

ADDENDUM #1 – MARCH 13, 2025

RE: CITY OF COQUILLE URA
N. Adams Street Improvements Phase 1: Underground Improvements
Project #23.81

FROM: HGE ARCHITECTS, Inc.
333 South 4th Street
Coos Bay, Oregon 97420
541-269-1166

TO: Prospective Bidders

This Addendum forms a part of the Contract Documents and modifies the original Documents dated February 2025, as noted below. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

This Addendum consists of **TWO (2)** page(s) together with the following attachments:

- **Specification Section C-800 – Supplementary Conditions**
- **Specification Section 00734 – Prevailing Wage Rate**
- **Specification Section 00960 – Common Provisions for Electrical Systems**
- **Specification Section 00962 – Metal Illumination and Traffic Signal Supports**
- **Specification Section 00970 – Highway Illumination**
- **Pacific Power Underground Installation Requirements**
- **Electrical Report, Cedar Electric, dated August 2024**

CHANGES TO PROJECT MANUAL:

1. **Specification Section 00100 Table of Contents, Volume 2:** ADD the following:
“DIVISION 0 – PROJECT REQUIREMENTS
Section 00734 – Prevailing Wage Rates
Section 00960 – Common Provisions for Electrical Systems
Section 00962 – Metal Illumination and Traffic Signal Supports
Section 00970 – Highway Illumination
Pacific Power Underground Installation Requirements
Electrical Report, Cedar Electric, dated August 2024”
2. **Specification Section C-800 Supplementary Conditions:** REPLACE section in entirety with attached.
3. **Specification Section 00734 Prevailing Wage Rate:** ADD attached section in entirety.
4. **Specification Section 00960 Common Provisions for Electrical Systems:** ADD attached section in entirety.

5. **Specification Section 00962 Metal Illumination and Traffic Signal Supports:** ADD attached section in entirety.
6. **Specification Section 00970 Highway Illumination:** ADD attached section in entirety.
7. **Pacific Power Underground Installation Requirements:** ADD attached report in entirety.
8. **Electrical Report, Cedar-Electric, dated August 2024:** ADD attached report in entirety.

CHANGES TO DRAWINGS: None.

SUBSTITUTION APPROVALS: None.

END OF ADDENDUM #1



SECTION 00800

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC Document C-700 (2018 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the same meanings stated in the General Conditions.

SC-1.01.A.3 Add the following language to the end of Paragraph 1.01.A.3:

The Application for Payment Form to be used on this project is EJCDC No. C-620.

SC-1.01.A.9 Add the following language to the end of Paragraph 1.01.A.9:

The Change Order Form to be used on this project is EJCDC No. C-941.

SC-1.01.A.39 Add the following language to the end of Paragraph 1.01A.39:

1.01.A.39 Also referred to as Project Manual - The bound documentary information prepared for bidding and constructing the Work, including the Bidding Requirements and Contract Documents.

SC-1.01.A.42 Delete Paragraph 1.01.A.42 in its entirety and insert the following:

1.01A.42 Substantial Completion - The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER as evidenced by ENGINEER's definitive Certificate of Substantial Completion it is 100% complete in accordance with the Contract Documents with the exception of minor and specific corrective items that would normally be itemized on a final punch list and completed before final acceptance; or if no such certificate is issued, when the Work is complete and ready for final payment as evidenced by ENGINEER's written recommendation of final payment in accordance with Paragraph 15.03. The terms "Substantially Complete and Substantially Completed" as applied to all or part of the Work refer to Substantial Completion thereof.

SC-1.01.A.51 Add the following new paragraph.

1.01.A.51 Final Acceptance - The time at which the Final Application for Payment has been approved by all of the following: Contractor, Engineer, Owner and Agency; if any.

SC-2.05.A Add the following language at the end of the first sentence of Paragraph 2.05.A:

Engineer may waive conference and allow schedules to be submitted by email.

SC-3.02.B Add the following new paragraph immediately after Paragraph 3.02.A.2:

3.02.B Referenced standards are a part of these specifications. If choices or options are contained therein, selection will be by the Engineer.

SC-3.03.B.1.b. Add the following paragraph(s) immediately after Paragraph 3.03.B.1.b:

1. Where a conflict occurs between or within the Standards, Specifications and Drawings, the more stringent or higher quality requirements shall apply. The precedence of the Contract Documents is in the following sequence.
 - a. Addenda and modifications by Change Order, Field Order or Work Change Directive to the Drawings and Specifications take precedence over the original Construction Documents.
 - b. In the Drawings, the precedence shall be Drawings of larger scale over those of smaller scale, figured dimensions over scaled dimensions and noted materials over graphic indications.
 - c. Should there be a conflict within the Specifications, on the Drawings or between the Drawings and Specifications, the Engineer shall decide which stipulation will provide the best installation and his decision shall be final.

SC-3.04.B Add the following paragraph(s) immediately after Paragraph 3.04.B:

- 3.04.B.1 Before executing the Agreements, the Contractor shall thoroughly familiarize himself with all specified products and submit written notice to Engineer if Contractor objects to the proposed use of any product.
- 3.04.B.2 Whenever in these Specifications a product is referred to in the singular number, such reference shall include as many such items as are indicated or required to complete work.
- 3.04.B.3 These Specifications are of the abbreviated or streamlined type and frequently include incomplete sentences. Words such as "shall, shall be, the Contractor shall" and similar phrases shall be supplied by inference.

SC-4.01 Amend the last sentence of Paragraph 4.01.A by striking out the following:

In no event will the Contract times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Contract, whichever date is earlier.

SC-4.03.A Amend third sentence of Paragraph 4.03.A to read as follows:

...Contractor shall, within 24 hours after becoming aware...

SC-4.05 Amend Paragraph 4.05.C by adding the following subparagraphs:

5. *Weather-Related Delays*
 - a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and

3) that such weather conditions had an adverse effect on the Work as scheduled.

- b. The existence of abnormal weather conditions will be determined on a month-by-month basis in accordance with the following:

SC-5.05 Add the following new paragraph immediately after Paragraph 5.05.F.4:

5.05.F.4 Oregon law requires Contractor to follow rules adopted by the Oregon Utility Notification Center. The rules are set forth in OAR 952-001-010 through 952-001-0090. Oregon Utility Notification Center (OUNC) may be contacted at 1-800-332-2344 for utility locates. Copies of the rules may be obtained from the Center.

SC-5.06 Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.
- B. Not Used.

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.C.:

- 1. Contractor shall be responsible for and shall pay all costs associated with the abatement, removal, and disposal of any existing Asbestos-Cement pipe requiring removal or disturbed during the Work within the limits described in the Construction Drawings or Specifications.

SC-5.06 Amend the first sentence of Paragraph 5.06.I to read as follows:

“Subject to the provisions of the Oregon Constitution, applicable Laws and Regulations, and to the limits of the Oregon Tort Claims Act,”.

By striking out the following: “To the fullest extent permitted by Laws and Regulations,”

SC-5.07 Add the following section immediately after 5.06.K:

SC-5.07 Historical or Archaeological Finds

- 2. Where historical objects of archaeological nature are encountered during construction, including but not limited to ruins, sites, buildings, artifacts, human remains, and fossils, the Contractor shall suspend operations in the area, preserve all such objects from disturbance and shall notify the Engineer of the nature and location of such finds. The Engineer will arrange for the disposition of all finds and shall notify the Contractor when to proceed with construction in affected area. The contractor shall be entitled to a change in the contract time equal to the delay caused by such finds, but shall not be entitled to costs, except for cost of labor to preserve the site and maintain utility services around the site during the delay.

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2010, 2013, or 2018 edition).
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2010, 2013, or 2018 edition).

SC-6.01 Add the following new paragraphs immediately after Paragraph 6.01.C:

1. The Bonds shall be accompanied by the name, address and phone number of the agent for the surety who is authorized to receive notice of claims against the Bond.
2. If the Contractor submits a cashier's check or a certified check in lieu of a performance bond pursuant to ORS 279C.380 (a), the Owner will hold the check for a period of 180 days beyond the date of final acceptance of the Work. If the Owner receives a notice of claim under ORS 279C.600 to 279C.625, the Owner will hold an amount sufficient to cover the claim for a period of two years following final acceptance of the Work. If an action is instituted against the cashier's check or certified check under ORS 279.536, the Owner will hold an amount sufficient to cover the amount of claim until the action is resolved.

SC 6.01 Add the following new paragraphs immediately after Paragraph 6.01.H:

1. Contractor shall have public works bond filed with the Oregon Construction Contractors Board before starting Work on the Project unless exempt under ORS 279C.800 to 279C.870.
2. Contractor shall include in every Subcontract a provision requiring every Subcontractor to have a public works bond filed with the Oregon Construction Contractors Board before starting Work on the Project unless exempt under ORS 279C.800 to 279C.870.

SC-6.02 Add the following paragraph immediately after Paragraph 6.02.B:

1. Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the Project is located, (b) is certified or authorized as a worker's compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker's compensation insurance for similar projects by the state within the last 12 months.
2. Bonds and Insurance shall be written by companies licensed to do business in the State of Oregon and satisfactory to the Owner.

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

- D. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Jones Act (if applicable)	
Bodily injury by accident—each accident	\$ 500,000
Bodily injury by disease—aggregate	\$ 500,000
Employer's Liability	
Each accident	\$ 500,000
Each employee	\$ 500,000
Policy limit	\$ 1,000,000
Stop-gap Liability Coverage	
For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	\$ 1,000,000

E. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:

1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
2. damages insured by reasonably available personal injury liability coverage, and
3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

F. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.
 - a. Such insurance must be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
4. Underground, explosion, and collapse coverage.
5. Personal injury coverage.

6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
 7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- G. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
 4. Any exclusion of coverage relating to earth subsidence or movement.
 5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
 6. Any limitation or exclusion based on the nature of Contractor's work.
 7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.
- I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$ 1,000,000
Products—Completed Operations Aggregate	\$ 1,000,000
Personal and Advertising Injury	\$ 500,000
Bodily Injury and Property Damage—Each Occurrence	\$ 500,000

- J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis. Automobile insurance coverage shall include use of any motor vehicle, including owned, non-owned and hired.

Automobile Liability	Policy limits of not less than:
Bodily Injury	
Each Person	\$ 500,000
Each Accident	\$ 1,000,000

Automobile Liability	Policy limits of not less than:
Property Damage	
Each Accident	\$ 1,000,000
[or]	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$ 1,000,000

- K. *Umbrella or Excess Liability*: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	\$ 1,000,000
General Aggregate	\$ 1,000,000

- L. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements*: Contractor may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of **\$200,000.00** after accounting for partial attribution of its limits to underlying policies, as allowed above.
- M. *Contractor's Pollution Liability Insurance*: Contractor shall purchase and maintain a policy covering third-party injury and property damage, including cleanup costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance must be maintained for no less than three years after final completion.

Contractor's Pollution Liability	Policy limits of not less than:
Each Occurrence/Claim	\$ 1,000,000
General Aggregate	\$ 1,000,000

- N. *Contractor's Professional Liability Insurance*: If Contractor will provide or furnish professional services under this *Contract*, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance must cover negligent acts, errors, or omissions in the performance of professional design or related services by the insured or others for whom the insured is legally liable. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

Contractor's Professional Liability	Policy limits of not less than:
Each Claim	\$ 1,000,000
Annual Aggregate	\$ 1,000,000

SC-6.04 Delete Paragraph 6.04.A of the General Conditions and substitute the following in its place:

A. *Installation Floater*

1. Contractor shall provide and maintain installation floater insurance on a broad form or “all risk” policy providing coverage for materials, supplies, machinery, fixtures, and equipment that will be incorporated into the Work (“Covered Property”). Coverage under the Contractor's installation floater will include loss from covered “all risk” causes (perils) to Covered Property:
 - a. of the Contractor, and Covered Property of others that is in Contractor's care, custody, and control;
 - b. while in transit to the Site, including while at temporary storage sites;
 - c. while at the Site awaiting and during installation, erection, and testing;
 - d. continuing at least until the installation or erection of the Covered Property is completed, and the Work into which it is incorporated is accepted by Owner.
2. The installation floater coverage cannot be contingent on an external cause or risk, or limited to property for which the Contractor is legally liable.
3. The installation floater coverage will be in an amount sufficient to protect Contractor's interest in the Covered Property. The Contractor will be solely responsible for any deductible carried under this coverage.
4. This policy will include a waiver of subrogation applicable to Owner, Contractor, Engineer, all Subcontractors, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them.

SC-7.03 Add the following new subparagraph immediately after Paragraph SC-7.03.D:

1. For purposes of administering the foregoing requirement, additional overtime costs are defined per State standards.

SC-7.03 Delete Paragraph 7.03.C in its entirety, and insert the following:

- C. In the absence of any Laws or Regulations to the contrary, Contractor may perform the Work on holidays, during any or all hours of the day, and on any or all days of the week, at Contractor's sole discretion.

SC-7.04 Add the following new paragraph immediately after Paragraph SC-7.04.B:

1. Contractor agrees to prefer goods and services that have been manufactured or produced in the United States of America if price, fitness, availability or quality is otherwise equal.

SC-7.05 Amend the third sentence of Paragraph 7.05.A by striking out the following:

“Unless the specification or description contains or is followed by words reading that no like, equivalent, or, ‘or-equal’ item is permitted.”

SC-7.05 Amend the last sentence of paragraph 7.05.A.1.a.3 by striking out “and,” and inserting a period at the end of Paragraph 7.05.A.1.a.3.

SC-7.06 Add the following new paragraph immediately after Paragraph 7.06.A.3.d:

4. It shall be the responsibility of the Contractor to insure that the items to be furnished as substitution shall fit within the space and envelope of the originally specified item. The Contractor shall make necessary field measurements to ascertain space requirements including those for connections and shall order such sizes and shapes of equipment that the final installation shall suit the true intent and meaning of the Plans and Specifications. Where equipment requiring different arrangement of connections from those shown is approved, it shall be the responsibility of the Contractor to install the equipment to operate properly and in harmony with the intent of the Plans and Specifications and to make all changes in work required by the different arrangement of connections.

SC-7.06 Add the following new paragraph immediate after paragraph 7.06.B:

1. *During Bidding.* The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or “or-equal” materials and equipment as defined in paragraph 7.06 of the General Conditions, or those substitute materials and equipment approved by the Engineer and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function, and quality to be met by any proposed substitute or “or-equal” item. Request for Engineer’s clarification of materials and equipment considered “or-equal” prior to the Effective Date of the Agreement must be received by the Engineer at least 5 days prior to the date for receipt of Bids. No item of material or equipment will be considered by Engineer as a substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each request shall conform to the requirements of Paragraph 7.06 of the General Conditions. The burden of proof of the merit of the proposed item is upon the Bidder. Engineer’s decision of approval or disapproval of a proposed item will be final. If Engineer approves any proposed substitute item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

SC-7.07 Add the following paragraph immediately after Paragraph SC-7.07. A:

1. The Contractor shall not award work valued at more than fifty percent of the Contract Price to a Subcontractor(s), without prior written approval of the Owner.

SC-7.07 Add the following paragraph immediately after Paragraph SC-7.07. D:

1. Once a Subcontractor list has been submitted and approved by the Owner (or Owner makes no objection thereto), Contractor shall not substitute any Subcontractor(s) without the written approval of the Owner.

SC-7.07 Add the following paragraph immediately after Paragraph SC-7.07.M:

N. Contractor will comply with ORS 279C.580 regarding all relations with Subcontractors.

O. Contractor agrees to make all provisions of the contract with the Owner applicable to any Subcontractor performing work under the contract.

P. Contractor and all first tier Subcontractors and Suppliers must comply with prompt payment provisions pursuant to ORS 279C.515. Contractor shall include in each subcontract for property, materials or services (1) a payment clause which obligates the Contractor to pay such Subcontractor or Supplier within 30 days of receiving payment from the Owner, (2) an interest penalty clause which obligates the Contractor to pay the Subcontractor an interest penalty on delinquent payments, and (3) a clause which requires first tier Subcontractors or Suppliers to include similar payment and interest penalty clauses in lower tier subcontracts. These clauses and the rights and obligations described thereby, shall conform to the requirements of ORS 279C.515 and ORS 279C.580.

SC-7.09 Add the following new paragraph immediately after paragraph SC-7.09. A:

B. Contractor shall fully comply with all provisions of permits and requirements of the Permitting Agency governing the Work or allowing access to adjacent land areas whether the permit is acquired by Owner or by the Contractor. Contractor to assume all responsibilities, obligations and conditions of the named Permit Holder as identified in the permit. Should there be a conflict between requirements of any permit and theses Contract Documents, the more stringent requirement will apply.

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

1. Contractor and any Subcontractor shall pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.
 2. Contractor shall pay promptly all contributions or amounts to the State Industrial Accident Fund and the State Unemployment Compensation Fund from Contractor or any Subcontractor in connection with the performance of the contract.
- B. Owner is exempt from payment of sales and compensating use taxes of the State of **Oregon** and of cities and counties thereof on all materials to be incorporated into the Work.
1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.
 2. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

SC-7.11 Add a new paragraph immediately after Paragraph 7.11.C:

D. Payment of Prevailing Wage Rates for Public Works. The Contractor and all persons doing or contracting to do any of the work contemplated by the Contract shall comply with all Federal and State Laws in employment and payment of labor. Contractor shall comply with all provisions of said laws (and pay all related fees), not only in regard to the payment of prevailing wage rates, but also in the matter of the necessary certificates and affidavits required to accompany each request for payment. No payment, progress or otherwise, will be paid unless accompanied by the necessary certificates and affidavits pertaining to prevailing wages.

E. The minimum wages to be paid workers on this project shall not be less than the prevailing rate including fringe benefits in accordance with ORS 279C, paid to the corresponding classes of workers in the locality where the public work is being provided. Prevailing rates shall be in accordance with the most current version (or as it is modified

by addendum) of the "Prevailing Wage Rates for Public Works Contracts in Oregon" as published by the Oregon Bureau of Labor and Industries (BOLI). Such publications can be obtained from the Bureau of Labor and Industries and the U.S. Department of Labor and a copy of the most current version is to be supplied to the Owner with the first pay request. If a dispute arises as to what is the prevailing wage rate for any class of workers, and a dispute cannot be settled by the parties involved, it may be referred to the Commissioner of Labor, State of Oregon, for final determination.

1. The wage rates are minimum rates only and the Owner will not consider any claims for additional compensation because of payment made by the Contractor or a Subcontractor of any wage rate in excess of the prevailing rate.
2. If Owner determines at any time that the prevailing rate of wage has not or is not being paid as required herein, it may retain from moneys due to Contractor an amount sufficient to make up the difference between the wages actually paid and the prevailing rate of wages, and may also cancel the Contract. Liquidated damages for failure to pay the rate of wage required herein shall be an additional amount equal to the unpaid premium, over and above the liability of the Contractor, any Subcontractor, or surety to pay said unpaid minimum to any workers affected.

F. Under the provisions of Oregon Law, ORS 279C.845, the wage certification form on public works contracts must be provided: Once within fifteen (15) days of the date the Contractor or Subcontractor first began work on the project and once before the final inspection of the project by the public contracting agency: In addition, for projects exceeding ninety (90) days, submissions are to be made at 90-day intervals. Payroll information is to be filed with both the public contracting agency and the Wage and Hour Division, Bureau of Labor and Industries, 1400 S.W. 5th Avenue, Portland, Oregon 97201. This payroll information must be kept by the Contractor and/or Subcontractor for three (3) years.

G. Contractor shall strictly observe and obey all of the terms and provisions of ORS 279C pertaining specifically, but not exclusively, to the furnishings of Workers Compensation Insurance, payment of laborers and material men, the withholding of State and Federal income and other taxes, hours of labor, and all other regulations provided in said chapter, and shall hold Owner harmless on account thereof.

H. Contractor shall employ no person for more than eight hours in any one day, or 40 hours in any one week, except in cases of necessity, emergency or where the public policy absolutely requires it. In such cases, Contractor shall pay the laborer at least time and a half pay for all overtime in excess of eight hours a day and for work performed on any legal holiday specified in ORS 279C.520. When specifically agreed to in a written labor-management negotiated labor agreement, a laborer may be paid at least time and a half pay for work performed in any legal holiday specified in ORS 187.010 and 187.020 and not listed in ORS 279C.540(1). Contractor to comply with ORS 279C.540 to 279C.545 and ORS 653.268 to 653.269 regarding hours of labor and overtime.

I. Contractor shall comply with ORS 279C.530 and shall make payment promptly, as due, to any person, co-partnership, association, or corporation furnishing medical, surgical, hospital, or other needed care of attention incident to sickness or injury to the employees of Contractor of all sums which the Contractor agreed to pay or collected or deducted from the wages of employees pursuant to any law, Contractor or agreement for the purpose of providing payment for such service.

J. The Contractor, or its Subcontractors, if any, and all employers working under this Contract are subject employers under Oregon Workers' Compensation Law and shall

comply with ORS 656.017, which requires them to provide Workers' Compensation for all their subject workers as defined under ORS chapter 656 (ORS 279C.530(2)).

K. Contractor shall comply with all federal, state, and local laws and regulations dealing with the prevention of environmental pollution and the preservation of natural resources that affect the performance of the Contract. If new or amended statutes, ordinances, or regulations are adopted, or the Contractor encounters a condition not referred to in the bid document not caused by the Contractor and not discoverable by reasonable site inspection which requires compliance with federal, state, or local laws or regulations dealing with the prevention of environmental pollution or the preservation of natural resources, both the Owner and the Contractor shall have all the rights and obligations specified in ORS 279C.525 to handle the situation.

L. This Contractor and all Subcontractors shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, handicap, marital status, age or national origin. Such action shall include, but not be limited to: employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship.

1. The Contractor shall post in conspicuous places available to employees and applicant for employment, notices setting forth the provisions of this nondiscrimination clause. Contractor's and Subcontractor's solicitations and advertisements for employees shall state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, handicap, marital status, age or national origin.

M. Contractor certifies that all subcontractors performing work described in ORS 701.005(2) (i.e. construction work) will be registered with the Construction Contractors Board or licensed by the State Landscape Contractors Board in accordance with ORS 701.035 to 701.055 before the subcontractors commence work under the Contract.

N. Upon award of this contract, the Owner is required to pay a fee to the BOLI Prevailing Wage Rate Unit in accordance with ORS 279C.830 (2) and OAR 839-025-0200. The amount of the fee shall be one tenth of one percent (.001) of the contract price; however, the fee must be no less than \$250 or more than \$7,500 regardless of the contract price.

SC-7.16 Add the following at the end of paragraph 7.16.B.3:

Shop Drawings and samples shall be submitted by the Contractor in sufficient time to allow the Engineer not less than 20 days to review the data for compliance.

SC-7.16 Add the following new paragraph immediately after Paragraph 7.16.F:

- C. In the event that the Contractor requests a change of a previously approved item, the Contractor shall reimburse the Owner for the Engineer's charges for its review time unless the need for such change is beyond the control of the Contractor.

SC-7.18 Add the following new paragraph immediately after Paragraph 7.18.B:

C. Contractor shall not be required to indemnify any indemnity to the extent the claim, cost, loss or damage is caused by the indemnity's negligence.

D. The performance of this Contract is at Contractor's sole risk. The service or services to be rendered under this Contract are those of an independent Contractor who is not an officer or agent of the Owner as those terms are used in ORS 30.265.

E. The Contractor shall not permit any lien or claim to be filed or prosecuted against the Owner in connection with this Contract and agrees to assume full responsibility for their satisfaction should any lien or claim be filed.

SC-8.04 Add the following new paragraph immediately after Paragraph 8.03 C:

A. Should Contractor cause damage to the work or property of any other contractor at the Site, or should any claim arising out of Contractor's performance of the Work at the Site be made by any other contractor against Contractor, Owner, Engineer, or the construction coordinator, then Contractor (without involving Owner, Engineer, or construction coordinator) shall either (1) remedy the damage, (2) agree to compensate the other contractor for remedy of the damage, or (3) remedy the damage and attempt to settle with such other contractor by agreement, or otherwise resolve the dispute by arbitration or at law.

B. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner, Engineer, the construction coordinator and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any other contractor against Owner, Engineer, consultants, or the construction coordinator to the extent said claim is based on or arises out of Contractor's performance of the Work. Should another contractor cause damage to the Work or property of Contractor or should the performance of work by any other contractor at the Site give rise to any other Claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer, or the construction coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner, Engineer, or the construction coordinator on account of any such damage or Claim.

C. If Contractor is delayed at any time in performing or furnishing the Work by any act or neglect of another contractor, and Owner and Contractor are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, Contractor may make a Claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be Contractor's exclusive remedy with respect to Owner, Engineer, and construction coordinator for any delay, disruption, interference, or hindrance caused by any other contractor. This paragraph does not prevent recovery from Owner, Engineer, or construction coordinator for activities that are their respective responsibilities.

SC-10.03 Add the following new subparagraph immediately after Paragraph 10.03.A:

1. On this Project, by agreement with the Owner, the Engineer will not furnish a Resident Project Representative to represent Engineer at the Site or assist Engineer in observing the progress and quality of the Work. This assistant will be assigned to various portions of the Work by the Engineer whether employed by the Owner or the Engineer. It is understood that the Resident Project Representative shall have the power, in the absence of the Engineer, to issue instructions and make decisions within the limitations of the authority of the Engineer. The authority of such assistants shall, however, be limited to the particular portion or phase of the work to which they are assigned and by the particular duties assigned to them by the Engineer.

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and

Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:

1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.
3. *Liaison*
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's On-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
4. *Review of Work; Defective Work*
 - a. Conduct On-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Observe whether any Work in place appears to be defective.
 - c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.
5. *Inspections and Tests*
 - a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
 - b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
6. *Payment Requests:* Review Applications for Payment with Contractor.
7. *Completion*
 - a. Participate in Engineer's visits regarding Substantial Completion.
 - b. Assist in the preparation of a punch list of items to be completed or corrected.
 - c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.

- d. Observe whether items on the final punch list have been completed or corrected.

D. The RPR will not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including “or-equal” items).
2. Exceed limitations of Engineer’s authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Authorize Owner to occupy the Project in whole or in part.

SC-13.01 Supplement Paragraph 13.01.C.2 by adding the following definition of small tools and hand tools:

- a. For purposes of this paragraph, “small tools and hand tools” means any tool or equipment whose current price if it were purchased new at retail would be less than \$500.

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the extended price of a particular item of Unit Price Work amounts to **25** percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than **25** percent from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor’s unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor’s costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

SC-14.02 Add the following new paragraph immediately after Paragraph 14.02.A:

1. Timely notice for inspections, tests, or approvals shall mean not less than 48 hours prior to the time when inspection, test, or approval is required.

SC-15.01 Add the following new paragraph immediately after Paragraph 15.01.B.2:

- a. Payments of Liens, Withholding Taxes, Contributions to Industrial Accident Fund, Labor, and Materials. The Contractor shall make payment promptly as due to all persons supplying to the Contractor labor or materials for the prosecution of the work provided for herein, and shall pay all contributions or amounts due the State Industrial Accident Fund from the Contractor or Subcontractors incurred in the performance of this Contract. The Contractor shall permit no lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished, and shall promptly pay any and all withholding taxes, whether state or federal, all social security charges and all contributions on amounts due to the State Unemployment Compensation Trust Fund, and promptly pay or cause to be withheld, as the case may be, any and all taxes, charges, or fees, or sums whatsoever which are now or may hereafter be required to be paid or withheld under any laws of the state and location where the work is to be performed. Contractor shall assume responsibility for satisfaction of any liens or claims filed or prosecuted and shall defend, indemnify and hold Owner harmless against any such liens or claims.
- b. Payment of Claims by the Owner. In the event the Contractor shall fail, neglect, or refuse to make prompt payment of any claim for labor or services furnished to the Contractor or Subcontractor by any person in connection with this contract as such claim becomes due, whether said services and labor be performed for the Contractor or a Subcontractor, then in such event, the proper officer or officers representing the Owner 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. The payment of a claim in the manner authorized herein shall not relieve the Contractor or his Surety from his or its obligation with respect to any unpaid claims. If the Owner is unable to determine the validity of any claim for labor or material furnished, the Owner may withhold from any current payment due Contractor an amount equal to said claim until its validity is determined, and the claim, if valid, is paid by the Contractor or the Owner. There shall be no final acceptance of the work under the Contract until all such claims have been resolved.

SC-15.01 Add the following new Paragraph after Paragraph 15.01.B.3:

4. The Application for Payment form, to be used on this project is the EJCDC C-620.

SC-15.01 Add the following language to the end of Paragraph 15.01.B.4:

No Payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage, or invest the retainage for the benefit of the Contractor.

SC-15.01 Delete Paragraph 15.01.D.1 in its entirety and insert the following in its place:

1. The Application for Payment with Engineer's recommendations will be presented to the Owner and Agency for consideration. If both the Owner and Agency find the Application for Payment acceptable, the recommended amount less any reduction

under the provisions of Paragraph 15.01.E will become due twenty (20) days after the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.

2. The Owner and Contractor are bound by the rights and responsibilities of the prompt payment polices and shall comply with the procedures for prompt payment as stated in ORS 279C.515, ORS 279C.570 and ORS 279C.580.

SC-15.01 Add the following new Paragraphs immediately after Paragraph 15.01.E.1.I:

- c. Third party claims filed or evidence indicating probable filing of such claim.
- d. Failure of Contractor to make payments properly or promptly to Subcontractors for materials, labor, or equipment.
- e. Damage to Owner or others.
- f. Failure of Contractor to file certified statements regarding payment of prevailing rates of wages ORS 279C.845 with Owner for each week of Work covered in the submitted Application for Payment.

SC-15.01 Add the following new Paragraph 15.01.F:

- F. For contracts in which the Contract Price is based on the Cost of Work, if Owner determines that progress payments made to date substantially exceed the actual progress of the Work (as measured by reference to the Schedule of Values), or present a potential conflict with the Guaranteed Maximum Price, then Owner may require that Contractor prepare and submit a plan for the remaining anticipated Applications for Payment that will bring payments and progress into closer alignment and take into account the Guaranteed Maximum Price (if any), through reductions in billings, increases in retainage, or other equitable measures. Owner will review the plan, discuss any necessary modifications, and implement the plan as modified for all remaining Applications for Payment.

SC-15.02 Amend the Paragraph 15.02.A by striking out the following:

“No later than seven days after the time of payment by Owner.” and inserting “no later than the time of payment by Owner.”

SC-15.03 Add the following new subparagraph to Paragraph 15.03.A:

1. Substantially complete is further defined and clarified as being 100% complete in accordance with the Contract Documents with the exception of minor and specific corrective items that will be itemized by the Engineer on a final punch list and completed before final acceptance. Final completion is further defined as being 100% complete in accordance with the Contract Documents, with no exceptions. Final completion of the entire project shall be no later than the time indicated on the Certificate of Substantial Completion. If no date is indicated, then thirty (30) calendar days from the date of substantial completion will be considered maximum. If final completion is not accomplished within the time indicated, liquidated damages if included in this Contract and as defined in the Agreement will be reinstated at that date and will continue until final completion or a time extension is granted.

2. Liquidated Damages. Should the Contractor fail to accomplish Substantial Completion or Final Acceptance in the time agreed upon in the Contract or within such extra time as may have been allowed for delays by extensions granted as provided in the Contract, the Contractor shall reimburse the Owner for the additional expense and damage for every day, that the Contract remains uncompleted after the date of completion given in the Contract. It is agreed that the amount of such additional expense and damage incurred by reason of failure to complete the Work within the time agreed is the per diem rate stipulated in the Agreement as a minimum or actual expenses or damages if they exceed this agreed to minimum amount. The said amounts are hereby agreed upon as liquidated damages for the loss to the Owner and on account of the value of the operation of the works dependent thereon. It is expressly understood and agreed that this amount is not to be considered in the nature of a penalty, but as actual expense and damages experienced by the Owner for delay of completion beyond the agreed to Contract times. Owner is authorized to deduct the amount of such damages from any monies due the Contractor for work performed or material furnished under this Contract, and the Contractor and his sureties shall be liable for any excess. Liquidated damages include only cost and expenses incurred by the Owner for delay of completion beyond the agreed to Contract times. Liquidated damages do not include any other cost, expense or claim Owner may have against Contractor for any other reason.

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

SC-15.06 Add the following new paragraph immediately after Paragraph 15.06.A.3:

4. Final payment will not be made to the Contractor until it files with the Owner a notarized affidavit containing the following statements:
 - a. "I (we) hereby certify that all work has been performed and material supplied in accordance with the plans, specifications, and Contract Documents for the above work;
 - b. No less than the prevailing rates of wages as ascertained by the governing body of the contracting agency has been paid to laborers and workers employed on this work (a signed State-approved Wage Certification Form certifying that Contractor has paid not less than the prevailing rate of wages as required by law);
 - c. No subcontract was assigned or transferred or performed by any subcontractor other than the original subcontractor, without prior notice having been submitted to the Engineer together with the names of all subcontractors;
 - d. All suppliers and subcontractors connected with the Work have been paid in full;
 - e. All claims for material and labor and other services performed in connection with these specifications have been paid; and
 - f. All monies due the State Industrial Accident Fund, the State Unemployment Compensation Trust Fund, the State Tax Commission, hospital associations and/or others have been paid."

SC-15.06 Add the following language to the end of Paragraph 15.06.E:

Final Payment shall include all amounts previously withheld as retainage.

SC-16.02 Add the following paragraphs immediately after Paragraph 16.02.A.4

5. Failure to make prompt payment to Subcontractors of for materials or labor;
6. Abandonment of the Work by the Contractor;
7. Subletting the Work without the previous written consent of the Owner;
8. Assignment of this Agreement, or any clam thereunder, without the previous written consent of the Owner;
9. Failing to achieve Substantial Completion within the Contract Time; or
10. Failing to make diligent and timely progress toward Substantial Completion.

SC-17.01 Add the following new Paragraph immediately after Paragraph 17.01.B:

- C. For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

17.02 Arbitration

- A. All matters subject to final resolution under this Article will be settled by arbitration administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules (subject to the conditions and limitations of this Paragraph SC-17.02). Any controversy or claim in the amount of \$100,000 or less will be settled in accordance with the American Arbitration Association's supplemental rules for Fixed Time and Cost Construction Arbitration. This agreement to arbitrate will be specifically enforceable under the prevailing law of any court having jurisdiction.
- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitration administrator, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in Article 17, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event will any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations.
- C. The arbitrator(s) must be licensed engineers, contractors, attorneys, or construction managers. Hearings will take place pursuant to the standard procedures of the Construction Arbitration Rules that contemplate in-person hearings. The arbitrators will have no authority to award punitive or other damages not measured by the prevailing party's actual damages,

except as may be required by statute or the Contract. Any award in an arbitration initiated under this clause will be limited to monetary damages and include no injunction or direction to any party other than the direction to pay a monetary amount.

- D. The Arbitrators will have the authority to allocate the costs of the arbitration process among the parties, but will only have the authority to allocate attorneys' fees if a specific Law or Regulation or this Contract permits them to do so.
- E. The award of the arbitrators must be accompanied by a reasoned written opinion and a concise breakdown of the award. The written opinion will cite the Contract provisions deemed applicable and relied on in making the award.
- F. The parties agree that failure or refusal of a party to pay its required share of the deposits for arbitrator compensation or administrative charges will constitute a waiver by that party to present evidence or cross-examine witness. In such event, the other party shall be required to present evidence and legal argument as the arbitrator(s) may require for the making of an award. Such waiver will not allow for a default judgment against the non-paying party in the absence of evidence presented as provided for above.
- G. No arbitration arising out of or relating to the Contract will include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
 - 1. the inclusion of such other individual or entity will allow complete relief to be afforded among those who are already parties to the arbitration;
 - 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration, and which will arise in such proceedings;
 - 3. such other individual or entity is subject to arbitration under a contract with either Owner or Contractor, or consents to being joined in the arbitration; and
 - 4. the consolidation or joinder is in compliance with the arbitration administrator's procedural rules.
- H. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.
- I. Except as may be required by Laws or Regulations, neither party nor an arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both parties, with the exception of any disclosure required by Laws and Regulations or the Contract. To the extent any disclosure is allowed pursuant to the exception, the disclosure must be strictly and narrowly limited to maintain confidentiality to the extent possible.

**SECTION 00-734
PREVAILING WAGE RATES**

PART 1 GENERAL

1.01 REQUIREMENTS:

- A. The "Prevailing Wage Rates for Public Works Contracts in Oregon" dated January 5, 2025 including any issued corrections or amendments that follow are herein added to the Contract Documents by reference.
- B. BOLI Prevailing Wage Rate information is available upon request, or electronically at www.oregon.gov/boli.
- C. Work under this Contract will be subject to the provisions of ORS 279C.800 to 279C.870, relating to BOLI Prevailing Wage Rates in effect at the time the project was advertised for bids.
- D. Provisions described in this Section or in Exhibit A of the Public Contracting Code Requirement for Public Improvements Contracts over \$50,000, located at the end of the Supplemental General Conditions, will apply regardless of the price of any individual Contract, so long as the combined price of all Contracts award on the project is \$50,000 or more.
- E. If total Contract amount does not exceed \$50,000, Contractor is not required to pay prevailing wage rates.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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Section 00960

Common Provisions for Electrical Systems

Description

00960.00 Scope - This Work consists of furnishing and installing Materials for electrical systems and for modifying existing systems.

00960.01 Regulations, Standards, and Codes - All electrical Materials and workmanship shall conform to the following standards where applicable:

- American National Standards Institute (ANSI)
- International Municipal Signal Association (IMSA)
- Underwriter's Laboratories, Inc. (UL)
- National Electrical Manufacturers Association (NEMA)
- National Electrical Safety Code (NESC)
- National Electrical Code, Oregon Amended (NEC)
- Standards of the American Society for Testing and Materials (ASTM)
- Local laws

Use the code, order, or standard in effect on the date the Project is advertised unless otherwise shown.

Safe wiring labels normally required by the Department of Consumer and Business Services, Building Codes Division will not be required for traffic management systems listed on the Red Sheets (see 00160.00) as allowed by ORS 479.540 and OAR 918-261-0037. The Red Sheets may be viewed on ODOT's web site.

00960.02 Equipment List and Drawing Submittals - Within 30 Calendar Days after execution of the Contract, submit the Blue Sheets (see 00160.00 and 00160.07) and the Green Sheets (see 00160.00 and 00160.07) according to 00150.37 for all Materials the Contractor proposes to install. Blue Sheets and Green Sheets contain submittal instructions and will be made available to the Contractor by the Engineer.

Within 14 Calendar Days after receipt of submittals, the Engineer will review the submittals and designate them in writing as "approved", "approved as noted", or "returned for correction". Do not proceed with the Work before receiving written approval of the submittals from the Engineer.

00960.03 Permits - Provide the Engineer with copies of all required electrical permits prior to performing any work.

Materials

00960.10 Materials - Furnish Materials meeting the following requirements:

Commercial Grade Concrete	00440
Controlled Low Strength Materials	00442
Delineators	00840.10 and 00840.11
Metal Illumination and Traffic Signal Supports	00962
Selected General Backfill	00330.13
Selected Granular Backfill	00330.14
Reinforcement	02510

Furnish electrical Materials that have been approved through the Blue Sheet and Green Sheet submittal process in 00960.02.

Anchor rods shall conform to 02560.30 and to the types and sizes shown.

Use commercially available 30 pound nonperforated asphalt-saturated felt where shown.

Use commercially available No. 10 - 0 Sand when sand blanket is required.

Use commercially available UL listed insulating vinyl plastic tape where shown.

Use commercially available UL listed silicon bronze (or copper alloy) split bolt where shown.

Use commercially available galvanized steel weatherproof compression fittings where shown.

Labor

00960.30 Licensed Electricians - According to the Oregon Administrative Rule 918-282-0120(1), no person or Entity shall allow any individual to perform electrical work for which the individual is not properly registered or licensed. Every person who installs electrical systems on the Project shall submit a copy of their electrical license or apprentice registration to the Engineer prior to performing any Work. They must be licensed as an S or a J under Oregon Administrative Rule 918-282.

Construction

00960.40 Excavation - Remove and replace sidewalks, curbs, paved surfaces, and other materials as needed. Replace and finish all surfaces to correspond with the existing surfaces. Restore all disturbed landscaping and underground systems to original condition.

Excavate trenches, foundations, and junction boxes to locations, Neat Lines, grades and Cross Sections as shown or as established or approved. Furnish, place, and remove any shoring required to prevent caving of walls.

Dispose of all excavated materials according to 00290.20.

00960.41 Horizontal Directional Drilling - Drilling shall not "hump" or deform the Pavement and shall be guided. Keep drilling pits at least 2 feet from the edge of Pavement. Do not use water to the extent that the Pavement might be undermined or Subgrade softened. Sand bedding and marking tape are not required with this method.

If jointed conduit is used, verify the joints have not separated by pulling a mandrel through the conduit after installation.

00960.42 Conduit:

(a) Cleaning New Conduit - Before cable and wire installation, clean all new conduit with cylindrical mandrel of the proper size for that conduit and blow out with compressed air. Mechanical pulling methods may be used for conduit cleaning.

(b) Cleaning Existing Conduit - Before installation of new cable(s) or wire(s) in an existing conduit, temporarily remove all existing cable(s) and wire(s). Clean existing conduit with cylindrical mandrel of the proper size for that conduit and blow out with compressed air. Mechanical pulling methods may be used for conduit cleaning. Stop Work and notify the Engineer immediately if there are any difficulties cleaning the existing conduit. Reinstall existing cable(s) and wire(s) in existing conduit unless otherwise shown.

00960.43 Foundations: Construct foundations for pedestals, posts, and cabinets according to Section 00440 and the applicable portions of 00540.48(a). Place concrete:

- Directly against the sides of the excavation in undisturbed or well-compacted material or place in forms.
- With a continuous pour.
- To the elevation shown or directed.
- With conduit ends and anchor rods held securely in proper vertical position, to proper height, using a manufacturer's recommended template until the concrete sets.

Maintain rebar clearances during concrete pour.

Make no adjustments of anchor rods after concrete has set.

Set forms square and true to line and grade. Construct forms of rigid materials that remain in position until removed.

Remove forms and place subsequent loading according to Table 00540-1.

Finish tops of foundations to Roadway, sidewalk or curb grade, or as directed.

Finish exposed concrete foundations to present a smooth, neat appearance. Fill all holes.

00960.45 Grounding and Bonding:

(a) General - Make all ground rods, metal conduit, metal poles, grounding wire, metallic junction boxes, metallic junction box covers, and cabinets mechanically and electrically secure to form a continuous, effectively grounded and bonded system.

(b) Grounding/Bonding Wire - Use a THWN No. 6 AWG stranded copper grounding/bonding wire in conduit or as shown. Use an un-insulated No. 4 AWG stranded copper grounding/bonding wire outside of conduit or as shown.

(c) Ground Rods - Ground each above ground metallic Structure with a separate ground rod.

(1) Located in Junction Box - Install ground rod in a junction box if shown. Drive ground rods into the ground with the top of the ground rod 2 inches to 3 inches above the bottom of the junction box to allow for an accessible clamp.

(2) Located in Foundation - Install ground rod in a foundation if shown, with the ground rod 2 inches to 3 inches above the top of the foundation to allow for an accessible clamp.

(d) Services and Cabinets - Bond the neutral conductor, the control cabinets, and the metal base to the grounding electrode system.

(e) Nonmetallic Conduit - In all nonmetallic conduit, run a ground/bond wire continuously between all poles, pedestals, posts, and cabinets. Bond wires are not required in conduit that only contains circuits that operate at less than 25 volts.

00960.46 Service Cabinet and Electrical Energy - Install service cabinet and associated Equipment, then arrange for the Utility providing power to have the service cabinet inspected and make the electrical hook-up prior to field testing. Field test according to 00990.70(g) for traffic signals, or according to 00970.70 for illumination.

Bill electrical energy costs to the Agency for permanent installations.

Maintenance

00960.60 Maintenance, Operation and Power Costs - The Agency will continue normal

maintenance and operations of the existing systems including the furnishing of electrical energy. Do not use for construction purposes electrical energy billed to the Agency or other agencies.

Finishing and Cleaning Up

00960.71 As-Built Plans - Upon completion of the installation, submit a red-lined copy of the original Plans noting all changes made. The information furnished shall include all modifications made and shall represent the material installed and in operation. It shall be sufficiently detailed to enable maintenance forces to replace or repair any part of the Project under routine or emergency maintenance by direct reference.

END OF SECTION

Section 00962

Metal Illumination and Traffic Signal Supports

Description

00962.00 Scope - This Work consists of furnishing, fabricating, galvanizing, and installing Materials for illumination and traffic signal supports and foundations. The location of illumination/signal Material shown is approximate, with exact locations established in the field.

00962.01 Regulations, Standards, and Codes - All designs and workmanship shall conform to the following standards where applicable:

- *AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals*
- AWS D1.1

Wherever reference is made to any of the standards mentioned above, the reference means the code, order, or standard in effect on the date the Project is advertised unless otherwise shown or specified in the Specials Provisions.

Do not begin installations until all permits are obtained and copies are given to the Engineer.

00962.02 Calculations and Drawings - Within 30 Calendar Days after execution of the Contract, submit at least six copies of:

- Prequalified manufacturing shop drawings.
- Calculations and shop drawings for all standard poles that do not have prequalified manufacturing shop drawings.
- Calculations and shop drawings of all nonstandard poles that do not have prequalified manufacturing shop drawings.
- Calculations and installation drawing of all nonstandard pole foundations that do not have details shown.

All engineered details and drawings which are not prepared by the Agency, but are required in the Contract Documents, shall be submitted for review prior to fabrication. Designs, details, Plans, and calculations shall be stamped and submitted according to 00150.35. Include the Field Verification Forms for Signal and Illumination supports, available from the Engineer.

Upon completion of the installation, submit six copies of all changes made from the original Plans. The information furnished shall include all modifications made and shall represent the Material installed and in operation. It shall be sufficiently detailed to enable maintenance forces to replace or repair any part of the Project under routine or emergency maintenance by direct reference.

Materials

00962.10 Materials - Furnish Materials meeting the following requirements:

Anchor Rods	02560
Commercial Grade Concrete	00440
High-Strength Fasteners	02560

The rotational capacity test of 02560.60(a) does not need to be repeated at the Project Site for luminaire slip base high-strength bolts.

The rotational capacity test of 02560.60(a) is not required by the supplier and does not need to be repeated at the Project Site for high-strength bolts installed in tapped holes.

The repeated Project Site rotational capacity test of 02560.60(a) for the high-strength thru bolt lots can be performed within 14 Days of installation at a testing facility or project staging location as approved by the Engineer. Keep all bolts in the original sealed containers at all times up until installation.

Furnish steel pole Materials meeting the requirements of Section 02530 modified as follows:

- Provide steel sheet for pole and arms meeting the requirements of ASTM A595, Grade A or B, ASTM A572, or approved equal.
- Provide all other steel sheet and plate meeting the requirements of ASTM A36 or ASTM A572, or approved equal.
- Supplementary Requirement S18 (ASTM A6), maximum tensile strength, is required.
- Galvanized base plates and small and hidden pieces do not require controlled silicon content.

Construction

00962.41 Excavation - Do all excavation, backfilling and resurfacing Work necessary to complete the Work. This includes removal and replacement of curbs, sidewalks, paved surfaces and other Materials. On completion of the Work, replace and finish all surfaces to correspond with the existing surfaces.

Furnish, place, and remove any shoring required to prevent caving of walls.

When excavating in paved areas, cut with an approved pavement cutting saw to a depth of at least 2 inches along the neat boundaries of the area to be removed. Cut sharp and well-defined Pavement edges with no evidence of cracking, delaminating, or stressing.

Restore all disturbed landscaping and underground systems to original condition upon completion of the Work at no additional cost to the Agency. Use hand excavation if directed.

(a) Excavation for Poles Foundations - Make all excavations for pole foundations to the Neat Lines of the foundations. Hand excavation may be required. Place the concrete directly against the sides of the excavation in undisturbed or well-compacted material.

(b) Disposal of Materials - Dispose of all materials according to 00290.20.

00962.43 Foundations - Construct foundations according to Section 00440 and the applicable portions of 00540.48(a). Place concrete as follows:

- With a continuous pour.
- To the elevation shown or directed.
- With conduit ends and anchor rods held securely in proper vertical position and height with the manufacturer's recommended template until the concrete sets.

Make no adjustment of anchor rods after concrete has set. Any adjustment made may be cause for rejection of the foundation.

Maintain rebar clearances during concrete pour.

Set forms square and true to line and grade. Construct forms of rigid materials that remain in position until removed. Use a steel template to accurately locate the anchor rods and hold them plumb and in proper alignment. Out-of-position anchor rods and anchor rods installed more than 40V:1H out of plumb are cause for rejection of the foundation. Field bending of anchor rods and field modification of the base plate are not allowed.

Remove forms and place subsequent loading according to Table 00540-1.

Finish tops of foundations to Roadway, sidewalk or curb grade, or as directed.

Finish exposed concrete foundations to present a smooth, neat appearance. Fill all holes.

Where breakaway bases are specified, the post stub projection shall not exceed the limits shown.

Where obstructions prevent the construction of planned foundations, construct the foundations in the location directed. Any extra cost due to the site change will be paid according to 00195.20.

If it is determined that foundations will extend deeper than shown, the extra foundation depth will be paid according to 00195.20.

00962.46 Steel Illumination and Signal Poles - Metal poles include vertical posts, signal mast arm, luminaire arms, connection hardware, and anchor rods. Do not erect poles until the Engineer has made a visual inspection of pole welding.

Fabricate entrance openings in metal poles and arms, including handholes, before galvanizing, except as shown for mounting traffic signal Material.

- (a) **Design** - Design all metal poles with self-supporting upsweep arms similar to the details shown.
- (b) **Pole Height** - Before poles are ordered, the Engineer will check the pole heights in the field and verify that the specified luminaire mounting heights above Pavement are provided. Provide upsweep bracket arms of lengths as shown or specified. Provide traffic signal poles of heights as shown or specified. Height of poles requiring slip plate bases is the length of shaft above the slip plate.
- (c) **Luminaire Arm** - The luminaire end of the arm shall be level when loaded to design weight. Use a bolted, flange type connection to join the upsweep arm to the pole. The connection shall be raintight and shall develop the strength of the arm. Provide the mast arm rise according to the Metal Light Pole Table, or as shown or specified.

Arms shall be self-supporting without tie rods, or braces. Measure upsweep rise from the point of attachment to the pole to the end tangent portion of the arm. Provide tapered arms that are either round, 8 sided, 12 sided, or 16 sided.

All arms shall allow for wiring entrances directly into the pole from inside the arm.

All pole bracket attachments for mounting upsweep arms shall have reamed, smooth ends.

The nominal mounting height (MH) shown in the Metal Light Pole Table or on the Plans is the distance between the Roadway at the edge of the Pavement and the luminaire. This height may vary plus or minus 1 foot.

- (e) **Deflection** - The horizontal dead load deflection at the top of the poles shall not exceed 1 percent of the pole length (2 percent for strain poles).

- (f) **Deviation from Straightness** - After the poles are delivered to the Project Site, and before they are erected on the foundations, the Contractor may be required to check any or all poles for deviation from straightness according to the following:

(1) Deviation in One Plane and One Direction Only - A straight line joining the surface of the pole at the base and the same surface of the pole at the top shall not be more than 1/2 inch from the surface of the pole for each 10 feet of length from the closest of these points. The opposite surface shall meet the same requirement.

(2) Deviation in Any Plane - A straight line connecting the midpoint of the pole at the base, with the midpoint at the top, shall not pass through the surface of the pole at any intermediate point.

Any pole not meeting these requirements will be rejected. If more than 25 percent of the poles fail to meet these requirements, sufficient cause exists to reject the entire shipment of poles for the Project.

(g) Welding - Weld steel illumination and signal poles according to AWS D1.1. The fabricator shall inspect welds according to details and requirements called out on the Contract Documents. This requirement will override all appropriate weld inspection requirements called out in Section 5.15 WELDING CONNECTIONS in AASHTO *Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*. Submit all testing procedures for Engineer's review prior to starting inspection. Submit certified copies of inspection reports to the Engineer for review.

If requested by the Engineer, additional weld inspection may be required upon arrival of the material at the Project Site. If defects are found by this additional inspection, the Contractor shall be responsible for the additional testing and repair costs. If no defects are found, the Engineer will be responsible for the additional inspection costs

(h) Welding Steel After Galvanizing - No field welding of galvanized steel will be allowed. The effected piece shall have the existing galvanizing removed from the heat effected area before welding. Perform the weld, remove the galvanizing totally from the entire piece, and hot-dip galvanize it. Submit the following data, stamped according to 00150.35, for review:

- Explanation for modification
- Name of shop performing the Work
- Welding procedure
- Description of the Work that will be performed
- Name of the shop performing the hot-dip galvanizing
-

(j) Erecting Metal Poles - Erect metal poles on concrete foundations and according to the recommendations of the pole manufacturer and as shown. Exercise reasonable care to prevent marking the finish and damaging poles.

Install all joint traffic signal and illumination poles so the distance from the Pavement to the light center is as shown or specified. Use the same tapered design for traffic signal and street light arms.

Bolt protrusion on slip base poles shall not interfere with the breakaway action of pole. File sharp edges smooth and repair according to ASTM A780.

(1) Repair Damaged Finish - Repair damaged galvanizing according to ASTM A780. Minor scratches less than 3 inches long by 3/16 inch wide or an area of 1/2 square inch can be repaired with the sprayed zinc method.

(2) Assembly of Supports and Bolt Tightening –

a. Anchor Rods for Signal Supports and Fixed Base Luminaire Supports –

1. Installation - After foundation concrete strength and curing requirements are satisfied and after inspection of the foundation, pole installation may begin.

Protect anchor rods, washers, and nuts from dirt and moisture. Lubricate anchor rod threads, nuts, and bearing surfaces that will turn during installation according to 02560.70. Estimate the required rake, if any, and set the lubricated leveling nuts accordingly, so that when pole installation is complete and all appurtenances are installed on the pole, the top of the pole is plumb with the base of the pole.

Lift the pole into position on the leveling nuts and washers. Make sure all leveling nuts and washers are in full contact with the base plate.

Install washers with lubricated bearing surfaces that turn during installation and lubricated top nuts, and bring to a snug tight condition. Snug tight is defined as the condition when all plies of the connection are in firm contact and can be obtained by the full effort of a worker on the end of a 12 inch long wrench. Several passes may be required to obtain uniform snug tightness.

When all anchor rods are snug tight, proceed with installation of arms and other appurtenances, if not previously installed. When installation of arms and appurtenances is complete, and the pole is plumb as defined above, final anchor rod tightening may begin. If the pole is not plumb, adjust as required and repeat snug tightening as described above. Make sure all leveling nuts and washers are in full contact with the base plate. As a safety measure, provide crane support of the pole until anchor rods tightening is completed.

Mark the initial relative position of each anchor rod and an outside ridge of each first nut above the base plate with a permanent felt tip pen or similar marker. Retain visibility of the marks for at least 7 Days to verify subsequent nut rotation. Rotate all first nuts above the base plate past snug tight an additional amount shown in 00962.46(j)(2)(e) in two passes. "Cheater" bars, multiplier wrenches, or slugging wrenches are allowed if required for large diameter anchor rods. After final tightening of the first nut above the base plate, tighten the second nut to a snug tight condition for assemblies with two nuts above the base plate

2. Inspection - Notify the Engineer in writing at least 24 hours before starting installation. The Engineer will observe the installation and tightening operations to ensure that proper procedures are followed.

The installation will be rejected if the geometry does not satisfy the requirements of 02560.05 or no permanent felt tip pen marks are present for at least 7 Days after installation showing the rotation past snug tight.

(k) Plate Flatness - Faying surfaces of plates shall be flat to within a tolerance of 1/32 inch in 12 inches and a tolerance of 1/16 inch overall. Base plates with leveling nuts shall be flat to within a tolerance of 1/8 inch in 12 inches and a tolerance of 3/16 inch overall.

00962.48 Coating - Prepare and powder coat supports according to the applicable portions of Section 00593 or prepare and coat supports according to the applicable portions of Section 00594. Provide coating materials for field application, repairing damaged coatings, and coating hardware after installation, according to Section 00593 or 00594. Do not coat:

- Slip plate or arm connection surfaces.
- Slip base bolting hardware.
- Anchor rods, anchor rod washers, and anchor rod nuts.
-

00962.50 Grounding and Bonding - For fixed base poles, provide a 1/2 inch, Type 308, 309, or 310 stainless steel stud on the inside of the shaft. Locate the stud directly opposite and level with the

handhole in the pole. Attach grounding electrode conductors and bonding conductors to the stud with a grounding wire clamp, "acorn style".

For slip base poles, do not allow the grounding wire to intrude into the slip plane. Instead, run a bond wire from the grounding electrode to a 1/2 inch, Type 308, 309, or 310 threaded stainless steel stud welded to the bottom base slip plate.

END OF SECTION

Section 00970

Highway Illumination

Description

00970.00 Scope - In addition to requirements of Section 00960, Section 00962, and Section 02926, install highway illumination according to the following Specifications.

00970.02 Equipment List and Drawings - Submit four copies of isocandela diagrams indicating the vertical light distribution, vertical control limits and the lateral light distribution classifications for each type of luminaire submitted for approval.

Upon request, submit one copy of luminous intensity distribution data in IES format using electronic mail for each type of luminaire submitted with the following:

- **Vertical angles** - Provide data in increments of 5 degrees or less for the vertical angles of 0 to 90 degrees, inclusive.
- **Horizontal angles** - Use a maximum of 10 degree increments for all horizontal angles.

Complete description data is required.

00970.03 Luminaire Submittal - Provide a sample luminaire for inspection and photometric testing if required. Sample luminaires may be considered as part of the shipment furnished for installation.

Construction

00970.41 Metal Light Pole or Tower Table - The metal light pole or high mast tower table for the Project is shown on the highway illumination Plans.

00970.42 Cable and Wire - Use type XHHW stranded copper wire in all current-carrying conductors in raceways.

Support the conductors at the top of the pole using a flexible metal cable support grip to prevent insulation damage at the upsweep arm opening. When splicing cable into a new or existing circuit at a pole base (minimum wire length: 18 inches outside handhole), install a watertight, in-line fuse holder in the pole base for each current-carrying wire going up the pole. This fuse holder shall be constructed so the wire to the ballast can be disconnected without cutting or disconnecting wiring at the ballast. Insulate terminal ends of the in-line fuse holder using either heat shrink tubing or electrical insulating rubber tape over-wrapped with electrical vinyl plastic tape as specified.

Use No. 12 AWG Type XHHW wire from the control cabinet to the photoelectric relay.

Use 3 conductor No. 10 AWG Type TC cable from the pole base to luminaire ballast. Use 2 conductors for luminaire ballast connection and 1 conductor for circuit grounding at the luminaire. Extend and securely connect electrical circuit grounding for each circuit connected to the luminaire end.

For double arm illumination pole, two sets of wires shall be installed separately from the pole base to each luminaire end. Do not splice wires inside the illumination pole except at the pole base.

Wires from the ballast to the lamp holders shall conform to the manufacturer's recommendations.

Color coding of illumination circuits is required for three phase systems only. Ensure color coding of each phase conductor remains consistent throughout the entire electrical system.

00970.43 Photocontrol Electronic Relay - Install the photocontrol electronic relay on either the control cabinet or on the metal pole as shown.

Use 1 1/4 inch welded hub in top of cabinet to install photocontrol electronic relay with minimum

24 inch long galvanized metal conduit and twistlock plug. When photocontrol relay is attached on the side of the cabinet, use LB type conduit outlet body, 1 1/4 inch galvanized metal conduit riser, and galvanized channel support for the riser. Riser conduit shall be minimum 2 feet above the top of the control cabinet. Secure field installed relay and conduit extensions against vandalism and ensure they are rain tight.

When photocontrol relay is installed on metal pole, use welded hub outlet located 180 degree from luminaire arm, threaded close nipple and 1 1/4 inch LB type conduit outlet body. Locate the hub 30 feet above base plate or as shown.

Mount the relay away from adjacent luminaires, and orient the light sensitive relay's window to the northern sky. Mark the date of installation on the bottom of the photocontrol electronic relay.

00970.45 LED Luminaires - Install LED luminaires as shown or as specified.

00970.47 HDPE Conduit and Connectors - High Density Polyethylene (HDPE) conduit may be used for horizontal directional drilling (HDD) applications. Provide HDPE conduit that is gray in color. Join HDPE conduit sections by mechanical fittings that have barbed threads on both ends or by a swedge coupler with two-part conduit adhesive.

The maximum length of the continuous single section of HDPE conduit installation is 250 feet.

Use woven polyester pull tape on all HDPE direct-bore installations for all brushing and mandrel proofing of the conduit. Provide a single continuous non-spliced run of tape within the conduit.

00970.50 Grounding and Bonding - In addition to the requirements of 00960.45 and 00962.50, ground and bond metal illumination poles and high mast towers according to the following:

Install 1-inch nonmetallic conduit from the pole base to the concrete and polymer concrete junction box at each pole. Install a ground rod in each junction box and install No. 6 AWG copper ground wire from the ground stud in the pole base to the ground rod in the junction box. The ground rod may be installed in the same junction box that provides illumination circuitry to the pole, if a separate and independent conduit is installed for the ground wire. Bond all metal conduit and metal junction box covers, if used, together to the ground rod.

On the inside of high mast tower shafts, weld a 1/2 inch Type 308, 309, or 310 threaded stainless steel stud for a grounding lug. Locate the grounding lug 90 degrees from and level with the bottom of the handhole.

Maintenance

00970.60 Maintaining Existing and Temporary Illumination Systems - Protect existing illumination systems and approved temporary replacements. Shutdown of a system may be allowed for alterations or final removal, as approved. Lighting system shutdowns shall not interfere with the regular lighting schedule. Notify the Engineer before performing any Work on existing systems.

Determine the exact location of existing conduit runs and pull boxes before using Equipment that may damage such facilities or interfere with any system.

Where Roadways are to remain open to traffic and existing lighting systems are to be modified, keep the existing systems in operation until the final connection to the modified circuit is made. The modified circuit is to be complete and operating by nightfall of the same Day the existing system is disconnected.

Finishing and Testing

00970.70 Field Test - Operate the completed lighting system or subsystem continuously for 7 consecutive Days and an additional 7 Days normal burn afterwards. When the lighting performance is satisfactory, the Contractor may be relieved of maintenance responsibility according to 00170.80(b).

Before completing the Work, conduct the following tests on all lighting circuits in the presence of the Engineer.

- A Megger test on each circuit between the conductor and ground with all switchboards, panelboards, fuse holders, switches, receptacles and overcurrent devices in place. Record all readings. Furnish the Engineer with one copy of the test results identifying observed readings with their respective circuits.
- Test the insulation resistance between conductor and ground. Resistance shall be as follows on circuits with total single conduction length of:
 - 2,500 feet and over - at least 6 MΩ
 - Less than 2,500 feet - at least 8 MΩ

Measurement

00970.80 Measurement - No measurement of quantities will be made for Work performed under this Section.

The estimated quantities of lighting poles and arms are listed on the Project Plans. If individual pole lengths or individual arm lengths increase or decrease by more than 3 feet from the estimated quantities shown, adjustments to the Contract lump sum amount for the item "Lighting Poles and Arms" will be made according to 00190.10(h). Adjustments will be made only for the increased or decreased individual pole lengths or individual arm lengths greater than 3 feet.

Payment

00970.90 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) Pole Foundations	Lump Sum
(b) Lighting Poles and Arms	Lump Sum
(c) Luminaires, Lamps, and Ballasts	Lump Sum
(d) Switching, Conduit, and Wiring.	Lump Sum
(e) Refurbishing and Reinstalling Existing Illumination Systems	Lump Sum

Item (a) includes all concrete foundations for lighting poles.

Item (b) includes all poles and arms for lighting poles.

Item (d) includes all switches, conduit, cabinets, wiring, delineators, junction boxes, and other items required to construct the lighting system as specified.

Item (e) includes all refurbishing, reinstalling, and other Work as specified and not included in the removal of existing illumination.

Payment will be payment in full for furnishing and placing all Materials, and for furnishing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

No separate or additional payment will be made for labeling the luminaires or poles.

If shown or specified as part of the Work for concrete Bridges or retaining walls, all conduit, junction boxes, cabinets, and other items permanently attached to or encased within concrete Bridges and retaining walls, as well as pole foundations incorporated into a Bridge or wall, will be included in payment made for the appropriate Bridge and wall items.

END OF SECTION

5. Underground Requirements

5.1 General

The customer is responsible for providing all trenches, backfill, compaction, conduit, and equipment foundations. The customer is responsible for boring if that method is used. The customer shall meet the requirements described in this section to complete construction for underground installation of services. Consult the Power Company for conduit layout, and for equipment foundation requirements for secondary and primary extensions.

All equipment bases, whether Power Company- or customer-owned, will be level with no more than 2 degrees slope. The customer is solely responsible that the installation remains structurally sound throughout the term of service; to this end, the customer should consider local ground and frost conditions. The Power Company may refuse to install facilities if a base is not structurally sound.

The customer is responsible for ensuring that all conduit system installations comply with Power Company requirements and are located consistent with drawings, when provided, as part of the agreement between Power Company and customer. Any conduit installed before receiving a job sketch from the Power Company may be subject to rejection or revision.

5.2 Conduit Requirements

All underground service conductors shall be installed in conduit.

The Power Company will install the underground cable from the Power Company's source to the service point.

The customer is responsible for ensuring that all conduit complies with Power Company requirements.

Requirements:

For all conduit installations, the customer shall:

1. Ensure that Power Company conduit is located away from (and never underneath) buildings, building foundations, or other structures (including retaining walls); for Rocky Mountain Power see Policy 242, section 4.3 (available here: <https://www.rockymountainpower.net/working-with-us/builders-contractors/electric-service-requirements.html>), for Pacific Power see Policy 343, section 4.3 (available here: <https://www.pacificpower.net/working-with-us/builders-contractors/electric-service-requirements.html>). See Section 10 for possible variance approvals.
2. Be responsible for recognizing potential surface and subgrade water flows and consulting the Power Company to minimize potential runoff problems.
3. Seal all raceways and conduit to prevent the infiltration of water into the electrical equipment.
4. Provide and install listed electrical grade conduit, fittings, and long radius sweeps (elbows). See Table 13. Above-ground conduit shall be Schedule 40 PVC or better. HDPE conduit cannot be exposed above grade. Some jurisdictions may require conduit grades better than Schedule 40; consult the local governing code.



Table 11—Below-Grade Conduit and Sweep Applications

Application	Type of Conduit ¹	Sweep Material ¹
Three-phase primary	PVC, Fiberglass, HDPE ³	Fiberglass
Single-phase primary	PVC, Fiberglass, HDPE ³	Fiberglass or PVC ²
Secondary	PVC, Fiberglass, HDPE ³	Fiberglass or PVC ²

Notes:

1. Steel conduit, casings, and sweeps may be required for special applications
2. Fiberglass can tolerate higher sidewall pressures than PVC and resist burn-through from pulling ropes. Longer conduit runs or conduit with multiple sweeps may require fiberglass.
3. HDPE is only allowed when directional boring or cable plowing installation methods are used.

Table 12—Above-Grade Conduit and Sweep Applications

Application	Type of Conduit ¹	Sweep Material ¹
Three-phase primary	Fiberglass or PVC	Fiberglass
Single-phase primary	Fiberglass or PVC	Fiberglass or PVC ²
Secondary	Fiberglass or PVC	Fiberglass or PVC ²

Notes:

1. Steel conduit, casings, and sweeps may be required for special applications
2. Fiberglass can tolerate higher sidewall pressures than PVC and resist burn-through from pulling ropes.

Table 13—Sweep Specifications

Conduit Diameter	Long Radius Sweep
3"	36"
4"	36"
6"	48"

Additional Requirements for Conduit Elbows and Sweeps:

- Fiberglass elbows require special couplings; see company Material Specification ZG 033, *Fiberglass Conduit*, for details. ZG 033 is posted at <https://www.pacificpower.net/working-with-us/builders-contractors/electric-service-requirements.html> and <https://www.rockymountainpower.net/working-with-us/builders-contractors/electric-service-requirements.html>.
 - HDPE is discussed in company specification ZG 031. ZG 031 is posted at <https://www.pacificpower.net/working-with-us/builders-contractors/electric-service-requirements.html> and <https://www.rockymountainpower.net/working-with-us/builders-contractors/electric-service-requirements.html>.
 - Elbows and sweeps must be certified by a Nationally Recognized Testing Laboratory (NRTL). Manufactured sweeps shall not be altered. Field form sweeps are not permitted.
- All joints shall be compressed to the depth of the coupling system, and glued. Where straight ends and bell ends are joined, the straight end shall be beveled so as not to become an obstacle to mandrels or pulled cable.

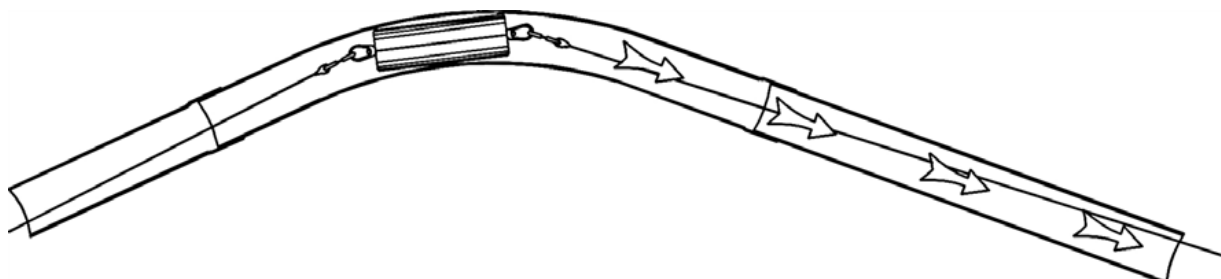


6. The customer shall supply smooth-walled conduit reducers (swedges) when required.
7. When conduit terminates at Power Company equipment, the customer shall consult the Power Company for the exact conduit location. **The customer shall not install conduit within 2 feet of Power Company facilities**, unless requested by the Power Company. Coordinate final conduit or sweep installation with the Power Company.
8. An expansion coupling shall be provided in the riser below the metering enclosure in areas where frost heaves and settling are likely to pull the surface-mounted meter socket from the wall.
9. When conduit extends vertically through a paved or concrete surface, a sleeve shall be placed around the conduit to prevent direct contact with the pavement or concrete to help prevent damage to conductors and service equipment caused by soil settling.
10. The customer shall keep the conduit free of dirt and debris during installation.
11. The customer shall provide backfill, compaction, and surface restoration that conforms to city, county, and state requirements.
12. The customer is responsible for repairing crushed conduit, including any costs for Power Company crews to return to the job site.
13. The customer shall not install or place any materials, including without limitation customer-owned conductors in the same conduit/vault system with Power Company conductors.
14. The customer shall provide a flat pull line (preferred) or poly rope (alternative) capable of withstanding 1,000 lbs. of tension, installed with 72 inches of extra line capable of extending from each end of the conduit. The pull line shall be secured inside the ends of the conduit and both conduit ends shall be capped.
15. All underground raceways should be proofed with a mandrel to remove obstructions, and to confirm at least 80% of the nominal conduit diameter. When requested by the Power Company, the customer shall perform a “witnessed proofing” of conduit systems. See [Table 14](#) and [Figure 14](#).

Table 14—Required Mandrel Sizes for Conduit Proofing

Conduit Nominal Diameter	Mandrel Diameter	Minimum Mandrel Length	Maximum Mandrel Length	Proof
3"	2.5"	3.25"	8"	83%
4"	3.5"	4.25"	8"	87%
6"	5.5"	6.25"	10"	92%

Note: The reduced inner diameter of HDPE conduit requires a smaller mandrel diameter than listed. Use a mandrel that confirms at least 80% of the nominal inner diameter.

Figure I4—Mandrel Proofing

5.2.1 Service Conduit Requirements

The customer shall meet the following requirements when preparing a service conduit system:

1. A stronger conduit material, larger conduit size, or larger sweep radius may be required for long runs or where more than three bends are needed. The customer shall obtain prior written approval from the Power Company for exceptions.
2. The customer must meet minimum conduit size requirements. See [Table 15](#) and [Table 16](#).
3. An aerial extension (primary or secondary) to connect a new underground service should be avoided, unless one or more of the following conditions exist, and the customer obtains the Power Company's prior approval:
 - a. Physical obstacles such as large culverts or sewer lines prohibit boring or trenching
 - b. Boring is prohibited by an authority having jurisdiction (AHJ)
 - c. Geological barriers such as deep canyons, water ways, solid rock, steep slopes, or unstable soil conditions prohibit trenching or boring

Table I5—Single-Phase Service Conduit Size, Run Lengths, and Bend Limits

Panel Ampacity	Maximum Conduit Length	Max Degree of Bends	Single Family Residential		Multi-Family and Non-Residential	
			Number of Conduit Runs	Conduit Trade Size	Number of Conduit Runs	Conduit Trade Size
125 or less	150	270	1	2"	1	2"
200	150	270	1	3"	1	3"
400	150	270	1	3"	2	3"
600	100	270	2	3"	2	3"
800	100	270	3	3"	3	3"

Table 16—Three-Phase Service Conduit Size, Run Lengths, and Bend Limits

Panel Ampacity	Maximum Conduit Length	Max Degree of Bends	120/208		277/480	
			Number of Conduit Runs	Conduit Trade Size	Number of Conduit Runs	Conduit Trade Size
200 or less	150	270	1	3"	1	3"
400	150	270	2	4"	2	3"
600	100	270	2	4"	2	4"
800	100	270	3	4"	3	4"
1,000	50	180	4	4"	4	4"
1,200	50	180	5	4"	5	4"
1,600	50	180	6	4"	6	4"
2,000	50	180	7	4"	6	6"
2,400	50	180	6	6"	6	6"
2,800	50	180	8	6"	8	6"
3,000	50	180	10	6"	10	6"
3,200	50	180	10	6"	10	6"
3,600	50	180	12	6"	12	6"
4,000	50	180	12	6"	12	6"

5.3 Trench and Backfill Requirements

The customer shall provide all trenching. All trenching work shall comply with all OSHA requirements, including shoring required when the combined height of the trench and the spoil exceeds 5 feet.

To the extent possible, trench bottoms shall be level and made of well-tamped earth or selected backfill without sharp rises and drops in elevation. Rock spurs or ridges shall not project into the trench. The customer is responsible for ensuring a clean trench prior to conduit installation.

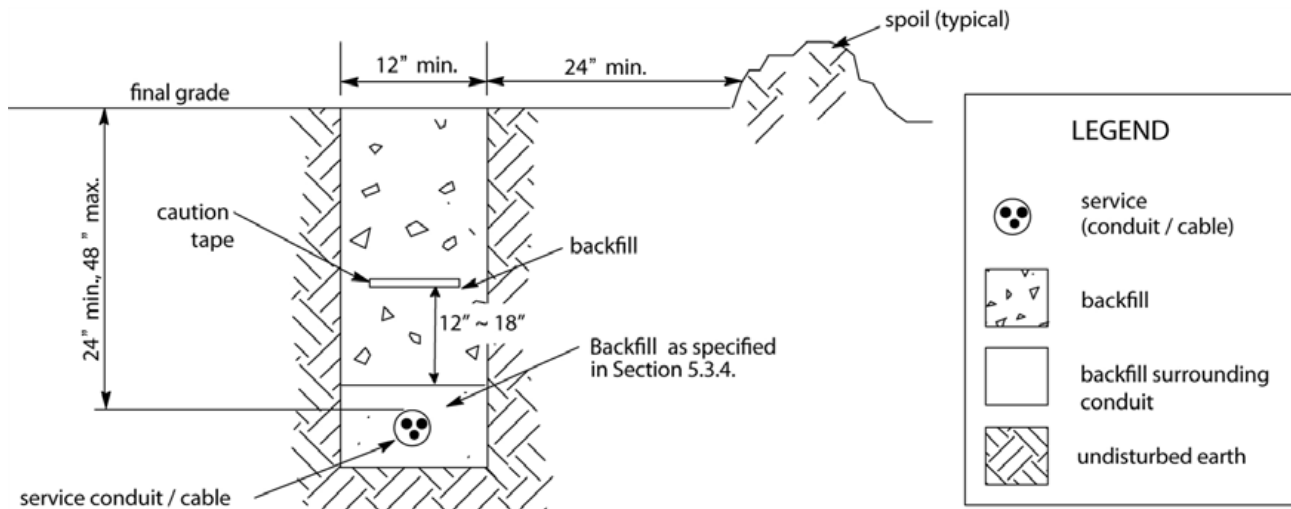
5.3.1 Call Before You Dig

State laws require the customer or excavator call for underground utility locations. Excavation may not be started until locations have been marked or the utilities have informed the excavator that there are no facilities in the area. Notify the local underground locating services (8-1-1) before you dig.

5.3.2 Service Trench

When installing only underground service conduit in the trench, follow the dimensions in [Figure 15](#).

Figure 15—Service Trench (Only)



5.3.3 Joint Use Service Trench

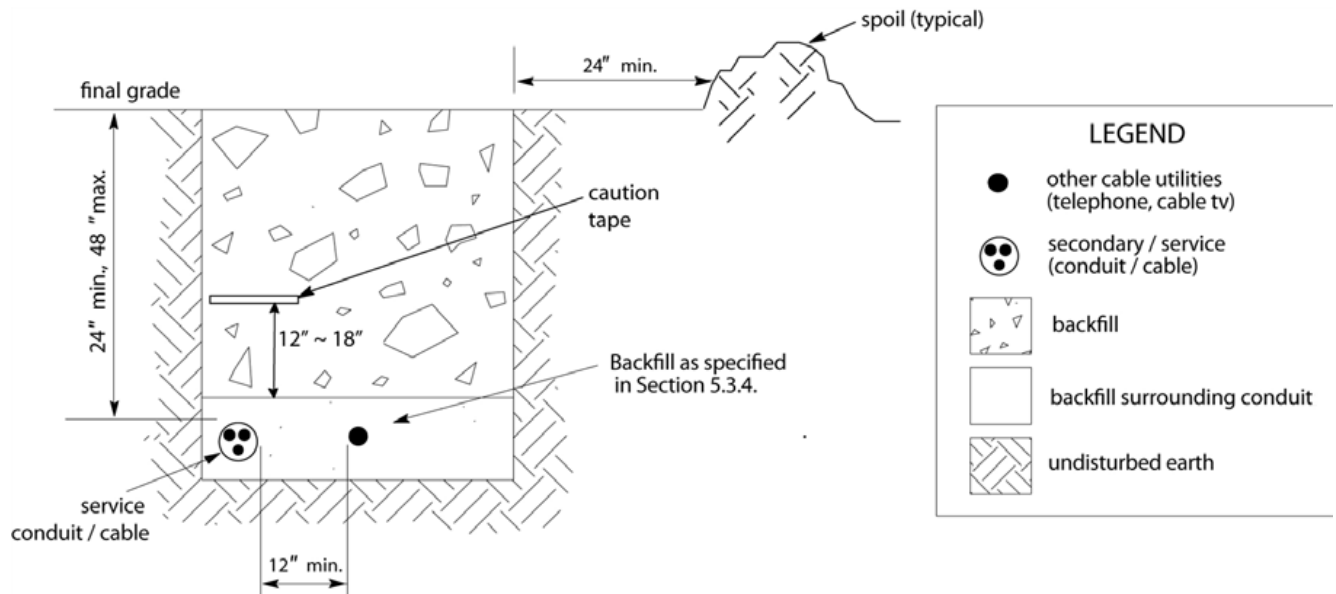
Joint use trenching requirements may vary by area; consult the Power Company for requirements before installation. The customer may be allowed to place communication, signal, and other electrical supply conductors in the same trench as Power Company conductors, provided that the installation meets Power Company requirements, and all concerned parties agree on the placement.

The Power Company will not install electrical conductors in a common trench with water lines, sewer lines, or other drainage lines. In general, a minimum distance of 12 inches shall exist between the underground service conduit and other utility lines, unless superseded by the requirements of other utilities involved (and/or unless local requirements differ).

For a joint use trench with gas lines, consult the Power Company for requirements. The minimum distance between the underground service conduit and gas lines may be greater than 12 inches if required by the gas utility.

When installing an underground service conduit in a joint use trench, follow the dimensions in [Figure 16](#).

Figure 16—Joint Use Service Trench



5.3.4 Backfill Requirements

The following list of requirements applies to all installations requiring backfill:

1. The customer shall provide trench backfill and site restoration.
2. All backfill shall be free of materials that may damage the conduit system. Backfill within 4 inches of the conduit shall be select (capable of passing through a 3/4-inch sieve).
3. Extra caution should be taken when refilling trenches.
4. The Power Company may not energize conductors until the customer completes the backfill to Power Company satisfaction.

The cost to repair a conduit is the responsibility of the customer.

5.4 Underground Utility Equipment Signs and Markers

Above-grade signage, buried radio frequency (RF) markers, and buried caution tapes assist utility location services. Their presence may also provide a supplemental level of protection against service interruptions from dig-ins. General requirements are provided below:



Requirements:

1. Caution tape shall be installed 12 to 18 inches above all electrical conduits and duct banks, if trenching or other open excavation methods are used.
 - a. Caution tape shall be red in color with black text "CAUTION BURIED ELECTRIC LINE BELOW," tape shall be a minimum of 6 inches wide by 0.004 inches thick. (3M Scotch #368 or equivalent).
2. Red-dyed concrete shall be used if concrete encasement is used to encase electrical conduits or duct banks.
3. Radio frequency (RF) markers shall be installed above 4- to 8-inch electrical conduits at stub-outs and transition points between bored and trench installations. (3M #1256 Passive Mid-Range Marker Power Encoded or equivalent). If these markers are required, they will be provided by the Power Company with locations specified on the job sketch.
4. Above-grade signage, if required, will be provided by the Power Company with locations specified on the job sketch.
5. Additional signs or markers may be required for unique installations.

CITY OF COQUILLE
NORTH ADAMS STREETSCAPES IMPROVEMENTS
PRIVATE ELECTRICAL SERVICE RELOCATION IMPACT

AUGUST 2024

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1.0 Executive Summary.

The City of Coquille is currently working on a plan to improve North Adams Street by moving utilities underground. As part of that plan Cedar Electric was tasked with coming up with an estimate on the impact to private electrical services to reroute the overhead services underground. As many of the structures are old, they have not been built to up to date NEC code or to Pacificcorp's recent construction standards.

Each building service was visited with representatives from Cedar Electric and Pacific Power. If available, the tenants and building owners were talked to. In total, 10 building services were affected for a total of 22 meters. For each service a recommendation and cost estimate are provided. We were not asked to provide estimates for trenching, backfill, conduit installed in the ground or the utility wiring. We have started our estimates as the cost coming out of the ground into the meter or current transformer cabinet.

While there are many other buildings along North Adams's street, only the electrical services that will be directly affected by the relocation of Pacific Power's utilities were looked at.

The following table is a summary of the costs for each building for the complete project. Material and labor pricing is as of August 2024. No contingency pricing or engineering costs have been built in, the basic designs were assumed such as if the building owner's had asked for estimate but using BOLI wage rates and public bonding.

Combined Total of All Projects			
Item	Quantity	Price	Extended
Subway	1	\$ -	\$ -
Coquille Chiropractic	1	\$ 9,400.00	\$ 9,400.00
Nosler Building	1	\$ 61,775.00	\$ 61,775.00
Denny's Pizza	1	\$ 6,300.00	\$ 6,300.00
Owen's Building	1	\$ 9,543.75	\$ 9,543.75
Pho House	1	\$ 400.00	\$ 400.00
Pacific Air Comfort	1	\$ 10,515.00	\$ 10,515.00
Total			\$ 97,933.75

2.0 Existing Conditions

A site visit was conducted on June 26, 2024 by Jerek Hodge, Damon Smith, Grant Cousens of Cedar Electric, and Kristopher Freeman and Austin Layton of Pacific Power. The information contained is from that visit and subsequent feedback of what changes Pacific Power was planning on North Adams Street.

2.1 9 North Adams St, “Subway”

The Subway location currently has a 400 amp 240V single phase service with an underground feed into the building. There are two separate feeders leaving the meter panel.



Figure 1

2.2 21 North Adams St. “Coquille Chiropractic”

The South half of the Chiropractor building has a 200 amp 240V single phase service with an underground feed. Power goes into a conduit under the building into an interior panel. The wall between 21 and 31 N Adams has been removed so there are currently two services into a single building. They previously were separate addresses with their own entrance like Subway.



Figure 2

2.3 31 North Adams St. “Coquille Chiropractic”

The North half of the Chiropractor building has a 200 amp 240V single phase service with an overhead feed. Power drops into a meter located inside the building and feeds two old Zinsco panels located on opposite sides of the same wall. The wall between 21 and 31 N Adams has been removed so there are currently two services into a single building.



Figure 3

2.4 57 North Adams St. “Nosler Building”

The Nosler Building currently has 25 Electrical Services on the building, with an unknown total amperage capacity. The maximum amperage assumed would be two 800 amp and two 200 amp single phase 240V services. Thirteen services are fed overhead to the South Apartments, two are 240 single phase commercial services, and ten are brand new services feeding the North Apartments from dual overhead masts.



Figure 4



Figure 5



Figure 6

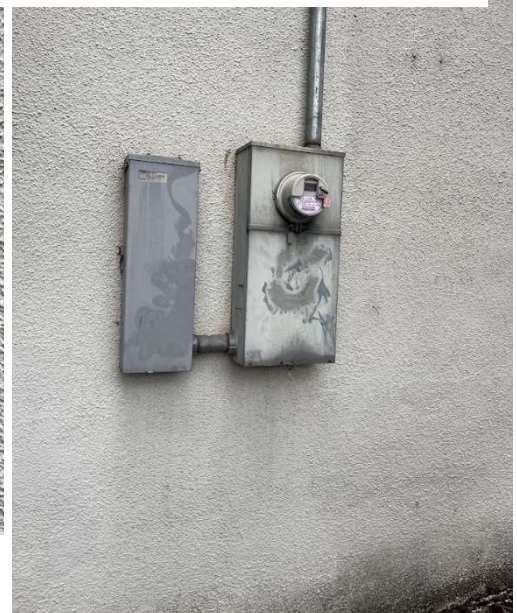


Figure 7

2.5 98 East 1st St. “Denny’s Pizza”

Denny’s Pizza currently has two 200 amp 240V single phase meters with side by side overhead drops. Each meter feeds into its own panel. The meters are located inside a garage area that is not accessible without opening of a garage door.



Figure 4

2.6 156 North Adams St. “Pho House”

There is a single 240V meter at this location with a straight unfused feed into the building panel which is located in the kitchen. The meter base can be converted to an underground drop.



Figure 5

2.7 201 North Adams St. “Owen’s Building”

Coos County owns the Owen’s Building and it has an 800 amp 3 phase 120/240V service with two overhead masts. The masts drop down the outside wall with dual LB connectors going into an indoor Current Transformer (CT) cabinet. The cabinet feeds to an inside disconnect that cuts power to the entire building. Pacific Power is making changes at this location and the incoming transformer is switching to 120/208V.



Figure 10



Figure 11

2.8 16 East 3rd Street “Pacific Air Comfort”

This building mainly stores HVAC components and has a 200 amp 240V overhead service crossing 3rd Street. Pacific Power is ending service support for this building on 3rd Street. There is a commercial meter base feeding into a panel with two 100 amp breakers inside. The main distribution panel is in the center of the building.



Figure 6

3.0 Cost Estimates

Cost estimates were made using marked up material costs and determining an hourly figure of the number of man-hours needed to make the modifications. Permits were estimated as they are based upon the type of circuit being installed and including the surcharges the County and State place on them. Material pricing has been volatile over the past few years so for future work cost indexing should be compared to the date of this document.

3.1 9 North Adams

Subway has a modern underground service that terminates in an underground pull box by Adams St. Pacific Power will relocate the wire for this box and no impact to the service is anticipated.

3.2 21 & 31 North Adams “Coquille Chiropractic”

These two locations have had their interior wall removed and now are one building. The two electrical services must be combined to meet building requirement if changed. One meter is located outside with an underground feed and the other overhead with an interior meter. Current Pacific Power standards do not allow interior meters. A new meter main will need to be mounted outside the building.

There are several options to reroute power and combine all the electrical into one. The option we chose for estimates is to replace the service panel to 21 N Adams as that will eliminate trenching across the parking lot and let Pacific Power reconnect at the same time as 9 N Adams. The existing 200 amp meter base will be replaced with a 400 Amp meter base. The Cutler Hammer panel inside

the building used an exemption to avoid having a main breaker outside, however this will go away since disconnects must be grouped. For 31 N Adams two 200 amp circuit breakers will be mounted nearby and conduit ran into the building upper crawl space. An SER cable will be pulled over to the Zinsco panel locations and both Panels replaced with a new one. A new 200 amp main breaker loadcenter with provisions for 40 breaker positions but using twin breakers capable of 60 total positions has been estimated to replace both Zinsco panels. The branch circuits will be re-fed into the new panel.

New ground rods and ground wire need to be installed outside the building at the new main breaker location.

21 & 31 N Adams Estimate			
Item	Quantity	Price	Extended
Materials	1	\$ 4,150.00	\$ 4,150.00
Labor	1	\$ 5,000.00	\$ 5,000.00
Permit	1	\$ 250.00	\$ 250.00
Total			\$ 9,400.00

3.3 57 North Adams

The Nosler building is the most difficult of the transitions. The owner has already begun moving services to update them and the apartments on the North half of the building already have a new meter pack and main disconnect installed that can be transitioned to underground feed. The South apartments and commercial parts of the building still are set up for overhead feed.

Pacific Power wants a new meter pack installed facing Adams Street to power the 12 apartments and house panel. This will include 100 amp feeders to all the apartments and a separate commercial style meter with a bypass. To keep the new wire runs shorter a new conduit will be run to each floor to meet the existing loadcenters. The house panel in the top floor will need moved to the left where the existing meters are to meet NEC clearances. Grounding and bonding will be done at the main breakers outside at the sidewalk.

Two commercial services are located on the building. Meter 82 617 33 can be refed from the bottom, we have just included a piece of conduit, a knockout and some time to help re-route the wire inside the meter the rest of the conduit and the utility feeders are not included.

The second meter, 82 617 158 currently is above the Pacific Power required height and feeds straight into the panel in the stair area. A new meter main with underground feed will need to be mounted at the correct height and grounded. We have included provision for a pull box or LB to be put into conduit to feed back into the existing panel.

Due to the size of the electrical service, a plan review will be required and building codes will require drawings from an Engineer or Supervising Electrician to complete the process.

57 N Adams Estimate			
Item	Quantity	Price	Extended
Materials	1	\$ 32,900.00	\$ 32,900.00
Labor	1	\$ 26,250.00	\$ 26,250.00
Permit	1	\$ 2,100.00	\$ 2,100.00
Plan Review	25%	\$ 2,100.00	\$ 525.00
Total			\$ 61,775.00

3.4 98 East 1st Street

The meters are currently inside the building and must be located outside. Two new commercial meters with mains will need mounted outside the building. The only available spot is currently part of their painted mural so that area will need to be repainted. Conduit will be routed inside of Denny's wall or the outside garage area to feed both panels with new feeders and new grounding. The existing panels will be re-fed.

98 E 1st Street			
Item	Quantity	Price	Extended
Materials	1	\$ 2,100.00	\$ 2,100.00
Labor	1	\$ 4,000.00	\$ 4,000.00
Permit	1	\$ 200.00	\$ 200.00
Total			\$ 6,300.00

3.5 156 North Adams Street

The Pho House Restaurant already has a Meter with bypass that Pacific Power accepted that can be re-fed from underground. Only the parts to stub conduit down to the ground have been included with a couple hours of oversight.

156 N Adams Estimate			
Item	Quantity	Price	Extended
Materials	1	\$ 50.00	\$ 50.00
Labor	1	\$ 250.00	\$ 250.00
Permit	1	\$ 100.00	\$ 100.00
Total			\$ 400.00

3.6 201 North Adams Street

The new electrical service will be 120/208 3-phase. A CT cabinet and main disconnect sit inside the building. To change the service a new 36"x48" outdoor CT can and thru wall conduit will need mounted into the existing disconnect. The existing meter base is in good shape and can be re-used and piped to.

The heating and cooling in the building is from mini-splits or resistive wall heaters that can adapt to 208V. Some time and cost has been included to re-fuse and reset adjustable wall heaters to the new voltage.

Due to the size of the electrical service, a plan review will be required and building codes will require drawings from an Engineer or Supervising Electrician to complete the process.

201 N Adams St			
Item	Quantity	Price	Extended
Materials	1	\$ 4,700.00	\$ 4,700.00
Labor	1	\$ 4,500.00	\$ 4,500.00
Permit	1	\$ 275.00	\$ 275.00
Plan Review	25%	\$ 275.00	\$ 68.75
Total			\$ 9,543.75

3.7 16 E 3rd Street

The overhead service to this building comes from the south. This pole is going to be eliminated and the new feed from Pacific Power is coming from Central Blvd on the northwest. The building has an electrical panel in the center of the building and a main panel at the Southeast where the existing meter is. Conduit will need run back to the main panel. It could also be changed to go to the center panel first and feed backwards to the old main panel. For estimating purposes, we have gone with an option of refeeding the Southeast panel from the new meter location. The ceilings are tall and the trusses are too far apart to hang conduit therefore the cost includes additional hangers from the ceiling. The concrete floor allows good accessibility for a scissor lift.

16 E 3rd St. Estimate			
Item	Quantity	Price	Extended
Materials	1	\$ 3,315.00	\$ 3,315.00
Labor	1	\$ 7,000.00	\$ 7,000.00
Permit	1	\$ 200.00	\$ 200.00
Total			\$ 10,515.00

4.0 Conclusion

The total price to modify all the electrical services to feed underground is approximately \$100,000.00. There would be some additional cost if this is created as a bid set to prepare bid documents. If placed as part of a larger project some contingency should be added in as well as markup if a General Contractor needed to manage the electrician as a subcontractor.