

**BEFORE THE BOARD OF COUNTY COMMISSIONERS  
LEWIS COUNTY, WASHINGTON**

**IN THE MATTER OF:**

RESOLUTION NO. 21-288

CALL FOR BIDS FOR THE CHEHALIS RIDGE RADIO  
SITE

**WHEREAS**, Lewis County operates several Public Safety Radio sites throughout Lewis County including a tower in Chehalis serving city law and fire services; and

**WHEREAS**, the Chehalis site is located on private property and the owner wishes it removed and it is not located in the most effective location to provide radio services throughout the area; and

**WHEREAS**, Lewis County has purchased property and had engineered plans and specifications developed to provide this service from a more effective location, has obtained permits and licenses for the new location and is now prepared to construct a new tower and support building for this purpose.

**NOW THEREFORE BE IT RESOLVED** Lewis County issue a Call for Bids for the Chehalis Ridge Radio Site Project; and

**NOW THEREFORE BE IT FURTHER RESOLVED** that the Internal Services Department in partnership with the E911 Communications Department prepare and issue bid documents for the aforementioned project.

DONE IN OPEN SESSION this 10th day of August, 2021.

APPROVED AS TO FORM:  
Jonathan Meyer, Prosecuting Attorney

BOARD OF COUNTY COMMISSIONERS  
LEWIS COUNTY, WASHINGTON

Kevin McDowell  
By: Kevin McDowell,  
Deputy Prosecuting Attorney

Gary Stamper  
Gary Stamper, Chair

ATTEST:



Lindsey R. Pollock, DVM  
Lindsey R. Pollock, DVM, Vice Chair

Rieva Lester  
Rieva Lester,  
Clerk of the Lewis County Board of  
County Commissioners

Sean D. Swope  
Sean D. Swope, Commissioner

# CALL FOR BIDS

## NOTICE

### CALL FOR BIDS

#### For

#### Lewis County Chehalis Ridge Radio Site Project

Lewis County is soliciting bids from qualified firms to provide bids for the construction of a radio site and tower for the public Safety radio network.

Firms desiring consideration shall submit a complete bid package based on the plans and specifications on file to Lewis County Clerk of the Board, 351 NW North Street, Room 210, Chehalis, WA 98532 by 3:00 PM on September 2, 2021.

For more information about the project, please contact Lewis County Capital Facilities Manager, Doug Carey at [Doug.Carey@lewiscountywa.gov](mailto:Doug.Carey@lewiscountywa.gov).

Lewis County is an equal opportunity and affirmative action employer. Minority- and women-owned firms are encouraged to submit bids.

DATED this 10<sup>th</sup> day of August, 2021



Clerk of the Board of County Commissioners

Lewis County, WA

PUBLISH: Chronicle - August 10 and 17, 2021

Seattle Daily Journal of Commerce - August 10, 2021

Lewis County Web Site <https://lewiscountywa.gov/departments/central-services/facilities/facilities-call-for-bids/>

1.

# CALL FOR BIDS

# **CALL FOR BIDS**

**NOTICE  
CALL FOR BIDS  
For  
Lewis County Chehalis Ridge Radio Site Project**

Lewis County is soliciting bids from qualified firms to provide bids for the construction of a radio site and tower for the public Safety radio network.

Firms desiring consideration shall submit a complete bid package based on the plans and specifications on file to Lewis County Clerk of the Board, 351 NW North Street, Room 210, Chehalis, WA 98532 by 3:00 PM on September 2, 2021.

For more information about the project, please contact Lewis County Capital Facilities Manager, Doug Carey at [Doug.Carey@lewiscountywa.gov](mailto:Doug.Carey@lewiscountywa.gov).

Lewis County is an equal opportunity and affirmative action employer. Minority- and women-owned firms are encouraged to submit bids.

DATED this \_\_\_\_ day of August, 2021

---

Clerk of the Board of County Commissioners  
Lewis County, WA

PUBLISH: Chronicle –August 10 and 17, 2021  
Seattle Daily Journal of Commerce—August 10, 2021  
Lewis County Web Site <https://lewiscountywa.gov/departments/central-services/facilities/facilities-call-for-bids/>

**Bids Due: 3:00 PM, September 2, 2021**

**SEALED BIDS MUST BE DELIVERED BY OR BEFORE  
3:00 P.M. on Thursday, September 2, 2021.**

(Lewis County official time is displayed on Mitel phones in the BOCC Office. **Bids submitted after 3:00 PM will not be considered for this project.**)

**INSTRUCTIONS TO BIDDERS  
FOR LEWIS COUNTY FACILITIES CONSTRUCTION PROJECTS  
PART 0 – GENERAL CONDITIONS**

**0.01 EXPLANATION TO PROSPECTIVE BIDDERS**

- A. Any prospective bidder desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must submit a request in writing to the Architect/Engineer (A/E) or owner if no A/E, 7 calendar days before the bid due date. Oral explanations or instructions given before the award of a contract will not be binding. Any information given a prospective bidder concerning a solicitation will be furnished promptly to all other prospective bidders by addendum to the solicitation, if that information is necessary in submitting bids or if the lack of it would be prejudicial to other prospective bidders.
- B. In accordance with the legislative findings and policies set forth in Chapter 39.19 RCW, the State of Washington encourages participation in all of its contracts by MWBE firms certified by the Office of Minority and Women's Business Enterprises (OMWBE). Participation may be either on a direct basis in response to this invitation or as a subcontractor to a bidder. However, unless required by federal statutes, regulations, grants, or contract terms referenced in the contract documents, no preference will be included in the evaluation of bids, no minimum level of MWBE participation shall be required as a condition for receiving an award, and bids will not be rejected or considered non-responsive on that basis.
- C. Any affirmative action requirements set forth in federal regulations or statutes included or referenced in the contract documents will apply.
- D. In accordance with RCW 39.04.320, the State of Washington requires 15% **Apprenticeship Participation** for all projects estimated to cost one million dollars or more. On applicable projects, the bid advertisement and Bid Proposal form shall establish a minimum required percentage of apprentice labor hours compared to the total labor hours. Bidders may contact the Department of Labor and Industries, Specialty Compliance Services Division, Apprenticeship Section, P.O. Box 44530, Olympia, WA 98504-4530, by phone (360) 902-5320, and e-mail at [thum235@lni.wa.gov](mailto:thum235@lni.wa.gov), to obtain information on available apprenticeship programs.

**0.02 PREPARATION OF BIDS – CONSTRUCTION**

- A. Bids must be: (1) submitted on the bid proposal forms, or copies of forms, furnished by the Owner or the Owner's agent, and (2) signed in ink. The person signing a bid must initial each change appearing on any bid form. If the bid is made by a corporation, it shall be signed by the corporation's authorized designee. The address of the bidder shall be typed or printed on the bid form in the space provided.
- B. The bid form may require bidders to submit bid prices for one or more items on various bases, including: (1) lump sum base bid; (2) lump sum bid alternate prices; (3) unit prices; or (4) any combination of items (1) through (3) above.
- C. If the solicitation includes alternate bid items, failure to bid on the alternates may disqualify the bid. If bidding on all items is not required, bidders should insert the words "no bid" in the space provided for any item on which no price is submitted.
- D. Substitute bid proposals will not be considered unless this solicitation authorizes their submission.

**0.03 BID GUARANTEE**

- A. When the sum of the base bid plus all additive bid alternates is \$35,000.00 or less, bid security is not required. When the sum of the base bid plus all additive alternates is greater than \$35,000.00, a bid guarantee in the amount of 5% of the base bid amount is required. Failure of the bidder to provide bid guarantee when required shall render the bid non-responsive.

- B. Acceptable forms of bid guarantee are: A bid bond or postal money order, or certified check or cashier's check made payable to the Lewis County Treasurer. The Owner will return bid guarantees (other than bid bond) to unsuccessful bidders as soon as practicable, but not sooner than the execution of a contract with the successful bidder. The successful bidder's bid guarantee will be returned to the successful bidder with its official notice to proceed with the work of the contract.
- C. The bidder will allow 60 days from bid opening date for acceptance of its bid by the Owner. The bidder will return to the Owner a signed contract, insurance certificate and bond or bond waiver within 15 days after award of the contract. If the apparent successful bidder fails to sign all contractual documents or provide the bond and insurance as required or return the documents within 15 days after award of the contract, the Owner may terminate the award of the contract.
- D. In the event a bidder discovers an error in its bid following the bid opening, the bidder may request to withdraw its bid under the following conditions:
  - 1. Written notification is received by the Owner within 24 hours following bid opening.
  - 2. The bidder provides written documentation of the claimed error to the satisfaction of the Owner within 72 hours following the bid opening. The Owner will approve or disapprove the request for withdrawal of the bid in writing. If the bidder's request for withdrawal of its bid is approved, the bidder will be released from further obligation to the Owner without penalty. If it is disapproved, the Owner may retain the bidder's bid guarantee.

#### 0.04 ADDITIVE OR DEDUCTIVE BID ITEMS

- A. The low bidder, for purposes of award, shall be the responsive bidder offering the low aggregate amount for the base bid item, plus additive or deductive bid alternates selected by the Owner, and within funds available for the project. The bidder agrees to hold all bid alternate prices until bid award and contract execution.

#### 0.05 ACKNOWLEDGEMENT OF ADDENDA

- A. Bidders shall acknowledge receipt of all addenda to this solicitation by identifying the addenda numbers in the space provided for this purpose on the bid proposal form. Failure to do so may result in the bid being declared non-responsive.

#### 0.06 SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

- A. The bidder acknowledges that it has taken steps necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to (1) conditions bearing upon transportation, disposal, handling, and storage of materials; (2) the availability of labor, water, electric power, and road; (3) uncertainties of weather, river stages, tides, or similar physical conditions at the site; (4) the conformation and conditions of the ground; and (5) the character of equipment and facilities needed preliminary to and during the work. The bidder also acknowledges that it has satisfied itself as to character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including exploratory work done by the Owner, as well as from the drawings and specifications made a part of this contract. Any failure of the bidder to take the actions described and acknowledged in this paragraph will not relieve the bidder from responsibility for estimating properly the difficulty and cost of successfully performing the work.

#### 0.07 BID AMOUNTS

- A. The bid prices shown for each item on the bid proposal shall include all labor, material, equipment, overhead and compensation to complete all of the work for that item.

- B. The actual cost of building permit (only) and the public utility hookup fees will be a direct reimbursement to the Contractor or paid directly to the permitting agency by the Owner. Fees for these permits should not be included by the Bidder in the bid amount.
- C. The Bidder agrees to hold the base bid prices until bid award and contract execution.

#### 0.08 TAXES

- A. The bid amounts shall not include Washington State Sales Tax (WSST). All other taxes imposed by law shall be included in the bid amount. The Owner will include WSST in progress payments. The Contractor shall pay the WSST to the Department of Revenue and shall furnish proof of payment to the Owner if requested. [NOTE: Contractor must bond for contract amount plus the WSST.]

#### 0.09 SUBMISSION OF BIDS

- A. Bid Proposals must be submitted on or before the time specified in the Advertisement for Bids.
- B. If the base bid and the sum of the additive alternates is one million dollars or more, the Bid Proposal shall comply with the following requirements:
  - 1. Pursuant to RCW 39.30.060, if the base bid and the sum of the additive alternates is one million dollars or more, the Bidder shall provide names of the Subcontractors with whom the Bidder will subcontract for performance of heating, ventilation and air conditioning (HVAC), plumbing, and electrical.
  - 2. The Bidder can name itself for the performance of the work.
  - 3. The Bidder shall not list more than one Subcontractor for each category of work identified UNLESS Subcontractors vary with bid alternates, in which case the Bidder must indicate which Subcontractor will be used for which alternate.
  - 4. Failure of the Bidder to submit as part of the bid the NAMES of such Subcontractors or to name itself to perform such work shall render the Bidder's bid nonresponsive and, therefore, void.
- C. The Bid Proposal shall be submitted in a sealed envelope addressed to the office specified in the Advertisement for Bids. The envelope shall have printed on the outside:
  - 1. The project number and description.
  - 2. The name and address of the bidder.
  - 3. Identification as Bid Proposal.
- D. Prior to the bid opening, the Owner's representative will designate the official bid clock. Any part of the bid proposal or bid modification not received prior to the times specified, per the designated bid clock, will not be considered and the bid will be returned to the bidder unopened.
- E. A bid may be withdrawn in person by a bidder's authorized representative before the opening of the bids. Bidder(s) representative will be required to show ID and sign on bid summary sheet before it will be released.
- F. People with disabilities who wish to request special accommodation, (e.g., sign language interpreters, Braille, etc.) need to contact the Owner ten (10) working days prior to the scheduled bid opening.

#### 0.10 BID RESULTS

- A. After the Bid Opening, Bidders may obtain the tabulation of apparent bids from Lewis County by calling (360) 740-1192 or accessing the project information page on the Lewis County website.

#### 0.11 LOW RESPONSIBLE BIDDER

- A. If applicable, it is the intent of the Owner to award a contract to the low responsible bidder. In determining the bidder's responsibility, the Owner shall consider an overall accounting of the attached **"DIVISION 00 RESPONSIBILITY CRITERIA"**. Upon Owner's request, the apparent low bidder must supply the requested information within two (2) business days of request by Owner. Withholding information or failure to submit all the information requested within the time provided shall render the

bid nonresponsive. If the Owner determines that the apparent low bidder is not responsible, the Owner will notify the bidder of its preliminary determination in writing. Within three (3) days after receipt of the preliminary determination, the bidder may withdraw its bid or request a hearing. The Owner will schedule a hearing within three (3) working days of receipt of the bidder's request. The hearing members will include the Central Services Director, Public Works Director and Central Services Project Manager. The Owner will issue a Final Determination after reviewing information presented at the hearing. The Owner's Final Determination is specific to this project, and will have no effect on other or future projects.

- B. **“SUBCONTRACTOR RESPONSIBILITY CRITERIA”** In accordance with SHB 2010 amending RCW 39.04 the Contractor shall include the language of this paragraph in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. The requirements of this paragraph apply to all subcontractors regardless of tier. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:
1. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;
  2. Have a current Washington Unified Business Identifier (UBI) number; and if applicable, have:
    - a. Have Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW;
    - b. A Washington Employment Security Department number, as required in Title 50 RCW;
    - c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
    - d. An electrical contractor license, if required by Chapter 19.28 RCW;
    - e. An elevator contractor license, if required by Chapter 70.87 RCW.
    - f. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3).

## 0.12 CONTRACT AWARD

- A. The Owner will evaluate bid responsiveness and bidder responsibility.
- A bid will be considered responsive if it meets the following requirements:
1. It is received at the proper time and place.
  2. It meets the stated requirements of the bid proposal.
  3. It is submitted by a licensed/registered contractor within the State of Washington at the time of bid opening and is not banned from bidding by the Department of Labor and Industries.
  4. It is accompanied by a bid guarantee, if required.
- A bid will be considered responsible if it meets the following requirements:
1. It meets an overall accounting of the responsibility criteria established for the project.
- B. The Owner reserves the right to accept or reject any or all bid proposals and to waive informalities that do not affect the essential fairness of the bidding process.
- C. The Owner may negotiate bid price adjustments with the low responsive bidder, including changes in the contract documents, to bring the bid within the available funding per RCW 39.04.015.
- D. The apparent low bidder, for purpose of award, shall be the responsive bidder offering the low aggregate amount for the base bid plus selected additive or deductive bid alternates and meeting all other bid submittal requirements.
- E. The Contract will only become effective when signed by the Owner. Prior to the Owner's signature, any and all costs incurred shall be the sole responsibility of the bidder.

**Division 00**  
**Responsibility Criteria**  
**Low Responsible Bidder**

It is the intent of the Owner to award a contract to the low responsible bidder. In determining the bidder's responsibility, the Owner shall consider an overall accounting of the items listed below. The bidder must submit the following information, demonstrating that they meet the listed criteria:

**1. Capacity**

<b>Category</b>	<b>Required Information / Criteria</b>
<input type="checkbox"/> Current Workload	<p>On a separate sheet, list all the major projects your firm has in progress or are projected to commence during the next 6 months, giving the name of project, Owner, architect, contract amount, percentage complete and scheduled completion date. Failure to list all major projects shall render the bid non-responsive.</p> <p>List the current or projected workload for the next 12 months including this Contract, expressed in total contract value. \$ _____</p> <p>List actual contracted workload for the previous 12 months, expressed in total contract value. \$ _____</p> <p>The bidder's current or projected workload, during the life of this contract, shall not exceed 150% of the actual contracted workload over the previous 12 months unless the bidder can demonstrate to the Owner's satisfaction that it has the capacity to assume the additional work of this project, provide adequate staffing, and meet project demands.</p>

**2. Previous Experience**

<b>Category</b>	<b>Required Information / Criteria</b>
<input type="checkbox"/> List of Completed Projects	<p>On a separate sheet, list all the major projects (\$75,000 and above) your firm has completed in each of the past five (5) years, giving the name of project, Owner (contact name and phone numbers), architect (contact name and phone numbers), contract amount, date of completion and percentage of the cost of the work performed with your own forces. This information will be used for references.</p>

- |  |   |
|--|---|
| <input type="checkbox"/> Experience of Superintendent or Project Manager | <p>Submit resume and references if different than above, of the person proposed by the bidder to superintend the work. This person shall have managed projects of similar complexity and similar size, and successfully completed the project within the last three (3) years.</p> <p>Superintendent and/or Project Manager shall not be replaced on the project without full consent of the Owner.</p> |
| <input type="checkbox"/> Equipment                                       | <p>Submit affidavit that firm has equipment necessary to perform all phases of work, including HMA pavers, planning or grinding machines, asphalt saws, etc.</p>  |
| <input type="checkbox"/>   |   |

### 3. Ability to Perform Within Time Specified

Category	Required Information / Criteria
<input type="checkbox"/> Contractor's Ability to Meet the Project Schedule	On a separate sheet, list the project titles, original contract time, and change order time extensions for three specific projects. Bidder shall document that it achieved substantial completion of three previous projects of similar size and scope within no more than 105% of the final contracted time for completion (including change ordered adjustments).

### 4. References

Category	Required Information / Criteria
<input type="checkbox"/> References from Owners of Previous Projects	Owner will check references by contacting owners of previous projects on bidder's performance over the last five years. On average, such references shall be satisfactory or better on a five category scale with "satisfactory" at mid scale. A reference score sheet will be utilized for rating completed projects of similar scope and value.
<input type="checkbox"/> Public Agency Debarment	Bidder shall not have been debarred by any Public agency within the last two (2) years.

**The apparent low bidder must provide the above required information within two (2) working days of receiving Owner notification. Failure to submit such information to the satisfaction of the Owner within the time provided shall render the bid non-responsive.**

If the Owner determines that the apparent low bidder is not responsible, the Owner will notify the bidder of its preliminary determination in writing. Within three (3) days after receipt of the preliminary determination, the bidder may withdraw its bid or may request a hearing. The Owner will schedule a hearing within three (3) working days of receipt of the bidder's request. The Owner will issue a Final

Determination after reviewing information presented at the hearing. The Owner's Final Determination is specific to this project, and will have no effect on other or future projects.

2.

# **DOCUMENT CHECK LIST**

**(Lewis County Forms Only)**

**The following items must be returned in the completed bid package:**

1. Signed Bid Form
2. Bid Security (Bid Bond, Cashiers Check)
3. Signed Non-Collusion Affidavit

3.

## Project Scope and Specifications

## SCOPE OF WORK

This project will construct for Lewis County Communications a new public safety radio site as per drawings and specifications developed by Cushing Civil Engineers (attached herein by reference).

This project includes all the labor and materials necessary to provide a complete operational radio site including, site prep, provision and erection of monopole tower, radio/generator building, site fencing. Owner will provide and install generator, A/C, and radio equipment in shed.

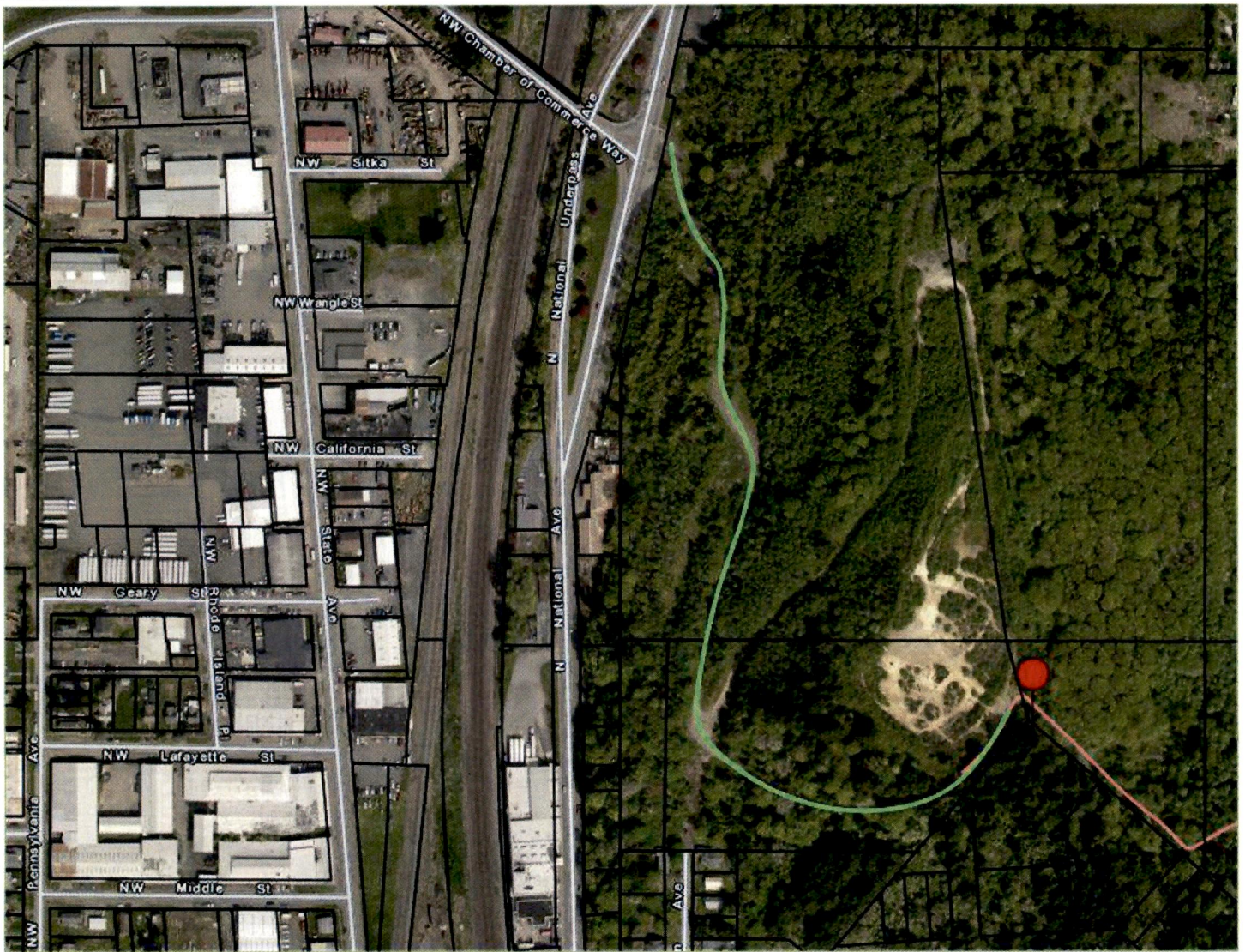
In addition to above, the contractor will be responsible for maintaining and repairing private access road to site to allow construction activities to take place and to repair any damage caused by construction activities.

Site prep spoils may be stored on site in areas identified by County.

Pre-Bid walkthrough scheduled for Tuesday, August 24, 2021

Project to be completed by April 30, 2022.

## Location



Construction Entrance

## Exhibit B- Compensation

Compensation will be made in the amount of \$\_\_\_\_\_, plus Washington State Sales Tax upon completion of contract. Progress payments may be made at County's discretion upon County's approval of Contractor's invoices, to the extent that said invoices reflect the completion of project milestones by the Contractor (milestones are points at which significant components of the project have been completed and at which tangible project deliverables of material value have been received by the County).

4.

LEWIS COUNTY  
AGREEMENT  
GENERAL TERMS AND  
CONDITIONS

# AGREEMENT

**EFFECTIVE DATE:** \_\_\_\_\_

\_\_\_\_\_, hereinafter called CONTRACTOR, and LEWIS COUNTY, hereinafter called COUNTY, agree as set forth in this Agreement, including: Scope of Work, Specifications, Compensation, Bid Response forms, General and Special Conditions, copies of which are attached hereto and incorporated herein by this reference as fully as if set forth herein.

Project: Chehalis Ridge Radio Project, #31-1617 Bid Price (with accepted alternates: \$ \_\_\_\_\_)

The term of this Agreement shall commence upon the date of execution as shown above. This agreement may be renewed or terminated upon written notice provided either by the County or the service provider thirty (30) or more days prior to the effective date of renewal or termination.

CONTRACTOR acknowledges and by signing this contract agrees that the Indemnification provisions set forth in Paragraphs 5, 7, 14, 15, 16, 21, 22, and 25, are totally and fully part of this contract and have been mutually negotiated by the parties.

IN WITNESS WHEREOF, the parties have executed this Agreement this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

CONTRACTOR:

LEWIS COUNTY

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Title of Signatory  
Authorized by the firm By Laws

Erik Martin  
Lewis County, County Manager

Mailing Address:

Approved as to Form Only:  
Jonathan Meyer, Prosecuting Attorney

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By:  
\_\_\_\_\_

UBI or Contractors License#

\_\_\_\_\_  
Deputy Prosecuting Attorney

\_\_\_\_\_  
Federal Business Tax ID No.

\_\_\_\_\_

## **GENERAL CONDITIONS**

1. **Scope of Contractors Services:**

The Contractor agrees to provide to the County services and any material set forth in the project narrative identified as Exhibit "A" during the agreement period. No material, labor, or facilities will be furnished by the County, unless otherwise provided for in the Agreement.

2. **Accounting and Payment for Contractor Services:**

Payment to the Contractor for services rendered under this Agreement shall be as set forth in Exhibit "B". Where Exhibit "B" requires payments by Lewis County, payment shall be based upon billings, supported unless otherwise provided in Exhibit "B", by documentation of units of work actually performed and amounts earned, including where appropriate, the actual number days worked each month, total number of hours for the month, and total dollar payment requested. Unless specifically stated in Exhibit "B" or approved in writing in advance by the official executing this Agreement for Lewis County (hereinafter referred to as the "Contracting Officer"), the County will not reimburse the Contractor for any costs or expenses incurred by the Contractor in the performance of this contract.

Where required, the County shall, upon receipt of appropriate documentation, compensate the Contractor, no more often than weekly; through the County voucher system for the Contractor's service pursuant to the fee schedule set forth in Exhibit "B".

3. **Assignment and Subcontracting:**

No portion of this contract may be assigned or subcontracted to any other individual, firm or entity without the express and prior written approval of the Contracting Officer or as set forth in Exhibit "A".

4. **Labor Standards and Contract Assistance:**

The Contractor shall comply with the provisions of the Lewis County Contract and Procurement Assistance Program as applicable, attached hereto as "Special Conditions".

5. **Independent Contractor:**

The Contractor's services shall be furnished by the Contractor as an independent Contractor and nothing herein contained shall be construed to create a relationship of employer-employee or master-servant, but all payments made hereunder and all services performed shall be made and performed pursuant to this Agreement by the Contractor as an independent Contractor. The Contractor acknowledges that the entire compensation for this Agreement is specified in Exhibit "B" and the Contractor is not entitled to any County benefits including, but not limited to: vacation pay, holiday pay, sick leave pay, medical, dental, or other insurance benefits, or any other rights or privileges afforded to Lewis County employees.

Contractor will defend, indemnify and hold harmless the County, its officers, agents or employees from any loss or expense, including but not limited to settlements, judgments, setoffs, attorneys' fees or costs incurred by reason of claims or demands because of breach of the provisions of this paragraph.

6. **No Guarantee of Employment:**

The performance of all or part of this contract by the Contractor shall not operate to vest any employment rights whatsoever and shall not be deemed to guarantee any employment of the Contractor or any employee of the Contractor or any subcontractor or any employee of any subcontractor by the County at the present time or in the future.

7. **Taxes:**

The Contractor understands and acknowledges that the County will not withhold Federal or State income taxes. Where required by State or Federal law, the Contractor authorizes the County to make withholding for any taxes other than income taxes (i.e., Medicare). All compensation received by the Contractor will be reported to the Internal Revenue Service at the end of the calendar year in accordance with the

applicable IRS regulations. It is the responsibility of the Contractor to make the necessary estimated tax payments throughout the year, if any, and the Contractor is solely liable for any tax obligation arising from the Contractor's performance of this Agreement. The Contractor hereby agrees to indemnify the County against any demand to pay taxes arising from the Contractor's failure to pay taxes on compensation earned pursuant to this Agreement.

The County will pay sales and use taxes imposed on goods or services acquired hereunder as required by law. The Contractor must pay all other taxes including, but not limited to: Business and Occupation Tax, taxes based on the Contractor's gross or net income, or personal property to which the County does not hold title. The County is exempt from Federal Excise Tax.

8. **Regulations and Requirement:**

This Agreement shall be subject to all laws, rules, and regulations of the United States of America, the State of Washington, and political subdivisions of the State of Washington, and to any other provisions set forth in Special Conditions.

9. **Prevailing Wages**

Contractor shall pay the prevailing rate of wages to all workers, laborers, or mechanics employed in the performance of any part of the Work in accordance with RCW 39.12 and the rules and regulations of the Department of Labor and Industries. The schedule of prevailing wage rates for the locality or localities of the Work, is determined by the Industrial Statistician of the Department of Labor and Industries. It is the Contractor's responsibility to verify the applicable prevailing wage rate.

Each Application for Payment submitted by Contractor shall state that prevailing wages have been paid in accordance with the pre-filed statement(s) of intent, as approved. Copies of the approved intent statement(s) shall be posted on the job site with the address and telephone number of the Industrial Statistician of the Department of Labor and Industries where a complaint or inquiry concerning prevailing wages may be made.

In compliance with chapter 296-127 WAC, Contractor shall pay to the Department of Labor and Industries the currently established fee(s) for each statement of intent and/or affidavit of wages paid submitted to the Department of Labor and Industries for certification.

10. **Right to Review:**

This contract is subject to review by any Federal or State auditor. The County or its designee shall have the right to review and monitor the financial and service components of this program by whatever means are deemed expedient by the Contracting Officer. Such review may occur with or without notice, and may include, but is not limited to, on-site inspection by County agents or employees, inspection of all records or other materials which the County deems pertinent to the Agreement and its performance, and any and all communications with or evaluations by service recipients under this Agreement. The Contractor shall preserve and maintain all financial records and records relating to the performance of work under this Agreement for 3 years after contract termination, and shall make them available for such review, within Lewis County, State of Washington, upon request.

11. **Modifications:**

Either party may request changes in the Agreement. Any and all agreed modifications shall be in writing, signed by each of the parties.

12. **Termination for Default:**

If the Contractor defaults by failing to perform any of the obligations of the contract or cannot perform because of regulatory order or failure to comply with regulatory requirements, including but not limited to applicable licensing laws, or becomes insolvent or is declared bankrupt or commits any act of bankruptcy- or insolvency or make an assignment for the benefit of creditors, the County may, by depositing written notice to the Contractor in the U.S. mail, postage prepaid, terminate the contract, and at the County's

option, obtain performance of the work elsewhere. If the contract is terminated for default, the Contractor shall not be entitled to receive any further payments under the contract until work called for, as may be applicable under Exhibit "A", has been fully performed. Any extra cost or damage to the County resulting from such default(s) shall be deducted from any money due or coming due to the Contractor. The Contractor shall bear any extra expenses incurred by the County in completing the work, as may be applicable under Exhibit "A", including all increased costs for completing the work, and all damage sustained, or which may be sustained by the County by reason of such default.

If a notice of termination for default has been issued and it is later determined for any reason that the Contractor was not in default, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to the Termination for Public Convenience paragraph hereof.

13. **Termination for Public Convenience:**

The County may terminate the contract in whole or in part whenever the County determines, in its sole discretion, that such termination is in the interests of the County. Whenever the contract is terminated in accordance with this paragraph, the Contractor shall be entitled to payment for actual work performed at unit contract prices for completed items of work. An equitable adjustment in the contract price for partially completed items of work will be made, but such adjustment shall not include provision for loss of anticipated profit on deleted or uncompleted work. Termination of this contract by the County at any time during the term, whether for default or convenience, shall not constitute a breach of contract by the County.

14. **Insurance Coverage:**

Contractor shall provide the following types and amounts of insurance:

1. **Commercial General Liability Insurance** using Insurance Services Office "Commercial General Liability" policy form CG 00 01, with an edition date prior to 2004, or the exact equivalent. Coverage for an additional insured shall not be limited to its vicarious liability. Defense costs must be paid in addition to limits. Limits shall be no less than \$1,000,000 per occurrence for all covered losses and no less than \$2,000,000 general aggregate.
2. **Workers' Compensation** on a state-approved policy form providing statutory benefits as required by law with employer's liability limits no less than \$1,000,000 per accident for all covered losses.
3. **Business Auto Coverage** on ISO Business Auto Coverage form CA 00 01 including owned, non-owned and hired autos, or the exact equivalent. Limits shall be no less than \$1,000,000 per accident, combined single limit. If Contractor owns no vehicles, this requirement may be satisfied by a non-owned auto endorsement to the general liability policy described above. If Contractor or Contractor's employees will use personal autos in any way on this project, Contractor shall obtain evidence of personal auto liability coverage for each such person.

**Excess or Umbrella Liability Insurance** (Over Primary) if used to meet limit requirements, shall provide coverage at least as broad as specified for the underlying coverages. Such policy or policies shall include as insureds those covered by the underlying policies, including additional insureds. Coverage shall be "pay on behalf", with defense costs payable in addition to policy limits. There shall be no cross liability exclusion precluding coverage for claims or suits by one insured against another. Coverage shall be applicable to County for injury to employees of Contractor, subcontractors or others involved in the Work. The scope of coverage provided is subject to approval of County following receipt of proof of insurance as required herein.

Policy or policies must list Lewis County as "primary, non-contributory" additionally insured.

15. **Defense & Indemnity Agreement.**

To the fullest extent permitted by law, the Contractor agrees to indemnify, defend and hold the County and its departments, elected and appointed officials, agents, and volunteers, harmless from and against any and

all claims, damages, losses and expenses, including but not limited to court costs, attorney's fees and alternative dispute resolution costs which 1) are caused in whole or in part by any act or omission, negligent or otherwise, of the Contractor, its employees, agents or volunteers, and/or Contractor's subcontractors and their employees, agents or volunteers; or 2) are directly or indirectly arising out of, resulting from or in connection with performance of this Agreement; or 3) are based upon the Contractor's or its subcontractors' use of, presence upon or proximity to the property of the County. Contractor's indemnity obligations shall extend to, but shall not be limited to, claims for any personal injury, for any bodily injury, sickness, disease or death and for any damage to or destruction of any property (including the loss of use resulting therefrom).

This indemnification obligation of the Contractor shall not apply if the claim, damage, loss or expense is caused by the sole negligence of the County. In the event of the concurrent negligence of the Contractor, its subcontractors, employees or agents, and the County, its employees or agents, this indemnification obligation of the Contractor shall be valid and enforceable only to the extent of the negligence of the Contractor, its subcontractors, employees and agents. This indemnification obligation shall not be limited in any way by the Washington State Industrial Insurance Act, RCW Title 51, or by application of any other workmen's compensation act, disability benefit act or other employee benefit act, and the Contractor hereby expressly waives any immunity afforded by such acts. The foregoing indemnification obligations of the Contractor are a material inducement to County to enter into this Agreement, are reflected in the Contractor's compensation, and have been mutually negotiated by the Parties.

16. **Participation by County – Right to participate; Survival of Contractor's Indemnity Obligations; Indemnity for Subcontractors.**

The County reserves the right, but not the obligation, to participate in the defense of any claim, damages, losses or expenses and any such participation shall not constitute a waiver of Contractor's indemnity obligations under this Agreement.

The Contractor agrees all Contractor's indemnity obligations shall survive the completion, expiration or termination of this Agreement.

In the event the Contractor enters into subcontracts to the extent allowed under this Agreement, the Contractor shall include as a requirement in each such contract that Contractor's subcontractors shall indemnify the County on a basis equal to or exceeding Contractor's indemnity obligations to the County.

17. **Venue and Choice of Law:**

In the event that any litigation should arise concerning the construction or interpretation of any of the terms of this Agreement, the venue of such action of litigation shall be in the courts of the State of Washington in and for the County of Lewis. This Agreement shall be governed by the law of the State of Washington.

18. **Withholding Payment:**

In the event the Contractor has failed to perform any substantial obligation to be performed by the Contractor under this Agreement and said failure has not been cured within the times set forth in this Agreement, then the County may, upon written notice, withhold all monies due and payable to Contractor, without penalty, until such failure to perform is cured or otherwise adjudicated.

19. **Payment and Performance Bond**

Payment and performance bonds for 100% of the Contract Sum, including all Change Orders and state sales tax, shall be furnished for the Work, and shall be in a form acceptable to the Owner. No payment or performance bond is required if the Contract Sum is \$35,000 or less and Contractor agrees that Owner may, in lieu of the bond, retain 50% of the Contract Sum for the period allowed by RCW 39.08.010.

20

**Future Non-Allocation of Funds:**

If sufficient funds are not appropriated or allocated for payment under this contract for any future fiscal period, the County will not be obligated to make payments for services or amounts incurred after the end of the current fiscal period. No penalty or expense shall accrue to the County in the event this provision applies.

21.

**Contractor Commitments, Warranties and Representations:**

Any written commitment received from the Contractor concerning this Agreement shall be binding upon the Contractor, unless otherwise specifically provided herein with reference to this paragraph. Failure of the Contractor to fulfill such a commitment shall render the Contractor liable for damages to the County. A commitment includes, but is not limited to any representation made prior to execution of this Agreement, whether or not incorporated elsewhere herein by reference, as to performance of services or equipment, p6ces or options for future acquisition to remain in effect for a fixed period, or warranties.

22.

**Patent/Copyright Infringement:**

Contractor will defend and indemnify the County from any claimed action, cause or demand brought against the County, to the extent such action is based on the claim that information supplied by the Contractor infringes any patent or copyright. The Contractor will pay those costs and damages attributable to any such claims that are finally awarded against the County in any action. Such defense and payments are conditioned upon the following:

- a. That Contractor shall be notified promptly in writing by County of any notice of such claim.
- b. Contractor shall have the right, hereunder, at its option and expense, to obtain for the County the right to continue using the information in the event such claim of infringement is made, provided no reduction in performance or loss results to the County.

23.

**Disputes:**

A. General

Differences between the Contractor and the County, arising under and by virtue of the Contract Documents shall be brought to the attention of the County at the earliest possible time in order that such matters may be settled or other appropriate action promptly taken. Except for such objections as are made of record in the manner hereinafter specified and within the time limits stated, the records, orders, rulings, instructions, and decisions of the Contracting Officer, shall be final and conclusive.

B. Notice of Potential Claims

The Contractor shall not be entitled to additional compensation which otherwise may be payable, or to extension of time for (1) any act or failure to act by the Contracting Officer or the County, or (2) the happening of any event or occurrence, unless the Contractor has given the County a written Notice of Potential Claim within 10 days of the commencement of the act, failure, or event giving rise to the claim, and before final payment by the County. The written Notice of Potential Claim shall set forth the reasons for which the Contractor believes additional compensation or extension of time is due, the nature of the cost involved, and insofar as possible, the amount of the potential claim. Contractor shall keep full and complete daily records of the Work performed, Labor and material used, and all costs and additional time claimed to be additional.

C. Detailed Claim

The Contractor is not entitled to claim any such additional compensation, or extension of time, unless within 30 days of the accomplishment of the portion of the work from which the claim arose, and before final payment by the County, the Contractor has given the County a detailed written statement of each element of cost or other compensation requested and of all elements of

additional time required, and copies of any supporting documents evidencing the amount or the extension of time claimed to be due.

24. **Ownership of Items Produced:**

All writings, programs, data, public records or other materials prepared by the Contractor and/or its consultants or subcontractors, in connection with the performance of this Agreement shall be the sole and absolute property of the County.

25. **Confidentiality:**

In the event that the Contractor comes in contact with or obtains knowledge of confidential information, the Contractor shall maintain the confidentiality of all obtained information provided by the County or acquired by the Contractor in performance of this Agreement, except upon the prior written consent of the Lewis County Prosecuting Attorney or an order entered by a court after having acquired jurisdiction over the County. Contractor shall immediately give to the County notice of any judicial proceeding seeking disclosure of such information. Contractor shall indemnify and hold harmless the County, its officials, agents or employees from all loss or expense, including, but not limited to settlements, judgments, setoffs, attorneys' fees and costs resulting from Contractor's breach of this provision.

26. **Notice:**

Except as set forth elsewhere in the Agreement, for all purposes under this Agreement, except service of process, notice shall be given by the Contractor to the Contract Manager for whom services are rendered, to wit: Steve Wohld, Chief of Internal Services, 351 NW North Street, Chehalis, Washington 98532-1900. Notice to the Contractor for all purposes under this Agreement shall be given to the address reflected above. Notice may be given by delivery or by depositing in the US Mail, first class, postage prepaid.

27. **Severability:**

If any term or condition of this contract or the application thereof to any person(s) or circumstances is held invalid, such invalidity shall not affect other terms, conditions or applications which can be given effect without the invalid term, condition or application. To this end, the terms and conditions of this contract are declared severable.

28. **Waiver:**

Waiver of any breach or condition of this contract shall not be deemed a waiver of any prior or subsequent breach. No term or condition of this contract shall be held to be waived, modified or deleted except by an instrument, in writing, signed by the parties hereto.

29. **Survival:**

The provisions of this Agreement which by their nature are reasonably intended to survive the expiration of this Agreement shall so survive, including paragraphs 5, 10, 11, 15, 16, 17, 18, 21, 22, 23, 24, 25, 26, 27, 29, and 30, notwithstanding the termination or invalidity of any other portion of this Agreement for any reason.

30. **Entire Agreement:**

This written contract, including all special provisions and attachments, represents the entire Agreement between the parties and supersedes any prior oral statements, discussions or understandings between the parties.

## SPECIAL CONDITIONS

### A. Definitions

The COUNTY is the recipient of CONTRACTOR'S services, and at all times acts through its Board of County Commissioners. The Contracting Officer of the COUNTY will be the Director of the Lewis County Chief of Internal Services, or his designee.

### Contractor Registration

The CONTRACTOR agrees and covenants to furnish unto the COUNTY proper evidence that the CONTRACTOR has fully complied with the State Licensing Law.

CONTRACTOR shall include his contractor's license number in the space provided on the front page of this Agreement.

### C. Non-Discrimination (Lewis County Funds)

The CONTRACTOR should be aware that public funds are being used to assist in this project. During the performance of this contract, the CONTRACTOR agrees as follows:

1. The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this non-discrimination clause.
2. The CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.
3. The CONTRACTOR will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, notice to be provided by the agency contracting officer, advising the labor union or worker's representative of the contractor's commitments under Section 202 or Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in a conspicuous place available to employees and applicants for employment.
4. The CONTRACTOR will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor.
5. The CONTRACTOR will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books and records for purposes of investigation to ascertain compliance with such rules, regulations and orders
6. In the event of the CONTRACTOR'S non-compliance with the non-discrimination clauses of this contract or with any such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contract may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may

be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.

7. The CONTRACTOR will include the provisions of Paragraphs (1) through (7) in every sub-contract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each sub-contract or vendor. The CONTRACTOR will take such action with respect to any sub-contract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for non-compliance: Provided, however, that in the event the CONTRACTOR becomes involved in, or is threatened with litigation with a sub-contractor or vendor as a result of such direction by the contracting agency, the CONTRACTOR may request the United States to enter into such litigation to protect the interest of the United States.

D. Original Specifications

It is hereby expressly agreed by and between the parties involved that in any matter, dispute, suit, or proceedings arising or in any way growing out of this contract in which it may be necessary to introduce into evidence the original of such specifications, that a printed copy thereof may be used in lieu thereof with like force and effect as though the original was produced.

E. Eight Hour Law and Payment for Labor

The CONTRACTOR agrees to comply with RCW chapter 49.28 providing that no laborer, workman or mechanic in the employ of the CONTRACTOR, sub-contractor, or other person doing or contracting to do the whole or any part of the work contemplated by this contract, shall be permitted or required to work more than eight (8) hours in any one calendar day, provided that, in cases of extraordinary emergency, such danger to life or property, the hours of work may be extended, but in such cases the rate of pay for time employed in excess of eight (8) hours of each calendar day shall not be less than one and one-half times the rate allowed for this same amount of time during eight (8) hours' service. Any work necessary to be performed after regular working hours, or Sunday or legal holidays shall be performed without additional expense to the COUNTY.

Notwithstanding the above provisions, a CONTRACTOR may enter into an agreement approved by the employees in which the employees may work up to ten (10) hours in a calendar day for not more than four (4) calendar days in a week.

CONTRACTOR further agrees that said contract is terminable in case the CONTRACTOR violates the provisions of such act.

The CONTRACTOR, and sub-contractors shall further verify that:

1. Contractor had not employed or retained any company or person (other than a full time bona fide employee working solely for the offeror) to solicit or receive this contract; and
2. Contractor has not paid or agreed to pay any company or person (other than a full-time bona fide employee working solely for the offeror) any fee, commission, percentage, or brokerage fee contingent upon or resulting from the award of this contract; and
3. Contractor has not been asked or otherwise coerced, whether expressed or implied, into contributing funds, for any purpose as a condition to doing business with the COUNTY.

It is further agreed that in case any dispute arises as to what are the prevailing wages for the work of a similar nature and such dispute cannot be adjusted by the parties involved, the matter shall be referred for arbitration to the Director of the Department of Labor & Industries of the State and his decision therein shall be final, binding, and conclusive on all parties.

- F. To the extent applicable, the parties agree that this agreement and CONTRACTOR'S work does not create or imply a license agreement for the use of software, code, or a computer program. CONTRACTOR agrees that COUNTY shall have the sole and exclusive ownership of all rights, title, and interest in all software, written code, computer programs created or written by CONTRACTOR and that COUNTY has the right of unlimited use of the software, code and programs, including reproduction, modification and sale. CONTRACTOR denies any proprietary rights, including copyrights, trademarks, trade secrets, or intellectual property rights, to any software, code or program.
- G. To the extent applicable, Contractor warrants that the computer code, software, or computer program installed by CONTRACTOR is not patented or copyrighted. CONTRACTOR will defend and indemnify the COUNTY from any claim, cause or demand brought against the COUNTY based upon copyright or patent of the software, computer code, or computer program installed by CONTRACTOR.

# 5.

## Notice Prevailing Wage Requirement

This project has been determined to be “Public Works” as defined by RCW 39.04 and WAC 296-127 and is subject to Washington State Prevailing Wage Laws. Current Prevailing Wage Rates for work performed in Lewis County can be found at <https://secure.lni.wa.gov/wagelookup/> These rates may not apply to work performed outside Lewis County.

In addition, successful Contractor may be required to produce Certified Payroll Records upon request.

6.

# PERFORMANCE BOND

**PERFORMANCE BOND FOR  
LEWIS COUNTY, WASHINGTON**

**Bond No.** \_\_\_\_\_

WE, \_\_\_\_\_ d/b/a \_\_\_\_\_ (Insert legal name of Contractor)  
(Insert trade name of Contractor, if any)

(hereinafter "Principal"), and \_\_\_\_\_ (hereinafter "Surety"), are held and firmly bound unto **LEWIS COUNTY, WASHINGTON** (hereinafter "County"), as Oblige, in an amount (in lawful money of the United States of America) equal to the total compensation and expense reimbursement payable to Principal for satisfactory completion of Principal's work under Contract No. \_\_\_\_\_ between Principal and County, which total is *initially* \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), for the payment of which sum Principal and Surety bind themselves, their executors, administrators, legal representatives, successors and assigns, jointly and severally, firmly by these presents.. Said contract (hereinafter referred to as "the Contract") is for \_\_\_\_\_ and is made a part hereof by this reference. The Contract includes the original agreement as well as all documents attached thereto or made a part thereof and amendments, change orders, and any other document modifying, adding to or deleting from said Contract any portion thereof.

This Bond is executed in accordance with the laws of the State of Washington, and is subject to all provisions thereof and the ordinances of County insofar as they are not in conflict therewith, and is entered into for the use and benefit of County, and all laborers, mechanics, subcontractors, and materialmen, and all persons who supply such person or persons, or subcontractors, with provisions or supplies for the carrying on of the work covered by Contract No. \_\_\_\_\_ between the below-named Contractor and County for \_\_\_\_\_, a copy of which Contract, by this reference is made a part hereof and is hereinafter referred to as "the Contract." (The Contract as defined herein includes the aforesaid agreement together with all of the Contract documents including addenda, exhibits, attachments, modifications, alterations, and additions thereto, deletions therefrom, amendments and any other document or provision attached to or incorporated into the Contract)

**THE CONDITION OF THIS OBLIGATION** is such that if Contractor shall promptly and faithfully performs the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

**THE PARTIES FURTHER ACKNOWLEDGE & AGREE AS FOLLOWS:**

- (1) Surety hereby consents to, and waives notice of, any alteration, change order, or other modification of the Contract and any extension of time made by County, except that any single or cumulative change order amounting to more than twenty-five percent (25%) of the penal sum of this bond shall require Surety's written consent.
- (2) Surety recognizes that the Contract includes provisions for additions, deletions, and modifications to the work or Contract Time and the amounts payable to Contractor. Subject to the limitations contained in paragraph (1) above, no such change or any combination thereof, shall void or impair Surety's obligation hereunder.
- (3) Surety shall indemnify, defend and protect County against any claim of direct or indirect loss resulting from the failure:
  - (a) Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform the Contract, or
  - (b) Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work.
- (4) Whenever County has declared Contractor to be in default and County has given Surety written notice of such declaration, Surety shall promptly (in no event more than thirty [30] days following receipt of such notice), specify, in written notice to County, which of the following actions Surety intends to take to remedy such default, and thereafter shall:
  - (a) Remedy the default within fifteen (15) days after its notice to County, as stated in such notice; or
  - (b) Assume within fifteen (15) days following its notice to County, full responsibility for the completion of the Contract in accordance with all of its provisions, as stated in such notice, and become entitled to payment of the balance of the Contract sum as provided in the Contract; or
  - (c) Pay County upon completion of the Contract, in cash, the cost of completion together with all other reasonable costs and expenses incurred by County as a result of Contractor's default, including but not limited to those incurred by County to mitigate its losses, which may include but are not limited to attorneys' fees and the cost of efforts to complete the work prior to Surety's exercising any option available to it under this Bond; or
  - (d) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon a determination by County and Surety jointly of the lowest responsible bidder, arrange for one or more agreements between such bidder and County, and make available as work progresses (even though there is a default or a succession of defaults under such

agreement(s) for completion arranged for under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract price, but not exceeding, including other costs and damages for which Surety may be liable hereunder, the penal sum of this Bond. The term "balance of the Contract price," as used in this paragraph, shall mean the total amount payable by County to Contractor under the Contract, less the amount properly paid by County to Contractor.

(5) If County commences suit and obtains judgment against Surety for recovery hereunder, then Surety, in addition to such judgment, shall pay all costs and attorneys' fees incurred by County in enforcement of County's rights hereunder. The venue for any action arising out of or in connection with this bond shall be in Lewis County, Washington.

(6) No right or action shall accrue on this Bond to or for the use of any person or corporation other than Lewis County, except as herein provided.

(7) No rider, amendment or other document modifies this Bond except as follows, which by this reference is incorporated herein:

**SURETY'S QUALIFICATIONS:** Every Surety named on this bond must appear on the United States Treasury Department's most current list (Circular 570 as amended or superseded) and be authorized by the Washington State Insurance Commissioner to transact business as a surety in the State of Washington. In addition, the Surety must have a current rating of at least A-VII in A. M. Best's Key Rating Guide.

**INSTRUCTIONS FOR SIGNATURES:** This bond must be signed by the president or a vice-president of a corporation; the managing general partner of a partnership; managing joint venturer of a joint venture; manager of a limited liability company or, if no manager has been designated, a member of such LLC; a general partner of a limited liability partnership; or the owner(s) of a sole proprietorship. If the bond is signed by any other representative, the Principal must attach currently-dated, written proof of that signer's authority to bind the Principal, identifying and quoting the provision in the corporate articles of incorporation, bylaws, Board resolution, partnership agreement, certificate of formation, or other document authorizing delegation of signature authority to such signer, and confirmation acceptable to the County that such delegation was in effect on the date the bond was signed. **A NOTARY PUBLIC MUST ACKNOWLEDGE EACH SIGNATURE BELOW.**

**FOR THE SURETY:**

By \_\_\_\_\_  
(Signature of Attorney-in-Fact)

\_\_\_\_\_  
(Type or print name of Attorney-in-Fact)

\_\_\_\_\_  
(Type or print telephone number for Attorney-in-Fact)

**FOR THE PRINCIPAL:**

By: \_\_\_\_\_  
(Signature of authorized signer for Contractor)

\_\_\_\_\_  
(Type or print name of signer for Contractor)

\_\_\_\_\_  
(Type or print title of signer for Contractor)

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) ss:

**ACKNOWLEDGMENT FOR CONTRACTOR**

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, before me a notary public in and for the State of \_\_\_\_\_, duly commissioned and sworn, personally appeared \_\_\_\_\_, the person described in and who executed the foregoing bond, and acknowledged to me that \_\_\_\_\_ signed and sealed said bond as the free and voluntary act and deed of the Contractor so identified in the foregoing bond for the uses and purposes therein mentioned, and on oath stated that \_\_\_\_\_ is authorized to execute said bond for the Contractor named therein. WITNESS my hand and official seal hereto affixed the day and year in this certificate first above written.

\_\_\_\_\_  
(Signature of Notary Public)

\_\_\_\_\_  
(Print or type name of Notary Public)

Notary Public in and for the State of \_\_\_\_\_ residing at \_\_\_\_\_  
My commission expires \_\_\_\_\_.

**SEAL →**

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) ss:

**ACKNOWLEDGMENT FOR SURETY**

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, before me a notary public in and for the State of \_\_\_\_\_, duly commissioned and sworn, personally appeared \_\_\_\_\_, Attorney-in-Fact for the Surety that executed the foregoing bond, and acknowledged said bond to be the free and voluntary act and deed of the Surety for the uses and purposes therein mentioned, and on oath stated that \_\_\_\_\_ is authorized to execute said bond on behalf of the Surety, and that the seal affixed on said bond or the annexed Power of Attorney is the corporate seal of said Surety. WITNESS my hand and official seal hereto affixed the day and year in this certificate first above written.

\_\_\_\_\_  
(Signature of Notary Public)

\_\_\_\_\_  
(Print or type name of Notary Public)

Notary Public in and for the State of \_\_\_\_\_ residing at \_\_\_\_\_  
My commission expires \_\_\_\_\_.

**SEAL →**

7.

CERTIFICATE  
OF  
INSURANCE

## EXHIBIT 1 -- INSURANCE COVERAGE REQUIREMENTS

✓ INDICATES WHAT TYPE OF INSURANCE IS REQUIRED

<u>TYPE OF INSURANCE</u>		<u>LIMITS OF LIABILITY</u>	
		Each Occurrence	Aggregate
<b>GENERAL LIABILITY</b>			
✓ Comprehensive Form	Bodily Injury	\$1,000,000	\$2,000,000
✓ Premises - Operations	Property Damage	\$1,000,000	\$2,000,000
Explosion & Collapse Hazard			
Underground Hazard			
<u>OR</u>			
✓ Products/Completed Operations Hazard			
✓ Contractual Insurance	Bodily Injury and Property Damage Combined Single Limit	\$1,000,000	\$2,000,000
✓ Broad Form Property Damage, Incl. Care, Custody Control			
✓ Independent Contractors			
✓ Personal Injury	Personal Injury	\$1,000,000	\$2,000,000
<b>AUTOMOBILE LIABILITY</b>			
✓ Comprehensive Form	Bodily Injury (Each Person)	\$1,000,000	
✓ Owned	Bodily Injury (Each Accident)	\$1,000,000	
✓ Hired	Property Damage OR	\$1,000,000	
✓ Non-Owned	Bodily Injury & Property Damage Combined Single Limit	\$1,000,000	
<b>EXCESS LIABILITY</b> (Over and above automobile and general liability)			
Umbrella Form	Bodily Injury/Property Damage Combined	\$1,000,000	\$1,000,000
<b>OR</b>			
✓ Excess Liability Gap Layer		\$500,000	\$500,000
✓ <b>WORKER'S COMPENSATION and</b>		Statutory	
✓ <b>EMPLOYER LIABILITY</b>		\$1,000,000	
<b>OTHER</b>			
Builder's All Risk	Amount of Contract Price	\$ _____	
Errors & Omissions (Professional Liability)		\$500,000	

Please indicate: Claims-Made Form: \_\_\_\_\_, Occurrence Form: \_\_\_\_\_,  
Extending Reporting Provisions Avail. \_\_\_\_\_

**The Contractor's insurance company must provide a certificate of insurance on the Lewis County form showing the above required coverage and modified to conform to the following endorsement. The following endorsement must also be signed by the insurer.**



INSURED (Legal name and business address)	CERTIFICATE HOLDER:		CONTRACT NUMBER
	LEWIS COUNTY, WASHINGTON DEPT. OF CENTRAL SERVICES		
	LEWIS COUNTY HISTORICAL COURTHOUSE		DATE ISSUED:
	351 N. W. NORTH STREET CHEHALIS, WASHINGTON 98532		

PROJECT DESCRIPTION / LOCATIONS / VEHICLES / RESTRICTIONS / SPECIAL ITEMS:

This is to certify that policies of Insurance listed below have been issued to the Insured named above for the policy period indicated.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	Date Policy Effective (MM/DD/YY)	Date Policy Expires (MM/DD/YY)	ALL LIMITS IN THOUSANDS	
	GENERAL LIABILITY  <input type="checkbox"/> Commercial General Liability <input type="checkbox"/> Claims Made <input type="checkbox"/> Occurrence <input type="checkbox"/> Owner's & Contractors Protection  Deductible \$				<b>General Aggregate</b>	\$
					Products Comp/Ops Aggregate	\$
					Personal & Advertising Injury	\$
					Each Occurrence	\$
					Fire Damage (Any One Fire)	\$
					Medical Expense (Any One Person)	\$
	AUTOMOBILE LIABILITY  <input type="checkbox"/> Any Auto <input type="checkbox"/> All Owned Autos <input type="checkbox"/> Scheduled Autos <input type="checkbox"/> Hired Autos <input type="checkbox"/> Non-Owned Autos <input type="checkbox"/> Garage Liability Deductible \$				CSL	\$
					Bodily Injury (per person)	\$
					Bodily Injury (per accident)	\$
					Property Damage	\$
	EXCESS LIABILITY  <input type="checkbox"/> Other Than Umbrella Form				Each Occurrence	Aggregate
					\$	\$
	WORKERS COMPENSATION AND EMPLOYER'S LIABILITY				STATUTORY	
					\$ (Each Accident)	
					\$ (Disease Policy Limit)	
					\$ (Disease-Each Employee)	
	OTHER					

ADDITIONAL PROVISIONS

LEWIS COUNTY is included as "primary, non-contributory" additionally insured as related to the above-mentioned project.

Should any of the above described policies be cancelled before the expiration date thereof, the issuing Company must deliver or mail not less than 45 days written notice to the above Certificate Holder, per RCW 48.18.290

COMPANIES AFFORDING COVERAGE		ISSUING COMPANY, AGENT OR REPRESENTATIVE	
NOTE: Attach a separate sheet to this certificate giving all the company names and their percentage of coverage, if clarification is needed.		NAME:	
		ADDRESS:	
Company Letter	A		
	B		
	C	Authorized Signature	
	D	Title	
	E	Signature Date	
		Signature Name	
		Telephone No.	

8.

**NON-COLLUSION  
AFFIDAVIT**

## NON-COLLUSION AFFIDAVIT

STATE OF WASHINGTON

COUNTY OF Lewis County

I, the undersigned, being duly sworn, deposes and says that the person, firm, association, co-partnership or corporation herein named, has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in the preparation and submission of a proposal to LEWIS COUNTY for consideration in the award of a contract on the improvement described as follows:

### **Chehalis Ridge Radio Site Project #31-1617**

I further, that this bid is not a sham or collusion, and in no respect or degree is the bid made in the interest or on behalf of any person, firm, or corporation not named in the Proposal containing such bid.

(CORPORATE SEAL) \_\_\_\_\_  
Name of Firm

\_\_\_\_\_  
Signature of Authorized Member

WORN to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL) \_\_\_\_\_  
Notary Public in and for the State of Washington

Residing at: \_\_\_\_\_

My commission expires: \_\_\_\_\_

9.

**BID FORM**

Project Name: Chehalis Ridge Radio Site Project Project No.: 31-1617

Name of Firm: \_\_\_\_\_

LEWIS COUNTY  
DEPARTMENT OF CENTRAL SERVICES  
FACILITIES DIVISION  
351 NW NORTH ST, MS:PSD05  
CHEHALIS, WA 98532

**BID PROPOSAL**

In compliance with the contract documents, the following bid proposal is submitted:

1) BASE BID (*Including Trench Excavation Safety Provisions*)

\_\_\_\_\_ \$ \_\_\_\_\_  
(Please print dollar amount in space above) (do not include Washington State Sales Tax)

TRENCH EXCAVATION SAFETY PROVISIONS

\$ \_\_\_\_\_

(Included also in Base Bid)

If the bid amount contains any work which requires trenching exceeding a depth of four feet, all costs for trench safety shall be included in the Base Bid **and indicated above** for adequate trench safety systems in compliance with Chapter 39.04 RCW, 49.17 RCW and WAC 296-155-650. Bidder must include a lump sum dollar amount in blank above (even if the value is \$0.00) to be responsive.

2) BID ALTERNATES (*Specify whether additive or deductive*)

(1) _____	\$ _____
(2) _____	\$ _____
(3) _____	\$ _____
(4) _____	\$ _____
(5) _____	\$ _____
(6) _____	\$ _____

**Do not include** Washington State Sales Tax **in alternate amounts.**

The Owner reserves the right to accept or reject any or all bid prices within sixty (60) days of the bid date.

Time for Completion

The undersigned hereby agrees to complete all the work under the Base Bid (and accepted alternates) within \_\_\_\_\_ calendar days after the date of Notice to Proceed.

Project Name: Chehalis Ridge Radio Site Project Project No.: 31-1617

Name of Firm: \_\_\_\_\_

UNIT PRICES (Where applicable) (Do not include Washington State Sales Tax)

Unit	Estimated Quantities	Additive	Deductive	Unit	Per
Item No.	Description	Unit Price	Price		Measurement
1.		\$	\$		
2.		\$	\$		
3.		\$	\$		
4.		\$	\$		
5.		\$	\$		

The above unit prices shall be for any additive and deductive work within 15% of the above estimated quantities. The unit price shall include full compensation for the cost of labor, materials, equipment, overhead, profit and any additional costs associated with the unit bid.

The Owner reserves the right to accept or reject any or all unit prices within sixty (60) days of the bid date.

### Subcontractor Listing – RCW 39.30.060

If the base bid and the sum of the additive alternates is one million dollars or more the bidder shall provide names of the subcontractors with whom the bidder will **directly** subcontract for performance of the following work. If the bidder intends to perform the work, the bidder must enter its name for that category of work.

The bidder shall not list more than one subcontractor for each category of work identified UNLESS subcontractors vary with bid alternates, in which case the bidder must indicate which subcontractor will be used for which alternate.

**Failure of the bidder to submit the NAMES of such subcontractors or to name itself to perform such work shall render the bidder's bid nonresponsive and, therefore, void.**

Designated Work	Firm Name
1. Heating Ventilation Air Conditioning (HVAC)	_____
1.a. HVAC Alternate Bid #____ (if applicable)	_____
2. Plumbing	_____
2.a. Plumbing Alternate Bid #____ (if applicable)	_____
3. Electrical	_____
3.a. Electrical Alternate Bid #____ (if applicable)	_____

Bidder may attach a separate sheet for additional alternate bid subcontractors.

Project Name: Chehalis Ridge Radio Site Project Project No.: 31-1617

Name of Firm: \_\_\_\_\_

### **Apprenticeship Requirements**

The apprentice labor hours required for this project are 15% of the total labor hours. The undersigned agrees to utilize this level of apprentice participation. Voluntary workforce diversity goals for this apprentice participation are identified in the Instructions To Bidders and Supplemental Conditions.

### Liquidated Damages

The undersigned agrees to pay the Owner as liquidated damages the sum of \$ 50.00 for each consecutive calendar day that is in default after the Contract Time. Liquidated damages shall be deducted from the contract by change order.

### Receipt of Addenda

Receipt of the following addenda is acknowledged:

Addendum No. ____	Addendum No. ____
Addendum No. ____	Addendum No. ____
Addendum No. ____	Addendum No. ____

Name of Firm \_\_\_\_\_

NOTE: If bidder is a corporation, write State of Incorporation; if a partnership, give full names and addresses of all parties below.

Signed by \_\_\_\_\_, Official Capacity \_\_\_\_

Print Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Date \_\_\_\_\_ Telephone \_\_\_\_\_ FAX \_\_\_\_\_

State of Washington Contractor's License No. \_\_\_\_\_

Federal Tax ID # \_\_\_\_\_ e-mail address: \_\_\_\_\_



1 Fairholm Avenue  
Peoria, IL 61603 USA  
Phone 309-566-3000  
FAX 309-566-3079

April 26, 2019

Cushing Civil Engineers  
Attn: Kenny McManaway  
107 SE Washington Street  
Suite 265  
Portland, OR. 97214

Reference: 80' Direct Embed Tapered Steel Pole  
Chehalis Ridge, Lewis County, WA.

File Number: 230062

<u>Copies</u>	<u>Drawing Number</u>	<u>Description</u>
1	230062-01-D1	Design Drawing Sealed for the State of Washington

Email Address: Kenny@cushingcivilengineers.com

Phone: 503 387 5331

Sincerely,

Danny Otten

crp



1 Fairholm Avenue  
Peoria, IL 61603 USA  
Phone: (309)-566-3000  
Fax: (309)-566-3079

**DATE:** APRIL 26, 2019

**PURCHASER:** CUSHING CIVIL ENGINEERS

**PROJECT:** 80 FT DIRECT EMBED TAPERED STEEL POLE  
CHEHALIS RIDGE, WASHINGTON

**FILE NUMBER:** 230062

**DRAWINGS:** 230062-01-D1

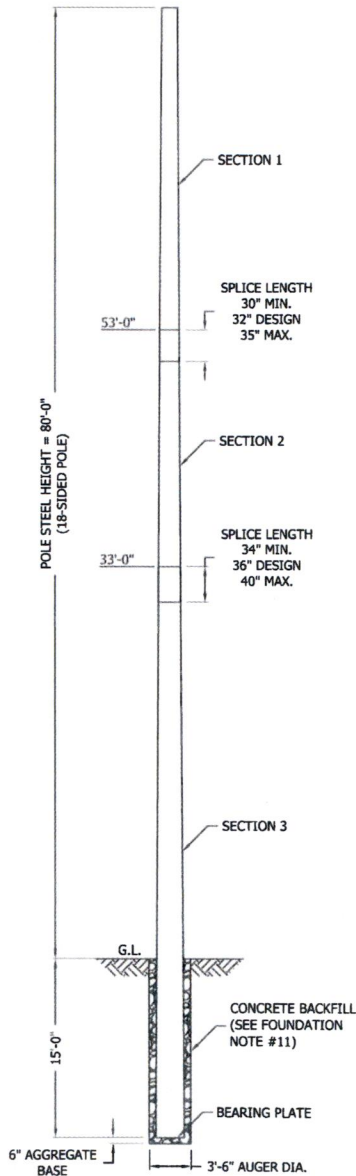
I CERTIFY THAT THE REFERENCED DRAWINGS WERE PREPARED UNDER MY SUPERVISION IN ACCORDANCE WITH THE DESIGN AND LOADING CRITERIA SPECIFIED BY THE PURCHASER AND THAT I AM A REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WASHINGTON.

CERTIFIED BY: \_\_\_\_\_

DATE: \_\_\_\_\_



*Products for a Growing World of Technology®*



POLE DESIGN LOADING		
DESIGN WIND LOAD PER ANSI/TIA-222-G USING THE FOLLOWING DESIGN CRITERIA:		
ASCE 7-16 FACTORED WIND SPEED (NO ICE): 103 MPH		
BASIC WIND SPEED (WITH ICE): 30 MPH PER ASCE 7-16		
DESIGN ICE THICKNESS: 0.5" PER ASCE 7-16		
EXPOSURE CATEGORY: C		
STRUCTURE CLASSIFICATION: III		
TOPOGRAPHIC CATEGORY: 5		
CREST HEIGHT: 298 FT		
DISTANCE FROM CREST: 82 FT		
Lh: 702 FT		
EARTHQUAKE SPECTRAL RESPONSE ACCELERATION, $S_s$ : 1.184 ; $S_1$ = 0.487		
THIS POLE IS DESIGNED TO SUPPORT THE FOLLOWING LOADS:		
ELEVATION (FT)	ANTENNA TYPE	LINE SIZE (NOM)
TOP	BEACON & LIGHTNING ROD	(1) 1/2"
79	(3) DB224 ON (3) 3 FT SIDE ARMS	(3) 1/2"
75	(2) 4 FT HP DISHES [AZ. 0 & 180 DEG] [6 GHZ]	(2) 1/2"
50	(3) DB224 ON (3) 3 FT SIDE ARMS	(3) 1/2"

#### FOUNDATION NOTES:

- FOUNDATION DESIGN HAS BEEN DEVELOPED IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL ENGINEERING PRINCIPLES AND PRACTICES WITHIN THE LIMITS OF THE SUBSURFACE DATA PROVIDED. FOUNDATION DESIGN MODIFICATIONS MAY BE REQUIRED IN THE EVENT THE FOLLOWING DESIGN PARAMETERS ARE NOT APPLICABLE FOR THE SUBSURFACE CONDITIONS ENCOUNTERED.
 

DEPTH (FT)	SOIL TYPE	K (PCF)	$\gamma$ (PCF)	$\phi$ (DEG)	C (KSF)	$\epsilon_{50}$ (IN/IN)
0.0-2.0	SOFT CLAY	5.0	80.0	0.0	0.100	0.035
2.0-5.0	SAND	34.0	103.0	30.0	0.000	0.000
5.0-7.5	SAND	229.0	126.0	37.0	0.000	0.000
7.5-10	SAND	198.0	124.0	36.0	0.000	0.000
10.0-15.0	SAND	236.0	128.0	38.0	0.000	0.000
- WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES, SAFETY REGULATIONS AND UNLESS OTHERWISE NOTED, THE LATEST REVISION OF ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE". PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION.
- FOUNDATION EMBEDMENT IS BASED ON A SOILS REPORT NO. 180178-GEO DATED 3/19/2019 BY BLACK MOUNTAIN CONSULTING, LLC.
- EMBEDMENT DEPTH INDICATED IS BASED ON THE GRADE LINE DESCRIBED IN THE REFERENCED GEOTECHNICAL REPORT. FOUNDATION MODIFICATION MAY BE REQUIRED IN THE EVENT CUT OR FILL OPERATIONS HAVE TAKEN PLACE SUBSEQUENT TO THE GEOTECHNICAL INVESTIGATION.
- FOUNDATION DESIGN ASSUMES LEVEL GRADE AT STRUCTURE SITE.
- FOUNDATION DESIGN ASSUMES THE RECOMMENDATIONS IN THE REFERENCED GEOTECHNICAL REPORT CONCERNING VERIFICATION OF SUBSURFACE CONDITIONS ARE IMPLEMENTED PRIOR TO PLACEMENT OF CONCRETE.
- FOUNDATION INSTALLATION SHALL BE SUPERVISED BY PERSONNEL KNOWLEDGEABLE AND EXPERIENCED WITH THE PROPOSED FOUNDATION TYPE. CONSTRUCTION SHALL BE IN ACCORDANCE WITH GENERALLY ACCEPTED INSTALLATION PRACTICES.
- FOUNDATION DESIGN ASSUMES INSTALLATION PROCEDURES WILL INCORPORATE THE PROCEDURES RECOMMENDED IN THE REFERENCED GEOTECHNICAL REPORT.
- FOUNDATION DESIGN ASSUMES FIELD INSPECTIONS WILL BE PERFORMED TO VERIFY THAT CONSTRUCTION MATERIALS, INSTALLATION METHODS AND ASSUMED DESIGN PARAMETERS ARE ACCEPTABLE BASED ON CONDITIONS EXISTING AT THE SITE.
- LOOSE MATERIAL SHALL BE REMOVED FROM BOTTOM OF EXCAVATION PRIOR TO PLACEMENT OF POLE. SIDES OF EXCAVATION SHALL BE ROUGH AND FREE OF LOOSE CUTTINGS.
- PROPORTIONS OF CONCRETE MATERIALS SHALL BE SUITABLE FOR THE INSTALLATION METHOD UTILIZED AND SHALL RESULT IN DURABLE CONCRETE FOR RESISTANCE TO LOCAL ANTICIPATED AGGRESSIVE ACTIONS. THE DURABILITY REQUIREMENTS OF ACI 318 CHAPTER 4 SHALL BE SATISFIED BASED ON THE CONDITIONS EXPECTED AT SITE. AS A MINIMUM, CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4500 PSI (20.7 MPa) IN 28 DAYS.
- CONCRETE SHALL BE PLACED IN A MANNER THAT WILL PREVENT SEGREGATION OF CONCRETE MATERIALS, INFILTRATION OF WATER OR SOIL AND OTHER OCCURRENCES WHICH MAY DECREASE THE STRENGTH OR DURABILITY OF THE FOUNDATION.

MAXIMUM FACTORED REACTIONS	
DOWNLOAD =	10.5 KIPS
SHEAR =	11.2 KIPS
O.T.M. =	614.1 FT-KIPS

#### GENERAL NOTES:

- ROHN PRODUCTS POLE DESIGNS CONFORM TO ANSI/TIA-222-G UNLESS OTHERWISE SPECIFIED UNDER POLE DESIGN LOADING.
- THE DESIGN LOADING CRITERIA INDICATED HAS BEEN PROVIDED TO ROHN. THE DESIGN LOADING CRITERIA HAS BEEN ASSUMED TO BE BASED ON SITE-SPECIFIC DATA IN ACCORDANCE WITH ANSI/TIA-222-G AND MUST BE VERIFIED BY OTHERS PRIOR TO INSTALLATION.
- ANTENNAS AND LINES LISTED IN POLE DESIGN LOADING TABLE ARE PROVIDED BY OTHERS UNLESS OTHERWISE SPECIFIED.
- STEP BOLTS WITH A SAFETY CLIMB SYSTEM ARE PROVIDED AS A CLIMBING FACILITY FOR THE INSTALLATION OF THE STRUCTURE.
- POLE MEMBER DESIGN DOES NOT INCLUDE STRESSES DUE TO ERECTION SINCE ERECTION EQUIPMENT AND CONDITIONS ARE UNKNOWN. DESIGN ASSUMES COMPETENT AND QUALIFIED PERSONNEL WILL ERECT THE POLE.
- WORK SHALL BE IN ACCORDANCE WITH ANSI/TIA-222-G, "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES".
- STRUCTURAL STEEL SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ANSI/TIA-222-G.
- PURCHASER SHALL VERIFY THE INSTALLATION IS IN CONFORMANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS FOR OBSTRUCTION MARKING AND LIGHTING.
- TOLERANCE ON POLE STEEL HEIGHT IS EQUAL TO PLUS 1% OR MINUS 1/2%.
- DESIGN ASSUMES THAT, AS A MINIMUM, MAINTENANCE AND INSPECTION WILL BE PERFORMED OVER THE LIFE OF THE STRUCTURE IN ACCORDANCE WITH ANSI/TIA-222-G.
- DESIGN ASSUMES ALL TRANSMISSION LINES ARE ROUTED INTERNALLY.
- DESIGN ASSUMES LEVEL GRADE AT POLE SITE.
- POLE SHAFT CONFORMS TO ASTM A572 GRADE 65. POLE BEARING PLATE STEEL CONFORMS TO ASTM A36.

#### SECTION SCHEDULE

SECTION	LENGTH (FT)	DIAMETER		WALL THICK (IN)	Fy (KSI)	WEIGHT (KIPS)
		BOT	TOP			
1	29.67	20.37	16.00	0.1875	65.0	1.144
2	23.00	22.87	19.48	0.1875	65.0	1.037
3	48.00	29.00	21.93	0.2500	65.0	3.473

FOR POLYGONAL POLES, DIAMETER IS MEASURED ACROSS FLATS.

**NOTE:** TABULATED WEIGHTS ARE APPROXIMATE. REFER TO ASSEMBLY DRAWING FOR FINAL WEIGHTS. ALL WEIGHTS SHALL BE VERIFIED PRIOR TO LIFTING.

FILE NO. 230062				
REVISIONS				
REV	DESCRIPTION	DWN	CHK	APP
PO BOX 5999 PEORIA, IL 61601-5999 TOLL FREE 800-727-ROHN				
THIS DRAWING IS THE PROPERTY OF ROHN. IT IS NOT TO BE REPRODUCED, COPIED OR TRACED IN WHOLE OR IN PART WITHOUT OUR WRITTEN CONSENT.				
CUSHING CIVIL ENGINEERS DESIGN PROFILE 80' DIRECT EMBED TAPERED STEEL POLE CHEHALIS RIDGE, WA				
DWN:	CHK'D:	DATE:		
SWG	HA	4/25/2019		
ENG'R:	HA	SHEET #:	1 OF 1	
PRJ. ENG'R:	SWG	PRJ. MANG'R:		
DRAWING NO:	230062-01-D1			REV: 0



TSTower - v 5.8.3 Tower Analysis Program  
(c) 1997-2019 TowerSoft www.TSTower.com



Licensed to: ROHN Products LLC  
Peoria, IL

File: W:\Jobs\2019\230062\230062.out  
Contract: 230062  
Project: 80 FT DEP  
Date and Time: 4/25/2019 3:00:48 PM

Revision: 0  
Site: CHEHALIS RIDGE- WA  
Engineer: SWG

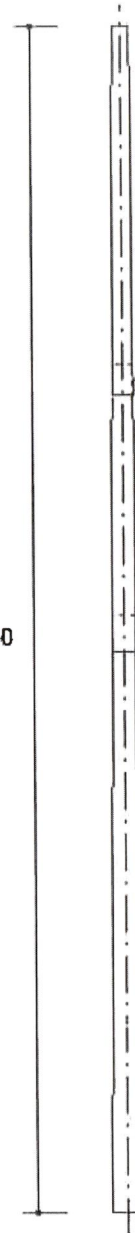
✓ HA

### DESIGN SPECIFICATION

Design Standard: ANSI/TIA-222-G-2005 Add.2  
Ultimate Design Wind Speed (No Ice) = 96.1 (mph)  
Nominal Design Wind Speed (No Ice) = 74.4 (mph)  
Basic Wind Speed (With Ice) = 30.0 (mph)  
Design Ice Thickness = 0.25 (in)  
Structure Class = III  
Exposure Category = C  
Topographic Category = 5

Sct	Length (ft)	Overlap (ft)	Top Dia (in)	Bot Dia (in)	Thick (in)
3	29.67	0.00	16.00	20.29	0.1875
2	23.00	2.67	19.53	22.86	0.1875
1	48.00	3.00	22.05	29.00	0.2500

95.00



### MAXIMUM BASE REACTIONS

Download (Kips)	10.5
Shear (Kips)	11.2
Moment (Kipsft)	614.1



TS Tower - v 5.8.3 Tower Analysis Program  
(c) 1997-2019 TowerSoft www.TSTower.com



Licensed to: ROHN Products LLC  
Peoria, IL

File: W:\Jobs\2019\230062\230062.out  
Contract: 230062  
Project: 80 FT DEP  
Date and Time: 4/25/2019 3:00:48 PM

Revision: 0  
Site: CHEHALIS RIDGE- WA  
Engineer: SWG

#### Section A: PROJECT DATA

Project Title: 80 FT DEP  
Customer Name: CUSHING CIVIL ENGINEERS  
Site: CHEHALIS RIDGE- WA  
Contract No.: 230062  
Revision: 0  
Engineer: SWG  
Date: Apr 25 2019  
Time: 03:00:31 PM

Design Standard: ANSI/TIA-222-G-2005 Addendum 2

#### GENERAL DESIGN CONDITIONS

Start wind direction: 0.00 (Deg)  
End wind direction: 315.00 (Deg)  
Increment wind direction: 45.00 (Deg)  
Elevation above ground: 0.00 (ft)  
Gust Response Factor Gh: 1.10  
Structure class: III  
Exposure category: C  
Topographic category: 5  
Type of Hill: 2-D Ridge  
Height of crest above surrounding terrain: 298.23 (ft)  
Distance from Crest to the tower (x): 82.12 (ft)  
Distance upwind of crest where difference in ground  
elevation is half the hill height (Lh): 702.13 (ft)  
Location of tower on the hill: Downwind  
Material Density: 490.1 (lbs/ft<sup>3</sup>)  
Young's Modulus: 29000.0 (ksi)  
Poisson Ratio: 0.30  
Weight Multiplier: 1.06

WIND ONLY CONDITIONS:  
Ultimate Design Wind Speed (No Ice): 96.06 (mph)  
Nominal Design Wind Speed (No Ice): 74.41 (mph)  
Directionality Factor Kd: 0.95  
Importance Factor I: 1.15  
Wind Load Factor: 1.60  
Dead Load Factor: 1.20

WIND AND ICE CONDITIONS:  
Basic Wind Speed (With Ice): 30.00 (mph)  
Directionality Factor Kd: 0.95  
Wind Load Importance Factor Iw: 1.00  
Ice Thickness Importance Factor Ii: 1.25  
Ice Thickness: 0.25 (in)  
Ice Density: 56.19 (lbs/ft<sup>3</sup>)  
Wind Load Factor: 1.00  
Dead Load Factor: 1.20  
Ice Load Factor: 1.00

WIND ONLY SERVICEABILITY CONDITIONS:  
Serviceability Wind Speed: 60.00 (mph)  
Directionality Factor Kd: 0.85  
Importance Factor I: 1.00  
Wind Load Factor: 1.00  
Dead Load Factor: 1.00

EARTHQUAKE CONDITIONS:  
Site class definition: D  
Spectral response acceleration Ss: 1.184



TSTower - v 5.8.3 Tower Analysis Program  
(c) 1997-2019 TowerSoft www.TSTower.com



Licensed to: ROHN Products LLC  
Peoria, IL

File: W:\Jobs\2019\230062\230062.out  
Contract: 230062  
Project: 80 FT DEP  
Date and Time: 4/25/2019 3:00:48 PM

Revision: 0  
Site: CHEHALIS RIDGE- WA  
Engineer: SWG

Spectral response acceleration S1:	0.487
Acceleration-based site coefficient Fa:	1.026
Velocity-based site coefficient Fv:	1.513
Design spectral response acceleration Sds:	0.810
Design spectral response acceleration Sd1:	0.491
Seismic analysis method:	1
Fundamental frequency of structure f1:	0.808
Total seismic shear Vs (Kips) :	2.90

Analysis performed using: TowerSoft Finite Element Analysis Program



TSTower - v 5.8.3 Tower Analysis Program  
(c) 1997-2019 TowerSoft www.TSTower.com



**Products**  
Licensed to: ROHN Products LLC  
Peoria, IL

File: W:\Jobs\2019\230062\230062.out

Contract: 230062

Project: 80 FT DEP

Date and Time: 4/25/2019 3:00:48 PM

Revision: 0

Site: CHEHALIS RIDGE- WA

Engineer: SWG

#### Section B: STRUCTURE GEOMETRY

Total Height (ft)	Bottom Diameter (in)	Top Diameter (in)	Embed. Depth (ft)							
95.00	29.00	16.00	15.00							
Sect. No	Length (ft)	Overlap (ft)	Bot Dia. (in)	Top Dia. (in)	Thick. (in)	Sides	Joint Type	Yield Stress (ksi)	Mass (lbs)	Calculated Taper (in/ft)
3	29.67	0.00	20.29	16.00	0.1875	18-sided	Telescopic	65.0	1143.8	0.14474
2	23.00	2.67	22.86	19.53	0.1875	18-sided	Telescopic	65.0	1037.4	0.14474
1	48.00	3.00	29.00	22.05	0.2500	18-sided	Embedded	65.0	3472.7	0.14474
Total Mass:									5653.9	



TSTower - v 5.8.3 Tower Analysis Program  
(c) 1997-2019 TowerSoft www.TSTower.com



Licensed to: ROHN Products LLC  
Peoria, IL

File: W:\Jobs\2019\230062\230062.out  
Contract: 230062  
Project: 80 FT DEP  
Date and Time: 4/25/2019 3:00:48 PM

Revision: 0  
Site: CHEHALIS RIDGE- WA  
Engineer: SWG

### Section C: ANTENNA DATA

Structure Azimuth from North: 0

#### ANTENNAS

Ant No.	Elev. (ft)	Antenna (#) Type	Ant. Azim.	Mount. Radius (ft)	Mount Type	Mount Azim.	Tx Line (#)Type	Mounting Pipe Size (in)	Pipe Length (ft)	Full Shielded	Ka
1	75.00	(1) HP4	0	1.00		0					1.00
		Vert. Offset 0.00 (ft)									
2	75.00	(1) HP4	180	1.00		180					1.00
		Vert. Offset 0.00 (ft)									

#### ANTENNA AND MOUNT WIND AREAS AND WEIGHTS

Ant No.	Antenna/Mount	Frontal Bare Area (ft) <sup>2</sup>	Lateral Bare Area (ft) <sup>2</sup>	Frontal Iced Area (ft) <sup>2</sup>	Lateral Iced Area (ft) <sup>2</sup>	Weight Bare (lbs)	Weight Iced (lbs)	Frequency GHz	Allowable Signal Loss dB	Gh Mount Ka
1	HP4	18.87	1.31	18.87	1.31	169.75	342.52	6.00	10	1.10
2	HP4	18.87	1.31	18.87	1.31	169.75	342.52	6.00	10	1.10



TS Tower - v 5.8.3 Tower Analysis Program  
(c) 1997-2019 TowerSoft www.TSTower.com



Licensed to: ROHN Products LLC  
Peoria, IL

File: W:\Jobs\2019\230062\230062.out  
Contract: 230062  
Project: 80 FT DEP  
Date and Time: 4/25/2019 3:00:48 PM

Revision: 0  
Site: CHEHALIS RIDGE- WA  
Engineer: SWG

#### Section D: TRANSMISSION LINE DATA

##### Transmission Lines Position

No.	Bot El (ft)	Top El (ft)	Desc.	Radius (ft)	Az.	Orient.	No.	Shielded	Shielded Lines	Antenna
1	0.00	80.00	3/8" CABLE	2.00	0.00	0.00	1	No	0	
2	0.00	80.00	LDF4P-50A	0.00	0.00	0.00	1	Yes	1	
3	0.00	79.00	LDF4P-50A	0.00	0.00	0.00	3	Yes	3	
4	0.00	75.00	LDF4P-50A	0.00	0.00	0.00	2	Yes	2	
5	0.00	50.00	LDF4P-50A	0.00	0.00	0.00	3	Yes	3	

##### Transmission Lines Details

No.	Desc.	Width (in)	Depth (in)	Unit Mass (lb/ft)
1	3/8" CABLE	0.38	0.38	1.00
2	LDF4P-50A	0.63	0.63	0.15
3	LDF4P-50A	0.63	0.63	0.15
4	LDF4P-50A	0.63	0.63	0.15
5	LDF4P-50A	0.63	0.63	0.15

Utilization of the cross-section for TX Lines: 0.77%



TS Tower - v 5.8.3 Tower Analysis Program  
(c) 1997-2019 TowerSoft www.TSTower.com



Licensed to: ROHN Products LLC  
Peoria, IL

File: W:\Jobs\2019\230062\230062.out  
Contract: 230062  
Project: 80 FT DEP  
Date and Time: 4/25/2019 3:00:48 PM

Revision: 0  
Site: CHEHALIS RIDGE- WA  
Engineer: SWG

#### Section F: POINT LOAD DATA

Structure Azimuth from North:0.00

##### POINT LOADS

No.	Description	Elev. (ft)	Radius (ft)	Azim. (Deg)	Orient. (Deg)	Vertical Offset (ft)	Tx Line	Comments
1	BEACON & LR	80.00	0.00	0.0	0.0	0.00		
2	(3) DB-224 3FTSA	79.00	0.65	0.0	0.0	0.00		
3	(3) DB-224 3FTSA	50.00	1.00	0.0	0.0	0.00		

##### POINT LOADS WIND AREAS AND WEIGHTS

No.	Description	Frontal Bare Area (ft^2)	Lateral Bare Area (ft^2)	Frontal Iced Area (ft^2)	Lateral Iced Area (ft^2)	Weight Bare (Kips)	Weight Iced (Kips)	Gh
1	BEACON & LR	5.00	5.00	10.00	10.00	0.25	0.50	1.10
2	(3) DB-224 3FTSA	23.50	23.50	39.00	39.00	0.45	0.75	1.10
3	(3) DB-224 3FTSA	23.50	23.50	39.00	39.00	0.45	0.75	1.10



TS Tower - v 5.8.3 Tower Analysis Program  
(c) 1997-2019 TowerSoft www.TSTower.com



Licensed to: ROHN Products LLC  
Peoria, IL

File: W:\Jobs\2019\230062\230062.out

Contract: 230062

Project: 80 FT DEP

Date and Time: 4/25/2019 3:00:48 PM

Revision: 0

Site: CHEHALIS RIDGE- WA

Engineer: SWG

Section H: STRUCTURE DISPLACEMENT DATA

Load Combination Wind Only - Serviceability

Wind Direction

Maximum displacements

Elev. (ft)	N-S Disp (in)	W-E Disp (in)	Vert. Disp (in)	N-S Rot (deg)	W-E Rot (deg)	Twist Rot (deg)
80.00	-17.5	-14.9	-0.2	-1.45	1.72	-0.02
74.64	-15.6	-13.3	-0.2	-1.44	1.71	-0.02
69.27	-13.7	-11.6	-0.1	-1.41	1.68	-0.02
63.91	-11.8	-10.1	-0.1	-1.37	1.62	-0.02
58.54	-10.0	-8.6	-0.1	-1.30	1.55	-0.02
53.18	-8.4	-7.2	-0.1	-1.23	1.45	-0.01
50.51	-7.6	-6.5	-0.1	-1.18	1.40	-0.01
47.01	-6.6	-5.6	-0.1	-1.12	1.32	-0.01
43.51	-5.6	-4.8	0.0	-1.05	1.23	-0.01
40.01	-4.8	-4.1	0.0	-0.97	1.13	-0.01
36.50	-4.0	-3.4	0.0	-0.89	1.04	-0.01
33.00	-3.2	-2.8	0.0	-0.80	0.93	-0.01
30.00	-2.7	-2.3	0.0	-0.72	0.83	-0.01
25.00	-1.9	-1.6	0.0	-0.61	0.71	0.00
20.00	-1.2	-1.1	0.0	-0.49	0.57	0.00
15.00	-0.7	-0.6	0.0	-0.37	0.43	0.00
10.00	-0.3	-0.3	0.0	-0.25	0.29	0.00
5.00	-0.1	-0.1	0.0	-0.13	0.15	0.00
0.00	0.0	0.0	0.0	0.00	0.00	0.00



TSTower - v 5.8.3 Tower Analysis Program  
(c) 1997-2019 TowerSoft www.TSTower.com



Licensed to: ROHN Products LLC  
Peoria, IL

File: W:\Jobs\2019\230062\230062.out

Contract: 230062

Project: 80 FT DEP

Date and Time: 4/25/2019 3:00:48 PM

Revision: 0

Site: CHEHALIS RIDGE- WA

Engineer: SWG

Section J: ANTENNA DISPLACEMENT DATA

Load Combination Wind Only - Serviceability

Wind Direction Maximum displacements

Ant.	Elev. (ft)	N-S Disp (in)	W-E Disp (in)	Vert. Disp (in)	N-S Rot (Deg)	W-E Rot (Deg)	Twist Tot (Deg)	Allow. (Deg)
1	75.00	-16.6	-14.1	-0.2	-1.44	1.72	-0.02	2.21
2	75.00	-16.6	-14.1	-0.2	-1.44	1.72	-0.02	2.21



TSTower - v 5.8.3 Tower Analysis Program  
(c) 1997-2019 TowerSoft www.TSTower.com



Licensed to: ROHN Products LLC  
Peoria, IL

File: W:\Jobs\2019\230062\230062.out

Contract: 230062

Project: 80 FT DEP

Date and Time: 4/25/2019 3:00:48 PM

Revision: 0

Site: CHEHALIS RIDGE- WA

Engineer: SWG

Section K: POLE OUTPUT LOAD DATA

Load Combination                      Max Envelope  
Wind Direction                      Maximum

Elev. (ft)	Axial Ld. (kips)	Shear Ld. (kips)	Torque (kipsft)	Bend Mom. (kipsft)
80.00	1.46	1.94	0.82	0.45
74.64	1.46	1.94	0.82	10.63
74.64	2.73	4.65	1.16	10.71
69.27	2.73	4.65	1.25	35.67
69.27	3.10	5.00	1.25	35.68
63.91	3.10	5.00	1.31	62.37
63.91	3.48	5.37	1.31	62.38
58.54	3.48	5.37	1.37	91.19
58.54	3.87	5.74	1.37	91.20
53.18	3.87	5.74	1.41	121.82
53.18	4.17	6.03	1.41	121.83
50.51	4.17	6.03	1.42	137.80
50.51	5.20	7.55	2.34	138.27
47.01	5.20	7.55	2.32	164.71
47.01	5.66	8.03	2.52	164.80
43.51	5.66	8.03	2.52	192.91
43.51	5.94	8.28	2.52	192.91
40.01	5.94	8.28	2.51	221.90
40.01	6.23	8.53	2.51	221.90
36.50	6.23	8.53	2.51	251.48
36.50	6.52	8.78	2.51	251.49
33.00	6.52	8.78	2.51	282.23
33.00	6.80	9.01	2.51	282.24
30.00	6.80	9.01	2.51	309.37
30.00	7.31	9.30	2.51	309.38
25.00	7.31	9.30	2.51	355.67
25.00	7.97	9.66	2.51	355.67
20.00	7.97	9.66	2.51	403.76
20.00	8.52	10.01	2.51	403.77
15.00	8.52	10.01	2.51	453.92
15.00	9.08	10.35	2.51	453.93
10.00	9.08	10.35	2.51	505.46
10.00	9.65	10.69	2.51	505.47
5.00	9.65	10.69	2.51	559.08
5.00	10.23	11.04	2.51	559.09
0.00	10.23	11.04	2.50	614.13
Base	10.52	11.24	2.50	614.13



TSTower - v 5.8.3 Tower Analysis Program  
(c) 1997-2019 TowerSoft www.TSTower.com



Licensed to: ROHN Products LLC  
Peoria, IL

File: W:\Jobs\2019\230062\230062.out

Contract: 230062

Project: 80 FT DEP

Date and Time: 4/25/2019 3:00:48 PM

Revision: 0  
Site: CHEHALIS RIDGE - WA  
Engineer: SWG

Section L: STRENGTH ASSESSMENT DATA  
Load Combination  
Wind Direction

Max Envelope  
Maximum

Elev. (ft)	Axial Ld. (kips)	Axial Cap (kips)	Moment (kip-ft)	Mom. Cap (kip-ft)	Assess.
80.00	1.46	700.28	0.45	227.26	0.004
74.64	1.46	734.60	10.63	250.22	0.007
74.64	2.73	734.60	10.71	250.22	0.045
69.27	2.73	768.93	35.67	274.28	0.132
69.27	3.10	768.93	35.68	274.28	0.132
63.91	3.10	803.25	62.37	299.45	0.210
63.91	3.48	803.25	62.38	299.45	0.211
58.54	3.48	837.58	91.19	325.73	0.282
58.54	3.87	837.58	91.20	325.73	0.283
53.18	3.87	863.27	121.82	349.61	0.351
53.18	4.17	863.27	121.83	349.61	0.351
50.51	5.20	862.79	138.27	349.14	0.400
47.01	5.20	878.92	164.71	364.90	0.455
47.01	5.66	878.92	164.80	364.90	0.456
43.51	5.66	894.74	192.91	380.87	0.510
43.51	5.94	894.74	192.91	380.87	0.511
40.01	5.94	910.26	221.90	397.04	0.563
40.01	6.23	910.26	221.90	397.04	0.563
36.50	6.23	925.47	251.48	413.40	0.613
36.50	6.52	925.47	251.49	413.40	0.613
33.00	6.52	940.38	282.23	429.95	0.661
33.00	6.80	940.38	282.24	429.95	0.661
30.00	7.31	1310.89	309.38	597.62	0.521
25.00	7.31	1353.55	355.67	637.37	0.562
25.00	7.97	1353.55	355.67	637.37	0.562
20.00	7.97	1396.21	403.76	678.40	0.599
20.00	8.52	1396.21	403.77	678.40	0.599
15.00	8.52	1438.87	453.93	720.71	0.634
15.00	9.08	1438.87	453.93	720.71	0.634
10.00	9.08	1481.54	505.46	764.30	0.666
10.00	9.65	1481.54	505.47	764.30	0.666
5.00	9.65	1515.83	559.08	804.73	0.699
5.00	10.23	1515.83	559.09	804.73	0.700
0.00	10.23	1546.86	614.13	844.40	0.732



TS Tower - v 5.8.3 Tower Analysis Program  
(c) 1997-2019 TowerSoft www.TSTower.com



Licensed to: ROHN Products LLC  
Peoria, IL

File: W:\Jobs\2019\230062\230062.out  
Contract: 230062  
Project: 80 FT DEP  
Date and Time: 4/25/2019 3:00:48 PM

Revision: 0  
Site: CHEHALIS RIDGE- WA  
Engineer: SWG

Section M: SECTION PROPERTIES DATA

Elev. (ft)	Diam. (in)	Width (in)	Thick. (in)	W/t	Area (in <sup>2</sup> )	S (in <sup>3</sup> )
80.0	16.0	2.5	0.188	13.1	9.4	36.71
74.6	16.8	2.6	0.188	13.8	9.9	40.41
74.6	16.8	2.6	0.188	13.8	9.9	40.41
69.3	17.6	2.7	0.188	14.5	10.3	44.30
69.3	17.6	2.7	0.188	14.5	10.3	44.30
63.9	18.4	2.9	0.188	15.3	10.8	48.37
63.9	18.4	2.9	0.188	15.3	10.8	48.37
58.5	19.1	3.0	0.188	16.0	11.3	52.61
58.5	19.1	3.0	0.188	16.0	11.3	52.61
53.2	19.9	3.1	0.188	16.7	11.7	57.03
53.2	19.9	3.1	0.188	16.7	11.7	57.03
50.5	20.3	3.2	0.188	17.1	12.0	59.30
50.5	19.9	3.1	0.188	16.7	11.7	56.94
47.0	20.4	3.2	0.188	17.2	12.0	59.93
47.0	20.4	3.2	0.188	17.2	12.0	59.93
43.5	20.9	3.3	0.188	17.7	12.3	62.98
43.5	20.9	3.3	0.188	17.7	12.3	62.98
40.0	21.4	3.4	0.188	18.1	12.6	66.12
40.0	21.4	3.4	0.188	18.1	12.6	66.12
36.5	21.9	3.5	0.188	18.6	12.9	69.33
36.5	21.9	3.5	0.188	18.6	12.9	69.33
33.0	22.4	3.6	0.188	19.1	13.2	72.61
33.0	22.4	3.6	0.188	19.1	13.2	72.61
30.0	22.9	3.7	0.188	19.5	13.5	75.49
30.0	22.5	3.5	0.250	13.9	17.6	96.53
25.0	23.2	3.6	0.250	14.4	18.2	102.95
25.0	23.2	3.6	0.250	14.4	18.2	102.95
20.0	23.9	3.7	0.250	14.9	18.8	109.57
20.0	23.9	3.7	0.250	14.9	18.8	109.57
15.0	24.7	3.8	0.250	15.4	19.4	116.41
15.0	24.7	3.8	0.250	15.4	19.4	116.41
10.0	25.4	4.0	0.250	15.9	19.9	123.45
10.0	25.4	4.0	0.250	15.9	19.9	123.45
5.0	26.1	4.1	0.250	16.4	20.5	130.70
5.0	26.1	4.1	0.250	16.4	20.5	130.70
0.0	26.8	4.2	0.250	16.9	21.1	138.15

Note: w/t values marked with \* (asterisk) indicate width to thickness exceeding maximum allowable values by standards.

# Rohn Products LLC.

Designed By: SWG

Checked By: HA

Eng. File: 230062

LPile: ver. 4

Customer: CUSHING CIVIL ENGINEERS

Site: CHEHALIS RIDGE- WA

Date: 4/25/2019 1:59:58 PM

Date: 4/25/19

Building Code: TIA Rev. G

LPile\_l: ver. 3.1.2

## FACTORED REACTIONS

	DESIGN	OPERATIONAL
Download, kips	10.5	6.1
OTM, ft-kips	614.1	194.3
Shear, kips	11.2	3.6

## LPILE INPUT PARAMETERS

Depth(ft)	Soil Type	K(pci)	$\gamma$ (pcf)	$\phi$ (deg)	C(ksf)	$\epsilon_{50}$ (in/in)	N	RQD
0.0-2.0	Soft Clay	5.0	80.0	0.0	0.100	0.035	1	0
2.0-5.0	Sand	34.0	103.0	30.0	0.000	0.000	10	0
5.0-7.5	Sand	229.0	126.0	37.0	0.000	0.000	44	0
7.5-10.0	Sand	200.0	124.0	36.0	0.000	0.000	38	0
10.0-15.0	Sand	240.0	128.0	38.0	0.000	0.000	48	0

Reaction Modification Factor = 1.33

Direct Embed Pole: Concrete Backfill

Pier Diameter = 3' - 6", Pier Depth = 15' - 0" and Ground Slope = 0 Deg.

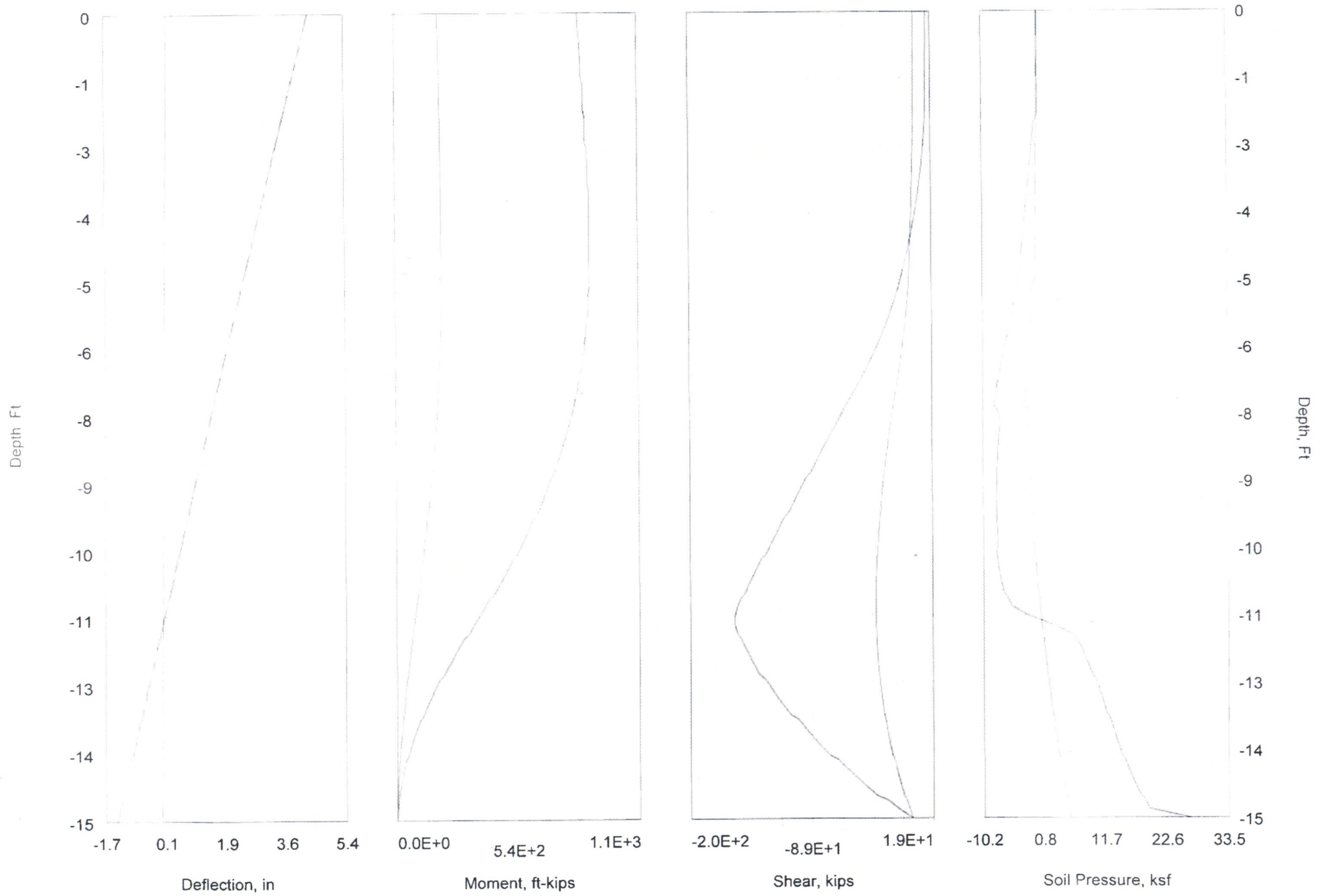
Effective OD = 3' - 6", Effective ID = 2' - 2"

## SUMMARY OF LPILE RESULTS

(See Attached Graphs)

	DESIGN	OPERATIONAL
Deflection at Top, in.	3.24	0.17 ✓
Moment, ft-kips	650.0	205.0
Shear, kips	118.5	32.3
Lateral Soil Pressure, ksf	20.11	5.28 ✓

230062  
SWG



SITE NAME:

# CHEHALIS RIDGE RADIO SITE

LOCATION:

1201 NORTH END AVE., CHEHALIS, WA 98532



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

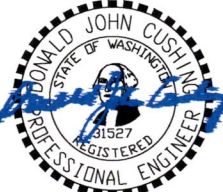
DATE	RELEASE
5-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-19-2021	FINAL CD

**DRAWING INFORMATION:**  
THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



LICENSURE:



RENEWAL DATE 10/31/21

SHEET TITLE  
**COVER SHEET**

SHEET NUMBER  
**T-1**

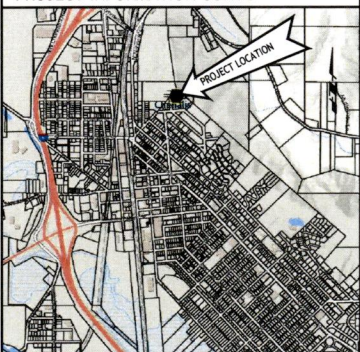
<b>FINAL CD SET:</b>	
<b>CIVIL/ELECTRICAL</b>	
T-1	COVER SHEET
	TOPOGRAPHIC SURVEY (1 OF 2)
	TOPOGRAPHIC SURVEY (2 OF 2)
G-1	GENERAL NOTES
C-1	OVERALL SITE PLAN
C-2	ENLARGED SITE PLAN
C-3	MONOPOLE ELEVATION
C-4	GRADING & EROSION CONTROL PLAN
C-4.1	GRADING & EROSION CONTROL NOTES & DETAILS I
C-4.2	GRADING & EROSION CONTROL NOTES & DETAILS II
C-5	NOT USED
C-6	ANTENNA PLAN AND DETAILS
C-7	FENCE DETAILS
C-8	COMPOUND DETAILS
C-9	LIQUID PROPANE GAS DETAILS
C-10	SHELTER FLOOR PLAN
C-11	SHELTER REFLECTED CEILING PLAN
C-12	SHELTER ELEVATIONS
C-13	SHELTER SECTIONS
S-1	STRUCTURAL GENERAL NOTES
S-2	FOUNDATION PLAN
S-3	ROOF FRAMING PLAN
S-4	STRUCTURAL DETAILS I
S-5	STRUCTURAL DETAILS II
E-1	SITE UTILITY PLAN
E-2	GROUNDING SITE PLAN
E-3	EXTERIOR GROUNDING DETAILS I
E-4	EXTERIOR GROUNDING DETAILS II

<b>COUNTY:</b> LEWIS COUNTY
<b>ZONING:</b> R1 - SINGLE FAMILY, LOW DENSITY
<b>JURISDICTION:</b> CITY OF CHEHALIS
<b>CONTACT PERSON:</b> DOUG CAREY (360) 740-1192 LEWIS COUNTY FACILITIES MANAGER
<b>PROPERTY OWNER:</b> LEWIS COUNTY 351 NW. NORTH STREET CHEHALIS, WA 98532 CONTACT: DOUG CAREY (360) 740-1192
<b>PARCEL NUMBER(S) &amp; AREA:</b> PARCEL NUMBER: 004696000000 1.43 ACRES
<b>PROJECT COORDINATES:</b> LAT: 46° 40' 09.94" N (46.669428) LONG: 122° 58' 3.48" W (-122.967633) SOURCE: 1A- SURVEY DATUM: NAVD 88
<b>UTILITY PROVIDERS:</b> TELCO/FIBER PROVIDER: CENTURY LINK POWER PROVIDER: LEWIS COUNTY PUD
<b>GENERAL INFORMATION:</b> 1. PARKING REQUIREMENTS ARE UNCHANGED 2. TRAFFIC IS UNAFFECTED 3. SIGNAGE AT SITE IS PROPOSED 4. SITE IS UNMANNED AND HANDICAP ACCESS IS NOT REQUIRED
<b>CODE INFORMATION:</b> 1. IBC-2015 INTERNATIONAL BUILDING CODE WITH WASHINGTON STATE AMENDMENTS 2. NEC-2014 NATIONAL ELECTRIC CODE 3. OCCUPANCY GROUP: U 4. CONSTRUCTION TYPE: II-B

<b>APPLICANT:</b> LEWIS COUNTY 381 NW. NORTH STREET CHEHALIS, WA 98532 CONTACT: DOUG CAREY
<b>LAND USE CONTACT:</b> MIKE UNGER (503) 464-2243

**PROJECT DESCRIPTION:**  
LEWIS COUNTY PROPOSES TO CONSTRUCT A NEW UNSTAFFED ESSENTIAL PUBLIC COMMUNICATIONS SERVICE FACILITY CONSISTING OF A NEW 80' TALL MONOPOLE WITH ANTENNAS, AND AN EQUIPMENT SHELTER WITHIN A NEW FENCED SECURITY COMPOUND.

**PROJECT INFORMATION CONT'D**



SCALE: NTS

<b>FROM THE LEWIS COUNTY FACILITIES OFFICE LOCATED AT 571 PRINDLE STREET IN CHEHALIS:</b>
1. HEAD EAST ON NW PRINDLE STREET TOWARDS NW FRONT STREET. (226 FT)
2. TURN LEFT ON NW FRONT STREET (282 FT)
3. TURN RIGHT ONTO NW PARK STREET (0.1 MI)
4. KEEP LEFT TO STARY ON NW PARK STREET (98 FT)
5. TAKE NE WASHINGTON AVE TO N NATIONAL AVE. (0.3 MI)
6. CONTINUE STRAIGHT ONTO NE CASCADE AVE (400 FT)
7. TURN LEFT ONTO NE WASHINGTON AVE. (0.2 MI)
8. TURN RIGHT ONTO N NATIONAL AVE. (0.7 MI)
9. TURN RIGHT ONTO COAL CREEK ROAD (0.3 MI)
<b>SITE WILL BE ON THE RIGHT</b>
EST. TIME: 4 MINS.
EST. MILEAGE: 1.6 MI

DRIVING DIRECTIONS

<b>SIGNATURE</b>	<b>DATE</b>
LEWIS COUNTY	
DOUG CAREY FACILITIES MANAGER	
LEWIS COUNTY	
SCOTT MATTOON RADIO SHOP ADMINISTRATOR	

DOCUMENT REVIEW

SHEET INDEX

PROJECT INFORMATION

LOCATOR MAP

SCALE: NTS

DRIVING DIRECTIONS

DOCUMENT REVIEW

1. THE BOUNDARY SHOWN ON THIS SURVEY IS BASED ON MONUMENTATION FOUND AND RECORD INFORMATION. THIS IS NOT A BOUNDARY SURVEY. THIS IS A SPECIALIZED TOPOGRAPHIC MAP WITH PROPERTY LINES. EASEMENTS, ENCUMBRANCES, DEPOSITIONS, AND INFORMATION FROM VARIOUS SOURCES OF RECORD AND AVAILABLE MONUMENTATION FOUND DURING THE FIELD SURVEY. PROPERTY LINES OF TITLE WERE NOT INVESTIGATED NOR SURVEYED EXCEPT AS SHOWN ON THIS PLAN. NO PROPERTY MONUMENTS WERE SET.

2. PROPERTY LINES SHOWN ON THIS SURVEY ARE BASED ON THE CHEHALIS LAND & TIMBER COMPANY SECOND ADDITION, BOOK 2 PAGE 109 ON FILE WITH LEWIS COUNTY, WASHINGTON.

UNDERGROUND UTILITIES SHOWN ON THIS SURVEY WERE LOCATED BASED ON UTILITY MARK OUTS PAINTED FOLLOWING A CALL FOR A FREE UTILITY LOCATE. NOT ALL UTILITIES MAY BE SHOWN. CALL FOR UTILITY LOCATES BEFORE DIGGING.

EXCEPT THAT PORTION OF SAID LOT 7 WHICH LIES EASTERLY OF THE EAST LINE OF LOT 4 IN SAID BLOCK 24 EXTENDED NORTHERLY.  
ALSO EXCEPT THAT PORTION OF SAID LOT 8 CONVEYED TO THE CHEHALIS WATER COMPANY BY DEED RECORDED FEBRUARY 23, 1895 UNDER  
RECORDING NO. 4954.

THE DATUM FOR THIS SURVEY IS NAVD88. AN ELEVATION WAS ESTABLISHED FOR CONTROL POINT #101 USING GPS METHODS AND GEOID12B.

CONTROL POINT #101 - AN IRON SPIKE  
ELEV = 464.70

THE BASIS OF BEARING FOR THIS SURVEY IS THE WASHINGTON STATE PLANE COORDINATE SYSTEM SOUTH ZONE (4602) WITH COORDINATES ESTABLISHED USING A GPS STATIC OBSERVATION AND A SOLUTION RECEIVED FROM THE NATIONAL GEODETTIC SURVEY (NGS) ONLINE POSITIONING USER SERVICE (OPUS).

LOCAL DATUM PLANE COORDINATES: AN AVERAGE COMBINED SCALE FACTOR OF 1.000105138 WAS USED TO CONVERT GRID COORDINATES TO GROUND COORDINATES SO CALCULATED GRID DISTANCES AND GROUND DISTANCES WOULD MATCH (I.E. - GRID COORDINATE TIMES SCALE FACTOR EQUALS GROUND COORDINATE).  
AN AVERAGE CONVERGENCE ANGLE OF  $-1^{\circ}47'32''$  WAS CALCULATED.

1. CHEHALIS LAND & TIMBER COMPANY SECOND ADDITION, BOOK 2 PAGE 109  
2. BOOK 30, PAGE 117  
3. BOOK 3, PAGE 266

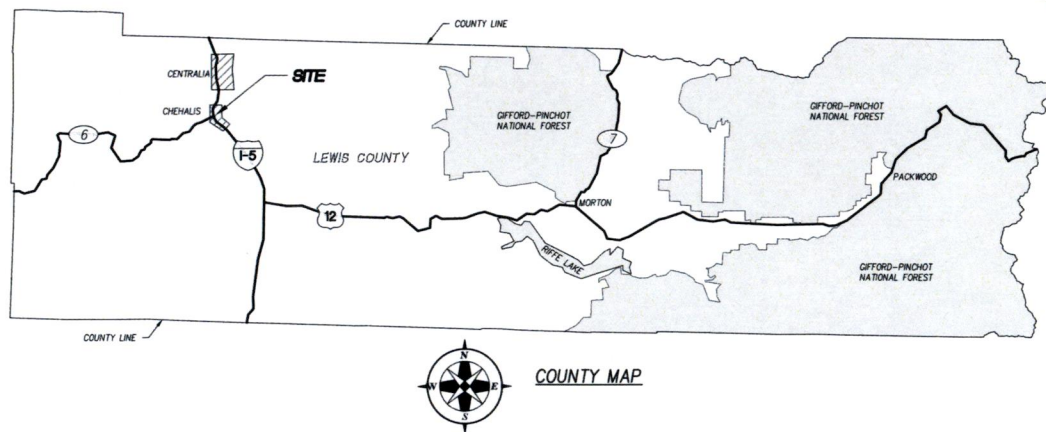
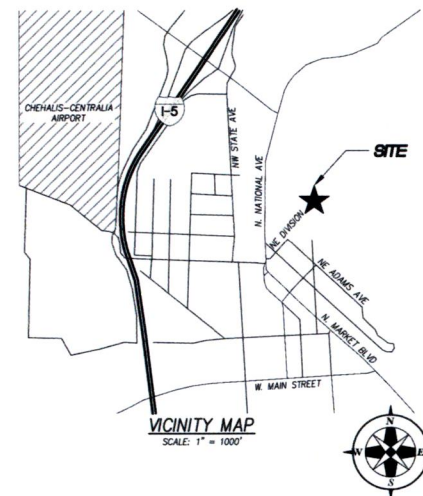
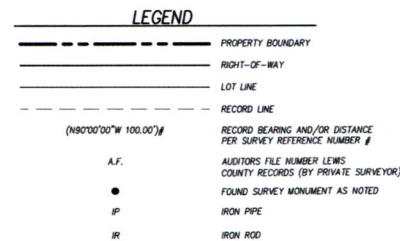
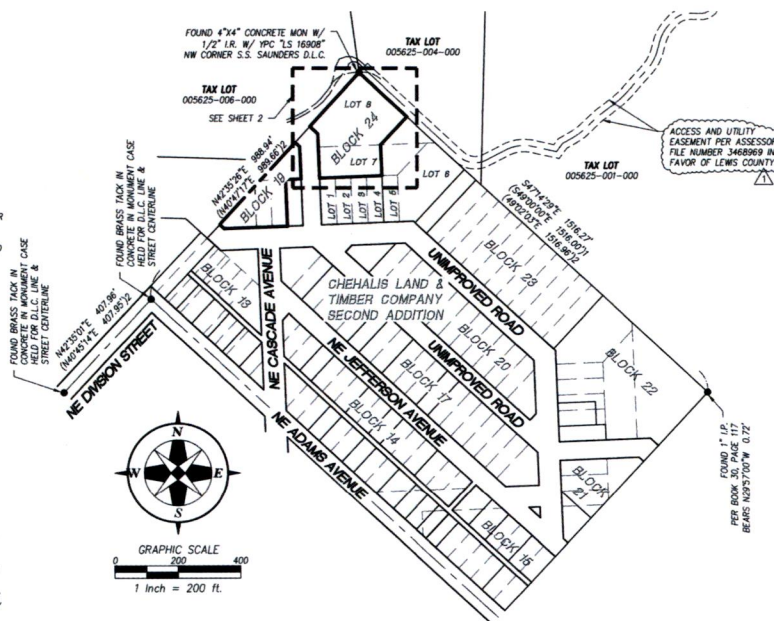
A. A.F. NO. 3455978-D  
B. A.F. NO. 4954

POINT 101		POINT 102	
IRON SPIKE		IRON SPIKE	
NORTHING:	497,021.919	NORTHING:	497,109.708
EASTING:	1,021,045.148	EASTING:	1,021,174.813
ELEVATION:	464.70'	ELEVATION:	456.41'

MOCKAY CONSULTING LLC RECEIVED A TITLE REPORT FOR THE PROJECT PREPARED BY LEWIS COUNTY TITLE, DATED NOVEMBER 9, 2018, POLICY NUMBER SGW-08003315. EXCEPTIONS LISTED INCLUDE:

- GENERAL TAXES AND ASSESSMENTS: IF ANY, NO SEARCH HAVING BEEN MADE THEREOF; ALSO, TAXES OR ASSESSMENTS WHICH ARE NOT SHOWN AS EXISTING LIENS BY THE RECORDS OF ANY TAXING AUTHORITY THAT LIEVES TAXES OR ASSESSMENTS ON REAL PROPERTY OR BY THE PUBLIC RECORDS.
- UNPAID INDEBTEDNESS, CLAIMS, RESERVATIONS OR EXCEPTIONS IN THE UNITED STATES PATENTS OR IN ACTS AUTHORIZING THE ISSUANCE THEREOF; WATER RIGHTS, CLAIMS OR TITLE TO WATER.
- EXISTING PROPERTY INTERESTS: THE INTERESTS OF THE REAL PROPERTY EXPRESSLY DESCRIBED HEREIN, OR TITLE TO STREETS, ROADS, AVENUES, LANES, WAYS OR WATERWAYS ON WHICH SUCH REAL PROPERTY ABUTS, OR THE RIGHT TO MAINTAIN THEREIN VAULTS, TUNNELS, RAMPS, OR ANY OTHER STRUCTURE OR IMPROVEMENTS; ON ANY RIGHTS OR EASEMENTS THEREIN UNLESS SUCH PROPERTY, RIGHTS OR EASEMENTS ARE EXPRESSLY EXCLUDED OR EXCEPTED.

IN THE SOUTHWEST 1/4 OF SECTION 29  
TOWNSHIP 14 NORTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN  
IN THE CITY OF CHEHALIS, LEWIS COUNTY, WASHINGTON  
SURVEYED DECEMBER 3, 2018



INITIAL SURVEY - CHEHALIS RADIO TOWER  
TAX PARCEL # 004696-000-000

**CUSHING CIVIL ENGINEERS**  
909 N BEECH STREET, SUITE D  
PORTLAND, OREGON 97227

[illegible]

648-6475

**McKay Consulting, LLC**

Planning • Engineering • Surveying      contact@mckayconsultingllc.com



DESIGNED BY: ERIC DUGGER

DRAWN BY: ERIC DUGGER

CHECKED BY: KAD E. MCKAY

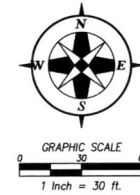
DATE: JANUARY 4, 2019

REVISÉ ON: OCTOBER 20, 2020

JOB NAME: CHEVALIS RADIO

108.6.18037	1.05
-------------	------

IN THE SOUTHWEST 1/4 OF SECTION 29  
TOWNSHIP 14 NORTH, RANGE 2 WEST OF THE WILLAMETTE MERIDIAN  
IN THE CITY OF CHEHALIS, LEWIS COUNTY, WASHINGTON  
SURVEYED DECEMBER 3, 2018



	PROPERTY BOUNDARY
	RIGHT-OF-WAY
	LOT LINE
	RECORD LINE
 UP	UNDERGROUND POWER
 FO	UNDERGROUND FIBER OPTIC
 T	UNDERGROUND TELECOM
 OT	OVERHEAD TELECOM
	GRAVEL ACCESS
 XX"	CONIFEROUS TREE W/ DIAMETER
 XX"	DECIDUOUS TREE W/ DIAMETER
	RECORD BEARING AND/OR DISTANCE PER SURVEY REFERENCE NUMBER
	AUDITORS FILE NUMBER LEWIS COUNTY RECORDS (BY PRIVATE)
	FOUND SURVEY MONUMENT AS IRON PIPE
	IRON ROD

**CUSHING CIVIL ENGINEERS**  
909 N BEECH STREET, SUITE D  
PORTLAND, OREGON 97227

[illegible]

**McKay Consulting, LLC**  
 Planning - Engineering - Surveying  
 2005 SE 3rd Avenue, Suite 600  
 Tallahassee, Florida 32301  
 contact@mckayconsultingllc.com



DESIGNED BY:	ERIC DUGGER
DRAWN BY:	ERIC DUGGER
CHECKED BY:	KAID E. McRAY
DATE:	JANUARY 4, 2019
REVISED ON:	OCTOBER 20, 2020
JOB NAME:	CHEHALIS RADIO

## GENERAL NOTES:

- DRAWINGS ARE NOT TO BE SCALED, WRITTEN DIMENSIONS TAKE PRECEDENCE, THIS SET OF DOCUMENTS IS INTENDED TO BE USED FOR DIAGRAMMATIC PURPOSES ONLY, UNLESS NOTED OTHERWISE. THE GENERAL CONTRACTOR'S SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ANY REQUIREMENTS DEEMED NECESSARY TO COMPLETE INSTALLATION AS DESCRIBED IN THE DRAWINGS AND OWNER'S PROJECT MANUAL.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL DIMENSIONS AND STANDARDIZED DETAILS THAT REQUIRE MODIFICATIONS DUE TO ACTUAL FIELD CONDITIONS AND REQUIREMENTS MUST BE SUBMITTED TO AND APPROVED BY OWNERS REPRESENTATIVE PRIOR TO START OF WORK.
- PRIOR TO THE SUBMISSION OF BIDS, CONTRACTORS INVOLVED SHALL VISIT THE JOB SITE TO FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE PROPOSED PROJECT. CONTRACTORS SHALL VISIT THE CONSTRUCTION SITE WITH THE CONSTRUCTION/CONTRACT DOCUMENTS TO VERIFY FIELD CONDITIONS AND CONFIRM THAT THE PROJECT WILL BE ACCOMPLISHED AS SHOWN. PRIOR TO PROCEEDING WITH CONSTRUCTION, ANY ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER VERBALLY AND IN WRITING.
- THE GENERAL CONTRACTOR SHALL RECEIVE WRITTEN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, SAFETY, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- ALL WORK PERFORMED ON THE PROJECT AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK.
- THE CONTRACTOR SHALL PROVIDE, AT THE PROJECT SITE, A FULL SET OF CONSTRUCTION DOCUMENTS UPDATED WITH THE LATEST REVISIONS INVOLVED WITH THE PROJECT. THIS SET IS A VALID CONTRACT DOCUMENT ONLY IF THE TITLE SHEET IS STAMPED IN RED INK "FOR CONSTRUCTION" AND EACH SUCCESSIVE SHEET BEARS THE ARCHITECT'S/ENGINEER'S SIGNED WET STAMP.
- THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, ETC. ACCORDING TO APPLICABLE CODES, STANDARDS, AND GOOD CONSTRUCTION PRACTICES. THE STRUCTURAL COMPONENTS OF ADJACENT CONSTRUCTION OR FACILITIES ARE NOT TO BE ALTERED BY THE CONSTRUCTION PROJECT UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL MEET ALL OSHA REQUIREMENTS FOR ALL INSTALLATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO THE EXISTING CONSTRUCTION AND REPAIR ALL DAMAGES TO EQUAL OR BETTER NEW CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER OF ANY DAMAGE TO THE BUILDING SITE OR ANY ADJACENT STRUCTURES AROUND THE PROJECT. THE OWNERS REPRESENTATIVE SHALL BE SOLE AND FINAL JUDGE AS TO THE QUALITY OF THE REPAIRED CONSTRUCTION. ANY ADDITIONAL MODIFICATIONS WHICH MUST BE MADE SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.
- WHERE NEW PAVING, CONCRETE SIDEWALKS OR PATHS MEET EXISTING CONSTRUCTION, THE CONTRACTOR SHALL MATCH THE EXISTING PITCH, GRADE, AND ELEVATION SO THE ENTIRE STRUCTURE SHALL HAVE A SMOOTH TRANSITION.
- THE CONTRACTOR SHALL MODIFY THE EXISTING FLOORS, WALL, CEILING, OR OTHER CONSTRUCTION AS REQUIRED TO GAIN ACCESS TO AREAS FOR ALL MECHANICAL, PLUMBING, ELECTRICAL, OR STRUCTURAL MODIFICATIONS. WHERE THE EXISTING CONSTRUCTION DOORS, PARTITIONS, CEILING, ETC. ARE TO BE REMOVED, MODIFIED, OR REARRANGED OR WHERE THE EXPOSED OR HIDDEN MECHANICAL, ELECTRICAL, SYSTEMS ARE ADDED OR MODIFIED, THE GENERAL CONTRACTOR SHALL REPAIR, PATCH AND MATCH ALL EXISTING CONSTRUCTION AND FINISHES OF ALL FLOORS WALLS AND CEILINGS. WHERE CONCRETE MASONRY CONSTRUCTION IS MODIFIED, THE CONTRACTOR SHALL TOOTH IN ALL NEW CONSTRUCTION TO MATCH THE EXISTING BOND. WHERE CONCRETE CONSTRUCTION IS MODIFIED, THE CONTRACTOR SHALL VERIFY THE EXACT DETAILS TO BE USED FOR CONSTRUCTION. ALL WORK SHALL BE COVERED UNDER THE GENERAL CONTRACT.
- IF CONTRACTOR OR SUBCONTRACTOR FIND IT NECESSARY TO DEViate FROM ORIGINAL APPROVED PLANS, THEN IT IS THE CONTRACTOR'S AND THE SUBCONTRACTOR'S RESPONSIBILITY TO PROVIDE THE PROJECT MANAGER WITH 4 COPIES OF THE PROPOSED CHANGES FOR HIS APPROVAL BEFORE PROCEEDING WITH THE WORK. IN ADDITION THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR PROCURING ALL NECESSARY APPROVALS FROM THE BUILDING AUTHORITIES FOR THE PROPOSED CHANGES BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR PROCURING ALL NECESSARY INSPECTIONS AND APPROVALS FROM BUILDING AUTHORITIES DURING THE EXECUTION OF THE WORK.
- CONTRACTOR TO PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF PROJECT AREA DURING CONSTRUCTION.
- THIS IS AN ESSENTIAL FACILITY THEREFORE SHALL STRICTLY MEET ALL APPLICABLE CODE AND JURISDICTIONAL REQUIREMENTS.

## GENERAL NOTES CONTINUED:

- THE CONTRACTOR SHALL PERFORM WORK DURING SITE/PROPERTY OWNER'S PREFERRED HOURS TO AVOID DISTURBING NORMAL BUSINESS.
  - SEAL ALL PENETRATIONS THROUGH FIRE-RATED AREAS WITH U.L. LISTED OR FIRE MARSHAL APPROVED MATERIALS AS APPLICABLE TO THIS FACILITY AND OR PROJECT SITE.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR UTILITY LOCATES, SCHEDULING, COORDINATING SPECIAL AND BUILDING DEPARTMENT INSPECTIONS.
  - ROUTING OF ALL CONDUITS, CABLES, CABLE TRAYS ETC ARE INDICATED AS PROPOSED LOCATION ONLY. CONFIRM THE EXACT LOCATION AND ROUTING WITH THE ON SITE PROJECT MANAGER PRIOR TO STARTING WORK.
- ### CONCRETE NOTES:
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318 AND THE SPECIFICATION CAST-IN-PLACE CONCRETE.
  - ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS (UNO).
  - REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES CLASS "B" AND ALL HOOKS SHALL BE STANDARD (UNO).
  - THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS: CONCRETE CAST AGAINST EARTH - 3 IN. CONCRETE EXPOSED TO EARTH OR WEATHER:  
#6 AND LARGER .....2 IN.  
#5 AND SMALLER & WWF .....1-1/2 IN.

- A 1/2" TROWELED RADIUS SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE (UNO). HOLES TO RECEIVE EXPANSION/WEDGE ANCHORS SHALL BE 1/8" LARGER IN DIAMETER THAN THE ANCHOR BOLT, DOWEL OR ROD AND SHALL CONFORM TO MFR RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. AVOID CUTTING EXISTING REBAR WHEN DRILLING HOLES IN THE ELATED SLAB.
- INSTALLATION OF CONCRETE EXPANSION AND WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES.
- FLOAT SURFACE SHALL BE A SMOOTH FINISH. SURFACE SHALL BE FREE OF ALL OBVIOUS DEPRESSIONS. SURFACE SHALL BE SLOPED AT 2% TO PROMOTE DRAINAGE AWAY FROM EQUIPMENT.

## SITE WORK NOTES:

- RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY UNLESS OTHERWISE REQUIRED TO BE LEFT AS DEFINED BY LAND/PROPERTY OWNER.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE EQUIPMENT, EQUIPMENT SHELTER, GENERATOR, FUEL TANK, TOWER AREAS, AND ADJACENT BUILDINGS, ETC.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND, FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO THE CRUSHED STONE APPLICATION. FABRIC USE AS REQUIRED.
- ALL APPLICABLE LOCATES SHALL BE PERFORMED PRIOR TO ANY EXCAVATION OR SITE GRADING. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND SHALL BE CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING.
- THE AREAS OF THE PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE BUILDING, DRIVEWAY OR CRUSHED STONE, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED, AND COVERED WITH MULCH AS SPECIFIED IN THE SPECIFICATION LANDSCAPE WORK.
- BEDDING MATERIAL FOR UTILITY LINES, CULVERTS AND PIPING: CLEAN SAND, MEDIUM TP COARSE, SUB ROUNDED NATURAL RIVER OR BANK SAND, WASHED, FREE OF SILT OR CLAY, LOAM, FRIABLE OR SOLUBLE MATERIALS, AND ORGANIC MATTER: GRADED IN ACCORDANCE WITH THE FOLLOWING GRAIN SIZE DISTRIBUTION:

SIEVE SIZE	PERCENT PASSING
NO. 4 MESH	100
NO. 8 MESH	60-90
NO. 16 MESH	0-45
NO. 100 MESH	0-25
NO. 200 MESH	0-2
NO. 250 MESH	0-2
- BMP'S FOR TEMPORARY EROSION/SEDIMENTATION CONTROL SHALL BE IMPLEMENTED PER LOCAL, CITY OR COUNTY GUIDELINES AND PER PLAN IF APPLICABLE.

## SITE WORK NOTES CONTINUED:

- ALL SITE DESIGN AND CONSTRUCTION MUST COMPLY WITH THE MOST CURRENT VERSION OF R56 STANDARDS AND ALIGNED WITH R56 GUIDELINES AS TECHNICALLY APPLICABLE. EACH SITE MUST PASS AN R56 AUDIT OR FM APPROVED BEFORE IT SHALL BE CONSIDERED COMPLETE AND ACCEPTED.
  - IF INADVERTENT DISCOVERIES OF NATIVE AMERICAN CULTURAL MATERIALS OR HUMAN REMAINS ARE MADE DURING CONSTRUCTION, ALL WORK SHOULD CEASE AND POTENTIALLY AFFECTED TRIBES, AS WELL AS THE STATE HISTORIC PRESERVATION OFFICE, SHOULD BE NOTIFIED IMMEDIATELY.
- ### TOWER/POLE NOTES:
- ALL ANTENNAS, LINES AND RELATED INSTALLATION HARDWARE TO BE PROVIDED BY THE LAND MOBILE COMMUNICATIONS PROVIDER.
  - ALL HARDWARE (NUTS AND BOLTS) BE TIGHTENED AND TORQUED IN ACCORDANCE WITH THE TOWER MANUFACTURER'S AND STRUCTURAL ENGINEER'S SPECIFICATIONS.
  - VERIFICATION THAT THE TOWER/POLE CAN SUPPORT THE PROPOSED ANTENNA LOADING IS TO BE DONE BY OTHERS.
  - PROVIDE SUPPORTS FOR THE ANTENNA COAX CABLES TO THE ELEVATION OF ALL INITIAL AND FUTURE ANTENNAS. ANTENNA COAX CABLES ARE TO BE SUPPORTED AND RESTRAINED AT THE CENTERS SUITABLE TO THE MANUFACTURER'S REQUIREMENTS.
- ### R56 NOTES:
- ALL SITE DESIGN AND CONSTRUCTION MUST COMPLY WITH THE MOST CURRENT VERSION OF R56 STANDARDS AND ALIGNED WITH R56 GUIDELINES AS TECHNICALLY APPLICABLE. SITE MUST PASS AN R56 AUDIT BEFORE IT SHALL BE CONSIDERED COMPLETE AND ACCEPTED.

## ATTENTION:

CALL 1-800-424-5555 48 HOURS BEFORE YOU DIG. WASHINGTON LAW REQUIRES YOU TO FOLLOW RCW 19.122 CHAPTER 144

## SYMBOLS LEGEND

REVISION	SECTION REFERENCE
KEY NOTE	ELEVATION DATUM POINT
REFERENCE ELEVATION	
REFERENCE	
CHAINLINK FENCE	
UNDERGROUND POWER	
JOINT TRENCH	

## ABBREVIATIONS LEGEND

A/C	AIR CONDITIONING	MET, MTL	METAL
ADJ	ADJUSTABLE	MFR	MANUFACTURER
AFF	ABOVE FINISH FLOOR	MGR	MANAGER
AGL	ABOVE GRADE LEVEL	MIN	MINIMUM
APPROX	APPROXIMATELY	MISC	MISCELLANEOUS
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	NA	NOT APPLICABLE
AWG	AMERICAN WIRE GAUGE	NIC	NOT IN CONTRACT
BLK	BLOCK	OC, olc	ON CENTER
BM	BASE MOBILE RADIO	OD	OUTSIDE DIAMETER
BIS	BUILDING STANDARD	OPG	OPENING
CLG	CEILING	OPP	OPPOSITE
CLR	CLEAR	OSP	OVERHEAD POWER
CMC	CONCRETE	UGP	UNDERGRND POWER
CONST	CONSTRUCTION	OFO	OVERHEAD FIBER
CONT	CONTINUOUS	UGT	UNDERGRND TELCO
DBL	DOUBLE	PLYWD	PLYWOOD
DIA, Ø	DIAMETER	PR	PAIR
DIAG	DIAGONAL	PROJ	PROJECT
DIM	DIMENSION	PROP	PROPERTY
DN	DOWN	PT	PRESSURE TREATED
DTL, DETL	DETAIL	REQD	REQUIRED
DWG	DRAWING	RM	ROOM
E	EAST	R.O.	ROUGH OPENING
EA	EACH	S	SOUTH
EL, ELEV	ELEVATION	SHT	SHEET
ELECT	ELECTRICAL	SM	SIMILAR
EQ	EQUAL	SPEC	SPECIFICATION
EQUIP	EQUIPMENT	SQ	SQUARE
ESC	EROSION & SEDIMENT CONTROL	SS	STAINLESS STEEL
E.W.	EACH WAY	STL	STEEL
EXIST	EXISTING	STRUCT	STRUCTURAL
EXT	EXTERIOR	SUSP	SUSPENDED
FFE	FINISH FLOOR ELEVATION	S.V.	SHEET VINYL
FLUOR	FLUORESCENT	THRU	THROUGH
FO	FIBER OPTIC	TNND	TINNED
FT	FOOT	T.O.C.	TOP OF CONCRETE
GA	GAUGE	TYP	TYPICAL
GALV	GALVANIZED(I)	UBC	UNIFORM BUILDING CODE
GC	GENERAL CONTRACTOR	UN.O.	UNLESS NOTED OTHERWISE
GRND	GROUND	VERT	VERTICAL
GWB	GYPSUM WALL BOARD	VIF	VERIFY IN FIELD
GYP BD	GYPSUM BOARD	VT	VINYL TILE
HARDWD	HARDWOOD	W	WEST
HORIZ	HORIZONTAL	WN	WINDOW
HR	HOUR	W/O	WITHOUT
HT	HEIGHT	WP	WATERPROOF
HVAC	HEATING, VENTING AND AIR CONDITIONING	∠	ANGLE
ID	INSIDE DIA	&	AND
IN	INCH	Q	CENTER LINE
INFO	INFORMATION	R	PROPERTY LINE
INT	INTERIOR	@	AT
LB(S)	POUND(S)	#	NUMBER
LNA	ANTENNA AMPLIFIER		
MAX	MAXIMUM		
MECH	MECHANICAL		

OVERHEAD POWER	— OSP —
OVERHEAD FIBER OPTIC	— OFO —
POWER/TELCO	— T/P —
LIQUID PROPANE GAS	— LPG —
FIBER OPTIC	— FO —
COAX	— COAX —
CENTERLINE	— — — — —
EASEMENT	— — — — —
PROPERTY LINE	— — — — —



PROJECT INFORMATION:

## SITE: CHEHALIS RIDGE RADIO SITE

1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

DRAWING INFORMATION:

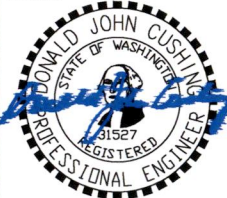
THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



909 N Beech Street, Suite D  
Portland, OR 97227  
(503) 387-5331  
www.cushing-engr.com

LICENSURE:



RENEWAL DATE 10/31/21

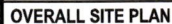
SHEET TITLE

## GENERAL NOTES

SHEET NUMBER

G-1

- #### PROJECT NOTES



**X TREE TO BE REMOVED**



1201 NORTH END AVE.,  
CHEHALIS, WA 98532

**DRAWING INFORMATION:**

THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



**LICENSURE:**



SHEET NUMBER

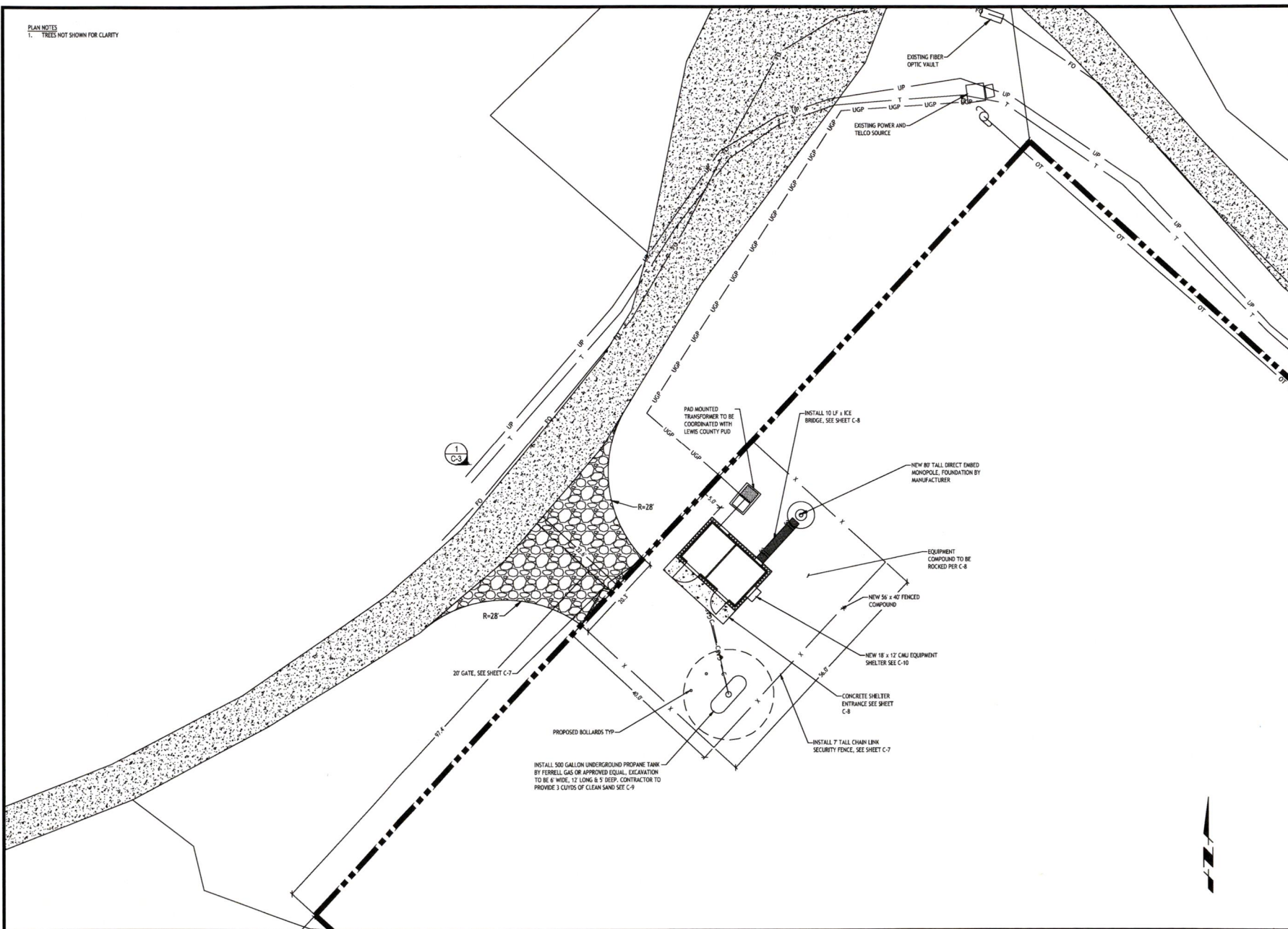
C-1

11X17 SCALE: 1" = 40'

22X34 SCALE: 1" = 20'

1	2
---	---

PLAN NOTES  
1. TREES NOT SHOWN FOR CLARITY



**PROJECT INFORMATION:**

SITE:  
CHEHALIS RIDGE  
RADIO SITE

1201 NORTH END AVE.,  
CHEHALIS, WA 98532

[illegible]

DRAWING INFORMATION:

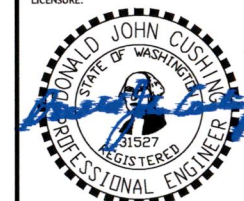
THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



909 N Beech Street, Suite D  
Portland, OR 97227  
(503) 387-5331  
[www.cushing-engr.com](http://www.cushing-engr.com)

LICENSURE:



RENEWAL DATE 10/31/21

SHEET TITLE

## ENLARGED SITE PLAN

SHEET NUMBER

C-2

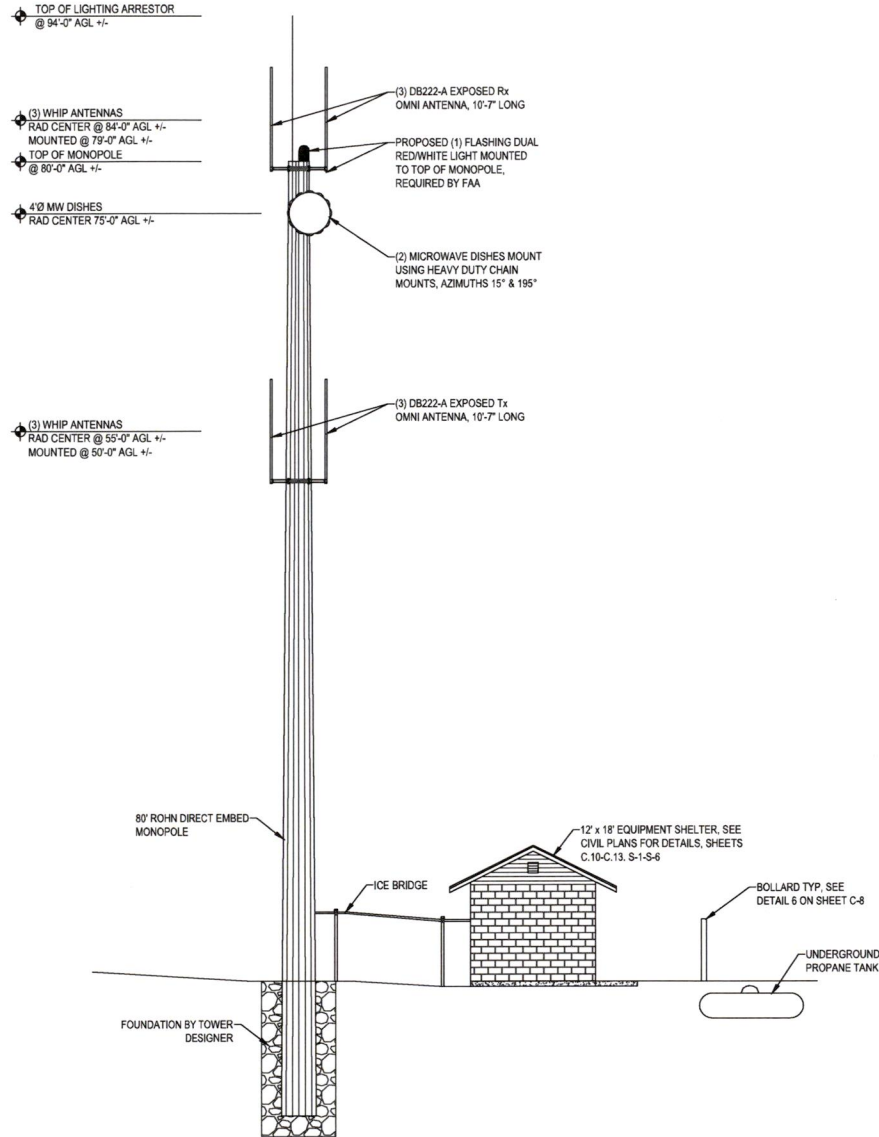
## ENLARGED SITE PLAN

11X17 SCALE: 1" = ##'

22X34 SCALE: 1" = ##'

--	--

- NOTE:
- FOR CONCEPTUAL PURPOSES ONLY
  - TREES NOT SHOWN FOR CLARITY
  - PROPOSED PROPANE TANKS AND ENCLOSURE NOT SHOWN FOR CLARITY



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
 1201 NORTH END AVE.,  
 CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

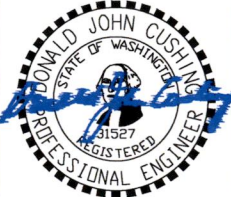
DRAWING INFORMATION:

THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



LICENSURE:



SHEET TITLE  
**MONOPOLE**  
**ELEVATION**

SHEET NUMBER

C-3

SITE ELEVATION

11X17 SCALE: NTS

22X34 SCALE: NTS

1



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

DRAWING INFORMATION:  
THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



909 N Birch Street, Suite D  
Portland, OR 97227  
(503) 387-5331  
www.cushing-enr.com

LICENSURE:



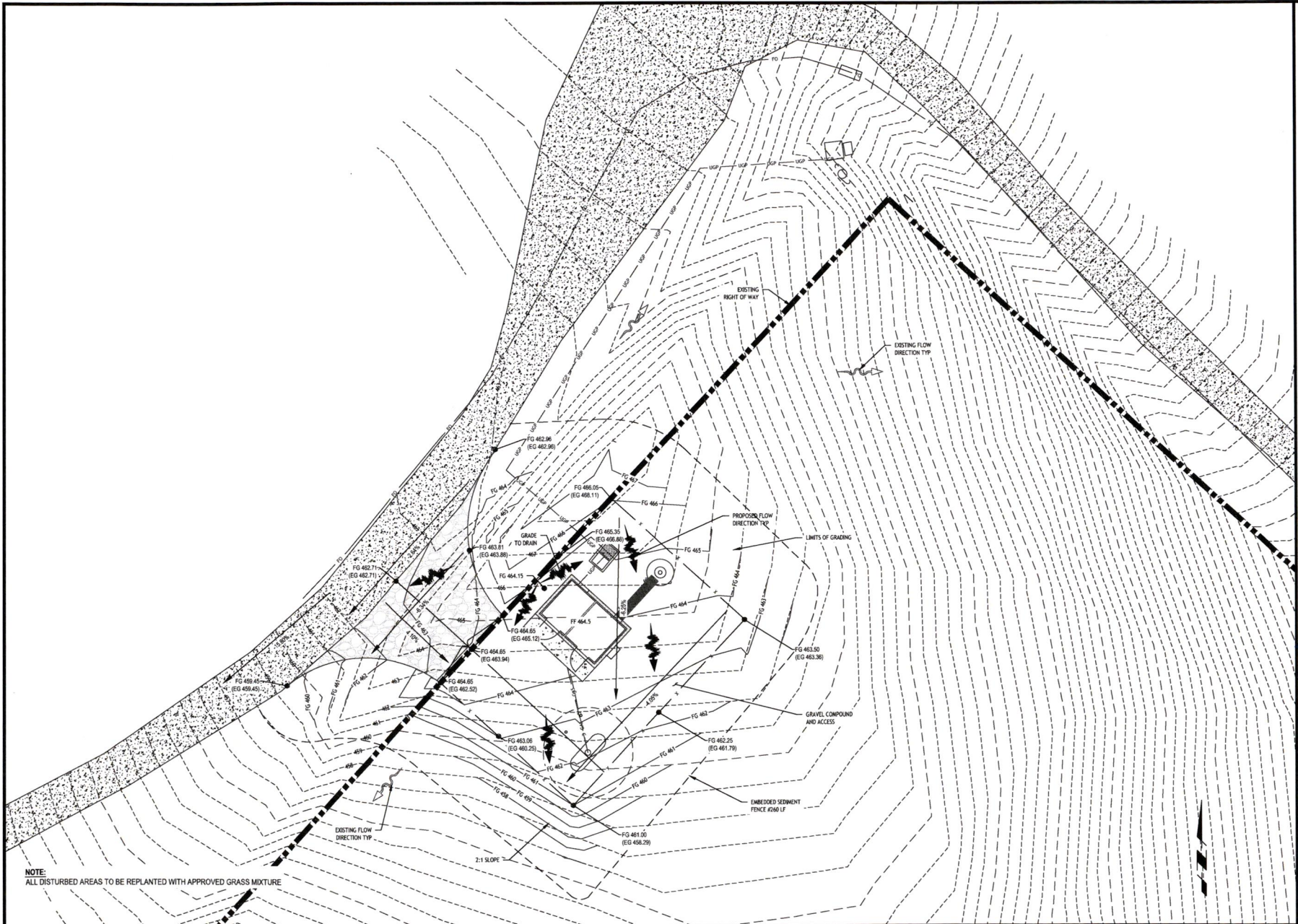
RENEWAL DATE 10/31/21

SHEET TITLE

**GRADING &  
EROSION  
CONTROL PLAN**

SHEET NUMBER

**C-4**



**GRADING & EROSION CONTROL PLAN**

11X17 SCALE: 1" = 20' 22X34 SCALE: 1" = 10'

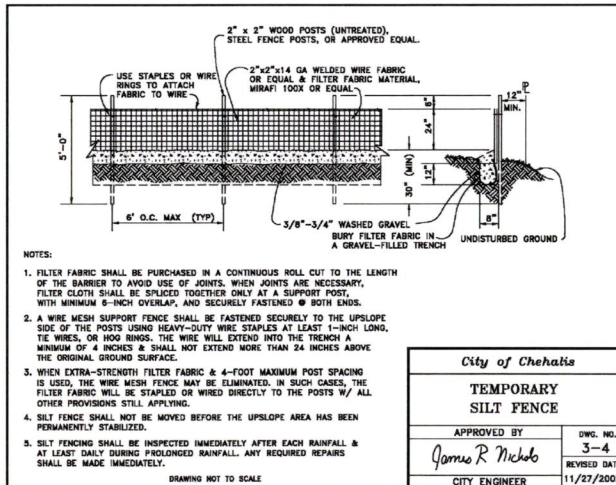
**3**

# EROSION CONTROL NOTES:

- OWNER OR DESIGNATED PERSON SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES, IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
- THE IMPLEMENTATION OF THESE ESC PLANS AND CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED BY THE LOCAL JURISDICTION, AND VEGETATION/LANDSCAPING IS ESTABLISHED. THE DEVELOPER SHALL BE RESPONSIBLE FOR MAINTENANCE AFTER THE PROJECT IS APPROVED UNTIL THE LOTS ARE SOLD.
- THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE MARKINGS SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
- THE ESC FACILITIES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING CONSTRUCTION PERIODS, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE.
- THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- AT NO TIME SHALL SEDIMENT BE ALLOWED TO ACCUMULATE MORE THAN 1/3 THE BARRIER HEIGHT. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATIONS SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- STABILIZED GRAVEL ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- STORM DRAIN INLETS, BASINS, AND AREA DRAINS SHALL BE PROTECTED UNTIL PAVEMENT SURFACES ARE COMPLETED AND/OR VEGETATION IS RE-ESTABLISHED.
- PAVEMENT SURFACES AND VEGETATION ARE TO BE PLACED AS RAPIDLY AS POSSIBLE.
- IF THERE ARE EXPOSED SOILS OR SOILS NOT FULLY ESTABLISHED FROM OCTOBER 1ST THROUGH APRIL 30TH, THE WET WEATHER EROSION PREVENTION MEASURES WILL BE IN EFFECT. SEE THE EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL (CHAPTER 4) FOR REQUIREMENTS.
- NO EXPOSED, BARE SOILS SHALL REMAIN UNSTABILIZED FOR MORE THAN TWO DAYS DURING THE PERIOD OCTOBER 1 THROUGH APRIL 30 OR FOR MORE THAN SEVEN DAYS DURING THE PERIOD OF MAY 1 THROUGH SEPTEMBER 30. ALL DISTURBED SOIL SURFACES SHALL BE STABILIZED BY A SUITABLE APPLICATION OF "BEST MANAGEMENT PRACTICES".
- WHERE FEASIBLE, NO MORE THAN 500 FEET OF TRENCH SHALL BE OPEN AT ONE TIME. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHIL SIDE OF TRENCHES PROVIDED IT DOES NOT CONFLICT WITH SAFETY REQUIREMENTS.
- THE DEVELOPER SHALL REMOVE ESC MEASURES WHEN VEGETATION IS FULLY ESTABLISHED.

## EROSION CONTROL NOTES

SCALE: NTS 1



City of Chehalis

### TEMPORARY SILT FENCE

APPROVED BY

*James R Nichols*

CITY ENGINEER

DWG. NO.

3-4

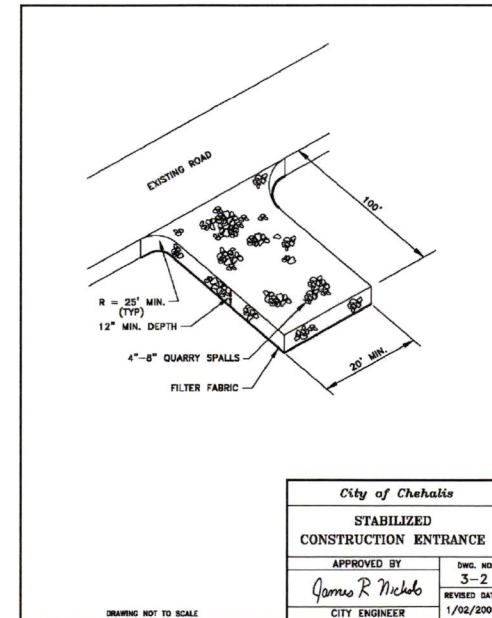
REVISED DATE

11/27/2003

1. MAINTAIN THE MATURE VEGETATION A MINIMUM OF 50' FROM THE SOUTHERN PROPERTY AS IT CURRENTLY EXISTS TO PROVIDE A BUFFER TO THE RESIDENTIAL PROPERTIES IN THE VICINITY.
2. ALL RECOMMENDATIONS OF THE BLACK MOUNTAIN GEOTECHNICAL REPORT, PROJECT NO. 180178-GE0, MUST BE ADHERED TO.
3. WORK MAY NOT COMMENCE UNTIL ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED, INCLUDING, BUT NOT LIMITED TO, CIVIL PLANS, BUILDING, ETC.
4. ALL CONDITIONS OF THE ATTACHED WASHINGTON STATE DEPARTMENT OF ECOLOGY LETTER, DATED MAY 1, 2019, MUST BE MET. SEE SHEET C-4.2.
5. ALL GRADING AND FILLING OF LAND MUST UTILIZE ONLY CLEAN FILL. ALL OTHER MATERIALS MAY BE CONSIDERED SOLID WASTE AND PERMIT APPROVAL MAY BE REQUIRED FROM YOUR LOCAL JURISDICTIONAL HEALTH DEPARTMENT PRIOR TO FILLING. ALL REMOVED DEBRIS RESULTING FROM THIS PROJECT MUST BE DISPOSED OF AT AN APPROVED SITE. CONTACT THE LOCAL JURISDICTIONAL HEALTH DEPARTMENT FOR PROPER MANAGEMENT OF THESE MATERIALS.
6. EROSION CONTROL MEASURES MUST BE IN PLACE PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION. THESE CONTROL MEASURES MUST BE EFFECTIVE TO PREVENT STORMWATER RUNOFF FROM CARRYING SOIL AND OTHER POLLUTANTS INTO SURFACE WATER OR STORMDRAINS THAT LEAD TO WATERS OF THE STATE. SAND, SILT, CLAY PARTICLES, AND SOIL WILL DAMAGE AQUATIC HABITAT AND ARE CONSIDERED TO BE POLLUTANTS.
7. ANY DISCHARGE OF SEDIMENT-LADEN RUNOFF OR OTHER POLLUTANTS TO WATERS OF THE STATE IS IN VIOLATION OF CHAPTER 90.48 RCW, WATER POLLUTION CONTROL, AND WAC 173-201A, WATER QUALITY STANDARDS FOR SURFACE WATERS OF THE STATE OF WASHINGTON, AND IS SUBJECT TO ENFORCEMENT ACTION.

## STAFF REPORT NOTES

SCALE: NTS 2



City of Chehalis

### STABILIZED CONSTRUCTION ENTRANCE

APPROVED BY

*James R Nichols*

CITY ENGINEER

DWG. NO.

3-2

REVISED DATE

1/02/2003



## PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

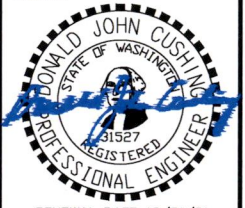
## DRAWING INFORMATION:

THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

## PLANS PREPARED BY:



## LICENSURE:



RENEWAL DATE 10/31/21

## SHEET TITLE

**GRADING &  
EROSION CONTROL  
NOTES & DETAILS I**

## SHEET NUMBER

C-4.1

NOT USED

3 EROSION CONTROL DETAILS

4

COWLITZ INDIAN TRIBE  
INADVERTENT DISCOVERY LANGUAGE

In the event any archaeological or historic materials are encountered during project activity, work in the immediate area (initially allowing for a 100' buffer; this number may vary by circumstance) must stop and the following actions taken:

1. Implement reasonable measures to protect the discovery site, including any appropriate stabilization or covering; and
2. Take reasonable steps to ensure the confidentiality of the discovery site; and,
3. Take reasonable steps to restrict access to the site of discovery.

The project proponent will notify the concerned Tribes and all appropriate county, state, and federal agencies, including the Department of Archaeology and Historic Preservation. The agencies and Tribe(s) will discuss possible measures to remove or avoid cultural material, and will reach an agreement with the project proponent regarding actions to be taken and disposition of material.

If human remains are uncovered, appropriate law enforcement agencies shall be notified first, and the above steps followed. If the remains are determined to be Native, consultation with the affected Tribes will take place in order to mitigate the final disposition of said remains.

See the Revised Code of Washington, Chapter 27.53, "Archaeological Sites and Resources," for applicable state laws and statutes. See also Washington State Executive Order 05-05, "Archaeological and Cultural Resources." Additional state and federal law(s) may also apply.

*It is strongly encouraged copies of inadvertent discovery language/plan are retained on-site while project activity is underway.*

Contact information:

Nathan Reynolds  
Interim Cultural Resources Manager  
Cowlitz Indian Tribe  
PO Box 2547  
Longview, WA 98632  
360-575-6226 Office  
360-577-6207 fax  
[nreynolds@cowlitz.com](mailto:nreynolds@cowlitz.com)

Revised 19 September 2017



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY  
PO Box 47775 • Olympia, Washington 98504-1775 • (360) 407-6300  
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

May 1, 2019

Hillary Hoke, Planner  
Lewis County  
Community Development  
2025 Northeast Kresky Avenue  
Chehalis, WA 98531

Dear Hillary Hoke:

Thank you for the opportunity to comment on the determination of nonsignificance for the Lewis County Communication Facility Project (SEPA-19-0004) located at Northeast Jefferson Avenue, Chehalis as proposed by Cushing Civil Engineers for Lewis County. The Department of Ecology (Ecology) reviewed the environmental checklist and has the following comment(s):

**SOLID WASTE MANAGEMENT: Derek Rockett (360) 407-6287**

All grading and filling of land must utilize only clean fill. All other materials may be considered solid waste and permit approval may be required from your local jurisdictional health department prior to filling. All removed debris resulting from this project must be disposed of at an approved site. Contact the local jurisdictional health department for proper management of these materials.

**WATER QUALITY/WATERSHED RESOURCES UNIT:  
Chris Montague-Breakwell (360) 407-6364**

Erosion control measures must be in place prior to any clearing, grading, or construction. These control measures must be effective to prevent stormwater runoff from carrying soil and other pollutants into surface water or stormdrains that lead to waters of the state. Sand, silt, clay particles, and soil will damage aquatic habitat and are considered to be pollutants.

Any discharge of sediment-laden runoff or other pollutants to waters of the state is in violation of Chapter 90.48 RCW, Water Pollution Control, and WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington, and is subject to enforcement action.

Hillary Hoke  
May 2, 2019  
Page 2

**Construction Stormwater General Permit:**  
The following construction activities require coverage under the Construction Stormwater General Permit:

1. Clearing, grading and/or excavation that results in the disturbance of one or more acres and discharges stormwater to surface waters of the State; and
2. Clearing, grading and/or excavation on sites smaller than one acre that are part of a larger common plan of development or sale, if the common plan of development or sale will ultimately disturb one acre or more and discharge stormwater to surface waters of the State.
  - a) This includes forest practices (including, but not limited to, class IV conversions) that are part of a construction activity that will result in the disturbance of one or more acres, and discharge to surface waters of the State; and
3. Any size construction activity discharging stormwater to waters of the State that Ecology:
  - a) Determines to be a significant contributor of pollutants to waters of the State of Washington.
  - b) Reasonably expects to cause a violation of any water quality standard.

If there are known soil/ground water contaminants present on-site, additional information (including, but not limited to: temporary erosion and sediment control plans; stormwater pollution prevention plan; list of known contaminants with concentrations and depths found; a site map depicting the sample location(s); and additional studies/reports regarding contaminant(s)) will be required to be submitted.

You may apply online or obtain an application from Ecology's website at: [http://www.ecy.wa.gov/programs/eq/stormwater/construction/\\_Application](http://www.ecy.wa.gov/programs/eq/stormwater/construction/_Application). Construction site operators must apply for a permit at least 60 days prior to discharging stormwater from construction activities and must submit it on or before the date of the first public notice.

Ecology's comments are based upon information provided by the lead agency. As such, they may not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

If you have any questions or would like to respond to these comments, please contact the appropriate reviewing staff listed above.

Department of Ecology  
Southwest Regional Office

(JG: 201901972)

cc: Chris Montague-Breakwell, WQ  
Derek Rockett, SWM  
Doug Carney, Lewis County (Proponent)



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

DRAWING INFORMATION:

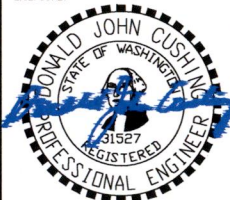
THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



909 N Beech Street, Suite D  
Portland, OR 97227  
(503) 387-5331  
[www.cushing-engr.com](http://www.cushing-engr.com)

LICENSURE:



RENEWAL DATE 10/31/21

SHEET TITLE

**GRADING &  
EROSION CONTROL  
NOTES & DETAILS II**

SHEET NUMBER

**C-4.2**

NOTE:  
• FOR CONCEPTUAL PURPOSES ONLY



PROJECT INFORMATION:  
**SITE:**  
**CHEHALIS RIDGE RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

DRAWING INFORMATION:  
THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



LICENSURE:



RENEWAL DATE 10/31/21

SHEET TITLE

**ANTENNA PLAN  
& DETAILS**

SHEET NUMBER

C-6



MODEL NUMBER HP4-S.2	WEIGHT 85 lbs
MANUFACTURER RADIO WAVES	DIMENSIONS 4' Ø



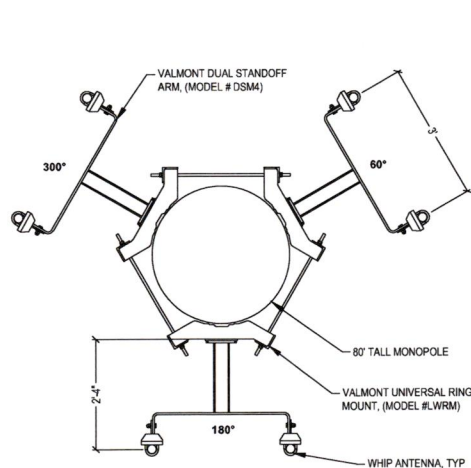
MODEL NUMBER HP3-S.2	WEIGHT 50 lbs
MANUFACTURER RADIO WAVES	DIMENSIONS 3' Ø



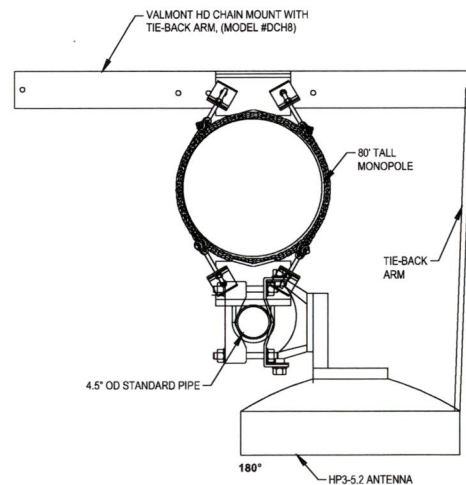
MODEL NUMBER D6ZZ2-a	WEIGHT 16 lbs
MANUFACTURER COMMSCOPE	DIMENSIONS 255 IN

## 1 ANTENNA DETAILS

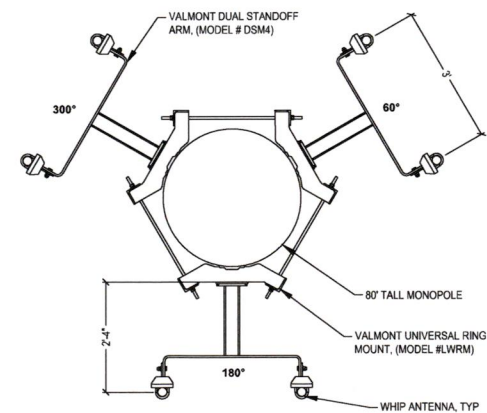
SCALE: N.T.S.



79' ELEVATION



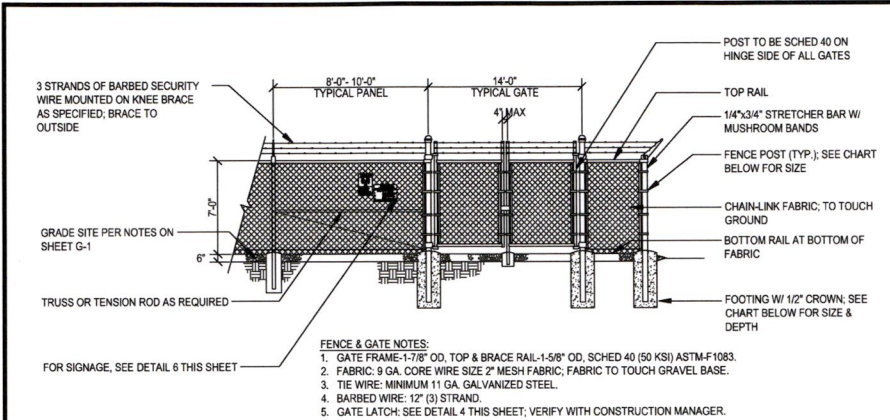
75' ELEVATION



50' ELEVATION

## 2 PROPOSED AZIMUTH DIAGRAMS

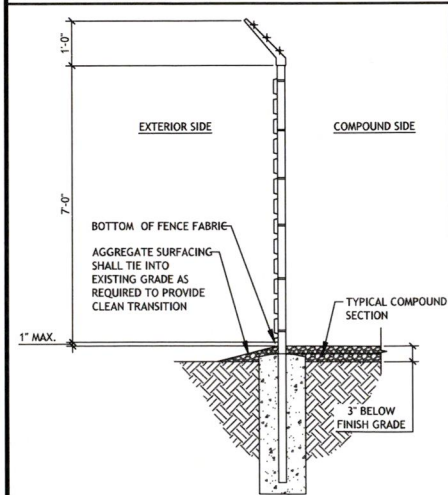
SCALE: N.T.S.



7' HIGH GATE/FENCE			
POST TYPE	POST DIAMETER	FOOTING SIZE	NOTES:
LINE POST	2-3/8"Ø	12"Øx24"	<ol style="list-style-type: none"> <li>ALL POSTS: SCHED 60 ASTM-F1083</li> <li>ALL FENCING TO BE ENGINEERED BY FENCING MANUFACTURER &amp; APPROVED BY PROJ. MGR</li> </ol>
CORNER POST	4"Ø	12"Øx36"	
GATE POST	4"Ø	12"Øx36"	
TOP RAIL	2"Ø		
BOTTOM RAIL	2"Ø		

6' HIGH GATE/FENCE			
POST TYPE	POST DIAMETER	FOOTING SIZE	NOTES:
LINE POST	2-3/8"Ø	12"Øx33"	<ol style="list-style-type: none"> <li>ALL POSTS: SCH. 40 (50 KSI) ASTM-F1083</li> <li>ALL FENCING TO BE ENGINEERED BY FENCING MANUFACTURER &amp; APPROVED BY PROJ. MGR. FENCE MANUFACTURER IS TO VERIFY ADEQUACY OF TABULATED POST &amp; FOOTING SIZES</li> </ol>
CORNER POST	4"Ø	16"Øx36"	
GATE POST	4"Ø	16"Øx36"	

## TYPICAL FENCE ELEVATION

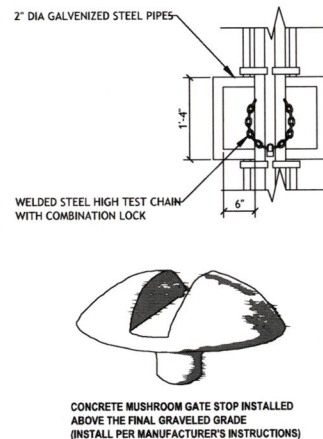


## TYPICAL FENCE SECTION

SCALE: NTS

## GATE LOCK & CENTER STOP

SCALE: NTS



## FENCING NOTES:

- GATE POST, CORNER, END, OR PULL POST 4" NOMINAL (4" O.D.) SCHEDULE 40 (50 KSI) PIPE, FOR GATE WIDTHS UP TO 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
- LINE POST: 2-3/8" O.D. 3.65 LBS/LIN FT. ASTM-F1083.
- TOP RAIL AND BRACE RAIL: 1-1/2" (1.9" O.D.) PIPE 2.72 LBS/LIN FT PER ASTM-F1083. INSTALL BRACE AT ALL CORNER LOCATIONS AND ADJACENT TO GATES.
- GATE FRAME: 1-1/2" (1.9 O.D.) 2.72 LBS/LIN FT. ASTM-F1083.
- FABRIC SHALL BE TWO-INCH CHAINLINK MESH NO. 9 GAUGE (0.148") WIRE. THE FABRIC SHALL HAVE A KNUCKLED FINISH FOR THE TOP SELVAGES. FABRIC SHALL CONFORM TO ASTM A-392 CLASS 1.
- TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL. PROVIDE A SINGLE WRAP OF FABRIC, TIE AT POSTS, RAILS, AND AT TENSION WIRE BY HOG RINGS.
- TENSION WIRE: MINIMUM 7 Ga. GALVANIZED STEEL.
- U.N.O. BARBED WIRE: DOUBLE STRAND 12 Ga. 1/2" O.D. TWISTED WIRE TO MATCH W/ FABRIC, 14 Ga. 4PT. BARBS SPACED ON APPROX. 5" CENTERS.
- U.N.O. BARBED WIRE GATE GUARDS SHALL BE FITTED WITH DOME CAPS.
- U.N.O. BARBED WIRE SUPPORT ARMS SHALL BE PRESSED STEEL COMPLETE WITH SET BOLT AND LOCK WIRE IN THE ARM.
- PROVIDE TWO 5 FOOT WIDE OUT SWINGING GATES, (UNLESS NOTED OTHERWISE). NO PERSONNEL GATES ARE REQUIRED (UNLESS AS DIRECTED BY THE CONSTRUCTION MANAGER). GATES SHALL BE ABLE TO LOCK.
- U.N.O. GATE POSTS SHALL BE EXTENDED 12 INCHES, INCLUDING DOME CAP, TO PROVIDE FOR ATTACHMENT OF BARBED WIRE.
- GATE FRAMES SHALL HAVE A FULL-HEIGHT VERTICAL BRACE, AND A FULL-WIDTH HORIZONTAL BRACE, SECURED IN PLACE BY USE OF GATE BRACE CLAMPS.
- GATE HINGES SHALL BE MERCHANTS METAL MODEL 64386 HINGE ADAPTOR WITH MODEL 6409, 180-DEGREE ATTACHMENT OR APPROVED EQUAL.
- GATE LATCH: 1-3/8" O.D. PLUNGER ROD W/ MUSHROOM TYPE CATCH.
- A 6" X 1/2" DIAMETER EYEBOLT TO HOLD TENSION WIRE SHALL BE PLACED AT LINE POSTS.
- STRETCHER BARS SHALL BE 3/16" OR HAVE EQUIVALENT CROSS-SECTIONAL AREA.
- U.N.O. ALL POSTS EXCEPT GATE POSTS SHALL HAVE A COMBINATION CAP AND BARBED WIRE SUPPORTING ARM.
- ALL CAPS SHALL BE MALLEABLE IRON, DOME OR ACORN SHAPED AS REQUIRED BY PIPE SIZE.
- OTHER HARDWARE MAY INCLUDE BUT NOT BE LIMITED TO TIE CLIPS, BAND CLIPS AND TENSION BAND CLIPS.
- U.N.O. WHERE THE USE OF CONCERTINA HAS BEEN SPECIFIED, 24" DIAMETER COIL. BARBED TAPE, STAINLESS STEEL, CYCLONE FENCE MODEL GBP TO TYPE III SHALL BE FURNISHED. IT SHALL BE SUPPORTED ABOVE THE TOP RAIL BY USE OF SIX (6) BARBED WIRE ARMS POSITIONED ATOP EACH LINE/CORNER POST.
- U.N.O. ALL CHAINLINK FENCING COMPONENTS MUST BE HOT DIPPED GALVANIZED.
- WHEN IN USE, PRIVACY SLATS TO BE A NEUTRAL COLOR.

## GENERAL FENCE NOTES

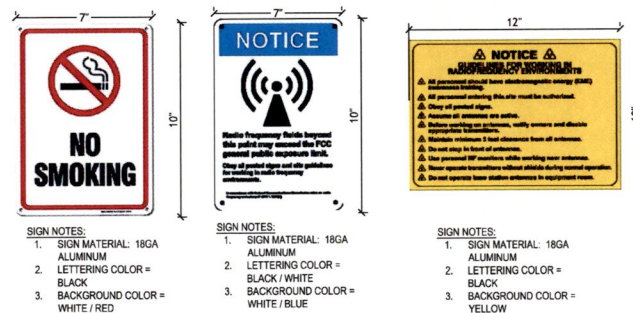
SCALE: NTS

2

## NOT IN USE

SCALE: NTS

3



## NOT IN USE

SCALE: NTS

6



## PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

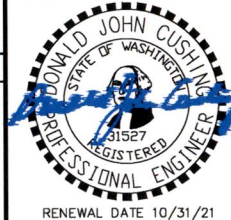
## DRAWING INFORMATION:

THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

## PLANS PREPARED BY:



## LICENSURE:

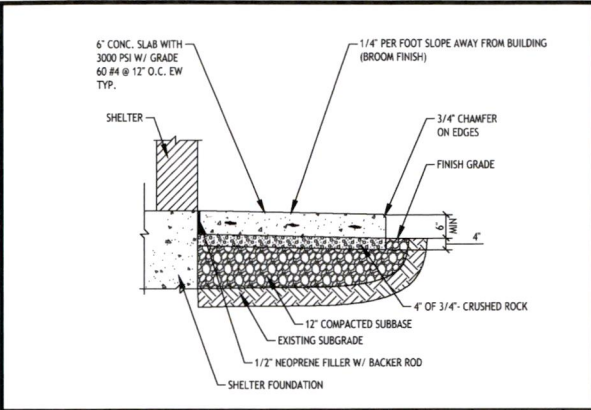


## SHEET TITLE

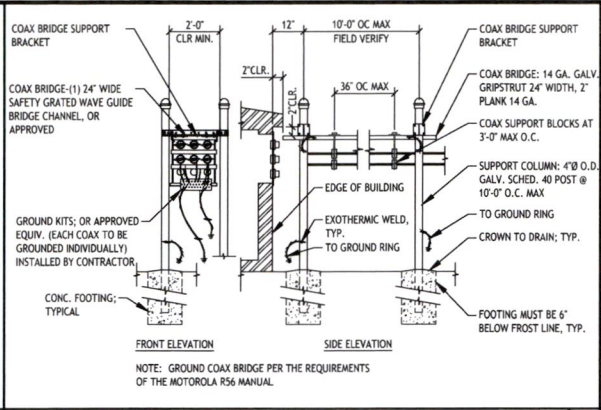
**FENCE DETAILS**

## SHEET NUMBER

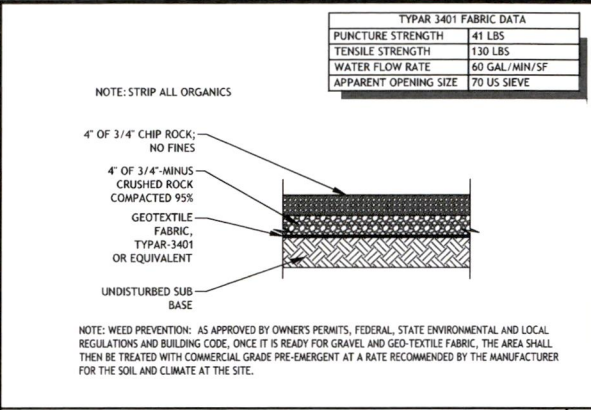
C-7



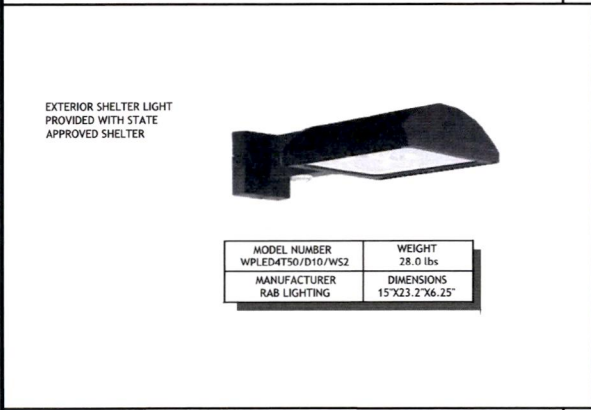
CONCRETE SHELTER ENTRANCE SECTION DETAIL



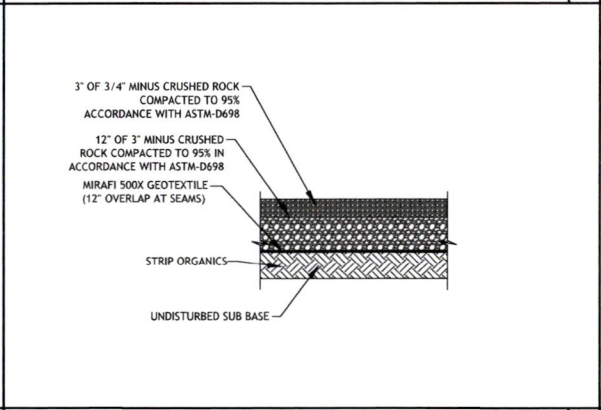
ICE BRIDGE DETAIL



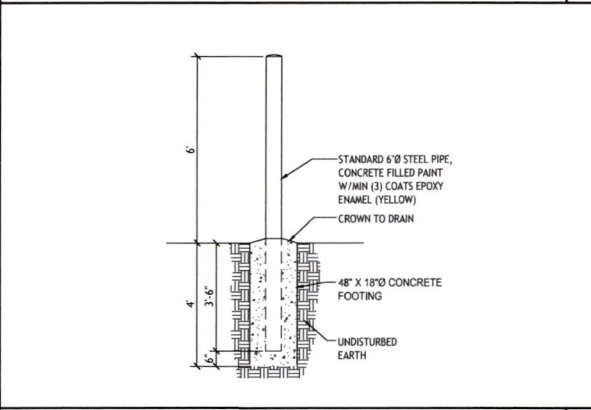
COMPOUND SECTION DETAIL



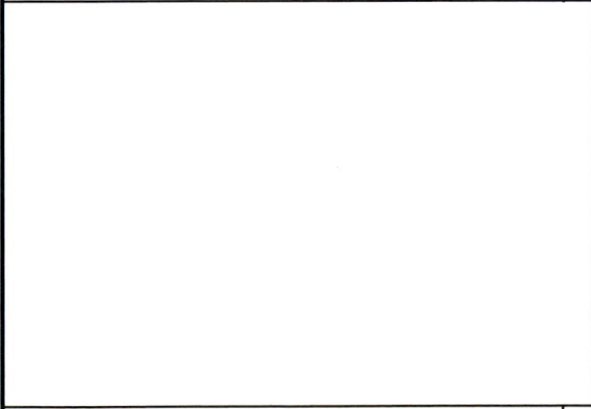
SHELTER LIGHT



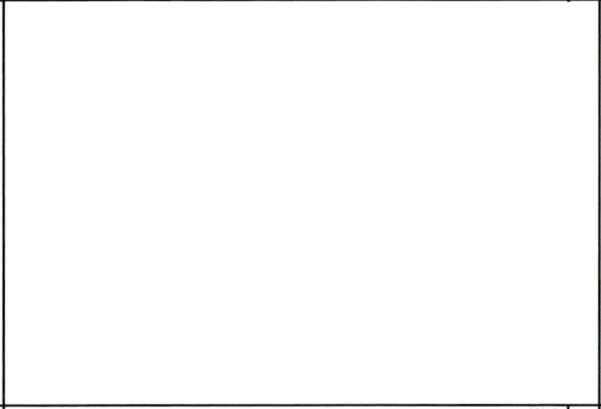
GRAVEL ACCESS ROAD DETAIL



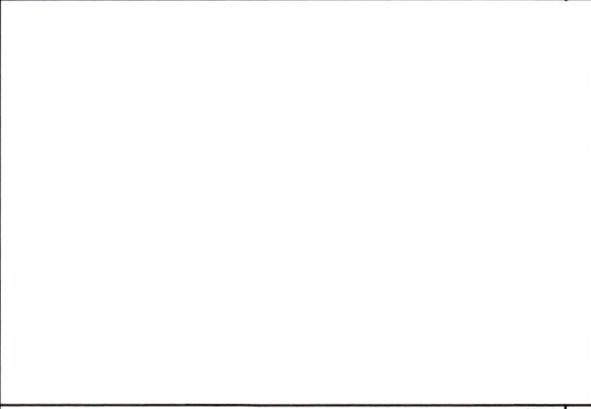
BOLLARD DETAIL



NOT IN USE



NOT IN USE



NOT IN USE

PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

DRAWING INFORMATION:

THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:

905 N Beech Street, Suite D  
Portland, OR 97227  
(503) 387-5331  
www.cushing-engr.com

LICENSURE:

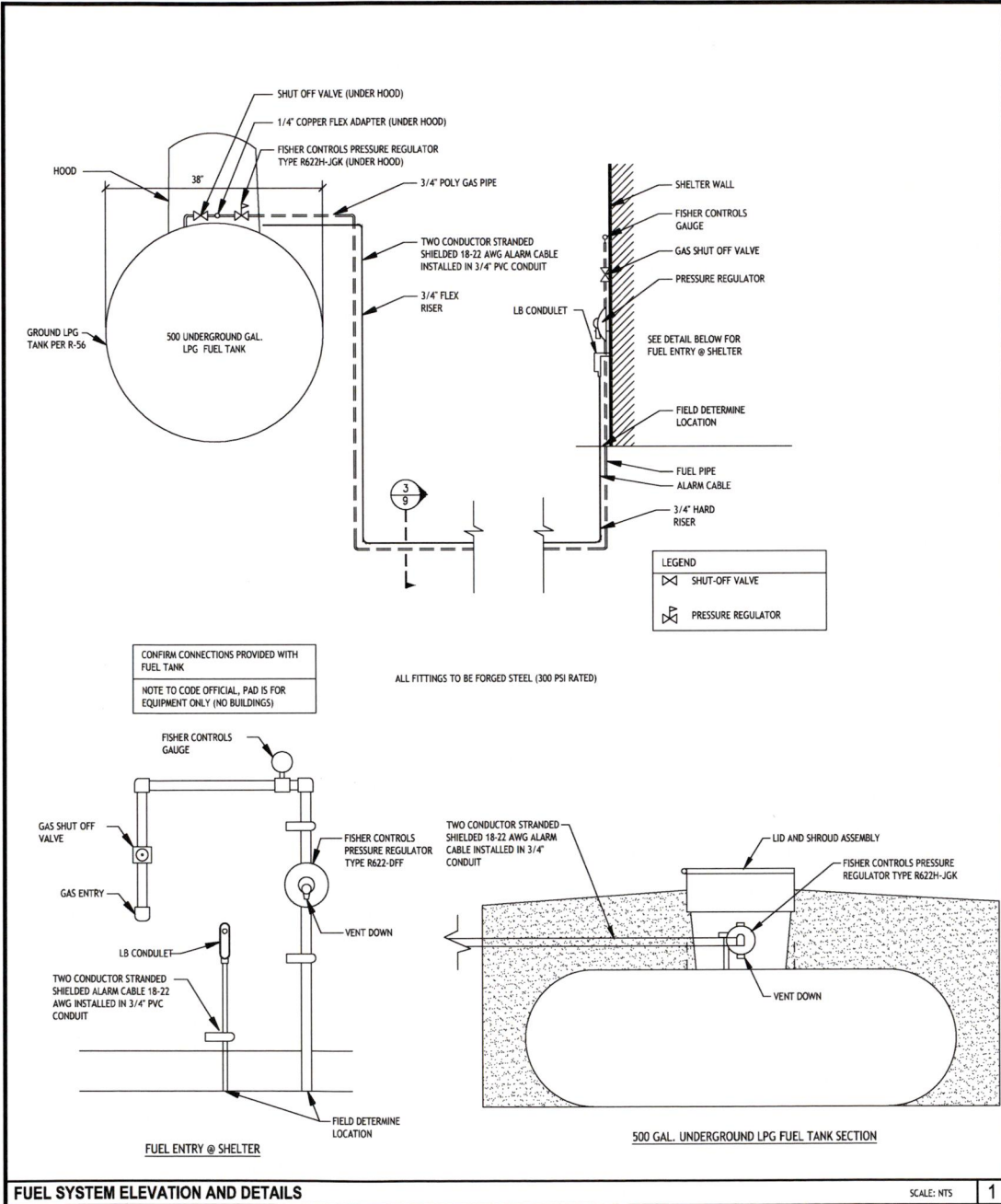
RENEWAL DATE 10/31/21

SHEET TITLE

**COMPOUND DETAILS**

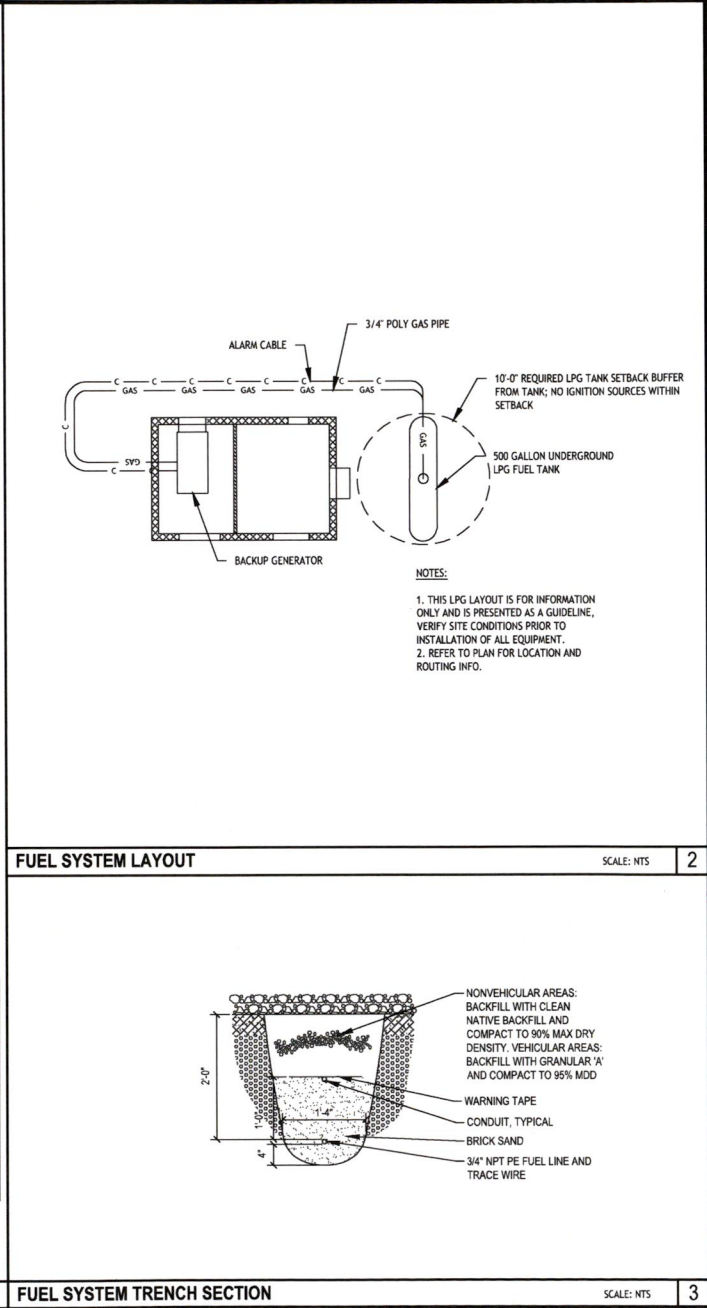
SHEET NUMBER

**C-8**



FUEL SYSTEM ELEVATION AND DETAILS

SCALE: NTS



FUEL SYSTEM TRENCH SECTION

SCALE: NTS



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
 1201 NORTH END AVE.,  
 CHEHALIS, WA 98532

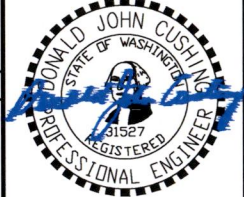
DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

DRAWING INFORMATION:  
 THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



LICENSURE:

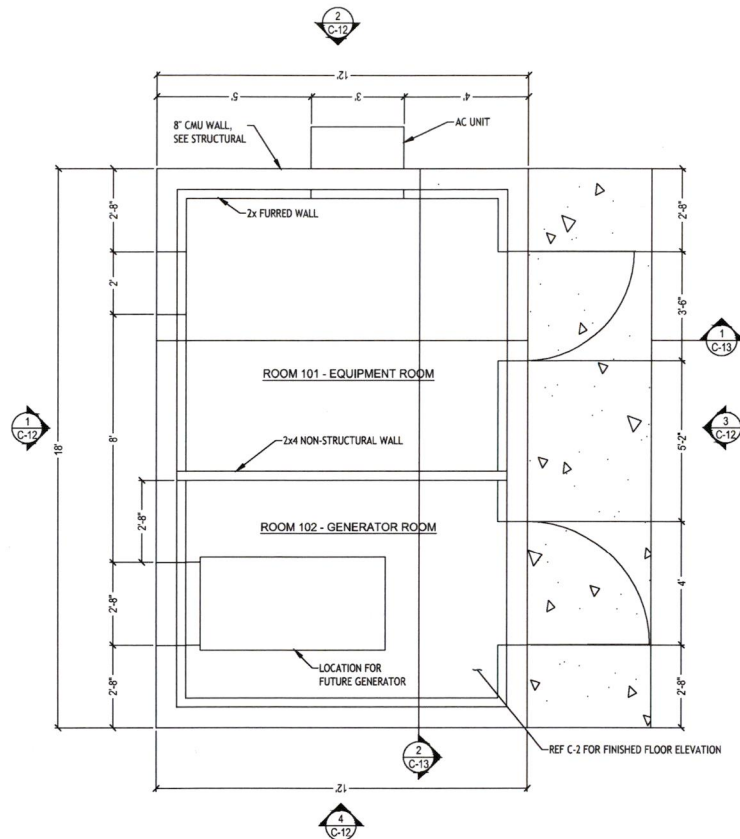


RENEWAL DATE 10/31/21

SHEET TITLE  
**LIQUID PROPANE**  
**GAS DETAILS**




SHEET NUMBER

C-9



1 FLOOR PLAN  
NTS

#### WALL LEGEND

-  8" CMU WALL, REF STRUCTURAL
-  2X4 FURRING OVER CMU WALL WITH R-13 BATT INSULATION, 5/8" TYPE X GWB IN GENERATOR ROOM AND FIRE-RATED PLYWOOD SHEATHING IN EQUIPMENT ROOM
-  2x6 NON-BEARING WALL WITH NO INSULATION, W/ 5/8" TYPE X GWB ON GENERATOR ROOM SIDE AND FRT PLYWOOD SHEATHING ON EQUIPMENT ROOM SIDE

NOTE: CEILING OF BOTH ROOMS TO BE 3/4" PLYWOOD W/ 5/8" TYPE X GWB ON GENERATOR ROOM SIDE, FIRE-RATED PLYWOOD SHEATHING ON EQUIPMENT ROOM SIDE

#### ATTIC VENTILATION NOTES

AREA VENTILATED = 178 S.F.  
REQD VENTN =  $1:150 = 1.187$  S.F. = 171 S.I.  
RIDGE VENTS PROVIDED = 18 L.F. AT 12 S.I. PER L.F. = 216 S.I.  
EAVE VENTS PROVIDED = 36 L.F. AT 12 S.I. PER L.F. = 432 S.I.  
GABLE VENTS PROVIDED = (2) x 144 S.I. = 288 S.I.  
TOTAL VENTN PROVIDED = 936 S.I.

RIDGE AND EAVE VENTS TO PROVIDE MIN 12 SI VENTILATION PER LF AND TO HAVE SCREENS WITH  $\frac{1}{4}"$  MAX OPENING

DOOR SCHEDULE								
DOOR	SIZE (WxH)	TYPE	COLOR	MATERIAL	MATERIAL	FINISH	HEAD HEIGHT	REMARKS
001	3'-6" x 6'-8"	LEAF	-	HOLLOW METAL	HOLLOW METAL	-	6'-8"	
002	3'-0" x 6'-8"	LEAF	-	HOLLOW METAL	HOLLOW METAL	-	6'-8"	

#### DOOR NOTES

- ALL DOORS TO RECIEVE ADA DEADBOLT AND LOCKSET
- ALL DOOR HARDWARE TO BE MOUNTED 36" ABOVE FLOOR. ALL DOORS TO MEET ACCESSIBILITY REQUIREMENTS OF THE BUILDING CODE 2015 OF WASHINGTON CHAPTER 11.
- ALL DOOR HANDLES, PULLS, LATCHES AND LOCKS TO BE OPERABLE WITHOUT TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.
- EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.



#### PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

#### DRAWING INFORMATION:

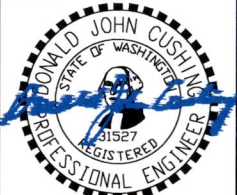
THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

#### PLANS PREPARED BY:



909 N Beach Street, Suite D  
Portland, OR 97227  
(503) 387-5331  
www.cushing-engr.com

#### LICENSURE:



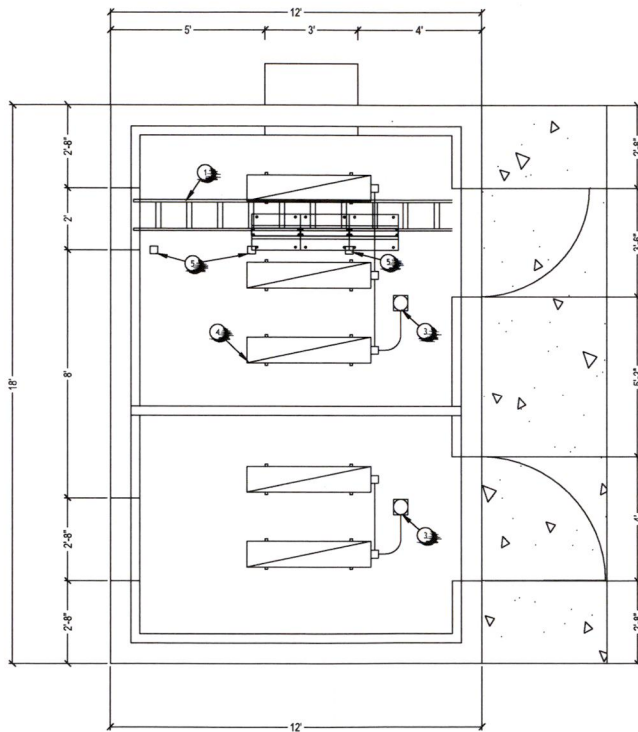
RENEWAL DATE 10/31/21

#### SHEET TITLE

**SHELTER FLOOR PLAN**

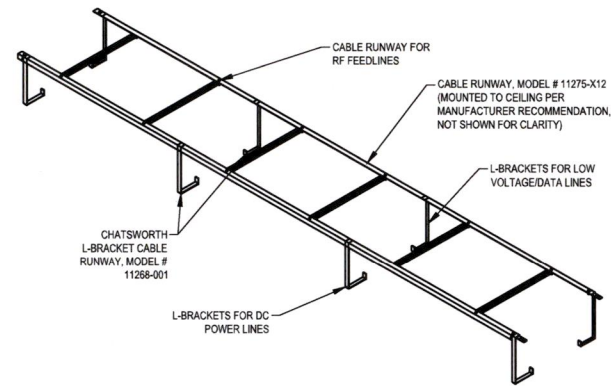
#### SHEET NUMBER

C-10



1 REFLECTED CEILING PLAN  
NTS

COMMON PARTS LIST			
ITEM	QTY	NAME	PART DESCRIPTION
1	1	12 INCH WIDE CABLE TRAY	WITH AUDIBLE ALARM
2		4' LIGHT FIXTURE	WRAP-AROUND CEILING FIXTURE WITH ACRYLIC PRISMATIC LENS AND ENERGY SAVING BALLAST DOUBLE TUBE T8 RAPID START
3		SMOKE/CARBON MONOXIDE DETECTOR	WITH AUDIBLE ALARM
4		UNITSTRUT	1-5/8" DEEP x 12" LONG
5		TWIST LOCK DUPLEX CEILING MOUNT RECEPTACLES	



2 CABLE TRAY DETAIL  
NTS



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

DRAWING INFORMATION:  
THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



LICENSURE:



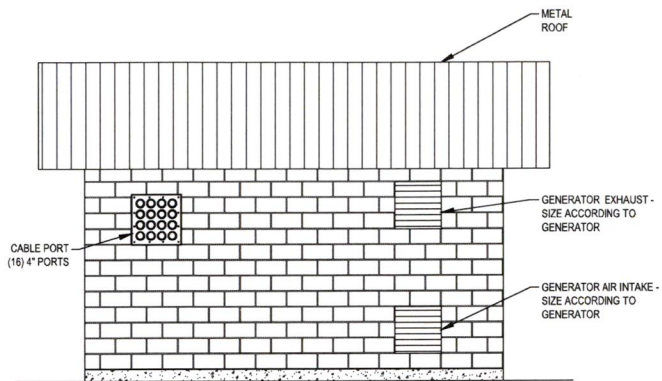
RENEWAL DATE 10/31/21

SHEET TITLE

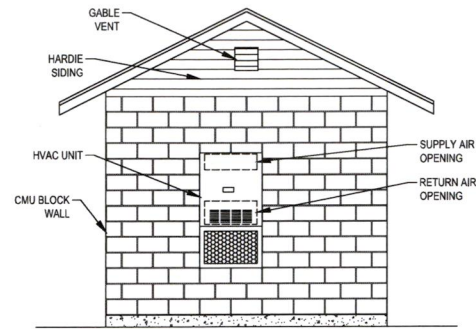
**SHELTER**  
**REFLECTED**  
**CEILING PLAN**

SHEET NUMBER

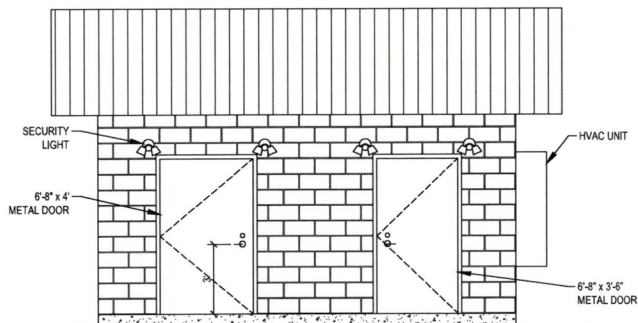
**C-11**



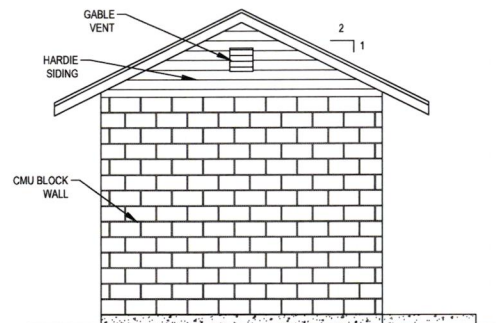
1 NORTHWEST ELEVATION  
SCALE: 3/8" = 1'-0"



2 SOUTHWEST ELEVATION  
SCALE: 3/8" = 1'-0"



3 SOUTHEAST ELEVATION  
SCALE: 3/8" = 1'-0"



4 NORTHEAST ELEVATION  
SCALE: 3/8" = 1'-0"



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

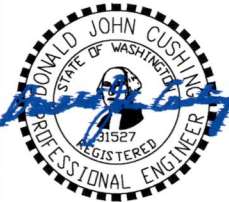
DRAWING INFORMATION:

THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



LICENSURE:



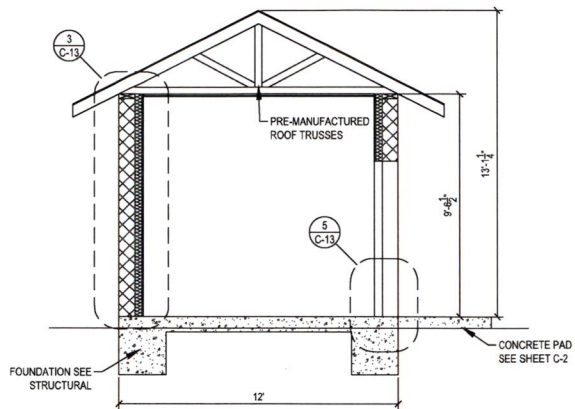
RENEWAL DATE 10/31/21

SHEET TITLE

**SHELTER**  
**ELEVATIONS**

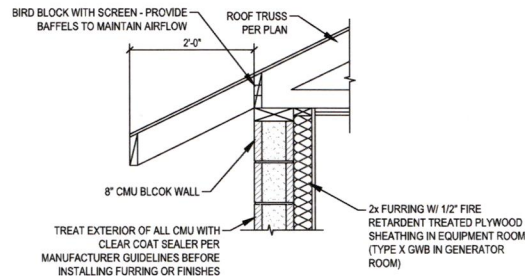
SHEET NUMBER

C-12



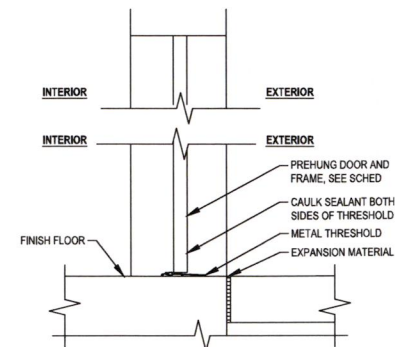
1 SECTION WITH INTERNAL VIEW LOOKING NORTHEAST

NTS



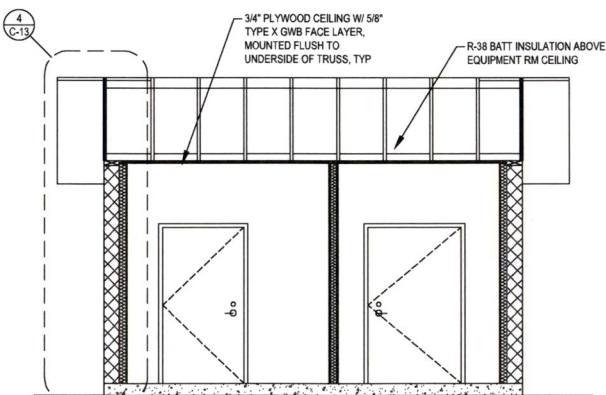
3 NORTHWEST WALL SECTION

NTS



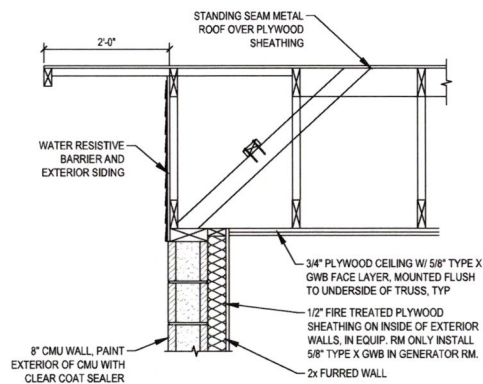
5 SECTION DOOR THRESHOLD

NTS



2 SECTION WITH INTERNAL VIEW LOOKING SOUTHEAST

NTS



4 NORTHWEST WALL SECTION

NTS



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

DRAWING INFORMATION:

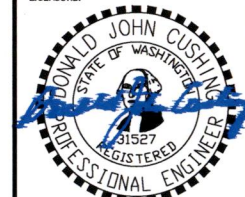
THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



909 N Beech Street, Suite D  
Portland, OR 97227  
(503) 387-5311  
www.cushing-engr.com

LICENSURE:



RENEWAL DATE 10/31/21

SHEET TITLE

**SHELTER**  
**SECTIONS**

SHEET NUMBER

**C-13**

SEE T-1 AND G-1 FOR ADDITIONAL GENERAL NOTES, GOVERNING CODES, AND PROJECT DESCRIPTION.

**DESIGN CRITERIA:**

CONSTRUCTION LL: 20 PSF

ROOF SNOW LOAD DATA -	GROUND SNOW LOAD:	25 PSF
	FLAT-ROOF SNOW LOAD:	25 PSF
	SNOW EXPOSURE FACTOR:	1.0
	SNOW LOAD IMPORTANCE FACTOR:	1.20
WIND DESIGN DATA -	THERMAL FACTOR (GEN. SHELTER):	1.0
	ULTIMATE DESIGN WIND SPEED:	115 MPH
	RISK CATEGORY:	IV
	WIND EXPOSURE:	C
EARTHQUAKE DESIGN DATA - (PER GEO. RPT. 3/5/04)	INTERNAL PRESSURE COEFFICIENT:	0.18±
	DESIGN WIND PRESSURES:	
	WIND LOAD HORIZONTAL (MMFRS):	27 PSF
	WIND LOAD (UPLIFT) (MMFRS):	20 PSF
	RISK CATEGORY:	IV
	SEISMIC IMPORTANCE FACTOR:	1.5
	MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS:	
	S <sub>s</sub>	1.154
	S <sub>1</sub>	0.501
	SITE CLASS:	D
	DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:	
	S <sub>ms</sub>	0.799
	S <sub>o1</sub>	0.501
	SEISMIC DESIGN CATEGORY:	D
	SEISMIC FORCE-RESISTING SYSTEM:	SPECIAL REINFORCED MASONRY SHEAR WALLS
	DESIGN BASE SHEAR:	0.1598W
	SEISMIC RESPONSE COEFFICIENT:	0.1598
	RESPONSE MODIFICATION COEFFICIENT:	5.00

GEOTECHNICAL INFORMATION - DESIGN LOAD-BEARING VALUES OF SOIL: 2,000 PSF FOR SPREAD FOOTINGS (SEE BLACK MOUNTAIN GEO. RPT. 3/19/19)

**SUBMITTALS:**

- SHOP DRAWINGS FOR ALL STRUCTURAL ITEMS DESIGNED BY OTHERS SHALL BE SUBMITTED TO THE CIVIL ENGINEER PRIOR TO FABRICATION AND CONSTRUCTION. THIS INCLUDES CONCRETE MIX DESIGNS, GROUT MIX DESIGNS, CONCRETE REINFORCEMENT, MASONRY REINFORCEMENT, REINFORCEMENT STEEL MILL CERTIFICATIONS, SLAB JOINT LAYOUT, PRE-MANUFACTURED WOOD JOISTS, AND MEP ANCHORAGES AND BRACING.
- CALCULATIONS AND DRAWINGS FOR ITEMS THAT ARE DESIGNED BY OTHERS SHALL BE SEALED AND STAMPED BY A PROFESSIONAL ENGINEER WHO IS LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.
- DESIGNS THAT MODIFY THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED AND ACCEPTANCE BY THE ENGINEER OF RECORD.
- DESIGNS SHALL CONFORM TO THE SPECIFICATION, REFERENCE STANDARDS, AND GOVERNING CODES. MINIMUM DESIGN LOADINGS ARE LISTED BELOW.

ROOF TRUSS DESIGN LOADS:  
ROOF DEAD LOAD = 14 PSF  
TOP CHORD = 8 PSF  
BOTTOM CHORD = 6PSF  
ROOF SNOW LOAD = 25 PSF

ROOF TOTAL DEFLECTION LIMIT = L/240  
ROOF LIVE LOAD DEFLECTION LIMIT = L/360

**TESTING AND INSPECTIONS:**

- INSPECTIONS SHALL BE IN ACCORDANCE WITH SECTION 110 AND CHAPTER 17 OF THE IBC.
- THE CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS WITH THE BUILDING OFFICIAL AND SPECIAL INSPECTOR.

**MASONRY:**

- ALL MASONRY SHALL COMPLY WITH THE REQUIREMENTS OF IBC CHAPTER 21 "MASONRY", TMS 602/ACI 530/ASCE 5, AND TMS 402/ACI 530.1/ASCE 6
- QUALITY ASSURANCE PROGRAM SHALL BE IN ACCORDANCE WITH THE INSPECTION AND TESTING REQUIREMENTS OF IBC SECTION 2105, CHAPTER 17, AND TMS 602/ACI 530.1/ASCE 6.
- MORTAR SHALL COMPLY WITH IBC 2103.2.2, 2103.2.3, OR 2103.2.4
- GROUT SHALL COMPLY WITH ARTICLE 2.2 OF TMS 602/ACI 530.1/ASCE 6
- METAL REINFORCEMENT AND ACCESSORIES SHALL CONFORM TO ARTICLE 2.4 OF TMS 602/ACI 530.1/ASCE 6
- PREPARATION, PROTECTION, AND CONSTRUCTION OF MASONRY DURING HOT OR COLD WEATHER (ABOVE 90°F AND BELOW 40°F), SHALL COMPLY WITH ACI 530.1 ARTICLE 1.8 C AND 1.8 D

**WOOD:**

- ALL WOOD FRAMING SHALL CONFORM TO THE REQUIREMENTS OF IBC CHAPTER 23 "WOOD"
- SAWN LUMBER AND PRE-MANUFACTURED WOOD PRODUCTS SHALL BE IDENTIFIED BY GRADE MARK OR CERTIFICATE OF INSPECTION ISSUED BY A CERTIFYING AGENCY (WWPA, WCLIS, OR NLGA)
- METAL PLATE TRUSSES SHALL MEET THE REQUIREMENTS OF IBC SECTION 2303.4 AS WELL AS THE LATEST EDITION OF ANSITP1 NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION.
- PRESERVATIVE TREATED LUMBER SHALL BE USED IN APPLICATIONS WHERE REQUIRED BY IBC 2304.12. WOOD USED IN DIRECT CONTACT WITH CONCRETE, 6" FROM WEATHER, OR USED TO FUR EXTERIOR MASONRY WALLS IS REQUIRED TO BE PRESERVATIVE TREATED. LUMBER USED SHALL BE APPROPRIATELY MARKED PER 2303.1.9. FASTENERS USED IN CONTACT WITH TREATED LUMBER SHALL BE IN ACCORDANCE WITH 2304.10.5.
- FIRE RETARDANT TREATED (FRT) WOOD MEMBERS SHALL HAVE A CURRENT ICC-ES EVALUATION REPORT.
- WOOD MATERIAL SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19%.
- WOOD STRUCTURAL PANELS SHALL CONFORM TO THE REQUIREMENTS OF DOC PS 1, DOC PS 2, OR ANSI/APA PRP 210 AND IBC 2303.1.5. UNLESS NOTED OTHERWISE IN DRAWINGS INSTALL PANELS WITH LONG DIMENSION ACROSS SUPPORTS AND CONTINUOUS OVER TWO OR MORE SPANS. END JOINTS SHALL OCCUR OVER SUPPORTS.
- ALL SILL PLATES AND LEDGERS SHALL BE INSTALLED WITH MINIMUM OF THREE FASTENERS.
- FASTENING OF WOOD MEMBERS SHALL NOT BE LESS THAN THAT SET FORTH IN IBC TABLE 2304.10.1.

**CONCRETE:**

- REFER TO CONCRETE NOTES ON G-1.



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-17-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

DRAWING INFORMATION:

THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



909 N Beach Street, Suite D  
Portland, OR 97227  
(503) 387-5331  
www.cushing-engr.com

LICENSURE:



RENEWAL DATE 10/31/21

SHEET TITLE

**STRUCTURAL**  
**GENERAL NOTES**

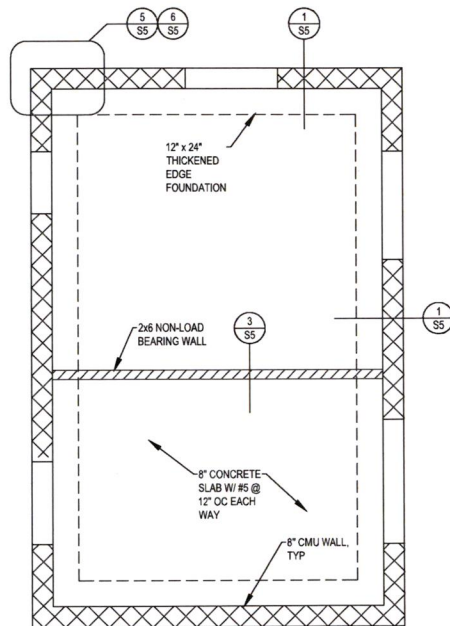
SHEET NUMBER

S-1

**GENERAL STRUCTURAL NOTES**

SCALE: NTS

1



1 FOUNDATION PLAN  
3/4" = 1'-0" 22X34

#### FOUNDATION PLAN NOTES

1. SEE G-1 AND S-1 FOR GENERAL NOTES, DESIGN CRITERIA, AND LEGEND
2. VERIFY DIMENSIONS AND ADDITIONAL DETAILS WITH CIVIL DRAWINGS
3. CONSTRUCTION AND CONTROL JOINTS SHALL BE LOCATED AND DETAILED AS ON THE CONSTRUCTION DRAWINGS
4. FOLLOW SUBGRADE AND STRUCTURAL FILL REQUIREMENTS OF THE GEOTECHNICAL REPORT
5. PROVIDE 6 MIL VAPOR BARRIER BELOW THE SLAB AT INTERIOR SPACES
6. REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 "DEFORMED AND PLAIN BILLET STEEL BARS FOR CONCRETE REINFORCEMENT" LATEST EDITION, GRADE 60
7. LAP LENGTH FOR SPLICES SHALL NOT BE LESS THAN A CLASS B SPLICE. WELDING OF REINFORCEMENT WILL NOT BE PERMITTED



#### PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

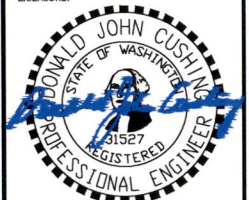
#### DRAWING INFORMATION:

THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

#### PLANS PREPARED BY:



#### LICENSURE:

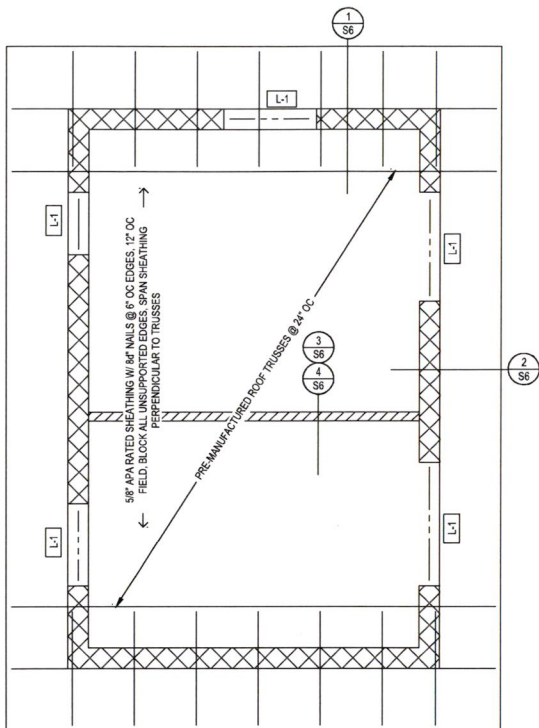


RENEWAL DATE 10/31/21

SHEET TITLE  
**FOUNDATION**  
**PLAN**

SHEET NUMBER

**S-2**



1 ROOF FRAMING PLAN  
3/4" = 1'-0" 22X34

#### ROOF FRAMING PLAN NOTES

- SEE G-1 AND S-1 FOR GENERAL NOTES, DESIGN CRITERIA, AND LEGEND
- VERIFY DIMENSIONS AND ADDITIONAL DETAILS WITH CIVIL DRAWINGS
- VERIFY LOCATION AND SIZE OF ALL WALL PENETRATIONS
- TRUSSES ARE DESIGNED BY OTHERS. TRUSS MANUFACTURER TO REVIEW PLANS AND DETAILS TO ACCOUNT FOR SPECIFIC CONDITIONS. TRUSS LAYOUT SHOWN ON THIS PLAN IS APPROXIMATE, TRUSS MANUFACTURER RESPONSIBLE FOR FINAL TRUSS LAYOUT AND CONFIGURATION. FOR STANDARD LOADS AND SUBMITTAL INFORMATION SEE G-1 AND S-1

LINTEL SCHEDULE		
TAG	REINFORCEMENT	NOTES
L-1	LINTEL W/ (2) #4	EXTEND BARS 16" MIN BEYOND OPENING



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

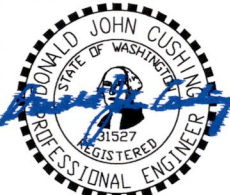
DRAWING INFORMATION:

THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



LICENSURE:



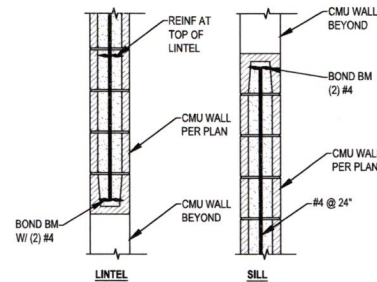
RENEWAL DATE 10/31/21

SHEET TITLE

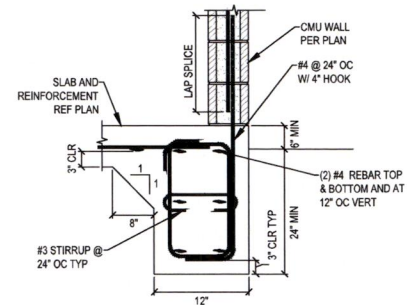
**ROOF FRAMING**  
**PLAN**

SHEET NUMBER

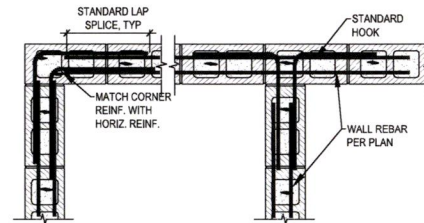
**S-3**



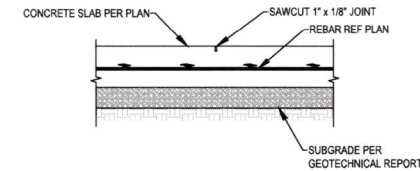
5  
S5 NTS CMU LINTEL AND SILL



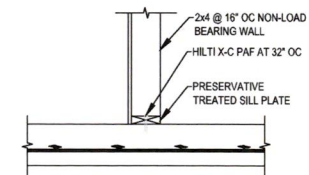
1  
S5 NTS EXT FOOTING AT CMU WALL



5  
S5 NTS CMU CORNER/INTERSECTION



2  
S5 NTS SLAB CONTROL JOINT



3  
S5 NTS FOUNDATION AT NON-LOAD BEARING WALL



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

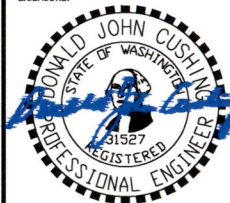
DRAWING INFORMATION:  
THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



909 N Beech Street, Suite D  
Portland, OR 97227  
(503) 387-5311  
www.cushing-engr.com

LICENSURE:

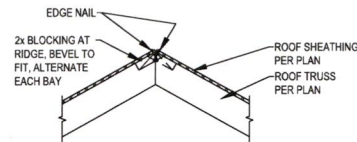


RENEWAL DATE 10/31/21

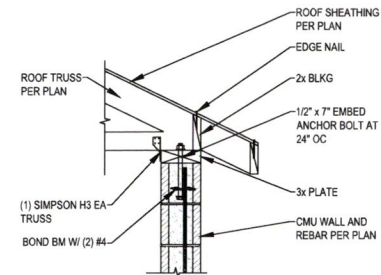
SHEET TITLE  
**STRUCTURAL**  
**DETAILS I**

SHEET NUMBER

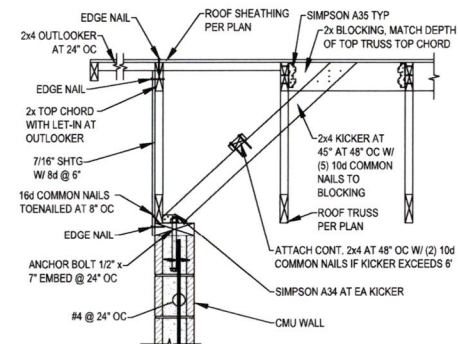
S-4



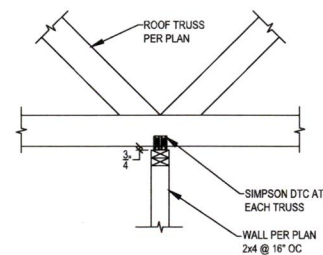
4 ROOF RIDGE  
S6 NTS



1 TRUSS TO CMU WALL  
S6 NTS



2 GABLE END AT CMU WALL  
S6 NTS



3 TRUSS AT INTERNAL WALL  
S6 NTS



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

DRAWING INFORMATION:

THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



909 N Beech Street, Suite D  
Portland, OR 97227  
(503) 387-5331  
www.cushing-engr.com

LICENSURE:



RENEWAL DATE 10/31/21

SHEET TITLE

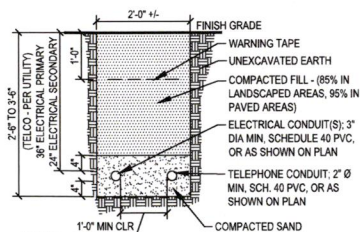
**STRUCTURAL**  
**DETAILS II**

SHEET NUMBER

S-5

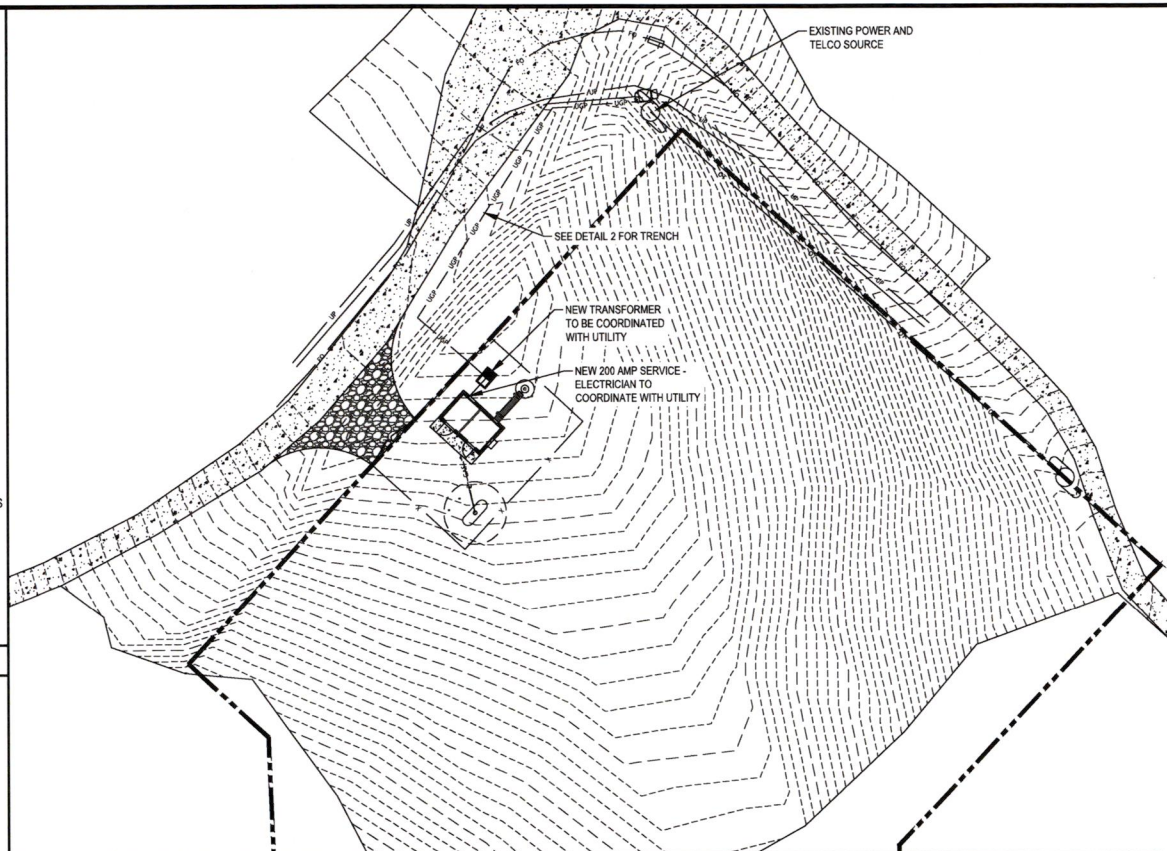
1. CUSTOMER IS RESPONSIBLE FOR ALL TRENCH, CONDUIT, VAULTS, PADS AND ROAD CROSSINGS.
2. ALL CONDUIT TO BE INSTALLED WITH 30 INCHES (MIN) COVER AT TOP OF CONDUIT FROM FINAL GRADE.
3. ALL CONDUCTORS TO BE INSTALLED IN GRAY, SCHEDULE 40, ELECTRICAL GRADE, PVC CONDUIT WITH NYLON PULL STRINGS (MIN. 500 LBS. TEST).  
PGE TO DETERMINE THE SIZE AND NUMBER OF CONDUITS REQUIRED.  
MAINTAIN MINIMUM 12 VERTICAL AND HORIZONTAL INCHES CLEARANCE BETWEEN GAS AND OTHER UTILITIES. ALL ELBOWS 4 INCH & SMALLER TO BE 36 INCH RADIIUS. ALL BENDS MUST BE FACTORY MADE. ALL ELBOWS LARGER THAN 4 INCH TO BE 60 INCH RADIIUS. RIGID STEEL OR PGE APPROVED. FIBERGLASS BENDS ARE REQUIRED FOR RUNS OF 151 FEET OR LONGER, OR FOR ANY LENGTH RUN WITH MORE THAN 180 DEGREES IN BENDS. PVC SCHEDULE 40 BENDS ARE ACCEPTABLE FOR RUNS OF 150 FEET OR LESS. THE MAXIMUM TOTAL BENDS IN ANY CONDUIT RUN IS 270 DEGREES
4. ALL TRANSFORMERS TO BE INSTALLED 8 FEET (MIN) FROM ANY COMBUSTIBLE BUILDING, WALL OR OVERHANG AND 4 FEET (MIN) FROM ANY FIRE HYDRANT. PGE TRANSFORMERS MUST BE WITHIN 15 FEET OF A DRIVEABLE AREA.  
ALWAYS MAINTAIN 10 FEET CLEARANCE IN FRONT OF ALL TRANSFORMERS.
5. TRANSFORMER PADS ARE TO BE SET SO THAT THE TOP IS 2 INCHES ABOVE FINAL GRADE. CONDUIT IS TO BE INSTALLED IN PAD AS INDICATED IN DETAIL AND TO EXTEND 1 INCH ABOVE THE PAD.
6. STEEL BARRIER POSTS ARE REQUIRED AROUND TRANSFORMERS THAT ARE EXPOSED TO VEHICLES.
7. ALL SWITCH VAULTS TO BE SET AT FINAL GRADE WITH 6 INCH GRAVEL BASE AND CONDUITS ALIGNED TO ENTER THE VAULT END LOWER KNOCKOUTS (TERMA-DUCTS).  
(SEE DETAIL ON SKETCH)
8. REFER TO PGE ELECTRICAL SERVICE REQUIREMENTS BOOK FOR FURTHER DETAILS & SPECIFIC REQUIREMENTS. LINK TO [WWW.PORTLANDGENERAL.COM](http://WWW.PORTLANDGENERAL.COM)
9. DESIGN IS BASED ON STANDARD UNDERGROUND EQUIPMENT. NON-STANDARD UNDERGROUND EQUIPMENT MAY BE AN OPTION AT AN ADDITIONAL COST TO THE CUSTOMER.

SCALE: NTS 1



1. EXCAVATE TO REQUIRED DEPTH
2. VERIFY ALL TRENCHING REQUIREMENTS PER LOCAL UTILITIES
3. CONTRACTOR TO PROVIDE (1) 300 POUND NYLON PULL CORD AND CONDUCTORS AS REQUIRED PER CONDUIT

## SCALE: NTS 2

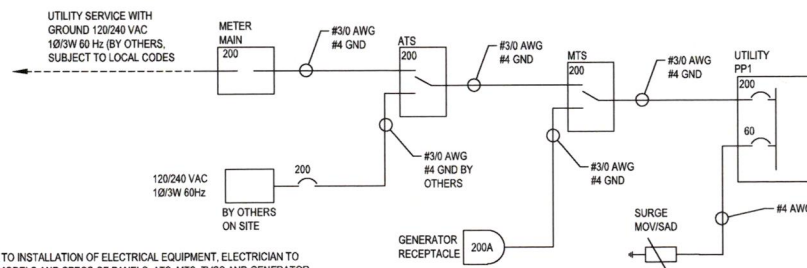


## SITE UTILITY PLAN

11X17 SCALE: 1" = 40'

22X34 SCALE: 1" = 20'

1



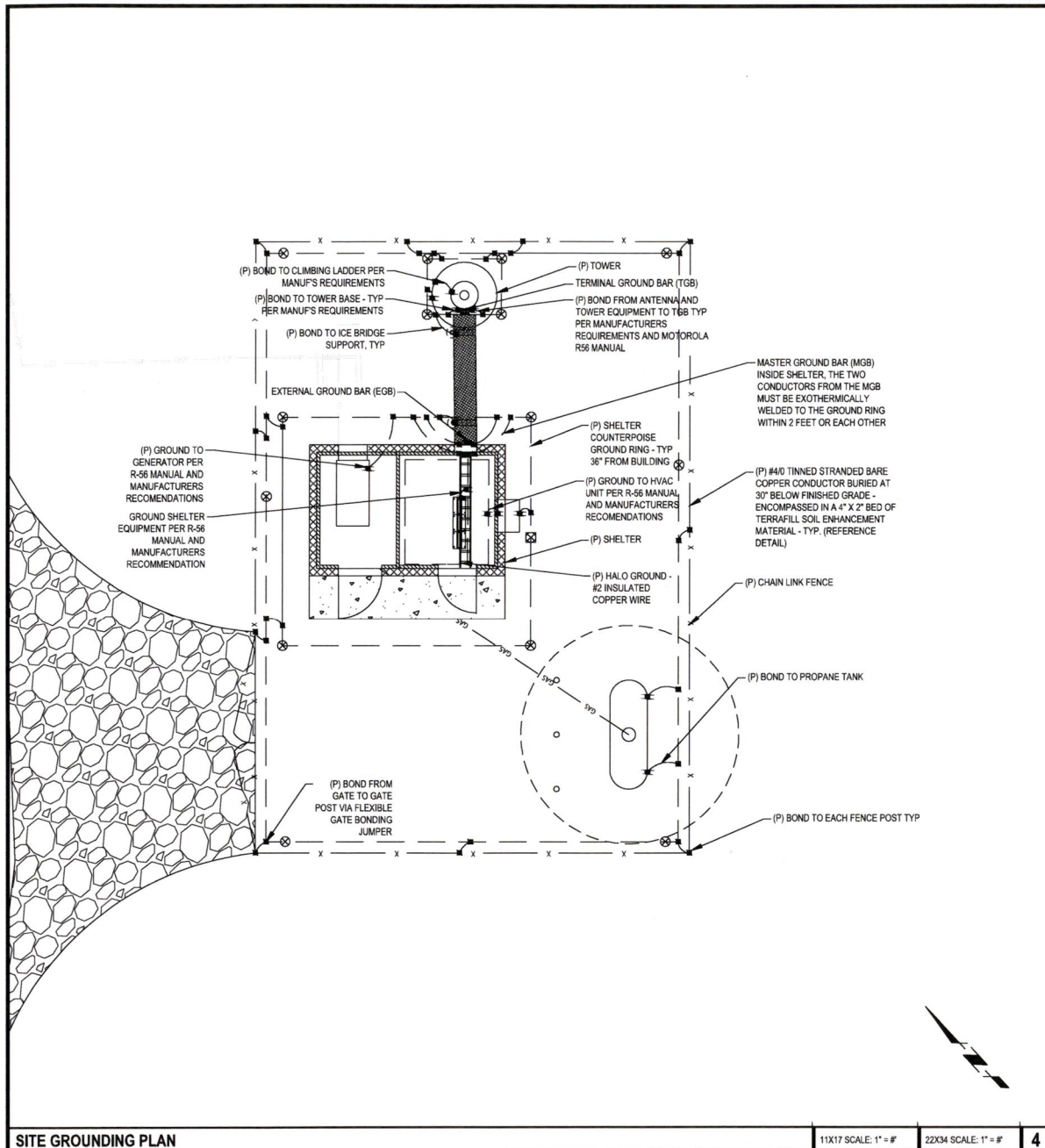
NOTE:

1. PRIOR TO INSTALLATION OF ELECTRICAL EQUIPMENT, ELECTRICIAN TO SUBMIT MODELS AND SPECS OF PANELS, ATS, MTS, TVSS AND GENERATOR PLUG FOR LEWIS COUNTY PM APPROVAL.
2. THE CONDUCTOR SIZING IN THIS DETAIL IS A GUIDELINE AND MAY VARY BASED UPON LENGTHS AND ROUTING IN THE FIELD. NEC CODE REQUIREMENTS TAKE PRECEDENCE OVER THESE DRAWINGS

## SCALE: NTS

4





SITE GROUNDING PLAN

11X17 SCALE: 1" = 5'

22X34 SCALE: 1" = 5'

4

## LEGEND

### LEGEND:

- TERRADYNE TG-10L-H36-2T-36-4F-P SERIES ELECTRODE W/ INSPECTION WELL
- EXOTHERMIC WELD
- MECHANICAL CONNECTION
- ⊗ 5/8" x 10' COPPER CLAD GROUND ELECTRODE
- ⊗ 5/8" x 10' COPPER CLAD GROUND ELECTRODE W/ INSPECTION SLEEVE
- #2 TINNED SOLID COPPER CONDUCTOR

BASED ON PROVIDED SOIL RESISTIVITY TEST DATA DATED 3/14/2019: LEVELS AVG.  
23,171 OHM-CM @ 5'

300'	CONDUCTOR, TINNED (2-T)
1	# OF TERRADYNE GROUND ROD, HORIZONTAL (TG-10L-H36-2T-36-3F-P)
14	# OF 5/8" X 10' COPPER CLAD GROUND ELECTRODE (5001)
24	BAGS OF TERRAFILL SOIL ENHANCEMENT (TF-50) WITH 4" X 2" BED
SOIL RESISTANCE = < 5 OHMS RESISTANCE TO EARTH VALUE	

## GROUNDING SUMMARY

1

- ALL INSTALLATIONS ARE TO BE FIELD VERIFIED.
- GROUND CONDUCTORS ARE TO BE BURIED AT A MINIMUM 30" BELOW GRADE OR 6" BELOW FREEZE LINE, WHICHEVER IS GREATER.
- ALL BELOW GRADE GROUNDING CONDUCTORS ARE TO BE ENCOMPASSED IN A 4" X 4" BED OF TERRAFILL SOIL ENHANCEMENT MATERIAL.
- BONDS TO FENCE POSTS ARE TO BE MADE AT 12" ABOVE GRADE WHERE APPLICABLE.
- NO CONDUCTOR SHALL HAVE A BEND IN RADIUS OF LESS THAN 12" AND SHALL NOT EXCEED 90 DEGREES.
- TERRADYNE ELECTROLYTIC GROUND ELECTRODES ARE NOT TO SHARE THE SAME TRENCH AS GROUNDING CONDUCTOR, NOR RUN IN A PARALLEL PATH TO THE CONDUCTOR.
- ALL GROUND SYSTEMS ARE TO BE MADE COMMON.
- ALL BONDS ARE TO BE COATED WITH ANTI-OXIDATION COMPOUND.
- WHERE STANDARD GROUND ELECTRODES ARE UNABLE TO BE DRIVEN, THE FOLLOWING ALTERNATIVES SHALL BE USED IN ORDER OF PRIORITY
  - GROUND ROD SPECIAL CASE INSTALLATION, PER DETAILS SHOWN ON SHEET E-2, SECTION 2
  - TERRADYNE ELECTROLYTIC GROUND ELECTRODE, PER DETAILS SHOWN ON SHEET E-3, SECTION 2
  - 12" X 12" X 1/8" COPPER GROUND PLATES SHALL BE INSTALLED 30" BELOW FINISHED GRADE & ENCOMPASSED IN 50LBS OF TERRAFILL SOIL ENHANCEMENT MATERIAL.
- ALL CONNECTIONS SHALL BE EXOTHERMICALLY WELDED.

## GENERAL NOTES

2



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

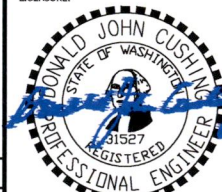
DRAWING INFORMATION:

THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



LICENSURE:



RENEWAL DATE 10/31/21

SHEET TITLE

**GROUNDING**  
**SITE PLAN**

SHEET NUMBER

E-2

3



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE		RELEASE
9-14-2020	FINAL CD	
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD	
5-18-2021	FINAL CD	

DRAWING INFORMATION:  
THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



LICENSURE:



RENEWAL DATE 10/31/21

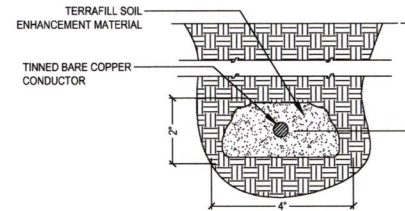
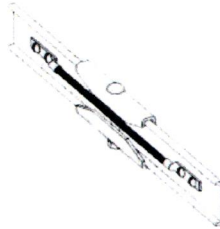
SHEET TITLE

**EXTERIOR**  
**GROUNDING**  
**DETAILS I**

SHEET NUMBER

E-3

NOTE: ALTERNATIVE  
BONDING FOR CABLE  
TRAYS WHEN  
MANUFACTURER  
BONDING NOT PRESENT



NOT USED

SCALE: NTS

1

CABLE TRAY BONDING CONDUCTOR

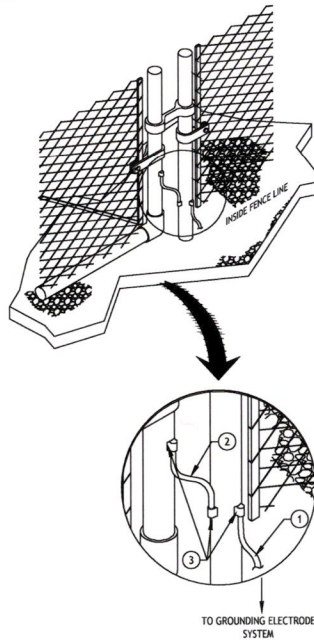
SCALE: NTS

2

SOIL ENHANCEMENT DETAIL

SCALE: NTS

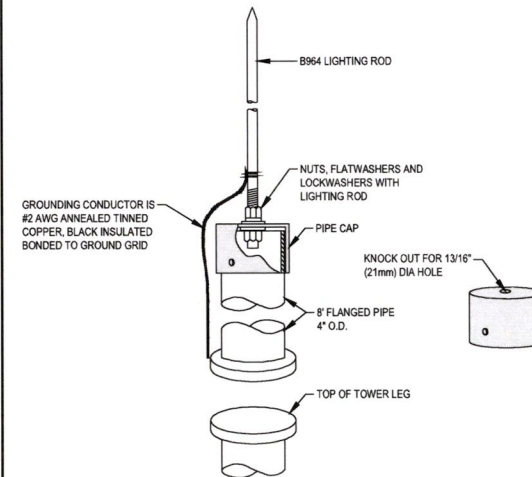
3



KEYNOTES:

- 1 2/0 AWG BARE TINNED STRANDED COPPER CONDUCTOR. USE 4/0 AWG IN SUBSTATION. EXOTHERMICALLY WELDED TO FENCE POST 12" ABOVE FINISHED GRADE
- 2 #2 AWG COPPER LITZ WIRE OR 3/4" COPPER BRAID
- 3 EXOTHERMIC CONNECTION IS PREFERRED, OR LUGS THROUGH - BOLTED TO GATE POSTS.

GROUNDING CONDUCTOR IS  
#2 AWG ANNEALED TINNED  
COPPER, BLACK INSULATED  
BONDED TO GROUND GRID



NOT USED

SCALE: NTS

4

FENCE POST AND GATE BONDING

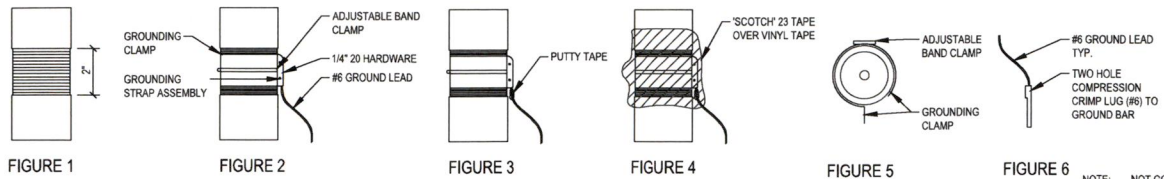
SCALE: NTS

5

LIGHTING ROD DETAIL

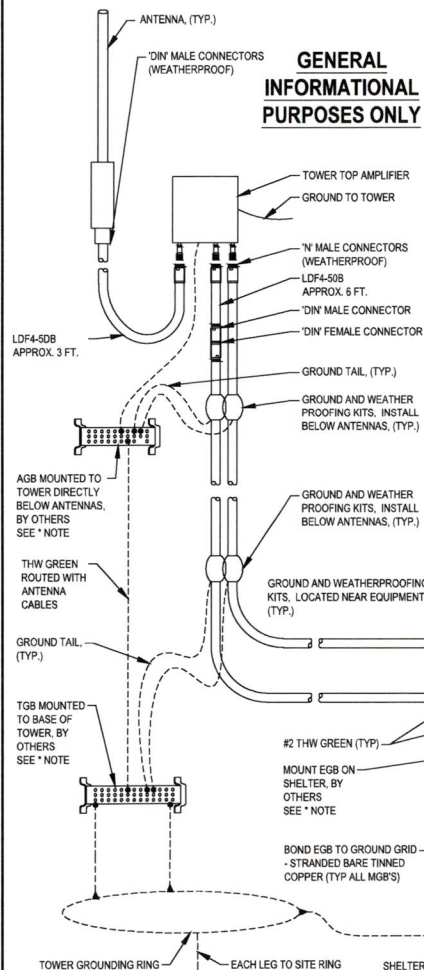
SCALE: NTS

6



## FEED LINE CABLE GROUNDING

NOTE: WEATHER PROOF ALL FEED LINE CONNECTIONS AND GROUNDS PER RS6 STANDARDS AND PER ATTACHED WEATHER PROOFING DRAWING



## GENERAL INFORMATIONAL PURPOSES ONLY

NOTE: ALL GROUNDING DESIGN, SPECIFICATIONS, AND CONSTRUCTION METHODS SHALL COMPLY WITH THE MOTOROLA RS6 "STANDARDS AND GUIDELINES FOR COMMUNICATION SITES".

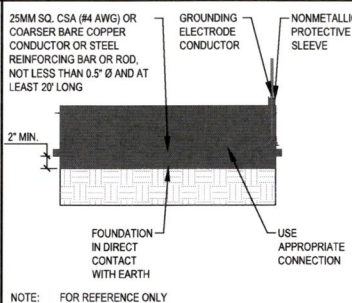
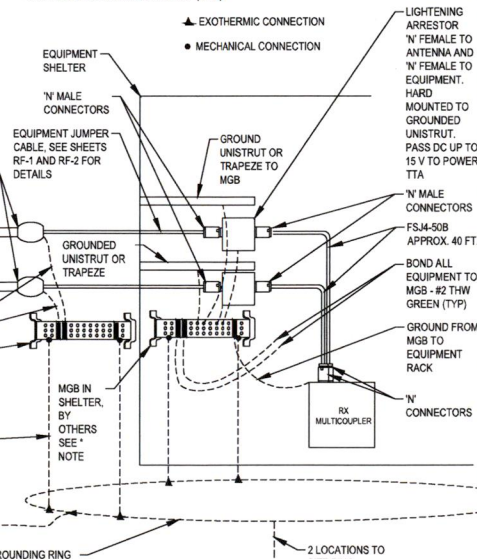
- 1 MAIN CONDUCTOR, COPPER CABLE
- 2 5/8" X 10' COPPER CLAD STEEL GROUND ROD, TO BE PLACED ON CENTER 10' ALONG CONDUCTOR
- 3 EXOTHERMIC TYPE "NC"
- 4 EXOTHERMIC TYPE "GT"

## GROUND ROD DETAIL

SCALE: NTS 4

NOTE: BENDS SHOWN ON GROUND TAILS AND GROUND CONNECTION WIRES ARE FOR ILLUSTRATION PURPOSES ONLY. AVOID EXCESSIVE BENDS. WIRES TO BE AS STRAIGHT AS POSSIBLE; INSTALL DIRECT FROM EQUIPMENT TO GROUND POINT. ALL GROUNDING DESIGN, SPECIFICATIONS, AND CONSTRUCTION METHODS SHALL COMPLY WITH THE MOTOROLA RS6 "STANDARDS AND GUIDELINES FOR COMMUNICATION SITES".

\* CONTRACTOR TO PROVIDE STUB UP (TYP.)



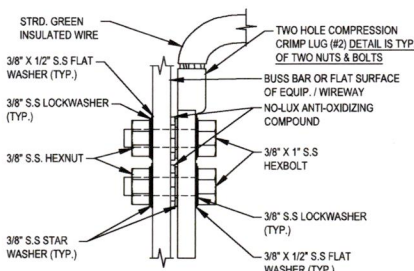
## UFER DETAIL

SCALE: NTS 5

- NOTES
1. TYP. FOR ALL GROUND WIRES FOR ELECT. AND OTHER EQUIPMENT.
  2. THE ENTIRE LUG AND AREA TO BE SPRAYED WITH CLEAR LAQUER OR COLD GALVANIZING SPRAY
  3. GROUND LEADS TO BE EXOTHERMIC WELDED TO GROUND RING.

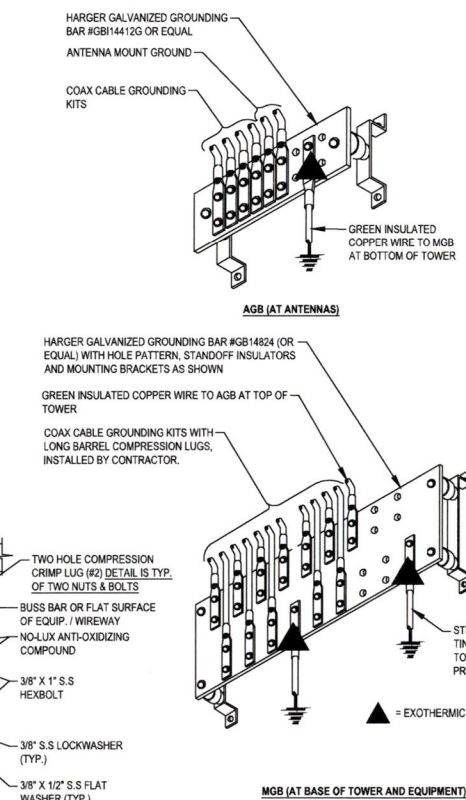
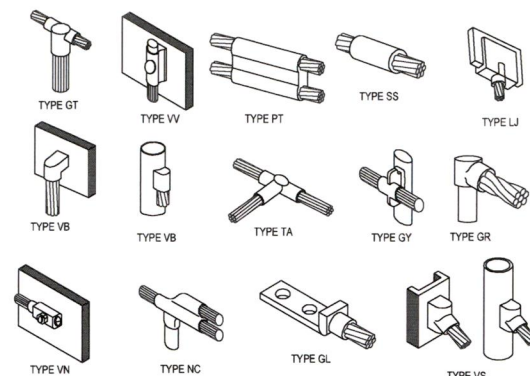
GENERAL NOTES

ALL ANTENNAS, LINES AND RELATED INSTALLATION HARDWARE TO BE PROVIDED BY THE LAND MOBILE COMMUNICATIONS PROVIDER.



## TYPICAL EXOTHERMIC CONNECTION DETAILS

SCALE: NTS 3



## TYPICAL RX GROUNDING SCHEMATICS (SEE OUTSIDE AND INSIDE TRANSMISSION LINE DETAILS)

SCALE: NTS 1

## GROUND BAR DETAILS

SCALE: NTS 6



PROJECT INFORMATION:

**SITE:**  
**CHEHALIS RIDGE**  
**RADIO SITE**  
1201 NORTH END AVE.,  
CHEHALIS, WA 98532

DATE	RELEASE
9-14-2020	FINAL CD
10-27-2020	UPDATED LAYOUT - PRELIMINARY CD
5-18-2021	FINAL CD

DRAWING INFORMATION:

THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF THE OWNER. IT IS PRODUCED SOLELY FOR USE BY THE OWNER AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF THE OWNER.

PLANS PREPARED BY:



909 N. Beech Street, Suite D  
Portland, OR 97227  
(503) 387-6331  
www.cushing-engr.com

LICENSURE:



RENEWAL DATE 10/31/21

SHEET TITLE

**EXTERIOR**  
**GROUNDING**  
**DETAILS II**

SHEET NUMBER

E-4



*Lewis County Facilities*

351 NW North Street  
Chehalis WA 98532

---

**BID PACKET FOR:**  
**Chehalis Ridge Radio Site Project**  
**Project #31-1617**

---

**OFFERED BY:**

LEWIS COUNTY  
DEPARTMENT OF INTERNAL SERVICES

351 NW North Street  
Chehalis, WA 98532

**Mailing Address:**

351 NW North Street  
Chehalis WA 98532  
ATTN: Capital Facilities  
Phone: 360-740-1192

# **BID PACKET CONTENTS**

1. BID ADVERTISEMENT/INSTRUCTIONS TO BIDDERS
2. CHECKLIST
3. PLANS AND SPECIFICATIONS
4. CENTRAL SERVICES CONTRACT/GENERAL CONDITIONS/SPECIAL CONDITIONS
5. PREVAILING WAGE NOTICE
6. PERFORMANCE BOND
7. CERTIFICATE OF INSURANCE
8. NON COLLUSION AFIDAVIT
9. BID FORM

# BOCC AGENDA ITEM SUMMARY

**Resolution:** 21-288

**BOCC Meeting Date:** Aug. 10, 2021

**Suggested Wording for Agenda Item:**

**Agenda Type:** Legal Notice

Call for Bids for the Chehalis Ridge Radio Site

**Contact:** Doug Carey

**Phone:** 3607401337

**Department:** IS - Internal Services (including SWWF and Facilities)

## **Description:**

Call for Bids for the Chehalis Ridge Radio Tower

## **Approvals:**

User	Status
PA's Office	Approved
Steve Wohld	Pending

## **Publication Requirements:**

### **Publications:**

The Chronicle August 10 and 17

The Seattle Daily Journal August 10

## **Additional Copies:**

## **Cover Letter To:**