



CITY OF
**West
Linn**

INVITATION FOR BID

CONSTRUCTION PROJECT

Public Works Department
22500 Salamo Road
West Linn, Oregon 97068
Telephone: (503) 722-5500
Fax: (503) 656-4106

City of West Linn Plans and Bid Documents

Project Number: **PW-13-14**

Project Description: **Santa Anita and Rosemont Intersection**

Prospective Bidders' Conference: April 30, 2014 10:00 a.m., local time

Due Date: May 9, 2014 2:00 p.m., local time

Plans and Specifications are available for download at no charge from the City's website at <http://bids.westlinnoregon.gov>

Alternately, copies may be reviewed or picked-up for a \$25.00 fee per set at:

**Public Works Department
Engineering Division
22500 Salamo Road
West Linn, Oregon 97068**

PROSPECTIVE BIDDERS' CONFERENCE ATTENDANCE IS REQUIRED

It is highly encouraged that Contractors and Subcontractors visit the site.



EXPIRES: 12/31/2014



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APPENDIX A

FORMS REQUIRED FOR SUBMITTAL WITH BID

(In addition to Notice of Invitation to Bid and Contract and any addenda)

1. BID FORM
2. BID BOND
3. NONCOLLUSION AFFADAVIT
4. THREE YEAR EXPERIENCE RECORD
5. FIRST-TIER SUBCONTRACTOR DISCLOSURE (WH-179)
Submit within 2 hours of bid closing.

FORMS NOT REQUIRED AT TIME OF BID

1. PERFORMANCE BOND
2. PAYMENT BOND
3. CONTRACTOR'S AFFADAVIT, SETTLEMENT OF CLAIMS
4. PUBLIC WORKS FEE INFORMATION FORM (WH-39)
To be completed and paid by City upon award
5. NOTICE OF PUBLIC WORKS (WH-81)
To be completed by City upon award.
6. PUBLIC WORKS FEE ADJUSTMENT FORM (WH-40)
To be completed by City after final completion of project.
7. PAYROLL INSTRUCTIONS (WH-38A)
8. PAYROLL/CERTIFIED STATEMENT FORM (WH-38)
9. CURRENT PREVAILING WAGE RATE COVER AND AMENDMENTS
The complete prevailing wage rate documents can be downloaded from the Oregon Bureau of Labor and Industries website at http://www.oregon.gov/boli/WHD/PWR/pages/pwr_state.aspx

APPENDIX B

TECHNICAL SPECIAL PROVISIONS

APPENDIX C

PLANS



CITY OF
**West
Linn**

City of West Linn, Oregon

Notice of Invitation for Bid and Contract

Project Number: **PW-13-14** Bid Due Date: **May 9, 2014**

Project Name: **Santa Anita and Rosemont Intersection** Bid Due Time: 2:00 p.m.

Bid Opening Location: City of West Linn – City Hall Council Chambers
22500 Salamo Rd., West Linn, OR 97068 Contact: Erich Lais, P.E.
Title: Asst. City Engineer

Time of Completion: August 15, 2014 Phone: (503) 722-5514

Project Description: Project generally includes grading, drainage, retaining walls, paving, concrete work, and traffic signal installations.

Sealed bids for the project identified and described above will be received by the City of West Linn at the specified location above until the date and time cited above. Bids received by the correct date and time shall be publicly opened and the bid price read. Bids shall be in the actual possession of the identified bidding department on or prior to the exact date and time indicated above. Late bids will not be considered, except as provided in the City of West Linn Procurement Policy. **Bids shall be submitted in a sealed envelope with the Invitation for Bid Project Number, Project Description, and the bidder's name and address clearly indicated on the front of the envelope.** All bids shall be completed in ink or typewritten. This Bid is for a public works project subject to ORS 279C.800 to 279C.870. Bidders are strongly encouraged to carefully read the **entire** Invitation for Bid Package.

BIDDER

To the City of West Linn:

The undersigned hereby Bids and agrees to furnish materials and/or services in compliance with all terms, conditions, specifications and addenda in the Notice of Invitation for Bid except for any written exceptions in the Bid. The signature below also certifies his or her understanding and compliance with The City of West Linn Standard Terms and Conditions.

Is the Bidder a "Resident" Bidder per ORS 279A.120? _____
Construction Contractors Board Yes/No

For clarification of this Bid contact:

Registration Number: _____

Name: _____

Federal Employer Identification Number: _____

Telephone: _____

Company Name

Authorized Signature for Bidder

Address

Printed Name

City State Zip Code

Title

ACCEPTANCE OF BID AND CONTRACT AWARD (For City of West Linn Use Only)

Your bid is hereby accepted. The Contractor is now bound to sell the materials and/or services listed by the attached award notice based upon the solicitation, including all terms, conditions, specifications, plans, addendum, amendments, etc., and the Contractor's Bid as accepted by the City.

Approved as to form:

Megan Thornton
Assistant City Attorney

City of West Linn, Oregon.

Awarded on _____, _____.

Chris Jordan, City Manager



STANDARD TERMS AND CONDITIONS

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1. PREPARATION OF BID:

- a. All bids shall be submitted on the forms provided in this *Invitation to Bid* package. It is permissible to copy these forms if required. Telegraphic (facsimile), electronic or mailgram bids will not be considered.
- b. The Bid and Contract Award document shall be submitted with an original ink signature by a person authorized to sign the Bid.
- c. Erasures, interlineations, or other modifications in the bid shall be initialed in original ink by the authorized person signing the Bid.
- d. If price is a consideration and in case of error in the extension of prices in the bid, the unit price shall govern. No bid shall be altered, amended, or withdrawn after the specified bid due date and time.
- e. Periods of time, stated as a number of days, shall be calendar days.
- f. Bid due date and time is stated as local Oregon time.
- g. The following items must be completed as part of the Bid submittal; Notice of Invitation for Bid and Contract (indicating Oregon Construction Contractors Board License Number), Bid Form, Bid Guaranty (Bond), Non-Collusion Affidavit, Three-Year Experience, and Addenda. Within two (2) hours of the Bid submittal, or with the Bid submittal, the First Tier Subcontractor Disclosure Form must be submitted if the bid is greater than \$100,000.
- h. It is the responsibility of all Bidders to examine the entire *Invitation For Bid* package and seek clarification of any item or requirement that may not be clear and to check all responses for accuracy before submitting a bid. Negligence in preparing a Bid confers no right of withdrawal after bid due date and time.

2. **INQUIRIES:** Any question related to the *Invitation For Bid (IFB)* shall be directed to the Buyer whose name appears as the Contact on the *IFB*. The Bidder shall not contact or ask questions of the department for which the requirement is being procured. Questions should be submitted in writing when time permits. The Buyer may require any and all questions be submitted in writing at the Buyer's sole discretion. Any correspondence related to an *Invitation For Bid* should refer to the appropriate *IFB* number, page, and paragraph number. All requests for additional information or interpretation of the *IFB* shall be submitted to the Buyer no later than five (5) calendar days before the deadline for submission of bids. If, in the opinion of the City, additional information or clarification is required, an addendum will be issued to all plan holders on record. Any addenda issued by the City seventy-two (72) hours or more before the scheduled closing time for filing bids shall be binding upon the Bidder. Addenda may be downloaded from the City's website. Bidders shall frequently check the City's website until closing including at least daily the week of the closing. Failure of the Bidder to receive or obtain such addenda shall not excuse them from compliance therewith if they are awarded the contract. Oral instructions or information given by City Officers, employees or agents to Bidders concerning this *IFB* or the work in general shall not bind the City.

3. **PROSPECTIVE BIDDERS CONFERENCE (REQUIRED):** A prospective Bidders conference will be held. If scheduled, the date and time of this conference will be indicated on the cover page of this document. The purpose of this conference will be to clarify the contents of this *Invitation For Bid* in order to prevent any misunderstanding of the City's position. Any doubt as to the requirements of this *Invitation For Bid* or any apparent omission or discrepancy should be presented to the City at this conference. The City will then determine if any action is necessary and may issue a written addendum to the *IFB*.

4. **LATE BIDS:** Late Bids received after the scheduled bid due date and time will be returned to the Bidder unopened.

5. **WITHDRAWAL OF BID:** At any time prior to the specified bid due date and time, a Bidder (or designated representative) may withdraw the bid.

6. **ADDENDUM OF BID:** Receipt of Addendum shall be acknowledged by signing and returning the document with the Bid at the specified bid due date and time.

7. **CONSTRUCTION CONTRACTORS REGISTRATION:** A person shall not submit a bid or proposal to work as a construction contractor unless that person is first registered with the Construction Contractors Board as required by ORS 701.021 or licensed by the State Landscape Contractor's Board as required by ORS 671.530. Bids from persons who fail to comply with this requirement shall be deemed non-responsive and be rejected.

8. AWARD OF CONTRACT:

- a. Notwithstanding any other provision of this *Invitation For Bid*, The City expressly reserves the right to: waive any immaterial defect or informality, reject any bids that do not comply with the prescribed public contracting procedures (including the requirement to demonstrate the bidder's responsibility under ORS 279C.375 (3)(b)), reject all bids for good cause if in the public interest, or reissue an *Invitation For Bid*.
- b. A response to an *Invitation For Bid* is a Bid to contract with the City based upon the terms, conditions and specifications contained in the City's *Invitation For Bid* and the written addenda thereto, if any. Bids do not become contracts unless and until they are accepted and executed by the **City Local Contract Review Board, City Manager or Department Director** in accordance with the City of West Linn Procurement Policy. A contract is formed when written notice of award(s) is provided to the successful Bidder(s). The contract has its inception in the award document, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the procurement contract are contained in the *Invitation For Bid*; unless modified by an Addendum.



STANDARD TERMS AND CONDITIONS

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THE FOLLOWING TERMS AND CONDITIONS ARE AN EXPLICIT PART OF THE SOLICITATION AND ANY RESULTANT CONTRACT.

1. **APPLICABLE LAW:** In the performance of this agreement, contractors shall abide by and conform to any and all laws of the United States, State of Oregon and City of West Linn including but not limited to federal and state executive orders providing for equal employment and procurement opportunities, the Federal Occupational Safety and Health Act and any other federal or state laws applicable to this agreement.

Attention is called to the requirements of Oregon Revised Statutes (O.R.S.) Chapter 279A, 279B, and 279C. This contract shall be governed by the laws of the State of Oregon. Any action or suits pertaining to this contract may be brought only in courts in the Circuit Court of Clackamas County or the U.S. District Court in Portland. Each and every provision of law and any clause required by law to be in the contract will be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the contract will forthwith be physically amended to make such insertion or correction.

The City may cancel this contract without penalty or further obligations by the City or any of its departments or agencies if any person significantly involved in initiating, negotiating, securing, drafting or creating the contract on behalf of the City or any of its departments or agencies, is at any time while the contract or any extension of the contract is in effect, an employee of any other party to the contract in any capacity or a consultant to any other party of the contract with respect to the subject matter of the contract.

2. **AMERICANS WITH DISABILITIES ACT, DISCRIMINATION & AFFIRMATIVE ACTION:** Bidders agree that if awarded a contract, the successful Bidder will comply with all applicable provisions of the Americans with Disabilities Act of 1990, 42 USC Section 12101 et seq. If any Bidder requires special assistance or auxiliary aids during the bidding process, please notify the City of West Linn, 503-657-0331 or TDD 503-657-7845 at least two (2) business days prior to the required assistance. To the extent applicable, the Contractor represents that it will comply with Executive Order 11246 as amended, Executive Order 11141, Section 503 of the Vocational Rehabilitation Act of 1973 as amended and the Age Discrimination Act of 1975, and all rules and regulations issued pursuant to the Acts. It is the policy of the City of West Linn that suppliers of goods or services to the City adhere to a policy of equal employment opportunity and demonstrate an affirmative effort to recruit, hire, and promote regardless of race, color, religion, gender, national origin, age or disability. By submitting the first tier subcontractor disclosure form, Bidder certifies that it has complied with ORS 279A.110(1), which states that a bidder may not discriminate against a subcontractor in awarding a subcontract because the subcontractor is a minority, women or emerging business enterprise certified under ORS 200.055 or a business enterprise that is owned or controlled by, or that employs a disabled veteran.
3. **BUSINESS LICENSE:** A current business license is required before doing business with the City. Information related to complying with the business license requirements is available by contacting the City Finance Department at 503-657-0331 or online at <https://westlinnoregon.gov/finance/online-business-license-registration>.
4. **CONSTRUCTION AND LANDSCAPE CONTRACTORS BOARDS:** Construction contractors must be licensed with the State of Oregon Construction Contractors Board in accordance with O.R.S. 701.005 and any other specialty licensing as required in the bid specification prior to submitting a bid to the City. For information contact:

CONSTRUCTION CONTRACTORS BOARD
700 Summer St. NE, Suite #300, Salem, OR 97310
(503) 378-4621 (website) <http://www.ccb.state.or.us>

A Landscape Contractors Board license is required in accordance with O.R.S. 671.510 if the bid specification includes landscape work as defined by O.R.S. 671.510. For information contact:

LANDSCAPE CONTRACTORS BOARD
2111 Front St. NE, Suite #2-101, Salem, OR 97310
(503) 378-5909 (website) <http://www.oregon.gov/LCB/>



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5. **LEGAL REMEDIES:** All claims and controversies shall be subject to resolution according to the terms of the City of West Linn Procurement Policy.
6. **BID GUARANTY:** All construction contracts shall be accompanied by a bid guaranty. No bid for construction will be considered unless accompanied by a certified check, cashier's check, or a bid bond for an amount not less than ten percent (10%) of the aggregate amount of the bid by a surety company authorized to issue such bonds in the State of Oregon. It shall be payable to the City of West Linn as a guaranty that the bid shall be irrevocable for a period of sixty (60) calendar days, unless otherwise specified, after the bid opening date and time and as liquidated damages should the Bidder fail or neglect to furnish the required performance bond and insurance and execute a contract within ten (10) calendar days after receiving said contract from the City for execution. The City will hold all bid security during the evaluation process. As soon as is practical after the completion of the evaluation, the City will issue a contract award notice for those Bids accepted by the City and return all checks to those who have not been issued a contract award notice.

All bid security from contractors who have been issued an award notice shall be held until the successful execution of all required contractual documents and bonds (performance bond, insurance, etc.). If the contractor fails to execute the required contractual documents and bonds within the time specified, or ten (10) days after notice of award if no period is specified, the contractor may be found to be in default and the contract terminated by the City. In case of default, the City reserves all rights inclusive of, but not limited to, the right to purchase material and/or to complete the required work in accordance with the City of West Linn Procurement Policy and to recover any actual excess costs from the contractor. Collection against the bid security shall be one of the measures available toward the recovery of any excess costs.
7. **CONFLICT OF INTEREST:** A Bidder submitting a bid hereby certifies that no officer, agent or employee of the City who has a pecuniary interest in this bid has participated in the contract negotiations on the part of the City, that the bid is made in good faith without fraud, collusion, or connection of any kind with any other Bidder of the same Invitation for Bids, and that the Bidder is competing solely in its own behalf without connection with, or obligation to, any undisclosed person or firm. No bid will be considered unless accompanied by the notarized Non-Collusion Affidavit form included in the Invitation for Bid.
8. **PRE-BID REQUIREMENTS:** Before submitting a bid, each Bidder shall carefully examine the Drawings, read the Specifications and all Addenda and visit the work site, if applicable. Each Bidder shall fully inform themselves prior to submitting a bid as to all existing conditions and limitations under which the Work is to be performed, and shall include in the bid a sum to cover all costs of all items necessary to perform the Work as set forth in the Bid Documents. No allowance will be made to any Bidder because of lack of such examination or knowledge. Submission of a bid will be construed as conclusive evidence that the Bidder has made such examination.
9. **LOCAL BUSINESS PREFERENCE:** ORS 279A.120 requires that, in all public contracts, the public contracting agency shall prefer good or services that have been manufactured or produced in this State if price, fitness, availability and quality are otherwise equal. As such the City desires to employ local businesses in the purchase, lease, or sale of any personal property, public improvements or services that have been manufactured or produced by a local business if price, fitness, availability and quality are otherwise equal. When a public contract is awarded to a nonresident bidder and the contract price exceeds \$10,000, the bidder shall promptly report to the Department of Revenue on forms provided by the department all information as required by ORS 279A.120(3).
10. **COST OF BID/PROPOSAL PREPARATION:** The City shall not reimburse the cost of developing, presenting, or providing any response to this solicitation. Bids submitted for consideration should be prepared simply and economically, providing adequate information in a straightforward and concise manner. The Invitation For Bid does not commit the City to pay any costs incurred by a Bidder in the submission of their bid, or in making any necessary studies or designs for the preparation thereof.
11. **CONTRACT:** The contract between the City and the Contractor shall consist of (1) the Invitation for Bid, including instructions, all terms and conditions, specifications, scopes of work, attachments, price sheet(s) and any amendments thereto, and (2) the Bid submitted by the Contractor in response to the Invitation for Bid (IFB). In the event of a conflict in



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language between the IFB and the Bid, the provisions and requirements in the IFB shall govern. However, the City reserves the right to clarify, in writing, any contractual terms with the concurrence of the Contractor, and such written contract shall govern in case of conflict with the applicable requirements stated in the IFB or the Vendor's Bid. The IFB shall govern in all other matters not affected by the written contract. The contract, if awarded, will be made to the lowest, responsive and responsible Bidder offering the lowest unit price base bid. Determination of the lowest responsive, responsible bid is subject to review by the City. Adversely affected or aggrieved bidders shall have seven calendar days after notice of award to submit to the City a written protest of the notice of award. Any written protest must be submitted in accordance with the adopted City Local Contract Review Board Rules.

12. **CONTRACT AMENDMENTS:** This contract may be modified only by a written Contract Amendment signed by persons duly authorized to enter into contracts on behalf of the City and the Contractor.
13. **CONTRACT APPLICABILITY:** The Bidder shall substantially conform to the terms, conditions, specifications and other requirements found within the text of this IFB. All previous agreements, contracts, or other documents, which have been executed between the Bidder and the City are not applicable to this IFB or any resultant contract.
14. **DRUG TESTING PROGRAM:** Pursuant to O.R.S. 279.505 (2) (1), the Contractor awarded the contract shall demonstrate that an employee drug-testing program is in place. The Contractor demonstrates that a drug-testing program is in place by signing of the contract. The drug testing program will apply to all employees and will be maintained for the duration of the Contract awarded. Failure to maintain a program shall constitute a material breach of contract.
15. **RELATIONSHIP TO PARTIES:** It is clearly understood that each party will act in its individual capacity and not as an agent, employee, partner, joint venturer, or associate of the other. An employee or agent of one party shall not be deemed or construed to be the employee or agent of the other for any purpose whatsoever. The Contractor is advised that taxes or Social Security payments will not be withheld from any City payments issued hereunder and that the Contractor should make arrangements to directly pay such expenses, if any.
16. **INTERPRETATION-PAROL EVIDENCE:** This contract represents the entire agreement of the Parties with respect to its subject matter, and all previous agreements, whether oral or written, entered into prior to this contract are hereby revoked and superseded by this contract. No representations, warranties, inducements or oral agreements have been made by any of the Parties except as expressly set forth herein, or in any other contemporaneous written agreement executed for the purposes of carrying out the provisions of this contract. This contract may not be changed, modified or rescinded except as provided for herein, absent a written agreement signed by both Parties. Any attempt at oral modification of this contract shall be void and of no effect.
17. **SUBCONTRACTS – ASSIGNMENT & DELEGATION:** Contractor shall submit a list of Subcontractors for approval by the City, and Contractor shall be fully responsible for the acts or omissions of any Subcontractors and of all persons employed by them, and neither the approval by City of any Subcontractor nor anything contained herein shall be deemed to create any contractual relation between the Subcontractor and City.

This agreement, and all of the covenants and conditions hereof, shall inure to the benefit of and be binding upon the City and the Contractor respectively and their legal representatives. Contractor shall not assign any rights nor delegate any duties incurred by this contract, or any part hereof without the written consent of City, and any assignment or delegation in violation hereof shall be void.

18. **APPROVAL OF SUBSTITUTIONS:** The materials, products, and equipment described in the Documents and Addenda establish a standard or required function, dimension, appearance, and quality to be met by any proposed substitution. No substitute will be considered unless written request for approval has been received by the City or its representative at least five (5) days prior to the scheduled closing time for receipt of bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including any drawings, cuts, performance, and test data and any other information necessary for evaluation of the substitute. If a substitute is approved, the approval shall be acknowledged in writing. Bidder shall not consider approvals made in any other manner.



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19. **RIGHTS AND REMEDIES:** No provision in this document or in the vendor's Bid shall be construed, expressly or by implication, as waiver by the City of any existing or future right and/or remedy available by law in the event of any claim of default or breach of contract. The failure of the City to insist upon the strict performance of any term or condition of the contract or to exercise or delay the exercise of any right or remedy provided in the contract, or by law, or the City's acceptance of and payment for materials or services, shall not release the Contractor from any responsibilities or obligations imposed by this contract or by law, and shall not be deemed a waiver of any right of the City to insist upon the strict performance of the Contract.

20. **INDEMNIFICATION:** Contractor warrants that all its work will be performed in accordance with generally accepted professional practices and standards as well as the requirements of applicable federal, state and local laws, it being understood that acceptance of a contractor's work by City shall not operate as a waiver or release.

Contractor agrees to indemnify and defend the City, its officers, agents and employees and hold them harmless from any and all liability, causes of action, claims, losses, damages, judgments or other costs or expenses including attorney's fees and witness costs and (at both trial and appeal level, whether or not a trial or appeal ever takes place) that may be asserted by any person or entity which in any way arise from, during or in connection with the performance of the work described in this contract, except liability arising out of the sole negligence of the City and its employees. If any aspect of this indemnity shall be found to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity of the remainder of this indemnification. The amount and type of insurance coverage requirements set forth herein will in no way be construed as limiting the scope of the indemnity in this paragraph.

21. **EARLY TERMINATION:** This agreement may be terminated without cause prior to the expiration of the agreed upon term by mutual written consent of the parties and for the following reasons:

- a. If work under the Contract is suspended by an order of a public agency for any reason considered to be in the public interest other than by a labor dispute or by reason of any third party judicial proceeding relating to the work other than a suit or action filed in regard to a labor dispute; or
- b. If the circumstances or conditions are such that it is impracticable within a reasonable time to proceed with a substantial portion of the Contract.

Payment of Contractor shall be as provided by ORS 279C.660 and shall be prorated to and include the day of termination and shall be in full satisfaction of all claims by Contractor against City under this Contract. Termination under any provision of this paragraph shall not affect any right, obligation, or liability of Contractor or City which accrued prior to such termination.

22. **CANCELLATION WITH CAUSE:** City may terminate this Contract effective upon delivery of written notice to Contractor, or at such later date as may be established by City, under any of the following conditions:

- a. If City funding from federal, state, local, or other sources is not obtained and continued at levels sufficient to allow for the purchase of the indicated quantity of services. This Contract may be modified to accommodate a reduction in funds,
- b. If Federal or State regulations or guidelines are modified, changed, or interpreted in such a way that the services are no longer allowable or appropriate for purchase under this Contract,
- c. If any license or certificate required by law or regulation to be held by Contractor, its subcontractors, agents, and employees to provide the services required by this Contract is for any reason denied, revoked, or not renewed,
- d. If Contractor becomes insolvent, if voluntary or involuntary petition in bankruptcy is filed by or against Contractor, if a receiver or trustee is appointed for Contractor, or if there is an assignment for the benefit of creditors of Contractor, or



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- e. If Contractor fails to maintain reasonable relations with the public. Verbal abuse, threats, or other inappropriate behavior towards members of the public constitutes grounds for termination.

Any such termination of this agreement under this section shall be without prejudice to any obligations or liabilities of either party already accrued prior to such termination.

City, by written notice of default (including breach of contract) to Contractor, may terminate the whole or any part of this Contract:

- f. If Contractor fails to provide services called for by this Contract within the time specified herein or any extension thereof, or
- g. If Contractor fails to perform any of the other provisions of this Contract, or so fails to pursue the work as to endanger performance of this Contract in accordance with its terms, and after receipt of written notice from City, fails to correct such failures within ten (10) days or such other period as City may authorize.

The rights and remedies of City provided in the above clause related to defaults (including breach of contract) by Contractor shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

If City terminates this Contract per clause f or g above, Contractor shall be entitled to receive as full payment for all services satisfactorily rendered and expenses incurred, an amount which bears the same ratio to the total fees specified in this Contract as the services satisfactorily rendered by Contractor bear to the total services otherwise required to be performed for such total fee; provided, that there shall be deducted from such amount the amount of damages, if any, sustained by City due to breach of contract by Contractor. Damages for breach of contract shall be those allowed by Oregon law, reasonable and necessary attorney fees, and other costs of litigation at trial and upon appeal.

23. **SEVERABILITY:** In the event any provision or portion of this Contract is held to be unenforceable or invalid by any court of competent jurisdiction, the remainder of this Contract shall remain in full force and effect and shall in no way be affected or invalidated thereby.
24. **FORCE MAJEURE:** Neither City nor Contractor shall be considered in default because of any delays in completion of responsibilities hereunder due to causes beyond the control and without fault or negligence on the part of the party so disabled, including, but not restricted to, an act of God or of a public enemy, volcano, earthquake, fire, flood, epidemic, quarantine, restriction, area-wide strike, freight embargo, unusually severe weather or delay of Subcontractor or suppliers due to such cause; provided that the party so disabled shall within ten (10) days from the beginning of such delay, notify the other party in writing of the causes of delay and its probable extent. Such notification shall not be the basis for a claim for additional compensation. Each party shall, however, make all reasonable efforts to remove or eliminate such a cause of delay or default and shall, upon cessation of the cause, diligently pursue performance of its obligation under Contract.
25. **RIGHT TO ASSURANCE:** Whenever one party to this contract in good faith has reason to question the other party's intent to perform he may demand that the other party give a written assurance of this intent to perform. In the event that a demand is made and no written assurance is given within five (5) days, the demanding party may treat this failure as an anticipatory repudiation of the Contract.
26. **RIGHT TO ACCESS RECORDS:** City shall have access to such books, documents, papers and records of Contractor and Subcontractors as are directly pertinent to this Contract for the purpose of making audit, examination, excerpts, and transcripts.
27. **WARRANTIES:** All work shall be guaranteed by the Contractor for a period of 18 months after the date of final acceptance of the work by the Owner. Contractor warrants that all practices and procedures, workmanship, and materials shall be the best available unless otherwise specified in the profession. Neither acceptance of the work nor payment



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therefore shall relieve Contractor from liability under warranties contained in or implied by this contract. Additional warranty requirements may be set forth in the solicitation.

28. **TITLE AND RISK OF LOSS:** The title and risk of loss of material and/or service shall not pass to the City until the City actually receives the material or service at the point of delivery, unless otherwise provided within this Contract.
29. **CONFLICT BETWEEN TERMS:** It is expressly agreed by and between the parties hereto that should there be any conflict between the terms of this instrument and the bid of the Contractor, this instrument shall control and nothing herein shall be considered as an acceptance of the said terms of said bid conflicting herewith.
30. **NONWAIVER:** The failure of the City to insist upon or enforce strict performance by Contractor of any of the terms of this contract or to exercise any rights hereunder shall not be construed as a waiver or relinquishment to any extent of its right to assert or rely upon such terms or rights on any future occasion.
31. **LIENS:** All materials, service or construction shall be free of all liens, and if the City requests, a formal release of all liens shall be delivered to the City.
32. **LICENSES:** Contractor shall have at the time of bid submittal, and shall maintain in current status, all Federal, State and Local licenses and permits required for the operation of the business conducted by the Contractor as applicable to this Contract. The conclusion of the issuing authority in each case is to be deemed conclusive for the purposes of complying with this provision. By submitting a bid for this public contract, you agree that, with respect to the contract, substantial compliance does not meet the minimum requirements of this or any provision hereof, or of any applicable law or other authority, and that strict compliance alone is adequate to meet those requirements, unless the City consents to such substantial compliance in writing at the time of bid submittal. The determination shall be made by the City.
33. **ATTORNEY'S FEES:** In case suit or action is instituted to enforce the provisions of this contract, the parties agree that the losing party shall pay such sum as the Court may adjudge reasonable attorney's fees and court costs including attorney's fees and court costs on appeal.
34. **PUBLIC RECORD:** All Bids submitted in response to this solicitation shall become the property of the City and shall become a matter of public record available for review, subsequent to the award notification, in accordance with the City's Procurement Policy.
35. **WORK IS PROPERTY OF THE CITY:** All work performed by Contractor under this Contract shall be the property of the City.
36. **ADVERTISING:** Contractor shall not advertise or publish information concerning this Contract, without prior written consent of the City.



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1. **DEFINITIONS:** The terms, as used in or pertaining to the contract, are defined as follows:

CITY: The word “*City*” shall refer to the City of West Linn, Oregon.

CONTRACTOR: The word “*Contractor*” is defined as the person, firm or corporation with whom the contract is made by the City.

CONTRACT: The word “*Contract*” will include; the Invitation to Bid Notice and Contract, Instructions to Bidders, Bid Form, Bid Guaranty, Performance Bond, Payment Bond, Notice of Award, Notice to Proceed, Change Order, Certificate of Insurance, Certificate of Completion, Contractor’s Affidavit Regarding Settlement of Claims, Contractor’s Affidavit Certifying Non-Collusion in Bidding, Standard Terms & Conditions, General Terms & Conditions, Special Terms & Conditions, Technical Provisions, Plans and Addenda thereto.

ENGINEER: The word “*Engineer*” is defined as the person, firm or corporation duly authorized by the City to act as agent in providing professional services including studies, planning, engineering design and construction administration services, inspecting materials and construction, and interpreting plans and specifications.

MATERIALS: The word “*Materials*” will include, in addition to materials incorporated in the project, equipment and other material used and/or consumed in the performance of the work.

SUBCONTRACTOR: The word “*Subcontractor*” is defined as those persons or groups of persons having a direct contract with the contractor and those who furnish material worked to a special design according to the plans and/or specifications for this work, and includes those who merely furnish materials not so worked.

WORK: The word “*Work*” shall include all labor necessary to accomplish the construction required by the Contract and all materials and equipment incorporated or to be incorporated in said construction.

2. **REFERENCE STANDARDS:**

- a. The “2010 City of West Linn Public Works Standards” which are sponsored and distributed by the City of West Linn Engineering Division, and which are hereinafter referred to as the “*COWL Specifications*,” are hereby adopted as part of these contract documents.
- b. The “2008 Oregon Standard Specifications for Construction” which are sponsored and distributed by Oregon Department of Transportation and the Oregon Chapter of the American Public Works Association, are hereby adopted as part of these contract documents.
- c. Clackamas County’s Signal Construction Standards are hereby adopted as part of these contract documents and supercede the 2008 Oregon Standard Specifications for Construction as shown in the Technical Special Provisions.
- d. If any contradiction exists between COWL Specifications or the 2008 Oregon Standard Specifications and this solicitation document, the solicitation language shall prevail.

3. **LAWS AND REGULATIONS:** The Contractor shall keep himself fully informed of all existing and future City and County ordinances and regulations and state and federal laws and Occupational Safety and Health Standards (OSHA) in any manner affecting the work herein specified. He shall at all times observe and protect and indemnify the City of West Linn, Oregon, and its officers and agents against any claim or liability arising from or based on the violation of any such ordinances, regulations or laws. It is the responsibility of the Contractor to obtain any and all information regarding the laws and regulations which may be referenced in the Specifications.

4. **RIGHTS OF WAY:** The Contractor shall not enter or occupy with workers, tools, equipment or materials any private ground outside the property or easement right of the City of West Linn, without the consent of the owner. The Contractor, at his own expense, is responsible for the acquisition of any additional easements or rights-of-way that he may desire to complete the work of this contract.



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5. **PROPOSAL QUANTITIES:** It is expressly understood and agreed by the parties hereto that the quantities of the various classes of work to be done and the material to be furnished under this Contract, which have been estimated as stated in the Bids, are only approximate and are to be used solely for the purpose of comparing, on a consistent basis, the bids for the work under this Contract. The Contractor further agrees that the City of West Linn will not be held responsible if any of the quantities shall be found incorrect; and the Contractor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission, or misstatement is found to occur in the estimated quantities, the same shall not invalidate this Contract or the whole or any part of the work in accordance with the Specifications and Plans herein mentioned, and for the prices herein agreed upon and fixed therefore, or excuse him from any of the obligations or liabilities hereunder, or entitle him to any damage or compensation except as may be provided in this contract.

6. **PREVAILING WAGE RATE DETERMINATION:** The Contractor shall pay the applicable prevailing wage rates that are in effect at the time the Contract is bid. If the contract price exceeds \$50,000 and is not otherwise exempt, workers shall be paid not less than the specified minimum hourly rate of wage in accordance with ORS 279C.838 and ORS 279C.840. Hard copies of the prevailing wage rates publication may be obtained by contacting the Oregon Bureau of Labor and Industries via telephone at: (971) 673-0839. The applicable prevailing wage rates may be accessed via the internet at: http://www.oregon.gov/BOLI/WHD/PWR/pwr_book.shtml. If the Project is subject to the Davis-Bacon Act and the state prevailing rate of wage is higher than the federal prevailing rate of wage, the contractor and every subcontractor on the Project shall pay at least the state prevailing rate of wage as determined under ORS 279C.815.

The Contractor and all subcontractors must have a public works bond filed with the Oregon Construction Contractors Board before starting work on the Project, unless exempt under ORS 279C.836(4), (7), (8) or (9). If the contractor fails to pay for labor or services, the City can pay and withhold these amounts from payments due the contractor in accordance with ORS 279C.515. Daily, weekly, weekend, and holiday overtime will be paid as required in ORS 279C.540. The Contractor shall provide workers with a written schedule showing the number of hours per day and days per week the employee may be required to work in accordance with ORS 279C.520. Contractor must promptly pay for any medical services they have agreed to pay per ORS 279C.530.

The City will not receive or consider a bid unless the bid contains a statement by the bidder that the bidder will comply with ORS 279C.838, ORS 279C.840, or 40 U.S.C. 3141. By signing and submitting the Bid, the Contractor agrees to comply with ORS 279C.838 or 279C.840 and/or 40 U.S.C. 3141 et seq. for a public works project subject to the state prevailing wage rates under ORS 279C.800 to 279C.870, the federal prevailing wage rates under the Davis-Bacon Act (40 U.S.C. 3141 et seq.) or both.

For contracts \$50,000 or greater, the City shall pay a fee to the Bureau of Labor and Industries and shall be mailed or otherwise delivered to the Bureau in accordance with Form WH-81 & WH-39.

7. **PAYMENTS TO CONTRACTOR:** City agrees to pay Contractor for performance of those services provided hereunder, which payment shall be based upon the following applicable terms:

a. **Payment:** Payment shall be based upon the unit prices bid by the Contractor, as listed in attached bid. Contractor shall prepare and submit each month to the Buyer identified in the Invitation for Bid at the address listed, a statement of services rendered, (indicating the description of each service used in the bid and the dollar amount of each service completed through the stated date), together with a request for payment duly verified by the Contractor's Representative.

Payment by the City shall release the City from any further obligation for payment to Contractor for services performed or expenses incurred as of the date of the statement of services. Payment of installments shall not be considered acceptance or approval of any work or waiver of any defects therein. City certifies that sufficient funds are available and authorized for expenditure to finance costs of this contract. Contractor shall include proof of payment to any and all



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subcontractors and suppliers with each statement submitted to the City. The City shall retain the right to withhold payments if required proof of payment to subcontractor and suppliers is not included with a statement.

- b. **Timing of Payments:** Progress payments, less a five percent retainage as authorized by ORS 279C.555, shall be made to the Contractor within twenty (20) days of the City's receipt of the statement of services.
- c. **Final Payment:** The Contractor shall notify the City in writing when the Contractor considers the project complete, and the City shall, within 15 days after receiving the written notice, either accept the work or notify the Contractor of work yet to be performed on the contract. If accepted by the City, the remaining balance due to the Contractor, including the retained percentage, shall be paid to the Contractor by the City within 30 days after the date of said acceptance.

The City shall pay to the Contractor interest at the rate of one and one-half percent per month on the final payment due the Contractor, to commence 30 days after the work under the Contract has been completed and accepted and to run until the date when final payment is tendered to the Contractor. If the City does not, within 15 days after receiving written notice of completion, notify the Contractor of work yet to be performed to fulfill contractual obligations, the interest provided by this subsection shall commence to run 30 days after the end of the 15-day period.

As a further condition of final acceptance, the City may require the Contractor to submit evidence, satisfactory to the City's Representative, that all payrolls, material bills, and other indebtedness connected with the project have been paid. If any indebtedness or liens are in dispute, the Contractor may submit a surety bond satisfactory to the City guaranteeing payment of all such disputed amounts if such payment has not already been guaranteed by surety bond.

All notices, bills and payments shall be made in writing and may be given by personal delivery or by mail. Notices, bills and payments sent by mail should be addressed to the attention of the Buyer and/or Authorized Bidder at the addresses identified in the Invitation for Bid and shall be deemed given upon deposit in the United States mail, postage paid. In all other instances, notices, bills and payments shall be deemed given at the time of actual delivery. Changes may be made in the names and addresses of the person to whom notices, bills, and payments are to be given by giving written notice pursuant to this paragraph.

8. **LIQUIDATED DAMAGES:** The Contractor agrees that the "Time of Completion" is defined in the Bid and agrees to complete the work by said date. The Contractor and City agree that the City will suffer damages each day the work remains uncompleted after the Time of Completion and that the amounts of those damages are difficult to calculate. Contractor and City agree that a reasonable amount of damages for late completion is **\$500 per calendar day** and Contractor agrees to pay such amounts as liquidated damages if the work is not completed by the Time of Completion. Contractor agrees that the liquidated damages specified herein are a fair way of ascertaining damages to the City and are not a penalty for late completion.
9. **STATUS OF CONTRACTOR AS INDEPENDENT CONTRACTOR:** Contractor certifies that:
 - a. Contractor acknowledges that for all purposes related to this Agreement, Contractor is and shall be deemed to be an Independent Contractor as defined by ORS 670.600 and not an employee of City, shall not be entitled to benefits of any kind to which an employee of City is entitled and shall be solely responsible for all payments and taxes required by law. Furthermore, in the event that Contractor is found by a court of law or any administrative agency to be an employee of City for any purpose, City shall be entitled to offset compensation due, or to demand repayment of any amounts paid to Contractor under the terms of this Agreement, to the full extent of any benefits or other remuneration Contractor receives (from City or third party) as a result of said finding and to the full extent of any payments that City is required to make (to Contractor or to a third party) as a result of said finding.



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- b. The Contractor hereby represents that no employee of the City, or any partnership or corporation in which a City employee has an interest, has or will receive any remuneration of any description from Contractor, either directly or indirectly, in connection with the letting or performance of this Agreement, except as specifically declared in writing.
 - c. If payment is to be charged against Federal funds, Contractor certifies that he or she is not currently employed by the Federal Government and the amount charged does not exceed his or her normal charge for the type of service provided.
 - d. Contractor and its employees, if any, are not active members of the Oregon Public Employees Retirement System and are not employed for a total of 600 hours or more in the calendar year by any public employer participating in the Retirement System.
 - e. Contractor certifies that it currently has a City business license or will obtain one prior to delivering services under this Agreement.
 - f. Contractor is not an officer, employee, or agent of the City as those terms are used in ORS 30.265.
10. **CERTIFIED PAYROLL:** The Contractor shall make payment promptly, as due, to all persons supplying to such Contractor labor or material for the performance of the work provided for in this contract. The Contractor will pay all contributions or amounts due the Industrial Accident Fund under the Worker's Compensation Law from such Contractor or Subcontractor incurred in the performance of this contract. The Contractor will pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167. The Contractor shall not permit any lien or claim to be filed or prosecuted against the City of West Linn on account of any labor or material furnished.

The Contractor or the Contractor's Surety and every Subcontractor or the Subcontractor's Surety shall file certified statements with the City in writing on a form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each worker which the Contractor or the Subcontractor has employed upon such public work, and further certifying that no worker employed upon such public work has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the contract, which certificate and statement shall be verified by the oath of the Contractor or the Contractor's Surety or Subcontractor or the Subcontractor's Surety that the Contractor or Subcontractor has read such statement and certificate and knows the contents thereof and that the same is true to the Contractor's or Subcontractor's knowledge.

- a. The certified statements shall set out accurately and completely the payroll records, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, and the gross wages the worker earned during each week identified in the certified statement.
- b. Each certified statement required herein shall be delivered or mailed by the Contractor or Subcontractor to the City. A true copy of the certified statements shall also be filed at the same time with the Commissioner of the Bureau of Labor and Industries. Certified statements shall be submitted as set forth in ORS 279C.845.
- c. The City shall retain 25 percent of any amount earned by Contractor until the certified statements as required by this section have been filed. City shall pay Contractor the amount retained under this subsection within 14 days after Contractor files the certified statements as required by this section, regardless of whether a subcontractor has failed to file certified statements as required by this section. City is not required to verify the truth of the contents of certified statements filed by Contractor.

The Contractor agrees that if the Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor or a Subcontractor by any person in connection with this contract as such claim becomes due, the proper office of the City of West Linn may pay such claim to the person furnishing the labor or services and charge the amount of the payment against funds due or to become due to the Contractor by reason of such contract. Payment of a



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claim in this manner shall not relieve the Contractor or the Contractor's Surety from obligation with respect to any unpaid claims.

Contractor agrees that no person shall be employed for more than ten (10) hours in any one day, or forty (40) hours in any one week, except in cases of necessity, emergency or when public policy absolutely requires it, and in such cases the laborer shall be paid at least time and a half pay for all overtime in excess of eight (8) hours in any one day or forty (40) hours in any one week when the workweek is five consecutive days, Monday through Friday, or ten (10) hours in any one day and or forty (40) hours in any one week when the workweek is four consecutive days, Monday through Friday and for all work performed on Saturday and on any legal holiday as specified in ORS 279C.540.

Contractor agrees to pay promptly as due, to any person, co partnership, association or corporation furnishing medical, surgical, and hospital care or other needed care and attention incident to sickness or injury to the Contractor's employees, of all sums which the Contractor agreed to pay for such services and all money and sums which the Contractor collected or deducted from employee wages pursuant to any law, contract or agreement for the purpose of providing or paying for such service.

11. **PRE-CONSTRUCTION CONFERENCE:** Within 30 days of the issuance of the Notice of Award, the Contractor is required to attend a Pre-construction Conference. The City will contact the Contractor to schedule a specific date, time and location for the Pre-construction conference. The purpose of the meeting is to outline specific construction items and procedures and to address items which require special attention on the part of the Contractor. The Contractor may also present proposed variations in procedures which the Contractor believes may improve constructability of the project, reduce cost, or will reduce inconvenience to the public. Any necessary coordination and procedures for Construction inspection and staking will be addressed during the Pre-construction Conference. The Contractor will be required to provide the following information at the Pre-construction Conference:

- a. Names and emergency telephone numbers of key personnel involved in the project.
- b. Names and telephone numbers of all subcontractors proposed for use on the project.
- c. A construction progress schedule showing the estimated time for start and completion of the major items of work.
- d. A written proposal outlining the intended plans for maintaining continuous access to residences and businesses along the construction site, and traffic control.
- e. An itemized list of all required shop drawings, material and equipment submittals and a schedule indicating the dates each of these items will be transmitted to the City for review.

Each of the above items is subject to the review and approval by the City.

12. **INSURANCE REQUIREMENTS:** The Contractor, at Contractor's own expense, shall purchase and maintain the herein stipulated minimum insurance with companies licensed to do business in the State of Oregon with policies and forms satisfactory to the City. The City reserves the right to reject all or any insurance carrier(s) with an unacceptable financial rating. All insurance required herein shall be maintained in full force and effect until all work required to be performed under the terms of the Contract is satisfactorily completed and formally accepted; failure to do so may, at the sole direction of the City, constitute a material breach of this Contract. The Contractor's insurance shall be primary insurance, and any insurance or self insurance maintained by the City shall not contribute to it.

Any failure to comply with the claim reporting provisions of the policies or any breach of an insurance policy warranty shall not affect coverage afforded under the policy to protect the City. The insurance policies shall contain a waiver of transfer



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rights of recovery (subrogation) against the City, its agents, representatives, directors, officers, and employees for any claims arising out of the Contractor's work or service.

The City reserves the right to request and to receive, within 10 working days, certified copies of any or all of the herein required insurance policies and/or endorsements. The City shall not be obligated, however, to review same or to advise Contractor of any deficiencies in such policies and endorsements, and such receipt shall not relieve Contractor from, or be deemed a waiver of the City's right to insist on, strict fulfillment of Contractor's obligations under this Contract.

The insurance policies required by this Contract shall name the City, its agents, representatives, officers, directors, officials and employees as Additional Insured with respect to this contract. All Liability Insurance policies will be endorsed to show this additional coverage. A cross-liability clause or separation of insured clause will be included in general liability policy.

The policy or policies of insurance maintained by the Contractor and its subcontractors shall provide at least the following limits and coverage:

- a. **Commercial General Liability Insurance:** Includes all liability including all major divisions of coverage, but not limited to, Premises/Operations, Completed Operations, Independent Contractors' Protective, Products-Completed Operations, Contractual Liability (including coverage for the Contractor's indemnity obligations and other contractual indemnity obligations assumed by the Contractor), Personal Injury, and Broad Form Property Damage (including coverage for Explosion, Collapse, and Underground Hazards). The following insurance will be carried:

Employer's Liability Insurance
\$ 2,000,000.00 Each Occurrence
\$ 2,000,000.00 Disease Each Employee
\$ 2,000,000.00 Disease – Policy

Commercial General Liability insurance
\$ 2,000,000.00 Each Occurrence Limit
\$ 3,000,000.00 General Aggregate
\$ 3,000,000.00 Products/Completed Operations Aggregate
\$ 3,000,000.00 Personal and Advertising Injury
\$ 2,000,000.00 Limited Job Site Pollution Occurrence Sub-Limit

Comprehensive Automobile Liability Insurance including coverage for all owned, hired and non-owned vehicles
\$ 2,000,000.00 Each Occurrence Combined Single Limit
\$ 3,000,000.00 Aggregate Bodily Injury & Property Damage

or

\$ 2,000,000.00 Each Person Bodily Injury
\$ 2,000,000.00 Each Occurrence Bodily Injury
\$ 2,000,000.00 Each Occurrence Property Damage
\$ 2,000,000.00 Each Occurrence Pollution Occurrence Sub-Limit

- b. "All risk" Builder's Risk Insurance (including earthquake and flood) covering the real and personal property of others in the care, custody, and control of the contractor, if applicable. Coverage shall include theft and damage to building interiors, exterior, in transit and offsite storage. The minimum amount of coverage to be carried shall be equal to the full amount of the contract.

The policy shall be endorsed to have the General Aggregate apply to this Project Only.

The insurance policies may provide coverage which contains deductibles or self-insured retentions. Such deductible and/or self insured retentions shall not be applicable with respect to the coverage provided to the City under such policies. The



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Contractor shall be solely responsible for deductible and/or self insured retention and the City, at its option, may require the Contractor to secure the payment of such deductible or self-insured retentions by a surety bond or an irrevocable and unconditional letter of credit.

Certificates of Insurance: Prior to commencing Services under this Contract, Contractor shall furnish the City with Certificates of Insurance, or formal endorsements as required by the Contract, issued by Contractor's insurer(s), as evidence that policies providing the required coverage, conditions and limits required by this Contract are in full force and effect. Certificates of Insurance should read "Insurance certificate pertaining to (this contract). The City of West Linn, its officers, directors and employees shall be added as additional insured with respects to this contract. Insured coverage is primary" in the description portion of the certificate.

If a policy does expire during the life of the contract, a renewal certificate must be sent to the City ten (10) days prior to the expiration date. Insurance required herein shall not expire, be canceled, or materially changed without thirty (30) days prior written notice to the City. The procuring of such required insurance shall not be construed to limit contractor's liability hereunder. Notwithstanding said insurance, Contractor shall be obligated for the total amount of any damage, injury, or loss caused by negligence or neglect connected with this Contract.

13. **PERFORMANCE BOND:** The contractor shall be required to furnish non-revocable security binding the contractor to provide faithful performance of the contract in the amount of 100% of the total contract price payable to the City of West Linn.

Performance security shall be in the form of a performance bond, certified check or cashier's check. This security must be in the possession of the City within the time specified or ten (10) days after notice of award if no period is specified. If the contractor fails to execute the security document as required, the contractor may be found in default and the contract terminated by the City. In case of default the City reserves all rights.

All performance bonds shall be executed on the Performance Bond form included in the Bid Document, duly executed by the Bidder as Principal and having as Surety thereon a Surety company approved by the owner and holding a Certificate of Authority to transact surety business in the State of Oregon, by the Oregon Department of Insurance. Individual sureties are unacceptable. All Insurers and Sureties shall have at the time of submission of the proposal an A.M. Best's Key Rating Guide of "A-" or better as currently listed in the most recent Best Key Guide, published by the A.M. Best Company, payable without condition to the Owner.

14. **PAYMENT BOND:** The contractor shall be required to furnish non-revocable security for the protection of all persons supplying labor and material to the contractor or any subcontractor for the performance of any work related to the contract. Payment security shall be in the amount of 100% of the total contract price and be payable to the City of West Linn. Payment security shall be in the form of a payment bond, certified check or cashier's check.

All payment bonds shall be executed on the Payment Bond form included in the Bid Document, duly executed by the Bidder as Principal and having as Surety thereon a Surety company approved by the owner and holding a Certificate of Authority to transact surety business in the State of Oregon, by the Oregon Department of Insurance. Individual sureties are unacceptable. All Insurers and Sureties shall have at the time of submission of the proposal and A.M. Best's Key Rating Guide of "A-" or better as currently listed in the most recent Best Key Guide, published by the A.M. Best Company, payable without condition to the Owner.

15. **NOTICE TO PROCEED:** Within 45 days of the issuance of the Notice of Award the City may issue a written Notice to Proceed. The Notice to Proceed shall stipulate the actual contract start date, the contract duration and the contract completion date. The time required for the Contractor to obtain permits, licenses and easements shall be included in the contract duration and shall not be justification for a delay claim by the Contractor. The time required for the Contractor to



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prepare, transmit and obtain approval of applicable submittals shall be included in the contract duration and shall not be justification for a delay claim by the Contractor.

No work shall be started until after all required permits, licenses, and easements have been obtained.

No work shall be started until all applicable submittals have been submitted and returned approved by the City's Representative.

16. **PROTECTION OF FINISHED OR PARTIALLY FINISHED WORK:** The Contractor shall properly guard and protect all finished or partially finished work, and shall be responsible for the same until the entire contract is completed and accepted by the City Engineer. The Contractor shall turn over the entire work in full accordance with these Specifications before final settlement shall be made.
17. **CHANGE ORDERS:** The City may at any time, and without notice, issue a written Change Order requiring additional work within the general scope of this Contract, or any amendment thereto, or directing the omission of or variation in work. If such Change Order results in a material change in the amount or character of the work, an equitable adjustment in the Contract price and other provisions of this Contract as may be affected may be made. Any claim by Contractor for an adjustment under this section shall be asserted in writing within thirty (30) days from the date of receipt by Contractor of the notification of change or the claim will not be allowed. Whether made pursuant to this section or by mutual agreement, no change shall be binding upon City until a Change Order is executed by the Authorized Representative of City, which expressly states that it constitutes a Change Order to this Contract. The issuance of information, advice, approvals, or instructions by City's Representative or other City personnel shall not constitute an authorized change pursuant to this section. Nothing contained in this section shall excuse the Contractor from proceeding with the prosecution of the work in accordance with the Contract, as changed.
18. **STOCKPILE OF MATERIALS:** The Contractor may, if approved by the City Engineer, place or stockpile materials in the public right-of-way provided they **do not** prevent access to adjacent properties or prevent compliance with traffic regulations. Traffic shall not be required to travel over stockpiled materials, and proper dust control shall be maintained.
19. **EXCESS MATERIALS:** When excavations are made, resultant loose earth shall be utilized for filling by compacting in place or disposed of off the site. Excess or unsuitable material, broken asphaltic concrete and broken portland cement concrete excavated from the right-of-way shall be removed from the project and disposed of by the Contractor.

Waste material shall not be placed on private property without express permission of the property owner.

The Contractor shall at all times keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the work, he shall remove all equipment, tools and surplus materials, and shall completely clean the premises, removing and disposing of all debris and rubbish, and cleaning all stains, spots, marks, dirt, smears, etc. When work premises are turned over to the City, they shall be thoroughly clean and ready for immediate use.

Clean-up shall include removal of all excess pointing mortar materials within pipes and removal of oversized rocks and boulders left after finish grading. The Contractor shall provide for the legal disposal of all waste products debris, etc., and shall make necessary arrangements for such disposal.

20. **ENVIRONMENTAL POLLUTION:** As provided by ORS 279C.525, all applicable provisions of federal, state or local statutes, ordinances and regulations dealing with the prevention of environmental pollution and the preservation of natural resources that affect the work under this contract are by reference incorporated herein to the same force and affect as if set forth herein in full. If the Contractor must undertake additional work due to the enactment of new or the amendment of existing statutes, ordinances or regulations occurring after the submission of the successful bid, the City shall issue a Change Order setting forth the additional work that must be undertaken. The Change Order shall not invalidate the Contract and



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there shall be, in addition to a reasonable extension, if necessary, of the contract time, a reasonable adjustment in the contract price, if necessary, to compensate the Contractor for all costs and expenses incurred, including overhead and profits, as a result of the delay or additional work.

21. **SALVAGE, COMPOSTING OR MULCHING:** If this is a contract for demolition work, the Contractor shall salvage or recycle construction and demolition debris, if feasible and cost-effective. If this is a contract for lawn and landscape maintenance, Contractor shall compost or mulch yard waste material at an approved site, if feasible and cost-effective.
22. **LOSSES AND DAMAGES:** All loss or damage arising out of the nature of the work to be done or from the action of the elements or from any unforeseen circumstances in the prosecution of the same, or from any unusual obstructions or difficulties which may be encountered in and/or during the prosecution of the work, or from any casualty whatsoever of every description, shall be sustained and borne by the Contractor at his own cost and expense.
23. **CHARACTER AND STATUS OF WORKMEN:** Only skilled foremen and workmen shall be employed on work requiring special qualifications. When required by the City, the Contractor shall discharge any person who is, in the opinion of the City Engineer, disorderly, dangerous, insubordinate, incompetent, or otherwise objectionable. The Contractor shall keep the City harmless from damages or claims for compensation that may occur in the enforcement of this section.
24. **WORK METHODS:** The methods, equipment and appliances used on the work shall be such as will produce a satisfactory quality of work, and shall be adequate to complete the contract within the time limit specified.

Except as is otherwise specified, the Contractor's procedure and methods of construction may, in general, be of his own choosing, provided they follow best general practice and are calculated to secure results which will satisfy the requirements of the specifications and the supervision of the work.

The work covered by this Contract shall be carefully laid out in advance and performed in a manner to minimize interference with normal operation and utilization of the roads. The Contractor shall exercise caution during the course of this construction work to avoid damage to all known existing or possible unknown existing underground utilities. He shall conduct his construction operations in such a manner as to avoid injury to his personnel and to avoid damage to all utilities. Any damage done will be repaired without delay and at the expense of the Contractor.

25. **INSPECTION:** All material and/or services are subject to inspection and acceptance by the City. Materials and/or services failing to conform to the specifications of this Contract will be held at Contractor's risk and may be returned to the Contractor. If so returned, all costs are the responsibility of the Contractor. The City may elect to do any or all of the following per written determination:
 - a. Waive the non-conformance.
 - b. Stop the work immediately.
 - c. Bring material into compliance.
26. **TRAFFIC REGULATIONS:** All traffic affected by this construction shall be regulated in accordance with the *Oregon Temporary Traffic Control Handbook*, latest edition, as prepared by the Oregon Department of Transportation and any questions shall be referred to the City of West Linn City Engineer for interpretation.

At the time of the pre-construction conference, the Contractor shall designate an employee who is well qualified and experienced in construction traffic control and safety to be responsible for implementing, monitoring and altering traffic control measure, as necessary. At the same time the City will designate a representative who will be responsible to see that



GENERAL TERMS AND CONDITIONS

Public Works Department
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Telephone: (503) 722-5500
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all traffic control and any alterations are implemented and monitored to the extent that traffic is carried through the work area in an effective manner and that motorists, pedestrians, bicyclists and workers are protected from hazard and accidents.

- a. All traffic control devices required for this project shall be the responsibility of the Contractor. The Contractor shall place advance warnings signs in accordance with the Traffic Control Handbook.
- b. The Contractor shall provide, erect and maintain all necessary flashing arrow boards, barricades, suitable and sufficient warning lights, signals and signs, and shall take all necessary precautions for the protection of the work and safety of the public. The Contractor shall provide, erect and maintain acceptable and adequate detour signs at all closures and along detour routes.
- c. All barricades and obstructions shall be illuminated at night, and all safety lights shall be kept burning from sunset until sunrise. All barricades and signs used by the Contractor shall conform to the standard design, generally accepted for such purposes, and payment for all such services and materials shall be considered as included in the other pay items of the Contract unless specifically listed and identified.
- d. The Contractor shall insure that all existing traffic signs are erect, clean and in full view of the intended traffic at all times. Street name signs at major street intersections shall be maintained erect at all times. If these signs should interfere with construction, the Contractor shall notify the Inspector at least forty eight (48) hours in advance for City personnel to temporarily relocate said signs. The City will re-set all traffic and street name signs to permanent locations when notified by the Contractor that construction is complete unless otherwise stated in the specifications.
- e. When construction activities or traffic hazards at the construction site require the use of flagmen, it shall be the Contractor's responsibility to provide adequate personnel including flagmen to direct traffic safely.
- f. Equipment used and/or directed by the Contractor shall travel with traffic at all times. Supply trucks shall travel with traffic except when being spotted. Provide a flagman to assist with this operation.
- g. During construction, it may be necessary to alter traffic control. Alterations shall be in accordance with the Traffic Control Handbook.
- h. **NO STREET WITHIN THIS PROJECT MAY BE CLOSED TO THROUGH TRAFFIC OR TO LOCAL EMERGENCY TRAFFIC WITHOUT THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER PER DIRECTION OF THE CITY MANAGER OF THE CITY OF WEST LINN.** Written approval may be given if sufficient time exists to allow for notification of the public at least two (2) days in advance of such closing. Partial closure of streets within the project shall be done in strict conformity with written directions to be obtained from the City Engineer.
- i. The Contractor shall address how local access to adjacent properties will be handled in accordance with the specification herein.
- j. Where crossings of existing pavements occur, no open trenches shall be permitted overnight, but plating may be permitted if conditions allow as determined by the City Engineer or his authorized representative. If plates cannot be used, crossings shall be appropriately back-filled to provide a safe smooth travelling surface.

27. **OUTDOOR CONSTRUCTION RESTRICTIONS:** Outdoor construction is restricted to the times listed below in the following table:

	Weekdays (Mon.-Fri.)	Weekends (Sat.-Sun.), Holidays
All Outdoor Construction Work	7:00 a.m. to 7:00 p.m.	9:00 a.m. to 5:00 p.m.



GENERAL TERMS AND CONDITIONS

Holidays include: New Year's Day, Martin Luther King Jr. Birthday, Washington's Birthday/President's Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, and Christmas Day.

28. **FIRST TIER SUBCONTRACTOR DISCLOSURE:** If a Bid for the Project is greater than \$100,000, within two working hours of the date and time the Bids are due, the Bidder must submit a written disclosure for all First Tier Subcontractors furnishing labor or labor and materials whose subcontracts are equal to or greater in value than 5% of the total Project Bid or \$15,000, whichever is greater, or \$350,000 regardless of the percentage of the total project bid in accordance with ORS 279C.370. The Bidder must disclose the following information about their first-tier subcontracts either in its Bid submission or within two (2) working hours after the date and time of the deadline when bids are due:

- a. The subcontractor's name, address, Construction Contractor's Board Number (as applicable), and
- b. The dollar value of the subcontract, and
- c. The category of work that the subcontractor will be performing.

If the bidder will not be using any subcontractors that are subject to the above disclosure requirements, the bidder is required to indicate "NONE" on the accompanying form. Failure to submit this form by the disclosure deadline will result in a non-responsive bid. A non-responsive bid will not be considered for award. It is the Bidder's responsibility to determine all the documents are must be submitted to the City.

29. **USE OF EQUALS:** When the specifications for materials, articles, products, and equipment state "or equal", Contractor may bid upon, and use materials, articles, products, and equipment which will perform equally the duties imposed by the general design. The Engineer will have the final approval of all materials, articles, products, and equipment proposed to be used as an "equal." It shall not be purchased or installed without prior written approval from the City or its representative.

30. **HAZARDOUS MATERIALS:** The Contractor shall supply the City with a list of any and all hazardous substances used in performance of this Contract. That list shall identify the location of storage and use of all such hazardous substances and identify the amounts stored and used at each location. Contractor shall provide City with material safety data sheets for all hazardous substances brought onto City property, created on City property or delivered to City pursuant to this Contract. For the purpose of this section, "hazardous substance" means hazardous substance as defined by ORS 453.307(5). Contractor shall complete the State Fire Marshall's hazardous substance survey as required by ORS 453.317 and shall assist City to complete any such survey that it may be required to complete because of substances used in the performance of this Contract.

31. **HAZARDOUS WASTE:** If, as a result of performance of this Contract, Contractor generates any hazardous wastes, Contractor shall be responsible for disposal of any such hazardous wastes in compliance with all applicable federal and state requirements. Contractors shall provide City with documentation, including all required manifests, demonstrating proper transportation and disposal of any such hazardous wastes. Contractor shall defend, indemnify, and hold harmless City for any disposal or storage of hazardous wastes generated pursuant to this Contract and any releases or discharges of hazardous materials.

32. **TEMPORARY SANITARY FACILITIES:** The Contractor shall provide facilities for the use of workmen employed on the work site in accordance with the requirements of ORS 654.150, (Sanitary facilities at construction projects; standards, exemptions) and the rules adopted pursuant thereto. Whether or not ORS 654.150 is applicable to the project is the sole responsibility of the Contractor. Contractor shall be responsible for all costs that may be incurred in complying with or in securing exemption or partial exemption from the requirements as incidental to this contract.

33. **ELECTRIC POWER, WATER AND TELEPHONE:** Unless otherwise specified, the Contractor shall make his own arrangements for electric power, water and telephone. Subject to the convenience of the utility, he may be permitted to



GENERAL TERMS AND CONDITIONS

connect to existing facilities where available, but he shall meter and bear the cost of such power or water, and installation and disconnect of such power, water and telephone services.

34. **UTILITIES AND ELECTRICAL POWER LINES:** The electric utility company may maintain energized aerial electrical power lines in the immediate vicinity of this project. Do not consider these lines to be insulated. Construction personnel working in proximity to these lines are exposed to an extreme hazard from electrical shock. Contractors, their employees and all other construction personnel working on this project must be warned of the danger and instructed to take adequate protective measure, including maintaining a minimum ten (10) feet clearance between the lines and all construction equipment and personnel. (see: OSHA Std. 1926.550 (a) 15).

Electrical utility companies may maintain energized underground electrical power lines in the immediate vicinity of this project. These power lines represent an extreme hazard of electrical shock to any construction personnel or equipment coming in contact with them. Contractors, their employees, and all other personnel working near any underground power lines must be warned to take adequate protective measure. (see: OSHA Std. 1926-651 (A)).

Oregon law requires all parties planning excavations in public rights-of-way to contact utilities for locations of their underground facilities in accordance with the rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center at (503) 232-1987.

35. **COOPERATIVE PURCHASING:** Any publicly funded city, county, district, agency or similar entity shall have the authority to purchase specified goods/services directly from the contractor under the terms and conditions of this contract as indicated below:
- a. The bidder agrees to extend identical pricing to local public agencies for the same terms. Quantities listed in this document reflect the City of West Linn's estimated usage only.
 - b. Each contracting agency will execute a separate contract with the successful bidder for its requirements.
 - c. Any bidder, by written notification at the time of the bid due date and time, may decline to extend the prices and terms of this bid to any, and/or all other public agencies.
 - d. Additional costs may be incurred by the successful bidder in contracting with another public agency. All demonstrable costs (shipping, etc.) may be passed on to that public agency.

Contractor shall provide information regarding total usage of contract upon request of the City of West Linn.



CITY OF
**West
Linn**

SPECIAL TERMS AND CONDITIONS

Solicitation Number: PW-13-14

Public Works Department
22500 Salamo Road
West Linn, Oregon 97068
Telephone: (503) 722-5500
Fax: (503) 656-4106

Purpose: The City of West Linn intends to establish a contract for the **Santa Anita and Rosemont Intersection Project**. For the Technical Provisions of this contract see Appendix B.

1. **Prospective Bidders Conference:** Prospective bidders are required to attend a conference to be held at the City of West Linn City Hall:

ADDRESS: 22500 Salamo Road
West Linn, Oregon 97068
Bolton Conference Room

DATE/TIME: AS INDICATED ON INVITATION FOR BID

The purpose of this conference will be to clarify the contents of this Invitation For Bid in order to prevent any misunderstanding of the City's position. Any doubt as to the requirements of this Invitation For Bid or any apparent omission or discrepancy should be presented to the City at this conference. The City will then determine the appropriate action necessary, if any, and issue a written addendum to the Invitation For Bid. Oral statements or instructions shall not constitute an amendment to the Invitation For Bid.

2. **Bid Acceptance Period:** In order to allow for an adequate evaluation, the City requires a Bid in response to this Solicitation to be valid and irrevocable for sixty (60) days after the opening time and date.
3. **Time of Completion:** The Contractor shall commence work for this project on or before the fifth (5) day following the project start date indicated on the "Notice to Proceed" issued by the City of West Linn and shall fully complete all work under the project within the "Time of Completion" stated on the "Notice of Invitation to Bid and Contract." The Contractor shall, at all times, during the continuance of the Contract, prosecute the work with such force and equipment as is sufficient to complete all work within the time specified.
4. **Plans and Specifications to Successful Bidder:** The successful Bidder may obtain five (5) sets of Plans and Specifications for this project from the City at no cost.
5. **City of West Linn Permit:** As a City project, the Contractor is not required to obtain a City Public Works Construction, Improvement, Blasting, or Erosion Control permit. The Contractor will be responsible for any other required agency permits.
6. **Key Personnel:** It is essential that the Contractor provide adequate experienced personnel, capable of and devoted to the successful accomplishment of work to be performed under this contract. The Contractor must agree to assign specific individuals to the key positions.
 - b. The Contractor agrees that, once assigned to work under this contract, key personnel shall not be removed or replaced without written notice to the City.
 - c. If key personnel are not available for work under this contract for a continuous period exceeding 30 calendar days, or are expected to devote substantially less effort to the work than initially anticipated, the Contractor shall immediately notify the City, and shall, subject to the concurrence of the City, replace such personnel with personnel of substantially equal ability and qualifications.



CITY OF
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BID FORM

Solicitation Number: PW-13-14

Public Works Department
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West Linn, Oregon 97068
Telephone: (503) 722-5500
Fax: (503) 656-4106

Appendix A

FORMS



CITY OF
**West
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BID FORM

Solicitation Number: PW-13-14

Public Works Department
22500 Salamo Road
West Linn, Oregon 97068
Telephone: (503) 722-5500
Fax: (503) 656-4106

Item	Spec. Reference	Description of material and/or services	Quantity	Unit	Unit Price	Total Amount
1	00210	MOBILIZATION	1	LS		
2	00225	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC, COMPLETE	1	LS		
3	00280	EROSION CONTROL, COMPLETE	1	LS		
4	00290	POLLUTION CONTROL PLAN	1	LS		
5	00305	CONSTRUCTION SURVEY WORK	1	LS		
6	00310	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	1	LS		
7	00320	CLEARING AND GRUBBING	1	LS		
8	00330	GENERAL EXCAVATION	1,550	CUYD		
9	00331	12 INCH SUBGRADE STABILIZATION	40	SQYD		
10	00390	LOOSE RIPRAP, CLASS 50	2.5	TON		
11	00445	10 INCH STORM SEWER PIPE, 5 FT DEPTH	12	FOOT		
12	00445	VIDEO INSPECTION	12	FOOT		
13	00470	CONCRETE STORM SEWER MANHOLES	1	EACH		
14	00470	CONCRETE INLETS, TYPE CG-3	2	EACH		
15	00490	ADJUSTING BOXES	4	EACH		
16	00490	MAJOR ADJUSTMENT OF MANHOLES	1	EACH		
17	00496	INSTALLING UTILITY CONDUIT	1,310	FOOT		
18	00496	INSTALLING UTILITY STRUCTURES	2	EACH		
19	0B596	RETAINING WALL, PREFABRICATED MODULAR GRAVITY	1	LS		
20	0B596	RETAINING WALL, RE-INSTALLED MODULAR GRAVITY	1	LS		
21	00620	COLD PLANE PAVEMENT REMOVAL, 0 - 2 INCHES DEEP	1,120	SY		
22	00620	COLD PLANE PAVEMENT REMOVAL, 2 INCHES DEEP	320	SY		
23	00641	3/4 INCH - 0 AGGREGATE BASE	280	TON		
24	00641	1-1/2 INCH - 0 AGGREGATE BASE	710	TON		
25	00744	LEVEL 3, 1/2" DENSE MHMAC MIXTURE, PG70-22	310	TON		
26	00744	LEVEL 3, 3/4" DENSE MHMAC MIXTURE, PG70-22	190	TON		
27	00748	2 INCH ASPHALT CONCRETE PAVEMENT REPAIR	730	SQYD		



CITY OF
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BID FORM

Solicitation Number: PW-13-14

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Item	Spec. Reference	Description of material and/or services	Quantity	Unit	Unit Price	Total Amount
28	00759	CONCRETE CURBS, CURB AND GUTTER	526	FOOT		
29	00759	CONCRETE CURBS, MOUNTABLE CURB AND GUTTER	35	FOOT		
30	00759	CONCRETE DRIVEWAYS	287	SQFT		
31	00759	CONCRETE WALKS	5,279	SQFT		
32	00759	6 INCH CONCRETE SURFACING	320	SQFT		
33	00840	DELINEATORS, TYPE 2	8	EACH		
34	00855	MONO-DIRECTIONAL WHITE TYPE 1AR MARKERS	5	EACH		
35	00855	BI-DIRECTIONAL YELLOW TYPE 1AR MARKERS	8	EACH		
36	00860	THERMOPLASTIC, EXTRUDED, SURFACE, NON-PROFILED	3,000	FOOT		
37	00867	PAVEMENT LEGEND, TYPE B: ARROWS	3	EACH		
38	00867	PAVEMENT LEGEND, TYPE B-HS: BICYCLE LANE STENCIL	1	EACH		
39	00867	PAVEMENT BAR, TYPE B-HS	234	SQFT		
40	00905	REMOVE EXISTING SIGNS	1	LS		
41	00990	TRAFFIC SIGNAL INSTALLATION	1	LS		
42	00990	FLASHING BEACON INSTALLATION	1	LS		
43	1030	LAWN SEEDING	30	SQYD		
44	01040	TOPSOIL	5	CUYD		
45	0140	BARK MULCH	15	CUYD		
46	01050	CL-6 CHAIN-LINK FENCE WITH VINYL CLAD FABRIC	260	FOOT		
47	01070	MULTIPLE MAILBOX SUPPORTS	1	EACH		
48	01120	RELOCATING IRRIGATION SYSTEMS	1	LS		
49	01170	ADJUSTING WATER METERS AND SERVICES	1	LS		
50	-	CONTRACTOR PROVIDED AS-CONSTRUCTED PLANS	1	LS	\$2,500	\$2,500
		Total Bid:				\$ _____



CITY OF
**West
Linn**

BID BOND

Solicitation Number: PW-13-14

Public Works Department
22500 Salamo Road
West Linn, Oregon 97068
Telephone: (503) 722-5500
Fax: (503) 656-4106

KNOW ALL PERSONS BY THESE PRESENTS:

That we, _____, as "Principal,"
(Name of Principal)

and _____, an _____ Corporation,
(Name of Surety)

authorized to transact Surety business in Oregon, as "Surety," hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns to pay unto the City of West Linn ("Obligee") the sum of (\$ _____) _____ dollars.

WHEREAS, the condition of the obligation of this bond is that Principal has submitted its proposal or bid to an agency of the Obligee in response to Obligee's procurement document for the project identified in the Solicitation Number indicated above which proposal or bid is made a part of this bond by reference, and Principal is required to furnish bid security in an amount equal to ten (10%) percent of the total amount of the bid pursuant to the procurement document and ORS 279C.365(4) for competitive bidding or 279C.400(5) for competitive proposals.

NOW, THEREFORE, if the proposal or bid submitted by Principal is accepted, and if a contract pursuant to the proposal or bid is awarded to Principal, and if Principal enters into and executes such contract within the time specified in the procurement document and executes and delivers to Obligee its good and sufficient performance and payment bonds required by Obligee, as well as any required proof of insurance, within the time fixed by Obligee, then this obligation shall be void; otherwise, it shall remain in full force and effect.

IN WITNESS WHEREOF, we have caused this instrument to be executed and sealed by our duly authorized legal representatives this _____ day of _____, 20__.

PRINCIPAL: _____

SURETY: _____

By _____
Signature

BY ATTORNEY-IN-FACT:

Official Capacity

Name

Attest: _____
Corporation Secretary

Signature

Address

City State Zip

Phone Fax



CITY OF
**West
Linn**

FORMS

Solicitation Number: PW-13-14

Public Works Department
22500 Salamo Road
West Linn, Oregon 97068
Telephone: (503) 722-5500
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NONCOLLUSION AFFIDAVIT

I, **(Type/Print Name)** _____, state that I am **(Position Title)** _____ of **(Name of Firm)** _____ and that I am authorized to make this affidavit on behalf of my firm, and its owners, directors, and, officers. I am the person responsible in my firm for the price(s) and the amount of this bid.

I state that:

1. The price(s) and the amount of this bid have been arrived at independently and without consultation, communication or agreement with any other contractor, bidder or potential bidder.
2. Neither the price(s) nor the amount of this bid, and neither the approximate price(s) nor approximate amount of this bid, have been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before bid opening.
3. No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a bid higher than this bid, or to submit any intentionally high or noncompetitive bid or other form of complementary bid.
4. The bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive bid.
5. **(Name of Firm)** _____, its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four (4) years been convicted or found liable for any act prohibited by state or federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract, except as follows:

I state that **(Name of Firm)** _____ understands and acknowledges that the above representations are material and important, and will be relied on by **THE CITY OF WEST LINN, OREGON** in awarding the contract(s) for which this bid is submitted. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from **THE CITY OF WEST LINN, OREGON** of the true facts relating to the submission of bids for this contract.

(Signature) (Signatory's Name)

(Signatory's Title)

STATE OF _____)
)§
COUNTY OF _____)

SWORN TO AND SUBSCRIBED BEFORE ME THIS _____ DAY OF _____, 20____

Notary Public

My Commission Expires _____



CITY OF
**West
Linn**

FORMS

Solicitation Number: PW-13-14

Public Works Department
22500 Salamo Road
West Linn, Oregon 97068
Telephone: (503) 722-5500
Fax: (503) 656-4106

THREE YEAR EXPERIENCE RECORD

Recent projects first

#1 (Project Name, Location, Contract Cost)

Project description: _____

Project completion date: (contract) _____

(actual) _____

Contact name: _____

Telephone: _____

#2 (Project Name, Location, Contract Cost)

Project description: _____

Project completion date: (contract) _____

(actual) _____

Contact name: _____

Telephone: _____

#3 (Project Name, Location, Contract Cost)

Project description: _____



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FORMS

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Fax: (503) 656-4106

Project completion date: (contract) _____ (actual) _____

Contact name: _____

Telephone: _____

#4 (Project Name, Location, Contract Cost)

Project description: _____

Project completion date: (contract) _____ (actual) _____

Contact name: _____

Telephone: _____

#5 (Project Name, Location, Contract Cost)

Project description: _____

Project completion date: (contract) _____ (actual) _____

Contact name: _____

Telephone: _____

Attach additional sheets if needed.



FIRST-TIER SUBCONTRACTOR DISCLOSURE

PROJECT NAME: _____

BID #: _____

BID CLOSING DATE: _____ TIME: _____

This form must be submitted at the location specified in the invitation to bid on the advertised bid closing date and within two working hours after the advertised bid closing time.

List below the name of each subcontractor that will be furnishing labor or will be furnishing labor and materials and that is required to be disclosed, the category of work that the subcontractor will be performing and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed. (ATTACH ADDITIONAL SHEETS IF NEEDED.)

NAME	DOLLAR VALUE	CATEGORY OF WORK
(1) _____	\$ _____	_____
(2) _____	\$ _____	_____
(3) _____	\$ _____	_____
(4) _____	\$ _____	_____
(5) _____	\$ _____	_____
(6) _____	\$ _____	_____
(7) _____	\$ _____	_____
(8) _____	\$ _____	_____
(9) _____	\$ _____	_____

Failure to submit this form by the disclosure deadline will result in a non-responsive bid. A non-responsive bid will not be considered for award.

Form submitted by (bidder name) _____

Contact name: _____ Phone no.: _____

CRS 279C-278 First-tier subcontractor disclosure. (1)(c) Within two working hours after the date and time of the deadline when bids are due to a contracting agency for a public improvement contract a bidder shall submit to the contracting agency a disclosure of the first-tier subcontractors that:

- (A) Will be furnishing labor or will be furnishing labor and materials in connection with the public improvement contract; and
- (B) Will have a contract value that is equal to or greater than five percent of the total project bid or \$5,000, whichever is greater, or \$350,000 regardless of the percentage of the total project bid.
 - (i) For each contract in which this subsection applies, the contracting agency shall designate a deadline for submission of bids that has a date on a Tuesday, Wednesday or Thursday and a time between 2 p.m. and 5 p.m., except that this deadline shall apply to public contracts for maintenance or construction of highways, bridges or other transportation facilities.
 - (ii) This subsection applies only to public improvement contracts ("projects") with a value estimated by the contracting agency to more than \$100,000.
 - (iii) This subsection does not apply to public improvement contracts that have been awarded from competitive bidding requirements under CRS 279C-301-304.
 - (iv) The disclosure of first-tier subcontractors under subsection (1) of this section shall include the name of each subcontractor, the category of work that each subcontractor will perform and the dollar value of each subcontractor. The information shall be disclosed in substantially the following tabular form:
- (2) The contracting agency shall accept the subcontractor disclosure. The contracting agency shall consider the bid of any contractor that does not submit a subcontractor disclosure to the contracting agency to be a non-responsive bid and may not award the contract to the contractor. A contractor's disclosure is not required to determine the accuracy or the completeness of the subcontractor disclosure.
- (3) After the bid is opened, the subcontractor disclosures must be made available for public inspection.
- (4) A contractor may substitute a first-tier subcontractor for under the provisions of CRS 279C-205.
- (5) A subcontractor may file a complaint under CRS 279C-302 based on the disclosure requirements of subsection (1) of this section.



CITY OF
**West
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PERFORMANCE BOND

Solicitation Number: PW-13-14

Public Works Department
22500 Salamo Road
West Linn, Oregon 97068
Telephone: (503) 722-5500
Fax: (503) 656-4106

KNOW ALL MEN BY THESE PRESENTS, that we, _____
(Official Name & Form of Organization)

Whose address is: _____
(Street Address) (City) (State) (Zip)

as Principal, and, _____
(Name of Surety) (Print - Agent / Contact Name) (Phone Number)

_____ *(Street Address of Surety) (City) (State) (Zip)*

a corporation duly authorized to conduct a general surety business in the State of Oregon, as Surety, are jointly and severally held and bound unto the City of West Linn, Oregon, a municipality of the State of Oregon, hereinafter called Obligee, in the sum of _____ and ____/100 DOLLARS (\$_____), *(The Contract Price, Both in Words & Figures)* lawful money of the United State of America, for the payment of which we, as Principal, and as Surety, jointly and severally bind ourselves, our successors and assigns firmly by these presents,

TERMS AND CONDITIONS

On the _____ *(Day)* of _____ *(Month)*, _____ *(Year)*, _____
(Name of Contractor)

Principal, entered into a contract with the City of West Linn, Oregon, Obligee, to construct certain public improvements and to provide material, labor and equipment for the construction of those improvements. The public improvements and work to be performed by Principal are more fully described in the contract documents between Principal and Obligee. Those contract documents are incorporated herein by reference.

In the event that Principal fails to complete the work as required under the contract, Surety shall either complete the work or pay Obligee the costs of completion of the work. Work is only complete when it meets the standards required by the Contract and applicable City standards. Surety's obligation shall remain in effect until the work is accepted by Obligee, but shall terminate on acceptance by Obligee. The total amount of the Surety's liability to Obligee under this bond shall in no event exceed the amount stated above.

Surety agrees that no change, extension of time, alternation, or addition to the terms of the contract, or to the work to be performed thereunder or the specifications accompanying the same shall in anywise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract or to the work or the specifications.

IN WITNESS WHEREOF, the parties hereto have caused this Bond to be executed in _____, Oregon, this ____ *(Day)* of _____ *(Month)*, _____ *(Year)*.

Contractor

Witnesses:

Principal Signature

Principal Printed Name

Surety

(A true copy of the Power of Attorney must be attached to the original of this bond)

Countersigned:

Surety Attorney of Fact

Resident Agent



CITY OF
**West
Linn**

PAYMENT BOND

Solicitation Number: PW-13-14

Public Works Department
22500 Salamo Road
West Linn, Oregon 97068
Telephone: (503) 722-5500
Fax: (503) 656-4106

KNOW ALL MEN BY THESE PRESENTS, that we, _____
(Official Name & Form of Organization)

Whose address is: _____
(Street Address) (City) (State) (Zip)

as Principal, and, _____
(Name of Surety) (Print - Agent / Contact Name) (Phone Number)

_____ (Street Address of Surety) (City) (State) (Zip)

a corporation duly authorized to conduct a general surety business in the State of Oregon, as Surety, are jointly and severally held and bound unto the City of West Linn, Oregon, a municipality of the State of Oregon, hereinafter called Obligee, in the sum of _____ and _____/100 DOLLARS (\$ _____), (The Contract Price, Both in Words & Figures) lawful money of the United State of America, for the payment of which we, as Principal, and as Surety, jointly and severally bind ourselves, our successors and assigns firmly by these presents,

TERMS AND CONDITIONS

On the _____ (Day) of _____ (Month), _____ (Year), _____
(Name of Contractor)

Principal, entered into a contract with the City of West Linn, Oregon, Obligee, for the construction of certain public improvements. As part of the contract, Principal is required to furnish materials, labor, and equipment to construct the improvements. The contract documents between Principal and Obligee are incorporated herein by this reference.

In the event that Principal fails to make payments when due to suppliers of labor, equipment or materials, Surety shall pay the suppliers the amounts they are due. In the event that Obligee pays any amounts to suppliers that Principal was required to pay, Surety shall reimburse Obligee for those payments. In the event that Principal permits any lien or claim to be filed or prosecution against the City on account of any labor or material furnished, Surety shall take such steps as are necessary to clear the lien, claim or prosecution. In the event that Principal fails to (1) promptly pay all contributions or amounts due the State Unemployment Compensation Trust Fund incurred to the performance of the contract, (2) promptly, as due, make payments to the person, co-partnership, association, or corporation entitled thereto of the money and sums mentioned in Section 279C.600 of the Oregon Revised Statutes, or (3) promptly pay to the Oregon State Tax Commission all sums required to be deducted and retained from wages of employees of the Principal and his sub-Contractors, pursuant to the Section 316.711, Oregon Revised Statutes, Surety shall make the required payments. Surety's obligations under this bond shall terminate when all payments required of Principal described in this paragraph are made in full.

The total amount of the Surety's liability under this bond both to the Obligee and to the persons furnishing labor or materials, provisions and goods to any person or persons, shall in no event exceed the amount stated above.

Surety agrees that no change, extension of time, alternation, or addition to the terms of the contract, or to the work to be performed there under or the specifications accompanying the same shall in anywise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract or to the work or the specifications.

IN WITNESS WHEREOF, the parties hereto have caused this Bond to be executed in _____, Oregon, this ____ (Day) of _____ (Month), _____ (Year).

Contractor

Witnesses:

Principal Signature

Principal Printed Name

Surety

(A true copy of the Power of Attorney must be attached to the original of this bond)

Countersigned:

Surety Attorney of Fact

Resident Agent



CONTRACT FEE SECTION
PREVAILING WAGE RATE UNIT
BUREAU OF LABOR AND INDUSTRIES
800 N.E. OREGON ST., #1045
PORTLAND, OR 97232-2180
PHONE: (971) 673-0852
FAX: (971) 673-0769

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) or (C).

PUBLIC AGENCIES: Please complete and mail this form to 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 BOLI. **The minimum fee is \$250.00; the maximum fee is \$7,500.00.** Without the following completed information, the bureau may be unable to properly credit you for payment received.

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.)



**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 Number (if known): _____
Address: _____ Agency Division: _____
City, State, Zip: _____
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: _____ Project Number: _____
Contract Name (if part of larger project): _____ Contract Number: _____
Project Manager Name: _____ Phone #: _____ Fax #: _____
Project Location (Street(s), City): _____ Project County: _____
Contract Amount: \$ _____ If under \$50,000, is this contract part of a larger project? YES _____ NO _____
If yes, total project amount: \$ _____
Will project use federal funds that require compliance with the Davis-Bacon Act? YES _____ NO _____
Date Contract Specifications First Advertised for Bid (if not advertised, date of RFP or first contact with contractor): _____
If CM/GC Contract, Date Contract Became a Public Works Contract (see OAR 839-025-0020(6)): _____
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 Number: _____
Name of Bonding Company: _____
Address: _____
Agent Name and Phone Number: _____
Payment Bond Number: _____

Copy of first-tier subcontractors attached (see NOTE above).

THIS FORM WILL BE RETURNED TO THE PUBLIC AGENCY FOR CORRECTION AND RESUBMITTAL IF INCOMPLETE.

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 privately owned road, highway, building, structure or improvement of any type that uses funds of a private entity and \$750,000 or more of funds of a public agency) and no public agency awards a contract to a contractor.

CONTRACT INFORMATION:

Name of Project Owner: _____ Phone #: _____ Fax #: _____
Project Name: _____ Project Number: _____
Project Location (Street(s), City): _____ Project County: _____
Total Project Amount: \$ _____ Amount of Public Funds Provided for the project: \$ _____
Name(s) of Public Agency (ies) Providing Public Funds: _____
Date the public agency or agencies commit to the provision of funds for the project: _____
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 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) and no public agency awards a contract to a contractor.

CONTRACT INFORMATION:

Name of Project Owner: _____ Phone #: _____ Fax #: _____
Project Name: _____ Project Number: _____
Project Location (Street(s), City): _____ Project County: _____
Total Project Amount: \$ _____ Amount of Public Funds Provided for the project: \$ _____
Name(s) of Public Agency(ies) Providing Public Funds: _____
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: _____
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: _____

THIS FORM WILL BE RETURNED TO THE PUBLIC AGENCY FOR CORRECTION AND RESUBMITTAL IF INCOMPLETE.

Signature of agency representative completing form: _____

Printed Name: _____ Phone #: _____ Date: _____

RETURN THIS COMPLETED FORM TO:
Prevailing Wage Rate Unit • Bureau of Labor and Industries • 800 NE Oregon Street, #1045 • Portland, OR 97232-2180
Telephone (971) 673-0852 • FAX (971) 673-0769 • pwremail@boli.state.or.us



CONTRACT FEE SECTION
PREVAILING WAGE RATE UNIT
BUREAU OF LABOR AND INDUSTRIES
800 N.E. OREGON ST., #1045
PORTLAND, OR 97232-2180
PHONE: (971) 673-0852
FAX: (971) 673-0769

For Office Use Only: Project DB #: _____

PUBLIC WORKS FEE ADJUSTMENT FORM

THIS FORM TO BE USED 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 BOLI 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 BOLI, 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

Sample Calculation:			
Final Contract Amount:	\$ 400,000.00	Final Fee Due:	\$ 400.00
Original Contract Amount:	- 300,000.00	Initial Fee Paid:	- 300.00
Total Adjustment:	\$ 100,000.00	Additional Amount Due:	\$ 100.00

(Please duplicate this form for future use)



BUREAU OF LABOR AND INDUSTRIES, PREVAILING WAGE RATE UNIT

**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 this form has not been officially approved by the U.S. Department of Labor (US DOL), 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 certified statement must be signed by the contractor, 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 must be submitted 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 week number for the reporting period.

Column 1 – NAME AND ADDRESS: The employee's full name must be shown on each payroll submitted. The employee's address must also be shown 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 Bureau of Labor and Industries' 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 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 10 in a day as overtime hours. For more information on overtime requirements, see the Contractor Responsibilities section of the Bureau of Labor and Industries' publication "Prevailing Wage Rate Laws" handbook.

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. The total number of straight time hours worked should be entered in the lower box ("ST"); the total number of overtime hours worked should be entered 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 contract 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. This figure can be calculated 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 BENEFITS 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 the Bureau of Labor and Industries' publication "Prevailing Wage Rate Laws" handbook.

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, the following check may be performed:

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 the Bureau of Labor and Industries publications 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 BUREAU OF LABOR AND 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**

PREVAILING WAGE RATES

for

Public Works Contracts in Oregon



OREGON BUREAU OF LABOR AND INDUSTRIES

**Brad Avakian
Commissioner
Bureau of Labor and Industries**

Effective: January 1, 2014

JANUARY 1, 2014 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. Using the booklet, [Definitions of Covered Occupations](#), find the definition that most closely matches the actual work being performed by the worker.

Asbestos Worker/Insulator	<u>38</u>
Boilermaker	<u>38</u>
Bricklayer/Stonemason	<u>38</u>
Bridge and Highway Carpenter (See Carpenter Group 5)	<u>38-39</u>
Carpenter.....	<u>38-39</u>
Cement Mason	<u>39</u>
Diver	<u>39-40</u>
Diver Tender.....	<u>39-40</u>
Dredger.....	<u>40</u>
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	<u>40-41</u>
Drywall Taper (See Painter)	<u>44</u>
Electrician	<u>41-42</u>
Elevator Constructor, Installer and Mechanic	<u>42</u>
Glazier	<u>42</u>
Hazardous Materials Handler.....	<u>42</u>
Highway/Parking Striper	<u>42</u>
Ironworker	<u>42-43</u>
Laborer	<u>43</u>
Limited Energy Electrician.....	<u>43-44</u>
Line Constructor.....	<u>44</u>
Marble Setter	<u>44</u>
Millwright Group 1 & 2 (See Carpenter Group 3 & 4)	<u>38-39</u>
Painter and Drywall Taper.....	<u>44</u>
Piledriver (See Carpenter Group 6)	<u>38-39</u>
Plasterer and Stucco Mason.....	<u>44</u>
Plumber/Pipefitter/Steamfitter	<u>44-45</u>
Power Equipment Operator	<u>45-46</u>
Rofer	<u>46</u>
Sheet Metal Worker	<u>47</u>
Soft Floor Layer	<u>47</u>
Sprinkler Fitter	<u>48</u>
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier).....	<u>48</u>
Tender to Plasterer and Stucco Mason.....	<u>48</u>
Testing and Balancing (TAB) Technician	<u>48</u>
Tile Setter/Terrazzo Worker: Hard Tile Setter	<u>48</u>
Tile, Terrazzo, and Marble Finisher	<u>48</u>
Truck Driver.....	<u>48-49</u>
MAP: Power Equipment Operator, Zone 1	<u>50</u>

OREGON DETERMINATION 2014-01

TRADE	BASIC HOURLY RATE	FRINGE RATE	TRADE	BASIC HOURLY RATE	FRINGE RATE
--------------	--------------------------	--------------------	--------------	--------------------------	--------------------

ASBESTOS WORKER/INSULATOR

41.27 19.02

FIRESTOP/CONTAINMENT WORKERS

27.73 12.29

BOILERMAKER

34.40 27.94

CARPENTER (continued)

<u>Group 1</u> (Carpenter Group-I)	<u>Group 2</u> (Carpenter Group-II)
---------------------------------------	--

<u>Group 3</u> (Millwright Group-I)	<u>Group 4</u> (Millwright Group-II)
--	---

<u>Group 5</u> (Bridge & Highway Carpenter)	<u>Group 6</u> (Piledriver)
--	--------------------------------

BRICKLAYER/STONEMASON

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

Area 1 **32.75 16.65**

Reference Counties Area 1

Baker	Grant	Marion	Umatilla
Benton (a)	Harney	Morrow	Union
Clackamas	Hood River	Multnomah	Wallowa
Clatsop	Lincoln (a)	Polk	Wasco (a)
Columbia	Linn (a)	Sherman	Washington
Gilliam	Malheur	Tillamook	Yamhill

(a) North Half

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

Area 2 **31.53 16.30**

Reference Counties Area 2

Benton (b)	Deschutes	Jefferson	Lincoln (b)
Coos	Douglas	Klamath	Linn (b)
Crook	Jackson	Lake	Wasco (b)
Curry	Jefferson	Lane	Wheeler

(b) South Half

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

CARPENTER

Zone 1 (Base Rate)

Group 1	33.58	14.47
Group 2	33.73	14.47
Group 3	34.08	14.47
Group 4	34.23	14.47
Group 5	34.08	14.47
Group 6	34.58	14.47

Zone Differential for Carpenters
(Add to Zone 1 Base Rate)

Zone 2	.85
Zone 3	1.25
Zone 4	1.70
Zone 5	2.00
Zone 6	3.00
Zone 7	5.00

- Zone 1: Projects located within 30 miles of the respective city hall of the cities listed below.
- 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.

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	

Zones for Groups 3 and 4 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 and 4 Carpenters

Eugene	Medford	Portland	Vancouver
Longview	North Bend	The Dalles	

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

CARPENTER (continued)

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).

Welders receive \$.75/hour above their group's rate.

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")

Zone 1 (Base Rate)

Group 1	29.98	17.79
Group 2	30.58	17.79
Group 3	30.58	17.79
Group 4	31.18	17.79

Zone Differential for Cement Mason
(Add to Zone 1 Base Rate)

Zone 2	.65
Zone 3	1.15
Zone 4	1.70
Zone 5	3.00

CEMENT MASON (continued)

Zone 1: Projects located within 30 miles of the respective 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 80 miles.

Zone 5: More than 80 miles.

Reference Cities for Cement Mason

Bend	Eugene	Portland	The Dalles
Corvallis	Medford	Salem	Vancouver

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).

DIVER & DIVER TENDER

Zone 1 (Base Rate)

DIVER	80.70	14.47
DIVER TENDER	38.04	14.47

- 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 Portland.

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

Zone 2	.85
Zone 3	1.25
Zone 4	1.70
Zone 5	2.00
Zone 6	3.00
Zone 7	5.00

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

DIVER & DIVER TENDER (continued)

- 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.

Reference Cities for Diver/Diver Tender

Astoria	Klamath Falls	Newport	Roseburg
Bend	Longview	North Bend	Salem
Eugene	Medford	Portland	The Dalles

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).

Depth Pay and Enclosure Pay are added to the Divers' Basic Hourly Rate to obtain the Total Hourly Rate for the Diver.

Basic Hourly Rate Pay	+	Hourly Depth Pay	+	Hourly Enclosure Pay	=	Diver Total Hourly Rate
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Diver Depth Pay:

<u>Depth of Dive</u>	<u>Hourly Depth Pay</u>
50-100 ft.	\$1.00 per foot over 50 feet
101-150 ft.	\$1.50 per foot over 100 feet
151-200 ft.	\$2.00 per foot over 150 feet

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

DIVER & DIVER TENDER (continued)

Diver Enclosure Pay (working without vertical escape):

Distance Traveled
In the Enclosure Hourly Enclosure Pay

5-50ft.	\$.50/hr. up to \$4.00 maximum per day
50-100ft.	\$1.13/hr. up to \$9.00 maximum per day
100-150ft.	\$2.13/hr. up to \$17.00 maximum per day
150-200ft.	\$4.63/hr. up to \$37.00 maximum per day
200-300ft.	\$4.63/hr. up to \$37.00 maximum per day, plus \$.40 per foot traveled in enclosure.
300-450ft.	\$4.63/hr. up to \$37.00 maximum per day, plus \$.80 per foot traveled in enclosure.
450-600ft.	\$4.63/hr. up to \$37.00 maximum per day, plus \$1.60 per foot traveled in enclosure.

DREDGER

Zone A (Base Rate)

Leverman (Hydraulic & Clamshell)	44.64	13.85
Assistant Engineer (Watch Engineer, Mechanic Machinist)	41.73	13.85
Tenderman (Boatman Attending Dredge Plant) Fireman	40.38	13.85
Fill Equipment Operator	39.30	13.85
Assistant Mate	36.78	13.85

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

Zone B	3.00
Zone C	6.00

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	33.87	14.18
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OREGON DETERMINATION 2014-01

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

**DRYWALL, LATHER, ACOUSTICAL CARPENTER
& CEILING INSTALLER** (continued)

2. LATHER, ACOUSTICAL CARPENTER
& CEILING INSTALLER

33.87 14.18

Zone Differential for Drywall, Lather, Acoustical
Carpenter & Ceiling Installer
(Add to Zone 1 Base Rate)

Zone mileage based on road miles:

Zone 2	31-40 miles	.85
Zone 3	41-50 miles	1.25
Zone 4	51-60 miles	1.70
Zone 5	61-70 miles	2.00
Zone 6	71-100 miles	3.00
Zone 7	101 or more	5.00

The correct transportation allowance shall be based on road mileage from the City Hall of the local union having jurisdiction of the job or other 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	27.70	12.14
Cable Splicer	30.47	12.28

Reference Counties Area 1

Malheur

Area 2

Electrician	37.05	17.29
Cable Splicer	38.90	17.35

Reference Counties Area 2

Baker	Grant	Umatilla	Wallowa
Gilliam	Morrow	Union	Wheeler

ELECTRICIAN (continued)

Area 3

Electrician	34.00	14.77
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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.

Area 4

Electrician	37.16	16.69
Cable Splicer	40.88	16.81
Lighting Maintenance/ Material Handlers	17.64	8.43

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

Area 5

Electrician	38.05	19.54
Material Handler/ Lighting Maintenance	21.69	12.59
Electrical Welder	41.85	19.66

Reference Counties Area 5

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

(d) North Half

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

ELECTRICIAN (continued)

**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	1.50
Zone 2	51-70 miles	3.50
Zone 3	71-90 miles	5.50
Zone 4	91 or more	9.00

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	30.02	14.80
Cable Splicer	30.02	14.80
Lighting Maintenance and Material Handlers	16.22	7.99

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.

Zone Pay for Area 6

Lighting Maintenance and Material Handlers

(Add to Basic Hourly Rate)

Zone mileage based on road miles:

Zone 1	0-20 miles	0.00
Zone 2	21-30 miles	1.00
Zone 3	31-40 miles	2.80
Zone 4	41-50 miles	4.50
Zone 5	51-60 miles	6.30
Zone 6	60 or more	9.00

There shall be a 20-mile free zone from the downtown Post Office in Grants Pass, Klamath Falls, Medford, and Roseburg.

ELEVATOR CONSTRUCTOR, INSTALLER AND MECHANIC

Area 1

Mechanic	47.76	26.79
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Reference Counties Area 1

Baker	Umatilla	Union	Wallowa
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Area 2

Mechanic	47.95	32.44
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Reference Counties Area 2

All remaining Counties

<u>GLAZIER</u>	33.27	16.42
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Add \$1.00 to base rate if safety belt is required by State safety regulations.

Add \$4.00 to base rate for work done from a non-motorized single-man bosun chair.

HAZARDOUS MATERIALS HANDLER

21.50	10.06
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HIGHWAY/PARKING STRIPER

33.41	10.36
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IRONWORKER

<u>Zone 1 (Base Rate):</u>	34.12	21.35
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Zone Differential for Ironworker

(Add to Basic Hourly Rate)

Zone 2	3.75 hr. or \$30.00 maximum per day
Zone 3	6.88 hr. or \$55.00 maximum per day
Zone 4	9.38 hr. or \$75.00 maximum per day

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

Zone 2: More than 45 miles, but less than 60 miles.

Zone 3: More than 60 miles, but less than 100 miles.

Zone 4: More than 100 miles.

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

IRONWORKER (continued)

Note: Zone pay for Ironworkers shall be determined using AAA road mileage computed from the city hall of the reference cities listed below or the residence of the employee, whichever is nearer to the project.

Reference Cities

Medford Portland

LABORER

Zone 1 (Base Rate):

Group 1	26.09	12.85
Group 2	27.09	12.85
Group 3	22.57	12.85

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.

Zone Differential for Laborers
(Add to Zone 1 Base Rate)

Zone 2	.65
Zone 3	1.15
Zone 4	1.70
Zone 5	2.75

Zone 1: Projects located within 30 miles of city hall in the reference cities listed below.

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 80 miles.

Zone 5: More than 80 miles.

Reference Cities

Albany	Burns	Hermiston	Roseburg
Astoria	Coos Bay	Klamath Falls	Salem
Baker City	Eugene	Medford	The Dalles
Bend	Grants Pass	Portland	

LABORER (continued)

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

<u>Area 1</u>	18.90	8.20
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Reference Counties Area 1

Malheur

<u>Area 2</u>	28.75	14.96
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Reference Counties Area 2

Baker	Grant	Umatilla	Wallowa
Gilliam	Morrow	Union	Wheeler

<u>Area 3</u>	25.95	13.03
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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.

<u>Area 4</u>	27.39	12.72
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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

OREGON DETERMINATION 2014-01

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

LIMITED ENERGY ELECTRICIAN (continued)

<u>Area 5</u>	28.75	15.21	
	<u>Reference Counties Area 5</u>		
Clackamas	Hood River	Tillamook	Yamhill (d)
Clatsop	Multnomah	Wasco	
Columbia	Sherman	Washington	

(d) North Half

<u>Area 6</u>	24.90	11.25	
	<u>Reference Counties Area 6</u>		

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.

LINE CONSTRUCTOR

<u>Area 1</u>		
Group 1	51.10	15.34
Group 2	45.62	15.15
Group 3	26.10	10.23
Group 4	39.23	11.82
Group 5	34.22	11.17
Group 6	31.31	11.15
Group 7	15.60	8.51

Reference Counties Area 1
All counties except Malheur County

<u>Group 1</u>	<u>Group 2</u>
Cable Splicer	Heavy Line Equipment Man
Leadman Pole Sprayer	Journeyman Lineman Welder
	Journeyman Lineman
	Pole Sprayer

<u>Group 3</u>	<u>Group 4</u>
Tree Trimmer	Line Equipment man

<u>Group 5</u>	<u>Group 6</u>
Head Groundman	Groundman
Jackhammer Man	
Powderman	
	<u>Group 7</u>
	Tree Trimmer Groundman

LINE CONSTRUCTOR (continued)

<u>Area 2</u>		
Cable Splicer	45.27	13.88
Journeyman Lineman	41.01	13.49
Line Equip. Operator	34.14	12.74
Groundman	24.31	10.58

Reference County Area 2
Malheur County

MARBLE SETTER **33.75 16.65**

(This trade is tended by "Tile, Terrazzo, & Marble Finishers")

PAINTER & DRYWALL TAPER

COMMERCIAL PAINTING	19.81	8.93
INDUSTRIAL PAINTING	21.01	8.93
BRIDGE PAINTING	24.81	8.93

Add \$0.75 to base rate for work over 60 ft. high on swing stage, mechanical climber, spider or bucket truck for both commercial and industrial painting.

DRYWALL TAPER	32.22	12.70
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PLASTERER AND STUCCO MASON

(This trade is tended by "Tenders to Plasterers")

Nozzleman	29.86	16.55
Swinging Scaffold	28.86	16.55
All Other Work	27.86	16.55

PLUMBER/PIPEFITTER/STEAMFITTER

<u>Area 1</u>	26.00	13.57
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Reference Counties Area 1

Baker	Harney (a)	Malheur
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(a) Except that portion which lies North and West of a North-South line drawn from the town of John Day to a point five miles east of the town of Burns and three miles South of Burns thence on an airline through the town of Wagontire West to the county line.

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

PLUMBER/PIPEFITTER/STEAMFITTER (continued)

Add \$2.21 per hour to basic hourly rate if it is possible for worker to fall 30 ft. or more, or if required to wear a fresh-air mask or similar equipment for 2 hours or more.

Zone Differential for Area 1
Plumbers/Pipefitters/Steamfitters
(Add to Base Rate)

Zone 1	2.50 per hour
Zone 2	3.50 per hour
Zone 3	5.00 per hour

Zone mileage based on road miles:

Zone 1: Forty (40) to fifty five (55) miles from City Hall in Boise, Idaho.

Zone 2: Fifty five (55) to one hundred (100) miles from City Hall in Boise, Idaho.

Zone 3: Over one hundred (100) miles from City Hall in Boise, Idaho.

There shall be a maximum of ten (10) hours of zone pay per workday.

Area 2 **48.10 25.89**

Reference Counties Area 2

Grant	Umatilla	Wallowa
Morrow	Union	

Zone Differential for Area 2
(Add to Base Rate)

Zone 2 **10.62/hr.** not to exceed \$80.00 day.

Zone mileage based on road miles:

Zone 2: Eighty (80) miles or more from City Hall in Pasco, Washington.

Area 3 **39.71 22.37**

Reference Counties Area 3

All Remaining Counties

POWER EQUIPMENT OPERATOR

Zone 1 (Base Rate)

Group 1	38.25	13.70
Group 1A	40.16	13.70
Group 1B	42.08	13.70
Group 2	36.56	13.70
Group 3	35.54	13.70
Group 4	34.56	13.70
Group 5	33.43	13.70
Group 6	30.34	13.70

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.

Zone Pay Differential
(Add to Zone 1 Base Rate)

Zone 2	3.00
Zone 3	6.00

For projects in the following metropolitan counties:

Clackamas	Marion	Washington
Columbia	Multnomah	Yamhill

See map on page 50 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.

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

TRADE

**BASIC
HOURLY FRINGE
RATE RATE**

POWER EQUIPMENT OPERATOR (continued)

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).

ROOFER

Area 1*

Roofers	28.03	11.06
Handling coal tar pitch	30.83	11.06
Remove fiberglass insulation	30.83	11.06

Reference Counties Area 1

Baker	Gilliam	Multnomah	Washington
Clackamas	Grant	Sherman	Wheeler
Clatsop	Hood River	Tillamook	
Columbia	Jefferson	Wasco	

*On all jobs on which coal tar pitch is the basic roofing material or where the old roof being removed is composed of coal tar based material, a rate of pay ten percent (10%) greater than the basic rate of pay shall be paid for all work performed.

ROOFER (continued)

*All employees engaged in removing fiberglass insulation shall receive a rate of pay ten percent (10%) greater than the employee's basic rate of pay.

Area 2**

Roofers	23.87	11.58
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Reference Counties Area 2

Benton	Douglas	Lake	Marion
Coos	Harney	Lane	Polk
Crook	Jackson	Lincoln	Yamhill
Curry	Josephine	Linn	
Deschutes	Klamath	Malheur	

** Add \$2.00 to basic hourly rate for application, spudding and cutting or removal of coal tar products.

** Add \$0.50 per hour to base hourly rate for application, spudding and cutting or removal of fiberglass insulation.

Area 4***

Roofers	24.82	10.22
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Reference Counties Area 4

Umatilla	Union	Wallowa
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*** Add \$2.00 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	24.88	10.27
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Reference County for Area 5

Morrow

**** Add \$3.00 to basic hourly rate for employees working with irritable and pitch bituminous materials.

TRADE

BASIC
HOURLY FRINGE
RATE RATE

TRADE

BASIC
HOURLY FRINGE
RATE RATE

TRUCK DRIVER (continued)

Zone A: Projects within 30 miles of the cities listed above

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.

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).

**AMENDMENTS TO OREGON DETERMINATION 2014-01
EFFECTIVE APRIL 1, 2014**

TRADE	BASIC HOURLY RATE	HOURLY FRINGE	TRADE	BASIC HOURLY RATE	HOURLY FRINGE
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ELECTRICIAN

Area 5

Electrician	38.75	20.31
Electrical Welder	42.63	20.43
Material Handler/ Lighting Maintenance	22.09	13.14

Reference Counties Area 5

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

(d) North Half

LIMITED ENERGY ELECTRICIAN

Area 5

29.75 15.69

Reference Counties Area 5

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

(d) North Half

PAINTER & DRYWALL TAPER

DRYWALL TAPER	32.72	13.00
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SPRINKLER FITTER

Area 1

33.74 20.20

Reference Counties Area 1

Benton	Deschutes	Klamath	Polk
Clackamas	Douglas	Lake	Sherman
Clatsop	Harney	Lane	Tillamook
Columbia	Hood River	Lincoln	Wasco
Coos	Jackson	Linn	Washington
Crook	Jefferson	Marion	Wheeler
Curry	Josephine	Multnomah	Yamhill

Area 2

30.15 20.10

Reference Counties Area 2

Baker	Grant	Morrow	Union
Gilliam	Malheur	Umatilla	Wallowa



CITY OF
**West
Linn**

TECHNICAL PROVISIONS

Solicitation Number: PW-13-14

Public Works Department
22500 Salamo Road
West Linn, Oregon 97068
Telephone: (503) 722-5500
Fax: (503) 656-4106

Appendix B

**SEE ATTACHED
TECHNICAL SPECIAL PROVISIONS**

CITY OF WEST LINN, OREGON
 PROJECT NUMBER: PW-13-14
 SANTA ANITA AND ROSEMONT INTERSECTION IMPROVEMETNS

TECHNICAL SPECIAL PROVISIONS

<p>Seal w/signature</p> 	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for temporary traffic control, temporary erosion control, drainage, earthwork, roadway, retaining walls, pavements, sign removal and striping. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Sections 00210, 00220, 00225, 00280, 00290, 00305, 00310, 00320, 00330, 00331, 00390, 00405, 00440, 00442, 00445, 00470, 00490, 00496, 00596, 0B596, 00620, 00641, 00730, 00744, 00748, 00759, 00840, 00850, 00855, 00865, 00867, 00905, 01030, 01040, 01050, 01070, 01120, 01170, 02001, 02010, 02020, 02030, 02040, 02050, 02320, 02440, 02450, 02510, 02630, 002640</p>
<p>Date Signed: <u>4/16/14</u></p>	

<p>Seal w/signature</p> 	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for traffic signal, flashing beacon and irrigation installations. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Sections 00594, 00950, 00960, 00962, 00990, 02530, 02560, 02920, 02925</p>
<p>Date Signed: <u>4/16/14</u></p>	

**Santa Anita and Rosemont Intersection Improvements
Special Provisions**

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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 Public Safety and Mobility - Replace the bullet that begins, "When included in the..." with the following bullet:

- Use portable changeable message signs (PCMS) according to Section 00225.

Replace the bullet that begins, "For all sidewalk or..." with the following bullet and sub-bullets:

- For all sidewalk or sidewalk ramp closures, install signs and other TCD as shown on the plans. Mount signs between the panels of a Type II barricade and place barricades facing pedestrian traffic.
 - Close the sidewalk at a point where there is an alternate way to proceed, or provide signing and other TCD to indicate an alternate pedestrian route. Place closure signing at the closure point in the middle of the existing pedestrian facility facing pedestrian traffic.
 - Provide additional TCM and an alternate pedestrian route that, as nearly as is practical, matches existing facility features and meets the accessibility requirements in Part 6 of the MUTCD and the requirements of the Americans with Disabilities Act (ADA).
 - Pave the alternate pedestrian route surface or provide an approved, non-slip 60 inch minimum wide surface meeting the requirements of the ADA.
 - Where a 60 inch minimum width along the entire alternate pedestrian route is not possible, provide 60 by 60 inch passing spaces every 200 feet along the route.
 - Protect pedestrians and delineate the alternate pedestrian route by placing pedestrian channelizing devices (PCD), or other approved devices, between the alternate pedestrian route and the work area. Keep PCD in place, except as required for actual work, until the existing pedestrian facility is reopened.
 - Reopen the existing pedestrian facility during non-work hours or continue to provide an alternate pedestrian route.

Replace the bullet that begins, "Do not stop or hold vehicles..." with the following bullet:

- Do not stop or hold vehicles on a highway within the Project Site for more than 20 minutes.

Replace the bullet that begins, "Do not perform work..." with the following bullet:

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- Do not perform work that restricts traffic access to and from both sides of the traveled way at the same time.

Add the following bullets to the end of the bullet list:

- Do not place work zone signs or sign supports that will block existing walkways or existing bikeways, except at the closure point of a walkway or bikeway.
- Open all lanes and adjacent asphalt surfaces (including shoulders and bike lanes) on all streets outside of allowable working or lane restriction hours with temporary or permanent pavement surfacing. Temporary steel plates or other methods to open the roadway to traffic must be approved by the Engineer. Compacted gravel surfacing is not allowed.
- Notify all emergency services of all changes to the traffic control prior to completing the change. Notify the Police and Fire of all lane closures.
- When an abrupt edge is created by excavation, protect traffic using the “ABRUPT PAVEMENT EDGE DETAIL” and the “TYPICAL ABRUPT EDGE SIGNING DETAIL” configurations shown on the standard drawings.
- Contractor shall coordinate construction activities with adjacent property owners to maintain driveway access at all times or the satisfaction of the property owner.

00220.40 General Requirements – Add the following to the end of this subsection:

(f) Road Closures – Rosemont Road may be closed for up to three continuous weeks if needed for construction. Contractor shall submit a request as part of the traffic control plan and the request must be approved by the City prior to the road closure.

SECTION 00225 - WORK ZONE TRAFFIC CONTROL

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

00225.01(a) Abbreviations - Add the following abbreviations to the list:

TMA - Truck Mounted Impact Attenuator

00225.01(b) Definitions - Replace the “Work Zone” definition with the following definition:

An area within highway construction, maintenance, or utility work activities which extends from the first road work, bridge work, or utility work warning sign to the last sign or the last TCD.

Add the following definitions:

Protection Vehicle - A vehicle placed in advance of short-duration or mobile work activities and dedicated to the protection of workers and equipment in the activity area. A protection

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vehicle is equipped with appropriate warning lights and signs. A protection vehicle may be fitted with a TMA.

Work Area - The portion of the highway closed to public traffic and set aside for workers, construction equipment, construction materials, and a protection vehicle, if applicable. The work area is typically delineated by channelizing devices or separated from traffic using temporary barriers.

00225.01(c) Standards - Replace the bullet that begins "FHWA "Standard Highway..." with the following bullet:

- FHWA "Standard Highway Signs" manual

Add the following bullet to the end of the bullet list:

- ODOT "Oregon Portable Changeable Message Sign Handbook", available on the ODOT Traffic Control Plans Unit website.

00225.02 General Requirements - Replace this subsection, except for the subsection number and title, with the following:

Provide and maintain all TCM. The Engineer may verbally or in writing require immediate changes to the TCM being used on the Project. Immediately make these changes, as directed. Submit all proposed TCM revisions to the Engineer for approval.

Do not start work on any stage of construction until the TCP has been reviewed and accepted and all TCM are in place and the TCP is operating satisfactorily. During construction, determine if TCM, in addition to those in place, are required and immediately notify the Engineer. Immediately make changes as approved or directed, but do not place or remove devices without prior approval.

Work may be suspended or the TCM may be performed by the Agency if the Contractor fails to correct an unsafe condition. Costs for work performed by the Agency will be deducted from monies due the Contractor.

When a through road intersects the work zone, place a "ROAD WORK AHEAD" (W20-1-48) sign in advance of the intersection at sign spacing "A" from the "TCD Spacing Table" shown on the standard drawings, or as shown in the TCP. These signs do not require sign flag boards, unless otherwise directed.

When paving operations create an abrupt edge, protect traffic by installing signing according the "2-Lane, 2-Way Roadway Overlay Area" detail shown on the standard drawings. Protect longitudinal pavement joints by placing and maintaining an asphalt concrete wedge according to 00745.61. Protect transverse pavement joints according to 00745.62.

When a cold planed pavement surface is used by traffic, install a Type "O4" "BUMP" (W8-1-48) sign approximately 100 feet in advance of the transverse paving edge. Install a "GROOVED PAVEMENT" (W8-15-48) sign with a "Motorcycle" (W8-15P-24) rider in advance of the "Bump" sign at sign spacing "A" from the "TCD Spacing Table" shown on the standard drawings. Face signs toward incoming traffic and install them before opening

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the cold planed surface area to public traffic. Protect exposed transverse and longitudinal cold planed pavement edges according to 00620.40.

During flagging operations, monitor the length of traffic queues and when extended traffic queues develop, protect traffic by providing advance flagger(s) and additional signing according to the "Extended Traffic Queues for Advance Flagging" detail shown on the standard drawings.

00225.05 Contractor Traffic Control Plan - Add the following bullet items to the end of this subsection:

- A detailed temporary striping plan in compliance with the current ODOT Traffic Line Manual.
- Two copies of a map of the Project showing all existing tourist-oriented direction (TOD) and business logo signs and a written narrative describing how these signs will be kept in service and protected throughout all the construction stages.

Replace the paragraph that begins "Further TCP revisions..." with the following:

If at any time during the work the Engineer determines the Traffic Control Plan to be inadequate, the Contractor shall provide and install the additional signs and devices at no additional cost to the Agency.

The Contractor shall provide the Engineer five (5) working days to review any submitted traffic control drawings. Drawings which are not approved shall be corrected and resubmitted for review as specified above.

Public traffic shall be permitted to pass through the work area, or an approved detour, with as little inconvenience and delay as possible. Bicycle and pedestrian lanes and pathways are legal travel lanes and must be treated as such. They shall be free of obstructions with as little delay as possible. Lane and pathways will be maintained free of debris to allow safe passage. The minimum travel lane width for a bicycle lane through a work zone area shall be four (4) feet. For temporary bicycle and pedestrian lanes and pathways, ADA compliant ramps must be used where the elevation difference is greater than ¼ inch.

The Contractor shall utilize cones, no parking signs and other means as needed in advance of paving and other construction operations to keep the roadway clear. The Agency will provide general mailer information to nearby property owners, but the Contractor shall be responsible for all day-to-day coordination necessary to clear the roadway prior to paving.

When signs are required for which specifications are not listed in the Contract Documents, the Contractor shall submit drawings for approval by the Engineer.

00225.10 General - Replace this subsection, except for the subsection number and title, with the following:

Evaluate the condition of TCD using the criteria shown in the most current version of the American Traffic Safety Services Association (ATSSA) publication titled "Quality Guidelines for Temporary Traffic Control Devices and Features". Use new TCD or TCD meeting the "Acceptable" quality category of the ATSSA publication for all installations unless otherwise specified. Provide test results, quality compliance certificates, equipment lists, and

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drawings when specified. Acceptance will be by the QPL, test results, quality compliance certificates, equipment lists, drawings, and testing as necessary to assure compliance with the Specifications. After TCD have been installed and accepted on the Project, inspect and maintain the condition of the devices.

All work zone TCD shall comply with the crashworthy requirements of the National Cooperative Highway Research Program (NCHRP) Report 350 or with the American Association of State Highway and Transportation Officials (AASHTO) Manual for Assessing Safety Hardware (MASH).

00225.11 Temporary Signing - Replace the sentence that begins "Furnish new or acceptable temporary signs..." with the following sentence:

Furnish temporary signs meeting the requirements of the "Acceptable" category shown in the ATSSA "Quality Guidelines for Temporary Traffic Control Devices and Features" handbook, available from the ATSSA website, and the following:

00225.11(a-4) Roll-up Signs - Replace this subsection, except for the subsection number and title, with the following:

Use roll-up signs with retroreflective roll-up sign sheeting from the QPL.

00225.11(b-5) Square Tube Sign Supports - Replace this subsection with the following subsection:

00225.11(b-5) Perforated Steel Square Tube Sign Supports - Use perforated steel square tube sign supports from the QPL and as shown on the standard drawings.

00225.11(c-1) Temporary Signs - Replace this subsection, except for the subsection number and title, with the following:

Use sign covers for temporary signs that meet the following requirements:

- From the QPL or made from one of the following materials:
 - One-piece plywood.
 - Type 2 riprap geotextile fabric.
- Large enough to completely cover the sign and attached rider signs.
- Easy to attach to and remove from the sign without damaging the sign face.
- Black and non-reflective.
- Opaque to prevent message visibility under day and nighttime conditions.

00225.11(d) Sign Flags - Replace the bullet that begins "16 inch square..." with the following bullet:

- Square and 16 inches by 16 inches or larger.

00225.11(g) Flashing Stop/Slow Paddles - Replace this subsection with the following subsection:

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00225.11(g) Flagger Stop/Slow Paddles - Use flagger "STOP/SLOW" paddles from the QPL.

00225.13(d) Plastic Drums - Replace the sentence that begins "Provide drums with..." with the following sentence:

Use retroreflective drum sheeting meeting the requirements of ASTM D 4956 Type III or Type IV.

Add the following subsection:

00225.23 Temporary Traffic Delineation - Provide pavement marking equipment according to 00850.20.

Add the following subsection:

00225.25 Safety Apparel - Workers, except flaggers, working within highway right-of-way and exposed to traffic or construction equipment shall wear high-visibility safety apparel that meets the Performance Class requirements of the most current version of ANSI/ISEA 107, "American National Standard for High Visibility Safety Apparel and Headwear Devices". Wear safety apparel that at least meets the following minimum requirements:

- **Daytime:** Class 2 upper body garment
- **Nighttime:** One of the following:
 - Class 3 upper body garment
 - Class 2 upper body garment and Class E trousers or gaiters
- ANSI Class 2 or 3 fluorescent orange-red, fluorescent yellow-green or a combination of the two of these colors for the apparel background material color
- Fluorescent yellow-green, orange, yellow, or bright white hardhat or baseball-style cap. Wear hardhats when there is danger of falling or flying objects or electrical shock or burns

Wearing high-visibility safety apparel that exceeds the minimum class requirements is allowed.

00225.27(a) Flagger Equipment - Replace this subsection, except for the subsection number and title, with the following:

Equip flaggers as follows:

- For daytime and nighttime flagging operations, wear high-visibility safety apparel that meets the Performance Class requirements of the most current version of ANSI/ISEA 107, "American National Standard for High Visibility Safety Apparel and Headwear Devices". Wear safety apparel that at least meets one of the following minimum requirements:
 - Class 3 upper body garment
 - Class 2 upper body garment and Class E trouser or gaiters
- Safety apparel with background material colors according to 00225.25.

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- A hardhat or baseball-style cap according to 00225.25.
- A minimum 18 inch x 18 inch "STOP/SLOW" paddle made of rigid substrate and fabricated using type "R1"/"O4" sheeting, or a flagger STOP/SLOW paddle from the QPL. A 24 inch x 24 inch STOP/SLOW paddle is recommended for higher speed situations or where more visibility is desired.
- Portable, self-contained two-way radio and repeaters, as required, with a range suitable for communications throughout the Project Site.

00225.27(b) Flagger Station Lighting - Replace the bullet that begins "Provide flagger illumination..." with the following bullet:

- Provide sufficient flagger illumination to completely illuminate the flagger during flagging operations.

00225.28 Traffic Control Supervisor - Replace this subsection, except for the subsection number and title, with the following:

Equip Traffic Control Supervisor (TCS) as follows:

- Safety apparel according to 00225.25.
- Portable, self-contained two-way radio with a range suitable for the Project Site, when necessary.
- Cellular telephone active at all times.
- A vehicle that is equipped with a roof or post mounted rotating amber light or strobe light that is visible for 360 degrees.

00225.30 General - Replace the sentence that begins, "Provide flaggers, TCS..." with the following sentence:

Provide flaggers, TCS, and pilot car operators, to stop, direct, and maintain traffic control through the work zone.

00225.31 Qualifications - Replace the paragraph that begins "Use flaggers, TCS..." with the following sentence:

Use flaggers, TCS, and pilot car operators that meet the following requirements:

00225.32 Traffic Control Supervisor - Replace this subsection, except for the subsection number and title, with the following:

When the bid schedule does not include an item for a TCS, appoint a trained person on the Project Site during working hours and on call at all other times who:

- Meets the requirements of 00225.31.
- Inspects and maintains TCD location, operation, quality, cleanliness, and effectiveness.
- Is equipped with a cellular telephone.
- Is equipped with a two-way radio, when necessary.

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- Has the authority to assign and control flagging operations.
- Has filed their name and phone number with the Engineer and local police.
- Notifies the Engineer of any corrective measures made to the TCP if the TCP is not functioning as required, or to accommodate site conditions. Maintain the original intent of the TCP and do not implement changes to the TCP before revisions are approved by the Engineer.

When the bid schedule includes an item for a TCS, provide a TCS who meets the requirements of 00225.31. The TCS shall possess a current ODOT "Oregon Certified Traffic Control Supervisor" card. A TCS with a current card from another State Department of Transportation or from the American Traffic Safety Services Association may obtain an Oregon Certified TCS card upon successful completion of ODOT's Recertification Class.

Before beginning work on the Project, the TCS shall:

- File with the Engineer and local police, their name and a telephone number at which the TCS can be contacted at all times.
- Have the documents listed in 00225.01 and applicable standards and specifications available at all times.

The TCS duties include the following:

- Supervise work zone traffic control measures, operations, activities, and conditions, including lane closures, lane or traffic shifts, detours, flagging operations, rolling slowdowns, and temporary traffic signal work.
- Oversee all applicable requirements of the Contract to ensure the convenience, safety and orderly movement of motor vehicle, bicycle, and pedestrian traffic.
- Attend meetings specifically scheduled to discuss the TCP and TCM.
- Discuss proposed TCM and coordinate implementation of the TCP with the Contractor and the Engineer.
- Make revisions to the TCP according to the following:
 - Make temporary revisions to the TCP in the event of an emergency and immediately follow-up with and report any changes to the Engineer.
 - Notify the Engineer before making any revisions to the TCP and indicate why revisions are necessary.
 - The TCS may make minor revisions to the TCP to accommodate site conditions if the original intent of the TCP is maintained and revisions have been approved by the Engineer.
 - Submit stamped working drawings that include the revisions according to 00225.05 and 00150.35 if the Contractor is using a modified Agency TCP or not using the Agency TCP.
- Coordinate the implementation and operation of all TCM, including those of subcontractors, suppliers, and any adjacent construction or maintenance operation.
- Provide supervision and oversight to maintain all TCM when in operation.

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- Coordinate the Project's activities (such as ramp, road, or lane closures) with appropriate police, fire control agencies, city or county agencies, medical emergency responders, school districts, Postmaster, and public transit agencies.
- At least once per TCS construction work shift, conduct a TCD inspection according to the following:
 - Inspect following initial placement or installation of TCD.
 - Inspect devices in place for proper location, installation, operation, quality, cleanliness, and effectiveness on public traffic.
 - Inspect TCD effectiveness in daylight and at night.
 - Inspect post-mounted signs.
 - Inspect temporary illumination and flagger station lighting at night, when in place.
 - Conduct additional TCD inspections for extended periods, as requested.
 - Prepare and sign a "Traffic Control Inspection Report" form (Form No. 734-2474). Submit the report to the Engineer no later than the end of the next TCS construction work shift.

Do not designate the Project superintendent as the TCS.

The TCS shall not act as a flagger or pilot car operator, except in an emergency or to relieve the flagger or pilot car operator for a period of less than 15 minutes.

Make arrangements so that the TCS will be available every day, on call at all times, and available upon the Engineer's request at other than normal working hours.

In the event of a work zone incident during non-work periods, the TCS shall be capable of reporting to the Project site within 1 hour after being notified. The TCS shall have appropriate personnel, equipment, and material available at all times to expeditiously correct any deficiency in the TCM for the Project.

Notify the Engineer of an alternate TCS who can assume the duties of the assigned TCS in the event of that person's inability to perform. Alternate TCS shall be adequately trained and certified according to 00225.31 and 00225.32. Notify the Engineer at least 12 hours before designating the TCS for the following 12-hour period. Make succeeding notifications within 24 hours every time a subsequent TCS is appointed to the Project.

00225.41(a) Speed Signs - Replace this subsection, except for the subsection number and title, with the following:

Use speed signs as follows:

(1) Advisory Speed Signs - Install Type "O4" advisory speed warning signs or riders as shown or as directed.

(2) Regulatory Speed Zone Signs - Install and maintain regulatory speed zone signs as directed and according to the "Temporary Speed Zone Order" signed by the State Traffic Engineer.

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When regulatory Type "W1" speed zone signs are used, cover conflicting existing Type "W1" speed zone signs with sign covers according to Section 00941. Cover or remove temporary regulatory Type "W1" speed zone signs and restore the original speed zone signs according to the "Temporary Speed Zone Order" and when directed.

If an existing regulatory Type "W1" speed zone sign displaying the original speed is 1,000 feet or less beyond the limits of the temporary speed zone, additional temporary regulatory Type "W1" speed zone signs displaying the original speed are not required.

00225.41(b) Sign Supports - Replace this subsection, except for the subsection number and title, with the following:

(1) Wood Sign Posts - Except as provided in the following (2) through (5), mount all temporary signs on wood sign posts as shown and as shown on the standard drawings.

When sign posts are installed in rock, a shorter post may be used if the post is installed in a buried concrete footing at least 12 inches in diameter and 2 feet deep.

(2) Portable Sign Supports - Use portable sign supports as follows:

- When signs are needed at a single location for no more than 48 consecutive hours.
- Position the support so the lowest point of the sign is at least 1 foot above the roadway surface.
- Turn, cover, or remove signs at the end of each work shift when the condition is no longer in effect.
- Use with roll-up signs.
- Use ballast to prevent tipping of the signs in high wind.

(3) Concrete Barrier Sign Supports - Mount signs on concrete barrier so the:

- Lowest point of the sign is at least 7 feet above the roadway surface.
- Sign and post are held securely to concrete barrier by an approved device.
- Sign can be turned and locked in a position parallel to the flow of traffic when not in use.

(4) Temporary Sign Supports - Use TSS as follows:

- When signs are needed at a single location for more than 48 consecutive hours.
- When not practical to post mount due to location or when utility conflicts exists.
- Do not tip over TSS at any time.
- Position double post TSS behind 8 foot type III barricade, as shown on the standard drawing or in the TCP. Where horizontal width prevents an 8 foot barricade, provide a 4 foot type III barricade, as shown or as directed.
- When not in use, locate TSS as far from public traffic as practical and turn away from traffic, or cover the sign. Retain the type III barricade for delineation.

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(5) Perforated Steel Square Tube Sign Supports - Perforated steel square tube sign supports may be used as a substitute for wood sign posts. Install perforated steel square tube sign supports as shown on the standard drawings.

00225.41(c) Sign Flag Boards and Sign Flags - Replace this subsection, except for the subsection number and title, with the following:

Use two sign flag boards and flags as follows:

(1) Sign Flag Boards - Install two sign flag boards, as shown or specified.

(2) Sign Flags - Sign flags may be installed above signs mounted on portable sign supports. Mount flags so the entire sign is visible.

00225.41(f) Inconsistent Temporary Signs - Replace this subsection, except for the subsection number and title, with the following:

Ensure that all temporary signs are properly used and consistent with the work zone. When signage is no longer required for staging or shift work, remove all temporary signs, sign flag boards, supports, sign covers, and ballast.

When temporary sign messages conflict with work zone conditions, traffic patterns, or other staging configurations, but signs are needed later in Project, do the following:

- Turn or cover the signs so the message is not visible to any traffic.
- Remove or cover sign flag boards.
- When covering signs and sign flag boards, use covers meeting the requirements of 00225.11(c-1).

When it is determined that only minor work remains on the Project and the work area does not encroach on traffic lanes or shoulders, do the following:

- Remove all temporary signs, including the advance construction and Project identification signs.
- Remove all sign flag boards and ballasts.
- Use roll-up signs on portable sign supports for minor or short duration work.

00225.41(g) Permanent Signage - Replace this subsection, except for the subsection number and title, with the following:

When permanent sign messages conflict with adjacent temporary signing, work zone conditions, traffic patterns or other staging configurations, do the following:

- Turn or cover the signs so the message is not visible to any traffic.
- When covering signs, use sign covers meeting the requirements of 00225.11(c-1).

When work zone conditions change and permanent sign messages no longer conflict with temporary signing, uncover permanent signs. Install or uncover appropriate permanent signing as required, before changing traffic control staging.

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00225.42(d) Impact Attenuators - Replace the two bullets that begin, “Use attenuators designed...” and “For narrow site...” with the following two bullets:

- Use attenuators designed for the pre-construction posted speed.
- For narrow site systems, secure the first two barrier sections by pinning or restraining as shown on the standard drawings.

00225.43(e) Pavement Markers - Replace the paragraph that begins “Unless shown on the...” and the three bullets with the following paragraph and bullets:

Unless otherwise shown, install pavement markers as follows:

- Three single markers spaced 5 feet apart to simulate a 10 foot skip line with a gap of 30 feet to the next skip line.
- Single markers spaced 10 feet apart for solid no passing lines.
- Double markers spaced 10 feet apart for double solid no passing lines.

Replace the paragraph that begins “Flexible pavement markers...” with the following two paragraphs:

Temporary pavement markers shall remain in place until the permanent markings are complete. Replace missing markers at no additional cost to the Agency. On the final pavement wearing course, place permanent markings a maximum of 28 calendar days after placing temporary pavement markers, or as directed.

Remove temporary markers from the pavement wearing course within 5 calendar days after the placement of permanent markings. Remove temporary pavement markers without damaging the roadway surface. Flexible pavement markers may be cut off within 1/8 inch of the roadway surface.

00225.43(e-3) Flexible Overlay Pavement Markers - Replace the bullet that begins “When temporary striping...: with the following bullet:

- When temporary striping is determined as not practical by the Engineer.

Replace the paragraph that begins “Install the markers...” with the following paragraph:

Install the pavement markers before reopening the roadway to traffic. Remove the markers on pavement base courses before placing the next surface layer.

00225.43(e-4) Existing Pavement Marker Removal - Replace the sentence that begins “Remove the markers from...” with the following sentence:

Remove pavement markers from permanent pavement wearing courses without damaging the roadway surface and ensure the surface texture remains similar to that of the surrounding area.

00225.43(g) Temporary Striping - Replace this subsection with the following subsection:

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(g) Temporary Pavement Markings - Before opening roadways to traffic, unless otherwise specified in 00225.43(h), apply temporary pavement markings on pavement base courses, wearing courses, and new bridge deck surfaces at locations shown, or as directed. Immediately remove all unacceptable pavement markings and replace with acceptable markings at no additional cost to the Agency.

Temporary pavement markings may be placed using paint, temporary tape, or pavement markers as follows:

(1) Base Courses - On pavement base courses, use paint, temporary tape, or pavement markers for temporary pavement markings, as shown in the standard drawings or in the TCP.

For painted striping, apply 4 inch wide by 10 foot long stripes with 30 foot gaps for skip line striping. Apply 4 inch wide, continuous stripes for solid line striping. Apply bead binder at a thickness of 15 mils wet, equivalent to 17 gallons/mile for a 4 inch wide solid line. Apply glass beads at a rate of 5 pounds per gallon of paint.

Before opening a traffic lane on a base course adjacent to temporary concrete barrier that is located on the right-hand side of the traffic lane, place right-hand edge line markings using paint or a continuous removable tape, or as directed.

Before opening a traffic lane adjacent to temporary concrete barrier that is located on the left-hand side of the traffic lane, place left-hand edge line markings using paint, a continuous strip of temporary removable tape, with pavement markers spaced 10 feet apart, or as directed.

(2) Wearing Course - On the pavement wearing course, use paint, temporary removable tape, or pavement markers for skip line or solid line markings, as follows:

- For left-hand solid lines and slip lines striping, use temporary removable tape or pavement markers.
- For right-hand solid edge line markings, use paint or a continuous strip of temporary removable tape.
- Where inlaid permanent pavement markings are to be placed, use paint for temporary pavement markings.
- Where durable permanent pavement markings are to be placed, apply temporary line markings using painted striping until durable permanent pavement markings can be applied according to 00225.43(g-4).

Before opening a traffic lane on a wearing course adjacent to temporary concrete barrier that is located on the right-hand side of the traffic lane, place right-hand solid edge line markings using a continuous strip of temporary removable tape, or as directed.

Before opening a traffic lane on a wearing course adjacent to temporary concrete barrier that is located on the left-hand side of the traffic lane, place left-hand solid edge line markings using a continuous strip of temporary removable tape, with pavement markers spaced 10 feet apart, or as directed.

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(3) New Bridge Deck Surfaces - On new bridge deck surfaces use temporary removable tape for temporary pavement markings for skip line or solid line striping, as shown or as directed.

(4) Durable Permanent Pavement Markings - On pavement wearing courses where durable permanent pavement markings are to be placed, apply temporary painted striping until durable permanent pavement markings can be applied, unless otherwise directed. Reduce the application rate of the paint to a thickness of 10 mils wet, equivalent to 12 gallons per mile for a 4 inch wide solid stripe. Apply reflective elements at a rate of 5 pounds per gallon of paint. Only one application is required.

Place temporary painted striping directly adjacent to the final location of the durable permanent pavement markings. Place the temporary painted striping so the durable permanent pavement markings can be aligned with existing striping at the end of the project limits. Removal of the temporary painted striping is not required, if aligned as described in this subsection.

When scheduled installation of durable permanent pavement markings will exceed, or will likely exceed, 28 calendar days after placement of the wearing surface, furnish and place temporary painted striping at the standard rate stated in 00225.43(g-1). Removal of this striping is not required, if aligned as described in this subsection.

00225.43(h) Pavement Edge Delineation - Replace this subsection, except for the subsection number and title, with the following:

Place tubular or conical markers to delineate the edge of pavement immediately after construction work removes or obscures painted edge stripes (shoulder or fog lines). If the left shoulder is less than 8 feet wide, tubular or conical markers may be substituted by installing Type 5 delineators on the concrete barrier at 25 foot spacing before left-hand edge line markings are removed or obscured.

Place tubular or conical markers to delineate the edge of pavement immediately after construction work or paving operations create an abrupt or sloped edge drop-off 1 inch or more in height along the right-hand or left-hand shoulder.

Maintain pavement edge delineation until temporary pavement markings can be applied according to 00225.43(g). Temporary pavement markings must be applied within 14 calendar days after the painted edge stripe has been removed or obscured. Locate and maintain the tubular and conical markers as follows:

- Between traffic and the abrupt edge.
- Space markers as shown for traffic delineators on the standard drawings at a maximum spacing of 200 feet.
- Patrol daily and restore them to their proper position at least once at the start of each work shift and once at the end of each work shift until the tubular or conical markers are no longer required.
- Remove after a new edge stripe has been painted and new delineators are in place.

00225.43(i) Stripe and Legend Removal - Add the following paragraph to the end of this subsection:

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Remove legends so that the legend outline is not recognizable on the pavement surface.

Add the following subsection:

00225.43(j) Pavement Legends and Bars - Before opening roadways to traffic, unless otherwise allowed, apply temporary pavement legends and bars on pavement base courses at locations designated. Apply bead binder at a thickness of 15 mils wet and glass beads at a rate of 5 pounds per gallon of paint.

00225.46(a) Sequential Arrow Signs - Add the following bullet to the beginning of the bullet list:

- Use to indicate a lane closure only. Use one sequential arrow sign for each lane being closed.

00225.47(a) Flaggers - Replace the paragraph that begins "During advance flagging..." with the following paragraph:

During advance flagging operations, the advance flagger shall only display the "SLOW" face of the paddle by covering the "STOP" face of the paddle with a sign cover in accordance with 00225.11(c-1).

00225.47(b) Flagger Station Lighting - In the bullet that begins "Locate the light equipment...", replace the words "travel lane" with the words "traffic lane".

Replace the bullet that begins "Place the flagger..." with the following bullet:

- Position and orient the flagger station lighting to direct the maximum amount of light toward the flagger and away from the approaching traffic in the near lane.

00225.60 Temporary TCD - Replace this subsection, except for the subsection number and title, with the following:

Evaluate the condition of TCD and maintain them using the criteria shown in the most current version of the ATSSA publication titled "Quality Guidelines for Temporary Traffic Control Devices and Features". Except for electrical devices, replace all TCD that, according to the ATSSA publication, are in "Marginal" or "Unacceptable" condition with equal devices that are in new or "Acceptable" condition, within a time period agreed upon by the Engineer.

Electrical devices that are in "Marginal" or "Unacceptable" condition may be repaired instead of being replaced, as long as the repairs are satisfactorily completed within a time period agreed upon by the Engineer.

The replacement or repair of TCD, found to be in "Marginal" or "Unacceptable" condition, shall be made at no additional cost to the Agency except as in 00225.90(a-1).

Evaluate, maintain, repair or replace TCD, and perform other duties including the following:

- Keep the devices in proper position, clean, and legible at all times.

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- Keep lights, reflectors, and flashers clean, visible, and operable during both daylight and darkness.
- Trim or remove vegetative growth or other materials so the devices can be seen.
- Verify, by inspection, the effectiveness of the installations at frequent intervals, both in daylight and darkness, at actual travel speeds.
- Repair, replace, or restore damaged or destroyed devices to maintain continuity and effectiveness.
- Maintain temporary TCD during suspensions of work the same as if work were in progress.

When the bid schedule does not include an item for a TCS, the Contractor's Superintendent or designee shall prepare and sign a daily "Traffic Control Inspection Report" (Form No. 734-2474) each working day. Submit the report to the Engineer no later than the end of the next working day.

Add the following subsection:

00225.63 Temporary Traffic Delineation - At no additional cost to the Agency, evaluate and maintain or immediately replace all unacceptable temporary traffic delineation with acceptable materials as follows:

(a) Pavement Markers - Damaged or missing markers. Maintain proper alignment and spacing of markers.

(b) Temporary Tape - Damaged or missing temporary tape. Maintain proper alignment and placement of temporary tape.

When removing damaged delineation from the pavement surface, remove adhesives, hardware, damaged delineation fragments or other materials using a method that will not damage the pavement surface. Repair any damaged surfaces to the Engineer's satisfaction at no additional cost to the Agency.

00225.67 Flagger Station Lighting - Replace the bullet that begins "Sufficient fuel to..." with the following bullet:

- Sufficient fuel to maintain continuous operation of the generator.

SECTION 00280 - EROSION AND SEDIMENT CONTROL

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

00280.42(c) Permanent Stabilization – Add the following to the end of this subsection:

All vegetated areas disturbed by the Contractor's operations shall be permanently re-seeded.

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

Inspect all erosion BMP and review the project site for potential erosion or sediment movement on a weekly basis and when 1/2 inch or more of rainfall occurs within a 24 hour period.

If a significant noncompliance or serious water quality issue occurs which may endanger health or the environment, verbally report to the Engineer with 24 hours.

SECTION 00290 - ENVIRONMENTAL PROTECTION

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

00290.20(c-2) Clean Fill - In the paragraph, replace "OAR 340-093-0030(13)" with "OAR 340-093-0030".

00290.20(c-3) Reuse, Recycle, and Dispose of Materials - Replace the bullet that begins "Reuse demolition..." with the following bullet:

- Reuse demolition debris.

00290.20(c-3-d) Concrete and Masonry - Replace the paragraph that begins "Concrete and masonry..." with the following paragraph:

Concrete and masonry, that is not recycled and does not contain hazardous substances, may be reused to fill basements or be buried in embankments on-site, provided that the materials are broken into pieces not exceeding 15 inches in any dimension, and placed so that:

00290.20(d) Hazardous Waste Management - In the paragraph that begins "In addition to current Laws...", replace the two bullets that begin "If the quantity of hazardous waste projected to be..." with the following three bullets:

- If the quantity of hazardous waste projected to be generated meets the requirements for a LQG, prepare a full Hazardous Waste Contingency Plan according to 40 CFR 265 Subpart D. Maintain a copy of the Contingency Plan on-site at all times during construction activities, readily available to employees and inspectors.
- If the quantity of hazardous waste projected to be generated meets the requirements for a SQG, prepare a modified Hazardous Waste Contingency Plan according to 40 CFR 262.34(d)(5) and 40 CFR 265 Subpart C. Maintain a copy of the modified Contingency Plan on-site at all times during construction activities, readily available to employees and inspectors.
- If the quantity of hazardous waste projected to be generated meets the requirements for a CEG, follow the contingency planning and storage requirements of the SQG unless the only potentially hazardous waste is aerosol cans smaller than 20 ounces. Limit storage to 180 days and 2,200 pounds. Prepare a modified Hazardous Waste

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Contingency Plan and keep a copy on-site with emergency response procedures and contact information.

00290.20(g) Spills and Releases - In the paragraph that begins "Obtain a response agreement...", replace the term "29 CFR 1920.120" with the term "29 CFR 1910.120".

Replace the lead-in paragraph that begins "In the event...", with the following lead-in paragraph:

In the event of a spill or release of a hazardous substance or hazardous waste or the release of any other material that has the potential to harm human health or the environment, do the following:

Add the following subsection:

00290.36(c) Avoid Nesting - Comply with Migratory Bird Treaty Act (16 U.S.C. 703-712). Submit a migratory bird protection plan for review and approval at least 10 Calendar Days before the pre-construction conference. Include the following:

- Describe measures to avoid disturbance to migratory bird nesting habitat (vegetation, structures) from March 1 to September 1 of each year.
- Do not begin work until the migratory bird protection plan is approved.
- In the event the nesting birds or bats are encountered during construction, the Engineer may suspend the work according to 00180.70

SECTION 00305 - CONSTRUCTION SURVEY WORK

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

Description

00305.00 Scope - Provide construction survey work according to the current edition on the date of Advertisement, of the ODOT "Construction Surveying Manual for Contractors". This manual is available on the web at:

<http://www.oregon.gov/ODOT/HWY/GEOMETRONICS/documents.shtml>

All survey staking information provided by the Agency is shown on the project plans. Additional information or clarification by the Engineer may be available upon request.

Measurement

00305.80 Measurement - No measurement of quantities will be made for construction survey work.

Payment

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

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

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

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

Progress payments will not be in excess of the reasonable value of the surveying work estimated by the Engineer.

Costs incurred caused by survey errors will be at the Contractor's expense. These costs include price adjustments for failure to meet requirements of the "Construction Surveying Manual for Contractors", repair or removal and replacement of deficient product, and over-run of material.

SECTION 00310 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Comply with Section 00310 of the Standard Specifications modified as follows:

00310.41(a) General - Replace this subsection, except for the subsection number and title, with the following:

Where an abutting structure or part of a structure is to be left in place, make clean, smooth, vertical cuts with a saw or other approved cutting device. Avoid operations that may damage any portion of the remaining structure. The Contractor shall immediately vacuum all saw cutting waste and dispose of it in a legal manner.

00310.44 Earthwork in Connection with Removal – Add the following at the end of the second paragraph:

Provide aggregate to backfill and compact all holes or utility trenches, associated with work in this section, up to the proposed roadway subgrade or to bring the trench bottom to the lines and grades necessary to install the proposed pipe. No separate payment will be made for this work.

00310.90 Payment – Add the following to the end of this subsection:

Saw cutting will be incidental to other pay items.

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SECTION 00320 - CLEARING AND GRUBBING

Comply with Section 00320 of the Standard Specifications modified as follows:

00320.42 Ownership and Disposal of Matter - Replace this subsection with the following subsection:

00320.42 Disposal of Matter - Dispose of all matter and debris according to 00290.20.

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 excavation basis.

00330.20 Tamping Foot Rollers - In the paragraph, replace "115 tons" with "15 tons".

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

Unless otherwise specifically allowed and subject to the requirements of 00280.03, dispose of materials, classed as waste materials in 00330.41(a-3) and 00330.41(a-4), outside and beyond the limits of the Project and Agency controlled property according to 00290.20. Do not dispose of materials on wetlands, either public or private, or within 300 feet of rivers or streams.

00330.41(a-6) Excavation of Existing Surfaces – Add the following to the end of this subsection:

Remove sidewalk and surfacing as shown on the Plans. Sidewalk and surfacing to be removed shall be cut in neat, straight lines with vertical edges along the limits of pavement removal. The cut lines for removal of asphaltic or cement concrete pavement shall be reviewed and approved by the Engineer in the field before cutting. Demolish and remove curbs as directed by the Engineer or as shown. Make a vertical saw cut between any existing curb that is to remain and portion that is to be removed. Remove pavement adjacent to the curb as shown on the Plans.

00330.41(a-9) Excavation Below Grade - Delete the bullet that begins "Unstable Subgrade...".

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

Construct the outer 12 inches of embankments with suitable materials to establish slope stabilization through permanent seeding. If suitable material is not available, provide suitable materials from a Contractor-provided source which conforms to the requirements

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of 00330.11 or 00330.13 and provides favorable conditions for germination of seed and growth of grass.

00330.71 Daily Progress Reports - Delete this subsection.

00330.80 Measurement - Replace the paragraph that begins "The quantities of earthwork..." and the two bullets with the following paragraph and bullets:

The quantities of earthwork will be measured according to one or more of the following:

- Volume basis, based on the Agency's digital terrain model (DTM) calculated by Triangular Volume, Average End Area Volume, or by other methods of equivalent accuracy.
- Volume basis, computed by the average end area method from cross section measurements, or by other methods of equivalent accuracy. When specified, corrections for curvature will be made.

00330.91(d) General Excavation - Delete the bullet that begins "Includes unsuitable material..." and add the following bulleted items:

- Includes all material within the excavation limits including but not limited to curbs, walks, surfacing, retaining wall blocks, concrete panels, asphalt, aggregate and earth as necessary to excavate to subgrade depth for the proposed roadway, curb and walks as shown on the Plan and in the typical sections.
- Includes excavation necessary to the vertical right-of-way line for retaining wall construction.
- Payment for removal of any item outside the limits shown in the Contract must first require written authorization from the Engineer.
- Payment for surfacing removed via cold plane pavement removal will be paid for separately under Section 00620.

00330.92 Kinds of Incidental Earthwork - Delete the bullet that reads "If shown on the plans."

SECTION 00331 - SUBGRADE STABILIZATION

Comply with Section 00331 of the Standard Specifications.

SECTION 00390 - RIPRAP PROTECTION

Comply with Section 00390 of the Standard Specifications modified as follows:

00390.11(b) Test Requirements - Under the "Material Test" column next to "Degradation" replace (ODOT TM 208A) with (ODOT TM 208). Under the "Requirement" column next to "Sediment Height" replace 8" with 8.0".

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00390.44(b) Loose Riprap - Replace the bullet that begins "According to 00350.43..." with the following bullet:

- According to 00350.41(d), if riprap is placed on geotextile.

SECTION 00405 - TRENCH EXCAVATION, BEDDING, AND BACKFILL

Comply with Section 00405 of the Standard Specifications.

SECTION 00440 - COMMERCIAL GRADE CONCRETE

Comply with Section 00440 of the Standard Specifications modified as follows:

00440.10 Materials - In the list of materials, delete the "Aggregates....02690" line.

00440.12 Properties of CGC - Replace the sentence that begins "Furnish a workable..." with the following sentence:

Furnish a workable CGC mixture that is uniform in composition and consistency, and unless otherwise shown or specified, has the following characteristics:

00440.13 Field-Mixed Concrete - Replace this subsection, except for the subsection number and title with the following:

CGC mixed work items listed in 00440.14(a) may be field mixed conventionally, or by volumetric/mobile mixers conforming to ASTM C 685.

When approved, concrete sidewalks, concrete driveways, and other flat concrete surfaces may be field mixed using volumetric/mobile mixers conforming to ASTM C 685.

00440.14(a) General - In the work item list, replace the square tube sign support line with the following line:

Perforated Steel Square Tube Sign Support Footings00920

00440.14(b) Delivery Tickets - Replace the last sentence with the following:

Delivery tickets are not required for field-mixed concrete except when volumetric/mobile mixers are used.

SECTION 00442 - CONTROLLED LOW STRENGTH MATERIALS

Comply with Section 00442 of the Standard Specifications.

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SECTION 00445 - SANITARY, STORM, CULVERT, SIPHON, AND IRRIGATION PIPE

Comply with Section 00445 of the Standard Specifications modified as follows:

Add the following definition:

Steel Reinforced Polyethylene - Steel reinforced ribbed high density polyethylene.

00445.80(a) Pipes - In the length bullet, add ", to the nearest foot" after the word "applicable".

SECTION 00470 - MANHOLES, CATCH BASINS, AND INLETS

Comply with Section 00470 of the Standard Specifications.

SECTION 00490 - WORK ON EXISTING SEWERS AND STRUCTURES

Comply with Section 00490 of the Standard Specifications.

SECTION 00496 – UTILITY UNDERGROUNDING

Section 00496, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00496.00 Scope - This work consists of installing electrical and communication conduit by open trench or horizontal directional drill (HDD) methods, vaults, hand holes and other utility structures required for aerial utility undergrounding work. Install PGE facilities according to PGE requirements as outlined in the PGE 2014-2015 Electrical Service Requirements Manual.

Materials

00496.10 Conduit –

- (a) All Portland General Electric (PGE) conduits shall be electrical-grade Schedule 40 gray PVC conduit. Sweeps of PVC, rigid steel, and fiberglass are acceptable. HDPE duct may be used for horizontal directional boring applications. The duct shall meet the requirements of PGE specification L22501.
- (b) All CenturyLink (CTL) and Comcast Cable (Comcast) conduits shall be electrical-grade Schedule 40 PVC conduit.

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- (c) Contact each utility company six (6) weeks in advance of conduit installation. See 00150.50(f) for utility contact information. HDPE duct may be used for horizontal directional boring applications.

00496.11 Vaults, Hand Holes and Other Electrical Structures – All vaults, hand holes and other electrical structures shall be of the type and size shown on the plans and as approved by the utility company.

Construction

00496.40 Trench Excavation and Horizontal Directional Drill – Excavate and horizontal directional drill according to 00960.41 and the details shown.

00496.41 Conduit – Install conduit according to 00960.42 and the details shown. A representative of the appropriate utility company shall be on hand during conduit installation.

Locate trenches as shown and as directed. All joints shall be clean and glued to prevent separation and minimize water in the conduit system. Conduits shall be laid in straight lines, as much as possible, with a minimum of joints. All conduits shall be kept clean of foreign materials, and all conduit ends must be capped with end caps. Duct tape is not to be used for capping ends of conduit runs. The Contractor shall run a mandrill through each conduit run to prove conduits are free and clear of all obstructions. A minimum of 12" radial clearance shall be maintained between PGE facilities and other facilities.

Install a 4/0 ground wire, provided by PGE, external to the conduit were shown. Place a Kevlar pull string, in each conduit for future use in conductor pulling operations. Pull strings must be kept from being glued to the conduit or from being caught in a joint. Each string shall be free moving from each vault or terminal location, and must be secured at each end to prevent accidental loss in conduit. All conduit ends, at each structure, shall be plugged and tagged with "To" and "From" locations. Conduit installation shall be approved by the Engineer prior to backfilling.

00496.42 Vaults, Hand Holes and Other Electrical Structures – Install all vaults, hand holes and other electrical structures required for aerial undergrounding according to manufacturer's specifications, the details shown, and as directed. A representative of PGE shall be on hand during installation.

00496.43 Work by Utilities:

(a) PGE – PGE work consists of undergrounding existing aerial power facilities within the project limits along Rosemont Road and portions of Old Parker Road. PGE will provide transformers and other electrical facilities required to complete undergrounding work, as well as pull the conductor cable once conduit and power facilities are installed. Install all conduit and power facilities required to complete undergrounding work except for the conductor cable. Following conduit installation, install a pull wire in all conduit runs to facilitate conductor cable installation. PGE will relocate or adjust other facilities within the project area in conflict with the proposed design prior to or during construction.

(b) CenturyLink – CenturyLink work consists of undergrounding existing aerial telephone and fiber optics facilities within the project limits along Rosemont Road and portions of Old

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Parker Road. CenturyLink will pull its cables once conduit is installed. Install all conduit required to complete undergrounding work. Following conduit installation, install a pull wire in all conduit runs to facilitate telephone and fiber optics installation.

- (c) **Comcast** – Comcast work consists of undergrounding existing aerial cable and fiber optics facilities along Rosemont Road and portions of Old Parker Road. Comcast will pull the its cables once conduit is installed. Install all conduit required to complete undergrounding work. Following conduit installation, install a pull wire in all conduit runs to facilitate cable installation.

Measurement

00496.80 General – The quantities of conduit installation will be measured by the length of trench or length of horizontal directional drill required to complete the installation, irrespective of the number of conduits installed, measured along the conduit nearest the centerline of the trench, with no deductions for junction boxes or fittings, from center to center of structures, junction boxes, or the ends of the conduit, whichever is applicable. There will be no separate measurement of the trench excavation, bedding, backfill, resurfacing or horizontal directional drilling required for conduit installation.

The quantities of vaults, hand holes, and other electrical structures required for aerial undergrounding will be measured on the unit basis, per each, by actual count. Required earthwork, conduit connections, aggregate base backfill, and concrete required to complete installation is considered incidental to the pertinent structure and no separate measurement will be made.

Payment

00496.90 General – The accepted quantities of utility undergrounding will be paid for at the Contract unit price for the following items:

Pay Item	Unit of Measurement
(a) Installing Utility Conduit.....	Foot
(b) Installing Utility Structures.....	Each

Item (b) includes all vaults, hand holes and other electrical structures required for aerial undergrounding. Sidewalk will be paid for separately.

Payment will be payment in full for furnishing and placing all equipment, labor and Incidentals necessary to complete the work as specified, including trench excavation, bedding, pipe zone backfill, trench backfill and horizontal directional drilling. Payment will be payment in full for furnishing and placing all material necessary to complete the work as specified, except as otherwise specified in this Section.

SECTION 00594 - PREPARING AND COATING METAL STRUCTURES

Comply with Section 00594 of the Standard Specifications modified as follows:

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00594.01(a) Abbreviations - Add the following abbreviation to the end of the list:

WFT - Wet Film Thickness

00594.01(b) Definitions - Replace the “Coat” definition with the following definition:

Coat - An application, or applications, of paint or other protective material to a substrate to form a specific single coat thickness.

Add the following definition to the end of the list:

Wet Film Thickness - Coating layer dimension determined with a wet film thickness gauge immediately after application and before curing.

Add the following subsection:

00594.02 Design Services - Provide structural design services by a civil or structural engineer licensed to practice in the State of Oregon.

Provide marine design services by an engineer licensed in the State of Oregon to practice in the field of naval architecture or marine engineering.

00594.03 Precoating Conference - Replace this subsection, except for the subsection number and title with the following:

Before beginning any preparation and coating work, meet with the Contractor’s supervisory personnel and quality control manager, any preparation or coating subcontractors’ supervisory personnel, a representative from the coating manufacturer, and the Engineer at a mutually agreed upon time. At least 21 calendar days before the precoating conference, submit a plan for accomplishing all phases of the preparation and coating work, including the following:

- Ventilation
- Containment
- Surface preparation
- Painting
- Coating materials
- Quality Control Plan
- Waste handling and disposal
- All other pertinent information

If the Contractor’s key personnel change, or if the Contractor proposes a significant revision to the plan for accomplishing the preparation and coating work, the Engineer may require additional precoating conferences.

Do not begin any preparation or coating work before the plan for completing the work has been approved.

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00594.05 Access and Containment For Field Preparation and Coating - Replace this subsection with the following subsection:

00594.05 Access and Containment For Field Preparation and Coating:

(a) Abrasive Blast Cleaning - Contain work debris that is generated from abrasive blast cleaning operations according to the Class 1A requirements of SSPC-Guide 6 and the following requirements:

- Type A1 rigid containment material with Type C1 rigid support structure in locations adjacent to traffic.
- Type A1 rigid containment floor decking.
- Type A2 flexible containment materials may be used where rigid containment materials are not specified. Provide flexible containment materials that are air impenetrable and have tear strength of at least 200 pounds per foot and tensile strength of at least 300 pounds per foot.
- Type H1 instrument verification of air pressure in rigid containment.
- Type H2 visual verification of air pressure in flexible containment.
- Type I1 minimum specified air movement 50 feet per minute cross draft. Use portable fans as needed to provide air movement in stagnant areas.
- Type J1 exhaust air filtration 99 percent cleaning efficiency for particulate diameters above 39 microns and less than 2 grains of particulate per thousand cubic feet of exhaust air or air recycled to the work area.
- Operate dust collection, air flow, and air movement equipment during blowdown to prevent dust from settling on the structure or within the containment.

(b) Tool Cleaning - Contain work debris that is generated from hand tool cleaning or power tool cleaning operations according to the Class 1P requirements of SSPC-Guide 6. For hand tool cleaning or vacuum shrouded power tool cleaning, ground covers or free-hanging tarpaulins are an acceptable alternate means of containment provided the debris is captured and controlled to the same degree as Class 1P. Provide Type A1 rigid floor decking work access platforms regardless of containment methods.

(c) Emissions - Emission from various containment systems will be assessed visually. Address any visible emissions immediately.

(d) Traffic Clearance - Maintain all traffic clearances shown. Do not allow the containment, cables, hoses, supplies, and equipment to encroach on the indicated traffic clearances at any time.

(e) Forced Air Ventilation - For containment using forced air ventilation, submit to the Engineer for review a sketch showing the size (length x width x height) and location of each containment that will be used and identifying the air moving equipment (manufacturer, model, and capacity in cubic feet per minute) for each containment, 21 calendar days before the pre-coating conference. Do not begin any containment work that requires forced air ventilation before the submittals have been approved by the Engineer.

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(f) Spill Response - Comply with Section 00290 for spill response, spill containment, and cleanup of spills and contamination.

(g) OSHA Requirements - Comply with all applicable requirements of the Occupational Safety and Health Administration, including but not limited to applicable portions of 29 CFR Ch. XVII, Sections 1926.55 through 1926.57, 1926.62, 1926.65, 1926.450 through 1926.454, and 1926.500 through 1926.503.

00594.10 Materials - Add the following to the end of this subsection:

Provide the following coating materials:
Black 595 Federal Color Number 37038

00594.11(a) Coating System - Replace this subsection, except for the subsection number and title, with the following:

Furnish coating materials from the QPL and according to the following requirements:

- For shop coating of steel or iron surfaces, furnish a 3 coat system with organic or inorganic zinc primer.
- For maintenance coating of steel or iron surfaces, furnish a 3 coat system with organic zinc primer.
- For field rehabilitation of coated steel or iron surfaces, furnish a 3 coat system with surface tolerant organic zinc primer.
- For shop coating or maintenance coating of non-ferrous surfaces, furnish a 2 coat system.

Do not apply coating materials until certifications required by 00165.35(a) and 00165.35(b) have been provided and the materials are accepted for use by the Agency.

00594.11(b) Manufacturing - Replace this subsection, except for the subsection number and title, with the following:

Furnish coating material meeting the following requirements:

- Prepared by the manufacturer.
- For multi-component coatings, be manufactured in separate, properly portioned containers and ready for field mixing. Do not field mix multi-component coatings unless approved by the Engineer.
- Homogeneous, free of contamination, and of a consistency suitable for the specified use.
- Does not require a pretreatment chemical or material prior to application of the prime coat, except as stipulated in these Specifications.
- Includes required tinting and coloring materials at the time of manufacturing. Do not use gray for the first prime coat.
- A sufficiently different shade for each individual coat from the manufacturer, so that skips and holidays can be easily detected. Do not tint the coating material in the field unless approved by the Engineer.

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- Unless otherwise specified, conforms to the following colors:
 - Federal Standard 595C color #24272 for ODOT Green top coat.
 - Federal Standard 595C color #30059 for weathering steel top coat.
 - Federal Standard 595C color #26357 for miscellaneous metal on concrete bridges.
- Does not vary in composition without prior notice by the manufacturer and approval of the Engineer.
- Has sufficient time remaining on the manufacturer's recommended shelf life to allow for application before expiration of that shelf life.

00594.11(c) Packaging - Replace this subsection, except for the subsection number and title, with the following:

Furnish unopened containers from the manufacturer that meet the following requirements:

- Constructed of new and unused materials.
- Not have a capacity of more than 6 gallons.
- Meet U.S. Department of Transportation's Hazardous Material Shipping Regulations.
- If necessary, constructed with an interior lining to prevent attack by the coating material. The lining shall not delaminate from the container wall so as to contaminate the coating.
- Labeled with a quality compliance certificate according to 00165.35, showing the following:
 - Manufacturer's name
 - Exact title of coating material
 - Manufacturer's batch number
 - Date manufactured
 - Identification of all toxic substances
 - Handling and application precautions

00594.11(d) Sampling and Testing - Replace the paragraph that begins "Have the coating material..." with the following paragraph:

Have the coating material manufacturer furnish the following to the ODOT Materials Laboratory:

Replace the bullet that begins "A material safety data..." with the following bullet:

- A Material Safety Data Sheet or Safety Data Sheet with the initial sample of each type of coating material and thinner.

00594.11(e) Specifications - Replace this subsection with the following subsection:

00594.11(e) Slip-Critical Connections - The primer coat on steel-to-steel contact surfaces at all slip-critical structural bolted connections using high strength bolts shall be in conformance with Class B (slip coefficient of 0.5) coating requirements in "Test Method to

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Determine the Slip Coefficient for Coatings Used in Bolted Joints", as adopted by the Research Council on Structural Connections.

Add the following subsection:

00594.13 Chloride Remover - When used, furnish a chloride remover from the QPL that is fully compatible with the coating system according to the recommendations of the coating system manufacturer.

Add the following subsection:

00594.30 Quality Control Personnel - Provide a quality control manager that is responsible for managing all preparation and coating quality control activities. The quality control manager shall not be employed in a supervisory role for any preparation or coating work.

00594.40(a) New Steel Structures - Replace the sentence that begins "Prepare and coat new..." with the following sentence:

Prepare and coat new erected steel structures and features.

Add the following subsection:

00594.40(e) Lighting - Provide lighting during all periods of preparation, coating, and inspection in accordance with SSPC-Guide 12, "Guide for Illumination of Industrial Painting Projects".

00594.41(b) Welded Areas - Replace the paragraph that begins "Do not apply..." with the following paragraph:

Do not apply coating within 4 inches of the weld before the welding operation is complete.

00594.42(b) Existing Steel Structures - Replace this subsection, except for the subsection number and title, with the following:

Blast-clean existing steel structure surfaces to be coated according to SSPC-SP 10 "Near White Blast Cleaning" with the appearance of the blast-cleaned surface to closely approximate Pictorial Standard SP 10 of SSPC-Vis 1, or clean to SSPC-SP WJ-2 "Very Thorough Waterjet Cleaning" with the appearance of the water-jetted surface to closely approximate Pictorial Standard WJ-2 of SSPC-Vis 4.

00594.42(c) Rehabilitating Existing Coated Steel Structures - In the paragraph that begins "Clean all existing...", replace the first sentence with the following sentence:

Prepare all existing steel surfaces to be coated according to SSPC-SP 15, "Commercial Grade Power Tool Cleaning".

In the paragraph that begins "The areas to...", replace the first sentence with the following sentence:

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Prepare all existing coated surfaces exposed by the removal of the existing components involved in the rehabilitation, all areas in which rivets, bolts, or plates are to be removed, and areas damaged by erection or other Contractor operations.

00594.42(d-2) Aluminum - Replace this subsection, except for the subsection number and title, with the following:

Solvent clean surfaces to be coated according to SSPC-SP 1, then follow by a light brush blast according to SSPC-SP 7 with a maximum nozzle pressure of 75 psi. Hand sand the surface to create a minimum 1 mil profile, or clean the surface according to the manufacturer's recommendation.

00594.42(e-2) Abrasives - In the paragraph that begins "Perform blast-cleaning...", replace the first sentence with the following sentence:

Perform blast-cleaning using an abrasive of a size which will continually produce an angular surface profile of at least 1 mil, but not more than 4 mils, as measured according to ASTM D 4417 using replica tape on the prepared surface.

00594.42(e-3) Air - Replace this subsection, except for the subsection number and title, with the following:

For blast-cleaning or blowing down, use high-pressure air that is free of water, oil, or any other material detrimental to the coating system. Provide adequate separators and traps. Test compressed air cleanliness daily according to ASTM D 4285, or as directed.

00594.42(e-4) Rust Inhibitor - Replace this subsection with the following subsection:

00594.42(e-4) Water - Use water for water jet cleaning that is clean, potable and does not contain more than 75 milligrams per liter of chlorides or 200 milligrams per liter of sulfates. Filter, recycle, and dispose of water when surface soluble salt levels cannot consistently be kept below 70 microsiemen per centimeter, measured with a conductivity meter capable of reading to 1 microsiemen per centimeter.

Use a rust inhibitor that is recommended by the coating manufacturer. Use the rust inhibitor to prepare a test panel at least 14 calendar days before beginning work, to show that the inhibitor does not cause loss of bond between the steel substrate and the primer. Do not use the rust inhibitor product if the test panel does not meet the adhesion requirements of 00594.43(g).

00594.42(e-5) Cleaning Procedures - Replace this subsection, except for the subsection number and title, with the following:

Perform blast-cleaning operations and pressure washing, as required, without damaging partially or entirely completed portions of the work. Do not blast-clean adjacent to areas being coated.

Examine blast-cleaned and pressure washed surfaces for any traces of corrosion, water, oil, grease, soluble salts, and other material deposited during the cleaning operations. If

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present, remove any detrimental material by solvent cleaning and blast-clean the surface again.

00594.42(e-6) Final Preparation - Replace this subsection, except for the subsection number and title, with the following:

Do not begin coating before:

- Blowing down prepared surfaces using high pressure air within the fully enclosed containment, with the specified ventilation operating, and supplemented by brushing if required.
- Determining that the prepared surfaces are free of all residue.
- Repairing all damaged galvanizing according to ASTM A 780.
- Obtaining approval from the Engineer.

00594.43(a) Description - Replace the bullet that begins “The best practices...” with the following bullet:

- The best practices of the trade in accordance with SSPC Painting Manual, Volume 1, “Good Painting Practice”.

00594.43(b-1) Rejection - Replace this subsection, except for the subsection number and title, with the following:

Reject and do not use the contents of a container if:

- The material does not arrive at the application site in the original, unopened manufacturer’s containers.
- The container is punctured or has a break in the lid seal.
- The coating materials have begun to polymerize, solidify, gel, or deteriorate in any other manner.
- The recommended shelf life, as stated in the manufacturer's product data sheets, has expired.

00594.43(b-3) Thinning - Replace this subsection, except for the subsection number and title, with the following:

Do not add additional thinner at the application site unless approved by the Engineer. If allowed, furnish the amount and type of thinner in conformance with the manufacturer's recommendations.

00594.43(c-1) Surface Condition - Replace this subsection, except for the subsection number and title, with the following:

Ensure that surfaces to be coated are free of moisture, dust, grease or other substances which would prevent the bonding of succeeding applications. Protect freshly coated surfaces from contamination by abrasives, dust or foreign materials from any source. Do not apply succeeding coats until the Engineer has approved the prepared surface.

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00594.43(c-2) Application Methods - Replace this subsection, except for the subsection number and title, with the following:

Apply coating materials by air or airless spray, brush, roller, any combination of these methods, or as recommended by the coating material manufacturer, unless otherwise specified. If air is used for application, ensure that it is free of water, oil, or any other material detrimental to the coating system. Provide adequate separators and traps and test air cleanliness daily according to ASTM D 4285, or as directed. Regardless of which application method is used to apply the coating, use brushes to push the coating into complex details, crevices, gaps, difficult to access areas and where spraying does not adequately cover or penetrate. All application techniques shall conform to Section 7 in SSPC-PA 1.

Apply subsequent coats of paint in sufficiently different shades so that skips and holidays can be easily detected.

Apply each coat in a uniform layer, completely covering the preceding coat. Correct runs, sags, skips or other deficiencies before application of succeeding coats. Perform re-cleaning, application of additional coating, or other measures, as directed by the Engineer, at no additional cost to the Agency.

For each applicator, perform at least one WFT test 15 minutes after coating application and one WFT test per hour thereafter. Test immediately after coating application and report results.

00594.43(d-1) Number of Coats and Film Thickness - In the paragraph that begins "Apply all coats..." replace the word "date" with the word "data".

Replace the paragraph that begins "Apply only a coating..." with the following paragraph:

Only apply zinc primer coating to steel-to-steel and steel-to-concrete contact surfaces, except top flanges, whether in the shop or field. Apply the full coating system so that it extends 1 inch into the steel-to-concrete contact surface if accessible. The dry film thickness of the primer on steel-to-steel contact surfaces shall not be less than 3 mils nor more than the manufacturer's class "B" certification allows.

00594.43(d-2) Stripe Coats - Replace the paragraph that begins "The full prime coat..." with the following paragraph:

The full prime coat may be applied prior to the prime stripe coat to prevent flash rusting of the cleaned steel surfaces if approved by the Engineer. In either case, apply the first application of prime coat by the use of brushes as described in the definition of "Stripe Coat" in 00594.01(b).

00594.43(d-3) Coating Thickness and Coverage Requirements - In the paragraph that begins "Coating thickness measurements...", replace the first sentence with the following sentence:

The Engineer will take dry coating thickness measurements after the application of each coat and before application of the succeeding coat.

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Replace the paragraph that begins “The dry film thickness...” with the following paragraph:

The Engineer will take dry film thickness measurements with a type 2 gauge according to SSPC-PA 2. The minimum dry film thickness measurements and frequency of measurements will be in accordance with SSPC-PA 2, modified as follows:

00594.43(e) Time of Application - Replace this subsection, except for the subsection number and title, with the following:

Unless otherwise approved by the Engineer, prime existing steel structure surfaces according to one of the following methods:

- Prime on the same day that the surfaces are cleaned.
- Apply an approved rust inhibitor to the entire surface on the same day as cleaning, and prime within 48 hours after inhibitor application.
- Reblast all surfaces prior to coating.

Before priming surfaces prepared by waterjetting, ensure that the surfaces do not exceed “Light” flash rust as defined by the “Wipe Test” in SSPC-SP WJ-2. Ensure that all other surfaces are dry and free of flash rust before priming.

Apply each coat over the preceding coat as soon as possible, allowing for drying time of the preceding coat, weather, temperature, and similar factors, as well as the manufacturer's recommendations. A primer coat that exhibits freckle rust or is exposed to the weather for more than 60 days shall be re-prepared to the requirements of 00594.42.

Allow each coat to dry and sufficiently cure before recoating so the succeeding or additional coat can be applied without delamination, blistering, wrinkling, or loss of adhesion or cohesion. Recoat times shall conform to the manufacturer's recommendations unless they conflict with this Section or any coating problems develop. Do not revise recoat times without receiving approval from the Engineer.

00594.43(g) Adhesion - Replace this subsection, except for the subsection number and title, with the following:

Perform adhesion tests in accordance with ASTM D 4541, Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers, using "Test Method D, E, or F", as warranted or at the direction of the Engineer. Ensure that a minimum pull-off strength of 650 psi is achieved for zinc rich primers and tar based coatings, and a minimum pull-off strength of 1000 psi is achieved for all other coatings, including those over a zinc rich primer. When testing a coating or coating system with a DFT of more than 12 mils, score around the test fixture.

00594.43(h) Environmental Conditions - Replace the paragraph that begins “Application of coating...” with the following paragraph:

Do not apply coating materials if the Engineer determines that conditions are not favorable for proper application and performance of the coating.

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00594.44 Inspecting - In the test table, replace the “Cleanness of Abrasive Material” line with the following line:

Oil in the Abrasive Material ASTM D 7393

In the test table, replace the “Pull-off Strength of Coating” line with the following line:

Pull-off Strength of Coating ASTM D 4541 (Method D, E, or F)

00594.60(a) Surface Preparation - Replace the paragraph that begins “If approved...” with the following paragraph:

If approved by the Engineer, prepare small areas according to SSPC-SP 15 so it does not damage adjacent areas.

SECTION 00596 - RETAINING WALLS

Replace Section 00596 of the Standard Specifications with the following Section 0B596:

SECTION 0B596 - PREFABRICATED MODULAR RETAINING WALLS

Description

0B596.00 Scope - This work consists of furnishing and constructing prefabricated modular gravity retaining walls as shown and specified.

0B596.01 Proprietary Prefabricated Modular Walls - Select one of the following preapproved Prefabricated Modular proprietary retaining wall systems for the wall as shown:

- Ultrablock TM Retaining Wall System, provided by Ultrablock, Inc., telephone: 800-377-3877.

0B596.03 Definitions:

Appurtenances - Traffic barriers, guardrail, fences, non-standard coping, drainage structures, sign supports, lighting supports, sound barriers, foundations, and utilities that are not part of the retaining wall system but are connected to, resting on, or passing through the retaining wall system.

Alternate Gabion Basket Joint Fasteners - Spiral binders or high tensile locking spring steel clip or clamp-on ring type fasteners specified as an alternate to tie wire for assembling and joining gabion units.

Batter - The slope of the wall facing from vertical that is expressed as degrees or as a ratio of the horizontal change in inches for each 12 inches of vertical change. A vertical face has a zero batter.

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Bin Wall - A prefabricated modular gravity retaining wall system type composed of metal or precast concrete modules backfilled with granular structure backfill material.

Crib Wall - A prefabricated modular gravity retaining wall system type composed of interlocking longitudinal and transverse beams made of precast reinforced concrete and backfilled with granular structure backfill material.

Dry Cast Concrete Block Gravity Wall - A prefabricated modular gravity retaining wall system type composed of dry cast concrete blocks without soil reinforcements.

Gabion Gravity Wall - A prefabricated modular gravity retaining wall system type composed of assembled wire baskets that are connected together, filled with specified rock.

Manufacturer - The fabricator having exclusive production rights for a proprietary retaining wall system.

Nonproprietary Retaining Wall System - A retaining wall system that is not patented or trademarked and is shown on the plans.

Piecemark - An alpha-numeric marking that identifies a specific type of retaining wall component. All components with the same piecemark are considered identical. Piecemarks shown on the working drawings identify placement of the component.

Preapproved Proprietary Retaining Wall System - A wall system that is listed in Appendix 15-D of the Geotechnical Design Manual (GDM).

Preapproved Proprietary Retaining Wall System Options - Acceptable preapproved proprietary retaining walls listed in 0B596.01 when proprietary retaining wall systems are required.

Preapproved Proprietary Retaining Wall System Alternates - Acceptable preapproved proprietary retaining walls listed in 0B596.01 when non-proprietary retaining wall systems are shown.

Prefabricated Modular Retaining Wall System - A basic gravity retaining wall system type composed of solid or hollow prefabricated concrete or steel modules. Hollow modules are typically backfilled with granular structure backfill material. Prefabricated modular retaining walls include metal and precast concrete bin, precast concrete crib, gabion, dry cast concrete block, and wet cast concrete block gravity retaining walls.

Proprietary Retaining Wall System - A retaining wall system that is protected by trademark, patent, or copyright and is produced or distributed by a manufacturer having exclusive rights.

Retained Backfill - Unreinforced backfill within a distance of $H/2$ behind the back of the wall, where H is the total height of the wall excluding the leveling pad or footing.

Retaining Wall System - An engineered system of structural and geotechnical components that restrains a mass of earth. The terms "retaining wall system", "retaining structure", and "retaining wall" are used interchangeably.

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Wet Cast Concrete Block Gravity Wall - A gravity retaining wall system type composed of wet cast concrete blocks without soil reinforcements.

OB596.04 Proprietary Retaining Walls - Submit the following at least 30 Calendar Days before beginning construction of proprietary retaining walls:

- Complete stamped working drawings and design calculations prepared by the Manufacturer according to 00150.35.
- Manufacturer's field construction manual.
- Manufacturer's field representative name and qualifications.

Field verify existing ground elevations and bottom of wall elevations before preparing and submitting working drawings.

Obtain the Engineer's written approval before beginning construction of the wall system.

(a) Working Drawings - Working drawings according to 00150.35 are drawings that meet the requirements of the project documents, the AASHTO LRFD Bridge Design Specifications, as modified by the ODOT GDM, and are consistent with the preapproved retaining wall system.

Include the following items in the working drawings, as applicable:

- **General Notes** - Information for design and construction of the retaining wall.
- **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.
- **Elevation View:**
 - 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 and foundation bearing elevation along face of the wall.
 - Vertical dimensions of steps along the wall base (foundation bearing elevation).
 - Centerline stations and elevations at the beginning and end of the wall.
 - Horizontal offsets.
 - Changes in the top of wall slope.
 - Layout of prefabricated modular units.
 - Architectural treatment.

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- **Typical Sections:**
 - Typical sections at intervals of 50 feet or less along the wall.
 - Wall construction limits.
 - Original and final ground lines across typical sections, including roadways, highway structures, and other facilities.
 - Construction centerline stationing at each typical section.
- **Structural and Geometric Details:**
 - Leveling pad details, showing depths and limits of proposed excavation beyond the neat lines of the wall.
 - Prefabricate modular unit details.
 - Final front face batter.
 - Reinforcing bar bend details.
 - Surface and subsurface drainage details for the wall.
 - Prefabricated modular unit construction details at utility and drainage facilities, overhead sign support footings, guardrails, traffic barriers, piles, shafts, or other structures.
 - Maximum inclinations of wall backslope and foreslope.
 - Elevation, slope, and width of wall bench in front of wall.
 - Locations of anticipated shoring.
- **Appurtenances:**
 - Wall appurtenance details needed to construct the wall.
 - Wall appurtenance details that are required but not fully detailed on the plans.
- **Wall Construction Methods and Construction Sequence:**
 - Wall construction methods.
 - Construction sequence.
 - Locations of all shoring.
- **Materials and Quantity Summary List** - All items of each wall.

(b) Design Calculations - Design calculations are calculations that meet the requirements of the project documents, AASHTO LRFD Bridge Design Specifications, as modified by the ODOT GDM, and are consistent with the preapproved retaining wall system, and according to 00150.35.

Include the following items in the design calculations, as applicable:

- **Design Limits:**

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- Structural and geotechnical design input parameters and design assumptions.
- Wall design loads, load combinations, load factors, and resistance factors for each limit state.
- **Methodology:**
 - 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.
 - A set of hand calculations verifying typical computer generated output.
- **External Stability Calculations** - Calculations showing that the retaining wall system meets external stability requirements, including overturning, sliding, and bearing capacity.
- **Internal Stability Calculations:**
 - Calculations showing that the retaining wall meets internal stability requirements at each level of the wall.
 - Calculations showing adequate structural resistance of prefabricated modular units.
- **Compound Stability** - Calculations showing that the retaining wall meets compound stability requirements.
- **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.

Retaining wall design parameters vary and are dependent upon backfill materials used by the contractor. Manufacturer shall be responsible for determining the needed design parameters required for design and construction of the required walls and must state the assumed values used for design in the submittal calculations:

(c) Manufacturer's Field Construction Manual - A field construction manual according to 00150.37, is prepared by the manufacturer and includes detailed instructions for constructing the retaining wall.

0B596.05 Nonproprietary Retaining Wall Submittals - Submit complete unstamped working drawings according to 00150.35 at least 30 Calendar Days before beginning construction of nonproprietary retaining walls. Field verify existing ground elevations and bottom of wall elevations before preparing and submitting working drawings. Obtain the Engineer's written approval before beginning construction of the wall system.

Materials

0B596.10 General:

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(a) Proprietary Retaining Wall Systems - Provide all proprietary retaining wall system components from the same wall manufacturer. If there are conflicts between the Manufacturer's requirements and the Agency's requirements, the Agency's requirements prevail.

(b) Nonproprietary Retaining Wall Systems - Provide materials according to the applicable material Specifications.

(c) Quality Control - Provide quality control according to Section 00165.

0B596.11 Backfill:

(a) Gravel Leveling Pads Backfill - Furnish dense graded 1" - 0 or the 3/4" - 0 aggregate base material for leveling pads meeting the requirements of 02630.10.

(b) Modular Block Core and Drainage Backfill - Furnish 3/4" - No. 4 PCC aggregate material meeting the requirements of 02690.20 (a) through (f).

(c) Gabion Basket Fill - Furnish a durable well graded 4 to 8 inch size rock material meeting the requirements of 00390.11(b).

(d) Granular Structure Backfill - Furnish dense graded 1" - 0 or 3/4" - 0 aggregate base material meeting the requirements of 02630.10 and the following:

(1) Material Passing No. 200 Sieve - The amount of material passing the No. 200 sieve shall not exceed 15 percent by weight. Test according to AASHTO T 27 and AASHTO T 11.

(2) Plasticity Index - The plasticity index of the material passing the No. 40 sieve shall not exceed 6. Test according to AASHTO T 90.

(e) Pipe Drain Backfill - Furnish granular drain backfill material for drainage pipes meeting the requirements of 00430.11.

0B596.12 Concrete:

(a) Cast-in-Place Concrete for Leveling Pads - Furnish commercial grade concrete for leveling pads meeting the requirements of Section 00440.

(b) Precast Concrete Bin Units - Furnish precast concrete bin units with the following properties:

(1) Portland Cement Concrete - Class 4000 - 3/4 structural concrete meeting the requirements of Section 00540.

(2) Casting - Place concrete in each bin unit without interruption and consolidate with an approved vibrator. Use a release agent throughout the casting operation.

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(3) Supporting and Curing - Maintain full support, cure the units, and do not strip or remove the forms from the units until the concrete has obtained a minimum compressive strength of at least 1,000 psi.

(4) Finish - Finish the bin unit front face with a general surface finish according to 00540.53(a).

(5) Tolerances - Manufacture units within the following tolerances:

a. Unit Dimensions - Within $\pm 1/2$ inch between diagonals. Within $\pm 3/16$ inch for all other unit dimensions.

b. Unit Face - Smooth formed surfaces within $\pm 3/32$ inch when measured with a 3 foot straight edge. Textured-finished surfaces within $\pm 3/16$ inch when measured with a 3 foot straight edge.

(6) Acceptance of Bin Unit Concrete Strength - Acceptance will be according to 00540.17, except acceptance of concrete strength will be determined based on production sublots. A production subplot will consist of either 10 units or a single day's production, whichever is less. Cast one set of cylinders for each production subplot. The concrete strength of a production subplot will be represented by a single compressive strength test on a cylinder.

(7) Marking - On the rear face of each unit scribe the date of manufacture, the production subplot number, and the piecemark.

(8) Handling, Storage, and Shipping - Do not allow chipping, discoloration, cracks, fractures and connecting device damage during handling, storing, and shipping. Support stored units on firm blocking.

(9) Rejection - Units not meeting the requirements of this subsection will be rejected.

(c) Dry Cast Concrete Blocks - Furnish dry cast concrete blocks with the following properties:

(1) Aggregate, Strength, Freeze-Thaw Durability, Unit Weight, and Water Absorption:

- Aggregate meeting the requirements of ASTM C 33.
- Blocks meeting the requirements of ASTM C 1372.
- The average of three coupons or cores have minimum compressive strength of 4,000 psi as tested according to ASTM C 140.
- Individual coupons or cores have a minimum compressive strength of 3,500 psi as tested according to ASTM C 140.
- A minimum oven-dry unit weight of 125 pcf as tested according to ASTM C 140.
- Test, no longer than 18 months before delivery, freeze-thaw durability of five test specimens made with the same materials, concrete mix design, manufacturing process, and curing method that will be used on the project. At least four of the five test specimens shall have a weight loss of not more than

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1 percent of the block's initial weight after 150 freeze-thaw cycles as tested according to ASTM C 1262.

- A maximum water absorption of 1 percent above the water absorption of the subplot of blocks that were produced and passed the freeze thaw test. For the water absorption testing, do not use the same blocks used for the freeze-thaw test.

(2) Portland Cement - Portland cement meeting the requirements of 02010.10.

(3) Blended Hydraulic Cement - Blended hydraulic cement meeting the requirements of 02010.20.

(4) Tolerances - Manufacture within the following geometric tolerances:

- Molded length and width dimensions within $\pm 1/8$ inch of the block manufacturer's nominal length and width dimensions.
- Molded height dimension within $\pm 1/16$ inch of the block manufacturer's nominal height dimension.
- Rear height does not exceed the front height.
- Top and bottom face groove dimensions within the tolerances specified by the manufacturer.

(5) Color - Consistent natural color of dry cast concrete.

(6) Finish - Split-face units that when viewed from a distance of 10 feet under diffused light, chips, cracks, and other imperfections are not detectable.

(7) Acceptance of Blocks - Acceptance will be determined on tolerances, visual inspection, compressive strength, water absorption, freeze-thaw durability, and unit weight. Acceptance of compressive strength, water absorption, and unit weight will be based on production sublots. The maximum number of blocks per production subplot is 2,000 blocks. Test blocks at the frequency of one set for each production subplot. Acceptance of freeze-thaw durability will be based on the freeze-thaw testing requirements of 0B596.12(c-1).

(8) Marking - Indicate the date of manufacture and the production subplot number on each subplot of dry cast concrete blocks.

(9) Handling, Storage, and Shipping - Do not allow chipping, discoloration, cracks, or fractures during handling, storing and shipping.

(10) Rejection - Blocks not meeting the requirements of this subsection will be rejected.

(d) Wet Cast Concrete Blocks - Furnish wet cast concrete blocks with the following properties:

(1) Concrete - Commercial grade concrete meeting the requirements of Section 00440.

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(2) Marking - The rear face of each block is scribed with the date of manufacture, the production subplot number, and the piecemark.

(3) Color - Consistent natural color of wet cast concrete.

(4) Finish - Smooth face blocks that, when viewed from a distance of 10 feet under diffused light, chips, cracks, and other imperfections are not detectable.

(5) Tolerances - Molded length and width dimensions within 1/4 inch from the manufacturer's dimensions. Molded height dimension within 1/8 inch of the manufacturer's dimension.

(6) Handling, Storing, and Shipping - Do not allow chipping, discoloration, cracks, or fractures during handling, storing, and shipping.

(7) Acceptance of Blocks - Acceptability will be determined by tolerances, visual inspection, and concrete strength. Concrete strength will be based on production sublots. A production subplot is 20 blocks or a single day's production, whichever is less. The production subplot will be represented by a single compressive strength sample of one set of cylinders.

(8) Rejection - Blocks not meeting the requirements of this subsection, or any of the following defects will be rejected:

- Honeycombed or open texture concrete.
- Extreme color variation on front face of block.

(e) Precast Concrete Crib Walls - Furnish precast concrete crib walls with the following properties:

(1) Portland Cement Concrete - Furnish Class 4000 - 3/4 structural concrete meeting the requirements of Section 00540.

(2) Color - Consistent natural color of wet cast concrete.

(3) Finish - Smooth crib wall members that, when viewed from a distance of 10 feet under diffused light, chips, cracks, and other imperfections are not detectable.

(4) Tolerances - Manufactured within $\pm 1/8$ inch of the Manufacturer's nominal dimensions.

(5) Handling, Storing, and Shipping - Do not allow chipping, discoloration, cracks, or fractures during handling, storing, and shipping.

(6) Acceptance of Concrete Strength - Acceptance of concrete strength will be determined based on production sublots. A production subplot will consist of either 100 crib wall members or a single day's production, whichever is less. Cast one set of cylinders for each production subplot. The concrete strength of a production subplot will be represented by a single compressive strength test on a cylinder.

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(7) Rejection - Crib units not meeting the requirements of this subsection will be rejected.

0B596.13 Steel:

(a) Steel Reinforcement for Concrete - Furnish steel reinforcement for concrete meeting the requirements of Section 00530.

(b) Metal Bin Gravity Walls - Furnish metal bin walls meeting the requirements of Section 02350.

(c) Gabion Baskets - Furnish gabion baskets meeting the requirements of Section 02340.

0B596.14 Geosynthetics:

(a) Geotextile Filter Layer for Subsurface Drainage Systems - Furnish Type 1, Level B, drainage geotextile according to Section 02320.

(b) Geotextile Filter Layer Between Backfill and Gabion Walls - Furnish Type 2, Level B, riprap geotextile according to Section 02320.

(c) Geotextile Filter Layer Between Backfill and Other Prefabricated Modular Walls - Furnish Type 1 or Type 2, Level B, drainage geotextile according to Section 02320.

(d) Modular Block Drainage Fill Geotextile Filter - Furnish Type 1, Level B, drainage geotextile according to Section 02320.

(e) Perforated Drain Pipe - Furnish perforated drain pipe according to Section 00430.

Labor

0B596.30 Quality Control Personnel - Provide technicians with CAgT and CDT certifications.

0B596.31 Manufacturer's Field Representative Qualifications and Duties - Provide a Manufacturer's field representative with the following minimum qualifications:

- Is a licensed professional engineer in the State of Oregon.
- Has been trained and certified by the Manufacture in the construction, installation, and inspection of the selected proprietary retaining wall system.

The times that the Manufacturer's field representative are required to be present or available and the duties of the Manufacturer's field representative are:

- **Preconstruction Conference** - Meet with the Engineer and all contractor supervisory personnel and subcontractors involved in construction of the proprietary retaining wall

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at the preconstruction conference to discuss methods of accomplishing all phases of work required to construct the proprietary retaining wall.

- **Initial Wall Construction** - Be present at the retaining wall construction site and provide technical assistance to the Contractor and Engineer during all wall construction activities from the beginning of wall construction until at least 10 percent of the total wall length is successfully installed and backfilled to a height of at least 10 feet, or the actual wall height, whichever is less.

Submit daily field observation reports no later than noon of the next working day. Include the following information in the daily field observation reports:

- Date of observation.
 - Description all work observed and whether or not the work was acceptable.
 - Documentation of all communications with the Contractor and Engineer.
 - Name and signature.
- **Remaining Wall Construction** - Be available by phone or in person as needed throughout the remaining construction of the proprietary retaining wall to provide technical assistance to the Contractor and Engineer.
 - **Final Field Observations** - Conduct a final field observation of the completed retaining wall construction with the Engineer and Contractor. Submit a final field observation report that includes the following information one Calendar Day after the final field observation:
 - Date of observation.
 - Documentation of all retaining wall deficiencies.
 - Recommendation to accept or reject the retaining wall construction.

Provide a stamped final report to the Engineer no later than 10 Calendar Days after the final field observation of the retaining wall. Include the following information in the final report:

- Preconstruction meeting minutes.
- All daily field observation reports.
- Transcripts of all communications with the Contractor and the Engineer during the remaining wall construction phase.
- Final field observation report.

Construction

OB596.40 General:

(a) Proprietary Retaining Walls - Construct proprietary retaining walls 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 shall take precedence.

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Follow instructions and recommendations of the representative if approved by the Engineer.

(b) Nonproprietary Retaining Walls - Construct nonproprietary retaining walls as shown.

(c) Retaining Wall Relocations – Remove, save and reinstall existing walls in new locations as shown. The Contractor shall take care to preserve the integrity of all materials. Contractor will be responsible for damage incurred of any materials during the removal and re-installation process. Re-install walls in new location to match pre-existing conditions to the satisfaction of the Engineer. Contractor shall provide any additional miscellaneous materials required such as bedding, backfill, etc. to provide a complete re-installation.

0B596.41 Excavation and Foundation Preparation - Perform excavation and prepare and backfill wall foundations according to Section 00510 and the following:

- Grade the foundation level for a width equal to the width of the wall base plus 1.0 feet on each side. Do not reinforce backfill for over-excavated foundations without prior approval.
- Place backfill material in nearly horizontal layers not more than 8 inches thick. Compact the entire surface of each layer with at least three coverages, using equipment made specifically for compaction. Routing hauling and grading equipment over the surface is not acceptable as adequate compaction.
- Do not construct backfill when the backfill, the foundation, or the embankment on which it would be placed is frozen, or unstable.

0B596.42 Leveling Pads:

(a) Cast-in-Place Leveling Pads - Construct cast in place leveling pads with:

- Unreinforced concrete.
- A width of at least the block front face to block back face plus 12 inches (6 inches on each side of the facing units).
- A thickness of 6 inches \pm 1/4 inch.
- A location tolerance of \pm 1 inch of the design location.
- A top pad tolerance of \pm 1/8 inch of the design elevation.

Cure cast-in-place leveling pads at least 12 hours before placing the wall units.

(b) Gravel Leveling Pads - Construct gravel leveling pads with:

- A width of at least the width of the wall facing plus 12 inches (6 inches on each side of the facing units).
- A thickness of at least 6 inches.
- A location tolerance of \pm 1 inch of the design location.
- A top pad tolerance of \pm 1/8 inch of the design elevation.

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Compact gravel leveling pads in 3 to 4 inch lifts using a minimum of three passes of a walk behind vibratory plate compactor with a gross static weight of not less than 125 pounds and a total compaction static plus dynamic force of not less than 2,000 pounds.

0B596.43 Subsurface Drainage - Install subsurface drainage before constructing walls.

0B596.44 Erecting Walls:

(a) Dry Cast Concrete Block Walls:

(1) Placement - Begin placing the first course of blocks on top of and in full contact with the lowest foundation level of the leveling pad. Level and align all blocks. Lay blocks as close together as possible and parallel to the straight or curved line of the wall face. Place blocks in vertical or battered positions as shown. Level each course block-to-block and front-to-back. Set each block on the blocks below without rocking. Correct high areas by grinding or shimming with approved shims. Do not use shims within 1 inch of the front face. Do not exceed a shim stack thickness of 1/16 inch. Stack all blocks in a running bond pattern with each block spanning the joint below.

Place granular structure backfill with each course of blocks. When shown, place modular block core backfill and drainage fill backfill, and install drainage fill geotextile and shear pins with each course of blocks. Remove all backfill that is on top of the blocks before installing the next course of blocks or soil reinforcements. Attach the top row of dry cast concrete blocks or cap blocks to the underlying blocks with an adhesive from the QPL. Clean the finished exposed wall face of all foreign material deposits.

(2) Tolerances:

- First course of wall blocks located within $\pm 1/4$ inch of the design horizontal alignment.
- Final out of plane concavity or convexity of the front face within $\pm 3/4$ inch in 10 feet.
- Final deviation from the design batter within $\pm 1 1/4$ inch for each 10 feet of wall height.
- Outward leaning batter is zero.
- Each course of blocks within $\pm 1/16$ inch of level when checked with a 4 foot straight edge level.
- Out of plane offset between consecutive rows within $3/4$ inch of the planned offset.
- Finished top of wall elevation within ± 1 inch of the design elevation.

(b) Wet Cast Concrete Block Walls:

(1) Placement - Begin placing the first course of blocks on top of and in full contact with the lowest foundation level of the leveling pad. Level and align all blocks. Lay blocks as close together as possible and parallel to the straight or curved line of the

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wall face. Place blocks in vertical or battered positions as shown. Level and set each block on the blocks below without rocking. Correct high areas by grinding or shimming with approved shims. Do not use shims within 1 inch of the front face. Do not exceed a shim stack thickness of 1/8 inch. Stack all blocks in a running bond pattern with each block spanning the joint below.

Place granular structure backfill with each course of blocks. When shown, place modular block core backfill and drainage fill backfill, and install drainage fill geotextile and shear pins with each course of blocks. Remove all backfill that is on top of the blocks before installing the next course of blocks or soil reinforcements. Clean the finished exposed wall face of all foreign material deposits.

(2) Tolerances:

- First course of wall blocks located within $\pm 1/4$ inch of the design horizontal alignment.
- Final out of plane concavity or convexity of the front face within $\pm 3/4$ inch in 10 feet.
- Final deviation from the design batter within $\pm 1 1/4$ inch for each 10 feet of wall height.
- Outward leaning batter is zero.
- Each course of blocks within $\pm 1/8$ inch of level when checked with a 4 foot straight edge level.
- Front-to-back tilting within $\pm 1/4$ inch of the design batter when measured with a straight edge level long enough to span the entire front-to-back distance of the block.
- Out of plane offset between consecutive rows within $\pm 3/4$ inch from the planned offset.
- Finished top of wall elevation within ± 1 inch of design elevation.

(c) Gabion Walls:

(1) General - Select and use:

- The same style of mesh for the gabion panel bases, ends, sides, diaphragms, and lids.
- The same method of joining the edges of a single gabion unit.
- The same method of tying successive gabion units together throughout each structure.

Place riprap geotextile according to Section 00350 and the following:

- Minimum overlap shall be 12 inches.
- Against the back of the gabion wall before placing backfill material.

(2) Assembly - Assemble each style of gabion by rotating the panels into position and joining the vertical edges with tie wire or alternate fasteners.

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If twisted wire panels are tied with tie wire, join the selvage vertical edges with alternating single and double loops at 4 inch nominal spacing.

If welded wire panels are tied with tie wire, pass the tie wire through each mesh opening along the vertical edges joint and secure with a half hitch locked loop.

Leave no openings greater than 4 3/4 inches (line dimension) along the edges or at corners of tied or spiral bound gabions of either mesh style. Crimp the edges of spiral binding wire to secure the spiral in place.

If high tensile fasteners are used instead of tie wire, install one fastener in each mesh opening according to the manufacturer's recommendations.

(3) Placement - Set the empty gabions in place and connect each gabion to the adjacent gabion along the top and vertical edges with tie wire or spiral binders. Connect each layer of gabions to the underlying layer along the front, back and sides with tie wire or spiral binders in the same manner as specified for assembly of baskets. Common wall construction will not be allowed.

Before filling each gabion with rock, remove all kinks and folds in the wire fabric and properly align all baskets. Remove all temporary clips and fasteners. The assembled gabion baskets may be placed in tension before filling.

Concurrently with the filling of the baskets, place granular structure backfill around the assembled baskets to the limits shown. Maintain the outside backfill approximately level with the inside fill.

(4) Basket Filling - Place rock by hand or machine. Maintain basket alignment, avoiding bulges, and fill with minimum voids. Provide an exposed rock surface that is smooth, neat appearing, and has no sharp edges projecting through the wire mesh.

Place the rock in layers to allow placement of internal connecting wires in each outside cell of the structure or when directed at the following intervals:

- None required for 1 foot high baskets.
- At the one half point for 1 1/2 foot high baskets.
- At one third points for 3 foot high baskets.

Fill the basket so the lid will bear on the rock when it is closed. Secure the lid to the sides, ends, and diaphragms with tie wire or spiral binders in the same manner as assembling the baskets.

(5) Repairs - During construction, repair and secure all breakage of the wire mesh that results in mesh or joint openings larger than 4 3/4 inches (line dimension). Make repairs using 13 1/2 gauge galvanized tie wire as directed.

Repair damaged PVC coated wire in a manner that provides the same degree of corrosion resistance as the undamaged wire, according to the manufacturer's recommended repair procedures and as approved.

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(6) Tolerances:

- First course of gabion units within $\pm 1/4$ inch of the design horizontal alignment.
- Final out of plane concavity or convexity within ± 2 inches in 10 feet.
- Final deviation from the design batter within ± 1 inch for each 10 feet of wall height.
- Outward leaning batter is zero.
- Out of plane offset between consecutive rows within ± 1 inch from the planned offset.

(d) Metal Bin and Precast Concrete Bin Walls:

(1) Placement - Begin placing the first course of bin wall units on top of and in full contact with the prepared leveling pad surface. Concurrently with the assembly of the bins, place granular structure backfill within and around the bins of the assembled wall to the limits shown. Maintain the outside backfill approximately level with the inside backfill.

(2) Tolerances:

- First course of units within $\pm 1/4$ inch of the design horizontal alignment.
- Final out of plane concavity or convexity within $\pm 1 1/4$ inches in 10 feet.
- Final deviation from the design batter within ± 1 inch for each 10 feet of wall height.
- Outward leaning batter is zero.
- Out of plane offset between consecutive rows within ± 1 inch from the planned offset.

(e) Precast Concrete Crib Walls:

(1) Placement - Begin placing the first course of crib wall units on top of and in full contact with the prepared leveling pad surface. Concurrently with the assembly of the cribs, place granular structure backfill within and around the cribs of the assembled wall to the limits shown. Maintain the outside backfill approximately level with the inside backfill. Fill depressions of stringers and spacers and compact without displacing them from line and batter.

(2) Tolerances:

- First course of units within $\pm 1/4$ inch of the design horizontal alignment.
- Final out of plane concavity or convexity within $\pm 1 1/4$ inches in 10 feet.
- Final deviation from the design batter within ± 1 inch for each 10 feet of wall height.
- Outward leaning batter is zero.
- Out of plane offset between consecutive rows within ± 1 inch from the planned offset.

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0B596.45 Geotextile Placement - Install geotextiles according to Section 00350 and as shown.

0B596.46 Drain Pipe Placement - Install drain pipe according to Section 00430 and as shown.

0B596.47 Backfill Placement:

(a) General - Do not misalign wall units or damage wall components when placing backfill material. Remove and replace all misaligned or damaged wall materials at no additional cost to the Agency.

(b) Compaction - Meet the following requirements:

(1) Equipment - Provide the following compaction equipment:

a. Backfill In and Within 3 Feet Behind Wall Units - Walk behind vibratory roller compactor with a single smooth drum, vibratory plate compactor, or rammer/tamper plate compactor; each with a gross static weight of not more than 1,000 pounds and a total compaction static plus dynamic force of not more than 5,000 pounds.

b. Backfill More Than 3 Feet Behind Wall Units - Vibratory roller compactor with a single smooth drum, vibratory plate compactor, or rammer/tamper plate compactor.

(2) Maximum Density and Optimum Moisture Content - Determine maximum density and optimum moisture content of the MSE granular backfill material according to AASHTO T 99 Standard Proctor Method A, with coarse particle correction according to AASHTO T 224.

(3) Moisture Content - Prepare backfill material to within minus 4% to plus 2% of optimum moisture content at the time of compacting. Add water to material that does not contain sufficient moisture and thoroughly mix. Remove excess moisture by manipulation, aeration, drainage, or other means before compacting.

(4) Density:

a. Backfill In and Within 3 Feet Behind Wall Units - Compact to 95% of maximum density using the required number of passes determined according to 0B596.47(b-5-a).

b. Backfill More Than 3 Feet Behind Wall Units - Compact to 95% of maximum density determined according to 0B596.47(b-5-b).

(5) Testing Methods and Frequency:

a. Test Pad Method - Before placing the wall backfill, determine the number of passes necessary to achieve the specified density by constructing a test pad that is at least 5 feet wide, 15 feet long, and 3 feet in final depth. Construct test pad fill in layers no more than 8 inches thick using the same equipment and methods that

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will be used to compact the wall backfill. Perform at least one density test according to AASHTO T 310 on each test pad layer. Construct and test a new test pad when changes in material occur or different equipment is used during the construction of the wall backfill, except a new test pad is not required for modular block drainage backfill.

b. Nuclear Gauge Method - Test in-place field density according to AASHTO T 310. Test at the frequency required in the ODOT Manual of Field Procedures.

(6) Deflection Requirement - Conduct at least one deflection test, witnessed by the Engineer on each compacted layer of backfill according to ODOT TM 158. If the tested layer exhibits yielding, deflection, reaction, or pumping, rework the area to provide acceptable test results before placing the next layer.

Maintenance

0B596.60 Protecting Work - Protect and repair work as follows:

- Do not allow runoff from adjacent areas to enter the wall construction site during construction operations.
- At the end of each day's operation, direct potential runoff away from the wall by sloping the last lift of backfill away from the wall.
- Rework and repair all damaged subgrade areas to the depth where undamaged work is encountered.

Measurement

0B596.80 Measurement – Measurement of retaining walls will be by the square foot of face area (excluding cap blocks) as measured by actual face of blocks placed including whole blocks that may be fully or partially buried.

Payment

0B596.90 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) Retaining Wall, Prefabricated Modular Gravity	Square Foot
(b) Retaining Wall, Re-installed Modular Gravity	Square Foot

In item (a), 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.

In item (b), payment will be payment in full for removing, preserving and placing all existing materials, furnishing additional materials as needed and for furnishing all equipment, labor, and incidentals necessary to complete the work as specified.

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Excavation will be paid for according to 00330.90.

No separate or additional payment will be made for:

- stamped working drawings and design calculations
- manufacturer's representative
- shoring, leveling pads, and specified backfill
- wall drainage and filter systems including all trenching, resurfacing and connection to an approved outlet location as necessary for a fully functioning system.
- cast-in-place and precast standard coping

SECTION 00620 - COLD PLANE PAVEMENT REMOVAL

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

00620.42 Disposal of Materials - Replace this subsection, except for the subsection number and title, with the following:

Dispose of all materials according to 00290.20.

Add the following subsection:

00620.44 Cold Planing Operations

All edges remaining after cold plane pavement removal shall be vertical to accept the succeeding full depth asphalt lift. Vertical edges left at the edge of the grinding drum are acceptable. Rounded edges where the face of the grinding drum is terminated are not allowed. Rounded edges shall be ground vertical by rotating the grinding machine or saw cutting.

00620.90 Payment – Add the following to the end of this subsection:

Payment includes removal, haul and disposal of cold planed surfacing material. Payment will only be made for those areas shown or as directed by the Engineer. No separate payment will be made if the Contractor elects to remove existing pavement at his own option by cold plane pavement removal.

SECTION 00641 - AGGREGATE SUBBASE, BASE, AND SHOULDERS

Comply with Section 00641 of the Standard Specifications modified as follows:

00641.12 Limits of Mixture - Replace this subsection, except the subsection number and title, with the following two paragraphs:

Provide a mixture of aggregate and water having a uniform moisture content sufficient to obtain the required compaction. Proportions will be in percentages by weight and will be

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known as the Mix Design. Determine the proportion of aggregate and water according to the MFTP. The amount of water for the Mix Design will be based on the dry weight of the aggregate.

When introducing water at the mixing plant, furnish the mixture with a tolerance of $\pm 2\%$ of the optimum water content at the time of mixing. If approved, excess percentage of water may be allowed. The Agency will treat excess percentage of water according to 00641.80(d).

00641.44(a-1) Dense-graded Aggregates - In the paragraph, replace "100%" with "95%".

SECTION 00730 - EMULSIFIED ASPHALT TACK COAT

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

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

No separate or additional payment will be made for emulsified asphalt tack coat.

SECTION 00744 - MINOR HOT MIXED ASPHALT CONCRETE (MHMAC) PAVEMENT

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

00744.01 Abbreviations - Add the following abbreviation to the beginning of the list:

MAMD - Moving Average Maximum Density

00744.02 Definitions - Add the following definitions:

Lot Size - A lot is the total quantity of material or work produced per JMF per project. The following circumstances will require a different lot:

- A new JMF is used.
- The method for measuring compaction is changed.
- A change from one test procedure for measuring asphalt content to another test procedure for measuring asphalt content occurs.

The Engineer may allow material for irregular areas not completed during the main paving operations, such as driveways or guardrail flares to be evaluated as a separate lot.

Sublot Size - A subplot is 1,000 tons of MHMAC, or the amount of MHMAC placed in a day if less than 1,000 tons is placed.

00744.10 Aggregate - Replace the paragraph that begins "Furnish coarse, fine, and..." with the following paragraph:

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Furnish coarse and fine aggregates for MHMAC meeting the following requirements:

00744.10(c) Fractured Faces - In the sentence that begins "Provide crushed aggregate...", replace "AASHTO TP 61" with "AASHTO T 335".

00744.10(f) Fine Aggregate - Replace the paragraph that begins "Blend Sand..." with the following paragraph:

Blend sand is allowed for Levels 1, 2, and 3 mixes. Do not use more than 6% natural or uncrushed blend sand, by weight, in the total aggregate. Provide a means of verifying and documenting the amount of blend sand added to the aggregate.

00744.11(a) Asphalt Cement - Delete the paragraph that begins "Testing of the asphalt cement...".

Delete the paragraph that begins "Asphalt in RAP material, when blended...".

00744.13 Job Mix Formula (JMF) Requirements - Replace the paragraph that begins "Provide a JMF for the Project meeting the following..." with the following paragraph:

Do not begin production of MHMAC for use on the Project until the JMF is reviewed by the Engineer and written consent is provided to proceed. A new JMF is required if the asphalt cement grade, additives, or the source of the aggregate changes during production. Provide a JMF for the Project meeting the following criteria:

Add the following paragraph to the end of this subsection:

For dense graded Level 3 wearing course mixes, the mix design submittal shall include the results of the performance testing as outlined in the latest ODOT Contractor Mix Design Guidelines for Asphalt Concrete.

00744.14 Tolerances and Limits - Under the "Constituent of Mixture/MHMAC All Types" list, delete the "Asphalt Cement - ODOT TM 321 (Cold Feed/Meter)..." line.

In the "Constituent of Mixture/HMAC All Types" list, in the item that begins "Moisture content at...", replace "WAQTC TM 6" with "AASHTO T 329".

00744.16 MHMAC Acceptance - Replace this subsection with the following subsection:

00744.16 MHMAC Acceptance - For each 1,000 tons of placement, a CAT-1 shall 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)

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.

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Provide split samples for Verification and Independent Assurance testing to the Engineer when requested.

For each subplot, sample and submit to the Engineer the asphalt cement according to AASHTO T 40 and Section 4(C) of the MFTP for compliance testing by ODOT Central Materials Laboratory.

Testing for irregular areas not completed during the main paving operations, such as driveways or guardrail flares may be waived upon written notice and accepted visually by the Engineer.

When three or more tests are performed on a project, a price adjustment will be calculated according to 00744.95.

Add the following subsection:

00744.17 Small Quantity Acceptance - When less than three test results are obtained on a project, the MHMAC will be accepted according to the following:

(a) Within Specification Limits - If all subplot sample test results are within specification limits for all constituents (including compaction) the material will be accepted and the full bid price will be paid for the material represented by that test.

(b) Outside Specification Limits - If a subplot sample test result for any constituent is outside the specification limit the Engineer will have the backup sample tested.

(1) Backup Within Specifications - If the backup sample test results for all constituents are within specification, the material will be accepted and the full bid price will be paid for the material represented by that test.

(2) Backup Out of Specifications - If the backup sample test results are out of specification, the Contractor may choose to accept the price adjustment calculated according to 00744.95 or may choose to sample the in-place material for further testing. The price adjustments will be computed using all original test results as well as all backup test results. (If there are less than three tests, average the two tests you have and use the average as the third test result). In no case will the composite pay factor (CPF) be greater than 1.0.

(3) In-Place Samples - If the in-place material is sampled, the Engineer will select and sample from three random locations from the area represented by the lot in question. Those samples will be tested and if found to be within specification the material will be accepted and paid for at the full bid price. If the material proves to be outside of the specification limits, the material will be accepted and paid for at an adjusted price according to 00744.95. In no case will the CPF be above 1.0.

00744.44 Tack Coat - Add the following paragraph to the end of this subsection:

Treat all paved surfaces on and against which MHMAC is to be placed with an asphalt tack coat according to Section 00730. Immediately before applying the tack coat, clean and dry the surface to be tacked. Remove all material, loose or otherwise, that will reduce adhesion

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of the tack by brooming, flushing with water, or other approved methods. Sand seal all joints following the final lift.

Add the following subsection:

00744.45 Preparation of Roadway – All water valves, manholes and catch basins shall be adjusted to finish grade in advance of or during the paving operation. No adjustments shall be made after the paving is completed unless approved by the Engineer prior to paving.

Any tree branches or foliage which will hinder the proper placement of the surfacing shall be removed by the Contractor by pruning and sealing the cut ends, or tying back in a manner approved by the Engineer. The Contractor shall be responsible for trees damaged that are not properly pruned or tied back.

Coordinate construction of driveway transitions with property owners to minimize disruption of access.

Add the following subsection:

00744.46 Preparation of Underlying Surfaces – All bases and foundations on which the pavement is to be constructed shall meet the applicable Specifications and be approved prior to the start of paving. Trim broken or ragged edges to firm material when directed.

Protect all existing structures from the overlay operation and check and clean as necessary after the overlay.

The pavement surface shall be dry prior to the preparation work and paving. Remove existing pavement markers, recessed markers, and pavement legends prior to paving. Remove pavement legends according to 00851.40.

Add the following subsection:

00744.48 Hauling, Depositing, and Placing - Haul, deposit, and place MHMAC as follows:

(a) Hauling - Cover MHMAC if rain or cold air temperatures are encountered any time between loading and placement.

MHMAC will be rejected before placing if one or more of the following is found:

- Below specified placing temperature limit
- Slumping or separating
- Solidifying or crusting
- Absorbing moisture

Dispose of rejected loads at no additional cost to the Agency.

Deliver the mixture to the paving machine at a rate that provides continuous operation of the paving machine, except for unavoidable delay or breakdown. If excessive stopping

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of the paving machine occurs during paving operations, the Engineer may suspend paving operations until the mixture delivery rate matches the paving machine operation.

(b) Depositing - Deposit MHMAC from the hauling vehicles so segregation is prevented.

When MHMAC is windrowed, the pick-up equipment shall:

- Pick up substantially all of the MHMAC deposited on the roadway.
- Be self-supporting, not exerting any vertical load on the paving machine, or causing vibrations or other motions which could have a harmful effect on the riding quality of the completed pavement.

(c) Placing - Alternative equipment and means may be allowed by the Engineer if the use of a paver is impractical.

Do not place MHMAC during rain or other adverse weather conditions, unless allowed by the Engineer. MHMAC in transit at the time adverse conditions occur may be placed if:

- It has been covered during transit.
- The MHMAC temperature is satisfactory.
- It is placed on a foundation free from pools or flow of water.
- All other requirements are met.

When leveling irregular surfaces and raising low areas, do not exceed 2 inches actual compacted thickness of any one lift, except the actual compacted thickness of intermittent areas of 1,000 square feet or less may exceed 2 inches, but not more than 4 inches. This may require portions of the mixture to be laid in two or more lifts.

Place the mixture in the number of lifts and courses, and to the compacted thickness for each lift and course, as shown. Place each course in one lift unless otherwise specified. Do not exceed a compacted thickness of 4 inches for any lift. Limit the minimum lift thickness to twice the maximum aggregate size in the mix.

Do not intermingle MHMAC produced from more than one JMF. Each base course panel placed during a working shift shall conform to a single JMF. The wearing course shall conform to a single JMF.

00744.49 Compaction - Replace this subsection with the following subsection:

00744.49 Compaction - Immediately after the MHMAC has been spread, struck off, and surface irregularities and other defects remedied, roll it uniformly with rollers meeting the requirements of 00744.24 until compacted to a minimum of 91% of MAMD. Perform finish rolling and continue until all roller marks are eliminated. Determine the density of each subplot by averaging five QC tests performed at random locations by a CDT with the nuclear gauge operated in the backscatter mode according to WAQTC TM 8. Calculate MAMD according to ODOT TM 305. When less than three subplot test results are obtained on a

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project, the MHMAC will be accepted according to 00744.17. Perform a minimum of one subplot density test per day.

Compaction to a specified density will not be required on temporary surfacing, guardrail flares, mailbox turnouts, road approaches, pavement repair, and areas of restricted width (less than 8 feet wide) or limited length, regardless of thickness. Compact these surfaces according to 00749.45.

00744.80 Measurement - Delete the sentence in the 3rd paragraph that begins "An estimated amount of asphalt in tack coat will be listed in the Special Provisions."

00744.90 Payment - Replace the third bullet with the following:

- The type of liquid asphalt will be inserted in the third blank when applicable.

Add the following to the end of this subsection:

Payment includes furnishing and placing temporary asphalt placed to open the roadway to traffic.

SECTION 00748 - ASPHALT CONCRETE PAVEMENT REPAIR

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

00748.20 Equipment - Add 00620 to the list of Sections.

00748.42 Embankment and Aggregate Backfill - Replace the title of this subsection with "Backfill".

Add the following subsection:

00748.44 Cold Plane Pavement Removal - Remove the existing pavement to the depth, width, grade, and cross section as shown or directed. Perform cold plane pavement removal according to 00620.40.

00748.90 Payment - Replace the paragraph that begins "No separate or...", with the following:

No separate or additional payment will be made for excavation, geosynthetics, stone embankment, cold plane pavement removal, aggregate, and water.

SECTION 00759 - MISCELLANEOUS PORTLAND CEMENT CONCRETE STRUCTURES

Comply with Section 00759 of the Standard Specifications modified as follows:

00759.50(c) Driveways, Walks, and Surfacing – Add the following to the end of this subsection:

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The Contractor shall plan joint spacing layout prior to concrete placement. The joint pattern of any pour should consider the width of the concrete placement required by the plans. The maximum joint spacing shall not exceed the dimensions shown. Finish sidewalks in accordance with the scoring pattern and finish type as detailed. Review joint layout with the Engineer for approval prior to pouring.

Broom finish shall not be curved around objects in the concrete, nor shall a broom border be placed around an object in the pavement. The broom finish shall flow through any objects and maintain a consistent pattern through the sidewalk. Joints shall be clean, straight and free from slurry. Where joints intersect, the cross created by the intersecting joints shall be clean and free from slurry. Tool edges around all structures located in the sidewalks and driveways. Provide isolation joint material around structures and seal in accordance with 00585.

Add the following subsection:

00759.52 Protection of Concrete – Protect the freshly poured concrete curbs and sidewalk from vandalism or other damage for a minimum of twenty-four (24) hours or until cured enough to support typical use, whichever is longer. Provide security personnel to guard the fresh concrete during this time. The number of personnel onsite shall be as required to protect the complete amount of concrete placed during the previous 24 hours. Any curb or sidewalk damaged by vandalism or other causes shall be replaced at no cost to the Agency.

All costs associated with protecting the freshly poured concrete shall be incidental to the sidewalk pay items.

00759.90 Payment – Replace the paragraph that reads “Items (e) and (f)” with the following:

Items (e) and (f) include sidewalks ramps and truncated domes.

Add the following paragraph to the end of this subsection:

All costs associated with protecting the freshly poured concrete shall be incidental to the applicable pay item.

SECTION 00840 - DELINEATORS AND MILEPOST MARKER POSTS

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

00840.10 Materials - Replace this subsection, except for the subsection number and title, with the following:

Furnish materials meeting the following requirements:

- Barrier Markers..... From QPL
- Delineator Reflective Sheeting (Type III and Type IV)..... From QPL

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Flexible Delineators From QPL

00840.11 Target Members - Delete this subsection.

SECTION 00850 - COMMON PROVISIONS FOR PAVEMENT MARKINGS

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

Add the following subsection:

00850.11 Flexible Bituminous Adhesive - At least two weeks before using, submit for Agency testing and approval a 15 pound brick sample of flexible bituminous adhesive for each manufacturer lot number, including previously tested and approved lot numbers that are over one year old, that will be used on the Project. All previously rejected lot number samples will not be retested. Agency testing and approval is only for acceptance of use of the adhesive.

00850.20(b) Equipment for Longitudinal Lines - Replace the paragraph that begins "Use equipment capable of..." with the following paragraph and bullets:

Provide equipment that can:

- Place two parallel lines simultaneously with 4 inch minimum to 12 inch maximum spacings between the two lines.
- Place the entire width of a line in one pass.

00850.40 Projects Without Striping Plans and 00850.41 Projects With Striping Plans - Replace these two subsections with the following subsection:

00850.40 Plans:

(a) Projects With Complete Striping Plans - When striping Supplemental Drawings are included in the Project, install striping as shown.

(b) Projects With Partial Striping Plans - When partial Supplemental Drawings are included in a Project, install striping according to the following:

- In areas where striping details are shown on the Supplemental Drawings, install striping as shown.
- In areas where striping details are not shown on the Supplemental Drawings, install striping to match the original striping configuration with the appropriate striping items listed in the Contract Schedule of Items.

(c) Projects Without Striping Plans - When striping Supplemental Drawings are not included in the Project, install striping to match the original striping configuration with the appropriate striping items listed in the Contract Schedule of Items.

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For Projects with partial striping plans or Projects without striping plans, document all existing striping, that is not shown, by survey according to Special Provision 00305. Submit survey documentation to the Engineer seven calendar days before the loss of existing pavement markings.

00850.46 Placement Tolerance - Replace the bullet that begins "Thickness of lines..." with the following bullet:

- **Thickness of flat, surface applied lines:** + 1/3 of the specified thickness, – 1/10 of the specified thickness

00850.47(b) Curing of Material - Replace this subsection, except for the subsection number and title, with the following:

At the time of installation, note and report to the Engineer all soft spots and darkened areas that may result in poor bonding and durability of the pavement markings.

00850.47(c) Retroreflectivity - Replace this subsection, except for the subsection number and title, with the following:

Except for paint applications, evaluate longitudinal and transverse marking retroreflectivity according to ODOT TM 777. Acceptance will be according to the following:

- **Longitudinal Markings** - Each longitudinal marking subplot will be accepted if the average of the measurements and at least 90 percent of the individual measurements within the subplot meet or exceed the required minimum initial retroreflectivity.

If more than 10 percent but no more than 25 percent of the individual measurements in a subplot fail, take additional measurements within the subplot according to ODOT TM 777, Section 7.2.1 halfway between the measurements taken during initial evaluation. Combine these additional measurements with the initial measurements and re-evaluate the subplot. If the combined subplot measurements do not meet the 90 percent criteria, remove and replace the entire longitudinal marking subplot at no additional cost to the Agency.

If more than 25 percent of the individual measurements in a subplot fail remove and replace the entire longitudinal marking subplot at no additional cost to the Agency.

- **Transverse Markings** - Each transverse marking subplot will be accepted if the average of the measurements and at least 90 percent of the individual measurements within the subplot meet or exceed the required minimum initial retroreflectivity.

If more than 10 percent but not more than 25 percent of the individual measurements in a subplot fail, take additional measurements within the subplot according to ODOT TM 777, Section 7.2.2. The Engineer will randomly select an equal number of untested transverse markings to test. Combine these additional measurements with the initial measurements and re-evaluate the subplot. If the combined subplot measurements do not meet the 90 percent criteria, remove and replace the entire transverse marking subplot at no additional cost to the Agency

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If more than 25 percent of the individual measurements in a subplot fail remove and replace the entire transverse marking subplot at no additional cost to the Agency.

00850.70 Disposal of Waste - Replace this subsection with the following subsection:

00850.70 Disposal of Materials - Dispose of all materials according to 00290.20.

00850.75 Manufacturer's Warranty - Replace the paragraph that begins "For Sections referencing..." with the following paragraph:

For Sections referencing 00850.75, furnish a Manufacturer's Warranty on Agency supplied warranty forms. The forms are available from the Engineer.

SECTION 00855 - PAVEMENT MARKERS

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

00855.40(c) Installation - In the paragraph that begins "Do not install...", replace the sentence that begins "Adjust spacing between..." with the following two sentences:

To avoid longitudinal cracks and joints, adjust pavement markers up to one half the width of the marker. To avoid transverse cracks and joints, adjust pavement markers ahead or back on line \pm 5 inches.

SECTION 00865 - LONGITUDINAL PAVEMENT MARKINGS - DURABLE

Comply with Section 00865 of the Standard Specifications modified as follows:

00865.45 Installation - Replace this subsection, except for the subsection number and title, with the following:

Place durable markings only when the manufacturer's representative determines that the pavement is ready for the pavement marking material.

Apply reflective elements at a rate to obtain the following minimum initial retroreflectivity readings:

- White - 250 mcd/m²/lx
- Yellow - 200 mcd/m²/lx

Apply marking materials by one or more of the following methods:

- **Method A: Extruded Markings** - Apply markings with an extrusion or ribbon type process and according to the following:

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- For grooved markings, grind the slot depth as shown. Apply the specified marking material into the slot so the slot is filled from edge to edge as shown. The top of the marking shall be flat or slightly convex.
- For profiled markings, place lines and bumps straight and square.
- **Method B: Spray Markings** - Apply two separate applications of spray markings with each application being one half the total specified thickness. Retrace the second application directly over the first application within 1/16 inch. For white colored markings, apply the second application in the same direction of the first application. For yellow colored markings that delineate two-way traffic, apply the second application in the opposite direction of the first application. For yellow colored markings on one-way roadways, apply the second application in the same direction of the first application.

00865.90 Payment - Replace this subsection, except for the subsection number and title, with the following:

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

Pay Item	Unit of Measurement
Method A (Extruded)	
(a) Thermoplastic, Extruded, _____, _____	Foot

In item (a), "Surface" or "Grooved" will be inserted in the first blank and "Profiled" or "Non-Profiled" will be inserted in the second blank.

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

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

SECTION 00867 - TRANSVERSE PAVEMENT MARKINGS - LEGENDS AND BARS

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

Add the following subsection:

00867.31 Manufacturer-Certified Installers - Provide certified installer's according to 00850.31.

00867.40 General - Delete this subsection.

00867.45 Installation - Replace the bullet that begins "Type B: Preformed..." with the following three bullets:

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- **Type B: Preformed, Fused Thermoplastic Film** - Install preformed, fused thermoplastic film as shown.
- **Type B-HS: Preformed, Fused Thermoplastic Film High Skid** - Install preformed, fused thermoplastic film high skid, that has intermixed reflective elements with factory installed crushed glass or aggregate on the surface for all staggered continental crosswalks, bike lane stencils, bike path railroad crossings, and other transverse pavement markings as shown.
- **Type AB:** Install Type A, Type B or Type B-HS as the Contractor elects.

00867.90 Payment - Replace this subsection, except for the subsection number and title, with the following:

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

Pay Item	Unit of Measurement
(a) Pavement Legend, Type ____ : Arrows	Each
(b) Pavement Legend, Type ____ : Bicycle Lane Stencil.....	Each
(c) Pavement Bar, Type ____	Square Foot

In items (a) through (c), the type of pavement marking material will be inserted in the first blank.

Item (a) includes single or multiple headed arrows as required.

Item (b) includes the bike lane stencil and arrow.

Item (c) includes all transverse pavement markings that are defined as a "BAR", including but not limited to, stop bars, crosswalk bars, chevron bars, transverse median bars, and transverse shoulder bars.

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% 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.

SECTION 00950 - REMOVAL OF ELECTRICAL SYSTEMS

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Comply with Section 00950 of the Standard Specifications modified as follows:

00950.02 Definitions - Add the following after the electrical systems definition:

The electrical system(s) to be removed under this Contract include:

Existing overhead flashing system located at the Rosemont Rd and Santa Anita Dr/Salamo Rd intersection. This includes two existing strain poles, two terminal cabinets, one flasher cabinet, one meter service, four flasher heads, and wiring.

Replace electrical system equipment that is deemed usable, which is damaged during salvaging and stockpiling.

SECTION 00960 - COMMON PROVISIONS FOR ELECTRICAL SYSTEMS

Comply with Section 00960 of the Standard Specifications supplemented and/or modified herein. In addition, comply with the most current version of the Clackamas County Signal Construction Standards (attached at the end of these Special Provisions).

00960.02 Equipment List and Drawings - Replace the first sentence in the fourth bullet point with the following:

Use materials from the current list of acceptable materials provided by the Agency.

00960.41(f) Disposition of Waste Materials - Replace this subsection with the following subsection:

00960.41(f) Disposal of Materials - Dispose of all materials according to 00290.20.

00960.42(a) General – Replace the third paragraph that begins “Install a No. 16 AWG THWN stranded copper...” with the following:

Install a No. 12 AWG THWN stranded copper wire (orange base) in all conduits as a locate (tracer) wire, even if not shown. All locatable tracer wire circuits shall be electrically continuous to cabinet with no connection to ground. Extend the wire 2 feet beyond conduit ends and install a wire nut. Do not join multiple locate wires under a common wire nut.

00960.42(g) Conduits Ends and Couplings – Replace the sentence that begins “After wiring is installed install...” with the following sentence:

After wiring is installed, install precut closed cell polyethylene foam that will prevent debris from entering the conduit system.

00960.45 Cable and Wire - In the paragraph that begins "Pull all wire...", replace the sentence that begins "Pull all wire..." with the following sentence:

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Pull all wire and cable by hand and on a straight line with the conduit opening to prevent damage to wire and cable installation.

00960.70 Electrical Energy – Replace this subsection with the following:

00960.70 Electrical Energy and Permits - Electrical permits are required before any electrical installation is begun in conformance with ORS 479.550. Inspections are required for all segments of the traffic signal, traffic signal detection, illumination, and communication system installations, including all underground conduits and other underground work in conformance with OAR 918-271-0040(1). Inspections shall be scheduled as directed on the Electrical Permit forms and the Contractor shall also notify the Project Manager. Electrical Permits must consist of the following components and cover all related work required in the traffic signal, video monitoring system, and communications systems installation:

- Service (for the meter pedestal)
- Feeder (for the feeder to traffic signal control cabinet)
- Branch Circuits (for field wiring)
- Limited Energy – Non Residential (for detection and fiber optic installation)

The electrical Contractor shall provide a copy of the applicable Electrical Permit and a listing of the persons expected to perform the electrical work and otherwise staff the traffic signal, system monitoring video system, and communications systems installation projects to the Project Manager with the project schedule at the arranged contract pre-construction meeting. Electrical license may be checked periodically in the course of the electrical work. Any necessary fees for electrical permits will be at cost to the Contractor.

After obtaining the required permits, have the power service inspected by the utility providing the power. Arrange for the utility to make the electrical hookup.

Electrical energy costs will be billed to the Agency or those named in the construction agreement for permanent installations. Do not use for construction purposes electrical energy billed to the Agency or other agencies.

SECTION 00962 - METAL ILLUMINATION AND TRAFFIC SIGNAL SUPPORTS

Comply with Section 00962 of the Standard Specifications supplemented and/or modified herein. In addition, comply with the most current version of Clackamas County Signal Construction Standards (attached at the end of these Special Provisions).

00962.05(a) Traffic Signal Mast Arm Supports – Replace subsection with the following:

00962.05(a) Traffic Signal Mast Arm Supports – All traffic signal mast arm poles including mast arms, luminaire arms, recessed terminal cabinets, base covers, anchor bolts and all other items specified in Clackamas County Standard Drawing shown on Sheet TS-7 to be furnished by the City of West Linn. Contractor to pick up traffic signal poles at 6111

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Skyline Drive, West Linn, 97068. Contact Jeff Randall, City of West Linn, at 503-880-9194 to coordinate pick up time and date.

00962.10 Materials - Add the following to the end of the material list:

High-Strength Fasteners 02560.20

Add the following at the end of the subsection:

Poles shall be steel. The silicon content for steel, except small incidental pieces, shall be in the range of 0 to 0.04% or 0.15% to 0.25%. All steel used in the metal pole assemblies including base plates, flange plates and gusset plates shall have a yield strength of 345MPa (50 ksi). The contractor shall submit mill certificates to the Project Manager verifying silicon content and prefabrication strength.

Anchor bolts shall conform to ASTM A307C. All nuts shall conform to ASTM A563 GR DH Heavy Hex. All washers shall conform to ASTM F436 Type 1. Connection bolts shall conform to ASTM A325. All anchor bolts, connection bolts, nuts, and washers shall be galvanized according to ASTM A123 & ASTM A153.

00962.41(b) Disposition of Waste Materials - Replace this subsection with the following subsection:

00962.41(b) Disposal of Materials - Dispose of all materials according to 00290.20.

00962.43 Foundations – Add the following at the end of subsection:

Foundations shall be in conformance with drawing number NWS4710. Good cohesionless soil shall be compact and well graded sand or sand and gravel with an angle of internal friction, $\phi=35^\circ$ and the effective unit weight of soil, $g=120$ pcf. Good cohesive soil shall be hard clay with a shear strength of cohesive soil, $c=1800$ psf. Average cohesionless soil shall be compact and fine sand, well drained sandy silt, loose coarse sand and gravel with an angle of internal friction, $\phi=25^\circ$ and the effective unit weight of soil, $g=100$ pcf. Average cohesive soil shall be hard or medium clay with a shear strength of cohesive soil, $c=1000$ psf and the effective unit weight of soil, $g=100$ pcf.

Poor soil conditions shall be conditions of soft clay, silt, and poorly compacted sands or containing large amounts of silt or organic material. A soil investigation and special design shall be required for poor soil conditions.

The following mast arm foundation standard drawing is prequalified for use on the Project:

Northwest Signal Supply

Dwg. NWS 4710 (Rev. 03/14/12)

00962.46 Steel Illumination and Signal Poles – Add the following at the end of first paragraph:

Metal poles shall be placed on the job site in a manner which allows the Agency Engineer to inspect luminaire arm connections, recessed terminal compartments, base

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plates, and tenons without moving the poles. The Contractor shall notify the Agency Engineer when the poles are ready for inspection.

If any shafts, arms, or luminaire arms do not meet Clackamas County specifications, they will be rejected. If the shafts, arms, or luminaire arms are rejected, the Contractor will have a maximum of 30 calendar days from the date of rejection to deliver replacement shaft(s), arm(s), or luminaire arm(s) to the job site which meet the Clackamas County specifications. The Contractor shall provide written documentation that the pole manufacturer is able to supply replacement poles to the job site within 30 calendar days following a rejection. If within one business day after pole rejection, the Contractor has not notified the Clackamas County that new poles are able to be delivered within 30 days, the Clackamas County reserves the right to immediately purchase new poles at the Contractor's expense. If after 30 calendar days following the rejection, the Contractor has not notified the Clackamas County in writing that new poles have been delivered to the job site, the Clackamas County reserves the right to purchase new poles at the contractor's expense and deduct the entire cost of the poles from the money due or to become due the Contractor on the contract.

00962.46(a) Design – Replace this subsection with the following:

00962.46(a) Design – All poles shall be either round, 8 sided, 12 sided, or 16 sided in cross section unless otherwise specified by the engineer. Alternative cross section shapes shall be considered special design poles and require submission of pole design calculations per the above criteria.

Submit detail drawings of poles for approval prior to fabrication. Dual mast arm poles and/or mast arm poles with an arm greater the 60' long shall be considered special design and require drawings and calculations approved by the project engineer prior to fabrication. Calculations shall conform to the latest Clackamas County design criteria. Foundations for special design poles shall be contractor designed and must have drawings and calculations approved by the project engineer prior to construction.

Pole assembly dimensions and thickness shall be as shown in the plans. All tube thicknesses shall consist of a single ply of steel, no multi-ply shafts shall be utilized. No slip fit connections shall be allowed. No alternate sizes will be accepted. The mast arm poles and the length of mast arms shall be as indicated on the plans. All pole assemblies shall be galvanized according to ASTM A123 & A153.

00962.46(g) Welding – Add the following after the first sentence:

Workmanship and finish shall be equal to the best general practice of a metal fabrication shop. Exposed welds, except fillet and fatigue resistant welds and welds on top of mast arms, shall be ground flush with the base metal. Exposed edges of the plates which make up the base assembly and flange connections shall be finished smooth and exposed corners of plates shall be neatly rounded unless otherwise shown on the plans.

00962.48 Coating - Replace this subsection, except for the subsection number and title, with the following:

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Prepare and coat supports according to the applicable portions of Sections 00593 or 00594 as the Contractor elects. Provide paint for field application, repair damaged coatings, and paint hardware after installation. Do not paint:

- Slip plate or arm connection surfaces.
- Slip base bolting hardware.
- Anchor rods, anchor rod washers, and anchor rod nuts.

Provide the following colors:

Item	Federal Standard
Pedestrian Poles and ornamental base covers, hanging flower bracket, hanging basket, controller cabinet, service cabinet, school flasher cabinets, and school flasher poles and frangible bases	595 Color Number 37038 (Black)

SECTION 00990 - TRAFFIC SIGNALS

Comply with Section 00990 of the Standard Specifications supplemented and/or modified herein. In addition, comply with the most current version of Clackamas County Signal Construction Standards (attached at the end of these Special Provisions).

00990.00 Scope - Replace this subsection, except for the subsection number and title, with the following:

In addition to the requirements of Section 00960, Section 00962, and Section 02925, install traffic signals according to the following Specifications.

00990.42 Indication Equipment - Add the following to the end of this subsection:

(h) Audible Pedestrian Signal (APS) - Provide a unique APS sound coincidental with the WALK indication. The APS system shall include a solid state electronic board, power supply, enclosure, loudspeaker, and mounting hardware necessary for fulfilling the intended use and the applicable portions of Standard Specification for Microcomputer Signal Controller.

(1) General - Provide an actuated delay time button that is adjustable in one-second increments throughout the range of 0 to 15 seconds.

The APS unit shall have a sound inhibit circuit capable of control by an external device.

(2) Electrical Requirements - The APS unit shall operate on 95 to 130 VAC, 60Hz, ≤ 3 W.

Provide a power protection circuit consisting of both fuse and transient protection.

Provide an optically isolated circuit allowing delayed actuation of the audible signal.

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(3) Environmental Requirements - The APS unit shall function properly throughout an ambient air temperature range of -35 °F to +165 °F.

(4) Outputs - Provide voice message, including automatic repeat capability for messages up to 20 seconds in length.

The audible signal shall be self-adjusting based on ambient noise during the WALK period.

The volume level at a distance of 3 feet from the APS enclosure shall be 66 dB typical, with a maximum of 90 dB.

The minimum volume level shall be adjustable proportionally from 66 dB to 90 dB without dismantling the APS unit housing.

Provide two switch-selectable electronic sounds according to the following:

Parameter	Sound No. 1	Sound No. 2
Sound type	"Peep-peep"	"Cuckoo"
Method	Electronic var. frequency tone	Electronic var. frequency tone
Period	1.0 sec. ± 20%	1.5 sec. ± 20%
Duration	0.2 sec. ± 20%	0.6 sec. ± 20%
Frequency Base	2800 Hz ± 20%	1100 Hz ± 20%
Frequency Deviation	- 800 Hz ± 20%	+120 Hz ± 20%

00990.43(b-1) Saw Cut – Modify the following:

In the fifth paragraph, add the following sentences after the sentence that begins with “Flush cuts thoroughly with a high-pressure...”:

Catch basins are to be protected from intrusion of slurry materials from saw cuts. Slurry materials are to be retained, recovered, and disposed of off-site.

Replace the last paragraph with the following:

Only round loops, 1.8 m (6 feet) shall be used for vehicle detector loops. Round loops, 1.5 m (5 feet) in diameter may be used in lanes less than 3.6 m (12 feet) in width, if specified on design plans or directed by an County Engineer or County Signal Electrician. Install according to standard loop installation Specifications, but make the saw cut exiting the loop perpendicular to the loop.

00990.43(b-5) Resistance Testing - Add the following paragraph to the end of this subsection:

Furnish a report identifying the resistance for each loop:

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- Before splicing and sealing
- Before splicing after sealing
- After splicing and sealing

00990.46 Fire Preemption – Add the following paragraphs after the last bullet point:

Furnish fire pre-emption system according to section 00960.02. The Preemption systems pre-approved for this project are as follows:

<u>Preemption System</u>	<u>Brand/Manufacturer</u>	<u>Model</u>
Interface (Cabinet)	Opticom (3M)	752
Detector (Field)	Opticom (3M)	721

00990.70(b) Control Equipment Testing – Replace the sentence that reads “Control equipment will be tested at no cost to the Contractor” with the following:

Any cost associated with testing the control equipment will be the responsibility of the contractor.

00990.90 Payment – Replace the paragraph that begins “Item (a) includes...” with the following:

Item (a) includes furnishing and installing all items of the traffic signal system, including the pedestrian poles and ornamental base covers, fire preemption system, service cabinet, controller, controller cabinet equipment, detection system, LED luminaires, flower pot arms, LED illuminated street name signs, vehicle and pedestrian signals, pedestrian pushbuttons, pick up of traffic signal poles, irrigation elements, and all appurtenances necessary to complete this work. It also includes the removal of the existing flasher system.

All traffic signal mast arm poles including mast arms, luminaire arms, recessed terminal cabinets, base covers, anchor bolts and all other items specified in Clackamas County Standard Drawing shown on Sheet TS-7 to be furnished by the City of West Linn. Contractor to pick up traffic signal poles at 6111 Skyline Drive, West Linn, 97068. Contact Jeff Randall, City of West Linn, at 503-880-9194 to coordinate pick up time and date.

Replace the paragraph that begins “Item (f) includes...” with the following:

Item (f) includes furnishing and installing all items of the flashing beacon system, including traffic signal poles, frangible bases, foundations, school speed limit signs (MUTCD S5-1), solar panels, vehicle signals, flasher /battery cabinets, ELTEC TC 2000 with pager, existing school sign assembly removal, conduit, wiring, power source connections, and all appurtenances necessary to complete this work,

SECTION 01030 - SEEDING

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

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

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

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

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

01030.71 Waste Disposal - Replace this subsection with the following subsection:

01030.71 Disposal of Materials - Dispose of all materials according to 00290.20.

SECTION 01040 - PLANTING

Comply with Section 01040 of the Standard Specifications modified as follows:

01040.48(a) Method "A" (Cultivated Planting Areas, Non-lawn) - In the paragraph that begins "Cultivate plant beds...", replace "2 inches" with "12 inches" in the first sentence and replace "52 inches" with "2 inches" in the second sentence.

01040.49 General Planting - Replace the bullet that begins "Do not plant in standing..." with the following bullet:

- Do not plant in standing water unless approved by the Agency. If standing water is present within a plant pit, notify the Agency prior to planting to determine what corrective measures are required.

SECTION 01050 - FENCES

Comply with Section 01050 of the Standard Specifications modified as follows:

01050.01(b-2) Double Gate - Replace the sentence that begins "Two single gate..." with the following sentence:

Two single gate units used together.

SECTION 01070 - MAILBOX SUPPORTS

Comply with Section 01070 of the Standard Specifications modified as follows:

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01070.14 Post Mounting Socket - Replace this subsection, except for the subsection number and title, with the following:

Furnish post anchors from the QPL.

SECTION 01120 - IRRIGATION SYSTEMS

Comply with Section 01120 of the Standard Specifications modified as follows:

01120.19 Electrical Wire and Splices - Replace the bullet that begins “Furnish a kit containing...” with the following bullet:

- A waterproof sealed wire connector system that is sealed from moisture, securely joins two or more conductors both mechanically and electrically, is rated for direct burial according to the manufacturer’s recommendations, and conforms to UL 486D for direct burial applications. Wrapping a splice in tape is not an acceptable method of waterproofing. Obtain approval of the sealed wire connector system from the Engineer before installation.

01120.46 Low Voltage Electrical Installation - In the paragraph that begins “Use direct burial...”, add the following sentence after the first sentence:

Install waterproof splices in accordance with manufacturer’s recommendations.

01120.90 Payment – Replace the first paragraph with the following:

The accepted quantities of work performed to relocate and reconnect existing irrigation systems will be paid for at the Contract lump sum amount for the items “Relocating and Reconnecting Irrigation Systems and Coordination”.

Work associated with irrigation system installation for the signal poles will be incidental to the signal installation bid item.

**SECTION 01170 - POTABLE WATER SERVICE CONNECTIONS,
2 INCH AND SMALLER**

Comply with Section 01170 of the Standard Specifications modified as follows:

01170.90 Payment – Add the following pay item:

- (d) Adjusting Water Meters and Water Services..... Lump Sum

Item (d) includes replacing water meter boxes and all adjustment and relocation work associated with existing water services to accommodate the improvements as shown.

SECTION 02001 - CONCRETE

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

02001.02 Abbreviations and Definitions - Replace the "Modifiers" line with the following:

Modifiers - Pozzolans, ground granulated blast furnace slag, and latex.

Replace the "Pozzolans" line with the following:

Pozzolans - Fly ash, silica fume, and metakaolin.

02001.30 Concrete Mix Design - In the paragraph that begins "Submit new or current...", replace the sentence that begins "Allow 14 calendar days..." with the following sentence:

Allow 21 calendar days for the review.

Replace the paragraph that begins "High performance concrete..." with the following paragraph and bullets:

High performance concrete (HPC) mix designs shall contain any of the following:

- Cementitious material with 66% portland cement, 30% fly ash, and 4% silica fume.
- Cementitious material with modifiers proportioned according to 02001.31(c) and with trial batches performed to demonstrate that the proposed alternate mix design provides a maximum of 1,000 coulombs at 90 days when tested according to AASTHO T 277.
- Cementitious material with modifiers and with trial batches performed to demonstrate that the proposed alternate mix design provides a maximum of 1,000 coulombs at 90 days when tested according to AASTHO T 277.

02001.31(b) Pozzolans - Replace this subsection, except for the subsection number and title, with the following:

Pozzolans or GGBFS may be used separately or in combinations up to 30% of the total cementitious materials content.

02001.31(c) Modifiers - Replace this subsection, except for the subsection number and title, with the following:

Modifiers may be used separately or in combinations as approved by the Engineer. Alternate HPC proportions may be:

Fly Ash	12% - 18%
GGBFS	20% - 35%
Silica Fume	3% - 5%

For alternate HPC mix designs do not replace more than 50% of total cementitious material with modifiers.

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When silica fume is added to truck mixed concrete, mix the batch a minimum of 100 revolutions at the mixing speed specified by the manufacturer before leaving the batch plant.

02001.31(f) Aggregate - Replace the paragraph that begins "If the nominal... and the three bullets with the following paragraph and bullets:

If the nominal maximum size of the coarse aggregate is not included as a part of the class of concrete, or shown on the plans, any size from 1 1/2 inch to 3/8 inch nominal maximum size aggregate may be used according to the ACI guidelines except:

- Use 3/4 inch nominal maximum size or larger aggregates in bridge deck concrete.
- Use 1 1/2 inch nominal maximum size aggregates in paving concrete unless otherwise indicated.
- Use 3/8 inch nominal maximum size aggregates in drilled shafts unless otherwise indicated.

02001.32(b) Plastic Concrete - Add the following to the bottom of the test and test method list:

Length Change	ASTM C 157
Permeability	AASHTO T 277

Add the following subsections:

02001.32(d) Length Change Tests - For all HPC mix designs, make at least three specimens from the trial batch for length change testing. Test samples according to ASTM C 157. Wet cure the samples until they have reached an age of 14 days, including the period in the molds. Store and measure samples according to ASTM C 157, section 11.1.2. Report length change results at 4, 7, 14, 28, and 56 day time intervals.

02001.32(e) Permeability Tests - For alternate HPC mix designs, make at least three specimens for permeability testing. Prepare, cure, dry and test according to AASHTO T 277. Report permeability in coulombs at 90 days.

Permeability tests are not required when HPC mix designs contain cementitious material with 66% portland cement, 30% fly ash, and 4% silica fume.

02001.34 Current Mix Designs - Add the following paragraphs to the end of this subsection:

For HPC mix designs, test according to the following and submit results:

Test	Test Method	Acceptance Value
Length Change	ASTM C 157	-
Permeability	AASHTO T 277	1,000 coulombs (max.) at 90 days

Add the following subsections:

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02001.34(a) Length Change Tests - For all HPC mix designs make at least three specimens for length change testing. Test samples according to ASTM C 157. Wet cure the samples until they have reached an age of 14 days, including the period in the molds. Store and measure samples according to ASTM C 157, section 11.1.2. Report length change results at 4, 7, 14, 28, and 56 day time intervals.

02001.34(b) Permeability Tests - For alternate HPC mix designs make at least three specimens for permeability testing. Prepare, cure, dry and test according to AASHTO T 277. Report permeability in coulombs at 90 days.

Permeability tests are not required when HPC mix designs contain cementitious material with 66% portland cement, 30% fly ash, and 4% silica fume.

SECTION 02010 - PORTLAND CEMENT

Comply with Section 02010 of the Standard Specifications modified as follows:

02010.10(b) Specifications - Replace the bullet that begins "Cement used west..." with the following bullet:

- Cement shall have a total alkali content (sodium and potassium oxide calculated as $\text{Na}_2\text{O} + 0.658 \text{K}_2\text{O}$) not exceeding 0.60%.

SECTION 02020 - WATER

Comply with Section 02020 of the Standard Specifications modified as follows:

02020.10 Water - Replace this subsection, except for the subsection number and title, with the following:

(a) General - Water used in mixing or curing concrete, mortar, grout, and in mixing cement-treated base shall be reasonably clean, and free of oil, sugar, organic matter, or other substances injurious to the finished product.

(b) Potable - Potable water may be used without testing if the Contractor provides a quality compliance certificate verifying that the water has met the limits and ranges of ASTM C 1602, according to tests made within the last two years.

Water approved for public use by the Oregon Health Division may be accepted for use without testing.

(c) Non-Potable, Unknown Quality, or Suspected Quality - Non-potable, Unknown Quality, or Suspected Quality water shall be tested at no additional cost to the Agency. Test according to ASTM C 114 and ASTM C 1603. Water from concrete production operations is considered Unknown Quality. Results of testing shall comply with the limits and ranges of ASTM C 1602 and shall be available for review upon request.

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SECTION 02030 - MODIFIERS

Comply with Section 02030 of the Standard Specifications modified as follows:

02030.10 Fly Ash - Replace this subsection with the following subsection:

02030.10 Fly Ash - Furnish Class C, Class F, or Class N fly ash from the QPL and conforming to AASHTO M 295 (ASTM C 618).

02030.20(a) Types - Replace the sentence that begins "The silica fume portion..." with the following two sentences:

The silica fume portion shall conform to AASHTO M 307. Total alkalis, as equivalent Sodium Oxide (Na₂O), shall be 1.5 percent maximum.

Add the following subsection:

02030.50 Metakaolin - Provide metakaolin from the QPL and conforming to AASHTO M 295 (ASTM C 618) Class N.

SECTION 02040 - CHEMICAL ADMIXTURES

Comply with Section 02040 of the Standard Specifications modified as follows:

02040.10 Materials - Replace the table with the following:

Admixture	Specification
Air-entraining	AASHTO M 154 (ASTM C 260)
Type A - Water-reducing	AASHTO M 194 (ASTM C 494)
Type B - Retarding	AASHTO M 194 (ASTM C 494)
Type C - Accelerating	AASHTO M 194 (ASTM C 494)
Type D - Water-reducing and Retarding	AASHTO M 194 (ASTM C 494)
Type E - Water-reducing and Accelerating	AASHTO M 194 (ASTM C 494)
Type F - Water-reducing, High Range	AASHTO M 194 (ASTM C 494)
Type G - Water-reducing, High Range and Retarding	AASHTO M 194 (ASTM C 494)
Type S - Specific Performance	AASHTO M 194 (ASTM C 494)

SECTION 02050 - CURING MATERIALS

Comply with Section 02050 of the Standard Specifications modified as follows:

02050.10 Liquid Compounds - In the paragraph that begins "Furnish liquid...", replace "AASHTO M 148" with "ASTM C 309".

Add the following to the end of this subsection:

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Before using liquid compounds, submit one quart samples of each lot for testing except samples are not required for commercial grade concrete applications unless the liquid compound is a conditionally approved product.

SECTION 02320 - GEOSYNTHETICS

Comply with Section 02320 of the Standard Specifications modified as follows:

02320.10(a-1) Geotextiles - Replace the bullet that begins "Meet or exceed..." with the following bullet:

- Meet or exceed the properties specified in 02320.20.

02320.10(c-2) Level B - Manufacturer's Quality Compliance Certificate - In the paragraph that begins "If the brochure..." replace the words "in Table 02320-1" with the words "in 02320.20".

02320.20 Geotextile Property Values - Replace Table 02320-1 with the following tables:

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Table 02320-1 Geotextile Property Values for Drainage Geotextile *

Geotextile Property	ASTM Test Method	Units	Geotextile Property Requirements			
			Type 1		Type 2	
			Woven	Nonwoven	Woven	Nonwoven
Grab Tensile Strength (minimum) Machine and Cross Machine Directions	D 4632	lb	180	115	250	160
Grab Failure Strain (minimum) Machine and Cross Machine Directions	D 4632	%	< 50	≥ 50	< 50	≥ 50
Tear Strength (minimum)	D 4533	lb	67	40	90	56
Puncture Strength (minimum)	D 6241	lb	370	220	495	310
Apparent Opening Size (AOS) (maximum) U.S. Standard Sieve	D 4751	—	40	40	40	40
Permittivity (minimum)	D 4491	sec ⁻¹	0.5	0.5	0.5	0.5
Ultraviolet Stability Retained Strength (minimum)	D 4355 (at 500 hours)	%	50	50	50	50
* Woven slit film geotextiles (geotextiles that are made from yarns of a flat, tape-like character) are not acceptable.						

Table 02320-2 Geotextile Property Values for Riprap Geotextile *

Geotextile Property	ASTM Test Method	Units	Geotextile Property Requirements			
			Type 1		Type 2	
			Woven	Nonwoven	Woven	Nonwoven
Grab Tensile Strength (minimum) Machine and Cross Machine Directions	D 4632	lb	250	160	315	200
Grab Failure Strain (minimum) Machine and Cross Machine Directions	D 4632	%	< 50	≥ 50	< 50	≥ 50
Tear Strength (minimum)	D 4533	lb	90	56	110	80
Puncture Strength (minimum)	D 6241	lb	495	310	620	430
Apparent Opening Size (AOS) (maximum) U.S. Standard Sieve	D 4751	—	40	40	40	40
Permittivity (minimum)	D 4491	sec ⁻¹	0.5	0.5	0.5	0.5
Ultraviolet Stability Retained Strength (minimum)	D 4355 (at 500 hours)	%	70	70	70	70
* Woven slit film geotextiles (geotextiles that are made from yarns of a flat, tape-like character) are not acceptable.						

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Table 02320-3 Geotextile Property Values for Sediment Fence

Geotextile Property	ASTM Test Method	Units	Geotextile Property Requirements		
			Supported	Unsupported	
			—	Elongation * ≥ 50%	Elongation * ≤ 50%
Grab Tensile Strength (minimum) Machine and Cross Machine Directions	D 4632	lb	90 90	120 100	120 100
Apparent Opening Size (AOS) (maximum) U.S. Standard Sieve	D 4751	—	30	30	30
Permittivity (minimum)	D 4491	sec ⁻¹	0.05	0.05	0.05
Ultraviolet Stability Retained Strength (minimum)	D 4355 (at 500 hours)	%	70	70	70

* Measured according to ASTM D 4632.

Table 02320-4 Geotextile Property Values for Subgrade Geotextile (Separation)

Geotextile Property	ASTM Test Method	Units	Geotextile Property Requirements	
			Woven	Nonwoven
Grab Tensile Strength (minimum) Machine and Cross Machine Directions	D 4632	lb	180	113
Grab Failure Strain (minimum) Machine and Cross Machine Directions	D 4632	%	< 50	≥ 50
Tear Strength (minimum)	D 4533	lb	68	41
Puncture Strength (minimum)	D 6241	lb	371	223
Apparent Opening Size (AOS) (maximum) U.S. Standard Sieve	D 4751	—	30	30
Permittivity (minimum)	D 4491	sec ⁻¹	0.05	0.05
Ultraviolet Stability Retained Strength (minimum)	D 4355 (at 500 hours)	%	50	50

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Table 02320-5 Geotextile Property Values for Embankment Geotextile

Geotextile Property	ASTM Test Method	Units	Geotextile Property Requirements	
			Woven	Nonwoven
Grab Tensile Strength (minimum) Machine and Cross Machine Directions	D 4632	lb	315	200
Grab Failure Strain (minimum) Machine and Cross Machine Directions	D 4632	%	< 50	≥ 50
Tear Strength (minimum)	D 4533	lb	110	80
Puncture Strength (minimum)	D 6241	lb	620	430
Apparent Opening Size (AOS) (maximum) U.S. Standard Sieve	D 4751	—	30	30
Permittivity (minimum)	D 4491	sec ⁻¹	0.02	0.02
Ultraviolet Stability Retained Strength (minimum)	D 4355 (at 500 hours)	%	50	50

Table 02320-6 Geotextile Property Values for Pavement Overlay Geotextile

Geotextile Property	ASTM Test Method	Units	Geotextile Property Requirements
			Nonwoven
Grab Tensile Strength (minimum) Machine and Cross Machine Directions	D 4632	lb	100
Grab Failure Strain (minimum) Machine and Cross Machine Directions	D 4632	%	≥ 50
Asphalt Retention (minimum)	D 6140	oz./sq.ft.	2.8
Melting Point (minimum)	D 276	°F	300

SECTION 02440 - JOINT MATERIALS

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

02440.10 Preformed Joint Fillers for Concrete - Replace this subsection, except for the subsection number and title with the following:

Furnish preformed joint fillers for concrete from the QPL conforming to the requirements of AASHTO M 153 or AASHTO M 213.

SECTION 02450 - MANHOLE AND INLET MATERIALS

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Comply with Section 02450 of the Standard Specifications modified as follows:

02450.30 Metal Frames, Covers, Grates, and Ladders - Under the Projects on State Highways requirements, replace the "Inlet frames and grates" line with the following lines:

Inlet frames and grates	M 306	Class 35 B
	M 227 (A 663)	65
	M 270 (A 709) A 36	36
	M 103 (A 27)	65 - 35

SECTION 02510 - REINFORCEMENT

Comply with Section 02510 of the Standard Specifications modified as follows:

02510.10 Deformed Bar Reinforcement - Replace the sentence that begins "Unless otherwise specified..." with the following sentence:

Unless otherwise specified or shown, all reinforcing bars shall be Grade 60.

02510.20 Mechanical Splices - Replace the bullet that begins "Provide mechanical splices..." with the following bullet:

- Provide mechanical splices from the QPL that develop at least the specified tensile strength or 135% of the specified minimum yield strength of the reinforcing bars in tension, whichever is less. Where bars of different sizes or strengths are connected, the governing strength shall be the strength of the smaller or weaker bar.

Add the following subsection:

02510.25 Headed Bar Reinforcement - Furnish Class HA headed steel bar from the QPL for concrete reinforcement. The headed steel bar shall develop the specified minimum tensile strength of the reinforcing bars, according to ASTM A 970. Ferrous-filler coupling sleeves, forged headed steel bars, and welded headed steel bars are not allowed for concrete reinforcement.

02510.40 Welded Wire Fabric - Replace this subsection with the following subsection:

02510.40 Welded Wire Reinforcement - Welded wire reinforcement shall conform to AASHTO M 55 (ASTM A 185). Deformed welded wire reinforcement shall conform to AASHTO M 221 (ASTM A 497).

SECTION 02530 - STRUCTURAL STEEL

Comply with Section 02530 of the Standard Specifications modified as follows:

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02530.71 Repair of Hot-Dip Galvanizing - Replace this subsection, except for the subsection number and title, with the following:

Repair damaged hot-dip galvanizing according to ASTM A 780 and ASTM A 123. Minimum dry film thickness is 3 mils. Minimum zinc content for Method A2 is 92 percent on the dry film.

SECTION 02560 - FASTENERS

Comply with Section 02560 of the Standard Specifications modified as follows:

02560.70 Lubricating Fasteners - Replace this subsection, except for the subsection number and title, with the following:

Furnish all galvanized and coated fasteners with a factory applied commercial water-soluble wax that contains a visible dye of a color that contrasts with the color of galvanizing or coating. Black fasteners shall be "oily" to the touch when installed.

Field lubricate galvanized bolts in tapped holes, galvanized anchor rods, and galvanized tie rods with a lubricant from the QPL. Apply lubricant to threads and to bearing surfaces that will turn during installation.

Protect fasteners from dirt and moisture at the job site. Clean, relubricate with a lubricant from the QPL, and retest fasteners that do not pass the field rotational capacity test. Obtain the Manufacturer's approval before relubricating tension control fasteners that are designed to automatically provide the tension.

Coat the outer surface of the collar in lock-pin and collar fasteners with an approved Manufacturer lubricant.

SECTION 02630 - BASE AGGREGATE

Comply with Section 02630 of the Standard Specifications modified as follows:

02630.10(a) Grading - In Table 02630-01, add the following sieve size line before the No. 10 sieve size line and add the following footnote at the end to the table:

No. 4 * - - - - -

* Report percent passing sieve when no grading requirements are listed

02630.10(b) Fracture of Rounded Rock - In the sentence that begins "Fracture of rounded rock...", replace "AASHTO TP 61" with "AASHTO T 335".

02630.11(b) Fracture of Rounded Rock - In the sentence that begins "Fracture of rounded rock...", replace "AASHTO TP 61" with "AASHTO T 335".

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SECTION 02640 - SHOULDER AGGREGATE

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

02640.10(b) Fracture of Rounded Rock - In the sentence that begins "Fracture of rounded rock...", replace "AASHTO TP 61" with "AASHTO T 335".

SECTION 02920 - COMMON ELECTRICAL MATERIALS

Comply with the most current version of the Clackamas County Signal Construction Standards (attached at the end of these Special Provisions). In addition, comply with Section 02920 of the Standard Specifications supplemented and/or modified herein unless it conflicts with the Clackamas County Signal Construction Standards.

02920.11 Nonmetallic Conduit - Replace the first two bullets with the following bullets:

- **Rigid Nonmetallic Conduit** – Heavy wall, extruded, rigid polyvinyl chloride (PVC) conforming to UL651, Schedule 80 Rigid PVC Conduit as shown.
- **Liquid-Tight Flexible Nonmetallic Conduit** - Meet the requirements of Article 351 of the NEC and shall be UL1660 listed.

02920.12 Conduit Fittings - Add the following bullets to the end of the bullet list:

- **Conduit Hub** - Hot-dip galvanized malleable iron screw-on style with Neoprene "O" ring.
- **HDPE Fittings** - Factory mechanical HDPE coupling with individual reverse locking threads and built in center stop meeting the requirements of ASTM F 2176.

02920.21(a) General – Add the following to the end of this Section:

All high-voltage wiring smaller than #10 AWG shall be IMSA 19-1 cable.

02920.21(c) Traffic Signal Circuits – Replace this Section with the following:

The #14 AWG, multi-conductor cables ran for traffic signal circuits will conform to IMSA Specification 19-1. Color coding of the conductors will be as follows:

Traffic Signal Color Code
Clackamas County, Oregon
#14 AWG IMSA 19-1 Traffic Signal Cable
Mast Arms Only

	Function (Phase)	20 Conductor [Feed]	10 Conductor [Branch]	7 Conductor [Branch]	5 Conductor [Branch]	4 Conductor [Branch]
Phase	Phase Red	Red	Red	Red	Red	Red

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	Phase Yellow	Orange	Orange	Orange	Orange	Orange
	Phase Green	Green	Green	Green	Green	Green
Side Street	Phase Red	Red/Black	Red/Black	Red	Red	Red
	Phase Yellow	Orange/Black	Orange	Orange	Orange	Black
	Phase Green	Green/Black	Green/Black	Green	Green	Green
Left Turn	Phase Red	Red/Black	White/Black	White/Black	Red	Red
	Phase Yellow	White/Red	Black	Black	Orange	Black
	Phase Green	Black/White	Blue	Green	Green	Green
Overlap	Phase Red	Red/Green	White/Black	White/Black	Red	Red
	Yellow/Flashing Yellow Arrow	Orange/Red	Black	Black	Orange	Black
	Phase Green	Blue/Red	Blue	Blue	Green	Green
Main Street	Phase Don't Walk	Red/White	Red	Red	Red	-
	Phase Walk	Green/White	Green	Green	Green	
Side Street	Phase Don't Walk	Black	Red/Black	Red	Red	-
	Phase Walk	Blue/White	Green/Black	Green	Green	-
Push-Button	Common	White/Black	White/Black	White/Black	Orange	-
	Main Street Phase	Blue	Blue	Blue	Black	-
	Side Street Phase	Blue/Black	Black	Black	Black	-
	Spare	White	-	-	-	-
	AC Common (Branch Only)	-	Spare	White		

02920.23 Wire - Add the following bullet to the end of the bullet list:

- **TFFN Wire** - Insulated stranded copper wire rated for 194 °F operation in dry locations and be UL listed as TFFN.

SECTION 02925 - TRAFFIC SIGNAL MATERIALS

Comply with the most current version of the Clackamas County Signal Construction Standards (attached at the end of these Special Provisions). In addition, comply with Section 02925 of the Standard Specifications supplemented and/or modified herein unless it conflicts with the Clackamas County Signal Construction Standards.

Add the following subsection:

02925.40(a) Power Service Cabinet - Service cabinets shall be the following or an approved equal:

Fouch Drwg #0600-0074-00 (NEMA 3-R Metered Base Mount Service Cabinet Clackamas County).

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02925.42 Traffic Signal Control Devices - Add the following to the end of this subsection:

The following changes are made to the September 2001 Standard Specifications for Microcomputer Signal Controller:

3.1.6.1 Replace "15 amps" with "10 amps"

Modify the Chapter 6 heading "SPECIFICATIONS FOR CABINET MODEL 332, 332S, 334, AND 340" to the following: "SPECIFICATIONS FOR CABINET MODEL 332S".

6.1.1.1 Add the following to the listed items: Auxiliary output file

6.1.1.4 In the first sentence, remove "with Model 400 Modem".

6.4.2.5.7.1 Replace all with the following:
The Model 206 Power Supply Module shall comply with the California Department of Transportation TEES 2009 model 206L.

6.5.2.1 Replace the last sentence with the following:

All spade connectors on wires connecting to the input panel (terminal blocks TB1 through TB10 and DC ground bus) and/or input files (terminal blocks T1 through T15) shall be crimped and soldered to the wires.

SECTION 3 - TELEPHONE EQUIPPED CABINETS

8.3.1 General Requirements

8.3.1.1 Data transmission between the controller and the remote control locations shall be by standard dial-up telephone line. Transmission rate shall support a variable transmission rate determined by autosyncing of the modem. The modem shall operate with the controller at any speed or settings the modem establishes with the external source. The remote station shall have a dial-up telephone line at the remote control. Provide one auto-dial/auto-answer external modem (28,000 bps minimum) for the controller.

In addition to the requirements of Section 02925.42 and the 2001 Oregon Department of Transportation Specifications for Microcomputer Signal Controller, additional modifications to the standard traffic signal 332S control cabinet components shall be as shown in the Plans.

Add the following new Chapter 9:

CHAPTER 9 - MODEL 2070 CONTROLLER UNIT

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SECTION 1 - MODEL 2070E CONTROLLER

9.1.1 Unit Chassis

9.1.1.1 The 2070E Controller shall consist of a 2070 Chassis meeting the following requirements:

1. Lite Cage
2. 2070-1E CPU Module
3. 2070-2A C1 Field I/O Connector Module
4. 2070-4A Power Supply Module
5. 2070-3B 8x40 LCD Display Module
6. 2070-6B 9600 baud Modem Module
7. Two 2Mb (Black) Data Key (5 Volt)

9.1.2 Controller and Module

9.1.2.1 The 2070E Controller and module shall meet the following specifications:

- Caltrans 2009 TEES
 - TEES Errata 1, January 21, 2010

 - Caltrans QPL Listing, February 22, 2012
 - OS-9 Operating System version 3.3 (Ethernet Capable)
 - Controller Boot Code Compatible with NW Signal Voyage Controller Firmware and all included features
- Tested and approved Boot Codes are:
- i. Intelight, Inc. – Firmware Build: 1.1.8.31.0.0 or later
 - ii. McCain, Inc. – Firmware Build: 1.0.0.0.0.0
 - iii. Safetran – Firmware Build: 1.1.1.0.842.1
 - iv. Naztec – Firmware Build: 6.0.2.1.0

02925.51 Traffic Signal Lamps - Add the following to the end of this subsection:

Provide the following LED modules:

Vehicle Signals

Indication Color	8 Inch Lens Type	12 Inch Lens Type
Red	LED ¹	LED ¹
Yellow	LED ¹	LED ¹
Green	LED ¹	LED ¹

Pedestrian Signals ²

Indication Color	Side by Side Type	Countdown Type

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Hand	LED ³	LED ⁴
Walking Man	LED ³	LED ⁴
Numbers	–	LED ⁴

- ¹ Flange mount LED modules.
- ² Pedestrian signal LED modules may be a combination of indication in one module or single indication in separate modules.
- ³ Side by side LED modules are a combination of indication (both the hand and walking man in one module).
- ⁴ Countdown LED modules are a combination of indication (both the hand and walking man overlaid on the left with numbers on the right in one module).

02925.62 Signal and Sign Mounting Hardware

Add the following to the end of this Section:

Nylon spacers shall be used to prevent contact between galvanized steel and aluminum material surfaces.

Use adjustable "SKYBRACKET" for all mast arm mounted signal head displays and mast arm mounted regulatory signs. No banding-type "SKYBRACKET" will be allowed for any mast arm mounted traffic signal head or sign. Where no tenon exists, use cable type "SKYBRACKET" with a minimum 27 mm (1in) diameter threaded pipe nipple installed into pole as a wireway.

Apply anti-seize to all bolt thread surfaces

02925.64 Vehicle Signal - Replace the sentence that begins "Construct vehicle signal..." with the following sentence"

Construct vehicle signal housings and doors of polycarbonate.

02925.64(d) Visors - Replace the sentence that begins "Construct visors of sheet..." with the following sentence:

Construct visors of polycarbonate.

02925.64(e) Backboards - Replace the sentence that begins "Construct backboards of..." and the sentence that begins "All backboards shall be..." with the following sentence:

Construct non-louvered backboards made of polycarbonate.

02925.65(a-1) Standard - Replace this subsection with the following subsection:

- (1) Standard** - The standard light source shall meet the requirements of 02925.51.

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02925.65(a-2) Count Down - Replace this subsection with the following subsection:

(2) Count Down - The count down shall meet the requirements of 02925.51.

02925.65(b) Housing and Door - In the bullet that begins "Use a one-piece...", replace the words "die-cast aluminum alloy" with the word "polycarbonate".

02925.65(b) Housing and Door - Add the following bullets to the end of the bullet list:

- When pedestrian signal heads are not utilizing the bottom opening for mounting, be installed with a hex head pipe plug with 1/4 inch drain hole drilled in the bottom of the plug.
- Be installed with terminal blocks to accommodate wire terminations.

02925.66 Pedestrian Push Buttons and Mount - Replace Section 02925.66 with the following:

02925.66 Pedestrian Push Buttons and Mount - Pedestrian pushbuttons for installation at traffic signals shall be as follows:

Pedestrian push button system shall be Polara ENZ - EZ Communication Navigator 4 Wire Push Button Station (P/N: EN49UNO-B) or an approved equal. See the plan set for additional details. The following components make up the push button system:

(a) Push Button Station (P/N: EN4 PBS) - The main body with pushbutton for installation on the signal or pedestrian pole.

(b) Ped Head Control Unit (P/N: PHCU4W) - Interface device for installation in pedestrian signal head.

(c) Pushbutton Frame Adapter (P/N: PBFA9X12-X) - The push button frame adapter shall be constructed out of cast aluminum and have a black powder coated finish.

(d) EZCommunicator Navigator Configurator (P/N: ECONFIG) - The EZCommunicator Navigator Configurator is a hand-held remote used for configuring a 4 Wire Navigator Push Button Station (PBS). Supply one (1) ECONFIG as part of this project.

Add the following subsection:

02925.68 Signal Head Covers - Provide signal head covers that:

- Are yellow prefabricated nylon.
- Completely cover visors and can cover the backplate.
- Include a fine mesh insert for signal testing.
- Have integral elastic bands and clips to secure the covers to the signal.

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END OF SPECIAL PROVISIONS

CLACKAMAS COUNTY SIGNAL CONSTRUCTION STANDARDS

O.D.O.T. STANDARDS TO BE OBSERVED EXCEPT AS FOLLOWS:

STANDARD OR REQUIREMENT

DETECTION, UNDERGROUND & ILLUMINATION

CONDUIT

SIGNAL, ILLUMINATION AND DETECTION - MINIMUM 2" (53mm)

INTERCONNECT CONDUITS - MINIMUM 3" (78MM)

ALL FILLED & EMPTY CONDUITS SHALL INCLUDE ORANGE THWN 12^{AWG} ELECTRICLY CONTINUOUS TRACER WIRE

ALL LOCATABLE TRACER WIRE CIRCUITS SHALL BE ELECTRICALLY CONTINUOUS TO CABINET WITH NO CONNECTION TO GROUND

BUSHINGS SHALL BE INSTALLED IN ACCORDANCE WITH ODOT SPEC PRIOR TO INSTALLING ANY WIRE OR PULL TAPES

INTERCONNECT CONDUIT ENDS SHALL HAVE APPROVED METALIC BUSHINGS INSTALLED PRIOR TO ANY WIRE PULLING

AS-CONSTRUCTED PLANS DETAILING FINAL CONDUIT & EQUIPMENT INSTALLATIONS, ARE REQ'D AT THE COMPLETION OF EVERY PROJECT ELECTRICAL PERMITS PRIOR TO INSTALLATION AND INSPECTIONS REQUIRED

ILLUMINATION

COBRA HEAD H.P.S. TYPE M-C THREE HORIZONTAL CUTOFF (FLAT LENSE)

MULTI-TAP 120-240 VAC BALLAST CONNECTED 240 VAC

LUMINAIRES INDIVIDUALLY FUSED AT POLE BASE, TYPE KTK FUSE, PROPERLY SIZED FOR LUMENAIRE BALLAST

SPLICING SHALL BE PERFORMED WITH RE-USABLE INSULATED LUGS - SPLIT-BOLTS ALLOWED ON GROUNDING WIRES ONLY

WATERPROOF FUSEHOLDERS - BUSSMAN # HEB-30A-600V or EQUIVALENT - EACH LUMINAIRE

ELECTRICAL PERMITS PRIOR TO INSTALLATION AND INSPECTIONS REQUIRED

JUNCTION BOXES

SEPARATE JB'S REQUIRED FOR SIGNAL vs VEHICLE LOOP DETECTION / COMMUNICATIONS

FIBER OPTIC J-BOXES TO BE SYNERTECH 24"x36"x24" DEEP 20K RATED BOX WITH RECESSED LID (see spec's)

JUNCTION BOXES IN UNPAVED AREAS SHALL HAVE APRONS (see ODOT TM-418)

BUSHINGS SHALL BE INSTALLED IN ACCORDANCE WITH ODOT SPEC PRIOR TO INSTALLING ANY WIRE OR PULL TAPES

SEAL CONDUITS WITH APPROVED FOAM PLUG. NO DUCT SEAL ALLOWED.

NON-SLIP LIDS ARE REQUIRED ON ALL IN-GROUND JUNCTION BOXES

ELECTRICAL PERMITS REQUIRED PRIOR TO INSTALLATION AND INSPECTIONS REQUIRED

LOOPS

PUSHBUTTON OR THUMBWHEEL CONTROL LOOP AMPS ONLY

NON-INSULATED FORKS REQUIRED ON LOOP TERMINATIONS IN CONTROL CABINET

CONTACT COUNTY SIGNAL MAINTENANCE PRIOR TO LOOP INSTALLATIONS & SPLICING FOR ON SITE INSPECTION

MAXIMUM OF 4 LOOP LEAD-INS PER STUB OUT FOR SAW-CUT LOOPS

MAXIMUM OF 2 LOOP LEAD-INS PER STUB OUT FOR PREFORMED LOOPS

POWER SERVICES

100 AMP, 240 VOLT, SAFETY SOCKET, 100A MAIN BREAKER WITH 60 AMP SIGNAL BREAKER

COMM. STAINLESS STEEL METER PEDESTAL FOUCH DRWG # 0600-0074-00 OR APPROVED EQUAL

ALL PHOTOCELL WIRING SHALL BE IN IMSA 19-1 CABLE - NO INDIVIDUAL WIRES ALLOWED

SCL-2 ODOT SPEC. FOR OVERHEAD FEED

CONTRACTOR SHALL SUBMIT TO COUNTY AN AVAILABLE FAULT CURRENT DATA SHEET FOR SERVICE APPROVAL

36 INCH SQUARE CONCRETE MAINTENANCE PAD REQUIRED AT FRONT OF SERVICE CABINET

CLACKAMAS COUNTY and/or CITY ELECTRICAL PERMITS AND INSPECTIONS REQUIRED

SIGNAL POLES

APPROVED ANTI-SIEZE TO BE APPLIED TO ALL THREADED SURFACES

POLE LOCATIONS & CURB LINES SHALL BE APPROVED BY ENGINEER FOR LOCATION AND GRADE PRIOR TO FOUNDATION CONSTRUCTION

CONTRACTOR REQUIRED TO NOTIFY COUNTY SIGNAL UNIT FOR POLE INSPECTION PRIOR TO ANY POLE INSTALLATION

MAST ARM ATTACHMENT POINT SHALL BE CALCULATED SO POLE BASE IS LOCATED AT ONE (1) INCH ABOVE FINISHED GRADE

MAST ARM ATTACHMENT POINT SHALL BE CALCULATED TO ALLOW FOR ELEVATED PLUMBIZERS WHENEVER POSSIBLE

ALL OPEN HOLES IN POLES SHALL BE SEALED WITH GALVANIZED OR STAINLESS PLUGS.

TENONS ARE REQUIRED FOR ALL SIGNAL HEADS, VIDEO CABLE ENTRANCES & APPLICABLE SIGNS

VIDEO DETECTION

FINAL CAMERA LOCATIONS SHALL BE APPROVED CLACKAMAS COUNTY SIGNAL UNIT PERSONNEL

UNIFORM 12 INCH (min) DRIP LOOPS REQUIRED ON ALL EXTERIOR WIRING AT POLE/ARM ENTRANCES

INSTALL ALL CABLE ENTRANCE POINTS UTILIZING TENON (1 1/2") or GRC NIPPLE (1" min) WITH WEATHERHEAD

ALL LANE-USE & MISC PAVEMENT MARKINGS SHALL BE AT LEAST 70' BACK FROM STOP-BAR FOR OPTIMUM VIDEO DETECTION

CAMERAS SHALL BE MOUNTED USING 0.75" x 0.03" STAINLESS STEEL BANDING WITH LOCKING-EAR BUCKLE OR APPROVED CABLE KIT

MINIMUM OF 6' OF SLACK REQUIRED ON ALL VIDEO CABLES (COAX & POWER) INSIDE OF POLES

CLACKAMAS COUNTY SIGNAL CONSTRUCTION STANDARDS (CON'T)

SUPERCEDES O.D.O.T. STANDARDS AS FOLLOWS:

STANDARD OR REQUIREMENT

OVERHEAD, WIRING & CONTROL EQUIPMENT

CONTROLLER & CABINET

INSTALL LATEST (COUNTY APPROVED) BOOT CODE ALONG WITH NWS VOYAGE 3.0 SOFTWARE (or Latest version)
MODEL 2070L CONTROLLER WITH 1B, 2A, 6B, 7A, AND DATA KEY
PROVIDE CONDUIT AND WIRE FOR PHONE DROP FROM CONTROL CABINET TO TELEPHONE COMPANY PEDESTAL
EXPENSES FOR ENVIRONMENTAL CHAMBER TESTING OF EQUIPMENT SHALL BE PAID BY THE CONTRACTOR
PUSHBUTTON OR THUMBWHEEL CONTROL LOOP AMPS ONLY
PROVIDE MODEL 400 MODEM FOR LOCAL and MODEL 24000 MODEM FOR MASTER CONTROLLER AND ISOLATED LOCAL INSTALLATIONS

EMERGENCY VEHICLE PREEMPTION

MULTIPLE BARREL OPTICOM DETECTORS SHALL BE UTILIZED WHEN NEEDED TO OBTAIN SUFFICIENT COVERAGE
OPTICOM EMERGENCY VEHICLE PREEMPTION 700 Series EQUIPMENT

SIGNALS

GLASS LENSES ON ALL INCANDESCENT INDICATIONS UNLESS OTHERWISE SPECIFIED
PED HEADS WITH DIALIGHT or LEOTEK LED "FILLED" SYMBOL HAND/MAN MODULES
PED SIGNALS SHALL BE CLAMSHELL MOUNT TYPE UNLESS OTHERWISE SPECIFIED
DIALIGHT HARD-WIRED L.E.D. SIGNAL MODULES MEETING CURRENT ITE SPEC. OR APPROVED EQUAL IN ALL INDICATIONS
LOUVERED BACKPLATES (Powder Coated) INSTALLED WITH PROPER SCREWS & WASHERS
ANTI-SIEZE TO BE APPLIED TO ALL BOLT THREAD SURFACES
CONTRACTOR SHALL NOTIFY COUNTY SIGNAL UNIT PRIOR TO OVERHEAD INSTALLATION FOR INSPECTION OF SIGNAL HEADS
USE ELEVATED PLUMBIZERS ON ALL MAST-ARM MOUNTED SIGNAL HEADS WHEREVER POSSIBLE
"SKYBRACKET" BRAND BANDING-TYPE ADJUSTABLE BRACKETS ALLOWED
ALL ADJUSTABLE BRACKETS SHALL BE COMPRESSION CONNECTION TYPE, SUCH AS "SKY BRACKETS" OR APPROVED EQUAL.
ALL UNUSED HEADS SHALL BE BAGGED WITH A DURABLE/REUSEABLE COVER OF CONTRASTING COLOR & MARKED "OUT OF SERVICE".
LOUVERS FOR TRAFFIC SIGNAL INDICATIONS TO BE A "PELCO GL1010" OR AN APPROVED EQUAL
CLACKAMAS COUNTY SIGNAL HEIGHT SPECIFICATIONS - 18' TO 19' TO BOTTOM OF SIGNAL ASSEMBLY
ALL ADJUSTABLE BRACKETS SHALL HAVE EXCESS TUBE LENGTH REMOVED

SIGNS

MAST ARM STREET NAME SIGNS TO BE MOUNTED BY BAND OR CABLE-TYPE "SKY-BRACKET" OR APPROVED EQUAL
SIGNS SHALL BE MOUNTED ON STANDARD PLUMBIZERS WHEREVER APPLICABLE
PROPER LOCATION OF REGULAR & HIGH INTENSITY REFLECTIVE SIGNS SHALL BE REQUIRED
NYLON SPACERS SHALL BE USED TO PREVENT CONTACT BETWEEN GALVANIZED STEEL AND ALUMINUM MATERIAL SURFACES

TERMINAL CABINETS

USE RECESSED TERMINAL CABINET - FABRICATED INTO POLE ACCORDING TO COUNTY SPECS
MAXIMUM HEIGHT OF 6'6" TO TOP OF TERMINAL CABINET
PROVIDE SUFFICIENTLY SIZED ISOLATED COPPER NEUTRAL BUSS BAR Maximum of 1 [one] wire per terminal)
PROVIDE MARATHON ELECTRIC CO. MODEL 1112 or EQUIVALENT TERMINAL BLOCKS
ALL WIRING SHALL BE NEAT & TIE-WRAPPED TO SECURE WIRING FROM ANY DAMAGE FROM DOOR, ETC
ALL WIRES SHALL LEAVE PERPENDICULAR TO THE TERMINAL STRIP - NO WIRE CONNECTIONS SHALL BE SUBJECT TO CABLE TENSION
ALL UN-USED TERMINAL SCREWS SHALL BE TIGHTENED TO PREVENT THEM FROM BACKING OUT DUE TO VIBRATION
NEOPRENE GASKET REQUIRED TO SEAL TERMINAL CABINET
ALL WIRES SHALL BE TERMINATED IN AN APPROVED TERMINAL STRIP, UNLESS OTHERWISE APPROVED
NO WIRE NUTS ALLOWED UNLESS OTHERWISE APPROVED
TERMINAL CAN SHALL BE LOCKABLE (see Pole Drawing) AND SECURED WITH STAINLESS STEEL CONTINUOUS HINGE & BOLTS
ALL CABLES SHALL BE MARKED IN TERM CABINET BY POLE #, DESTINATION, and SIGNAL or PED PHASE WITHIN 3" OF CABLE JACKET END

WIRES & CABLES

ELECTRICAL PERMITS PRIOR TO INSTALLATION AND ELECTRICAL INSPECTIONS REQUIRED

1 - #8 Cu COMMON (Neutral) TO EACH TERMINAL CABINET
1 - #6 Cu GROUNDING CONDUCTOR TO EACH TERMINAL CABINET
3 - #6 Cu TO CONTROLLER CABINET UNLESS OTHERWISE NOTED
ALL HIGH VOLTAGE WIRING SMALLER THAN #10awg SHALL BE IMSA 19-1 CABLE
14 GAUGE - 20 CONDUCTOR IMSA SPEC 19-1 SIGNAL CABLE TO EACH SIGNAL POLE TERM CABINET (Color Code Provided by County)
SIGNAL CIRCUITS AND PED CIRCUITS REQUIRE SEPARATE CABLES BEYOND 20 CONDUCTOR SIGNAL POLE FEEDER
ALL SIGNAL CABLES SHALL BE MARKED IN CONTROLLER CABINET BY POLE # DESTINATION WITHIN 3" OF CABLE JACKET END
ALL WIRING SHALL BE NEAT & PROPERLY SECURED.
ALL SPLICES SHALL BE DONE BY APPROVED MEANS
ALL GROUNDING & BONDING CONDUCTORS SHALL BE BARE Cu (Stranded)
ONLY ONE NEUTRAL CONDUCTOR PER TERMINAL IN TERMINAL CABINETS
ALL FIELD WIRE TERMINATIONS IN THE CONTROLLER CABINET SHALL BE MADE WITH NON-INSULATED SPADES & CRIMPED PROPERLY
ALL CRIMPS SHALL BE MADE WITHIN MANUFACTURERS SPECIFICATIONS
FOR GROUNDING REQUIREMENTS, REFER TO TM405 (Jan 2001) OPTIONAL POLE BASE GROUNDING DETAIL.
ALL COMMUNICATION CABLE SHALL HAVE FOAM SKIN/FILLED CORE. Anixter Part No. E-001219DFO or Equivalent.
NO WIRE NUTS ALLOWED ON PERMANENT WIRING
DRIP LOOPS (12" MIN) SHALL BE INSTALLED ON ALL EXPOSED WIRES ENTERING ANY CABLE ENTRANCE
DOUBLE-CIRCLE LOOPS SHALL BE INSTALLED ON ALL VIDEO CABLE AT THE WIRE ENTRANCE POINT (WEATHERHEAD)
TYPE "TC" CABLES FOR INTERSECTION ILLUMINATION - #10 AWG, 3-CONDUCTOR, CLASS B STRANDING, UV RESISTANT PVC JACKET.
MINIMUM 1 SPARE CONDUCTOR REQ'D IN IMSA CABLE FOR SIGNAL HEAD CIRCUITS
MINIMUM OF 6 FEET OF SLACK IN ALL CABLES IN POLES & J-BOXES ARE REQUIRED



CITY OF
**West
Linn**

PLANS

Solicitation Number: PW-13-14

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Appendix C

**SEE ATTACHED
PLANS**