- 3) If agitated continuously, the grout may be held in the ready-mix truck for up to 2.5 hours if the air temperature is not greater than 68° F, or up to 2 hours if the air temperature is between 68° and 100° F. Do not place grout if the air temperature exceeds 100° F or is less than 39° F unless approved procedures for hot (over 100° F) or cold weather (less than 39° F) placement are followed. Place grout with designed with retarders to extend the holding time or placement temperature range in accordance with the mix design parameters.
- 4) Use a screen with a mesh with openings no larger than 3/4 in. for grout between the delivery point from a ready-mix truck and the pump, to remove large particles or cement clumps that can clog the grout injection system.
- 5) Use a grout positive displacement pump with a known volume per stroke that is capable of developing peak pressures of at least 350 psi at the pump. Size the pump appropriately for the pile size such that a smooth, continuous delivery of grout can be maintained while limiting the pressure variations (particularly the pressure drop) felt by the pile due to the pump strokes. Provide the Engineer the value of the volume of grout delivered by each stroke of the pump and demonstrate to the Engineer that the actual volume delivered by each stroke of the pump is within 3 percent of the value provided. Recalibrate the volume per stroke when the Engineer suspects that the grout or concrete delivery performance has changed.
- 6) Record automatic measurements during the pile construction process as described in 00513.47. Make all inspection records available as described in 00513.53.

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- 7) Maintain the minimum value of grout pressure at the pump outlet or at the top of the auger that is required on the approved Working Drawings or approved pile installation plan for all grout placement operations throughout the project.

**00513.45 Grout Testing** – Take grout samples for strength testing from the discharge at the delivery trucks prior to pumping. Take 2-inch cube grout samples and subject samples to a 10 percent increase in required compressive strength as compared to cylinder samples.

Prepare no less than 12 samples for each 50 cubic yards<sup>3</sup> of grout placed. Prepare no less than 12 such samples per Day. Cure grout cubes and test according to this Section. Provide 6 grout cubes to the Engineer.

Test the remaining 6 samples by an independent testing agency for unconfined compressive strength. As a minimum, 2 samples are to be tested at 7 Days after sampling; 2 samples tested at 28 Days after sampling; and 2 samples will be held in reserve. Meet the minimum compressive strength of the samples tested at 28 Days after casting as specified in 00513.43 for grout.

Test a grout sample obtained from every truck for fluid consistency meeting 00513.43 (flow cone) and temperature prior to discharging into the pump hopper. Additional samples may be required at the discretion of the Engineer at any time during the grout placing process to ensure that consistent fluidity/slump is being achieved.

**00513.46 Auger Equipment** – Use continuous auger flights from the top of the auger to the bottom tip of the cutting face of the auger, with no gaps or other breaks. Gaps in the flighting are allowed only where auger sections are joined and may not exceed 1 inch. The auger length must be capable of installing a pile to a depth that is 20 percent greater than the depth of the pile shown on the approved Working Drawings. Provide uniform auger flighting diameter throughout its length with the outside diameter of the auger being at least 97 percent of the design diameter of the pile. Use only single helix augers. Maintain the hollow stem of the auger in a clean condition throughout the construction operation. In order to facilitate inspection, clearly mark the leads every 1-foot along its length so that such marks are visible to the unaided eye from the ground.

Construct the bottom of the auger flights and the cutting teeth attached thereto, geometrically so that the bottom of the pile will be as flat as feasible. Fit the grout injection port with a means of sealing it against ingress of water and soil during drilling. Guide the auger at the ground surface by a guide connected to the leads of the Auger-Cast (CFA) piling rig. If the auger is over 40 feet long, align with a guide located approximately half the length of the auger above the ground-surface guide. Where Auger-Cast (CFA) piles are installed with hydraulic, fixed mast installation platforms, and the stem to which the auger is fixed has an outside diameter 10 inch or greater, a guide above the ground surface is not required. The leads that carry the rotary unit that power the auger should be restrained against rotation by an appropriate mechanism. Provide a piling rig capable of penetrating the ground without drawing surrounding soils laterally into the pile bore, and capable of installing a pile to a depth at least 20 percent greater than the depth of the piles shown.

**00513.47 Automatic Measurement and Recording Equipment** - As a minimum, make and record the following automatic measurements during the drilling operation:

- 1) Auger rotation

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- 2) Depth of the auger injection point
- 3) Torque delivered to the auger; and
- 4) Crowd force (downward thrust on auger)

Reference all measurements to (or plotted against) the depth of the auger injection point with a rotational position indicator on the auger head system and an electronic position indicator on the crane line or boom holding the auger. Position torque and thrust load cells on the auger head system. As a minimum, make and record the following automatic measurements during the grouting operations:

- 1) Volume of grout
- 2) Maximum and minimum grout pressure
- 3) Auger rotation (if rotated) and,
- 4) Depth of the injection point.

Reference all measurements to (or plotted against) the depth of the auger injection point with electronic flowmeters and electronic pressure transducers placed in the grout or concrete pressure line, an electronic position indicator on the crane line or boom holding the auger, and a rotational position indicator on the auger system. Calibrate all measuring and recording equipment at the beginning of the project to demonstrate that the values indicated by the measuring and recording equipment are within 3 percent of the values indicated. Perform calibrations in accordance with the equipment manufacturer's specifications. Recalibrate all measuring and recording equipment when the Engineer suspects that the drilling and grouting performance has changed.

**00513.48 Drilling of Auger-Cast (CFA) Piles** - Perform the drilling required for the piling, through whatever materials are encountered, to the dimensions and elevations required by the plans and as shown on the approved Working Drawings. Do not commence drilling until a sufficient supply of grout is present on the Project Site to complete the pile. Use the drilling parameters (auger rotation speed, penetration rates, crowd, torque, etc.) for the production piles established in the pile installation plan.

Install the pile with center within 3 inches of the location shown on the approved Working Drawings in a horizontal plane (i.e., plan-view). The completed pile is to be plumb to within 2 percent, if vertical, or installed to within 2 percent of its design batter, as determined by the angle from the vertical, if planned as a batter pile. Any pile in violation of these tolerances will be subject to review by the Engineer and may be rejected or replaced at no additional cost to the Agency.

Demonstrate that grout in the adjacent piles within 6 diameters, center to center, of each other is fully set before proceeding to the next. Fully set means that the grout should have set enough such that the integrity of the existing pile will not be compromised if drilling the new pile causes mining of soil away from the existing pile. Minimum set time is no less than 24 hours.

Do not extract the auger from the ground at any time during the construction of a pile in such a way that would result in an open unsupported borehole or inflow of water into the pile borehole. If it should become necessary to raise the auger and subsequently re-insert the auger during the pile construction process, increase the depth of the pile or perform other additional measures as directed.

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Advance the auger into the ground at a continuous rate and at a rate of rotation that prevents excess spoil from being transported to the ground surface. Utilize automated monitoring equipment to verify this target rate of penetration is maintained during construction of production piles.

Pile termination criteria, including refusal criteria, if applicable, will be established by the Engineer. If refusal is encountered before planned depth is achieved, stop rotation of the auger and the notify the Engineer. The Auger-Cast (CFA) Pile contractor and Engineer will evaluate the installation data and determine if the established termination criteria have been met, or if other action is required to complete the pile. If an obstruction is encountered and it does not allow the pile to be completed in the planned location, notify the Engineer for determination of remedial action.

Remove any natural or manmade object encountered that was not revealed by the Agency's site investigation, and that would cause a significant decrease in the rate of advancement if removed using the techniques and Equipment used successfully used to excavate the Auger-Cast (CFA) pile. The Engineer will be the sole judge of the significance of any reduced rate of auger advancement and the classification of any unexpected obstructions. Removal of unexpected obstructions from the auger-cast (CFA) pile excavation will be paid according to 00195.20.

**00513.49 Grouting of Auger-Cast (CFA) Piles** – Commence the placement of grout within 5 minutes after the auger has achieved the planned depth. Pump grout through the hollow-stem auger with sufficient pressure (as measured at the top of the auger) as the auger is withdrawn to completely form the pile and fill any soft or porous zones surrounding the pile.

At the beginning of grout placement, the application of grout pressure or by central reinforcing bar will remove the sealing device (plug, or bottom cover plate at the tip of the auger). As pumping begins, lift the auger from 6- to 12- inches to facilitate removal of the sealing device. Take care to ensure that the auger is lifted only within this specified range to initiate the flow of grout and that water inflow and soil movement at or near the base of the auger are minimized. After withdrawing the auger to initiate the flow of grout the tip of the auger should be re-inserted to at least the original depth.

Use the technique and equipment used to initiate and maintain the grout flow so that a pile of the full design cross-section is obtained from the maximum depth of boring to the final pile cut-off level. Supply the grout to the pile at a rate during auger withdrawal that ensures that a continuous monolithic shaft of at least the full specified cross-section is formed, and is free from soil inclusions or any grout segregation.

Extract the auger at a smooth, steady rate while continuously pumping. If rotation of the auger occurs during auger extraction, extract auger in a positive manner, i.e. in the same direction as during drilling.

Satisfactory coordination of auger withdrawal with pumping is indicated by maintaining a positive pressure in the grout at the auger tip, and a sufficient volume or pressure of grout to fill the pile (with a small oversupply of volume) verified using automated monitoring equipment.



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Measure and record the volume of grout placed as a function of depth at intervals not exceeding 2 feet using automated monitoring equipment. Establish the magnitude of minimum oversupply (or grout volume factor) appropriate for the site conditions by the Auger-Cast (CFA) contractor and approved by the Engineer and maintained during production pile construction. Inadequate volume pumped over a depth interval of 5 feet is a basis for rejection of the pile.

Maintain the grout volume factor target for the pile established in the pile installation plan +/- 7.5 percent. Production piles installed outside of this range are considered unacceptable piles as listed in 00513.54.

If placement of grout is suspended for any reason, such as equipment failure, the pile will need to be re-drilled. The pile may be re-drilled in the same location if the grout is still fluid enough for the drill rig to penetrate. If the grout has set, the pile will need to be re-drilled in a new location. The pile installation plan and Working Drawings will need to be revised by the Auger-Cast (CFA) Pile contractor to reflect the changes and submitted to the Engineer for approval prior to re-drilling the pile.

**00513.50 Pile Head Finishing and Protection** - Immediately upon completion of placement of the fluid grout, remove all excess grout and spoils from the vicinity of the top of the excavation and place a suitable temporary device within the top of the excavation, extending both above and below the ground surface by at least 1-foot to keep surface spoil from entering the grout column before it sets. Immediately upon placement of this temporary device, remove any and all loose soil that has fallen into the grout column using the tools and methods contained in the approved pile installation plan, and before the grout begins its initial set. Remove the temporary device without disturbing the natural soil surrounding the top of the pile once the grout has set.

**00513.51 Reinforcing Steel Placement** – Place any required reinforcing steel as shown by lowering the steel into the grout column while it is in a fluid state. Use reinforcing steel free of oil, soil, excessive rust or other deleterious material. Center the reinforcing steel in the excavation by means of plastic or cementitious spacers placed at sufficient intervals along the pile and at sufficient intervals around the steel to keep the steel centered. Metallic spacers are not permitted. Centralizer types and spacing are subject to approval by the Engineer. If cages of reinforcing steel are called for on the approved Working Drawings, completely assemble the longitudinal bars and lateral reinforcement (spiral or horizontal ties) and place as a unit. Where spiral reinforcement is used, tied reinforcement to the longitudinal bars at a spacing not to exceed 1-foot unless otherwise shown. Welding of reinforcement is permitted only if weldable reinforcing steel is specified as part of the approved design.

Splice the reinforcing steel at locations that are shown. Use reinforcement steel free of permanent distortion, such as bars bent by improper pickup. If a pile is required by the Engineer to be lengthened after the steel has been cut and cages have been assembled, extend the schedule of reinforcing steel (both longitudinal and lateral) to the required depth by splicing. Splices should be as close to the bottom of the reinforcing cage as possible. Welding of splices is not permitted unless weldable reinforcing steel is specified as part of the approved design.

Place the reinforcing steel in the grout column immediately after screening the grout and before the grout begins to set. The steel may be lowered into the grout by gravity or pushed gently to final position by hand. Do not vibrate, drive, or otherwise guide the reinforcing steel into position by mechanical means. Hold the reinforcing steel in position at the ground surface

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within the fluid grout column by supports appropriate for the reinforcement used and maintain it in place until the grout reaches its initial set, or 24 hours, whichever is longer.

**00513.52 Cut-Off** – Cut off the tops of piles square with the pile axis at the elevations indicated, by removing fresh grout from the top of the pile or by cutting off hardened grout down to the final cutoff point at any time after initial set has occurred. Prepare the finished top of pile no more than 1 inch below or 3 inch above the elevation shown on the approved Working Drawings.

**00513.53 Inspection and Records** - Maintain accurate records for each pile constructed. Similar records will be maintained by the Engineer. These records document the following:

- 1) Pile location;
- 2) Ground surface elevation (reference grade for pile length);
- 3) Pile toe (bottom) depth and elevation;
- 4) Elevation of top of grout;
- 5) Pile length;
- 6) Auger diameter;
- 7) Details of the reinforcing steel (number, size, and grade of longitudinal bars, size and spacing of transverse steel; outside diameter and length of cage);
- 8) Flowcone efflux time and volume of grout placed
- 9) Theoretical volume of drilled hole (theoretical diameter = diameter of auger);
- 10) Depth to which reinforcing steel was placed;
- 11) Date/Time of beginning of drilling;
- 12) Date/Time of completion of drilling;
- 13) Date/Time grout was mixed;
- 14) Date/Time ready-mix grout truck arrived at Project Site, and copies of all grout batch tickets used for the pile construction;
- 15) Date/Time of beginning of grout pumping;
- 16) Date/Time of completion of grout pumping;
- 17) Date/Time of placement of reinforcing steel;
- 18) Weather conditions, including air temperature, at time of grout placement;
- 19) Identification of all grout samples taken from the pile;
- 20) All other pertinent data relative to the pile installation; and
- 21) All readings made by the automated measuring and recording equipment to include as a minimum:
  - a. Auger rotation verses depth for every 2 feet increment, or less, of pile advancement during the drilling process, and during placement of grout (if auger is rotated during this placement);
  - b. Volume of grout placed versus depth of outlet orifice for every 2 feet increment, or less, of pile placed;
  - c. Average maximum and minimum pump stroke pressures at ground level for every 2 feet increment, or less, of pile placed;
  - d. Average maximum and minimum pump stroke pressure at or near the auger head for every 2 feet increment, or less, of pile placed, if directed by the Engineer; and

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- e. Additionally, the Engineer may also specify that torque and crowd force (downward thrust on auger) measurements be made for every 2 feet increment, or less, of pile advancement during the drilling process.

Provided this data to the Engineer within 24 hours of the completion of the pile. Provide data collected by automated measuring and recording equipment in numerical or graphical form.

**00513.54 Unacceptable Piles** - Unacceptable piles are defined as piles that do not meet the project performance criteria with regard to load carrying capacity and deflections. The following items constitute construction conditions would be considered a basis for pile rejection:

- 1) Piles for which the data from the automated measuring and recording equipment, other recording methods, or the Inspector’s records indicate that a defective pile has been installed due to an inadequate penetration rates, grout volume factors or pressures, or other pile installation parameters that do not meet the criteria established for the pile installation.
- 2) Piles out of position at the ground surface or not within the plumbness or batter limits defined in 00513.48
- 3) Piles in which the top of pile elevation is outside the limits shown.
- 4) Piles in which the grout strength, or grout factor is less than as designed.
- 5) Piles in which the reinforcing steel was not inserted as designed.
- 6) Piles that exhibit any visual evidence of grout contamination, excessive settlement of grout, structural damage, or inadequate consolidation of grout (honeycombing).

If piles are found to be deficient, repair or replace, as directed by the Engineer at no additional cost to the Agency.

**Measurement**

**00513.80 – Measurement** – No measurement of quantities will be made for Work performed under this Section. Estimated quantities, based on the Pile Embedment Table and the pile diameter shown on the Plans, are as follows:

Item	Quantity
Auger-Cast Pile Excavation.....	718 vertical lineal feet
Grout.....	84 Cu. Yd
Auger-Cast Pile Reinforcement.....	13,200 pounds

**Payment**

**00513.90 Payment** – The accepted quantities of Work performed under this Section will be paid for at the Contract Lump Sum amount for the item “Auger-Cast (CFA) Piles”.

Payment includes furnishing and moving the augering equipment to the Project, setting up the equipment at the various locations on the Project and removing the equipment from the

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Project. Payment also includes the cost of auger-cast pile excavation, grouting, and reinforcement.

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.

If the Contractor chooses to use a larger pile diameter than the diameter shown, no additional payment will be made for the larger auger diameter, nor for the additional excavation, grout, or reinforcement.

**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 Name	Uncoated Reinforcement Quantity (Pound)		
	Grade 60	Grade 80	Grade 100
Boardwalk	2,300	N/A	N/A
Tributary Culvert 7	6,000	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.

**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:

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- 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)

### **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 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.

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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, tighten no more than one quarter turn past snug-tight, 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.

**(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**

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Minimum Pullout Force							
Dia. (inch)	Anchor Bolts			Embed Depth (inch)*	Rebar		
	Grade 36	Grade 55	Grade 105		Grade 60	Force (Pounds)	Embed. Depth (inch)*
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.

**(c) Anchor Test Summary** - Test the installed anchors according to Table 00535-2 and Section 00165.

Table 00535-2

Str. Name #	Dwg #	Anchor				Demo. Test (yes/no)	Prod. Test (yes/no)
		System (Mech/ Resin)	Type (bolt/ rebar)	Size	Grade		
				Sustained Tension (yes/no)			

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Board walk	J11	Resin	Bolt	7/8- inch	36	No	Yes	Yes
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Replace anchors that fail at no additional cost to the Agency.

**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.

**SECTION 00540 - STRUCTURAL CONCRETE**

Comply with Section 00540 of the Standard Specifications modified as follows:

**00540.80(a)(1) Lump Sum** - Add the following to the end of this subsection:

The estimated quantity of concrete is:

<b>Type and Class</b>	<b>Quantity (Cu. Yd.)</b>
General Structural Concrete, Class 3300	18



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**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).

	YES	NO	N/A
<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?	_____	_____	_____
10. Has damage from stream drift been considered in the falsework design?	_____	_____	_____

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- 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?

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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- 8. Are wedges required between longitudinal beams and cap beams to accommodate longitudinal slope or to reduce eccentric loading? \_\_\_\_
- 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

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****SECTION 00541 - FACING AND DRAINAGE FOR SOIL NAIL WALLS**

Section 00541, which is not a Standard Specification, is included in this Project by Special Provision.

**Description**

**00541.00 Scope** - The work of this Section includes the temporary and permanent shotcrete structural facings required for the construction of the soil nail walls, and associated drainage work. The work consists of providing, placing and securing geocomposite drainage material, weep holes, footing drains, drain pipes, reinforcing steel and shotcrete for the temporary and permanent structural facings, with architectural treatment, according to Section 00543.

For soil nail walls and soil nail wall excavation see 00598.

**00541.03 Construction Submittals** - Submit the following:

**(a) Shotcrete and Drainage** - Submit the following, unstamped, for approval according to 00150.35, at least 30 calendar days before beginning construction of the temporary and permanent shotcrete structural facings:

- Documentation of the nozzle men's qualifications including proof of ACI certification, if applicable, and written evidence that the on-site supervisor, nozzle operator, and delivery Equipment operator have performed satisfactory Work in similar capacities elsewhere for a sufficient length of time to be fully qualified to perform their duties
- Proposed methods of shotcrete placement and of controlling and maintaining facing alignment, location and shotcrete thickness.
- Surface preparation details necessary for placement of reinforcement, shotcrete application, sculpting, and finishing
- Identify methods used to prevent pollution due to run-off
- Identify actions to be taken to mitigate the effects of inclement weather
- Shotcrete mix design including:
  - Type of portland cement
  - Aggregate source and gradation
  - Proportions of mix by weight and water-cement ratio
  - Proposed admixtures, manufacturer, dosage and technical literature
  - Trial batch test results
- Certificates of compliance, manufacturers' engineering data and installation instructions for the geocomposite drain strip, drain grate and accessories
- Certificates of compliance for PVC and other drain pipes and fittings
- Gradation test results for Granular Drain Backfill
- Architectural treatment details according to 00543.01

Previous strength test results for the proposed shotcrete mix completed within one year of the start of shotcreting may be submitted for initial verification of the required compressive strengths at start of production work.

**00541.04 Preconstruction Meeting** - A preconstruction meeting, scheduled by the Engineer, will be held prior to the start of soil nail wall construction. Attendance by the



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shotcrete contractor is mandatory. See 00598.05 of these Special Provisions for more information.

**Materials**

**00541.10 General** - Provide materials meeting the following requirements:

Portland Cement.....	02010.10, Type I, II, or III.
Fine Aggregate .....	02690.30
Coarse Aggregate.....	02690.20
Water .....	Section 02020
<b>Chemical Admixtures:</b>	
Accelerator.....	02040.00, Fluid type, applied at nozzle.
Water-reducer and Superplasticizer .....	Section 02040
Retarders .....	Section 02040
<b>Mineral Admixtures</b>	
Fly Ash.....	02030.10
Microsilica Admixtures.....	02030.20
Welded Wire Fabric .....	02510.40
Reinforcing Bars for .	
Shotcrete Facing.....	02510.10, Grade 60, deformed
Concrete Repair Material .....	ASTM C 928, QPL
Drainage Geotextile.....	02320.20; Type 2
Granular Drain Backfill .....	00430.11
<b>Geocomposite Drain Strip:</b>	
• Miradrain 6000	
• Amerdrain 520, or	
• Approved equal.	
<b>PVC Drain Pipes:</b>	
Longitudinal Pipe - ASTM 1785 Schedule 40 PVC, solid and perforated wall, cell classification 12454-B or 12354-C, with solvent weld or elastomeric gasket joints.	
Weep Hole Pipe - ASTM 1785 Schedule 80 PVC, solid wall, cell classification 12454-B or 12354-C, with solvent weld or elastomeric gasket joints.	
Fittings - ASTM D 3034, cell classification 12454-B or 12454-C, wall thickness SDR35, with solvent weld or elastomeric gasket joints.	
Solvent Cement .....	ASTM D 2564
Primer.....	ASTM F 656

Transport, store and handle materials so as to prevent contamination, segregation, corrosion or damage. Protect liquid admixtures from evaporation and freezing. Provide geocomposite drain strips in rolls wrapped with a protective covering and stored in a manner that protects the fabric from mud, dirt, dust, debris, and shotcrete rebound. Do not remove protective wrapping until immediately before installing the drain strip. Avoid extended exposure to ultraviolet light. Label each roll of drain strip in the shipment to identify the production run.

**00541.11 Shotcrete** – Comply with the shotcrete requirements of ACI 506.2, "Specifications for Materials, Proportioning and Application of Shotcrete", except as otherwise specified in these Special Provisions.

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Shotcrete may be produced by either a wet-mix or dry-mix process.

The wet-mix process consists of thoroughly mixing all the ingredients except accelerating admixtures, but including the mixing water, introducing the mixture into the delivery equipment and delivering it, by positive displacement, to the nozzle.

The dry-mix process consists of shotcrete without mixing water conveyed pneumatically through a hose and mixed with water introduced at the nozzle. For additional descriptive information, refer to the American Concrete Institute, ACI 506R "Guide to Shotcrete."

**00541.12 Shotcrete Mix Design** – Do not proceed with shotcrete placement prior to receipt of the Engineer's written approval of the proposed mix design and method of placement.

**(a) Aggregate** - Provide aggregate for shotcrete meeting the strength and durability requirements of Section 02690 and the following gradation:

<u>Sieve Size</u>	<u>Percent Passing by Mass</u>
1/2 inch	100
3/8 inch	90-100
No. 4	70-85
No. 8	50-70
No. 16	35-55
No. 30	20-35
No. 50	8-20
No. 100	2-10

**(b) Proportioning and Use of Admixtures** - Proportion the shotcrete to be pumpable with the concrete pump furnished for the work, with a cementing materials content of at least 550 lbs. per cubic yard and water/cement ratio not greater than 0.50. Do not use admixtures unless approved by the Engineer. Thoroughly mix admixtures into the shotcrete at the rate specified by the manufacturer. Provide accelerators (if used) compatible with the cement used, be non-corrosive to steel and not promote other detrimental effects such as cracking or excessive shrinkage with a maximum allowable chloride ion content of all ingredients not exceeding 0.10% when tested to AASHTO T 260.

**(c) Air Entrainment** - Air entrainment is not required.

**(d) Strength Requirements** - Provide a shotcrete mix capable of attaining at least 1500 psi compressive strength in 3 days and 3000 psi in 28 days. The average compressive strength of each set of three test cores extracted from test panels or wall face shall equal or exceed 100 percent of the specified compressive strength, with no individual core less than 80 percent of the specified compressive strength.

**(e) Mixing and Batching** - Aggregate and cement may be batched by weight or by volume in accordance with the requirements of ASTM C 94 or AASHTO M 241/ASTM C 685. Thoroughly blend mixing materials in sufficient quantity to maintain placing continuity. Provide ready mix shotcrete that complies with AASHTO M 157. Batch, deliver, and place shotcrete within 90 minutes of mixing. The use of retarding admixtures may extend application time beyond 90 minutes, if approved by the Engineer.

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Premixed and packaged shotcrete mix that conform to the specifications may be provided for on-site mixing. Place mixed shotcrete in the time limits according to the manufacturer's recommendations.

**00541.15 Field Quality Control** - Provide quality control according to Section 00165. Provide certified technicians according to 02001.50.

Test panels are required to demonstrate the qualification of nozzlemen without previous ACI certification. Production test panels and test cores from the wall facing are required for production quality verification.

Perform shotcreting and coring of test panels and wall facing by the Contractor's qualified personnel in the presence of the Engineer. Provide equipment, materials, and personnel as necessary to obtain shotcrete cores for testing. Perform compressive strength testing. Shotcrete final acceptance will be based on the 28-day compressive strength of three test cores taken from the face of the soil nail wall at locations designated by the Engineer. Shotcrete production work will be permitted only upon approval of the design mix and nozzlemens' qualifications and may continue if the specified 3-day and 28-day strengths are attained. Shotcrete work by a particular crew will be suspended if the test results for their work do not attain the specified strength requirements. If this happens, modify the mix, methods, equipment, procedures, or any combination of the foregoing until satisfactory results are obtained. Before resuming work, shoot a test panel and demonstrate that the shotcrete satisfies the specified strength requirements.

### **Equipment**

**00541.20 General** - Furnish shotcrete equipment capable of delivering the premixed material accurately, uniformly, and continuously through the delivery hose.

### **Labor**

**00541.30 Workers' Experience Requirements** – Provide workers, including foremen, nozzlemen, and delivery equipment operators, experienced in their respective specialties. Demonstrate shotcrete nozzlemen experience on at least three projects in the past three years in similar shotcrete application work and the ability to satisfactorily place the shotcrete. In addition to the documented experience on at least three projects, initial qualification of nozzlemen will be based either on previous ACI certification or satisfactory completion of preconstruction test panels according to 00541.40. The requirement for nozzlemen to shoot preconstruction qualification test panels will be waived for nozzlemen who submit documented proof that they have been certified in accordance with the ACI 506.3R "Guide to Certification of Shotcrete Nozzlemen" and certified by an ACI recognized shotcrete testing lab and/or recognized shotcreting consultant, approved by the Agency, and covers the type of shotcrete to be used (plain wet-mix, plain dry-mix or steel fiber reinforced). All nozzlemen will be required to periodically shoot production test panels during the course of the work at the frequency specified in 00541.40(b).

### **Construction**

**00541.40 Test Panels** - Construct qualification and production test panels, including core extraction and compressive strength testing, in accordance with ACI 506.2, AASHTO T 24 and the following.

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**(a) Qualification Test Panels** – Perform at least one qualification test panel for each proposed mixture and for each shooting position to be encountered on the job by nozzleman without previous ACI certification. Conduct qualification testing before beginning production work using the equipment, materials, mixture proportions and procedures to be used for the soil nail wall shotcrete facing. Make qualification test panels at least 30 x 30 inches and at least 4 inches thick. Slope the sides of preconstruction and production test panels at 45 degrees over the full panel thickness to release rebound.

Notify the Engineer not less than two days prior to making qualification test panels. Engineer's visual inspection of the shotcrete density and void structure and on achieving the specified 3-day and 28-day compressive strength determined from test specimens extracted from the preconstruction test panels provide initial qualification of the nozzlemen.

Begin production shooting based on satisfactory completion of the preconstruction test panels and passing 3-day strength test requirements for nozzlemen without ACI Certification. Passing the 28-day strength tests and satisfactory shooting during production test panels and shotcrete facing construction required for continued qualification.

**(b) Production Test Panels** - Perform at least one production test panel during each vertical lift of wall construction. Construct the production test panels simultaneously with the shotcrete facing at times designated by the Engineer. Construct production test panels with minimum dimensions of 18 x 18 inches square and at least 4 inches thick. With the approval of the Engineer, six 3-inch diameter cores taken from the shotcrete facing may be substituted for any production test panel.

**(c) Test Panel Curing, Test Specimen Extraction and Testing** - Immediately after shooting qualification or production test panels, field-cure the panels by covering and tightly wrapping with a sheet of material meeting the requirements of ASTM C 171 until they are delivered to the testing lab or test specimens are extracted. Do not immerse the test panels in water. Do not further disturb test panels for the first 24 hours after shooting. Provide a minimum of six 3-inch diameter core samples cut from each preconstruction test panel and production test panel. The Contractor has the option of extracting test specimens from test panels in the field or transporting to another location for extraction. Keep panels in their forms when transporting. Do not take cores from the outer 6 inches of test panels, measured in from the top outside edges of the panel form. Trim the ends of the cores to provide test cylinders at least 3 inches long. If the Contractor chooses to take cores from the wall face in lieu of making production test panels, locations will be designated by the Engineer. Take cores from the wall face that are free of steel reinforcement.

Clearly mark the cores and containers to identify the core locations and whether they are for qualification or production testing. If for production testing, mark the section of the wall represented by the cores on the cores and container. Immediately wrap cores in wet burlap or material meeting requirements of ASTM C 171 and seal in a plastic bag. Deliver cores to the testing lab within 48 hours of applying the shotcrete. The remainder of the panels will become the property of the Contractor. Perform compressive strength testing. Upon delivery to the testing lab, samples will be placed in the moist room until the time of test. When the test length of a core is less than twice

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the diameter, the correction factors given in AASHTO T 24 will be applied to obtain the compressive strength of individual cores. For each test panel, three cores will be tested at 3 days and three cores will be tested at 28 days in accordance with AASHTO T 24. Fill core holes in the wall by dry-packing with non-shrink patching mortar after the holes are cleaned and dampened. Do not fill core holes with shotcrete.

**00541.41 Wall Drainage Network** - Install and secure all elements of the wall drainage network as shown or as directed to suit the site conditions. The drainage network consists of geocomposite drain strips, weep holes, footing drains, and longitudinal drain pipes.

**(a) Geocomposite Drain Strips** - Install geocomposite drain strips centered between the columns of nails as shown. Place the drain strips at least 12 inches wide and placed with the geotextile side against the excavation face or as recommended by the manufacturer. Secure the strips to the excavation face and prevent shotcrete from contaminating the ground side of the geotextile. Make splices with at least 12-inches of overlap such that the flow of water is not impeded. In areas of excessive groundwater seepage, as determined by the Engineer, place additional drain strips horizontally, connecting to the vertical drain strips, as directed. Repair any damage to the geocomposite drain strip which may interrupt the flow of water or allow soil to enter the drain.

**(b) Weep Holes** - Install non-perforated PVC pipe weep holes centered on geocomposite drain strip locations as shown. Outlet weep holes 3" above finished grade. Cut weep holes flush with permanent shotcrete structural wall facing.

**(c) Footing Drain** - Install footing drains at the bottom of each wall as shown. Envelope the granular drain backfill and pipe with drainage geotextile conforming to the dimensions of the trench, as shown.

**(d) Longitudinal Drain Pipes** - Install lengths of perforated PVC pipe to within the footing drain as shown. Transition from perforated PVC pipe to solid wall PVC pipe when drain pipe leaves soil nail wall alignment. Provide 0.5 percent minimum slope to drainage outlet.

**00541.44 Shotcrete Facing:**

**(a) Shotcrete Alignment and Thickness Control** – Required minimum thickness of shotcrete as shown in the plans. Provide shooting wires, thickness control pins, or other devices acceptable to the Engineer to obtain the required thickness. Install thickness control devices normal to the surface such that they protrude the required shotcrete thickness outside the surface. Construct the front face of the shotcrete so that shotcrete does not extend beyond the limits shown.

**(b) Surface Preparation** - Do not place shotcrete on frozen surfaces or surfaces with flowing water. Clean the face of the excavation, the ungrouted zone above the nail grout at the excavation cut face and other surfaces to be shotcreted of loose materials, mud, rebound, overspray or other matter that could prevent or reduce shotcrete bond. Protect adjacent surfaces from overspray during shooting. Avoid loosening, cracking, or shattering the ground during excavation and cleaning. Remove any loosened or damaged surface material to a sufficient depth to provide a base that is suitable to receive the shotcrete. Remove material that comes loose as the shotcrete is applied.

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**(c) Application** - Maintain a clean, dry, oil-free supply of compressed air sufficient for maintaining adequate nozzle velocity at all times. Control shotcrete application thickness, nozzle technique, air pressure, and rate of shotcrete placement to prevent sagging or sloughing of freshly-applied shotcrete.

Apply the shotcrete from the lower part of the area upwards to prevent accumulation of rebound. Orient nozzle approximately perpendicular to the working face and at such a distance that rebound will be minimal and compaction will be maximized. Ensure complete coverage and encapsulation of reinforcement. Do not work rebound back into the construction. Where shotcrete is used to complete the top ungrouted zone of the nail drill hole near the face, position the nozzle into the mouth of the drill hole to completely fill the void.

A clearly defined pattern of continuous horizontal or vertical ridges or depressions at the reinforcing elements after they are covered with shotcrete will be considered an indication of insufficient reinforcement cover or poor nozzle technique. In this case, suspend application of shotcrete immediately and implement corrective measures before resuming. The shotcreting procedure may be corrected by adjusting the nozzle distance and orientation, by ensuring adequate cover over the reinforcement, by adjusting the water content of the shotcrete mix or other means. Adjustment in water content of wet-mix shotcrete requires re-qualifying the shotcrete mix.

**(d) Defective Shotcrete** - Repair shotcrete surface defects as soon as possible after placement. Remove and replace shotcrete that exhibits segregation, honeycombing, lamination, voids, or sand pockets. Remove and replace, or cover with additional shotcrete, at no additional cost to the Agency, all in-place shotcrete not meeting the specified strength requirement.

**(e) Construction Joints** - Taper construction joints uniformly toward the excavation face over a distance at least equal to the thickness of the shotcrete layer. Provide a minimum reinforcement overlap at reinforcement splice joints as shown. Clean and wet the surface of the joint before adjacent shotcrete is applied. Where shotcrete is used to complete the top ungrouted zone of the nail drill hole near the face, clean and dampen the upper grout surface to receive shotcrete, to the maximum extent practical, similar to a construction joint.

**(f) Finish** - Apply a rough-screeded finish to temporary shotcrete structural facing. Remove shotcrete from the temporary structural facing extending into the permanent shotcrete structural facing beyond the tolerances shown or specified.

**(g) Architectural Treatment** – Provide architectural treatment according to Section 00543 and as shown.

**(h) Attachment of Nail Head Bearing Plate and Nut** - Attach a bearing plate, washer and nut to each nail head as shown. While the shotcrete is still plastic, uniformly seat the plate on the shotcrete by hand-wrench tightening the nut. Where uniform contact between the bearing plate and the shotcrete cannot be provided, set the plate in a bed of grout. After grout has set for 24 hours, hand-wrench tighten the nut. Ensure bearing plates with headed studs are in intimate contact with the construction facing and the studs are located within the tolerances specified in Section 00598.

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**(i) Weather Limitations** - The temperature range for the shotcrete mix, when deposited, is between 50 ° F and 95 ° F. Protect the shotcrete if it must be placed when the ambient temperature is below 41 ° F and falling, or when it is likely to be subjected to freezing temperatures before gaining sufficient strength. Maintain cold weather protection, such as blankets, heating under tents, or other approved means, until the in-place compressive strength of the shotcrete is greater than 725 psi.

Suspend shotcrete application during high winds and heavy rains unless suitable protective covers, enclosures or wind breaks are installed. Remove and replace newly placed shotcrete exposed to rain, or runoff that washes out cement or otherwise makes the shotcrete unacceptable to the Engineer. Provide a polyethylene film or equivalent to protect the work from exposure to adverse weather.

**(j) Curing** - Curing is not required for construction facings to be covered by a permanent shotcrete structural facing or whose service life is less than 36 months.

**00541.46 Temporary Shotcrete Structural Facing Tolerances** - Construction tolerances for the temporary shotcrete structural facing are as follows:

Horizontal location of wire mesh and rebar from plan  
location, as measured normal from wall face:..... 0.75 inch  
Nail head bearing plate, deviation from parallel to wall face: .....5 degrees  
Thickness of shotcrete\*: ..... 0.40 inch

\*Shotcrete thickness tolerances are measurements between the finish shotcrete wall surface and the plan surface location. These are measurements of local irregularities in the finished shotcrete wall surface relative to the plan location. Construct the full thickness of shotcrete to the plan dimensions, unless otherwise approved.

**00541.47 Permanent Shotcrete Structural Facing Architectural Treatment** - Construct permanent shotcrete structural facing with architectural treatment according to Section 00543 and as shown.

**00541.48 Permanent Shotcrete Structural Facing Tolerances** - Construction tolerances for the permanent shotcrete structural facing are as follows:

Horizontal location of rebar from plan  
location, as measured normal from wall face:..... 0.50 inch

Spacing between reinforcing bars, from plan dimension:..... 1.0 inch  
Thickness of shotcrete: .....minimum shown

### Measurement

**00541.80 Measurement** - No measurement of quantities will be made for Work performed under this Section.

### Payment

**00541.90 Payment** - No separate or additional payment will be paid for Work performed under this section. Payment is included in payment made for the appropriate items under 00598.90.

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****SECTION 00543 - ARCHITECTURAL TREATMENT**

Section 00543, which is not a Standard Specification, is included in this Project by Special Provision.

**Description**

**00543.00 Scope** - This work consists of sculpting the exposed faces of the permanent shotcrete structural facing for soil nail walls and coating exposed surfaces, as shown.

**00543.01 Construction Submittals** - At least 30 calendar days before permanent shotcrete structural facing work commences submit the following for review and approval by the Engineer:

- Written evidence that the shotcrete sculptor responsible for architectural treatment have performed satisfactory Work in similar capacities elsewhere for a sufficient length of time to be fully qualified to perform their duties
- A list identifying the lead sculptor and additional sculptors, each having experience installing sculpted shotcrete on at least 3 projects of similar magnitude and difficulty over the past 3 years
- Coating specifications and manufacturer instructions, color samples for approval, and detailed descriptions of proposed shotcrete preparation and coating application methods
- Identify curing methods to be used for the completed, sculpted shotcrete surface

**Materials**

**00543.10 General** - Furnish, store, prepare, apply, and cure all materials according to manufacturers' directions specified for the intended use.

**00543.11 Shotcrete Coating –**

**(a) Description** - This work consists of providing and applying shotcrete antigraffiti coatings to retaining wall surfaces designated in the plans and these special provisions.

**(b) Materials** - Submit proposed antigraffiti shotcrete sealer to Engineer for approval. Provide the following product or approved equal:

- Prmakote 333, provided by Visual Pollution Technologies, Inc., telephone: (480) 657-9183

At a minimum, the antigraffiti coating must meet the following:

- Be nontoxic, non-sacrificial, nonflammable, water-based coating designed for protecting concrete from graffiti
- Be compatible with the shotcrete surface treatment
- Have a clear matte finish when dry

Furnish, prepare, apply, cure and store materials according to the Manufacturer's recommendations.



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**00543.12 Quality Control** - Provide quality control according to Section 00165.

**Construction**

**00543.40 General** - Construct architectural treatment where shown. Extend architectural treatment and shotcrete finishing on soil nail wall facing at least 1 foot below finished grade, or as approved.

**00543.41 Architectural Test Panels** - Construct one or more flat, vertical, unreinforced test panels, using approved sculpting methods and the same framing materials, finishing techniques, labor, equipment, construction joints, shotcrete mix, placement methods, and curing methods as will be used for production, to demonstrate architectural treatment workmanship and materials. Provide a minimum test panel size of 4 inches thick, 4 feet wide and 6 feet high with at least two framed edges and one smooth surface.

Do not proceed with the work prior to receiving the Engineer's approval of the test panel. Remove and dispose of unsatisfactory test panels and repeat as required. The Engineer may reject, under the provisions of 00150.00, any portion of the permanent shotcrete structural facings whose finished appearance does not conform to the appearance of the approved test panel.

Provide a uniform, continuous look without blemishes, voids, disruption of pattern, or unintentional ridges or seams.

**00543.42 Sculpting Shotcrete** – Sculpt the exposed face of the permanent shotcrete structural facing to produce a finish like that produced on the approved Architectural Test Panel submitted. Produce the finish by carving relief into the shotcrete wall face.

**00543.43 Shotcrete Surface Preparation** – Prepare all surfaces to be coated in accordance with the manufacturer's recommendations. Correction of surface problems created as a result of the contractor surface preparation methods will be corrected at no additional cost to the Agency.

Sand blasting will not be allowed for cleaning or preparing shotcrete surfaces. Pressure washing with water (3000 psi) is the preferred method of removing laitance. Pressure wash at a rate of 3 to 4 gallons per minute using a fan nozzle, held perpendicular to the surface, at a distance of 16 to 24 inches. Prepare the surface free of blemishes, discolorations, surface voids and conspicuous form marks, as determined by the Engineer.

**00543.44 Shotcrete Coating Application** – Apply the coatings in accordance with the manufacturer's written instructions. Complete and approve application test sample areas prior to production coating work on the finished structure. Prepare test sample areas to be a minimum of 13 square feet each and include all operations and preparations herein specified. The Engineer will select the location of test sample areas. Conform all production coating work to the approved test sample materials and construction methods. Approved test sample areas will become part of the final work.

This test sample is in addition to the test panel defined in 00542.41.

Extend shotcrete coatings a minimum of 12 inches below the finish ground line.

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**00543.80 Measurement** - No measurement for payment will be made for architectural treatment for the soil nail walls.

**Payment**

**00543.90 Payment** - There will be no separate or additional payment for architectural treatment applied according to this Section. Payment is included in payment made for the appropriate items under 00598.90.

**SECTION 00570 - TIMBER STRUCTURES**

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

**00570.00 Scope** - Replace this subsection, except for the subsection number and title, with the following:

This Work consists of furnishing and erecting timber boardwalk structures as shown.

The terms "hardware," "fastenings," and "fasteners" include nails, bolts, washers and nuts, lag screws, wood screws, threaded rods, clevises, plates, and all other metal used in timber construction.

**00570.41 Fasteners:** Add the following bullets to the end of the bullet list:

- Bore holes for threaded rods 1/32 inch to 1/16 inch larger than the rod diameter. Accurately align holes in all connected members and side plates. Do not force drive bolts.
- Where shown, bore vertical slotted holes with a width 1/32 inch to 1/16 inch larger than the rod diameter and a height 1/2 inch to 1 inch larger than the rod diameter. Center the rod in the slot at the time of structure assembly.

**00570.42(a) Pile Bents** - Delete this subsection.

**00570.42(b) Framed Bents** - Replace this subsection, except for the subsection number and title, with the following:

Provide true and even bearing of posts on plates. Furnish grout pads beneath plates such that plates are level. Fasten posts to plates as shown, removing all earth from contact with all timber.

**00570.43 Stringers** - Replace this subsection, except for the subsection number and title, with the following:

Place stringers according to the following:

- Knots near edges will be in the top portions of stringers.
- Frame blocking between stringers as shown, with approved fastenings as shown.
- Do not splice stringers. Cut stringers full length within each boardwalk span.

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**00570.44(b) Covering Materials** - Replace this subsection, except for the subsection number and title, with the following:

Cover the planking with the following:

- Abrasive traction strips as shown, with a non-degrading, tactile surface. Screw or otherwise mechanically fastened strips to the planks. Strips shall accommodate moisture-related shrinkage and expansion of the planks without failure. Submit product data for approval prior to procurement. Install strips according to the manufacturer’s instructions.

**00570.45 Wheel Guards and Railings** - Replace this subsection with the following subsection:

**00570.45 Pedestrian Rail** - Construct rails:

- In a vertical orientation, without regard to deck cross-slope.
- True to line, grade, and dimensions shown or computed.
- With a smooth, even, uniform top rail.
- With horizontal elements placed at the maximum spacings shown.
- Using stainless steel or galvanized fastenings.

**00570.46 Trusses** – Delete this subsection.

**00570.80 Measurement** - Replace this subsection, except for the subsection number and title, with the following:

The quantities of Work performed in boardwalk construction will be measured on the length basis, along the horizontal alignment of the boardwalk and pedestrian rails.

**00570.90 Payment** - Replace this subsection, except for the subsection number and title, with the following:

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

<b>Pay Item</b>	<b>Unit of Measurement</b>
(a) Timber Boardwalk .....	Foot
(b) Pedestrian Rail.....	Foot

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 grout pads, hardware, fastenings, fasteners, preservative treatment, coatings, or abrasive traction strips.

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****SECTION 00571 - PREFABRICATED PEDESTRIAN BRIDGE**

Section 00571, which is not a Standard Specification, is included in this Project by Special Provision.

**00571.00 Scope** – This Work consists of designing, fabricating, furnishing, installing, and erecting a timber and glued laminated timber pedestrian bridge as shown. Additionally, this Work includes design, fabrication, furnishing, and installing bearings and anchor bolts required for the glued laminated timber pedestrian bridge. The bridge shall be similar to what is shown in the plans and shall meet the requirements shown in both the plans and this specification. The bridge shown is schematic only, with full design required by the supplier.

**00571.01 Definitions:**

**Hardware and Fastenings** - hardware and fastenings include nails, spikes, bolts, washers and nuts, lag screws, wood screws, threaded rods, clevises, and all other metal used in prefabricated bridge construction.

**Timber** – wooden lumber and timber, and glued laminated wood products

**00571.02 Submittals** – Submit stamped Working Drawings that include design calculations, shop drawings and fabrication details, and erection plans according to 00150.35, at least 30 Calendar Days before fabrication of bridge.

**00571.05 Design:**

**(a) Specifications** – Design the prefabricated bridge, bearings, and anchor bolts according to the 2012 *AASHTO LRFD Bridge Design Specifications* and the *LRFD Guide Specifications for the Design of Pedestrian Bridges*, 2009.

**(b) Live loads** – Design the prefabricated bridge for the following:

- (1) Pedestrian load – Design the bridge for a uniformly distributed pedestrian live load of 90 pounds per square foot. No reduction due to tributary area is allowed.
- (2) Maintenance vehicle load – Design the bridge for the maintenance vehicle load as shown.

Pedestrian and vehicular live loading need not be combined in design.

**(c) Dimensions** – Satisfy the following prefabricated bridge requirements:

- (1) Provide span and clear width between rails as shown.
- (2) Camber the bridge such that the bridge profile achieves the profile grade shown under full dead load deflection.

**(d) Deflection** – Satisfy the following prefabricated bridge deflection criteria:

- (1) Vertical live loads** – Design the prefabricated bridge such that vertical deflections under unfactored pedestrian or maintenance vehicle loading (whichever controls) do not exceed  $1/360^{\text{th}}$  of the span length.

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- (2) **Wind loads** – Design the prefabricated bridge such that horizontal deflections under unfactored lateral wind load do not exceed  $1/360^{\text{th}}$  of the span length.

**Materials**

**00571.10 Materials** – Provide materials according to the following:

- (a) Use Douglas Fir-Larch No. 1 or better, S4S, pressure treated for dimensional lumber.
- (b) Provide glued laminated timber composed of Douglas Fir or Douglas Fir-Larch, pressure treated, and graded as required by design. Use waterproof phenolic resin glue adhesive.
- (c) Provide hot-dip galvanized Steel according to ASTM A123 for steel design elements including bolts, rods, washers, nuts, clevises, and bearing. Weld Steel in according to AWS D1.5.
- (d) Bearings to comply with Section 00582.

**Construction**

**00571.40 Delivery and storage** – Unload and handle prefabricated bridge materials with a forklift and crane using nylon slings. Handle and store Materials to prevent warping, twisting, and any other forms of damage. Report any damage that occurs to the bridge supplier. Written permission must be obtained from the supplier's engineer prior to incorporation of damaged materials into the Work, with a copy to the Engineer. Damages which are visible must be accepted by the Engineer in writing prior to incorporation into the Work.

**00571.41 Erection** – Install the prefabricated bridge according to the supplier's approved shop drawings and erection plans. Temporary bracing is the responsibility of the erector. Do not field drill, cut, or otherwise alter prefabricated bridge components without written permission from the bridge supplier's engineer. Written permission must be stamped by the bridge supplier's engineer. Submit the written permission as stamped Working Drawings according to 00150.35.

**00571.42 Pedestrian Rail** – Construct rail:

- In a vertical orientation, without regard to deck cross-slope.
- True to line, grade, and dimensions shown or computed.
- With a smooth, even, uniform top rail.
- With horizontal elements placed at the maximum spacings shown.
- Using stainless steel or galvanized fastenings.

**Measurement**

**00571.80 Measurement** – No measurement of quantities will be made for Work performed under this section.

**Payment**

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**00571.90 Payment** – The accepted quantities of Work performed under this Section will be paid for at the Contract lump sum amount for the item “Prefabricated Bridge.”

No separate or additional payment will be made for bearing devices and anchor bolts.

**SECTION 00596A - MECHANICALLY STABILIZED EARTH RETAINING WALLS**

Comply with Section 00596A of the Standard Specifications modified as follows:

**00596A.01 Proprietary MSE Walls** - Select one of the following preapproved proprietary MSE retaining wall systems for the wall, structure no. MS01 and MS02, as shown:

- Allan Block AB3® (MSE System) MSE Retaining Wall System, provided by Oregon Block and Paver MFG, telephone: (541) 233-7856.
- Allan Block AB6® (MSE System) MSE Retaining Wall System, provided by Oregon Block and Paver MFG, telephone: (541) 233-7856.
- Anchor Diamond (prefabricated modular system) MSE Retaining Wall System, provided by Anchor Wall Systems Inc., telephone: (949) 363-6663.
- MESA (MSE System) MSE Retaining Wall System, provided by Tensar Corporation, telephone: (360) 779-5555 B11.

**00596A.04(b) Design Calculations** - Add the following to the end of this subsection:

The following retaining wall design parameters have been established for this Project:

- Foundation soil unit density ..... 110 lbs./cu. ft.
- Foundation soil angle of internal friction ..... 28 degrees
- Foundation soil nominal (unfactored) bearing resistance ..... @B=4 Feet 5,800 lbs./sq. ft.
- Retained soil unit density..... 110 lbs./cu. ft.
- Retained soil angle of internal friction ..... 28 degrees
- Reinforced soil unit density ..... 125 lbs./cu. ft.
- Reinforced soil angle of internal friction ..... 34 degrees
- Peak ground acceleration coefficient (*PGA*) ..... 0.265
- Short period spectral acceleration coefficient (*S<sub>s</sub>*) ..... 0.772
- Long period spectral acceleration coefficient (*S<sub>l</sub>*) ..... 0.471
- Site class..... D
- Peak seismic ground acceleration coefficient modified by zero period site factor (*A<sub>s</sub>*) ..... 0.36
- Horizontal seismic acceleration coefficient (*k<sub>h</sub>*) ..... 0.18
- Minimum length of soil reinforcement for overall stability ..... 8 feet or 0.8 H of wall, whichever is longer
- Minimum length of soil reinforcement for external stability ..... 8 feet or 0.8 H of wall, whichever is longer

**00596A.80 Measurement** - Add the following to the end of this subsection:

The estimated quantities of retaining walls, measured along the sloped face of the wall, are:

**Structure Number MS01:**

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<b>Station Limits</b>	<b>Area</b>
Sta.5+40 to Sta. 6+20 Lt.	609 sq. ft.

**Structure Number MS02:**

<b>Station Limits</b>	<b>Area</b>
Sta. 39+75 to Sta. 40+23 Rt.	303 sq. ft.

**SECTION 00596D – REINFORCED SOIL SLOPES**

Section 00596D, which is not a Standard Specification, is included in this Project by Special Provision.

**Description**

**00596D.00 Scope** - This Work consists of design, furnishing materials, and construction of geosynthetic/welded wire reinforced soil slope structure.

**00596D.01 Regulations, Standards, and Codes** - All designs and workmanship shall conform to the following standards where applicable:

- FHWA-NHI-10-024 and FHWA-NHI-10-025 (GEC 011) Volume I and II, *Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes*

Wherever reference is made to any of the standards mentioned above, the reference means the code, order, or standard in effect on the date the Project is advertised unless specified otherwise on the Plans or Special Provisions.

**00596D.02 Definitions:**

**Reinforced Soil Slope (RSS)** - are a form of reinforced soil that incorporate planar reinforcing elements in constructed earth-sloped structures with face inclinations of less than 70 degrees.

**Extensible Tensile Reinforcements** - Geosynthetic reinforcement where the deformation under load is equal to or greater than that of the reinforced backfill.

**Inextensible Tensile Reinforcements** - Steel reinforcement where the deformation under load is significantly less than that of the reinforced backfill.

**Facing** - is a component of the RSS structures and usually consists of welded wire mesh, geosynthetic wrap-around, and/or some type of erosion control material.

**Retained backfill** -is the fill material located behind the mechanically stabilized soil zone.

**Reinforced fill** - is the fill material in which the reinforcements are placed.

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Refer to 00596A.03 for additional definitions.

**00596D.04 Reinforced Soil Slope (RSS)** – Select one of the following proprietary RSS systems for structure no. RS01 thru RS09, as shown:

- Artweld Gabion (prefabricated modular system), provided by Hilfiker Retaining Walls, telephone: (800) 762-8962.
- Welded Wire Wall (MSE system), provided by Hilfiker Retaining Walls, telephone: (800) 762-8962.
- MSE Plus (welded wire wall MSE system), provided by SSL, LLC, telephone: (831) 430-9300
- Tensar Wire-Forming Retaining Wall System, provided by Tensar Corporation, telephone: (360) 779-5555 B11.

**00596D.05 Submittals** - Submit the following at least 60 Calendar Days before beginning construction of proprietary reinforced soil slope :

- Complete stamped Working Drawings and design calculations prepared by the manufacturer, according to 00150.35.
- Manufacturer's field construction manual, according to 00150.37.
- Manufacturer's field representative's name and qualifications.

Field verify existing ground elevations and bottom of RSS elevations before preparing and submitting Working Drawings.

Obtain the Engineer's written approval before beginning construction of the RSS system.

**(a) Working Drawings** – Verify that Working Drawings meet the requirements of the Project documents and the requirements of FHWA-NHI-10-024 and FHWA-NHI-10-025 (GEC 011) Volume I and II, *Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes*, as modified by the ODOT GDM, and be consistent with the RSS system proposed.

Include the following items in the Working Drawings, as applicable:

**(1) General Notes** - Information for design and construction of the retaining wall.

**(2) Plan View:**

- Construction centerline and related horizontal curve data.
- Centerline station and offset to the wall control line or face of wall including the beginning and end points of the retaining wall.
- Location, type, and size of all appurtenances.
- Location of Right of Way and easement boundaries, staged construction, designated Wetlands, and all other Highway Structures, features, or facilities, or other construction constraints.
- Length, size, number, and layout of Soil reinforcements.
- Wall stations where changes in the Soil reinforcement length occur.

**(3) Elevation View:**



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- Wall vertical curve data and wall elevations at a sufficient number of points along the top of wall that defines the top of wall alignment.
- Field verified elevations of original and final ground lines along face of the wall and top of leveling pad.
- Vertical dimensions of steps along the top of leveling pad.
- Centerline stations and elevations at the beginning and end of the wall.
- Horizontal offsets.
- Changes in the top of wall Slope.
- Type and size of facing components.
- Layout of MSE wall panels, including wall finish pattern.

**(4) Typical Sections:**

- Typical sections at intervals of 50 feet or less along the wall.
- Wall construction and limits of reinforced backfill.
- Locations, length, size, and number of Soil reinforcements.
- Original and final ground lines across Typical Sections, including Roadways, Highway Structures, and other facilities.
- Construction centerline stationing at each Typical Section.

**(5) Structural and Geometric Details:**

- Leveling pad details, showing depths and limits of proposed excavation beyond the Neat Lines of the wall.
- Top of wall elements such as coping, traffic barrier, and impervious membrane.
- Panel details.
- Final front face batter.
- Details of wedges, shims, clamps, or bracing.
- Reinforcing bar bend details.
- Surface and subsurface drainage details for the wall, including drainage swale, filters, drains, and collector and outlet pipes.
- Wall facing and Soil reinforcement construction details at Utility and drainage facilities, overhead sign support footings, bridge abutments, piles, shafts, and other Structures.
- Wall initiations and terminations.
- Details for wall slip joints, curves, and for external, internal, and acute angle corners.
- Maximum inclinations of wall backslope and foreslope.
- Elevation, Slope, and width of wall bench in front of wall.
- Locations of anticipated shoring.

**(6) Appurtenances:**

- Wall appurtenance details needed to construct the wall.
- Wall appurtenance details that are required but not fully detailed on the Plans.

**(7) Facing Components:**

- Dimensions, including thickness.
- Details necessary to construct the facing components.
- Reinforcing steel in the component.

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- Location of tensile Soil reinforcement attachment devices embedded in the facing.
- Class of concrete finish.
- Architectural treatment, if applicable.

**(8) Soil Reinforcements** - Soil reinforcement dimensions and details necessary to construct the wall.

**(9) Wall Construction Methods and Construction Sequence:**

- Wall construction methods.
- Construction sequence.
- Locations of all shoring.

**(10) Materials and Quantity Summary List** - All items of each wall.

**(b) Design Calculations** – Verify that design calculations meet the requirements of the Project documents and FHWA-NHI-10-024 and FHWA-NHI-10-025 (GEC 011) Volume I and II, *Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes* as modified by the ODOT GDM. RSS design parameters are listed below:

- Foundation soil unit density ..... 110 lbs./cu. ft.
- Foundation soil angle of internal friction ..... 28 degrees
- Foundation soil nominal (allowable) bearing resistance ..... @B=8 Feet 2,500 lbs./sq. ft.
- Retained soil unit density..... 110 lbs./cu. ft.
- Retained soil angle of internal friction ..... 28 degrees
- Reinforced soil unit density..... 125 lbs./cu. ft.
- Reinforced soil angle of internal friction ..... 34 degrees
- Peak ground acceleration coefficient (PGA) ..... 0.265
- Short period spectral acceleration coefficient ( $S_s$ ) ..... 0.772
- Long period spectral acceleration coefficient ( $S_l$ ) ..... 0.471
- Site class..... D
- Peak seismic ground acceleration coefficient modified by zero period site factor ( $A_s$ ) ..... 0.36
- Horizontal seismic acceleration coefficient ( $k_h$ ) ..... 0.18
- Minimum length of soil reinforcement for overall stability ..... 8 feet or 0.8 H of RSS, whichever is longer
- Minimum length of soil reinforcement for external stability ..... 8 feet or 0.8 H of RSS, whichever is longer

Include the following items in the design calculations, as applicable:

**(1) Design Limits:**

- Structural and geotechnical design input parameters and design assumptions.
- Wall design loads, load combinations, load factors, and resistance factors for each limit state.

**(2) Methodology:**

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- Design steps with a detailed design narrative explaining the design and demonstrating how the design meets all applicable design requirements.
- Explanation of all symbols and variables used in the calculations.
- Hand calculations verifying results of computer generated wall design. Hand calculations are not required if the MSEW® version 3.0 or later software program is used to design the wall.

**(3) External Stability Calculations** - Calculations showing that the retaining wall system meets external stability requirements, including overturning, sliding, and bearing capacity.

**(4) Internal Stability Calculations:**

- Calculations showing that the retaining wall meets internal stability requirements at each level of the wall.
- Calculations showing adequate resistance against Soil reinforcement rupture, pullout, and, reinforcement-facing connection failure.
- Calculations showing adequate structural resistance of facing elements.
- Calculations showing all structural details meet internal stability requirements, including construction details to accommodate vertical and horizontal obstructions in the reinforced backfill.

**(5) Compound Stability** - Calculations showing that the retaining wall meets compound stability requirements.

**(6) Appurtenances:**

- Design calculations for wall appurtenances that are required but not fully detailed on the Plans.
- Calculations for all appurtenance load effects on the wall.

**(c) Manufacturer's Field Construction Manual** – Prepare a Manufacturer's field construction manual that includes detailed instructions for constructing the RSS.

### **Materials**

**00596D.10 General:**

**(a) Proprietary RSS System** - Provide all proprietary RSS system components from the same manufacturer. If there are conflicts between the manufacturer's requirements and the Agency's requirements, the Agency's requirements prevail.

**(b) Quality Control** - Provide quality control according to Section 00165.

**00596D.11 Backfill** - Provide backfill according to 00596A.11

**00596D.13 Steel** - Provide steel reinforcement according to 00596A.13

**00596D.14 Geosynthetics** - Provide geosynthetics according to 00596A.14

### **Labor**

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**00596D.30 Quality Control Personnel** - Provide technicians with CAgT, CDT, and CEPT certifications.

**00596D.31 Manufacturer's Representative Qualifications and Duties** - Provide manufacturer's representative according to 00596A.31.

**Construction****00596D.40 General:**

**(a) Proprietary RSS System** - Construct proprietary RSS according to Agency requirements, manufacturer's Working Drawings, and the manufacturer's field construction manual. If the manufacturer's Working Drawings or the manufacturer's field construction manual conflict with Agency requirements, Agency requirements take precedence. Follow instructions and recommendations of the representative if approved by the Engineer. The elements of construction consist of simply:

- Preparation of foundation and leveling pad.
- Placing the reinforcement
- Constructing the face

**00596D.41 Excavation and Foundation Preparation** - Perform excavation and foundation preparation according to 00596A.41.

**00596D.42 Leveling Pads** - Construct leveling pads according to 00596A.42(b).

**00596D.45 Geosynthetic Placement** - Install the geosynthetic reinforcement according to the manufacturer's recommendations, unless otherwise modified by these specifications. Place the geosynthetic reinforcement within the layers of the compacted soil as shown or directed.

- Place the geosynthetic reinforcement in continuous longitudinal strips in the direction of main reinforcement. Joints in the design strength direction (perpendicular to the slope) is not permitted with geotextile or geogrid, except as indicated on the drawings.
- Horizontal coverage of less than 100 percent is not allowed unless specifically detailed in the construction drawings. In the case of 100 percent coverage in plan view adjacent strips need not be overlapped.
- Overlapp or mechanically connect adjacent rolls of geosynthetic reinforcement where exposed in a wrap-around face system, as applicable.
- Place only that amount of geosynthetic reinforcement required for immediately pending work to prevent undue damage. After a layer of geosynthetic reinforcement has been placed, the next succeeding layer of soil is placed and compacted as appropriate. After the specified soil layer has been placed, the next geosynthetic reinforcement layer is installed. Repeat the process for each subsequent layer of geosynthetic reinforcement and soil.
- Place geosynthetic reinforcement to lay flat and pulled tight prior to backfilling. Do not allow a track-type vehicle on the geosynthetic reinforcement before at least 8 inches of soil has been placed. Avoid sudden braking and sharp turning, sufficient to displace fill.
- During construction, the surface of the fill should be kept approximately horizontal. Place geosynthetic reinforcement directly on the compacted horizontal fill surface. Geosynthetic reinforcements are to be placed within 3 inches of the design elevations

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and extend the length as shown on the elevation view unless otherwise directed by the Engineer.

**00596D.47 Reinforced Backfill Placement and Compaction -**

Compact fill as specified or to at least 95 percent of the maximum density determined in accordance with AASHTO T-99, whichever is greater.

- Density test every 200 cubic yard of soil placement. Complete a minimum of three tests per lift.
- Place backfill, spread, and compacted in such a manner to minimize the development of wrinkles and/or displacement of the geosynthetic reinforcement.
- Place fill in 8-inch maximum lift thickness where heavy compaction equipment is to be used, and 6-inch maximum uncompacted lift thickness where hand operated equipment is used.
- Grade backfill away from the slope crest and rolled at the end of each Work Day to prevent ponding of water on surface of the reinforced soil mass.
- Do not operate tracked construction equipment directly upon the geosynthetic reinforcement. A minimum fill thickness of 8-inches is required prior to operation of tracked vehicles over the geosynthetic reinforcement. Turning of tracked vehicles should be kept to a minimum to prevent tracks from displacing the fill and the geosynthetic reinforcement.
- If approved by the Engineer, rubber-tired equipment may pass over the geosynthetic reinforcement at speeds of less than 25 mph. Avoid sudden braking and sharp turning.

**00596D.48 Placement of Face -** Install the RSS facing, erosion control measures and planting as shown and approved design by the Proprietary RSS contractor.

**Maintenance**

**00596D.60 Protecting Work -** Protect and repair Work as follows:

- Do not allow runoff from adjacent areas to enter the RSS construction site during construction operations.
- At the end of each Day's operation, direct potential runoff away from the RSS by sloping the last Lift of backfill away from the RSS facing.
- Rework and repair all damaged Subgrade areas to the depth where undamaged Work is encountered.

**Measurement**

**00596D.80 Measurement -** No measurement of quantities will be made for Work performed under this Section.

The estimated quantities of RSS, measured along the sloped face of the RSS, are:

**Structure Number RS01:**

Station Limits	Area
Sta. 3+77 to Sta. 5+09 Lt.	1355 sq. ft.

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**Structure Number RS02:**

<b>Station Limits</b>	<b>Area</b>
Sta. 6+95 to Sta. 7+63 Lt.	496 sq. ft.

**Structure Number RS03:**

<b>Station Limits</b>	<b>Area</b>
Sta. 10+29 to Sta. 11+88 Lt.	2757 sq. ft.

**Structure Number RS04:**

<b>Station Limits</b>	<b>Area</b>
Sta. 15+20 to Sta. 16+21 Lt.	859 sq. ft.

**Structure Number RS05:**

<b>Station Limits</b>	<b>Area</b>
Sta. 17+59 to Sta. 18+18 Lt.	475 sq. ft.

**Structure Number RS06:**

<b>Station Limits</b>	<b>Area</b>
Sta. 23+77 to Sta. 25+00 Lt.	1371 sq. ft.

**Structure Number RS07:**

<b>Station Limits</b>	<b>Area</b>
Sta. 23+77 to Sta. 25+00 Rt.	914 sq. ft.

**Structure Number RS08:**

<b>Station Limits</b>	<b>Area</b>
Sta. 38+40 to Sta. 40+05 Lt.	1255 sq. ft.

**Structure Number RS09:**

<b>Station Limits</b>	<b>Area</b>

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Sta. 38+40 to Sta. 39+75 Rt.

858 sq. ft.

**Payment**

**00596D.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) RSS, RS01 .....	Lump Sum
(b) RSS, RS02 .....	Lump Sum
(c) RSS, RS03 .....	Lump Sum
(d) RSS, RS04 .....	Lump Sum
(e) RSS, RS05 .....	Lump Sum
(f) RSS, RS06 .....	Lump Sum
(g) RSS, RS07 .....	Lump Sum
(h) RSS, RS08 .....	Lump Sum
(i) RSS, RS09 .....	Lump Sum

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.

Excavation below elevations shown will be paid for according to 00510.90(c).

No separate or additional payment will be made for:

- manufacturer's representative
- excavation, shoring, leveling pads, and specified backfill
- RSS drainage and filter systems
- Soil reinforcement
- cast-in-place and precast standard coping

**SECTION 00598 - SOIL NAIL WALLS**

Section 00598, which is not in the Standard Specifications, is included in this Project by Special Provision.

**Description**

**00598.00 Scope** - This Work consists of constructing permanent soil nail walls as shown and specified.

**00598.01 Subsurface Information** - In addition to the subsurface information shown, geotechnical reports are also available for review at the Engineer's office.

The regional groundwater table is anticipated to be below the level of the wall excavation based on the results of the geotechnical site investigation. However, there are localized areas of perched water or seepage in the project area and these areas may be encountered during wall excavation. The project geotechnical reports should be referenced for more

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detailed information regarding groundwater conditions at the soil nail wall locations. Field observations made during the construction site survey may also reveal, and alert the Contractor to, areas of groundwater seepage.

Review the project geotechnical information to further evaluate the impact of site conditions on selected excavation methods, drilling equipment, grouting methods and other aspects of the Work. Project geotechnical information includes:

2020 Geotechnical Data Report: Cedar Creek/Tonquin Trail: OR-99W – Murdock Segment 3 SW Washington Street – Cedar Creek/OR-99W Crossing dated September 16, 2020.

**00598.02 Definitions:**

**Soil Nail** - A generic term to refer to a reinforcing bar grouted into a drilled hole installed in any type of ground.

**00598.03 Construction Site Survey** Prior to start of any wall construction activity, the Contractor shall inspect the site to observe and document the preconstruction condition of the site, existing structures and facilities. During construction, the Contractor shall observe the conditions above the soil nail wall on a daily basis for signs of ground movement in the vicinity of the wall. Immediately notify the Engineer if any signs of movement, such as new cracks, increased size of old cracks or separation of joints in structures, foundations, streets or paved and unpaved surfaces are observed. If the Engineer determines that the movements exceed those anticipated for typical soil nail wall construction and require corrective action, the Contractor shall take corrective actions necessary to stop the movement or perform repairs.

**00598.04 Submittals** - Before beginning construction of soil nail walls, submit the following to the Engineer:

- Submit contractor and personnel qualifications according to 00598.30.

Submit the following at least 15 Calendar Days before initiating soil nail wall construction:

- The proposed start date and proposed detailed wall construction sequence including:
  - Plan describing how surface water will be diverted, controlled and disposed.
  - Proposed methods and equipment for excavating the soil or rock within the structural excavation limits.
  - Measures to ensure wall and slope stability during various stages of wall construction and excavation including where discontinuous rows of nails will be installed (if applicable). Information on space requirements for installation equipment, temporary shoring plans (if applicable), information on provisions for working in the proximity of underground facilities or utilities (if applicable).
  - Proposed nail drilling methods and equipment, including drill hole diameters proposed to achieve the specified pullout resistance values including any variation of proposed drill hole diameters or procedures along the wall alignment.
- Nail grout mix design including:
  - Type and Brand of Portland cement.
  - Aggregate source and gradation.
  - Proportions of mix by weight and water-cement ratio.



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- Manufacturer, brand name and technical literature for proposed admixtures.
- Compressive strength test results (per AASHTO T 106) supplied by a qualified independent testing lab verifying the specified minimum 3 and 28-day grout compressive strengths. Previous test results for the proposed grout mix completed within one year of the start of grouting on this project may be submitted for initial verification and acceptance of the required compressive strengths and start of production work.
- Proposed nail grout placement procedures and equipment.
- Proposed nail testing methods and equipment setup including:
  - Details of the jacking frame and appurtenant bracing.

Submit the following at least 15 Calendar Days prior to start of nail installation or incorporation of the respective materials into the Work:

- Details showing methods of isolating test nails during shotcrete application (i.e., methods to prevent bonding of the soil nail bar and the shotcrete facing during testing).
- Details showing methods of providing the temporary unbonded length and of grouting the temporary unbonded length of production test nails after completion of testing.

**(a) Test Equipment List** – Include the identification number and certified calibration records for each test jack and pressure gauge and load cell to be used. Calibrate the jack and pressure gauge as a unit. Certify the jack and pressure gauge unit to be accurate within 2 percent of the applied certification loads by a qualified independent testing laboratory within 90 days prior to submittal. Submit calibration records that include the date tested, device identification number, and the calibration test results.

**(b) Manufacturer Certificates of Compliance** - Submit manufacturer certificates of compliance for the soil nail centralizers, bearing plates and nuts, and encapsulation.

Upon delivery of nail bars to the Project Site, provide certified mill test results for nail bars from each heat specifying the ultimate strength, yield strength, elongation and composition.

**(c) Shop Drawings** – Submit Stamped Working Drawings according to 00150.35, identifying soil nail placement, temporary and permanent reinforcing placement including splice locations and lengths, connector plate placement, and drainage details. Identify methods used to hold these items in place throughout construction.

The Engineer will approve or reject the submittals within 15 Calendar Days after receipt of a complete submittal. Do not begin wall construction or incorporate materials into the Work until the submittal requirements are satisfied and approved by the Engineer. Resubmit changes or deviations from the approved submittal.

No adjustments in Contract Time will be allowed due to incomplete submittals.

**00598.05 Preconstruction Meeting** - A mandatory preconstruction meeting will be scheduled by the Engineer subsequent to reviewing and approving construction submittals required under subsection 00598.04. The meeting will be held prior to the start of soil nail wall construction. The Engineer, Contractor, Agency and soil nail contractor shall attend the meeting. The excavation contractor, shotcreting contractor and survey contractor, if different than the prime Contractor or soil nail contractor, shall also attend. The preconstruction

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meeting will be conducted to clarify the construction requirements for the work, to coordinate the construction schedule and activities, and to identify contractual relationships and delineation of responsibilities of the prime Contractor and the various subcontractors, particularly those pertaining to wall excavation, nail installation and testing, excavation and wall alignment survey control, and shotcrete and CIP facing construction.

**Materials**

**00598.10 General** - Furnish new materials without defects. Remove defective materials from the job site at no additional cost to the Agency. Remove the defective or otherwise unacceptable materials from the project as soon as possible to ensure that they are not incorporated into the Work. Materials for soil nail structures consist of the following:

- **Solid Bar Nail Tendons** - AASHTO M 31/ASTM A 615, Grade 60 or 75. Deformed bar, continuous without splices or welds, new, straight, undamaged, epoxy coated and encapsulated as shown. Thread a minimum of 6 inches on the wall anchorage end to allow proper attachment of bearing plate and nut. Threading may be continuous spiral deformed ribbing provided by the bar deformations (e.g. Dywidag or Williams continuous threadbars) or may be cut into a reinforcing bar. If threads are cut into a reinforcing bar, provide the next larger bar number designation from that shown on the plans, at no additional cost to the Agency.
- **Shotcrete** - Perform shotcrete for permanent and temporary structural facings as shown and according to Section 00541.
- **Encapsulation** - Minimum 0.04-inch-thick corrugated HDPE tube conforming to AASHTO M 252 or corrugated PVC tube conforming to ASTM D 1784, Class 13464-B. Provide encapsulation at least 0.20 inch of grout cover over the nail bar and be resistant to ultraviolet light degradation, normal handling stresses, and grouting pressures. Factory fabrication of the encapsulation is preferred and recommended. Upon the Engineers approval, the encapsulation may be field fabricated if performed in strict accordance with the manufacturer's recommendations.
- **Fusion Bonded Epoxy Coating** - Minimum thickness of 0.016 inch, electrostatically applied, conforming to ASTM A 775. Bend test requirements are waived. Coating at the wall anchorage end of epoxy coated bars may be omitted over the length provided for threading the nut against the bearing plate.
- **Centralizers** - Manufactured from Schedule 40 PVC pipe or tube, steel or other material not detrimental to the nail steel. Wood, or wood products, is not allowed. Securely attach the centralizer to the nail bar, sized to position the nail bar within 1.0 inch of the center of the drill hole, sized to allow tremie pipe insertion to the bottom of the drill hole, and sized to allow grout to freely flow up the drill hole.
- **Nail Grout** - Neat cement or sand/cement mixture with a minimum 3-Day compressive strength of 1,500 psi and a minimum 28-Day compressive strength of 3,000 psi when tested according to AASHTO T 106.
- **Admixtures** - AASHTO M 194. Admixtures which control bleed, improve flowability, reduce water content and retard set may be used in the grout, subject to review and approval by the Engineer. Accelerators are not permitted. Expansive admixtures may only be used in grout used for filling sealed encapsulations. Prepare admixtures compatible with the grout and mixed according to the manufacturer's recommendations.
- **Portland Cement** - AASHTO M 85, Type I, II, or III.

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- **Fine Aggregate** - According to 02690.20.
- **Bearing Plates** - AASHTO M 183/ASTM A 36.
- **Nuts** - AASHTO M 291, grade B, hexagonal, fitted with beveled washer or spherical seat to provide uniform bearing.

**00598.20 Materials Handling and Storage** - Store cement to prevent moisture degradation and partial hydration. Do not use cement that has become caked or lumpy. Store aggregates so that segregation and inclusion of foreign materials are prevented. Do not use the bottom 6 inches of aggregate piles in contact with the ground.

Store steel reinforcement on supports to keep the steel from contacting the ground. Damage to the nail steel as a result of abrasion, cuts, nicks, welds, and weld splatter will be cause for rejection. Do not ground welding leads to nail bars. Protect nail steel from dirt, rust, and other deleterious substances prior to installation. Corrosion or pitting of nails, as determined by the Engineer, will be cause for rejection. Place protective wrap over anchorage end of nail bar to which bearing plate and nut will be attached to protect during handling, installation, grouting and shotcreting.

Do not move or transport encapsulated nails until the encapsulation grout has reached sufficient strength to resist damage during handling. Handle encapsulated nails in a manner that will prevent large deflections, distortions or damage. Repair encapsulated nails that are damaged or defective in accordance with the manufacturer's recommendations or remove them from the site.

Handle and store epoxy coated bars in a way that will prevent them from being damaged beyond what is permitted by ASTM D 3963. Repair damaged epoxy coating according to ASTM A 775 and the coater's recommendations using an epoxy field repair kit approved by the epoxy manufacturer. For repaired areas, the minimum epoxy coating thickness is 0.012-inches.

### **Labor**

**00598.30 Personnel Qualifications** - Perform the soil nail Work using a company and personnel experienced in soil nail Work. Submit a list to the Engineer for approval identifying the on-site supervisors and drill rig operators assigned to the Project and the company's experience relevant to the Project. A minimum of 21 Calendar Days before the planned start of wall construction, provide the following information to verify the firm's experience and the qualifications of personnel scheduled to perform the soil nail wall:

- Submit a project reference list of at least 3 separate permanent soil nail retaining wall projects during the past 3 years, totaling at least 1000 square yards of wall face area and at least 500 permanent soil nails. Include a brief description of each project and the owner's contact person's name and current phone number for each project listed.
- On-site supervisors shall be a professional civil engineer, registered in the State of Oregon, employed by the soil nail contractor, and having experience in the construction of permanent soil nail retaining walls on at least 3 completed projects over the past 3 years.
- Drill rig operators shall have experience installing permanent soil nails on at least 3 projects over the past 3 years.

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- Do not use consultants or manufacturer's representatives to satisfy the requirements of this section.

The Engineer will respond within 15 Calendar Days after receipt of submittal. Do not begin Work or order materials until the qualifications have been approved. The Engineer may suspend the Work if the Contractor substitutes unapproved personnel during construction. Submit requests for substitution of either on-site supervisors or drill operators to the Engineer, who will have 7 Calendar Days to respond to each request. Additional costs resulting from the suspension of Work due to the changing of personnel is the Contractor's responsibility, and no adjustment in Contract Time resulting from the suspension of Work will be allowed.

**Construction**

**00598.40 Site Drainage Control** - Provide positive control and discharge of all surface water that will affect construction of the soil nail retaining wall. Repair damage caused by surface water at no cost to the Agency. Do not allow surface water or ground water seepage to collect at the face of wall excavations. Capture surface water runoff flows and flows from existing subsurface drainage structures independently of the wall drainage network and convey them to an outfall structure or storm sewer, as approved by the Engineer.

Maintain all pipes or conduits used to control surface water during construction. Upon substantial completion of the wall, remove surface water control pipes or conduits from the site. Alternatively, with the approval of the Engineer, pipes or conduits that are left in place, may be fully grouted and abandoned or left in a way that protects the structure and all adjacent facilities from migration of fines through the pipe or conduit and potential ground loss.

Immediately contact the Engineer if unanticipated existing subsurface drainage structures are discovered during excavation.

**00598.41 Wall Alignment Survey Control** - Provide survey reference and control points along, or offset from, the top of wall alignment at approximate 30 foot intervals prior to starting wall excavation for the following:

- providing the necessary survey and alignment control during excavation of each lift,
- locating and drilling each drill hole within the allowable tolerances,
- performing the wall excavation and nail installation in a manner which will allow for constructing the shotcrete facing to the specified minimum thickness,
- performing wall excavation such that the finish CIP structural facing can be constructed to the specified minimum thickness and to the line and grade indicated in the plans.

Where the as-built location of the front face of the shotcrete exceeds the allowable tolerance from the wall control line shown, the Contractor is responsible for determining, and bearing the cost of, remedial measures necessary to provide proper attachment of nail head bearing plate connections and satisfactory placement of the final facing, as shown on the plans.

**00598.42 Excavation** - Coordinate the Work and the excavation so the soil nail wall is safely constructed. Make no excavations steeper than those specified or shown, either above or below the soil nail wall, without prior written approval of the Engineer.

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**(a) General Excavation** - Complete clearing, grubbing, grading and excavation above and behind the wall before commencing wall excavation. Do not overexcavate the original ground behind the wall or at the ends of the wall, beyond the limits shown. Do not perform general excavation that will affect the soil nail wall until wall construction starts. Coordinate general excavation and drainage work with the soil nailing work.

Perform excavation for the wall from the top down in a horizontal staged excavation lift sequence with the ground level for each lift excavated not more than mid-height between adjacent nail rows. Do not excavate the full wall height to the final wall alignment in one excavation stage unless the wall is only one lift high and there is sufficient standup time. Maintain a working bench of native material between successive lifts to serve as a platform for the drilling equipment. Provide a bench wide enough for a safe working area for the drill equipment and workers.

**(b) Soil Nail Structure Excavation** - Perform soil nail structure excavation according to this subsection and applicable portions of Section 00510. Structure excavation in the vicinity of the wall face will require special care and effort as compared to general earthwork excavation. Due to the close coordination required between the soil nail contractor and the excavation contractor, perform structure excavation for the soil nail wall under the direction and direct supervision of the soil nail specialty contractor.

Soil nail structure excavation limits are shown. Excavate to the final wall face using procedures that: (1) prevent, or minimize, over excavation; (2) prevent, or minimize, ground loss, swelling, air slaking, or loosening; (3) prevent loss of support for completed portions of the wall; (4) prevent loss of soil moisture at the face; and (5) prevent ground freezing.

Monitor the exposed unsupported final excavation face cut height does not exceed the vertical nail spacing plus the required reinforcing lap or the short-term stand-up height of the ground, whichever is less. For each excavation lift, complete excavation to the final wall excavation line and application of the shotcrete in the same work shift unless otherwise approved by the Engineer. Application of the shotcrete may be delayed up to 24 hours if the Contractor determines the delay will not adversely affect the excavation face stability. A polyethylene film over the face of the excavation may reduce degradation of the cut face caused by changes in moisture.

At the soil nail contractor's option, during each excavation lift, nails may be drilled and installed through a temporary stabilizing berm. The purpose of the stabilizing berm is to prevent or minimize instability or sloughing of the final excavation face due to ground conditions or drilling action. The stabilizing berm geometry includes the top of berm extending horizontally out from the bottom front face of the overlying shotcrete a distance of one foot and cut down from that point to the base grade for that excavation lift at a slope not steeper than 1H:1V. The soil nail contractor may use a different berm geometry if the soil nail contractor determines that the different geometry provides satisfactory performance. Following the installation of nails in that lift, excavate the temporary stabilizing berm to the final wall face excavation line and clean the final excavation face of all loose materials, mud, rebound and other foreign matter which could prevent or reduce shotcrete bond. Ensure that installed nails and corrosion protection are not damaged during excavation of the stabilizing berm. Repair or replace nails or corrosion protection damaged or disturbed during excavation of the stabilizing berm, to the Engineer's satisfaction, at no additional cost to the Agency. Do not excavate the stabilizing berm until

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the nail grout has aged for at least 24 hours. Remove hardened nail grout protruding from the final wall excavation line more than 2 inches in a manner that prevents fracturing the grout at the nail head. Sledge hammer removal of the grout is not allowed. The use of hand-held rock chippers, as well as other tools or equipment, is acceptable provided their use does not damage or disturb the remaining grout at the nail head, the nail bar, or corrosion protection. Alternative excavation and soil nail installation methods that meet these objectives may be submitted to the Engineer for review according to 00598.04.

Do not proceed with excavation to the next lift until nail installation, reinforced shotcrete placement, attachment of bearing plates and nuts and nail testing have been completed and accepted in the current lift. Cure nail grout and shotcrete for at least 72 hours or attained at least the specified 3-Day compressive strength before excavating the next underlying lift. Excavating the next lift in less than 72 hours will only be allowed if the Contractor submits compressive strength test results, for tests performed by a qualified independent testing lab, verifying that the nail grout and shotcrete mixes being used will provide the specified 3-Day compressive strengths in the lesser time.

Notify the Engineer immediately if raveling or local instability of the final wall face excavation occurs. Temporarily stabilize unstable areas by means of buttressing the exposed face with an earth berm or other methods.

**00598.43 Wall Discontinuities** - Where the Contractor's excavation and installation methods result in a discontinuous wall along any nail row, extend the ends of the constructed wall section beyond the ends of the next lower excavation lift by at least 10 feet. Construct slopes at these wall discontinuities to prevent sloughing or failure of the temporary slopes at the end of each discontinuous wall section.

**00598.44 Excavation Face Protrusions, Voids or Obstructions** - Remove all or portions of Cobbles, Boulders, rubble or other subsurface obstructions encountered at the final wall excavation face which will protrude into the design shotcrete facing. Determine method of removal of face protrusions, including method to safely secure remnant pieces left behind the excavation face and for promptly backfilling voids resulting from removal of protrusions extending behind the excavation face. Notify the Engineer of the proposed method(s) for removal of face protrusions prior to beginning removal. Backfill with shotcrete or concrete, voids or over-excavation beyond the plan wall excavation line resulting from the removal of face protrusions or excavation operations, as approved by the Engineer. Removal of face protrusions and backfilling of voids or over-excavation is considered Incidental to the work. Cost due to removal of unanticipated man-made obstructions will be determined according to 00195.20.

**00598.45 Soil Nail Installation:**

**(a) General** - Determine the required final drill hole diameter(s), drilling method, grout composition and installation method necessary to achieve the specified nail pullout resistance(s) according to 00598.04.

No drilling or installation of production nails will be permitted in any soil/rock unit until successful preproduction verification testing of nails is completed in that unit and approved by the Engineer. Install verification test nails using the same equipment, methods, nail inclination and drill hole diameter as planned for the production nails. Perform preproduction verification tests according to 00598.47(d) prior to starting wall excavation

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and prior to installation of production nails in the specific lift in which the designated verification test nails are located. The number and location of the verification tests will be as indicated on the plans or as specified. Verification test nails may be installed through either the existing slope face prior to start of wall excavation, drill platform work bench, stabilization berm or into slot cuts made for the particular lift in which the verification test nails are located. Slot cuts should only be large enough to safely accommodate the drill and test nail reaction setup. Subject to the Engineer's approval, verification test nails may also be installed at angle orientations other than perpendicular to the wall face or at different locations than specified, if the Contractor can demonstrate that the test nails will be bonded into ground which is representative of the ground at the verification test nail locations designated on the plans or as specified.

Install the production soil nails before the application of the reinforced shotcrete facing. At the Contractor's request and subject to the Engineer's written approval, the shotcrete facing may be placed before drilling and installing the nails. If approved by the Engineer, provide a blockout through the shotcrete facing at drill hole locations using PVC pipe, or other suitable material, to prevent damage to the facing during drilling. As part of the required construction submittals, provide the Engineer with acceptable structural design calculations demonstrating that the facing structural capacity will not be reduced and that the bearing plates are adequate to span the nail drill hole blockout through the construction facing.

Where necessary for stability of the excavation face, the Contractor has the option of placing a sealing layer (flashcoat) of unreinforced shotcrete, or steel fiber reinforced shotcrete. The Contractor also has the option of drilling and grouting nails through a temporary stabilizing berm of native soil according to 00598.42.

The cost of any contractor redesign work, additional materials, or installation modifications will be performed at no additional cost to the Agency.

**(b) Drilling** - Make drill holes for the soil nails at the locations, orientations, and lengths as shown or as directed by the Engineer. Select drilling equipment and methods suitable for the ground conditions depicted in the plans, and described in the geotechnical reports and shown in the boring logs. Select drill hole diameter(s) required to develop the specified pullout capacity and to also provide a minimum 0.50-inch grout cover over the encapsulation of encapsulated nails. A minimum required drill hole diameter is shown on the plans. It is the Contractor's responsibility to determine the final drill hole diameter(s) required to provide the specified pullout capacity. Use of drilling muds such as bentonite slurry to assist in drill cutting removal is not allowed. Air may be used. With the Engineer's approval, the Contractor may be allowed to use water or foam flushing upon successful demonstration, at no additional cost to the Agency, that the installation method still provides adequate nail pullout capacity. If caving ground is encountered, use cased drilling methods to support the sides of the drill holes. Use percussion or other suitable drilling equipment capable of drilling and maintaining stable drill holes at locations where hard drilling conditions such as Rock, Cobbles, Boulders, or obstructions are encountered.

Immediately suspend or modify drilling operations if ground subsidence is observed, if the soil nail wall is adversely affected, or if adjacent structures are damaged from the drilling operation. Immediately stabilize the adverse conditions at no additional cost to the Agency.

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**(c) Nail Bar Installation** - Provide nail bars according to the schedules included in the plans. Provide centralizers sized to position the bar within 1.0 inch of the center of the drill hole. Position centralizers as shown, so their maximum center-to-center spacing does not exceed 10 feet. Locate centralizers within 2.0 feet from the top and bottom of the drill hole. Securely attach centralizers to the bar so they will not shift during handling or insertion into the drill hole, will allow grout tremie pipe insertion to the bottom of drill hole and will allow grout to flow freely up the hole.

Inspect each nail bar before installation and repair or replace any damaged bars or corrosion protection. Check uncased drill holes for cleanliness, and take remedial action as necessary, prior to insertion of the soil nail bar. Insert nail bars with centralizers into the drill hole to the required length without difficulty and in a way that prevents damage to the drill hole, bar, or corrosion protection. Do not drive or force partially inserted soil nails into the hole. Remove nails which cannot be fully inserted to the design depth and clean the drill hole to allow unobstructed installation.

When using cased or hollow stem auger drilling equipment which does not allow for the centralizers to pass through the casing or auger stem, the Contractor may delete the centralizers if the neat cement grout pumped through the casing is placed using grout pressures greater than 150 psi or if the sand-cement grout placed through the stem of the auger has a slump of 9.0 inches or less.

**(d) Nail Installation Tolerances** - Do not extend nails beyond the Right-of-Way or easement limits shown. Nail location and orientation tolerances are:

- (1) Nail head location, deviation from plan design location: 6 inches any direction
- (2) Nail inclination, deviation from plan:  $\pm 3$  degrees.
- (3) Center nail bars within 1.0 inch of the center of the drill hole.
- (4) Horizontal Location of Headed Studs on Bearing Plates, from plan location:  $\pm 0.50$  inches

Location tolerances are applicable to only one nail and not accumulative over large wall areas. Soil nails which do not satisfy the specified tolerances, due to the Contractor's installation methods, will be replaced by the Contractor at no additional cost to the Agency. Backfill abandoned nail drill holes with tremied grout as approved by the Engineer. Nails which encounter unanticipated obstructions during drilling may be relocated, as approved by the Engineer.

**00598.46 Grouting:**

**(a) Grout Mix Design** - Use a neat cement grout or a sand-cement grout. Submit the proposed nail grout mix design to the Engineer for review and approval according to 00598.04. Include in the design mix submittal the compressive strength test results verifying that the proposed mix will have a minimum 3-Day compressive strength of 1500 psi and minimum 28-Day compressive strength of 3000 psi.



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**(b) Grout Testing** - During production, sample the nail grout at a frequency of not less than once for each 40 cubic yards of grout placed and prepare two sets of three cubes each according to AASHTO T 106. Test for compressive strength by testing one set 3 Days after casting and one set 28 Days after casting. Provide test results to the Engineer within 24 hours of testing.

**(c) Grouting Equipment** – Provide grout equipment that produces a uniformly mixed grout free of lumps and undispersed cement, and be capable of continuously agitating the mix. Use a positive displacement grout pump equipped with a pressure gauge which can measure at least twice but no more than three times the intended grout pressure. Size the grouting equipment to enable the entire nail to be grouted in one continuous operation. Place the grout within 60 minutes after mixing or within the time recommended by the admixture manufacturer, if admixtures are used. Grout not placed in the allowed time limit will be rejected.

**(d) Grouting Methods** - Grout the drill hole after installation of the nail bar. Grout each drill hole within 2 hours of completion of drilling, unless otherwise approved by the Engineer. Inject the grout at the lowest point of each drill hole through a grout tube, casing, hollow-stem auger, or drill rods. Keep the outlet end of the conduit delivering the grout below the surface of the grout as the conduit is withdrawn to prevent the creation of voids. Completely fill the drill hole in one continuous operation. Cold joints in the grout column are not allowed except at the top of the test bond length of proof tested production nails. At the Contractor's option, the grout tube may remain in the hole provided it is filled with grout. Grouting before insertion of the nail is allowed provided the nail bar is immediately inserted through the grout to the specified length without difficulty.

During casing removal for drill holes advanced by either cased or hollow-stem auger methods, maintain sufficient grout level within the casing to offset the external groundwater/soil pressure and prevent hole caving. Maintain grout head or grout pressures sufficient to ensure that the drill hole is completely filled with grout and to prevent unstable soil or groundwater from contaminating or diluting the grout. Record the grout pressures for soil nails installed using pressure grouting techniques. Control grout pressures to prevent excessive ground heave or fracturing.

Remove the grout and nail if grouting is suspended for more than 30 minutes or does not satisfy the requirements of this specification or the plans, and replace with fresh grout and undamaged nail bar at no additional cost to the Agency.

**00598.47 Nail Testing:**

**(a) General** - Perform both verification and proof testing of designated test nails. Perform preproduction verification tests on sacrificial test nails at locations as directed by the Engineer. Contractor can use production nails for verification testing at their own risk. If production nails are used as verification nails, they should be replaced at no cost to the Agency if the nails fail under verification testing. Perform proof tests on production nails at locations selected by the Engineer. The Engineer will record the required nail test data. Do not perform nail testing until the nail grout and shotcrete facing have cured a minimum of 72 hours and attained the minimum specified 3-Day compressive strength. Testing in less than 72 hours will only be allowed if the Contractor submits compressive strength test results, for tests performed by a qualified independent testing lab, verifying that the nail

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grout and shotcrete mixes will provide the specified 3-Day compressive strengths in less time.

**(b) Proof Test Nail Unbonded Length** - Provide temporary unbonded lengths for each test nail. Isolate the test nail bar from the shotcrete facing or the reaction frame used during testing. Install a test nail through the shotcrete facing that does not affect the location of the reinforcing steel under the bearing plate. Accepted proof test nails may be incorporated as production nails provided the temporary test unbonded length is fully grouted subsequent to testing. Submit the proposed test nail isolation methods, methods for providing an unbonded test length, and methods for grouting the unbonded length subsequent to testing, to the Engineer for review and approval according to 00598.04. Where temporary casing of the unbonded length of test nails is provided, install the casing in a way that prevents any reaction between the casing and the grouted bond length of the nail or the stressing apparatus. Do not extend nail hole grout above the top of the tested bond length during testing and finish normal to the soil nail bar.

**(c) Testing Equipment** – Include testing equipment consisting of dial gauges, dial gauge support, jack and pressure gauge, electronic load cell, and a reaction frame. The load cell is required only for the creep test portion of the verification test. Provide a description of the test setup and jack, pressure gauge and load cell calibration curves according to 00598.04.

Design the testing reaction frame to be sufficiently rigid and of adequate dimensions such that excessive deformation of the testing equipment does not occur. If the reaction frame will bear directly on the shotcrete facing, design the reaction frame to prevent cracking of the shotcrete. Independently support and center the jack over the nail bar so that the bar does not carry the weight of the testing equipment. Align the jack, bearing plates, and stressing anchorage with the bar such that unloading and repositioning of the equipment is not required during the test.

Apply and measure the test load with a hydraulic jack and pressure gauge. Provide a pressure gauge graduated in 75 psi increments or less. Provide a jack and pressure gauge with a pressure range not exceeding twice the anticipated maximum test pressure. Allow jack ram travel to be sufficient enough to allow the test to be done without resetting the equipment. Monitor the nail load during verification tests with both the pressure gauge and the load cell. Use the load cell to maintain constant load hold during the creep test load hold increment of the verification test.

Measure the nail head movement with a dial gauge capable of measuring to 0.001 inch. Provide a dial gauge with a travel sufficient to allow the test to be done without having to reset the gauge. Visually align the gauge to be parallel with the axis of the nail and support the gauge independently from the jack, wall or reaction frame. Use two dial gauges, one on either side of the nail, when the test setup requires reaction against a soil cut face or other non-rigid reaction surface.

**(d) Preproduction Verification Testing** - Preform preproduction verification testing prior to installation of production nails to verify the Contractor's installation methods, proposed drill hole diameter and nail pullout resistance. Perform preproduction verification tests at the locations and elevations shown or specified and according to 00598.45, unless otherwise approved by the Engineer. Perform a minimum of 2 verification tests in each different soil/rock unit and for each different drilling/grouting method proposed to be used,

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at each wall location. Verification test nails will be sacrificial and not incorporated as production nails unless otherwise approved by the Engineer. Bare bars can be used for the sacrificial verification test nails.

Develop and submit the details of the verification testing arrangement, including the method of distributing test load pressures to the excavation surface (reaction frame), test nail bar size, grouted drill hole diameter and reaction frame dimensioning to the Engineer for approval according to 00598.04. Construct verification test nails using the same equipment, installation methods, nail inclination, and drill hole diameter as planned for the production nails. Changes in the drilling or installation method may require additional verification testing as determined by the Engineer and provided at no additional cost to the Agency.

Provide verification test nails that have both bonded and unbonded lengths. Prior to testing only grout the bonded length of the test nail with an unbonded length of the test nail being at least 3.0 feet. Determine the bonded length of the test nail based on the production nail bar grade and size such that the allowable bar structural load is not exceeded during testing and not be less than 10 feet. Do not exceed the allowable bar structural load of 90 percent of the yield strength for Grade 60 and Grade 75 bars during testing. Provide larger verification test bar sizes, if required to safely accommodate the 10 foot minimum test bond length and testing to 2 times the allowable pullout resistance requirements, at no additional cost to the Agency.

Verify the verification test bonded length,  $L_{BV}$ , does not exceed the test allowable bar structural load divided by 2 times the allowable pullout resistance value. Use the following equation for determining the verification test nail maximum bonded length to be used to avoid structurally overstressing the verification test nail bar size:

$$L_{BV} = C f_Y A_S / (2 Q_d), \text{ or } 10 \text{ feet, whichever is greater.}$$

where:

$L_{BV}$  = Maximum Verification Test Nail Bonded Length (feet).

$C$  = 0.9 for Grade 60 and 75 bars.

$f_Y$  = Bar Yield or Ultimate Stress (ksi).

$A_S$  = Bar Steel Area (in<sup>2</sup>).

2 = Pullout resistance safety factor.

$Q_d$  = Allowable pullout resistance (kips/ft.; kips per linear foot of grouted nail length, specified in these special provisions or on the plans).

Determine the Design Test Load (DTL) during verification testing using by the following equation:

$$DTL = \text{Design Test Load (kips)} = L_{BV} \times Q_d$$

where:

$L_{BV}$  = As-built bonded test length (ft.)

$Q_d$  = Allowable pullout resistance (kips/ft., kips per linear foot of grouted nail length, specified in these special provisions or on the plans).

MTL = 2.0 x DTL = Maximum Test Load (kips).

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Incrementally load the verification test nails to a maximum test load of 200 percent of the Design Test Load (DTL) according to the following loading schedule. Record the soil nail movements at each load increment.

VERIFICATION TEST LOADING SCHEDULE

<u>LOAD</u>	<u>HOLD TIME</u>
AL (.05 DTL max.)	1 minute
0.25 DTL	10 minutes
0.50 DTL	10 minutes
0.75 DTL	10 minutes
1.00 DTL	10 minutes
1.25 DTL	10 minutes
1.50 DTL (Creep Test)	60 minutes
1.75 DTL	10 minutes
2.00 DTL (Max. Test Load)	10 minutes

The alignment load (AL) should be the minimum load required to align the testing apparatus and should not exceed 5 percent of the Design Test Load (DTL). Dial gauges should be set to "zero" after the alignment load has been applied.

Hold each load increment for at least 10 minutes. Monitor the verification test nail for creep at the 1.50 DTL load increment. Measure nail movements during the creep portion of the test and recorded at 1 minute, 2, 3, 5, 6, 10, 20, 30, 50, and 60 minutes. Maintain the load during the creep test within 2 percent of the intended load by use of the load cell.

**(e) Proof Testing of Production Nails** - Perform proof testing on 5 percent of the production nails in each nail row or minimum of 1 nail per row. The locations will be designated by the Engineer. A verification test nail, successfully completed during production work, is considered equivalent to a proof test nail, and counted as a proof test nail, in determining the number of proof tests required for any row.

Provide production proof test nails that have both bonded and temporary unbonded lengths. Prior to testing, only grout the bonded length of the test nail and maintain a temporary unbonded length of the test nail of at least 3 feet. Determine the bonded length of the test nail based on the production nail bar grade and size such that the allowable bar structural load is not exceeded during testing and not less than 10 feet. Production proof test nails shorter than 13 feet in length may be constructed with less than the minimum 10 foot bond length with the unbonded length limited to 3 feet. Verify that the allowable bar structural load during testing for Grade 60 and Grade 75 bars does not exceed 90 percent of the yield strength.

Verify the proof test bonded length,  $L_{BP}$ , does not exceed the test allowable bar load divided by 1.5 times the allowable pullout resistance value, or above minimum lengths, whichever is greater. Use the following equation for sizing the proof test nail bonded length to avoid overstressing the production nail bar size:

$$L_{BP} = C f_y A_s / (1.5 Q_d), \text{ or above minimum lengths, whichever is greater.}$$

$$L_{BP} = \text{Maximum Proof Test Nail Bonded Length (ft.)}$$

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- C = 0.9 for Grade 60 and 75 bars and 0.8 for Grade 150 bars  
 $f_y$  = Bar Yield or Ultimate Stress (ksi)  
 $A_s$  = Bar Steel Area (in.<sup>2</sup>)  
 1.5 = Pullout resistance safety factor  
 $Q_d$  = Allowable pullout resistance (kips/ft.; kips per linear foot of grouted nail length, as specified or shown)

Determine the Design Test Load (DTL) during proof testing by the following equation:

$$DTL = \text{Design Test Load (kN)} = L_{BP} \times Q_d$$

$$L_{BP} = \text{As-built bonded test length (ft.)}$$

$$Q_d = \text{Allowable pullout resistance (kips/ft.; kips per linear foot of grouted nail length, as specified or shown)}$$

$$MTL = 1.5 \times DTL = \text{Maximum Test Load (kips)}$$

Perform proof tests by incrementally loading the proof test nail to a maximum test load of 150 percent of the Design Test Load (DTL). The nail movement at each load will be measured and recorded by the Engineer in the same manner as for verification tests. Monitor the test load by a jack pressure gauge with a sensitivity and range meeting the requirements of pressure gauges used for verification test nails. At load increments other than maximum test load, hold the load long enough to obtain a stable reading, as approved by the Engineer. Verify that the incremental proof test loading meets the following loading schedule. Record the soil nail movements at each load increment.

PROOF TEST LOADING SCHEDULE

<u>LOAD</u>	<u>HOLD TIME</u>
AL (.05 DTL max.)	Until Stable
0.25 DTL	Until Stable
0.50 DTL	Until Stable
0.75 DTL	Until Stable
1.00 DTL	Until Stable
1.25 DTL	Until Stable
1.50 DTL (Max. Test Load)	See Below

The alignment load (AL) should be the minimum load required to align the testing apparatus and should not exceed 5 percent of the Design Test Load (DTL). Dial gauges should be set to "zero" after the alignment load has been applied.

Maintain all load increments within 5 percent of the intended load. Depending on the following performance criteria, perform either 10 minute or 60 minute creep tests at the maximum test load (1.50 DTL). Start the creep period as soon as the maximum test load is applied and measure and record the nail movement at 1 minutes, 2, 3, 5, 6, and 10 minutes. If nail movement exceeds 0.04 in. between 1 minute and 10 minute readings, maintain the maximum test load an additional 50 minutes and record movements at 20 minutes, 30, 50, and 60 minutes.

**(f) Test Nail Acceptance Criteria** - Consider a test nail acceptable when all of the following criteria are met:

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- **Verification Tests:** A total creep movement of less than 0.08 inch per log cycle of time between the 6 and 60 minute readings is measured during creep testing and the creep rate is linear or decreasing throughout the creep test load hold period.
- **Proof Tests:** A total creep movement of less than 0.04 inch is measured between the 1 and 10 minute readings or a total creep movement of less than 0.08 inch is measured between the 6 and 60 minute readings and the creep rate is linear or decreasing throughout the creep test load hold period.
- The total measured movement at the maximum test load exceeds 80 percent of the theoretical elastic elongation of the test nail unbonded length.
- A pullout failure does not occur at the maximum test load. Pullout failure is defined as the load at which attempts to further increase the test load result in continued pullout movement of the test nail. Record the pullout failure load as part of the test data.

Successful proof tested nails, meeting the above test acceptance criteria, may be incorporated as production nails provided that they meet the following criteria:

- the unbonded length of the test nail drill hole has not collapsed during testing,
- the minimum required drill hole diameter has been maintained,
- the specified corrosion protection is provided, and
- the test nail length is equal to or greater than the scheduled production nail length.

Complete grouting of test nails meeting these requirements by satisfactorily grouting up the unbonded test length. Maintaining the temporary unbonded test length for subsequent grouting is the Contractor's responsibility. If the unbonded test length of production proof test nails cannot be satisfactorily grouted subsequent to testing, sacrifice the proof test nail and replace with an additional production nail installed at no additional cost to the Agency.

**00598.48 Test Nail Rejection Procedures:**

**(a) General** - Determine the cause if a test nail does not satisfy the acceptance criteria.

**(b) Verification Test Nails** - The Engineer will evaluate the results of each verification test. Installation methods which do not satisfy the nail testing requirements will be rejected. If rejected, propose alternative methods and install replacement verification test nails. Install and test replacement Verification Test Nails at no additional cost to the Agency.

**(c) Proof Test Nails** - The Engineer may require the Contractor to replace some or all of the installed production nails between a failed proof test nail and the adjacent passing proof test nail. Alternatively, the Engineer may require the installation and testing of additional proof test nails to verify the capacity of the previously installed production nails in the affected area. The Contractor may propose additional alternative modifications to the nail installation and construction procedures, for the Engineer's review and approval. Contractor proposed alternatives effecting wall design, such as nail length, spacing or capacity will be reviewed by the Engineer according to 00140.70. The nails may not be lengthened beyond the permanent Right-of-Way easements shown. Installation and

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testing of additional proof test nails or installation of additional or modified nails as a result of proof test nail failure(s) will be at no additional cost to the Agency with no time extension granted.

**00598.49 Nail Installation Records** - Records documenting the soil nail wall construction will be maintained by the Contractor unless otherwise agreed to by the Engineer. Record information on each soil nail installed and accepted by the Engineer, including, but not limited to, information on nail location and orientation, soil type(s) encountered, drill hole diameter and length, nail bar type, grade, size and length, corrosion protection, grout and grouting method, and nail capacity. Provide this information to the Engineer at the end of each shift for all soil nails installed during the shift. Provide the Engineer with as-built drawings of each soil nail wall showing as-built nail locations, and as-built shotcrete facing line and grade, within 5 weeks after completion of the shotcrete facing and prior to placement of the CIP facing.

**Measurement**

**00598.80 Measurement** - No measurement of quantities will be made for Work performed under this Section. The estimated quantities of Materials are:

**Retaining Wall SN01 Quantities:**

Item	Quantity
Soil Nail Bar.....	340 LF
Soil Nail Grout.....	3 Cu. Yd
Verification Test Nails.....	2 Each
Proof Test Nails.....	2 Each
Reinforcement.....	950 Lbs.
Temporary Shotcrete Structural Facing.....	5 Cu. Yd
Permanent Shotcrete Structural Facing.....	10 Cu. Yd
Architectural Treatment.....	410 Sq. Ft
Drainage Pipe (6" Dia).....	82 ft
Drainage Pipe (2" Dia).....	9 ft
Drainage Composite.....	15 Sq. Yd

**Retaining Wall SN02 Quantities:**

Item	Quantity
Soil Nail Bar.....	255 LF
Soil Nail Grout.....	2 Cu. Yd
Verification Test Nails.....	2 Each
Proof Test Nails.....	2 Each
Reinforcement.....	850 Lbs.
Temporary Shotcrete Structural Facing.....	5 Cu. Yd
Permanent Shotcrete Structural Facing.....	9 Cu. Yd
Architectural Treatment.....	365 Sq. Ft
Drainage Pipe (6" Dia).....	91 ft
Drainage Pipe (2" Dia).....	8 ft
Drainage Composite.....	12 Sq. Yd

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Additional excavation beyond the plan wall final excavation line resulting from irregularities in the cut face, excavation or inadvertent excavation will not be measured.

Top of soil nail wall is defined as the top of shotcrete placement, for the purpose of calculating the quantities of soil nail structural excavation.

No separate measurement will be made for site drainage control work, required in this Section.

Failed verification test nails, or additional verification test nails installed to verify alternative nail installation methods proposed by the Contractor, will not be measured for payment.

Failed proof test nails, or additional proof test nails will not be measured for payment.

Survey work will be measured according to 00305.80.

**Payment**

**00598.90 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) Furnish Soil Nail Installation and Testing Equipment	Lump Sum
(b) Retaining Wall SN01	Lump Sum
(c) Retaining Wall SN02	Lump Sum

Payment will be payment in full for furnishing and placing all Materials, and for furnishing all Equipment, labor, technical representatives, and Incidentals necessary to complete the Work as specified.

Payment for wall alignment, and soil nail drill hole survey work will be according to Section 00305.

Payment for soil nail structure excavation will be according to Section 00510.

No separate or additional payment will be made for soil nail installation records and as-built drawings.

No separate or additional payment will be made for larger size bearing plates or additional reinforcement beyond that detailed on the plans.

No separate or additional payment will be made for placing a flashcoat and is considered incidental to the soil nailing work.



**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****SECTION 00620 - COLD PLANE PAVEMENT REMOVAL**

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

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

Traffic will be allowed on the cold planed surface up to 7 Calendar Days after removing the existing surface. Sweep and clean the cold planed surface before opening to traffic.

Before beginning paving operations, make repairs to the existing cold planed surface as directed. Payment for the repairs will be made according to 00195.20.

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

Comply with Section 00641 of the Standard Specifications.

**SECTION 00730 - EMULSIFIED ASPHALT TACK COAT**

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

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

**00730.90 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. Approximately 5 Tons of Emulsified Asphalt in tack coat will be required on this Project.

**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.

**00744.16 Sampling and Testing** - Replace this subsection, except for the subsection number and title, with the following:

For each 1,000 Tons of placement, have a CAT I perform a minimum of one of each of the following test methods as modified in the MFTP:

- Asphalt Content - AASHTO T 308 with ODOT TM 323 determined Calibration Factor
- Gradation - AASHTO T 30
- Mix Moisture - AASHTO T 329
- Maximum Specific Gravity - AASHTO T 209

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- Field Compacted Gyratory Specimens - ODOT TM 326

When less than 1,000 Tons of mix is placed in a Day, perform a minimum of one series of tests per Day. Provide test results to the Engineer by the middle of the following work shift. The Engineer may waive the requirement for any of AASHTO T 308, AASHTO T 30, AASHTO T 329, and ODOT TM 326 on a daily basis. The Engineer may waive the requirement for AASHTO T 209 when less than 500 Tons of ACP is placed in a single work shift.

Provide samples or split samples to the Engineer when requested.

**00744.17 Acceptance** - Replace this subsection, except for the subsection number and title, with the following:

If the test result for each mix gradation constituent, asphalt content, and density measurement is within the specification limits, the material will be accepted. If the asphalt content, one or more gradation constituents, or the density measurement are not within the specification limits, the material that is not within the specification limits will be accepted according to 00150.25.

**00744.41 Mixing Temperature** - Replace the table with the following:

Type	Temperature, °F	
	Maximum at Mixer	Minimum Behind Paver
HMAC	350	240
WMAC	350	215

**00744.49 Compaction** - Replace the paragraph that begins "Determine compliance with..." with the following paragraph:

Determine compliance with density Specifications by random testing of the compacted surface with calibrated nuclear gauges. Determine the density by averaging QC tests performed by a CDT with the nuclear gauge operated in the backscatter mode according to AASHTO T 355 at one random location for each 100 Tons of asphalt concrete placed, but take no less than 10 tests each shift. Do not locate the center of a density test less than 1 foot from the Panel edge. Calculate MAMD according to ODOT TM 305. The Engineer may waive compaction testing requirements when less than 500 Tons of ACP is placed in a single work shift.

### **SECTION 00749 - MISCELLANEOUS ASPHALT CONCRETE STRUCTURES**

Comply with Section 00749 of the Standard Specifications.

### **SECTION 00759 - MISCELLANEOUS PORTLAND CEMENT CONCRETE STRUCTURES**

Comply with Section 00759 of the Standard Specifications modified as follows:

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**00759.90 Payment** – Replace the paragraph that begins " Item (k) includes the additional Work required ..." with the following paragraph:

Item (k) includes the additional Work required to construct a curb ramp or replace an existing curb ramp. Payment for the area of the curb ramp will be made under the concrete walks Pay item.

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

Comply with Section 00850 of the Standard Specifications.

**SECTION 00855 - PAVEMENT MARKERS**

Comply with Section 00855 of the Standard Specifications.

**SECTION 00856 - SURFACE MOUNTED TUBULAR MARKERS**

Comply with Section 00856 of the Standard Specifications.

**SECTION 00865 - LONGITUDINAL PAVEMENT MARKINGS - DURABLE**

Comply with Section 0865 of the Standard Specifications.

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

Comply with Section 00867 of the Standard Specifications.

**SECTION 00868 - COLORED LANE MARKINGS**

Section 00868, which is not a Standard Specification, is included in this Project by Special Provision.

**Description**

**00868.00 Scope** - In addition to the requirements of Section 00850, install colored lane markings according to the following Specifications.

**Labor**

**00868.30 Manufacturer's Representative** - Provide a manufacturer's representative according to 00850.30.

**00868.31 Manufacturer-Certified Installers** - Provide certified installers according to 00850.31.

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**00868.45 Installation** - Place markings only when the manufacturer's representative determines that the pavement is ready for the pavement marking material.

Apply the material to the pavement according to the manufacturer's installation instructions to the full width shown in the Plans. Joints will be allowed with no overlap or gap allowed at the joint.

Do not install reflective elements.

Install the pavement marking material surface according to the manufacturer's installation instructions to achieve a uniform initial skid resistance greater than or equal to 50 British Pendulum Number (BPN) when tested according to ASTM E303.

Apply one or more of the following marking material types:

- **Preformed, Fused Thermoplastic Film High Skid** - Install preformed, fused thermoplastic film high skid that has factory installed crushed glass or Aggregate on the surface.
- **Methyl Methacrylate** - Apply methyl methacrylate to the pavement to the full width shown in a single application. Colored lane markings shall be 90 mils to 120 mils in thickness, exclusive of projecting surface-applied friction elements, with a continuous and uniform cross sectional configuration.

**00868.75 Manufacturer's Warranty** - Furnish a manufacturer warranty that unconditionally warrants to the Agency the product(s) and installation under this Section against failure , according to this subsection and 00170.85(c)(1). Use Agency-supplied warranty forms, available from the Engineer.

"Unconditionally warrant" means that the warranty covers all failures, regardless of the source or cause of the failure, including, without limitation, whether the source or cause is or may be related to workmanship, inspection, or choice of materials.

The Agency inspection of any portion of the Work during the Contract and during the product installation, the Agency acceptance of the Work, corrections under the warranty, or expiration of the warranty shall not relieve the obligations under this warranty.

**(a) Warranty Period** - The warranty period shall be for 18 months.

**(b) Failure** - For purposes of this warranty, failure is defined as one or more of the following:

- **Insufficient Color Stability:**
  - Green markings fail to meet the requirements of the Federal Highway Administration Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes (IA-14) tested according to ASTM D6628.

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- **Loss of Adhesion** - Markings show 5 percent or greater loss of marking material due to non-adhesion.
- **Skid Resistance** - Markings fail to maintain an average skid resistance greater than or equal to 50 British Pendulum Number (BPN) when tested in an equal number of test locations in both wheel path and non-wheel path locations according to ASTM E303.

**(c) Remedy** - Upon notification by the Engineer of a failure, provide the following remedy at no additional cost to the Agency:

- Repair or replace, at the discretion of the Engineer, all failed pavement markings within 6 months of the Agency's request to do so.
- Use materials and procedures meeting the Specifications.
- Match repairs to adjoining Work.
- Coordinate timing of repair Work with the Engineer.

**(d) Agency's Right to Make Repairs** - If, in the opinion of the Engineer, a failure causes or may cause a hazard, the failure may be temporarily corrected by Agency or other forces at no additional cost to the Agency. Replace temporary repairs with permanent repairs at no additional cost to the Agency and according to the Specifications and within the time specified in 00868.75(c).

**Measurement**

**00868.80 Measurement** - The quantities of colored lane markings will be measured on the area basis.

**Payment**

**00868.90 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) Green Bicycle Lane, Preformed Thermoplastic Film ....	Square Foot

Payment will be payment in full for furnishing and placing all Materials, and for furnishing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

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

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

Comply with Section 00905 of the Standard Specifications.

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****SECTION 00910 - WOOD SIGN POSTS**

Comply with Section 00910 of the Standard Specifications.

**SECTION 00920 - SIGN SUPPORT FOOTINGS**

**00920.80 Measurement** - Add the following to the end of this subsection:

The estimated quantities of concrete for minor sign supports are:

<b>Support Type</b>	<b>Quantity</b>
Perforated Steel Square Tube Anchor Sign Supports	0.4 cu. yd.

**SECTION 00930 - METAL SIGN SUPPORTS**

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

**00930.80 Measurement** - Add the following to the end of this subsection:

The estimated quantities of structural steel are as follows:

<b>Item</b>	<b>Estimated Quantity (Pound)</b>
<b>Minor Sign Supports</b>	
Perforated Steel Square Tube Anchor Sign Supports	795lb

**SECTION 00940 - SIGNS**

Comply with Section 00940 of the Standard Specifications modified as follows:

**00940.90 Payment** -

Add the following paragraph to the end of this subsection:

No separate or additional payment will be made for anti-graffiti coating of signs.

**SECTION 00950 - REMOVAL OF ELECTRICAL SYSTEMS**

Comply with Section 00950 of the Standard Specifications modified as follows:

**00950.02 Definitions** - Delete this subsection.

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****SECTION 00960 - COMMON PROVISIONS FOR ELECTRICAL SYSTEMS**

Comply with Section 00960 of the Standard Specifications modified as follows:

**00960.30 Licensed Electricians** - Replace the paragraph that begins " According to the Oregon Administrative Rule ..." with the following paragraph:

According to the Oregon Administrative Rule 918-282-0120(1), no person or entity shall allow any individual to perform electrical work for which the individual is not properly registered or licensed. Every person who installs electrical systems on the Project shall submit a copy of their electrical license or apprentice registration to the Engineer prior to performing any Work. They must be licensed as an S or a J under Oregon Administrative Rule 918-282.

Add the following subsection:

**00960.42(d) Connecting Non-Metallic Conduit to Metallic Conduit** - Use a nonmetallic female threaded connector to connect nonmetallic conduit to metallic conduit.

Add the following subsection:

**00960.45(h) Metallic Junction Boxes and Lids** - Bond metal junction boxes and lids to form a continuous effectively grounded and bonded system with metallic conduit, grounding wire, metal standards and controller cabinets. Leave enough slack in the bond wire connected to the lid to allow complete removal of the lid. Junction boxes only containing circuits that operate at less than 25 V do not need to be bonded.

**00960.46 Service Cabinet and Electrical Energy** - Replace this subsection, except for the subsection number and title, with the following:

Install service cabinet and associated equipment, then arrange for the Utility providing power to have the service cabinet inspected and make the electrical hook-up prior to field testing. Field test according to 00990.70(g) for traffic signals, or according to 00970.70 for illumination.

Table 00960-1 contains Utility contact information to arrange for the Utility to make electrical hookups:

**Table 00960-1**

<b>Location</b>	<b>Utility</b>	<b>Utility Contact Person's Name, Email and Phone Number</b>	<b>Utility Job Number</b>
OR99W/Meinecke Parkway	Portland General Electric	Rico Solis, <a href="mailto:Rodrigo.Solis@pgn.com">Rodrigo.Solis@pgn.com</a> 503-672-5417	M2704492

Furnish and install a meter base approved by the serving Utility (with cover by the Utility), where shown.

Electrical energy costs will be billed to the Agency for permanent installations.

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****SECTION 00962 - METAL ILLUMINATION AND TRAFFIC SIGNAL SUPPORTS**

Comply with Section 00962 of the Standard Specifications.

**00962.05(c) Illumination Supports** - Add the following to the end of this subsection:

The following standard illumination pole drawings are prequalified for use on the Project:

Ameron Pole Products Division	Drg. OR7, Rev. C, 1/02
	Drg. OR8, Rev. C, 1/02
	Drg. OR9, Rev. E, 2/02
Union Metal Corp.	Drg. 71049-B18 sh 1, R3, 2/99
	Drg. 71049-B18 sh 2, R3, 2/99
	Drg. 71049-B19 sh 1, R3, 2/99
	Drg. 71049-B19 sh 2, R3, 2/99
Valmont Industries Inc.	Drg. DB00386 page 1, Rev. D, 1/23/15
	Drg. DB00386 page 2, Rev. D, 1/23/15
	Drg. DB00386 page 3, Rev. D, 1/23/15
	Drg. DB00386 page 4, Rev. D, 1/23/15
	Drg. DB00387 page 1, Rev. D, 1/16/15
	Drg. DB00387 page 2, Rev. D, 1/16/15
	Drg. DB00387 page 3, Rev. D, 1/16/15

**SECTION 00970 - HIGHWAY ILLUMINATION**

Comply with Section 00970 of the Standard Specifications modified as follows:

Add the following subsection:

**00970.15 LED Luminaires on Traffic Signal Supports** - Furnish one of the following approved models or an approved equal:

- CREE LED - Traveyo Series Large,  
TRVLG-A-HT-3ME-16L-40K7-UL-GY-N
- Signify - LUMEC LED - RoadFocus RFL,  
RFL-135W80LED4K-G2-R3M-UNV-DMG-PH9-GY3
- Current LED - Evolve, ERLH-0-14-C3-40-D-GR

When higher light output is desired, higher wattage luminaires up to 170 watt within the same brand/model listed above, may be furnished.

When furnishing an LED luminaire model that is not specified as approved, the luminaire shall meet the requirements of 02926.54.

**00970.90 Payment** -



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Replace the paragraph that begins "Item (d) includes all..." with the following paragraph:

Item (d) includes all switches, conduit, cabinets, wiring, delineators, junction boxes, and other items required to construct the lighting system as specified. Item (d) also includes trench excavation, conduit, backfill, surface restoration and all work necessary for the relocation of the 2" PGE electrical conduit near the proposed trailhead off Washington St as shown.

**SECTION 00990 - TRAFFIC SIGNALS**

Comply with Section 00990 of the Standard Specifications modified as follows:

Add the following subsection:

**00990.10 Materials** - Furnish Materials meeting the following requirements:

Backer Rod ..... 02440.14

Furnish the following Materials from the QPL:

- Hot-Melt Loop Sealant

Add the following subsection:

**00990.41 Inductive Loop Detectors:**

**(a) General** - Do not begin saw cutting until the loop layout has been inspected by the Engineer.

Do not place wire in saw cuts until the cuts have been inspected by the Engineer.

**(b) Saw Cut and Wire Installation** - Saw cut in a manner that is the most practicable, direct line between loops and junction boxes.

Immediately after saw cutting and before the cuttings dry, thoroughly flush each cut with a high-pressure water stream. Before the cuts dry, blow cuts free of water, debris, rock, and grit with compressed air. Slots may also be cleaned by means of a high-pressure water injection/vacuum extraction system. Remove rocks or other material that may be wedged in the cut. Remove and dispose of all cuttings according to 00290.20.

Dry cuts before placing wire.

After the saw cut is cleaned of debris, place the loop wire by pushing it into the slot with a blunt nonmetallic object. Use care to avoid damaging the insulation.

**(c) Sealant** - Install the sealant in slots according to the manufacturer's instructions. Furnish a copy of the manufacturer's specifications including application procedures. The Engineer may order a test run of any application method or material before filling saw cuts.

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In order to prevent heat damage to the insulation, do not allow the temperature of the sealant to exceed 410 °F during application. Install hot-melt sealants in layers to prevent damage to wire insulation. Allow each layer to cool before the next layer is installed. Do not use water to accelerate cooling.

Sealants that crack or pull away from the saw cuts after curing will be rejected.

**(d) Resistance and Continuity Testing** - The resistance to ground of the loop and loop feeder combinations, shall be 500 MΩ or greater when checked at the following conditions:

- Before splicing and sealing - continuity test
- Before splicing after sealing - resistance test
- After splicing and sealing - resistance test

Furnish a report of the resistance and continuity results for each loop at each testing condition.

Add the following subsection:

**00990.42(b) Loop Feeder Cables** – When terminating loop feeder cable inside the controller cabinet, do not remove the outside jacket and shield more than 6 inches from the end of the cable. Crimp lugs used for loop wire field terminals may be insulated or non-insulated. Terminate loop feeder shield drain wire to the cabinet input panel grounding bus nearest the feeder wire termination point.

**00990.90 Payment** - Replace the paragraph that begins "Mast arm pole and strain pole foundations ..." with the following paragraph:

Drilled shaft foundations for traffic signal 15 foot through 55 foot mast arm supports will be paid for according to 00963.90. Drilled shaft foundations for traffic signal 60 foot through 75 foot mast arm supports will be paid for according to 00921.90.

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****SECTION 01010 - STORMWATER CONTROL, WATER QUALITY STRUCTURES**

Section 01010, which is not a Standard Specification, is included for this Project by Special Provision.

**Description**

**01010.00 Scope** - This Work consists of furnishing and installing a water quality Structure as shown.

**01010.02 Definitions:**

**Water Quality Structure** - An underground self-activating Structure with no moving mechanical parts or external power sources which removes pollutants from stormwater runoff and retains the pollutants in the Structure.

**01010.03 Submittals** - Furnish water quality Structures having general use level designation for enhanced treatment through the State of Washington, Department of Ecology's Technology Assessment Protocol-Ecology (TAPE) Program.

Provide the following water quality Structures as indicated in Table 01010-1:

**Table 01010-1**

<b>Drainage Facility Identification Number</b>	<b>Location (Station)</b>	<b>Stormwater Control Facility Treatment Category</b>
DF-1	47+02	Suspended solids treatment

Water Quality Structure shall be a Bio Clean MWS Linear-4-8-3'-1"-C-UG Stormwater Biofiltration System. Provide anti-slip coating for hatch.

The use of the Bio Clean MWS Linear-4-8-3'-1"-C-UG Stormwater Biofiltration System is expressly required by the Agency and is subject to an exemption under ORS 279C.345. Substitutes will not be considered by the Agency.

Submit the following according to 00150.35:

- Unstamped Working Drawings that include the following information:
  - All design and construction details.
  - Structure plan view with dimensions.
  - Typical section with dimensions.
  - All appurtenances labeled.
  - Installation and pipe connection details.
  - Peak flow bypass details.
- Manufacturer prepared product brochures.
- Design calculations showing the water quality design flow rate and online peak flow rate requirements for each water quality Structure listed in the Table 01010-2.

## Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)

Table 01010-2

Drainage Facility Identification Number	Location (Station)	Contributing Impervious/Drainage Area (Acres)	On-line or Off-line	Water Quality Design Flow Rate (cubic feet per second)	On-line Water Quality Structure Peak Flow Rate (cubic feet per second)
DF-1	47+14	0.06	On-line	0.06	0.22

**Construction**

**01010.40 General** - Construct water quality Structures according to the manufacturer's recommendations.

**01010.41 Pipe connections** - Place connecting pipe at the required alignment and grade. Set the connecting pipe through the full thickness of the wall and flush with the inner face of the wall. Ensure that pipe connections to the Structure are watertight. Connect all pipes to water quality Structure according to the manufacturer's recommendations.

**Maintenance**

**01010.70 Cleaning** - Remove all accumulated sediment and debris before completing the facility.

**Measurement**

**01010.80 Measurement** - No measurement of quantities will be made for Work performed under this Section.

**Payment**

**01010.90 Payment** - The accepted quantities of Work performed under this Section will be paid for at the Contract lump sum amount for the item "Water Quality Structure, \_\_\_\_\_".

The drainage facility identification number will be inserted in the blank.

Payment will be payment in full for furnishing and placing all Materials, and for furnishing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

**SECTION 01030 - SEEDING**

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

**01030.12 Soil Conditioners, Amendments and Bio-Amendments** – Replace this subsection with the following:

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

Furnish Soil Bio-Amendment packaged in combination with Bonded Fiber Matrix (BFM) mulch (Section 00280) and containing beneficial soil bacteria *Bacillus firmus* at a rate not less than 250 cfu/gram and containing also arbuscular mycorrhizal fungi *Rhizophagus intraradices* at a rate not less than of 0.066 propagules per gram.

**01030.13(c) Pure Live Seed** - Replace this subsection, except subsection number and title, with the following subsection:

Use the PLS specified rate listed in 01030.13(f) for determining PLS application rates. Ensure the PLS application rate meets the PLS specified rate. Apply pre blended seed mixes, with multiple species, at a PLS application rate ensuring all species meet or exceed the PLS specified rate for each species in the seed mix.

PLS application rate for an individual seed species is determined as follows:

- PLS specified rate is listed in 01030.13(f)
- PLS factor is obtained by multiplying the seed label germination percentage times the seed label purity percentage. Use the purity and germination percentages from the label on actual bags of seed to be used on the Project.
- PLS application rate is obtained by dividing the PLS specified rate by the PLS factor.

For a seed mix, make this calculation for each seed species in the mix and then adjust as follows:

- Using the seed tag, determine the weight of each seed species in the bag and use this information to find the percentage, by weight, of each seed species in 1 pound for the pre-blended mix.
- Divide the percentage by weight of each seed species, per pound, for the pre-blended mix, by the PLS application rate for that specific seed species.

Determine the highest application rate in the seed mix and apply the seed mix at that application rate.

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

Provide the following seed mix formulas:

- **Seed Mix Palette 'A' – EROSION CONTROL ALONG ALEXANDER LANE:**

<b>Botanical Name (Common Name)</b>	<b>PLS (lb/acre)</b>
<i>Festuca rubra trichophylla</i> (Lighthouse Slender Red Fescue)	27.96
<i>Festuca rubra</i> 'Chantilly' (Chantilly Creeping Red Fescue)	27.81
<i>Festuca rubra var commutate</i> (Longfellow III Chewings Fescue)	27.09

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<i>Festuca trachyphylla</i> 'Eureka II' (Eureka II Hard Fescue)	27.09
<i>Festuca ovina</i> 'Quatro' (Quatro Tetraploid Sheep Fescue)	27.05
<i>Trifolium repens</i> (White Clover)	6.69

\* Oregon Certified Seed

- **Seed Mix Palette 'B' – EROSION CONTROL ALONG PATH:**

<b>Botanical Name (Common Name)</b>	<b>PLS (lb/acre)</b>
<i>Elymus glaucus</i> (Blue Wildrye)	17.10
<i>Bromus carinatus</i> (California Brome)	12.87
<i>Danthonia californica</i> (California Oatgrass)	4.18
<i>Festuca roemerii</i> (Roemer's Fescue)	4.42
<i>Koeleria macrantha</i> (Prairie Junegrass)	4.79

\* Oregon Certified Seed

Seeding: After ground disturbance is complete.

**01030.13(g) Availability** - Add the following sentence to the end of this subsection:

Submit the seed and seed mixes to be used on the project according to 00150.37.

Add the following subsection:

**01030.14(b)(4) Organic Fertilizer** - Furnish organic fertilizer that meets Section 01040.13 Soil Testing minimum requirements.

**01030.15 Mulch** – Replace the subsection, except subsection number and title, with the following sentence:

For all seeding application, furnish and use bonded fiber matrix, as described in 00280.14(e), for hydroseeding mulch, at manufacturer's recommended application rates.

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

**01030.17 Pesticides** – Add the following before the paragraph that begins “Submit proposed pesticides”

If needed, only organic pesticides on the Xerces List

[https://xerces.org/sites/default/files/2019-09/19-005\\_01\\_Organic-Approved-Pesticides\\_Overview-FS\\_web.pdf](https://xerces.org/sites/default/files/2019-09/19-005_01_Organic-Approved-Pesticides_Overview-FS_web.pdf) with a rating of LOW or LOW-MEDIUM toxicity rating are approved for this project. Follow listed precautions. Do not apply if bees, butterflies or butterfly larvae are present.

**01030.40 General** - Add the following sentence after the sentence beginning “Notify the Agency...”:

Notify the Agency of the acreage to be seeded at least 7 Days before seeding begins.

**01030.42 Weed Control** - Add the following paragraph and bullets after the paragraph that begins "If a pesticide has been approved for..." and before subsection (a):

The Specified Weeds and plant species to be removed include the following:

- All Oregon Department of Agriculture Class A and B listed noxious species

Add the following subsection:

**01030.43(c) Seed Application Rates** - Determine the seeding application rate according to 01030.13(c). Apply seed mixes at the highest application rate calculated to provide not less than the specified application rate for each individual seed species in the mix.

Add the following subsection:

**01030.44(c) Organic Fertilizer** - Apply organic fertilizer at the rates and locations recommended by the Soil Fertility Test and Soil Amendment Report as specified in Section 01040.13(a).

**01030.80 Measurement** - Add the following to the end of this subsection:

Soil testing will be measured according to 01040.80

**01030.90 Payment** - Add the following to the end of this subsection:

Soil testing will be paid for according to 01040.90.

## **SECTION 01040 - PLANTING**

Comply with Section 01040 of the Standard Specifications modified as follows:

**01040.13(b)(1) Sampling** - Add the following to the beginning of this subsection:

Conduct at least one test from tree planting area with remaining tests conducted in seeding areas evenly spaced along the trail.

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

**SECTION 01050 - FENCES**

Comply with Section 01050 of the Standard Specifications modified as follows:

Add the following subsection:

**01050.11 Split Rail Fence** – Furnish materials as shown.

Add the following subsection:

**01050.12 Wood Rub Rail** – Furnish materials as shown.

Add the following subsection:

**01050.51 Split Rail Fence** – Install split rail fence as shown in the drawings.

Add the following subsection:

**01050.52 Wood Rub Rail** – Install wood rub rail as shown in the drawings.

**01050.80 Measurement** - Add the following paragraph(s) to the end of this subsection:

- (j) Split Rail Fence – Split rail fence will be measured on the length basis. Measurement will be from center to center of posts, measured along the line and grade of each separate continuous run of fence as constructed.
- (k) Wood Rub Rail – Wood rub rail will be measured on the length basis. Measurement will be from end to end of the wooden boards, measured along the line and grade of each separate continuous run of rail as constructed.

**01050.90 Payment** - Add the following subsections:

- (f) Split Rail Fence – Split rail fence will be paid for at the Contract unit price, per unit of measure, for the following items:

<b>Pay Item</b>	<b>Unit of Measurement</b>
-----------------	----------------------------

(a) Split Rail Fence.....	Foot
---------------------------	------

- (g) Wood Rub Rail – Wood Rub Rail will be paid for at the Contract unit price, per unit of measure, for the following items:

<b>Pay Item</b>	<b>Unit of Measurement</b>
-----------------	----------------------------

(a) Wood Rub Rail.....	Foot
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**SECTION 01069 - METAL HANDRAIL AND PEDESTRIAN FENCE**

Section 01069, which is not a Standard Specification, is included in this Project by Special Provision.



**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)****Description**

**01069.00 Scope** - This Work consists of furnishing and installing metal handrails and pedestrian rail units as shown or directed.

**Materials**

**01069.10 Materials** - Furnish Materials meeting the following requirements:

Commercial Grade Concrete .....	00440
Metal Handrail.....	02830
Pedestrian Fence.....	02831

**Construction**

**01069.40 Metal Handrail and Pedestrian Fence:**

- (a) **Handrail** - Fabricate and install imbedded and bolted down metal handrail as shown.
- (b) **Pedestrian Fence** - Fabricate and install pedestrian fence units as shown.

**01069.41 Welding** - Welding, welder qualifications, prequalification of weld details and inspection of welds shall conform to AWS D1.1. Submit all welding procedure specifications 7 Days prior to fabrication to the Engineer for approval.

**01069.42 Concrete Footings** - Dimensions of footings shall not be less than shown and shall fill the excavated areas. Place the concrete with contact against firm Soil at the sides and bottom and tamp around the posts and brace ends after the posts and braces have been brought to and firmly held in proper position. Strike off, slope or crown and smooth the surface of the concrete at the ground level to shed water. Allow to cure for at least 5 Calendar Days before subjecting the posts to strain.

Excavate for concrete footings to reasonably Neat Lines, but not less than the specified dimensions in Soil, or not less than 18 inches deep in Rock. Prevent disturbance of original ground at the sides and bottom of the excavation.

Dispose of Materials removed under these provisions, including excess excavation, in a satisfactory manner.

**01069.43 Bolt Holes:**

- (a) **Punched Holes** - Use a die with a diameter not exceeding the diameter of the punch by more than 1/16 inch. Ream holes that are required to be enlarged to admit the anchor bolts. Make clean cut holes without torn or ragged edges.
- (b) **Accuracy of Punched Holes** - After punching the holes in the plate, stack the plates with the edges even and insert a cylindrical pin, 1/8 inch smaller in diameter than the nominal size of the punched hole, through the punched holes perpendicular to the face of the plate. No drifting of the rod while passing through each of the punched holes in the

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

stack is allowed. Ensure that the edges of the stack stay in alignment. Non-conforming pieces will be rejected.

**Measurement**

**01069.80 Measurement** - The quantities of Work performed under this Section will be measured according to the following:

- **Length Basis** - Metal handrail will be measured on the length basis, by measuring along the top rail member, from center of end post to center of end post.
- **Unit Basis** - Pedestrian fence will be measured on the unit basis. Pedestrian fence will be counted for each 62 inch long unit.

**Payment**

**01069.90 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:

Pay Item	Unit of Measurement
(a) Metal Handrail, _____ Rails.....	Foot
(b) Pedestrian Fence .....	Each

In item (a), the number of rails will be inserted in the blank.

Payment will be payment in full for furnishing and placing all Materials, and for furnishing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

**SECTION 01091 - WATERWAY ENHANCEMENTS**

Section 01091, which is not a Standard Specification, is included in this Project by Special Provision.

**Description**

**01091.00 Scope** - This Work consists of constructing waterway enhancements such as fish rocks, fish logs, streambed gravels, and other types of waterway items as shown or directed.

**01091.05 Pre-Work Meeting** - Attend a pre-work meeting at the Project Site with the Engineer at least 8 Calendar Days prior to implementation of Waterway Enhancement work. Required attendees include:

- Engineer
- Contractor
- Waterway Enhancement Subcontractors
- ODOT Region Environmental Coordinator
- ODOT Hydraulics Designer

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The pre-work meeting agenda typically includes the methods of accomplishing phases of the waterway enhancement work, including Temporary Water Management (TWM), fish salvage plan and strategy, managing environmental risks, turbidity monitoring, energy dissipation, dewatering and re-watering plan and strategy, site clean-up expectations, and the circumstances to engage the Engineer. Representatives from interested permitting agencies will be invited by the Agency.

**Materials**

**01091.10 Material** - Furnish Materials meeting the following requirements:

**(a) Streambed Boulders and Cobbles:**

Surface substrate larger than 3-inch diameter sourced on-site from the stream channel prior to excavation to place the arch culvert. Material shall be stockpiled separately from Subgrade Bedding Backfill.

Acceptance of Streambed Boulders and Cobbles by the Engineer is required prior to placement in the stream channel. Acceptance shall be conducted by visual inspection. Inspection will require the Contractor using equipment to mix, turn, or excavate into the stockpile.

**(b) Subgrade Bedding Backfill** - Subsurface substrate sourced on-site from the stream channel after excavation of the Streambed Boulders and Cobbles. Material shall be stockpiled separately from Streambed Boulders and Cobbles. Subgrade Bedding Backfill shall be uncrushed, clean, hard, durable and meet this gradation:

Percent Passing (by weight)	Size (inch)
100	3.0
50	1.0 - 1.5
20	No. 4
10	No. 200

Maximum size shall be determined by measuring the diameter along the longest axis of the stone. Minimum dimension of individual pieces shall not be less than one-third the maximum dimension.

The Subgrade Bedding Backfill gradation shall contain at least 10 percent by weight passing the No 200 sieve.

Acceptance of Subgrade Bedding Backfill by the Engineer is required prior to placement in the stream channel. Acceptance shall be conducted by visual inspection. Inspection will require the Contractor using equipment to mix, turn, or excavate into the stockpile.

**Construction**

**01091.40 General** - Obtain all permits and perform work in and around water according to Section 00290 and the following:

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**(a) Streambed Boulders and Cobbles-** Place as shown on the drawings or as directed by the Engineer.

Streambed Boulders and Cobbles shall be placed following placement of the footings for the arch culvert and following the Engineer’s acceptance of the placed Subgrade Bedding Backfill. Streambed Boulders and Cobbles shall be placed in loose, uncompacted lifts to create surface conditions that existed prior to construction and consistent with the undisturbed channel surface materials upstream and downstream of the arch culvert.

**(b) Subgrade Bedding Backfill -** Place as shown on the drawings or as directed by the Engineer.

Subgrade Bedding Backfill shall be placed following placement of the footings for the arch culvert and prior to placement of the Streambed Boulders and Cobbles. The Subgrade Bedding Backfill shall be placed in lifts and constructed to prevent low flows from flowing subsurface by filling interstitial spaces in the backfill. (Loss of surface flow would prevent fish passage at low flows.)

To fill interstitial spaces, the Contractor shall “pressure” apply water to each placed layer to wash fines into the interstitial spaces. The spaces are satisfactorily filled when water equivalent to the low flow rate of the stream does not go subsurface and the Engineer provides visual acceptance. If water is not present in the stream during construction, the Contractor shall apply water to create sufficient channel flow to facilitate observation and acceptance by the Engineer.

**Measurement**

**01091.80 Measurement -**

**(a) Streambed Excavation, Streambed Boulders and Cobbles, and Subgrade Bedding Backfill -** The quantities of streambed excavation, streambed boulders and cobbles, and subgrade bedding backfill will be measured on the volume basis.

**Payment**

**01091.90 Payment -** The accepted quantities of waterway enhancement items 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) Streambed Excavation.....	Cubic Yard
(b) Streambed Boulders and Cobbles .....	Cubic Yard
(d) Subgrade Bedding Backfill.....	Cubic Yard

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.

**SECTION 01095 - SITE FURNISHINGS**

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

Section 01095, which is not a Standard Specification, is included in this Project by Special Provision.

**Description**

**01095.00 Scope** - This Work consists of constructing site furnishings such as benches, picnic tables, litter receptacles, bicycle racks, and other furnishings as shown or directed.

**Materials****01095.10 General:**

Backless bench and litter receptacle shall be from the same manufacturer and set.

**(a) Benches** - Provide benches meeting the following requirements:

- **Manufacturers and Products:**
  - Esplanade Series, ES-1.3, 72-inch length
    - <https://www.fairweathersf.com/product/es-1-3/>
    - Type: no-arms
    - Color/finish: semi-gloss black powder coat w/ polyester TGIC powder
    - Mount: surface-mount
  - Scarborough Bench, Backless, 6-foot (71.5-inch) length
    - <https://www.landscapeforms.com/en-US/product/Pages/Scarborough-Bench.aspx>
    - Type: horizontal strap (straight, non-woven) without center/intermediate arm
    - Color/finish: Onyx, Panguard II polyester powder coat
    - Mount: surface-mount
  - Meridian Backless with cast iron ends, MR1-1110, 6-foot length
    - <https://www.sitescapesonline.com/Meridian-mr1-1110.asp>
    - Options: no center arm rest
    - Color/finish: Onyx with Duracoat finish
  - Avondale Backless with cast iron ends, AV1-1110-RP, 6-foot length
    - <https://www.sitescapesonline.com/avondale-av1-1110.asp>
    - Options: Type: recycled plastic lumber with weathered wood color, zero (no) armrest
    - Color/finish: Onyx with Duracoat finish

**(c) Litter Receptacles** - Provide trash receptacles meeting the following requirements:

**(1) Manufacturers and Products:**

- Esplanade Trash Receptacle, TR-8
  - <https://www.fairweathersf.com/product/tr-8/>
  - Options: hinged side-opening door, trash rain-shield top
  - Color/finish: semi-gloss black powder coat w/ polyester TGIC powder
  - Mount: surface-mount (no pedestal, no embedment)
- Scarborough Litter Receptacle, Side-Opening

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- <https://www.landscapeforms.com/en-US/product/Pages/Scarborough-Litter-Receptacle.aspx>
- Options: vertical strap
- Color/finish: Onyx, Panguard II polyester powder coat
- Liner color: Pine
- Mount: surface-mount
- Meridian Waste Receptacle, MR2-1001
  - <https://www.sitescapesonline.com/meridian-mr2-1000.asp>
  - Options: 40 gallon capacity, dome top
  - Color/finish: Onyx with Duracoat finish
- Avondale Trash Receptacle, AV2-3001-RP
  - <https://www.sitescapesonline.com/avondale-av2-3000.asp>
  - Options: 36 gallon capacity, dome top, Type: recycled plastic lumber with weathered wood color
  - Color/finish: Onyx with Duracoat finish

**Construction**

**01095.40 General** - Install all site furnishings as shown and according to the manufacturer’s recommendations.

**Measurement**

**01095.80 Measurement** - The quantities of site furnishings will be measured on the unit basis.

**Payment**

**01095.90 Payment** - The accepted quantities of site furnishings 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) Benches, Type Backless .....	Each
(c) Litter Receptacles .....	Each

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.

**SECTION 02001 - CONCRETE**

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

**02001.30(e)(1) HPC Coarse Aggregate Content** - Delete the paragraph that begins “Two or more Aggregate products or sources...”

**SECTION 02150 - LUMBER AND TIMBER CONNECTORS**

**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

Comply with Section 02150 of the Standard Specifications modified as follows:

**02150.10 Lumber and Timber Connectors – Add the following:**

**(g) Steel plates** – Provide plate according to ASTM A36, A572 Grade 50, or A709 Grade 50. Galvanize plate according to AASHTO M232 (ASTM A 153).

**(h) Clevises** – Provide clevises according to ASTM A668. Galvanize clevises according to AASHTO M232 (ASTM A 153).

**(i) Turnbuckles** – Provide turnbuckles according to ASTM F1145. Galvanize turnbuckles according to AASHTO M232 (ASTM A 153).

**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 T 2. 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.

## Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)

**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".

### SECTION 02830 - METAL HANDRAIL

Section 02830, which is not a Standard Specification, is included in this Project by Special Provision.

#### Description

**02830.00 Scope -** This Section includes the requirements for the steel in handrail for stairways and pedestrian facilities.

#### Materials

**02830.10 Shapes, Plates, and Bars -** Shapes, plates, and bars shall conform to ASTM A36.

Punch anchor plate bolt holes at the locations shown before fabrication.

**02830.20 Steel Pipe -** Steel pipe shall conform to ASTM A500, seamless, Grade B.

**02830.21 Steel Tube -** Steel tube shall conform to ASTM A500, seamless, Grade B.



**Cedar Creek/Tonquin Trail: OR99W – SW Pine St (Sherwood)**

**02830.22 Fasteners** - Fasteners shall meet the requirements of Section 02560. Machine screws shall be SAE 18 8 stainless steel.

**02830.30 Galvanizing** - Hot-dip galvanize all handrail components according to AASHTO M 111 (ASTM A123) after shop fabrication.

**02830.31 Repair of Hot-Dip Galvanizing** - Repair damaged hot-dip galvanizing according to ASTM A780 and ASTM A123. Minimum zinc content for Method A2 is 94 percent on the dry film.

**02830.40 Incidentals** - Plates, caps, and miscellaneous pieces necessary to complete the rail shall be as shown.

**02830.50 Acceptance** - Acceptance of handrail Materials will be according to 00165.35 and this Section.

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**SECTION II. SCHEDULE OF ITEMS**

Payment for work done under this Contract will be made at the unit prices listed on the inserted sheet or sheets which follow. The quantities given are approximate only, and it is neither expressly nor by implication agreed that the actual amounts of work to be done and paid for will be in accord therewith.

## SCHEDULE OF ITEMS

CEDAR CREEK/TONQUIN TRAIL: OR99W - SW PINE ST (SHERWOOD) (C15264)

LEGACY CONTRACTING INC

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
SECTION 0001 TEMPORARY FEATURES AND APPURTENANCES					
0010	0100-0101000T TRAINING	HOUR	660.00	20.00	13,200.00
0020	0210-0100000A MOBILIZATION	LUMP SUM	ALL	369,100.00	369,100.00
0030	0221-0100000A TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LUMP SUM	ALL	2,100.00	2,100.00
0040	0222-0102000J TEMPORARY SIGNS	SQFT	844.00	20.00	16,880.00
0050	0222-0162000E SEQUENTIAL ARROW SIGNS	EACH	2.00	650.00	1,300.00
0060	0222-0164000E PORTABLE CHANGEABLE MESSAGE SIGNS	EACH	2.00	1,800.00	3,600.00
0070	0222-0167300E PORTABLE CHANGEABLE MESSAGE SIGNS, ROLLER MOUNTED	EACH	2.00	5,300.00	10,600.00
0080	0223-0169000E TRAFFIC CONTROL SUPERVISOR	EACH	20.00	345.00	6,900.00
0090	0224-0104000E TEMPORARY BARRICADES, TYPE II	EACH	9.00	55.00	495.00
0100	0224-0105000E TEMPORARY BARRICADES, TYPE III	EACH	6.00	120.00	720.00
0110	0224-0145000E TEMPORARY PLASTIC DRUMS	EACH	95.00	50.00	4,750.00
0120	0225-0154000F STRIPE REMOVAL	FOOT	137.00	2.35	321.95
0130	0225-0155100J LEGEND REMOVAL	SQFT	12.00	12.30	147.60
0140	0225-0156000J BAR REMOVAL	SQFT	53.00	12.25	649.25



## SCHEDULE OF ITEMS

CEDAR CREEK/TONQUIN TRAIL: OR99W - SW PINE ST (SHERWOOD) (C15264)

LEGACY CONTRACTING INC

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
0150	0245-0100000A TEMPORARY WATER MANAGEMENT FACILITY AT STATION 17+97	LUMP SUM	ALL	16,235.00	16,235.00
0160	0280-0100000A EROSION CONTROL	LUMP SUM	ALL	10,950.00	10,950.00
0170	0280-0101000J PLASTIC SHEETING	SQYD	100.00	5.50	550.00
0180	0280-0104010R TEMPORARY MULCHING, HYDROMULCH	ACRE	1.04	1,355.00	1,409.20
0190	0280-0105030J MATTING, TYPE C	SQYD	5,038.89	0.85	4,283.06
0200	0280-0106060E CHECK DAM, TYPE 6	EACH	7.00	145.00	1,015.00
0210	0280-0110010E CONSTRUCTION ENTRANCE, TYPE 1	EACH	5.00	1,700.00	8,500.00
0220	0280-0111010E TIRE WASH FACILITY, TYPE 1	EACH	5.00	3,900.00	19,500.00
0230	0280-0112500E CONCRETE WASHOUT FACILITY	EACH	3.00	750.00	2,250.00
0240	0280-0113000F SEDIMENT FENCE	FOOT	6,432.00	2.15	13,828.80
0250	0280-0114030E INLET PROTECTION, TYPE 3	EACH	12.00	90.00	1,080.00
0260	0280-0115020E SEDIMENT BARRIER, TYPE 2	EACH	50.00	58.00	2,900.00
0270	0280-0115030F SEDIMENT BARRIER, TYPE 3	FOOT	200.00	3.30	660.00
0280	0280-0115080F SEDIMENT BARRIER, TYPE 8	FOOT	321.00	6.35	2,038.35
0290	0290-0100000A POLLUTION CONTROL PLAN	LUMP SUM	ALL	1,200.00	1,200.00



## SCHEDULE OF ITEMS

CEDAR CREEK/TONQUIN TRAIL: OR99W - SW PINE ST (SHERWOOD) (C15264)

LEGACY CONTRACTING INC

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
0300	0290-0102000A WORK CONTAINMENT PLAN	LUMP SUM	ALL	7,800.00	7,800.00
0310	0290-0200000A TURBIDITY MONITORING	LUMP SUM	ALL	1,975.00	1,975.00
0320	0294-0200010M CONTAMINATED SOIL DISPOSAL	TON	74.00	98.50	7,289.00
0330	0294-0500000A LEAD COMPLIANCE PLAN	LUMP SUM	ALL	1,180.00	1,180.00
0340	0294-0700000E SOIL SAMPLE COLLECTION AND ANALYTICAL TESTING	EACH	3.00	2,300.00	6,900.00
SECTION 0002 ROADWORK					
0350	0305-0100000A CONSTRUCTION SURVEY WORK	LUMP SUM	ALL	43,000.00	43,000.00
0360	0310-0101000F REMOVAL OF CURBS	FOOT	341.00	5.50	1,875.50
0370	0310-0102000J REMOVAL OF WALKS AND DRIVEWAYS	SQYD	144.00	14.25	2,052.00
0380	0310-0106000A REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP SUM	ALL	5,800.00	5,800.00
0390	0310-0106100J REMOVAL OF CURB RAMP, WALK, CURB, SURFACING	SQYD	328.00	12.95	4,247.60
0400	0310-0112000A REMOVAL OF FENCES	LUMP SUM	ALL	1,900.00	1,900.00
0410	0310-0116000A REMOVAL OF PIPES	LUMP SUM	ALL	955.00	955.00
0420	0310-0119000F ASPHALT PAVEMENT SAW CUTTING	FOOT	794.00	4.00	3,176.00
0430	0320-0100000A CLEARING AND GRUBBING	LUMP SUM	ALL	116,325.00	116,325.00





## SCHEDULE OF ITEMS

CEDAR CREEK/TONQUIN TRAIL: OR99W - SW PINE ST (SHERWOOD) (C15264)

LEGACY CONTRACTING INC

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
0440	0330-0123000K EMBANKMENT IN PLACE	CUYD	2,654.00	43.00	114,122.00
0450	0330-0126000K STONE EMBANKMENT	CUYD	987.00	59.50	58,726.50
0460	0340-0100000Q WATERING	MGAL	25.00	430.00	10,750.00
0470	0350-0105000J SUBGRADE GEOTEXTILE	SQYD	6,637.00	1.30	8,628.10
0480	0390-0101000J FILTER BLANKET	SQYD	105.00	5.85	614.25
0490	0390-0105000K LOOSE RIPRAP, CLASS 50	CUYD	17.00	159.00	2,703.00
0500	0390-0116000K LOOSE RIPRAP, CLASS 2000	CUYD	67.00	142.00	9,514.00
0510	1999-9Z90000E SUPPLEMENTAL ANCHOR RODS	EACH	11.00	1,095.00	12,045.00
0520	1999-9Z90000E SUPPLEMENTAL ANCHOR/SOIL NAIL	EACH	13.00	800.00	10,400.00
0530	1999-9Z90000J ANCHORED MESH WALL SOIL SLOPE STABILIZATION	SQFT	5,916.00	66.00	390,456.00

## SECTION 0003 DRAINAGE AND SEWERS

0540	0415-0100000F MAINLINE VIDEO INSPECTION	FOOT	555.00	12.00	6,660.00
0550	0430-0100060F 6 INCH DRAIN PIPE	FOOT	1,511.00	29.00	43,819.00
0560	0430-0101000E SUBSURFACE DRAIN OUTLETS	EACH	13.00	358.00	4,654.00
0570	0445-010012AF 12 INCH CULVERT PIPE, 5 FT DEPTH	FOOT	139.00	119.00	16,541.00



## SCHEDULE OF ITEMS

CEDAR CREEK/TONQUIN TRAIL: OR99W - SW PINE ST (SHERWOOD) (C15264)

LEGACY CONTRACTING INC

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
0580	0445-010012BF 12 INCH CULVERT PIPE, 10 FT DEPTH	FOOT	57.00	255.00	14,535.00
0590	0445-010012CF 12 INCH CULVERT PIPE, 20 FT DEPTH	FOOT	42.00	400.00	16,800.00
0600	0445-010018AF 18 INCH CULVERT PIPE, 5 FT DEPTH	FOOT	27.00	180.00	4,860.00
0610	0445-035012AF 12 INCH STORM SEWER PIPE, 5 FT DEPTH	FOOT	200.70	88.00	17,661.60
0620	0445-035024AF 24 INCH STORM SEWER PIPE, 5 FT DEPTH	FOOT	85.00	148.00	12,580.00
0630	0445-0700120E SLOPED END SECTIONS, 12 INCH	EACH	17.00	445.00	7,565.00
0640	0445-0700180E SLOPED END SECTIONS, 18 INCH	EACH	2.00	500.00	1,000.00
0650	0445-0700240E SLOPED END SECTIONS, 24 INCH	EACH	1.00	545.00	545.00
0660	0450-0144000F 144 INCH X 65 INCH STRUCTURAL PLATE ARCH	FOOT	40.00	520.00	20,800.00
0670	0450-0190000K STRUCTURAL PLATE CONCRETE FOOTINGS AND HEADWALLS	CUYD	47.00	685.00	32,195.00
0680	0470-0307000E CONCRETE INLETS, TYPE CG-2	EACH	3.00	1,595.00	4,785.00
0690	0490-0100000E ADJUSTING BOXES	EACH	1.00	485.00	485.00
0700	0490-0120000E MINOR ADJUSTMENT OF MANHOLES	EACH	6.00	925.00	5,550.00
0710	0490-0121000E MAJOR ADJUSTMENT OF MANHOLES	EACH	1.00	2,100.00	2,100.00



## SCHEDULE OF ITEMS

CEDAR CREEK/TONQUIN TRAIL: OR99W - SW PINE ST (SHERWOOD) (C15264)

LEGACY CONTRACTING INC

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
SECTION 0004 RETAINING WALL, RS01					
0720	1999-9Z90000A RSS, RS01	LUMP SUM	ALL	69,935.00	69,935.00
SECTION 0005 RETAINING WALL, RS02					
0730	1999-9Z90000A RSS, RS02	LUMP SUM	ALL	26,665.00	26,665.00
SECTION 0006 RETAINING WALL, RS03					
0740	1999-9Z90000A RSS, RS03	LUMP SUM	ALL	212,445.00	212,445.00
SECTION 0007 RETAINING WALL, RS04					
0750	1999-9Z90000A RSS, RS04	LUMP SUM	ALL	63,045.00	63,045.00
SECTION 0008 RETAINING WALL, RS05					
0760	1999-9Z90000A RSS, RS05	LUMP SUM	ALL	26,085.00	26,085.00
SECTION 0009 RETAINING WALL, RS06					
0770	1999-9Z90000A RSS, RS06	LUMP SUM	ALL	83,455.00	83,455.00
SECTION 0010 RETAINING WALL, RS07					
0780	1999-9Z90000A RSS, RS07	LUMP SUM	ALL	49,235.00	49,235.00
SECTION 0011 RETAINING WALL, RS08					
0790	1999-9Z90000A RSS, RS08	LUMP SUM	ALL	59,775.00	59,775.00



## SCHEDULE OF ITEMS

CEDAR CREEK/TONQUIN TRAIL: OR99W - SW PINE ST (SHERWOOD) (C15264)

LEGACY CONTRACTING INC

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
SECTION 0012 RETAINING WALL, RS09					
0800	1999-9Z90000A RSS, RS09	LUMP SUM	ALL	79,415.00	79,415.00
SECTION 0013 RETAINING WALL, MS01					
0810	0596-A002000A RETAINING WALL, MSE	LUMP SUM	ALL	52,365.00	52,365.00
SECTION 0014 RETAINING WALL, MS02					
0820	0596-A002000A RETAINING WALL, MSE	LUMP SUM	ALL	21,996.00	21,996.00
SECTION 0015 RETAINING WALL, SN01					
0830	1999-9Z90000A FURNISH SOIL NAIL INSTALLATION AND TESTING EQUIPMENT	LUMP SUM	ALL	11,000.00	11,000.00
0840	1999-9Z90000A RETAINING WALL SN01	LUMP SUM	ALL	71,115.00	71,115.00
SECTION 0016 RETAINING WALL, SN02					
0850	1999-9Z90000A FURNISH SOIL NAIL INSTALLATION AND TESTING EQUIPMENT	LUMP SUM	ALL	11,000.00	11,000.00
0860	1999-9Z90000A RETAINING WALL SN02	LUMP SUM	ALL	72,365.00	72,365.00
SECTION 0017 BRIDGES					
0870	0530-0104000A REINFORCEMENT, GRADE 60	LUMP SUM	ALL	19,365.00	19,365.00
0880	0540-0301000A GENERAL STRUCTURAL CONCRETE, CLASS 3300	LUMP SUM	ALL	36,416.00	36,416.00
0890	0000-0100000A DELETED BID ITEM	LUMP SUM	ALL	0.00	0.00





## SCHEDULE OF ITEMS

CEDAR CREEK/TONQUIN TRAIL: OR99W - SW PINE ST (SHERWOOD) (C15264)  
LEGACY CONTRACTING INC

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
0900	1999-9Z90000A AUGER-CAST (CFA) PILES	LUMP SUM	ALL	143,888.00	143,888.00
0910	1999-9Z90000A PREFABRICATED BRIDGE	LUMP SUM	ALL	76,665.00	76,665.00
0920	1999-9Z90000F PEDESTRIAN RAIL	FOOT	524.00	65.00	34,060.00
0930	1999-9Z90000F TIMBER BOARDWALK	FOOT	262.00	1,530.00	400,860.00
SECTION 0018 BASES					
0940	0620-0104000J COLD PLANE PAVEMENT REMOVAL, 0 - 2 INCHES DEEP	SQYD	76.11	25.00	1,902.75
0950	0641-0112000K 3/4 INCH - 0 AGGREGATE BASE	CUYD	1,112.00	78.50	87,292.00
SECTION 0019 WEARING SURFACES					
0960	0744-0202000M LEVEL 2, 1/2 INCH ACP MIXTURE	TON	1,018.00	135.00	137,430.00
0970	0744-0302000M LEVEL 3, 1/2 INCH ACP MIXTURE	TON	8.40	198.00	1,663.20
0980	0759-0103000F CONCRETE CURBS, CURB AND GUTTER	FOOT	113.10	50.00	5,655.00
0990	0759-0108000F CONCRETE CURBS, LOW PROFILE MOUNTABLE CURB, MODIFIED	FOOT	181.00	46.00	8,326.00
1000	0759-0110000F CONCRETE CURBS, STANDARD CURB	FOOT	427.00	23.00	9,821.00
1010	0759-0122000J CONCRETE ISLANDS	SQFT	209.00	20.00	4,180.00
1020	0759-0127000J CONCRETE DRIVEWAYS, REINFORCED	SQFT	543.00	23.00	12,489.00
1030	0759-0128000J CONCRETE WALKS	SQFT	1,103.00	15.00	16,545.00



## SCHEDULE OF ITEMS

CEDAR CREEK/TONQUIN TRAIL: OR99W - SW PINE ST (SHERWOOD) (C15264)

LEGACY CONTRACTING INC

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
1040	0759-0147000J PATTERNED CONCRETE SURFACING	SQFT	102.40	56.00	5,734.40
1050	0759-0154100E EXTRA FOR NEW CURB RAMPS	EACH	12.00	575.00	6,900.00
1060	0759-0510000J TRUNCATED DOMES ON NEW SURFACES	SQFT	12.00	69.95	839.40

## SECTION 0020 PERMANENT TRAFFIC SAFETY AND GUIDANCE DEVICES

1070	0855-0102100E BI-DIRECTIONAL YELLOW TYPE I MARKERS	EACH	9.00	19.00	171.00
1080	0856-0101000E PERMANENT SURFACE MOUNTED TUBULAR MARKERS	EACH	3.00	95.00	285.00
1090	0865-0116500F METHYL METHACRYLATE, EXTRUDED, SURFACE, PROFILED	FOOT	110.00	19.00	2,090.00
1100	0867-0103500E PAVEMENT LEGEND, TYPE AB: ARROWS	EACH	1.00	300.00	300.00
1110	0867-0145500J PAVEMENT BAR: TYPE AB	SQFT	271.50	10.75	2,918.63
1120	0867-0169500E PAVEMENT LEGEND, TYPE AB: YIELD LINE TRIANGLE	EACH	4.00	70.00	280.00
1130	0868-0100000J GREEN BICYCLE LANE, PREFORMED THERMOPLASTIC FILM	SQFT	62.50	9.30	581.25

## SECTION 0021 PERMANENT TRAFFIC CONTROL AND ILLUMINATION SYSTEMS

1140	0905-0100000A REMOVE EXISTING SIGNS	LUMP SUM	ALL	325.00	325.00
1150	0910-0100000K WOOD SIGN POSTS	FBM	300.00	23.00	6,900.00
1160	0920-0100000A SIGN SUPPORT FOOTINGS	LUMP SUM	ALL	2,700.00	2,700.00



## SCHEDULE OF ITEMS

CEDAR CREEK/TONQUIN TRAIL: OR99W - SW PINE ST (SHERWOOD) (C15264)

LEGACY CONTRACTING INC

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
1170	0930-0117000A PERFORATED STEEL SQUARE TUBE ANCHOR SIGN SUPPORTS	LUMP SUM	ALL	1,350.00	1,350.00
1180	0940-0202000J SIGNS, STANDARD SHEETING, SHEET ALUMINUM	SQFT	97.00	25.00	2,425.00
1190	0970-0100000A POLE FOUNDATIONS	LUMP SUM	ALL	1,900.00	1,900.00
1200	0970-0104000A LUMINAIRES, LAMPS, AND BALLASTS	LUMP SUM	ALL	6,900.00	6,900.00
1210	0970-0105000A SWITCHING, CONDUIT, AND WIRING	LUMP SUM	ALL	9,800.00	9,800.00
1220	0970-0200000A LIGHTING POLES AND ARMS	LUMP SUM	ALL	17,235.00	17,235.00
1230	0990-0102000A TRAFFIC SIGNAL MODIFICATION, PACIFIC HIGHWAY WEST (OR99W) AND MEINECKE PKWY	LUMP SUM	ALL	77,255.00	77,255.00

## SECTION 0022 RIGHT-OF-WAY DEVELOPMENT AND CONTROL

1240	1010-0100000A WATER QUALITY STRUCTURE, STATION 47+02	LUMP SUM	ALL	43,445.00	43,445.00
1250	1030-0109000R SEED MIX PALETTE A	ACRE	0.10	8,800.00	880.00
1260	1030-0132000R SEED MIX PALETTE B	ACRE	1.10	4,456.00	4,901.60
1270	1030-0139000R FERTILIZING	ACRE	1.30	1,600.00	2,080.00
1280	1040-0100000E SOIL TESTING	EACH	4.00	355.00	1,420.00
1290	1040-0101000K TOPSOIL	CUYD	839.82	50.00	41,991.00
1300	1040-0107000K SOIL CONDITIONER	CUYD	1.30	155.00	201.50



## SCHEDULE OF ITEMS

CEDAR CREEK/TONQUIN TRAIL: OR99W - SW PINE ST (SHERWOOD) (C15264)

LEGACY CONTRACTING INC

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
1310	1040-0126000E DECIDUOUS TREES, 1 INCH CALIPER	EACH	3.00	315.00	945.00
1320	1040-0130000E DECIDUOUS TREES, 2 INCH CALIPER	EACH	12.00	598.00	7,176.00
1330	1040-0161000E TUBELING PLANT	EACH	3,500.00	3.80	13,300.00
1340	1040-0193000K WOOD CHIP MULCH	CUYD	16.13	71.00	1,145.23
1350	1040-0203000E BOULDERS	EACH	4.00	265.00	1,060.00
1360	1050-0135000F 4 FOOT CHAIN LINK FENCE	FOOT	202.00	40.00	8,080.00
1370	1050-0135000F 6 FOOT CHAIN LINK FENCE	FOOT	70.00	50.00	3,500.00
1380	1050-0204000E 24 FOOT X 72 INCH CHAIN LINK DOUBLE GATES	EACH	1.00	3,600.00	3,600.00
1390	1069-0100000F METAL HANDRAIL, 2 RAILS	FOOT	108.00	105.00	11,340.00
1400	1091-0100500K STREAMBED EXCAVATION	CUYD	303.00	26.00	7,878.00
1410	1095-0100000E BENCHES, TYPE BACKLESS	EACH	1.00	2,300.00	2,300.00
1420	1095-0104000E LITTER RECEPTACLES	EACH	1.00	1,900.00	1,900.00
1430	1999-9Z90000F SPLIT RAIL FENCE	FOOT	1,728.00	36.50	63,072.00
1440	1999-9Z90000F WOOD RUB RAIL	FOOT	410.00	12.85	5,268.50
1450	1999-9Z90000K STREAMBED BOULDERS AND COBBLES	CUYD	21.00	73.50	1,543.50





## SCHEDULE OF ITEMS

CEDAR CREEK/TONQUIN TRAIL: OR99W - SW PINE ST (SHERWOOD) (C15264)

LEGACY CONTRACTING INC

ITEM NO	ITEM DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
1460	1999-9Z90000K SUBGRADE BEDDING BACKFILL	CUYD	99.00	37.00	3,663.00
SECTION 0023 ADDED BID ITEMS					
1470	0245-0101000U BYPASS PUMP MONITORING	DAY	18.00	525.00	9,450.00

Total Bid: \$3,846,216.72



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## SECTION III. CONTRACT

THIS CONTRACT, made and entered into, in duplicate, this April 1, 2021

by and between the State of Oregon, by and through its Transportation Commission and its Department of Transportation, hereinafter called "State", and Legacy Contracting, Inc., an Oregon corporation, authorized to do business in the State of Oregon, hereinafter called "Contractor",

## WITNESSETH:

That the said Contractor, in consideration of the sums to be paid by the State in the manner and at the time herein provided, and in consideration of the other covenants and agreements herein contained, hereby agrees to perform and complete the work herein described and provided for and to furnish all necessary machinery, tools, apparatus, equipment, supplies, materials and labor and do all things in accordance with the applicable Plans, the applicable Standard Specifications, the Special Provisions and other required provisions bound herewith or incorporated therein, and in accordance with such alterations or modifications of the same as may be made by the Engineer or the State, and according to such directions as may from time to time be made or given by the Engineer under the authority and within the meaning and purpose of this Contract. This agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the Contractor.

That the applicable Plans, the applicable Standard Specifications, the Special Provisions and other required provisions bound herewith or incorporated therein and the Schedule of Items bound herewith are hereby specifically referred to and by this reference made a part hereof, and shall by such reference have the same force and effect as though all of the same were fully written or inserted herein.

That the Contractor shall faithfully complete and perform all of the obligations of this Contract, and in particular shall promptly, as due, make payment of all just debts, dues, demands and obligations incurred in the performance of said Contract; and shall not permit any lien or claim to be filed or prosecuted against the State. It is expressly understood that the laws of the State of Oregon shall govern this Contract in all things.

In consideration of the faithful performance of all of the obligations, both general and special, herein set out, and in consideration of the faithful performance of the work as set forth in this Contract, the applicable Plans, Standard Specifications, Special Provisions, other required provisions, Schedule of Items, and all general and detailed Specifications and Plans which are a part hereof, and in accordance with the directions of the Engineer and to the Engineer's satisfaction, and, on Federal-Aid Projects, to the satisfaction of the Federal Highway Administration, or its authorized representative, in conformity with the requirements of the Federal-Aid Road Act and all amendments thereto, the State agrees to pay to the said Contractor the amount earned, as determined from the actual quantities of work performed and the prices and other bases of payment specified and taking into consideration any amounts that may be deductible under the terms of the Contract, and to make such payments in the manner and at the times provided in the applicable Standard Specifications or Special Provisions.

IN WITNESS WHEREOF, the parties hereto have subscribed their names and affixed their respective official seals as of the date first above written.

The execution of this public improvement Contract is authorized by the Director of the Oregon Department of Transportation through duly adopted Delegation Orders and Letters of Authority.

\_\_\_\_\_  
Oregon Department of Transportation      Date

Contractor: Legacy Contracting, Inc.  
Address: 41850 Kingston Jordan Rd SE, Stayton OR 97383  
Phone: 503-749-1818  
Email: [jeffh@legacycontractinginc.com](mailto:jeffh@legacycontractinginc.com)

185342  
Oregon Construction Contractors Board  
Registration Number

02/02/2023  
Expiration Date

By \_\_\_\_\_  
Authorized Official Signature      Date

\_\_\_\_\_  
Printed Name

By \_\_\_\_\_  
Authorized Official Signature

\_\_\_\_\_  
Printed Name

## SECTION IV. PERFORMANCE BOND

Bond No. \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS: That, Legacy Contracting, Inc., an Oregon corporation.

as principal, and

as Surety, are jointly and severally held and bound unto the State of Oregon, in the sum of

Three Million, Eight Hundred Forty-six Thousand Two Hundred Sixteen Dollars and Seventy-two Cents (\$3,846,216.72)

for the payment of which we jointly and severally bind ourselves, our heirs, executors, administrators and assigns or successors and assigns, firmly by these presents.

## THE CONDITION OF THIS BOND IS SUCH

That, whereas the said principal herein has made and entered into a certain Contract, a copy of which is attached hereto, with the State of Oregon by and through its Transportation Commission and its Department of Transportation, which Contract, together with the applicable Plans, Standard Specifications, Special Provisions, and Schedule of Items, is by this reference made a part hereof, whereby the said principal agrees to do in accordance with the certain terms conditions, requirements, Plans and Specifications set out in said Contract and all authorized modifications of the Contract which increase the amount of the work and the amount of the Contract. Notice to the Surety of any of the immediately foregoing is waived.

NOW, THEREFORE, if the principal herein shall faithfully and truly observe and comply with the terms, conditions and provisions of the said Contract, in all respects, and shall well and truly and fully do and perform all construction work (and design, if any) and all other work and matters and things by it undertaken to be performed under said Contract, upon the terms set forth therein, and within the time prescribed therein, or as extended as provided in the Contract, and shall indemnify and save harmless the State of Oregon, the Oregon Transportation Commission, the Oregon Department of Transportation and their respective members, officers, employees, and agents, against any direct or indirect damages of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the said Contract by the said Contractor or any subcontractors and shall in all respects perform said Contract according to applicable law, then this obligation is to be void, otherwise to remain to full force and effect.

Cedar Creek/Tonquin Trail: OR 99W – SW Pine St. (Sherwood) Project, Contract No. 15264

Nonpayment of the bond premium will not invalidate this bond nor shall the State of Oregon, by and through its Transportation Commission or its Department of Transportation, be obligated for the payment thereof.

Witness our hands this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Contractor: Legacy Contracting, Inc.  
Address: 41850 Kingston Jordan Rd SE, Stayton OR 97383  
Phone: 503-749-1818  
Email: [jeffh@legacycontractinginc.com](mailto:jeffh@legacycontractinginc.com)

By \_\_\_\_\_  
Authorized Official Signature

By \_\_\_\_\_  
Authorized Official Signature

\_\_\_\_\_  
Surety

By \_\_\_\_\_  
Signature  
Attorney in Fact

\_\_\_\_\_  
Printed Name  
Attorney in Fact  
(A Power of Attorney for the Attorney in Fact  
must be attached to this bond)

By \_\_\_\_\_  
Agent (Required)  
Agent Phone Number: \_\_\_\_\_  
Agent Email: \_\_\_\_\_

\_\_\_\_\_  
Surety's Seal  
Must be affixed



## SECTION V. PAYMENT BOND

Bond No. \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS: That, Legacy Contracting, Inc., an Oregon corporation.

as principal, and

as Surety, are jointly and severally held and bound unto the State of Oregon, in the sum of

Three Million, Eight Hundred Forty-six Thousand Two Hundred Sixteen Dollars and Seventy-two Cents (\$3,846,216.72)

for the payment of which we jointly and severally bind ourselves, our heirs, executors, administrators and assigns or successors and assigns, firmly by these presents.

## THE CONDITION OF THIS BOND IS SUCH

That, whereas the said principal herein has made and entered into a certain Contract, a copy of which is attached hereto, with the State of Oregon by and through its Transportation Commission and its Department of Transportation, which Contract, together with the applicable Plans, Standard Specifications, Special Provisions, and Schedule of Items, is by this reference made a part hereof, whereby the said principal agrees to do in accordance with the certain terms, conditions, requirements, Plans and Specifications set out in said Contract and authorized modifications of the Contract which increase the amount of the work and the amount of the Contract. Notice to the Surety of any of the immediately foregoing are waived.

NOW, THEREFORE, if the principal herein shall make payment promptly, as due to all subcontractors and to all persons supplying to the Contractor or any subcontractors, equipment, supplies, labor or materials for the prosecution of the work, or any part thereof, provided for in said Contract, and shall pay all contribution of amounts due its workers compensation carrier and the State Unemployment Compensation Trust Fund from such Contractor or subcontractors incurred in the performance of said Contract, and pay all sums of money withheld from the Contractor's employees and payable to the Revenue Department; and shall pay all other just debts, dues and demands incurred in the performance of the said Contract and shall pay the State of Oregon, by and through its Transportation Commission and its Department of Transportation, such damages as may accrue to the State under said Contract, then this obligation is to be void, otherwise to remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond nor shall the State of Oregon, by and through its Transportation Commission and its Department of Transportation, be obligated for the payment thereof.

Witness our hands this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Contractor: Legacy Contracting, Inc.  
Address: 41850 Kingston Jordan Rd SE, Stayton OR 97383  
Phone: 503-749-1818  
Email: [jeffh@legacycontractinginc.com](mailto:jeffh@legacycontractinginc.com)

By \_\_\_\_\_  
Authorized Official Signature

By \_\_\_\_\_  
Authorized Official Signature

\_\_\_\_\_  
Surety

By \_\_\_\_\_  
Signature  
Attorney in Fact

\_\_\_\_\_  
Printed Name  
Attorney in Fact  
(A Power of Attorney for the Attorney in Fact  
must be attached to this bond)

By \_\_\_\_\_  
Agent (Required)  
Agent Phone Number: \_\_\_\_\_  
Agent Email: \_\_\_\_\_

\_\_\_\_\_  
Surety's Seal  
Must be affixed

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**SECTION VI. CERTIFICATION OF WORKERS' COMPENSATION COVERAGE**OREGON TRANSPORTATION COMMISSION  
OREGON DEPARTMENT OF TRANSPORTATION

The Contractor, for the purposes of this Contract, hereby certifies that it is currently providing Oregon Workers' Compensation coverage for all its employees and will maintain coverage throughout the course of the Project through one of the following methods:

1.  "Carrier-Insured Employer" (State Accident Insurance Fund Corp. or other authorized insurer)

Insurance Company Name \_\_\_\_\_

ID/Policy Number \_\_\_\_\_

2.  "Self-Insured Employer" (Certified by the Workers' Compensation Division)

ID number as assigned by the  
Workers' Compensation Division \_\_\_\_\_

3.  I am an independent contractor and will perform all work under this contract without the assistance of others.

In the event of cancellation or change in the information above, Contractor certifies that it will immediately notify the Oregon Department of Transportation of said cancellation or change and will obtain alternate coverage.

Dated \_\_\_\_\_ 20\_\_

\_\_\_\_\_  
(Contractor's Signature)

**REMINDER - ADDITIONAL INFORMATION NEEDED**

Has your insurance carrier filed with Oregon Workers' Compensation Division a guaranty contract as proof of coverage for your employees working in Oregon?

For filing information, contact the Workers' Compensation Division at Labor and Industries Building: Salem, OR 97301; Phone (503) 947-7810.

