



City of Tacoma, WA

TACOMA POWER

REQUEST FOR BIDS

TOWER PAINTING WEATHERWAX RIDGE & PETERMAN HILL

SPECIFICATION NO. PG22-0290N





City of Tacoma
TACOMA POWER/ GENERATION
REQUEST FOR BIDS PG22-0290N
Tower Painting Weatherwax Ridge & Peterman Hill

Submittal Deadline: 11:00 a.m., Pacific Time, Wednesday, December 21, 2022

Submittals must be received by the City's Procurement and Payables Division prior to 11:00 a.m. Pacific Time.

For electronic submittals, the City of Tacoma will designate the time of receipt recorded by our email, sendbid@cityoftacoma.org, as the official time of receipt. This clock will be used as the official time of receipt of all parts of electronic bid submittals.

Submittal Delivery: Submittals will be received as follows:

By Email:

sendbid@cityoftacoma.org

Maximum file size: 35 MB. Multiple emails may be sent for each submittal.

Bid Opening: Submittals in response to a RFB will be recorded as received by a Purchasing representative. Final results are posted to our website www.TacomaPurchasing.org as they come available.

Solicitation Documents: An electronic copy of the complete solicitation documents may be viewed and obtained by accessing the City of Tacoma Purchasing website at www.TacomaPurchasing.org.

- [Register for the Bid Holders List](#) to receive notices of addenda, questions and answers and related updates.
- Click here to see a [list of vendors registered for this solicitation](#).

Pre-Proposal Meeting: A pre-proposal meeting will be held at the Tacoma Public Utilities Building, 3628 S. 35th St. Tacoma, WA 98409 on Tuesday, December 6, 2022, at 10:00 a.m. Please confirm attendance with Ms. Carly Fowler at cfowler@cityoftacoma.org.

Project Scope: This project includes painting of Weatherwax Ridge 70-foot self-supporting tower and Peterman Hill 140-foot self-supporting tower including all cleaning and preparation. Coatings include full prime coat, intermediate, and topcoat.

Estimate: \$325,000

Paid Sick Leave: The City of Tacoma requires all employers to provide paid sick leave as set forth in Title 18 of the Tacoma Municipal Code. For more information, visit [our Minimum Employment Standards Paid Sick Leave webpage](#).

Americans with Disabilities Act (ADA Information): The City of Tacoma, in accordance with Section 504 of the Rehabilitation Act (Section 504) and the Americans with Disabilities Act (ADA), commits to nondiscrimination on the basis of disability, in all of its programs and activities. Specification materials can be made available in an alternate format by emailing Gail Himes at ghimes@cityoftacoma.org, or by calling her collect at 253-591-5785.

Federal Title VI Information:

"The City of Tacoma" in accordance with provisions of Title VI of the Civil Rights Act of 1964, (78 Stat. 252, 42 U.S.C. sections 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin in consideration of award.

Additional Information: Requests for information regarding the specifications may be obtained by contacting Carly Fowler, Buyer by email to cfowler@cityoftacoma.org

Protest Policy: City of Tacoma [protest policy](#), located at www.tacomapurchasing.org, specifies procedures for protests submitted prior to and after submittal deadline.



Meeting sites are accessible to persons with disabilities. Reasonable accommodations for persons with disabilities can be arranged with 48 hours advance notice by calling 253-502-8468.

SPECIFICATION CONTENTS

This Specification contains the following:

1. Request for Bids
2. Bidder's Checklist
3. Letters and Calls
4. Special Notice to Bidders
5. Signature Page
6. Certification of Compliance with Wage Payment Statutes
7. State Responsibility and Reciprocal Bid Form
8. Proposal Sheets
9. Contractor's Record of Prior Contracts (Three Minimum, Section 01300 – Subsection 1.1)
10. List of Equipment
11. Insurance Certificate Requirements
12. Contractor's Work Hazard Analysis Report
13. Contractor Performance Review
14. General Provisions
15. Prevailing Wages
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17. Special Provisions
18. Technical Provisions
19. Appendices
 - Appendix A – Site Visit Reports
 - Appendix B – Coating Product Sheets
 - Appendix C – Sample Documents

BIDDER'S CHECK LIST

The bidder's attention is especially called to the following forms which must be submitted with your bid:

- (a) Schedule of bid price.
The unit/lump sum prices bid must be shown in the space provided.
- (b) Signature page.
To be completed and signed by the bidder.
- (c) Certification of Compliance with Wage Payment Statutes
- (d) Contractor's Record of Prior Contracts **(required)**.
- (e) List of Equipment **(required)**.
- (f) State Responsibility and Reciprocal Bid Preference Form **(required)**.
- (g) "Submittals Required with Bid" as are listed in the Special Provisions Section 01300 – Submittals and Shop Drawings (for construction contracts) or Submittals Section (for supply contracts).
- (h) Sustainability Worksheet

The following forms are to be executed after the contract is awarded:

- (a) Contract
This agreement is to be executed by the successful bidder.
- (b) Performance and Payment Bonds **(required)**.
To be executed by the successful bidder and his surety company, and countersigned by a local resident agent of said surety company.
- (c) Contractor's Work Hazard Analysis Report (for construction contracts only)
- (d) General Release to the City of Tacoma (for construction contracts only).
To be executed by the successful bidder upon completion of work and prior to the receipt of the final payment.
- (e) Insurance Requirements

LETTERS AND CALLS

All information requested prior to the bid opening is subject to the limitations in Paragraph 1.02 of the **General Provisions**.

Address all letters to the Department of Public Utilities, P. O. Box 11007, Tacoma, Washington 98411.

For questions regarding General Provisions, Special or Technical Provisions, direct attention to Carly Fowler, Buyer, cfowler@cityoftacoma.org.

For letters and calls regarding the EIC Program, direct attention to the EIC Program Coordinator at 253-591-5224 for calls, and to EIC/Community & Economic Development, Tacoma Municipal Building, 747 Market Street, Tacoma, Washington 98402, for letters.

For letters and calls regarding the LEAP Program, direct attention to the LEAP Coordinator at 253-594-7933 for calls, and to LEAP/ Community & Economic Development, Tacoma Municipal Building, 747 Market Street, Tacoma, Washington 98402, for letters.

All letters shall indicate the title and specification number (prior to award) or title and contract number (following award).

**CITY OF TACOMA
FINANCE/PURCHASING DIVISION
SPECIAL NOTICE TO BIDDERS**

Public works and improvement projects for the City of Tacoma are subject to Washington state law and Tacoma Municipal Code, including, but not limited to the following:

I. STATE OF WASHINGTON

A. RESPONSIBILITY CRITERIA – STATE OF WASHINGTON

In order to be considered a responsible bidder the bidder must meet the following mandatory state responsibility criteria contained in RCW 39.04.350:

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 bid submittal**;
2. Have a current Washington Unified Business Identifier (UBI) number;
3. If applicable:
 - a. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;
 - b. Have a Washington Employment Security Department number, as required in Title 50 RCW;
 - c. Have a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW and;
4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 (unlicensed or unregistered contractors) or 39.12.065(3) (prevailing wage).
5. Have received training on the requirements related to public works and prevailing wage under this chapter and chapter 39.12 RCW and must designate a person or persons to be trained on these requirements. The training must be provided by the department of labor and industries or by a training provider whose curriculum is approved by the department. Bidders that have completed three or more public works projects and have had a valid business license in Washington for three or more years are exempt from this subsection.

B. RECIPROCAL PREFERENCE FOR RESIDENT CONTRACTORS:

Effective March 30, 2012, RCW 39.04.380 imposes a reciprocal preference for resident contractors. Any bid received from a non-resident contractor from a state that provides an in-state percentage bidding preference is subject application of a comparable percentage disadvantage.

A non-resident contractor from a state that provides an in-state percentage bidding preference means a contractor that:

1. Is from a state that provides a percentage bid preference to its resident contractors bidding on public works projects, and
2. Does not have a physical office located in Washington at the time of bidding on the City of Tacoma public works project.

The state of residence for a non-resident contractor is the state in which the contractor was incorporated, or if not a corporation, the state in which the contractor's business entity was formed.

The City of Tacoma will evaluate all non-resident contractors for an out of state bidder preference. If the state of the non-resident contractor provides an in state contractor preference, a comparable percentage disadvantage will be applied to the non-resident contractor's bid prior to contract award. The responsive and lowest and best responsible bidder after application of any non-resident disadvantage will be awarded the contract.

The reciprocal preference evaluation does not apply to public works procured pursuant to RCW 39.04.155, RCW 39.04.280, federally funded competitive solicitations where such agencies prohibit the application of bid preferences, or any other procurement exempt from competitive bidding.

Bidders must provide the City of Tacoma with their state of incorporation or the state in which the business entity was formed and include whether the bidder has a physical office located in Washington.

The bidder shall submit documentation demonstrating compliance with above criteria on the enclosed State Responsibility and Reciprocal Bidder Information form.

C. SUBCONTRACTOR RESPONSIBILITY

1. The Contractor shall include the language of this subcontractor responsibility section 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 section apply to all subcontractors regardless of tier.
2. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:
 - a. 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;
 - b. Have a current Washington Unified Business Identifier (UBI) number;
 - c. If applicable, have:
 - a. Have Industrial Insurance (workers' compensation) coverage for the bidder'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 and;
3. Not be disqualified from bidding on any public works contract under RCW 39.06.010 (unlicensed or unregistered contractors) or 39.12.065(3) (prevailing wage).

II. CITY OF TACOMA

A. SUPPLEMENTAL RESPONSIBILITY CRITERIA – CITY OF TACOMA:

In order to be considered a responsible bidder, the prospective bidder shall have all of the following qualifications set forth in Tacoma Municipal Code 1.06.262:

1. Adequate financial resources or the ability to secure such resources;
2. The necessary experience, stability, organization and technical qualifications to perform the proposed contract;
3. The ability to comply with the required performance schedule, taking into consideration all existing business commitments;
4. A satisfactory record of performance, integrity, judgment and skills; and
5. Be otherwise qualified and eligible to receive an award under applicable laws and regulations.
 - a. Bidder Responsibility. Bidders shall not be in violation of 39.04.350 RCW Bidder Responsibility Criteria - Supplemental Criteria.

In addition to the mandatory bidder responsibility criteria listed immediately above, the City may, in addition to price, consider any or all of the following criteria contained in Tacoma Municipal Code Chapter 1.06.262 in determining bidder responsibility:

1. The ability, capacity, experience, stability, technical qualifications and skill of the respondent to perform the contract;
2. Whether the respondent can perform the contract within the time specified, without delay or interference;
3. Integrity, reputation, character, judgment, experience, and efficiency of the respondents, including past compliance with the City's Ethics Code;
4. Quality of performance of previous contracts;
5. Previous and existing compliance with laws and ordinances relating to contracts or services;
6. Sufficiency of the respondent's financial resources;
7. Quality, availability, and adaptability of the supplies, purchased services or public works to the particular use required;
8. Ability of the respondent to provide future maintenance and service on a timely basis;
9. Payment terms and prompt pay discounts;
10. The number and scope of conditions attached to the submittal;
11. Compliance with all applicable City requirements, including but not limited to the City's Ethics Code and its Equity in Contracting and Local Employment and Apprenticeship Training programs;
12. Other qualification criteria set forth in the specification or advertisement that the appropriate department or division head determines to be in the best interests of the City.

The City may require bidders to furnish information, sworn or certified to be true, to demonstrate compliance with the City responsibility criteria set forth above. If the city manager or director of utilities is not satisfied with the sufficiency of the information provided, or if the prospective respondent does not substantially meet all responsibility requirements, any submittal from such respondent must be disregarded.

B. ADDITIONAL SUPPLEMENTAL CRITERIA – NOT APPLICABLE

C. MODIFICATIONS TO SUPPLEMENTAL CRITERIA

Potential bidders may request modifications to the City's **supplemental criteria** by submitting a written request to the Purchasing Division via email to sendbid@cityoftacoma.org no later than 5:00 p.m. Pacific Time, three days prior to the submittal deadline. Please include the Specification No. and Title when submitting such requests. Requests must include justification for why certain criteria should be modified. Requests received after this date and time will not be considered.

The City will respond to a timely submitted request prior to the bid opening date. Changes to the supplemental criteria, if warranted, will be issued by addendum to the solicitation documents and posted to the City's website for the attention of all prospective bidders.

D. DETERMINATION OF BIDDER RESPONSIBILITY

If the City determines the bidder does not meet the criteria above and is therefore not a responsible bidder, the City shall notify the bidder in writing with the reasons for its determination. If the bidder disagrees, the bidder may appeal the determination in a manner consistent with the City's Protest Policy. Appeals are coordinated by the Purchasing Division heard by the Procurement and Payables Division manager for contracts less than or equal to \$500,000 and by Contracts and Awards Board for contracts greater than \$500,000.

SIGNATURE PAGE

CITY OF TACOMA DEPARTMENT OF PUBLIC UTILITIES – TACOMA POWER

All submittals must be in ink or typewritten, executed by a duly authorized officer or representative of the bidding/proposing entity, and received and time stamped as directed in the **Request for Bids page near the beginning of the specification**. If the bidder/proposer is a subsidiary or doing business on behalf of another entity, so state, and provide the firm name under which business is hereby transacted.

REQUEST FOR BIDS SPECIFICATION NO. PG22-0290N Tower Painting Weatherwax Ridge & Peterman Hill

The undersigned bidder/proposer hereby agrees to execute the proposed contract and furnish all materials, labor, tools, equipment and all other facilities and services in accordance with these specifications.

The bidder/proposer agrees, by submitting a bid/proposal under these specifications, that in the event any litigation should arise concerning the submission of bids/proposals or the award of contract under this specification, Request for Bids, Request for Proposals or Request for Qualifications, the venue of such action or litigation shall be in the Superior Court of the State of Washington, in and for the County of Pierce.

Non-Collusion Declaration

The undersigned bidder/proposer hereby certifies under penalty of perjury that this bid/proposal is genuine and not a sham or collusive bid/proposal, or made in the interests or on behalf of any person or entity not herein named; and that said bidder/proposer has not directly or indirectly induced or solicited any contractor or supplier on the above work to put in a sham bid/proposal or any person or entity to refrain from submitting a bid/proposal; and that said bidder/proposer has not, in any manner, sought by collusion to secure to itself an advantage over any other contractor(s) or person(s).

Bidder/Proposer's Registered Name

Signature of Person Authorized to Enter Date
into Contracts for Bidder/Proposer

Address

Printed Name and Title

City, State, Zip

(Area Code) Telephone Number / Fax Number

Authorized Signatory E-Mail Address

State Business License Number
in WA, also known as UBI (Unified Business Identifier) Number

E.I.No. / Federal Social Security Number Used on Quarterly
Federal Tax Return, U.S. Treasury Dept. Form 941

State Contractor's License Number
(See Ch. 18.27, R.C.W.)

E-Mail Address for Communications

Addendum acknowledgement #1_____ #2_____ #3_____ #4_____ #5_____

THIS PAGE MUST BE SIGNED AND RETURNED WITH SUBMITTAL.



City of Tacoma

Certification of Compliance with Wage Payment Statutes

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date (November 28, 2022), that the bidder is not a “willful” violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

I certify under penalty of perjury under the laws of the state of Washington that the foregoing is true and correct.

Bidder

Signature of Authorized Official*

Printed Name

Title

Date

City

State

Check One:

Individual ☐

Partnership ☐

Joint Venture ☐

Corporation ☐

State of Incorporation, or if not a corporation, the state where business entity was formed:

If a co-partnership, give firm name under which business is transacted:

** If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.*

Specification No. PG22-0290N

Name of Bidder: _____

State Responsibility and Reciprocal Bid Preference Information

Certificate of registration as a contractor
(Must be in effect at the time of bid submittal):

Number: _____

Effective Date: _____

Expiration Date: _____

Current Washington Unified Business Identifier
(UBI) Number:

Number: _____

Do you have industrial insurance (workers' compensation)
Coverage nor your employees working in Washington?

☐ Yes ☐ No
☐ Not Applicable

Washington Employment Security Department Number

Number: _____

☐ Not Applicable

Washington Department of Revenue state excise tax
Registration number:

Number: _____

☐ Not Applicable

Have you been disqualified from bidding any public
works contracts under RCW 39.06.010 or 39.12.065(3)?

☐ Yes ☐ No
If yes, provide an explanation of your
disqualification on a separate page.

Do you have a physical office located in the state of
Washington?

☐ Yes ☐ No

If incorporated, in what state were you incorporated?

State: _____ ☐ Not Incorporated

If not incorporated, in what state was your business
entity formed?

State: _____

Have you completed the training required by RCW
39.04.350, or are you on the list of exempt businesses
maintained by the Department of Labor and Industries?

☐ Yes ☐ No

 Name of Bidder

PROPOSAL A
WEATHERWAX RIDGE

	<u>QUANTITY</u>	<u>BID UNIT</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
<u>ITEM 1</u>				
Mobilization/Demobilization Weatherwax Ridge	1	LS	\$ _____	\$ _____
<u>ITEM 2</u>				
Weatherwax Ridge Surface Cleaning and Preparation	1	LS	\$ _____	\$ _____
<u>ITEM 3</u>				
Weatherwax Ridge Coating Application	1	LS	\$ _____	\$ _____
<u>ITEM 4</u>				
*Force Account				\$ <u>15,000</u>
*Bidders shall include the \$ <u>15,000</u> figure as part of their overall bid.				
TOTAL ITEMS 1 - 4				\$ _____
**Sales Tax @ <u>8.9%</u>				\$ _____
(**Note Paragraph 1.13 of General Provisions)				
TOTAL AMOUNT				\$ _____

 Name of Bidder

PROPOSAL B
PETERMAN HILL

	<u>QUANTITY</u>	<u>BID UNIT</u>	<u>UNIT COST</u>	<u>TOTAL COST</u>
<u>ITEM 1</u>				
Mobilization/Demobilization Peterman Hill	1	LS	\$ _____	\$ _____
<u>ITEM 2</u>				
Peterman Hill Surface Cleaning and Preparation	1	LS	\$ _____	\$ _____
<u>ITEM 3</u>				
Peterman Hill Coating Application	1	LS	\$ _____	\$ _____
<u>ITEM 4</u>				
*Force Account				\$ <u>15,000</u>
*Bidders shall include the \$ <u>15,000</u> figure as part of their overall bid.				
TOTAL ITEMS 1 - 4				\$ _____
**Sales Tax @ <u>7.8%</u>				\$ _____
(**Note Paragraph 1.13 of General Provisions)				
TOTAL AMOUNT				\$ _____
TOTAL AMOUNT PROPOSAL A + B EXCLUDING TAX				\$ _____
TOTAL AMOUNT PROPOSAL A + B WITH TAX				\$ _____

Name of Bidder

PROPOSAL

NOTE TO BIDDERS

A pre-bid meeting will be held at Tacoma Public Utilities Building, 3628 S. 35th St. Tacoma, WA 98409 on Tuesday, December 6, 2022 at 10:00 a.m. Please confirm your attendance with Ms. Carly Fowler at cfowler@cityoftacoma.org.

If you are unable to attend this meeting, please call the EIC (Equity in Contracting) Office at 253-591-5224 and/or the LEAP (Local Employment and Apprenticeship Program), at 253-591-5826, for instructions in filling out the EIC/LEAP forms (if applicable) or for questions concerning these requirements.

Name of Bidder

CONTRACTOR'S RECORD OF PRIOR CONTRACTS

NAME _____ ADDRESS _____

Beginning Date	Completion Date	Contract With	Contact Person Telephone #	Amount of Contract

REMARKS: _____

Following is a list to be filled in by the bidder, showing equipment definitely available for use on the proposed work as required. (Give quantity, description, size or capacity, condition and present location of each item of equipment.)

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.



CITY OF TACOMA

INSURANCE REQUIREMENTS FOR CONTRACTS

The Contractor (Contractor) shall maintain at least the minimum insurance set forth below. By requiring such minimum insurance, the City of Tacoma shall not be deemed or construed to have assessed the risk that may be applicable to Contractor under this Contract. Contractor shall assess its own risks and, if it deems appropriate and/or prudent, maintain greater limits and/or broader coverage.

1. GENERAL REQUIREMENTS

The following General Requirements apply to Contractor and to Subcontractor(s) of every tier performing services and/or activities pursuant to the terms of this Contract. Contractor acknowledges and agrees to the following insurance requirements applicable to Contractor and Contractor's Subcontractor(s):

- 1.1. City of Tacoma reserves the right to approve or reject the insurance provided based upon the insurer, terms and coverage, the Certificate of Insurance, and/or endorsements.
- 1.2. Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by City of Tacoma.
- 1.3. Contractor shall keep this insurance in force during the entire term of the Contract and for Thirty (30) calendar days after completion of all work required by the Contract, unless otherwise provided herein.
- 1.4. Insurance policies required under this Contract that name "City of Tacoma" as Additional Insured shall:
 - 1.4.1. Be considered primary and non-contributory for all claims.
 - 1.4.2. Contain a "Separation of Insured provision and a "Waiver of Subrogation" clause in favor of City of Tacoma.
- 1.5. Section 1.4 above does not apply to contracts for purchasing supplies only.
- 1.6. Verification of coverage shall include:
 - 1.6.1. An ACORD certificate or equivalent.
 - 1.6.2. Copies of all endorsements naming the City of Tacoma as additional insured and showing the policy number.
 - 1.6.3. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.
- 1.7. Liability insurance policies, with the exception of Professional Liability and Workers' Compensation, shall name the City of Tacoma and its officers, elected officials, employees, agents, and authorized volunteers as additional insured.
 - 1.7.1. No specific person or department should be identified as the additional insured.
 - 1.7.2. All references on certificates of insurance and endorsements shall be listed as "City of Tacoma".
 - 1.7.3. The City of Tacoma shall be additional insured for both ongoing and completed operations using Insurance Services Office (ISO) form CG 20 10 04 13 and CG 20



CITY OF TACOMA

INSURANCE REQUIREMENTS FOR CONTRACTS

37 04 13 or the equivalent for the full available limits of liability maintained by the Contractor irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract and irrespective of whether the Certificate of Insurance describes limits lower than those maintained by the Contractor.

- 1.8. Contractor shall provide a Certificate of Insurance for each policy of insurance meeting the requirements set forth herein when Contractor provides the signed Contract for the work to City of Tacoma. Contractor shall provide copies of any applicable Additional Insured, Waiver of Subrogation, and Primary and Non-contributory endorsements. Contract or Permit number and the City Department must be shown on the Certificate of Insurance.
- 1.9. Insurance limits shown below may be written with an excess policy that follows the form of an underlying primary liability policy or an excess policy providing the required limit.
- 1.10. Liability insurance policies shall be written on an "occurrence" form, except for Professional Liability/Errors and Omissions, Pollution Liability, and Cyber/Privacy and Security
- 1.11. If coverage is approved and purchased on a "Claims-Made" basis, Contractor warrants continuation of coverage, either through policy renewals or by the purchase of an extended reporting period endorsement as set forth below.
- 1.12. The insurance must be written by companies licensed or authorized in the State of Washington pursuant to RCW 48 with an (A-) VII or higher in the A.M. Best's Key Rating Guide www.ambest.com.
- 1.13. Contractor shall provide City of Tacoma notice of any cancellation or non-renewal of this required insurance within Thirty (30) calendar days.
- 1.14. Contractor shall not allow any insurance to be cancelled or lapse during any term of this Contract, otherwise it shall constitute a material breach of the Contract, upon which City of Tacoma may, after giving Five (5) business day notice to Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith; with any sums so expended to be repaid to City of Tacoma by Contractor upon demand, or at the sole discretion of City of Tacoma, offset against funds due Contractor from City of Tacoma.
- 1.15. Contractor shall be responsible for the payment of all premiums, deductibles and self-insured retentions, and shall indemnify and hold the City of Tacoma harmless to the extent such a deductible or self-insured retained limit may apply to the City of Tacoma as an additional insured. Any deductible or self-insured retained limits in excess of Twenty Five Thousand Dollars (\$25,000) must be disclosed and approved by City of Tacoma Risk Manager and shown on the Certificate of Insurance.
- 1.16. City of Tacoma reserves the right to review insurance requirements during any term of the Contract and to require that Contractor make reasonable adjustments when the scope of services has changed.



CITY OF TACOMA INSURANCE REQUIREMENTS FOR CONTRACTS

- 1.17. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made by City of Tacoma to Contractor.
- 1.18. Insurance coverages specified in this Contract are not intended and will not be interpreted to limit the responsibility or liability of Contractor or Subcontractor(s).
- 1.19. Failure by City of Tacoma to identify a deficiency in the insurance documentation provided by Contractor or failure of City of Tacoma to demand verification of coverage or compliance by Contractor with these insurance requirements shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- 1.20. If Contractor is a State of Washington or local government and is self-insured for any of the above insurance requirements, a certification of self-insurance shall be attached hereto and be incorporated by reference and shall constitute compliance with this Section.

2. CONTRACTOR

As used herein, "Contractor" shall be the Supplier(s) entering a Contract with City of Tacoma, whether designated as a Supplier, Contractor, Vendor, Proposer, Bidder, Respondent, Seller, Merchant, Service Provider, or otherwise.

3. SUBCONTRACTORS

It is Contractor's responsibility to ensure that each subcontractor obtain and maintain adequate liability insurance coverage. Contractor shall provide evidence of such insurance upon City of Tacoma's request.

4. REQUIRED INSURANCE AND LIMITS

The insurance policies shall provide the minimum coverages and limits set forth below. Providing coverage in these stated minimum limits shall not be construed to relieve Contractor from liability in excess of such limits.

4.1 Commercial General Liability Insurance

Contractor shall maintain Commercial General Liability Insurance policy with limits not less than One Million Dollars (\$1,000,000) each occurrence and Two Million Dollars (\$2,000,000) annual aggregate. The Commercial General Liability Insurance policy shall be written on an Insurance Services Office form CG 00 01 04 13 or its equivalent. Products and Completed Operations shall be maintained for a period of three years following Substantial Completion of the Work related to performing construction services.

This policy shall include product liability especially when a Contract solely is for purchasing supplies. The Commercial General Liability policy shall be endorsed to include:

4.1.1 A per project aggregate policy limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

4.1.2

4.2 Commercial (Business) Automobile Liability Insurance

Contractor shall maintain Commercial Automobile Liability policy with limits not less than One Million Dollars (\$1,000,000) each accident for bodily injury and property damage and bodily injury



CITY OF TACOMA

INSURANCE REQUIREMENTS FOR CONTRACTS

and property damage coverage for owned (if any), non-owned, hired, or leased vehicles. Commercial Automobile Liability Insurance shall be written using ISO form CA 00 01 or equivalent. Contractor must also maintain an MCS 90 endorsement or equivalent and a CA 99 48 endorsement or equivalent if "Pollutants" are to be transported.

4.3 Workers' Compensation

4.3.1 Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington, as well as any other similar coverage required for this work by applicable federal laws of other states. The Contractor must comply with their domicile State Industrial Insurance laws if it is outside the State of Washington.

4.4 Employers' Liability Insurance

Contractor shall maintain Employers' Liability coverage with limits not less than One Million Dollars (\$1,000,000) each employee, One Million Dollars (\$1,000,000) each accident, and One Million Dollars (\$1,000,000) policy limit.

4.5 Pollution Liability Insurance

Contractor shall maintain a Pollution Liability or Environmental Liability Insurance providing coverage, including investigation and defense costs, for bodily injury and property damage, including loss of use of damaged property or of property that has been physically damaged or destroyed.

Such coverage shall provide both on-site and off-site cleanup costs and cover gradual and sudden pollution, and include in its scope of coverage the City of Tacoma damage claims for loss arising out of Contractor's work with limits not less than One Million Dollars (\$1,000,000) each occurrence and Two Million Dollars (\$2,000,000) aggregate.

This policy shall include Environmental Resource Damage coverage and Hazardous Substance Removal. If such coverage is provided on a "claims-made" basis, the following additional conditions must be met:

4.5.1 The policy must contain no retroactive date, or the retroactive date must precede the commencement date of this Contract.

4.5.2 The extended reporting period (tail) must be purchased to cover a minimum of Six (6) years beyond completion of work.

4.6 Other Insurance

Other insurance may be deemed appropriate to cover risks and exposures related to the scope of work or changes to the scope of work required by City of Tacoma. The costs of such necessary and appropriate Insurance coverage shall be borne by Contractor.

TACOMA PUBLIC UTILITIES
CONTRACTOR'S WORK HAZARD ANALYSIS REPORT
for

(Project Name)

The contractor and his/her subcontractors shall thoroughly review the scope of work described in the proposed project drawings and specifications. Following the review, the contractor will be responsible to indicate below any known or potential safety issues or phases of construction that may require specific safety procedures as identified by WISHA or OSHA regulations, and/or prudent construction practices; i.e., shoring, fall protection, scaffolding, hazardous materials, etc.

Failure to list and comply with safety requirements will be cause for disqualification from future Utilities contracts. A copy of this report shall be posted at the job site at all times.

If, during the course of construction, other safety requirements are identified, they will be added to this report as an addendum. The contractor will be required to adhere to the recommended actions and/or controls identified in the addendum.

SAFETY ISSUES/CONCERNS*	HAZARDS	RECOMMENDED ACTION AND/OR CONTROLS
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

*USE A SEPARATE SHEET IF MORE ROOM IS NEEDED

Contractor Name and Title

Date

Job Site Superintendent

Date

Company Officer Signature

**TACOMA POWER, GENERATION SECTION
CONTRACTOR PERFORMANCE REVIEW
(FOR INTERNAL RECOMMENDATION PURPOSES)**

Project:		Spec. #
Location:	Contractor: (Use separate sheet for each sub-contractor)	
Engineer:	Inspector:	

EVALUATION

Rate Each Area:	EXCELLENT - 3	GOOD - 2	ACCEPTABLE - 1	INADEQUATE - 0
-----------------	---------------	----------	----------------	----------------

- | | |
|---|--|
| _____1. Safety | _____7. Quality of Supervisor |
| _____2. Quality of Work | _____8. Site Management |
| _____3. Overall Rating | _____9. Adequate Equipment |
| _____4. Communication/Coordination
on Site | _____10. Adequate Personnel |
| _____5. Communication/Coordination
with Office | _____11. Was Project Completed
on Time (Y/N) |
| _____6. Supervision on Site | _____12. Would You Recommend
this Contractor Work
for Us Again (Y/N) |

[illegible]

Input by _____ Review No. _____ Date _____

GENERAL PROVISIONS

(Revised December 15, 2020)

SECTION I - BIDDING REQUIREMENTS

SECTION I REQUIREMENTS ARE BINDING ON ALL RESPONDENTS.

1.01 USE AND COMPLETION OF CITY PROPOSAL SHEETS

A. Respondent's Proposal

Each Respondent must bid exactly as specified on the Proposal sheets. All proposals must remain open for acceptance by the City for a period of at least 60 calendar days from the date of opening of the bids.

B. Alterations of Proposals Not Allowed

Proposals that are incomplete or conditioned in any way contain alternatives or items not called for in the General Provisions and Specifications, or not in conformity with law may be rejected as being nonresponsive. The City cannot legally accept any proposal containing a substantial deviation from these Specifications.

C. Filling Out City Proposal Sheets

All proposals must be completed using the proposal sheets and forms included with this specification, and the prices must be stated in figures either written in ink or typewritten. No proposal having erasures or interlineations will be accepted unless initialed by the Respondent in ink.

1.02 CLARIFICATION OF PROPOSAL FOR RESPONDENT

If a prospective Respondent has any questions concerning any part of the Proposal, he/she may submit a written request for answer of his/her questions. Any interpretation of the Proposal will be made by an Addendum duly issued and mailed or delivered to each prospective Respondent. Such addendum must be acknowledged in the proposal. The City of Tacoma will not be responsible for any other explanation or interpretation of the bid documents.

1.03 RESPONDENT'S BOND OR CERTIFIED CHECK

Each bid for construction must be accompanied either by a certified or cashier's check for 5 percent of the total amount bid, including tax, payable to the City Treasurer, or an approved bid bond, by a surety company authorized to do business in the State of Washington, for 5 percent of the total amount bid. The person legally authorized to sign the bid must sign all bid bonds. The approved bid bond form attached to these Specifications should be used: no substantial variations from the language thereof will be accepted.

If a bid bond is used, the 5 percent may be shown either in dollars and cents, or the bid bond may be filled in as follows, "5 percent of the total amount of the accompanying proposal."

The check of the successful Respondent will be returned after award of the Contract, acceptance of the Payment and Performance Bond and City's receipt of the signed Contract. The checks of all other Respondents will be returned immediately upon the award of the Contract. Bid bonds will not be returned.

1.04 DELIVERY OF PROPOSALS TO THE CITY'S PURCHASING OFFICE

- A.** Proposal packages must be received by the City's Procurement and Payables Division in SAP Ariba (unless another form of delivery is stated), prior to the scheduled time and date stated in the Solicitation.
- B.** Supplier is solely responsible for timely delivery of its Submittal.
- C.** Submittals received after the time stated in the solicitation will not be accepted.
- D.** For purposes of determining whether a Submittal has been timely received in SAP Ariba, the City's Procurement and Payables Division will rely on the submittal clock in SAP Ariba.

1.05 LICENSES/PERMITS

- A.** Suppliers, if applicable, must have a Washington state business license at the time of Submittal and throughout the term of the Contract. Failure to include a Washington state business license may be grounds for rejection of the Submittal or cancellation of contract award. Information regarding Washington state business licenses may be obtained at <http://bls.dor.wa.gov>.
- B.** Upon award, it is the responsibility of the Supplier to register with the City of Tacoma's Tax and License Division, 733 South Market Street, Room 21, Tacoma, WA 98402-3768, 253-591-5252, https://www.cityoftacoma.org/government/city_departments/finance/tax_and_license/. Supplier shall obtain a business license as is required by Tacoma Municipal Code Subtitle 6C.20.
- C.** During the term of the Contract, Supplier, at its expense, shall obtain and keep in force any and all necessary licenses and permits.

1.06 CONTRACTOR'S STATE REGISTRATION NUMBER

Contractors for construction or public works construction are required to be licensed by the state. If the provisions of Chapter 18.27 of the Revised Code of Washington apply to the Respondent, then the Respondent's Washington State Contractor's Registration No. must accompany the bid.

1.07 BID IS NONCOLLUSIVE

The Respondent represents by the submission of the Proposal that the prices in this Bid are neither directly nor indirectly the result of any formal or informal agreement with another Respondent.

1.08 EVALUATION OF BID

A. Price, Experience, Delivery Time and Responsibility

In the evaluation of bids, the Respondent's experience, delivery time, quality of performance or product, conformance to the specifications and responsibility in performing other contracts (including satisfying all safety requirements) may be considered in addition to price. In addition, the bid evaluation factors set forth in City Code Section 1.06.262 may be considered by the City. Respondents who are inexperienced or who fail to properly perform other contracts may have their bids rejected for such cause.

B. Prequalified Electrical Contractor

Certain types of electrical construction require special expertise, experience, and prequalification of the Contractor (or subcontractor) by the City. In such cases, the Respondent must be prequalified or the Respondent must subcontract with a City prequalified electrical contractor for the specialty work.

C. Insertions of Material Conflicting with Specifications

Only material inserted by the Respondent to meet requirements of the Specifications will be considered. Any other material inserted by the Respondent will be disregarded as being nonresponsive and may be grounds for rejection of the Respondent's Proposal.

D. Correction of Ambiguities and Obvious Errors

The City reserves the right to correct obvious errors in the Respondent's proposal. In this regard, if the unit price does not compute to the extended total price, the unit price shall govern.

1.09 WITHDRAWAL OF BID

A. Prior to Bid Opening

Any Respondent may withdraw his/her Proposal prior to the scheduled bid opening time by delivering a written notice to the City's Procurement and Payables Office. The notice may be submitted in person or by mail; however, it must be received by the City's Procurement and Payables Office prior to the time of bid opening.

B. After Bid Opening

No Respondent will be permitted to withdraw his/her Proposal after the time of bid opening, as set forth in the Call for Bids, and before the actual award of the Contract, unless the award of Contract is delayed more than sixty (60) calendar days after the date set for bid opening. If a delay of more than 60 calendar days does occur, then the Respondent must submit written notice withdrawing his/her Proposal to the Purchasing Manager.

1.10 OPENING OF BIDS

At the time and place set for the opening of bids, all Proposals, unless previously withdrawn, will be publicly opened and read aloud, irrespective of any irregularities or informalities in such Proposal.

1.11 CITY COUNCIL/PUBLIC UTILITY BOARD FINAL DETERMINATION

The City Council or Public Utility Board of the City of Tacoma shall be the final judge as to which is the lowest and best bid in the interest of the City of Tacoma. The City reserves the right to reject any and all bids, waive minor deviations or informalities, and if necessary, call for new bids.

1.12 RESPONDENT'S REFUSAL TO ENTER INTO CONTRACT

Any Respondent who refuses to enter into a Contract after it has been awarded to the Respondent will be in breach of the agreement to enter the Contract and the Respondent's certified or cashier's check or bid bond shall be forfeited.

1.13 TAXES

A. Include In Proposal All Taxes

Respondent shall include in his/her Proposal all applicable local, city, state, and federal taxes. It is the Respondent's obligation to state on his/her Proposal sheet the correct percentage and total applicable Washington State and local sales tax. The total cost to the City including all applicable taxes may be the basis for determining the low Respondent.

B. Federal Excise Tax

The City of Tacoma is exempt from federal excise tax. Where applicable, the City shall furnish a Federal Excise Tax Exemption certificate.

C. City of Tacoma Business and Occupation Tax

Sub-Title 6A of the City of Tacoma Municipal Code (TMC) provides that transactions with the City of Tacoma, may be subject to the City of Tacoma's Business and Occupation Tax. It is the responsibility of the Respondent awarded the Contract to register with the City of Tacoma's Department of Tax and License, 733 South Market Street, Room 21, Tacoma, WA 98402-3768, telephone 253-591-5252. The City's Business and Occupation Tax amount shall not be shown separately but shall be included in the unit and/or lump sum prices bid.

1.14 FIRM PRICES/ESCALATION

Except as specifically allowed by the Special Provisions, only firm prices will be accepted.

1.15 AWARD

A. Construction and/or Labor Contracts

Unless specifically noted in the Special Provisions or Proposal sheets, all construction and/or labor contracts will be awarded to only one Respondent.

B. Supply/Equipment Contracts

The City reserves the right to award an equipment or supply contract for any or all items to one or more Respondents as the interests of the City will be best satisfied.

1.16 INCREASE OR DECREASE IN QUANTITIES

The City of Tacoma reserves the right to increase or decrease the quantities of any items under this Contract and pay according to the unit prices quoted in the Proposal (with no adjustments for anticipated profit).

1.17 EXTENSION OF CONTRACT

Contracts resulting from this specification shall be subject to extension by mutual agreement per the same prices, terms and conditions.

1.18 PAYMENT TERMS

- A. Prices will be considered as net 30 calendar days if no cash discount is shown. Payment discount periods of twenty (20) calendar days or more if offered in the submittal, will be considered in determining the apparent lowest responsible submittal. Discounts will be analyzed in context of their overall cumulative effect. Invoices will not be processed for payment nor will the period of cash discount commence until receipt of a properly completed invoice and until all invoiced items are received and satisfactory performance of the Contractor has been attained. If an adjustment in payment is necessary due to damage or dispute, the cash discount period shall commence on the date final approval for payment is authorized.
- B. ePayable/Credit Card Acceptance. Submittals offering ePayable/Credit card acceptance may be compared against submittals offering a prompt payment discount to evaluate the overall cumulative effect of the discount against the advantage to the City of the ePayable/Credit card acceptance, and may be considered in determining the apparent lowest responsible submittal.

1.19 PAYMENT METHOD – EPAYABLES – CREDIT CARD ACCEPTANCE – EFT/ACH ACCEPTANCE

- A. Payment methods include:
- EPayables (Payment Plus). This is payment made via a virtual, single use VISA card number provided by the City's commercial card provider. Suppliers accepting this option will receive "due immediately" payment terms. Two options for acceptance are available to suppliers. Both are accompanied by an emailed advice containing complete payment details:
 - Straight-through processing (buyer initiated). Immediate, exact payments directly deposited to supplier accounts by the City's provider bank; the supplier does not need to know card account details.
 - Supplier retrieves card account through the secure, on-line portal provided via email notifications sent by the City's commercial card provider.
 - Credit card. Tacoma's VISA procurement card program is supported by standard bank credit suppliers and requires that merchants abide by the VISA merchant operating rules. It provides "due immediately" payment terms.
 - Suppliers must be PCI-DSS compliant (secure credit card data management) and federal FACTA (sensitive card data display) compliant.
 - Suppliers must be set up by their card processing equipment provider (merchant acquirer) as a minimum of a Level II merchant with the ability to pass along tax, shipping and merchant references information.
 - Electronic Funds Transfer (EFT) by Automated Clearing House (ACH). Standard terms are net 30 for this payment method.
 - Check or other cash equivalent. Standard terms are net 30 for this payment method.
- B. The City's preferred method of payment is by ePayables (Payment Plus) followed by credit card (aka procurement card). Suppliers may be required to have the capability of accepting the City's ePayables or credit card methods of payment. **The City of Tacoma will not accept price changes or pay additional fees when ePayables (Payment Plus) or credit card is used.**
- C. The City, in its sole discretion, will determine the method of payment for goods and/or services as part of the Contract.

1.20 COOPERATIVE PURCHASING

The Washington State Interlocal Cooperative Act RCW 39.34 provides that other governmental agencies may purchase goods and services on this solicitation or contract in accordance with the terms and prices indicated therein if all parties are agreeable.

1.21 PUBLIC DISCLOSURE: PROPRIETARY OR CONFIDENTIAL INFORMATION

- A. Respondent's Submittals, all documents and records comprising any Contract awarded to Respondent, and all other documents and records provided to the City by Respondent are deemed public records subject to disclosure under the Washington State Public Records Act, Chapter 42.56 RCW (Public Records Act). Thus, City may be required, upon request, to disclose the Contract and documents or records related to it unless an exemption under the Public Records Act or other laws applies. In the event CITY receives a request for such disclosure, determines in its legal judgment that no applicable exemption to disclosure applies; and Respondent has complied with the requirements to Respondent has complied with the requirements to mark records considered confidential or proprietary

as such requirements are stated below, City agrees to provide Respondent 10 days written notice of impending release. Should legal action thereafter be initiated by Respondent to enjoin or otherwise prevent such release, all expense of any such litigation shall be borne by Respondent, including any damages, attorneys' fees or costs awarded by reason of having opposed disclosure. City shall not be liable for any release where notice was provided and Respondent took no action to oppose the release of information.

B. If Respondent provides City with records or information that Respondent considers confidential or proprietary, Respondent must mark all applicable pages or sections of said record(s) as "Confidential" or "Proprietary." Further, in the case of records or information submitted in response to a Request for Proposals, an index must be provided indicating the affected pages or sections and locations of all such material identified Confidential or Proprietary. Information not included in the required index will not be reviewed for confidentiality or as proprietary before release. If Supplier fails to so mark or index Submittals and related records, then the City, upon request, may release said record(s) without the need to satisfy the requirements of subsection A above; and Respondent expressly waives its right to allege any kind of civil action or claim against the City pertaining to the release of said record(s). Submission of materials in response to City's Solicitation shall constitute assent by Respondent to the foregoing procedure and Respondent shall have no claim against the City on account of actions taken pursuant to such procedure.

1.22 FEDERAL AID PROJECTS

The City of Tacoma in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, subtitle A, Office of the Secretary, part 21, nondiscrimination in federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR, part 26, will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award.

SECTION II - CONTRACT REQUIREMENTS

2.01 CONTRACTOR'S RESPONSIBILITY

A. Contract Documents

The Respondent to whom the Contract is awarded, hereinafter called the Contractor, shall enter into a Contract with the City of Tacoma, , within 10 days after receipt from the City of Tacoma of a properly prepared Contract. In addition, the Contractor will do all things required to promptly perform this Contract pursuant to the terms of this Contract. Certain contracts for supplies, goods or equipment may use the City Purchase Order in place of a formal contract document.

B. Surety Bonds

Except as modified by the Special Provisions, the Respondent to whom the Contract is awarded shall provide a payment and performance bond, including power of attorney, for 100 percent of the amount of his/her bid (including sales taxes), to insure complete performance of the Contract including the guarantee. The bonds must be executed by a surety company licensed to do business in the State of Washington. For a supply-type contract, a cashier's check or cash may be substituted for the bonds; however, this cash or cashier's check must remain with the City through the guarantee period and any interest on said amount shall accrue to the City.

C. Independent Contractor

Contractor is an independent contractor; no personnel furnished by the Contractor shall be deemed under any circumstances to be the agent or servant of the City. Contractor shall be fully responsible for all acts or omissions of Subcontractors and its and their suppliers and of persons employed by them, and shall be specifically responsible for sufficient and competent supervision and inspection to assure compliance in every respect with the Contract. There shall be no contractual relationship between any Subcontractors or supplier and the City arising out of or by virtue of this agreement. No provision of the Contract is intended or is to be construed to be for the benefit of any third party.

2.02 CONFLICTS IN SPECIFICATIONS

Anything mentioned in the Specifications and not shown on the Drawings and anything on the Drawings and not mentioned in the Specifications shall be of like effect and shall be understood to be shown and/or mentioned in both. In case of differences between Drawings and Specifications, the Specifications shall govern. In addition, in the event of any conflict between these General Provisions, the Special Provisions, the Technical Provisions and/or the Proposal pages, the following order of precedence shall control:

1. Proposal pages prevail if they conflict with the General, Special or Technical Provisions.
2. Special Provisions prevail if they conflict with the General Provisions and/or Technical Provisions.
3. Technical Provisions prevail if they are in conflict with the General Provisions.

In case of discrepancy of figures between Drawings, Specifications or both, the matter shall immediately be submitted to the Engineer for determination. Failure to submit the discrepancy issue to the Engineer shall result in the Contractor's actions being at his/her own risk and expense. The Engineer shall furnish from time to time such detailed drawings and other information as he/she may consider necessary.

2.03 INSPECTION

A. Of the Work

All materials furnished and work done shall be subject to inspection.

The Inspector administering the Contract shall at all times have access to the work wherever it is in progress or being performed, and the Contractor shall provide proper facilities for such access and inspection. Such inspection shall not relieve the Contractor of the responsibility of performing the work correctly, utilizing the best labor and materials in strict accordance with the Specifications of this Contract. All material or work approved and later found to be defective shall be replaced without cost to the City of Tacoma.

B. Inspector's Authority

The inspector shall have power to reject materials or workmanship which do not fulfill the requirements of these Specifications, but in case of dispute the Contractor may appeal to the Director or Superintendent, whose decision shall be final. The word "Director" means the Director of the City of Tacoma General Government department that is administering the contract. The word "Superintendent" means the Superintendent of the City of Tacoma, Department of Public Utilities Division that is administering the contract.

The Contract shall be carried out under the general control of the representative of the particular City Department or Division administering the Contract, who may exercise such control over the conduct of the work as may be necessary, in his or her opinion, to safeguard the interest of the City of Tacoma. The Contractor shall comply with all orders and instructions given by the representative of the particular Department or Division administering the Contract in accordance with the terms of the Contract.

Provided, that for the purposes of construction contracts, such control shall only apply (a) to the extent necessary to ensure compliance with the provisions of this contract, and (b) to the extent necessary to fulfill any nondelegable duty of the City for the benefit of third parties not engaged in promoting the activity of this contract.

Nothing herein contained, however, shall be taken to relieve the Contractor of his/her obligations or responsibilities under the Contract.

2.04 FEDERAL, STATE AND MUNICIPAL REGULATIONS

All federal, state, municipal and/or local regulations shall be satisfied in the performance of all portions of this Contract. The Contractor shall be solely responsible for all violations of the law from any cause in connection with work performed under this Contract.

2.05 INDEMNIFICATION

A. Indemnification

Contractor acknowledges that pursuant to the terms of this agreement, Contractor is solely and totally responsible for the safety of all persons and property in the performance of this Contract. To the greatest extent allowed by law, Contractor assumes the risk of all damages, loss, cost, penalties and expense and agrees to indemnify, defend and hold harmless the City of Tacoma, from and against any and all liability which may accrue to or be sustained by the City of Tacoma on account of any claim, suit or legal action made or brought against the City of Tacoma for the death of or injury to persons (including Contractor's or subcontractor's employees) or damage to property involving Contractor, or subcontractor(s) and their employees or agents, arising out of and in connection with or incident to the performance of the Contract including if the City is found to have a nondelegable duty to see that work is performed with requisite care, except for injuries or damages caused by the sole negligence of the City. In this regard, Contractor recognizes that Contractor is waiving immunity under industrial Insurance Law, Title 51 RCW. This indemnification extends to the officials, officers and employees of the City and also includes attorney's fees and the cost of establishing the right to indemnification hereunder in favor of the City of Tacoma. In addition, within the context of competitive bidding laws, it is agreed that this indemnification has been mutually negotiated. Provided however, this provision is intended to be applicable to the parties to this agreement and it shall not be interpreted to allow a Contractor's employee to have a claim or cause of action against Contractor.

B. Limitation of Liability for Primarily Supply-Type Contracts

In all contracts where the total cost of the supply of materials and/or equipment constitute at least 70 percent of the total contract price (as determined by the City), the City agrees that it will not hold the contractor, supplier or manufacturer liable for consequential damages for that part of the contract related to the manufacture and/or design of the equipment, materials or supplies.

2.06 CONTRACTOR'S INSURANCE

A. During the course and performance of a Contract, Contractor will provide proof and maintain the insurance coverage in the amounts and in the manner specified in the City of Tacoma Insurance Requirements as is applicable to the services, products, and deliverables provided under the Contract. The City of Tacoma Insurance Requirements document, if issued, is fully incorporated into the Contract by reference.

B. Failure by City to identify a deficiency in the insurance documentation provided by Contractor or failure of City to demand verification of coverage or compliance by Contractor with these insurance requirements shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

2.07 ASSIGNMENT AND SUBLETTING OF CONTRACT

C. Assignment

The Contract shall not be assigned except with the consent of the Superintendent or his/her designee.

Requests for assignment of this contract must be in writing with the written consent of the surety, and the request must show the proposed person or organization to which the contract is assigned is capable, experienced and equipped to perform such work. The proposed substitute person or organization may be required to submit to the City information as to his/her experience, financial ability and give statements covering tools, equipment, organization, plans and methods to fulfill any portion of the Contract prior to approval of assignment.

D. Subletting

The Contract shall not be sublet except with the written consent of the Superintendent or his/her designee. In the event that a prequalified electrical contractor is necessary to perform certain portions of the work, such work may be subcontracted with a City prequalified electrical contractor for the type of work involved.

Requests for subletting of this Contract must be in writing with the written consent of the Surety, and the request must show the proposed person or organization to which the Contract is sublet is capable, experienced and equipped to perform such work. The proposed substitute person or organization may be required to submit to the City information as to his experience, financial ability and give statements covering tools, equipment, organization, plans and methods to fulfill any portion of the Contract prior to approval of subletting.

The written consent approving the subletting of the Contract shall not be construed to relieve the Contractor of his/her responsibility for the fulfillment of the Contract. The Subcontractor shall be considered to be the agent of the Contractor and the Contractor agrees to be responsible for all the materials, work and indebtedness incurred by the agent.

A subcontractor shall not sublet any portion of a subcontract for work with the City without the written consent of the City.

2.08 DELAY

E. Extension of Time

With the written approval of the Superintendent or his/her designee, the Contractor may be granted additional time for completion of the work required under this Contract, if, in the Superintendent's opinion the additional time requested arises from unavoidable delay.

F. Unavoidable Delay

Unavoidable delays in the prosecution of the work shall include only delays from causes beyond the control of the Contractor and which he/she could not have avoided by the exercise of due care, prudence, foresight and diligence. Delay caused by persons other than the Contractor, Subcontractors or their employees will be considered unavoidable delays insofar as they necessarily interfere with the Contractor's completion of the work, and such delays are not part of this Contract.

Unavoidable delay will not include delays caused by weather conditions, surveys, measurements, inspections and submitting plans to the Engineer of the particular Division involved in administering this Contract.

2.09 GUARANTEE

A. Guarantee for Construction, Labor or Services Contract

Neither the final certificate of payment or any provision in the Contract Documents, nor partial or entire occupancy of the premises by the City, shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of the work unless a longer period is specified. The City will give notice of observed defects with reasonable promptness.

If it has been discovered, before payment is required under the terms of the Contract, that there is a failure to comply with any of the terms and provisions of this Contract, the City has the right and may withhold payment.

In case of a failure of any part of the work, materials, labor and equipment furnished by the Contract or to fully meet all of the requirements of the Contract, the Contractor shall make such changes as may be necessary to fully meet all of the specifications and requirements of this Contract. Such changes shall be made at the Contractor's sole cost and expense without delay and with the least practicable inconvenience to the City of Tacoma. Rejected material and equipment shall be removed from the City's property by and at the expense of the Contractor.

B. Guarantee for Supply Contracts

Unless a longer period is specified, the supplier and/or manufacturer of the supplies, materials and/or equipment furnished pursuant to this Contract agrees to correct any defect or failure of the supplies, materials and/or equipment which occurs within one year from the date of: (1) test energization if electrical or mechanical equipment; (2) commencement of use if supplies or materials, provided, however, said guarantee period shall not extend beyond eighteen months after date of receipt by the City. All of the costs (including shipping, dismantling and reinstallation) of repairs and/or corrections of defective or failed equipment, supplies and/or material is the responsibility of the supplier and/or manufacturer.

When the supplier is not the manufacturer of the item of equipment, supplier agrees to be responsible for this guarantee and supplier is not relieved by a manufacturer's guarantee.

C. Guarantee Period Extension

The Contract guarantee period shall be suspended from the time a significant defect is first documented by the City until the work or equipment is repaired or replaced by Contractor and accepted by the City. In addition, in the event less than ninety (90) days remain on the guarantee period (after recalculating), the guarantee period shall be extended to allow for at least ninety (90) days from the date the work or equipment is repaired or replaced and accepted by the City.

2.10 DEDUCTIONS FOR UNCORRECTED WORK

If the City of Tacoma deems it expedient to correct work not done in accordance with the terms of this Contract, an equitable deduction from the Contract price shall be made.

2.11 CITY OF TACOMA'S RIGHT TO TERMINATE CONTRACT

A. Termination for Convenience

1. Supplies. The City may terminate a Contract for supplies at any time upon prior written notice to Contractor. Upon the effective date of termination specified in such notice, and payment by the City, all conforming supplies, materials, or equipment previously furnished hereunder shall become its property.
2. Services. The City may terminate a Contract for services at any time, with or without cause, by giving 10-business day's written notice to Supplier. In the event of termination, all finished and unfinished work prepared by Supplier pursuant to the Contract shall be provided to the City. In the event City terminates the Contract due to the City's own reasons and without cause due to Supplier's actions or omissions, the City shall pay Supplier the amount due for actual work and services necessarily performed under the Contract up to the effective date of termination, not to exceed the total compensation set forth in the Contract.

B. Termination for Cause

1. The City may terminate a Contract for either services or supplies in the event of any material breach of any of the terms and conditions of the Contract if the Contractor's breach continues in effect after written notice of breach and 30 days to cure such breach and fails to cure such breach
2. Bankruptcy. If the Contractor should be adjudged as bankrupt, or makes a general assignment for the benefit of creditors, or a receiver should be appointed on account of his/her insolvency, or if he/she or any of his/her subcontractors should violate any of the provisions of the Contract, or if the work is not being properly and diligently performed, the City of Tacoma may serve written notice upon the Contractor and Surety, executing the Payment and Performance Bond, of its intention to terminate the Contract; such notice will contain the reasons for termination of the Contract, and unless within 10 days after the serving of such notice, such violation shall cease and an arrangement satisfactory to the City of Tacoma for correction thereof shall be made, the Contract shall, upon the expiration of said 10 days, cease and terminate and all rights of the Contractor hereunder shall be forfeited. In the event the Contract is terminated for cause, Contractor shall not be entitled to any lost profits resulting therefrom.
3. Notice. In the event of any such termination for cause, the City of Tacoma shall immediately send (by regular mail or other method) written notice thereof to the Surety and the Contractor. Upon such termination the Surety shall have the right to take over and perform the Contract, provided however, the Surety must provide written notice to the City of its intent to complete the work within 15 calendar days of its receipt of the original written notice (from the City) of the intent to terminate. Upon termination and if the Surety does not perform the work, the City of Tacoma may take over the work and prosecute the same to completion by any method it may deem advisable, for the account of and at the expense of the Contractor, and the Contractor and the Surety shall be liable to the City of Tacoma for all cost occasioned to the City of Tacoma thereby. The City of Tacoma may without liability for doing so, take possession of and utilize in completing the work, such materials, equipment, plant and other property belonging to the Contractor as may be on the site of the work and necessary therefore.

2.12 LIENS

In the event that there are any liens on file against the City of Tacoma, the City of Tacoma shall be entitled to withhold final or progress payments to the extent deemed necessary by the City of Tacoma to properly protect the outstanding lien claimants until proper releases have been filed with the City Clerk.

2.13 LEGAL DISPUTES

A. General

Washington law shall govern the interpretation of the Contract. The state or federal courts located in Pierce County Washington shall be the sole venue of any mediation, arbitration, or litigation arising out of the Contract.

Respondents providing submittals from outside the legal jurisdiction of the United States of America will be subject to Tacoma's City Attorney's Office (CAO) opinion as to the viability of possible litigation pursuant to a contract resulting from this Specification. If it is the opinion of the CAO that any possible litigation would be beyond reasonable cost and/or enforcement, the submittal may be excluded from evaluation.

B. Attorney Fees

For contracts up to \$250,000, which become the subject of litigation or arbitration, the substantially prevailing party may be entitled to reasonable attorney fees, as provided in RCW 39.04.240. Provided, however, the attorney fee hourly rate for the City of Tacoma's assistant city attorneys is agreed to be \$150 per hour or the same as the hourly rate for Contractor's legal counsel, whichever is greater.

2.14 DELIVERY

Prices must be quoted F.O.B. destination, freight prepaid and allowed with risk of loss during transit remaining with Contractor/Supplier (unless otherwise stated in these Specifications) to the designated address set forth in these Specifications.

Deliveries shall be between 9:00 a.m. and 3:30 p.m.; Monday through Friday only (except legal holidays of the City of Tacoma).

Legal holidays of the City of Tacoma are:

New Year's Day	January 1
Martin Luther King's Birthday	3rd Monday in January
Washington's Birthday	3rd Monday in February
Memorial Day	Last Monday in May
Independence Day	July 4
Labor Day	1st Monday in September
Veteran's Day	November 11
Thanksgiving Day	4th Thursday of November
Day after Thanksgiving	4th Friday of November
Christmas Day	December 25

When any of these holidays occur on Saturday or Sunday, the preceding Friday or the following Monday, respectively, is a legal holiday for the City of Tacoma.

2.15 PACKING SLIPS AND INVOICES

A. Packing slips and shipping notices shall be sent to the specific City Division or Department receiving the item(s) at the address stated in City's Solicitation or as otherwise stated in the Contract and include complete description of items, contents of items if crated or cased, quantity, shipping point, carrier, bill of lading number and City of Tacoma purchase order.

B. Each invoice shall show City of Tacoma purchase order number, release number if applicable, quantity, unit of measure, item description, unit price and extended price for each line if applicable, services and deliverables provided if applicable. Line totals shall be summed to give a grand total to which sales tax shall be added, if applicable.

1. For transactions conducted in SAP Ariba, invoices shall be submitted through Ariba.
2. For invoices paid by ACH or by check, unless stated otherwise, invoices shall be electronically submitted by email with corresponding PO number listed in the subject line to accountspayable@cityoftacoma.org.

3. For invoices paid by credit card, invoices shall also display the last name of the cardholder and last four digits (only) of the card number (e.g., Jones/6311). Unless stated otherwise, invoices shall be electronically submitted by email with corresponding PO number listed in the subject line to (do not combine different POs into one invoice or charge) to pcardadmin@cityoftacoma.org.

2.16 APPROVED EQUALS

A. Unless an item is indicated as "No substitute", special brands, when named, are intended to describe the standard of quality, performance or use desired. Equal items will be considered by the City, provided that the respondent specifies the brand and model, and provides all descriptive literature, independent test results, product samples, local servicing and parts availability to enable the City to evaluate the proposed "equal".

B. The decision of the City as to what items are equal shall be final and conclusive. If the City elects to purchase a brand represented by the respondent to be an "equal", the City's acceptance of the item is conditioned on the City's inspection and testing after receipt. If, in the sole judgment of the City, the item is determined not to be an equal, the item shall be returned at the respondent's expense.

C. When a brand name or level of quality is not stated by the respondent, it is understood the offer is exactly as specified. If more than one brand name is specified, respondents must clearly indicate the brand and model/part number being bid.

2.17 ENTIRE AGREEMENT

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

2.18 CODE OF ETHICS

The City's Code of Ethics, Chapter 1.46, Tacoma Municipal Code, provides ethical standards for City personnel and prohibits certain unethical conduct by others including respondents and contractors. Violation of the City's Code of Ethics will be grounds for termination of this contract.

2.19 FEDERAL FINANCIAL ASSISTANCE

If federal funds, including FEMA financial assistance to the City of Tacoma, will be used to fund, pay or reimburse all or a portion of the Contract, Contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives and the following clauses will be incorporated into the Contract:

A. EQUAL EMPLOYMENT OPPORTUNITY During the performance of this Contract, Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

1. 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 setting forth the provisions of this nondiscrimination 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, color, religion, sex, sexual orientation, gender identity, or national origin.
3. The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other

employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

4. 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, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
5. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
6. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
7. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
8. The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

B. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (B)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (B)(1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

3. Withholding for unpaid wages and liquidated damages. The City shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (B)(2) of this section.
4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (B)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (B)(1) through (4) of this section.

C. CLEAN AIR ACT

1. Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
2. Contractor agrees to report each violation to the City and understands and agrees that the City will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

D. FEDERAL WATER POLLUTION CONTROL ACT

1. Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
2. Contractor agrees to report each violation to the City, understands, and agrees that the City will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

E. DEBARMENT AND SUSPENSION

1. This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
2. Contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
3. This certification is a material representation of fact relied upon by the City. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to (insert name of recipient/subrecipient/applicant), the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
4. Contractor agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

F. BYRD ANTI-LOBBYING AMENDMENT

1. Contractors who apply or bid for an award of \$100,000 or more shall file the required certification with City. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the City.
2. If applicable, Contractor must sign and submit to the City the following certification:

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap.38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Date

G. PROCUREMENT OF RECOVERED MATERIALS

1. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:
 - a. Competitively within a timeframe providing for compliance with the contract performance schedule;
 - b. Meeting contract performance requirements; or
 - c. At a reasonable price.
2. Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.
3. Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

[Section III is for contracts that involve construction and/or labor, and are not applicable to contracts solely for material/supply purchases.]

GENERAL PROVISIONS

SECTION III - CONSTRUCTION AND/OR LABOR CONTRACTS

SECTION III REQUIREMENTS APPLY ONLY TO CONSTRUCTION AND/OR LABOR CONTRACTS AND ARE IN ADDITION TO APPLICABLE REQUIREMENTS CONTAINED IN SECTION II CONTRACT REQUIREMENTS.

3.01 RESPONDENT'S DUTY TO EXAMINE

The Respondent agrees to be responsible for examining the site(s) and to have compared them with the Specifications and Contract Drawings, and to be satisfied as to the facilities and difficulties attending the execution of the proposed Contract (such as uncertainty of weather, floods, nature and condition of materials to be handled and all other conditions, obstacles and contingencies) before the delivery of his/her Proposal. No allowance will be subsequently made by the City on behalf of the Respondent by reason of any error or neglect on Respondent's part, for such uncertainties as aforesaid.

3.02 PERMITS

Except when modified by the Special Provisions, the Contractor shall procure and pay for all permits and licenses necessary for the completion of this Contract including those permits required by the City of Tacoma. The City will obtain county or state road crossing permits if required. In the event a necessary permit is not obtained, the Contractor will not be permitted to work on items subject to said permit and any delays caused thereby will not be subject to extra compensation or extensions.

3.03 NOTIFICATION OF OTHER GOVERNMENTAL AGENCIES AND UTILITIES WHEN UNDERGROUND WORK IS INVOLVED

The Contractor shall notify all other affected governmental agencies and utilities whenever underground work is done under the terms of this Contract. The Contractor is required to obtain permission of the appropriate public and private utilities and governmental agencies before performing underground work pursuant to the terms of this Contract. The Contractor is required to call "one call" at 1-800-424-5555 for all work involving excavation or digging more than 12 inches beneath ground or road surface.

The City may have indicated on the plans and specifications the existence of certain underground facilities that are known to the City department responsible for this Contract. It is the Contractor's responsibility to fully comply with the Underground Utility Locate Law, Chapter 19.122 RCW. If the site conditions are "changed or differing" as defined by RCW 19.122.040(l), the Contractor may pursue the party responsible for not properly marking or identifying the underground facility. The Contractor agrees not to file any claim or legal action against the City (department responsible for this Contract) for said "changed or differing" conditions unless said City department is solely responsible for the delay or damages that the Contractor may have incurred.

3.04 TRENCH EXCAVATION BID ITEM

In the event that "trench excavation" in excess of four feet requires a safety system pursuant to Washington State law and safety shoring, sloping, sheeting, or bracing is used, a separate bid item should be set forth in the Proposal for this work. If a separate bid item is not set forth in the Proposal pages, said installed safety system shall be paid at \$3.00 per lineal foot of trench, which unit price includes both sides of the trench.

3.05 SAFETY

A. General

The Contractor shall, at all times, exercise adequate precautions for the safety of all persons, including its employees and the employees of a Subcontractor, in the performance of this Contract and shall comply with all applicable provisions of federal, state, county and municipal safety laws and regulations. It is the Contractor's responsibility to furnish safety equipment or to contractually require Subcontractors to furnish adequate safety equipment relevant to their responsibilities.

The Contractor shall obtain the necessary line clearance from the inspector before performing any work in, above, below or across energized Light Division circuits.

The Inspector and/or Engineer may advise the Contractor and the Safety Officer of any safety violations. It is the Contractor's responsibility to make the necessary corrections. Failure to correct safety violations is a breach of this Contract and, as such, shall be grounds for an order from the Safety Officer, Inspector or Engineer to cease further work and remove from the job site until the condition is corrected. Time and wages lost due to such safety shutdowns shall not relieve the Contractor of any provisions of Section 3.14 of this Specification and shall be at the sole cost of the Contractor. The purpose of this authority to stop work is to enforce the contract and not to assume control except to the extent necessary to ensure compliance with the provisions of this contract.

Any of the above actions by employees of the City of Tacoma shall in no way relieve the Contractor of his/her responsibility to provide for the safety of all persons, including his/her employees.

B. Work Hazard Analysis Report

The Contractor will be required to complete a work hazard analysis report. This report shall outline how the Contractor proposes to satisfy all safety laws and regulations involved in performing the work. This report shall be completed and submitted to the City Safety Officer before the pre-construction conference. A copy of the report shall be maintained at the work site (accessible to the supervisor).

3.06 PROTECTION OF WORKERS AND PROPERTY

The Contractor shall erect and maintain good and sufficient guards, barricades and signals at all unsafe places at or near the work and shall, in all cases, maintain safe passageways at all road crossings, and crosswalks, and shall do all other things necessary to prevent accident or loss of any kind.

The Contractor shall protect from damage all utilities, improvements, and all other property that is likely to become displaced or damaged by the execution of the work under this Contract.

The Contractor is responsible for all roads and property damaged by his/her operations as shall be determined by the Engineer administering this Contract. The Contractor shall be responsible for repairing all damage to roads caused by his/her operations to the satisfaction of the particular governmental body having jurisdiction over the road.

3.07 CONTRACTOR - SUPERVISION AND CHARACTER OF EMPLOYEES

A. Superintendent to Supervise Contractor's Employees

The Contractor shall keep on his/her work, during its progress, a competent superintendent and any necessary assistants, all of whom must be satisfactory to the City of Tacoma. The Contractor's superintendent shall not be changed except with the consent of the City of Tacoma, unless the Contractor's superintendent proves to be unsatisfactory to the Contractor and ceases to be in his/her employ. The Contractor's superintendent shall represent the Contractor in his/her absence and all directions given to him/her shall be binding as if given to the Contractor directly. The Contractor shall give efficient supervision to the work, using his/her best skill and attention.

B. Character of Contractor's Employees

The Contractor shall employ only competent, skillful, faithful and orderly persons to do the work, and whenever the Engineer administering the Contract shall notify the Contractor in writing that any person on the work is, in his or her opinion, incompetent, unfaithful, disorderly or otherwise unsatisfactory, the Contractor shall forthwith discharge such persons from the work and shall not again employ him or her on this Contract.

3.08 CONTRACTOR'S COMPLIANCE WITH THE LAW

A. Hours of Labor

The Contractor and Subcontractors shall be bound by the provisions of RCW Chapter 49.28 (as amended) relating to hours of labor. Except as set forth in the Special Provisions, eight (8) hours in any calendar day shall constitute a day's work on a job performed under this Contract.

In the event that the work is not performed in accordance with this provision and in accordance with the laws of the State of Washington, then this Contract may be terminated by the City of Tacoma for the reason that the same is not performed in accordance with the public policy of the State of Washington as defined in said statutes.

B. Prevailing Wages

If federal, state, local, or any applicable law requires Supplier to pay prevailing wages in connection with a Contract, and Supplier is so notified by the City, then Supplier shall pay applicable prevailing wages.

If applicable, a Schedule of Prevailing Wage Rates and/or the current prevailing wage determination made by the Secretary of Labor for the locality or localities where the Contract will be performed is attached and made of part of the Contract by this reference. If prevailing wages do apply to the Contract, Supplier and its subcontractors shall:

1. Be bound by and perform all transactions regarding the Contract relating to prevailing wages and the usual fringe benefits in compliance with the provisions of Chapter 39.12 RCW, as amended, the Washington State Prevailing Wage Act and/or the Davis-Bacon Act (40 U.S.C. 3141- 3144, and 3146-3148) and the requirements of 29 C.F.R. pt. 5 as may be applicable, including the federal requirement to pay wages not less than once a week,
2. Ensure that no worker, laborer or mechanic employed in the performance of any part of the Contract shall be paid less than the prevailing rate of wage specified on that Schedule and/or specified in a wage determination made by the Secretary of Labor (unless specifically preempted by federal law, the higher of the Washington state prevailing wage or federal Davis-Bacon rate of wage must be paid) and Additionally, in compliance with applicable federal law, contractors are required to pay wages not less than once a week.
3. Immediately upon award of the Contract, contact the Department of Labor and Industries, Prevailing Wages section, Olympia, Washington and/or the federal Department of Labor, to obtain full information, forms and procedures relating to these matters. Per such procedures, a Statement of Intent to Pay Prevailing Wages and/or other or additional documentation required by applicable federal law, must be submitted by Contractor and its subcontractors to the City, in the manner requested by the City, prior to any payment by the City hereunder, and an Affidavit of Wages Paid and/or other or additional documentation required by federal law must be received or verified by the City prior to final Contract payment. In the event any dispute arises as to what are the prevailing rates of wages for work of a similar nature and such dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the Director of the State of Washington, Department of Labor and industries whose decision shall be final, conclusive and binding on all parties involved in the dispute.

3.09 COPELAND ANTI-KICKBACK ACT

For contracts subject to Davis Bacon Act the following clauses will be incorporated into the Contract:

A. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

B. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

C. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

3.10 CHANGES

A. In Plans or Quantities

The City of Tacoma, without invalidating this Contract, or any part of this Contract, may order extra work or make reasonable changes by altering, adding to or deducting from the materials, work and labor and the Contract sum will be adjusted accordingly. All such work and labor shall be executed under the conditions of the original Contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change. When work or bid items are deducted, reduced or eliminated, it is agreed that no payment will be made to Contractor for anticipated profit.

B. Extra Work

Any claim or order for extra materials, work and labor made necessary by alterations or additions to the plans or by other reasons for which no price is provided in this Contract, shall not be valid unless the Contractor and Engineer administering the Contract have agreed upon a price prior to commencing extra work, and the agreement has been signed by the Contractor and approved by the Superintendent or his/her designee, and approved by the payment and performance bond surety.

C. Extra Work - No Agreed Price

If it is impracticable to fix an increase in price definitely in advance, the order may fix a maximum price which shall not under any circumstances, be exceeded, and subject to such limitation, such alteration, modification, or extra shall be paid for at the actual necessary cost as determined by the City of Tacoma, which cost (including an allowance for profit) shall be determined as the sum of the following items (1) to (7) inclusive:

- (1) Labor, computed at regular wage scale, including premium on compensation insurance and charge for social security taxes, and other taxes, pertaining to labor; no charge for premium pay shall be allowed unless authorized by the Engineer administering the Contract;
- (2) The proportionate cost of premiums on comprehensive general liability and other insurance applicable to the extra work involved and required under this Contract;
- (3) Material, including sales taxes pertaining to materials;
- (4) Plant and equipment rental, to be agreed upon in writing before the work is begun; no charge for the cost of repairs to plant or equipment will be allowed;
- (5) Superintendence, general expense and profit computed at 20 percent of the total of paragraphs (1) to (4) inclusive;
- (6) The proportionate cost of premiums on bonds required by this Contract, computed by 1 1/2 percent of the total of paragraphs (1) to (5) inclusive.
- (7) The City of Tacoma reserves the right to furnish such materials as it may deem expedient, and no allowance will be made for profit thereon.

Whenever any extra work is in progress, for which the definite price has not been agreed on in advance, the Contractor shall each day, report to the Engineer the amount and cost of the labor and material used, and any other expense incurred in such extra work on the preceding day, and no claim for compensation for such extra work will be allowed unless such report shall have been made.

The above-described methods of determining the payment for work and materials shall not apply to the performance of any work or the furnishing of any material, which, in the judgment of the Engineer administering the Contract, may properly be classified under items for which prices are established in the Contract.

D. Claims for Extra Work

If the Contractor claims that any instructions by drawings or otherwise, involve extra cost under this Contract, he/she shall give the City of Tacoma written notice thereof within 30 days after receipt of such instruction, and in any event before proceeding to execute the work, except in an emergency endangering life or property, and the procedures governing the same shall be as provided for immediately above in this paragraph. The method in these paragraphs is the only method available to the Contractor for payment of claims for extra work performed under the terms of this Contract.

3.11 CLEANING UP

The Contractor shall at all times, at his/her own expense, keep the premises free from accumulation of waste materials or debris caused by any workers or the work, at the completion of the work the Contractor shall remove all his waste materials from and about the site and all his/her equipment, sanitary facilities and surplus materials. In the case of dispute, the City of Tacoma may remove the debris and charge the cost to the Contractor as the City of Tacoma shall determine to be just. All material that is deposited or placed elsewhere than in places designated or approved by the Engineer administering the Contract will not be paid for and the Contractor may be required to remove such material and deposit or place it where directed.

3.12 PROGRESS PAYMENT

Progress payments will be made up to the amount of ninety-five percent (95%) of the actual work completed as shall be determined by the Engineer administering the Contract.

The Contractor may request that an escrow account be established as permitted by law, in which event the Contractor will earn interest on the retained funds.

When the time for construction, services and/or installation will exceed thirty (30) days, the Contractor may request, by invoice, to be paid a progress payment based on percentage of work completed. The Engineer will review and approve the progress payment request on a monthly basis.

3.13 FINAL PAYMENT

The final payment of five percent (5%) of the Contract price shall be approved on final acceptance of the work under this Contract by the Superintendent or his/her designee. In addition, before final payment is made, the Contractor shall be required to:

- A. Provide a certificate from the Washington State Department of Revenue that all taxes due from the Contractor have been paid or are collectible in accordance with the provisions of Chapter 60.28 and Title 82 of the Revised Code of Washington;
- B. Provide the General Release to the City of Tacoma on the form set forth in these Contract documents;
- C. Provide a release of any outstanding liens that have been otherwise filed against any monies held or retained by the City of Tacoma;
- D. File with the City Director of Finance, and with the Director of the Washington State Department of Labor and Industries, on the state form to be provided, an affidavit of wages paid;
- E. File with the City Director of Finance, on the state form to be provided, a statement from the State of Washington, Department of Labor and Industries, certifying that the prevailing wage requirements have been satisfied.
- F. File with the City Director of Finance, on the state form to be provided, a statement of release from the Public Works Contracts Division of the State of Washington, Department of Labor and Industries, verifying that all industrial insurance and medical aid premiums have been paid.

If there is a fee assessed to the City for any certificate, release or other form required by law, the contractor agrees that the fee amount may be passed on to the Contractor and deducted from the monies paid to the Contractor.

3.14 FAILURE TO COMPLETE THE WORK ON TIME

Should the completion of the work required under the Contract be delayed beyond the expiration of the period herein set for the completion of said work, or such extension of said period as may be allowed by reason of unavoidable delays, there shall be deducted from the total Contract price of work, for each calendar day by which such completion shall be delayed beyond said period of such extension thereof the sum of \$300 or a sum of money as set forth hereinafter in these Specifications, as the amount of such deduction per calendar day.

Said sum shall be considered not as a penalty, but as liquidated damages, which the City will suffer by reason of the failure of the Contractor to perform and complete the work within the period, herein fixed or such extensions of said period as may be allowed by reason of unavoidable delays.

Any money due or to become due the Contractor may be retained by the City to cover said liquidated damages, and should such money not be sufficient to cover such damages, the City shall have the right to recover the balance from the Contractor or his/her Sureties.

The filing of any bid for the work herein contemplated shall constitute acknowledgment by the Respondent that he/she understands, agrees and has ascertained that the City will actually suffer damages to the amount hereinabove fixed for each and every calendar day during which the completion of the work herein required shall be delayed beyond the expiration of the period herein fixed for such completion or such extension of said period as may be allowed by reason of unavoidable delays.

3.15 CITY RESERVES RIGHT TO USE FACILITIES PRIOR TO ACCEPTANCE

The City of Tacoma hereby reserves the right to use the facilities herein contracted prior to final acceptance under this Contract. The use of said facilities, as mentioned herein, shall not be construed as a waiver or relinquishment of any rights that the City of Tacoma has under this Contract.

3.16 LIST OF SUBCONTRACTORS

Bid proposals for construction, alteration or repair of any building or other public works that may exceed \$1,000,000 including tax shall satisfy the following requirement: Respondent shall submit as part of the bid, the names of the subcontractors, with whom the respondent, if awarded the contract, will subcontract performance of the work of heating, ventilation and air conditioning, plumbing as described in chapter 18.106 RCW, and electrical as described in chapter 19.28 RCW, or to name itself for the work. The respondent shall not list more than one subcontractor for each category of work identified, unless subcontractors vary with bid alternates, in which case the respondent must indicate which subcontractor will be used for which alternate. Failure to comply with this provision or the naming of two or more subcontractors to perform the same work shall require the City (pursuant to state law RCW 39.30.060) to determine that respondent's bid is nonresponsive; therefore, the bid will be rejected.

PREVAILING WAGE RATES

This project requires prevailing wages under [39.12 RCW](#). Any worker, laborer, or mechanic employed in the performance of any part of the work shall be paid not less than the applicable prevailing rate of wage.

The project sites are located in Grays Harbor and Lewis Counties.

The effective date for prevailing wages on this project will be the **submittal deadline** with these exceptions:

- a. If the project is not awarded within six months of the submittal deadline, the award date is the effective date.
- b. If the project is not awarded pursuant to a competitive solicitation, the date the contract is executed is the effective date.
- c. Janitorial contracts follow WAC 296-127-023.

Except for janitorial contracts, these rates shall apply for the duration of the contract unless otherwise noted in the solicitation.

Look up prevailing rates of pay, benefits, and overtime codes from this link:

<https://secure.lni.wa.gov/wagelookup/>

REQUIRED FILINGS

The contractor and all subcontractors covered under [39.12 RCW](#) shall submit to the Department of Labor and Industries (L&I) for work provided under this contract:

1. A Statement of Intent to Pay Prevailing Wages must be filed with and approved by L&I upon award of contract.
2. An Affidavit of Wages Paid must be filed with and approved by L&I upon job completion.

Payments cannot be released by the City until verification of these filings are received by the engineer. Additional information regarding these filings can be obtained by calling the Department of Labor & Industries, Prevailing Wage at 360-902-5335, <https://www.lni.wa.gov/> or by visiting their MY L&I account.

Sustainability Worksheet

The City has an interest in sustainable operations with minimal adverse impact on the environment. The City seeks to do business with vendors that value community and environmental stewardship that help us meet our sustainable purchasing goals.

1. Have you incorporated sustainability into your everyday business practices? Y/N Please describe

2. Have you taken measures to minimize impacts to the environment in the delivery of proposed goods and/or services? Y/N Please describe.

3. Please describe the estimated percentage of material to be recycled or reused under this project ____%.

Tower Painting Weatherwax Ridge & Peterman Hill

SPECIFICATION NO. PG22-0290N

These Special and Technical Specifications have been prepared under the direction of a licensed Professional Engineer, registered in the State of Washington

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DIVISION 1 - SPECIAL PROVISIONS

SECTION 01010 - SUMMARY OF WORK

1.1 PROJECT DESCRIPTION

This project includes painting of Weatherwax Ridge 70-foot self-supporting tower and Peterman Hill 140-foot self-supporting tower including all cleaning and preparation. Coatings include full prime coat, intermediate, and topcoat.

The contractor shall supply all materials required to complete the work required by this contract.

In all cases, the City's contract is with one (1) general contractor and it is the general contractor's responsibility to ensure all work required to provide a complete and operational facility is included in their bid. When possible, the City has attempted to reference work that should be coordinated with various trades, but it is the contractor's responsibility to coordinate and schedule the work of all subcontractors, trades, and suppliers to assure the proper and timely prosecution and completion of all items of work.

1.2 PROJECT LOCATIONS

This project has two (2) locations listed below:

- Weatherwax Ridge - 47°20'13.06"N, 123°36'7.89"W, Grays Harbor County, WA
- Peterman Hill - 46°31'45.41"N, 122°15'51.47"W, Lewis County, WA

1.3 SITE SHOWING

The bidder will be responsible for examining the site(s) and to have compared the sites with the specifications and contract drawings contained in this specification, and be satisfied as to the facilities and difficulties attending the execution of the proposed contract (such as uncertainty of weather, floods, nature and condition of materials to be handled and all other conditions, special work conditions including work schedules, obstacles and contingencies) before the delivery of their proposal.

No allowance will be subsequently made by the City on behalf of the bidder by reason of any error or neglect on the bidder's part, for such uncertainties as aforesaid.

A site showing will not be conducted for this project. The contractor may be able to coordinate a visit to the site on their own. Failure to examine the site may be grounds to reject the bid. Tacoma Power shall make no adjustment to the price or provide any compensation to the contractor for impacts relating to the contractor's failure to consider the potential impacts of not only the site conditions observed, but changes in the observed conditions that could have been foreseen by the contractor.

By entering into the contract, the bidder represents that they have inspected in detail the project site and has become familiar with all the physical and local conditions affecting the project and/or the project site. Any information provided by the City to the contractor, relating to existing conditions on, under, or to the project and/or site including, but not limited to information pertaining to hazardous material abatement and other conditions affecting the project site, represents only the opinion of the City as to the location, character, or quantity of such conditions and is provided only for the convenience of the contractor. The contractor shall draw their own conclusions from such information and make such tests, review and analyses as the contractor deems necessary to understand such conditions and to prepare their proposal.

The City assumes no responsibility whatsoever with respect to the sufficiency or accuracy of such information and there is no guarantee, either expressed or implied, that the conditions indicated or otherwise found by the contractor as a result of any examination or exploration are representative of those existing throughout the work and/or project site.

The contractor shall carefully study and compare the contract documents with each other and shall at once report to the City errors, inconsistencies or omissions discovered. If the contractor performs any construction activity knowing it involves a recognized error, inconsistency or omission in the contract documents without such notice to the City, the contractor shall assume the risk and responsibility for such performance and shall bear an appropriate amount of the attributable costs for correction.

The contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the contractor with the contract documents before commencing activities. Errors, inconsistencies or omissions discovered shall be reported to the City at once.

1.4 COMMENCEMENT, PROSECUTION AND COMPLETION

The contractor will be required to complete the contract documents and to provide surety and payment bonds within ten (10) calendar days after the award of the contract. The contractor shall begin the work to be performed in the contract within ten (10) calendar days after the date of notification to commence work. Notification to commence work may either be by letter or, if no letter is issued, by agreement at the preconstruction conference (or if no letter is issued, by the date the contract is executed by the City).

The contractor shall be required to complete all work within **one hundred eighty (180) calendar days** after the date of notification to commence work. If the contractor fails to complete all work within **one hundred eighty (180) calendar days**, the City will assess liquidated damages in accordance with Section 3.14 of the General Provisions.

The contractor shall begin purchasing material required for all work to be performed in the contract within ten (10) calendar days after the date of notification to commence work. All materials necessary to complete the job shall be staged and inspected by the engineer before any work will be started.

1.5 SPECIFICATION FORMAT

This specification is written and formatted for use with Public Works specifications and is numbered to be consistent with other specifications, including Construction Specifications Institute (CSI) format, as modified by the City. It is not intended to indicate what work is to be accomplished by various subcontractors on the project. In all cases, the City's contract is with one (1) general contractor and it is the general contractor's responsibility to insure all work required to provide a complete and operational facility is included in their bid.

When possible, the City has tried to reference work which should be included with various trades, but it is the contractor's responsibility to ensure all work is properly coordinated. The numbering system in the Special Provisions Section reflects standard provisions written by the City and assigned constant numbers. Thus, gaps will appear when specific sections are not used.

1.6 CONTRACT WORK TIMES

Contract work times shall be Monday through Friday, 7:00 a.m. to 5:00 p.m., excluding holidays, described in Section 2.14 of the General Provisions or as otherwise approved by the City.

If the contractor elects to work on a Saturday, Sunday, holiday or longer than the designated contract work times, such work shall be considered overtime work. On all such overtime work, a City engineer or their inspector must be present. The contractor shall reimburse the City for the full amount of the costs for City employees who must work any such overtime hours. It shall be the engineer's decision as to when an inspector is required. For the purpose of estimation of reimbursement of City employee's overtime, the bidder shall budget \$50.00 per hour.

However, if the City orders work to be performed on overtime, all City employees' overtime costs will be at no expense to the contractor. The City will not require reimbursement for overtime hours worked by the City for inspection as detailed in the General Provisions if the conditions of this paragraph are met to the satisfaction of the engineer.

It is possible that other contractors or the City will be working in the project area during the time of construction. It shall be the responsibility of this contractor to coordinate its work with all other agencies and/or contractors within the project area.

1.7 QUALIFICATION OF CONTRACTORS

A. QUALIFIED CONTRACTORS

Only contractors with management, employees, and staff experienced in the type of work required by this specification, and with a record of successful completion of projects of similar scope, complexity, and overall cost will be considered. The bidder must complete the Contractor's Record of Prior Contracts form attached to this specification at the time of submitting their bid. The City will be the sole judge of the bidder's ability to meet the requirements of this paragraph. Bidders past work will be judged in complexity of job, time of completion, organization, and other factors that may indicate the abilities of the contractor.

Submit to the engineer within ten (10) calendar days following execution of the contact documents, a list of all subcontractors, including each subcontractor's address, telephone number, and contact person to be used on this project.

After completion of the project, an evaluation prepared on the form titled "Generation Contractor Performance Review" which is attached will be completed for the general and all subcontractors on this project. This form will be used to determine the adequacy of the work performed on this project including supervisor, quality of work, and adequate manpower and equipment, and the ability for the general or subcontractor to perform work for Tacoma Power in the future.

Any exception taken by any contractor to the comments on the form should be directed to the engineer within thirty (30) days of receipt. Failure to adequately respond to a poor evaluation within this time frame will be cause for rejection of future bids. The completed evaluation form will be shared with the contractor and subcontractors, but will be kept confidential by the City.

B. QUALIFIED SUPERINTENDENT

The contractor shall employ a competent superintendent as referenced in Section 01040 – Project Coordination, Paragraph 1.13 – Superintendent.

1.8 SPECIFICATIONS AND DRAWINGS

The following reports, attached to these specifications in Appendix A, are included for reference:

Peterman Hill Site Visit Report No. 201425.05

Weatherwax Ridge Site Visit Report No. 200869.06

The contractor shall keep on the job site a copy of the specifications, and shall, at all times, give the engineer access thereto.

1.9 EVALUATION OF BIDS

The award of this contract will not be based on cost alone as other factors and features are equally important. The contract will be awarded to the lowest responsive and responsible bidder complying with the specifications; provided such bid is reasonable and it is in the best interests of the City to accept.

The City, however, reserves the right to reject any and all bids and to waive any informalities in bids received. The City reserves the right to let the contract to the lowest responsive and responsible bidder whose bid will be most advantageous to the City, price and any other factors considered.

All other elements or factors, whether or not specifically provided for in this contract, which would affect the final cost to and the benefits to be derived by the City will be considered in determining the award of the contract. In addition, the bid evaluation factors set forth in City Code Section 1.06.262 may be considered by the City. The conclusive award decision will be based on the best interests of the City. The engineer's decision as to which contractor best meets the City's need will be final.

In addition to General Provisions Section 1.08, the following factors may be used in bid evaluation:

- A. Experience and success of both company and superintendent completing at least three (3) projects of similar scope, complexity and overall cost.
- B. Proposal prices, base bid, and cost of any or all alternates listed.
- C. Past record with the City (including satisfying safety requirements).
- D. Bidder's responsibility based on, but not limited to:
 - 1. Ability, capacity, organization, technical qualifications and skill to perform the contract or produce the services required.
 - 2. Contractor's construction record including references, judgment, stability, adequacy of equipment proposed to be furnished.
 - 3. Whether the contract can be performed within the time specified.
 - 4. Quality of performance of previous contracts or services

1.10 LOCAL EMPLOYMENT AND APPRENTICESHIP TRAINING PROGRAM (LEAP)

Participation in LEAP is not required for this project. However, contractors are encouraged to volunteer in the LEAP Program. Following are the LEAP Program goals:

LEAP is a City of Tacoma economic development program adopted to provide employment opportunities for City of Tacoma residents on qualifying City funded projects. It requires the prime contractor or service provider performing a qualifying public works project or service contract to ensure that 15-percent of the total labor hours worked on the project are performed by apprentices approved by the Washington State Apprenticeship Council (SAC) and/or residents of Tacoma. Compliance may be met through any combination of utilizing residents of Tacoma or SAC apprentices on the project. Residents entering apprenticeships or other related training programs may be screened to work on City public works projects or service contracts.

Contractors/vendors may obtain further information by contacting the City's LEAP Contract and Program Auditor at 253-591-5826 or e-mail leap@cityoftacoma.org. The LEAP coordinator can assist contractors in the recruitment of qualified employees from the Private Industry Council and other pre-employment and training organizations available in the area. The LEAP Office is located in the Tacoma Municipal Building, 747 Market Street, Room 808, Tacoma, Washington 98402.

1.11 PREVAILING WAGES

In addition to the requirements of Section 3.09(B) of the General Provisions, the contractor shall be required to post on the job site a copy of the intent form to pay prevailing wages.

As identified in the General Provisions, the contractor shall comply with the law regarding prevailing wages. These rules apply to any contractor who does business with the City, including owner/operators.

A Statement of Intent to Pay Prevailing Wages **MUST** be filed with the Washington Department of Labor & Industries upon award of contract. An Affidavit of Wages Paid **MUST** be filed with the Washington Department of Labor & Industries upon job completion.

Payments cannot be released by the City until certification of these filings are received by the engineer. Additional information regarding these submittals can be obtained by calling the Department of Labor & Industries, Prevailing Wage at 360-902-5335, or by visiting their web site at:

<http://www.lni.wa.gov/tradeslicensing/prevailingwage/default.asp>

1.12 PERFORMANCE (SURETY), PAYMENT AND RETAINAGE BONDS

A. PERFORMANCE (SURETY) AND PAYMENT BONDS

The Contractor shall provide both a Surety and Payment Bond for 100-percent of the total contract award within ten (10) calendar days after award of the contract in accordance with the General Provisions. These bonds shall be required for each contact awarded under this specification.

B. RETAINAGE BOND

A 5-percent retainage bond may be provided in lieu of the City withholding five-percent retainage. If a retainage bond is not obtained, the City will withhold 5-percent retainage until the end of the contract. If a retainage bond is provided, the City form must be used.

Contractor shall provide notice of intent to provide retainage bond ten (10) days prior to first invoice. The City may elect to allow submission of retainage bond after the first payment at its discretion.

END OF SECTION

SECTION 01025 - MEASUREMENT AND PAYMENT

1.1 ADMINISTRATION

A. AUTHORITY

The City inspector or engineer in coordination with the contractor shall make all measurements and determine all quantities and amounts of work done for progress payments under the contract.

Approximately once a month, the project engineer shall make an estimate of the work completed or done by the contractor, and such estimates will be made by measurement or approximation at the option of the engineer. The engineer's determination of progress payments shall be conclusive. The City will not pay for material not under City control.

Modify Section 2.14 of the General Provisions as follows.

Invoices shall be emailed to the attention of:

Kevin Smith
Tacoma Power/Generation Engineering
kesmith@cityoftacoma.org

NOTE: All questions regarding contract status or payments should be directed to the project engineer.

B. UNIT QUANTITIES SPECIFIED

Quantities indicated in the proposal are for bidding and contract purposes only. Quantities and measurements supplied or placed in the work and verified by the engineer and contractor determine payment.

Adjustments to contract prices due to changes in quantity shall be in accordance with the latest edition of the Standard Specifications, unless otherwise modified by this specification.

The City reserves the right to delete any bid item from the contract by notifying the contractor in writing of its intent. In the event of deleted work, the contractor's sole compensation shall be the money due the contractor for materials that had been purchased and obtained by the contractor prior to the deletion of the work.

C. CONTRACT PRICE

The lump sum and unit bid prices shall be full and complete compensation for the contract work stated, together with all appurtenances incidental thereto, including materials, equipment, tools, labor, and all the costs to the contractor for completing the contract in accordance with the plans, specifications, and instructions of the engineer.

All work not specifically described or mentioned in these specifications, but are required to be constructed to achieve complete and operable systems, structures or amenities shall be considered incidental items of work, not separately compensable, and its price included in items of work specified in the specifications.

D. NON-PAYMENT FOR REJECTED OR SURPLUS PRODUCTS

Payment will not be made for any of the following:

1. Products wasted or disposed of in a manner that is not acceptable
2. Products determined as unacceptable before or after placement
3. Products not completely unloaded from the transporting vehicle
4. Products placed beyond the lines and levels of the required work

5. Products remaining on hand after completion of the work
6. Loading, hauling and disposing of rejected products

E. WORK INCIDENTAL TO BID ITEMS

Work incidental to the bid items are described within each applicable proposal item listed in paragraph 1.2 – Proposal Items.

1.2 PROPOSAL ITEMS

PROPOSAL A – WEATHERWAX RIDGE

1. MOBILIZATION/DEMOBILIZATION WEATHERWAX RIDGE, PER LUMP SUM

A. MEASUREMENT

Mobilization/Demobilization Weatherwax Ridge shall be measured per the lump sum (LS), not to exceed 10-percent of the base bid price.

B. PAYMENT

The lump sum (LS) contract price for Mobilization/Demobilization Weatherwax Ridge shall be full compensation for all labor, equipment, and materials to mobilize to the job site, preparation of work areas, demobilization, including clean up and site restoration. Phases of this job may require multiple mobilizations/demobilizations by some trades/subcontractors. Mobilization/demobilization will only be paid once regardless of the number of mobilizations.

2. WEATHERWAX RIDGE SURFACE CLEANING AND PREPARATION

A. MEASUREMENT

Weatherwax Ridge Surface Cleaning and Preparation shall be measured per the lump sum (LS) for all labor, equipment, materials, permitting, and legal disposal required to prepare tower for coating application in accordance with the attached plans, specifications, and manufacturer's recommendations.

Contractor shall take care not to damage any existing structures and utilities. If damaged, the contractor will be responsible for all repair costs as well as any liquidated damage associated with but not limited to costs associated with loss of revenue.

B. PAYMENT

The lump sum (LS) price for Weatherwax Ridge Surface Cleaning and Preparation shall be full compensation for all costs associated with this bid item.

3. WEATHERWAX RIDGE COATING APPLICATION

A. MEASUREMENT

Weatherwax Ridge Surface Coating Application shall be measured per the lump sum (LS) for all labor, equipment, materials, permitting, and legal disposal required to paint tower in accordance with the attached plans, specifications, and manufacturer's recommendations. Coating application shall include full prime coat, intermediate, and topcoat.

Contractor shall take care not to damage any existing structures and utilities. If damaged, the contractor will be responsible for all repair costs as well as any liquidated damage associated with but not limited to costs associated with loss of revenue.

B. PAYMENT

The lump sum (LS) price for Weatherwax Ridge Coating Application shall be full compensation for all costs associated with this bid item.

4. FORCE ACCOUNT, PER LUMP SUM

A. MEASUREMENT

Measurement will be made for Force Account in accordance with Section 1-09.6 of the latest edition of the Standard Specifications for Road, Bridge and Municipal Construction of the Washington State Department of Transportation as modified by Force Account Work in the Special Provisions or on negotiated lump sum or unit price change orders added to the contract.

B. PAYMENT

Payment shall be made for change order items added to the contract which shall be treated as a deduct to the force account remaining available.

"Force Account," as listed in the proposal

PROPOSAL B – PETERMAN HILL

1. MOBILIZATION/DEMobilIZATION PETERMAN HILL, PER LUMP SUM

A. MEASUREMENT

Mobilization/Demobilization Peterman Hill shall be measured per the lump sum (LS), not to exceed 10-percent of the base bid price.

B. PAYMENT

The lump sum (LS) contract price for Mobilization/Demobilization Peterman Hill shall be full compensation for all labor, equipment, and materials to mobilize to the job site, preparation of work areas, demobilization, including clean up and site restoration. Phases of this job may require multiple mobilizations/demobilizations by some trades/subcontractors. Mobilization/demobilization will only be paid once regardless of the number of mobilizations.

2. PETERMAN HILL SURFACE CLEANING AND PREPARATION

A. MEASUREMENT

Peterman Hill Surface Cleaning and Preparation shall be measured per the lump sum (LS) for all labor, equipment, materials, permitting, and legal disposal required to prepare tower for coating application in accordance with the attached plans, specifications, and manufacturer's recommendations.

Contractor shall take care not to damage any existing structures and utilities. If damaged, the contractor will be responsible for all repair costs as well as any liquidated damage associated with but not not limited to costs associated with loss of revenue.

B. PAYMENT

The lump sum (LS) price for Peterman Hill Surface Cleaning and Preparation shall be full compensation for all costs associated with this bid item.

3. PETERMAN HILL COATING APPLICATION

A. MEASUREMENT

Peterman Hill Surface Coating Application shall be measured per the lump sum (LS) for all labor, equipment, materials, permitting, and legal disposal required to paint tower in accordance with the attached plans, specifications, and manufacturer's recommendations. Coating application shall include full prime coat, intermediate, and topcoat.

Contractor shall take care not to damage any existing structures and utilities. If damaged, the contractor will be responsible for all repair costs as well as any liquidated damage associated with but not limited to costs associated with loss of revenue.

B. PAYMENT

The lump sum (LS) price for Peterman Hill Coating Application shall be full compensation for all costs associated with this bid item.

4. FORCE ACCOUNT, PER LUMP SUM

A. MEASUREMENT

Measurement will be made for Force Account in accordance with Section 1-09.6 of the latest edition of the Standard Specifications for Road, Bridge and Municipal Construction of the Washington State Department of Transportation as modified by Force Account Work in the Special Provisions or on negotiated lump sum or unit price change orders added to the contract.

B. PAYMENT

Payment shall be made for change order items added to the contract which shall be treated as a deduct to the force account remaining available.

"Force Account," as listed in the proposal

1.3 FORCE ACCOUNT WORK

This section supersedes Section 3.10, Paragraph C of the General Provisions.

In certain circumstances, the contractor may be required to perform additional work. Where the work to be performed is determined to be extra and not attributed to the contractor's negligence, carelessness, or failure to install permanent controls, it shall be paid in accordance with the unit contract price or by force account.

Such additional work not covered by contract items will be paid for on a force account basis in accordance with Section 1-09.6 of the Standard Specifications or as a negotiated change order with lump sum or unit price items. For the purpose of providing a common proposal for all bidders and for that purpose only, the City has estimated the potential cost of force account work, and has entered the amount in the bid proposal to become a part of the total bid by the contractor. However, there is no guarantee that there will be any force account work.

1.4 NON-PAYMENT FOR REJECTED OR SURPLUS PRODUCTS OR WORK

Payment will not be made for work rejected by the City. Products or work not meeting contract requirements shall be replaced by the contractor at no expense to the City, regardless of the impact to work, schedule or cost.

END OF SECTION

SECTION 01040 - PROJECT COORDINATION

1.1 PROJECT ENGINEER/LEAD

The project engineer/lead shall be herein referenced as engineer in these specifications.

Construction management for this project with whom the contractor shall coordinate all their activities will be Mr. Kevin Smith at 253-355-6762 once the notice to commence work is issued. Any changes to these specifications or plans shall be approved by this engineer prior to commencing any work.

Bidder inquiries, regarding technical specifications, may be directed to Kevin Smith at 253-355-6762. For general purchasing provisions, contact Carly Fowler, Purchasing, via email, at cfowler@cityoftacoma.org.

1.2 MEETINGS

A. PRE-BID MEETING

All bidders are invited to attend a pre-bid meeting on Tuesday, December 6, 2022 at 10:00 a.m. in the Third Floor Engineering Conference Room, Tacoma Public Utilities Administration Building, 3628 South 35th Street, Tacoma, Washington. Email Carly Fowler at cfowler@cityoftacoma.org to confirm your attendance.

B. PRE-CONSTRUCTION MEETING

Following award of the contract, the engineer will notify the selected bidder of the time and date of the pre-construction meeting to be held at the project location or the Third Floor Engineering Conference Room, Tacoma Public Utilities Administration Building, 3628 South 35th Street, Tacoma, Washington.

Minutes of the pre-construction meeting will be sent to the contractor and all meeting attendees. Recipients of the pre-construction meeting minutes will be required to direct any comments or changes to these minutes to the engineer within seven (7) days from the date of receipt. If no changes or comments are received within the seven (7) days, the meeting minutes will be kept by the engineer and become part of the project file.

C. SITE MEETINGS

The engineer will schedule weekly meetings at the project site on an as-needed basis. Attendance is required of the contractor, site superintendent and major subcontractors at all such meetings. The engineer will notify the contractor of all required site meetings during the pre-construction meeting. Agenda will follow the same format as the pre-construction conference for applicable items.

Minutes of the weekly site meeting will be sent to the contractor and all meeting attendees. Recipients of the pre-construction meeting minutes will be required to direct any comments or changes to these minutes to the engineer within seven (7) days from the date of receipt. If no changes or comments are received within the seven (7) days, the meeting minutes will be kept by the engineer and become part of the project file.

1.3 PERMITS

The contractor shall apply for, obtain and pay for all required permits as set forth in Section 3.02 of the General Provisions.

1.4 COORDINATION WITH OTHERS

A. OPERATION OF EXISTING FACILITIES

The facilities or portions of facilities within the project limits must be kept in continuous operation throughout the construction period. No interruption will be permitted which adversely affects the degree of service provided. Provided permission is obtained by the City in advance, portions of the existing facilities may be taken out of service for short periods.

All construction activities shall be coordinated daily with the engineer or their designated representative. Changes to the schedule that will affect dates shown as milestones on the schedule shall be coordinated with the engineer on a daily basis.

The City will be using this facility for ongoing daily operations.

The contractor shall become familiar with the ongoing operations and include all coordination required as part of the bid. The contractor shall follow all requirements of the City and do all coordination as part of the required work.

B. SCHEDULE AND COORDINATION OF WORK

The contractor shall coordinate scheduling, submittals, and all work specified herein to assure efficient and orderly sequence of the installation of interdependent construction elements with provisions for accommodating items installed later.

1.5 DIVISION OF WORK

A. MATERIAL FURNISHED AND INSTALLED BY CONTRACTOR

The contractor shall furnish and pay for all necessary materials and shall provide all labor, tools, equipment and superintendent, and perform all work incidental to the completion of the project as contemplated by this contract in accordance with the plans, specifications, and instructions of the engineer.

Each subcontractor shall furnish and install all materials and equipment unless otherwise specified.

1.6 LIMITATION OF CONTRACTOR'S WORK AREA/OR CONTRACTOR'S USE OF PREMISES

A. BARRIERS

Clearly mark work area to divide from area in City use.

B. CITY OCCUPANCY

The project and/or its surrounding area will be occupied/used by the City of on-going daily operations. The City has designated areas to be kept clear during all phases of construction during the pre-bid meeting.

C. CONTRACTOR'S USE OF PREMISES

All requests for use of areas not designated for use by the contractor shall be made in writing to the engineer for approval at least four (4) days in advance of the need. The engineer shall approve those areas for use prior to use by the contractor.

All staging and work areas shall be submitted with bids for approval by the engineer.

1.7 HAZARDOUS MATERIALS

The contractor is required to follow all local, state, and federal laws pertaining to the disturbance, removal, handling, storing, transporting, and disposal of all materials deemed hazardous by law.

All work shall be performed by workers certified by Washington State Department of Labor and Industries as having successfully completed a state approved training course. All work shall be in accordance with EPA Title 40 CFR.

See additional requirements in Specification Section 01740 – Waste Management.

1.8 CONTRACT CHANGES

The City has developed four (4) forms to facilitate and track communications with the contractor. These are the **Request for Information (RFI)**, **Engineering Change Directive (ECD)**, **Proposal Request (PR)**, and **Change Order Proposal (COP)**. These forms are included at the end of the Special Provisions.

The **Request for Information (RFI)** shall be used by the contractor whenever written direction on conflicts in plans, insufficient or unconstructable detail is shown, or any other issue which should be documented arises. The City may also use the form to inquire on contractor's methods, schedule or other issues not warranting more formal letter correspondence. The contractor shall maintain the numbering system and, as such, any issued by the City will be unnumbered until delivered to the contractor.

The **Engineering Change Directive (ECD)** shall be used by the City to transmit new or revised drawings, issue additions or modifications to the contract or furnish any other direction which should be documented. Directives are effective immediately. Should the contractor believe that such Directive should result in either a change in cost or time for the project, they shall notify the engineer prior to commencing such work and, if possible, submit a **Change Order Proposal** prior to the start of such work, but in no case, more than seven (7) days from receipt of said Directive.

In the event the City does not receive a **Change Order Proposal** from the contractor within seven (7) calendar days of the contractor's receipt of a Directive from the City, the contractor shall have no claim for extra cost or time or impacts attributable to the work required by the Directive. (Directives are numbered by the City.) Once the City and the contractor have established a price for the changes required by the Directive or any other request by the City for a change in the work, and a **Change Order Proposal** issues reflecting the agreed upon price, it is agreed and understood that the price reflected by the **Change Order Proposal** shall include all direct costs, indirect costs, and the contractor's estimate of impacts to its work, including but not limited to delay impacts, and shall represent a full and final settlement of all issues pertaining to the work required by the Directive, and work performed by the contractor up to the date of the **Change Order Proposal**.

The **Proposal Request (PR)** shall be used by the City to request pricing on a possible change in plans or additional work. The PR may also be used to request credits for deletion or changes in scope of work. The contractor shall respond to such requests with a **Change Order Proposal** within seven (7) days from receipt of said Request unless more time has been agreed to. Requests are numbered by the City.

The **Change Order Proposal (COP)** shall be used by the contractor to respond to City issued Proposal Requests, Engineering Change Directives or when the contractor believes that changed conditions or omitted, but necessary, work items exist. The COP may be used for requested changes in cost or time of the contract. COPs shall be numbered by the contractor, and, in the case of revision or resubmission of the same basic COP, the number shall be hyphenated with the letter "B", "C", etc.

1.9 DIFFERING SITE CONDITION

Differing site conditions shall be administered in accordance with Sections 1.04.5, 1.04.7, and 1.09.11 of the Standard Specifications except as stipulated in these Special and General Provisions. Contractor shall have no claim for additional costs or work, if it fails to submit a written RFI to the City immediately upon encountering any differing site condition, conflicts in the plans, specifications, or constructability issues.

The contractor shall promptly, and before conditions are disturbed, notify the engineer or their field representative of problems with subsurface conditions at the site, problems or conflicts in the plans or specifications or problems on constructability. A written **Request for Information (RFI)** shall be submitted by the contractor when such problems and direction are required.

The engineer shall promptly investigate the conditions, and if agreed upon with the contractor, adjustment shall be made on the appropriate details in writing to facilitate construction. The response may be on the **RFI** or may necessitate an **Engineering Change Directive (ECD)** or **Proposal Request (PR)**. No claim by the contractor under this differing site condition shall be allowed except as agreed upon in writing with the engineer.

Whenever possible, should the City desire extra work to be performed a **Proposal Request (PR)** shall be sent to the contractor.

Whenever possible, the contractor shall submit in advance and in writing, a **Change Order Proposal (COP)** for changes in the scope of work and/or contract amount. This proposal shall be either accepted or rejected in writing by the project engineer prior to work commencing. When no agreement can be reached, the City may order extra work on force account.

When time is short, the contractor shall notify the City extra work is required or the City shall notify the contractor that extra work is needed and at a minimum, the engineer shall issue a handwritten **Engineering Change Directive**. In such cases, said handwritten **Directive** will not be considered as agreement that such work is extra. Within seven (7) days, the contractor shall submit a written **Change Order Proposal** for changes in the scope of work and/or contract amount.

1.10 CONSTRUCTION PROGRESS SCHEDULES

A. FORMAT

The contractor shall prepare schedules as a horizontal bar chart with separate bar for each major portion of work or operation, identifying the first workday of each week and include holidays and times when facility will not be available to contractor for City installed work.

B. CONTENT

This schedule shall be activity-oriented showing as nearly as can be determined the starting and completion dates of each event. The schedule shall show the materials delivery, setup, and construction duration.

Show complete sequence of construction, by activity, with dates for beginning and completion of each element of construction.

Identify each task by the appropriate proposal bid item number and subcontractor responsible.

C. SEQUENCE SCHEDULING

It shall be the contractor's responsibility to properly phase in all work specified herein including all work done by subcontractors.

D. SUBMITTALS

The contractor shall submit initial schedules at the preconstruction meeting or at a minimum of within ten (10) working days after the contract award. After review, if changes are required by the engineer, resubmit required revised data within ten (10) working days.

The contractor shall use the attached Submittal Transmittal form (electronic version is available from the engineer) for all submittals.

Within twenty (20) days of the date of the contract, the contractor and the engineer will reach an agreement on any and all adjustments and all modifications to the submitted schedule which are warranted. The schedule, thus modified, will become part of the contract.

The failure of the contractor to submit a schedule(s), or the inability of the contractor and the City to reach an agreement as to modifications to a schedule, shall not excuse the contractor's obligation to perform the work required by the specifications in the number of days required by the specification.

1.11 PROTECTION OF EXISTING UTILITIES AND IMPROVEMENTS

In addition to Section 3.03 "Notification of Other Governmental Agencies and Utilities When Underground Work is Involved" and Section 3.07 "Protection of Workers and Property" of the General Provisions:

The contractor shall protect from damage the utilities and all other existing improvements not provided for in the proposal or special provisions. The cost of labor, equipment and materials required to protect or replace said items shall be incorporated into the bid for this project.

1.12 CITY OCCUPANCY

The City reserves the right to use or to occupy any substantially completed part of the project. Such use of occupancy shall not constitute acceptance of the work, or any part thereof.

1.13 SUPERINTENDENT

The contractor shall employ a competent superintendent (foreman) who shall be present at the project site at all times during the entire progress of the work, except those times when the contractor is demobilized. The superintendent shall be on site even when only a subcontractor is working, unless otherwise approved by the engineer. The foreman shall be satisfactory to the contractor, and shall have full authority to act on their behalf.

It will be the foreman's responsibility to have a set of plans and specifications on the project site during the progress of the work. The foreman shall mark or record on the plans all changes made during construction. Such redline "AS-BUILT" plans shall be available to the engineer at all times and shall be delivered to the engineer upon completion of the work.

The superintendent initially assigned to the project by the general contractor shall remain superintendent for the duration of the contract. If the superintendent is replaced, all work shall stop until an additional preconstruction meeting with the City is held. This work stoppage will be at the contractor's expense. The completion date shall remain unchanged, regardless of any work stoppage.

1.14 CLEAN UP

In addition to Section 3.11 - Cleaning Up of the General Provisions

A. DAILY

The contractor and the City inspector will walk the site daily and as required to determine the cleanup and restoration required.

All areas shall be left safe, clean and free of debris.

Surplus material, tools, temporary structures, dirt and rubbish shall be removed and disposed of by the contractor, and the construction site shall be left clean to the satisfaction of the engineer.

Cleanup is considered incidental to the project and no payment will be allowed.

Collect waste daily and when containers are full, legally dispose of waste off site.

Cleanup of any area impacted by the construction shall be done weekly or as directed/instructed by the engineer.

END OF SECTION



CHANGE ORDER PROPOSAL (COP)

(This form shall be used by the contractor to respond to City issued Proposal Requests, Engineering Change Directives or when the contractor believes that changed conditions or omitted, but necessary, work items exist. The COP may be used for requested changes in cost or time of the contract.)

COP No.:

(Contractor Assigns)

REF. Doc.:

(Initiating a RFI, ECD or PR)

Date: _____

Project Title: _____

Specification No.: _____ Contract No.: _____

Contractor:

Owner:

Tacoma Power/Generation
3628 South 35th Street
Tacoma, WA 98409

Title: _____

☐ Architectural ☐ Civil ☐ Structural ☐ Mechanical ☐ Electrical ☐ Other

Scope of Change:

Initiated By: _____ Representing: _____
(Name) (Company)

Cost/Credit: _____ Time Extension Request: _____

Attachment Type: _____
(Supporting Documentation)

This change order proposal shall include ALL labor, material, equipment, subcontractor costs, mark-ups including overhead, profit, any other direct and/or indirect costs, and any requests for additional time associated with the change in the scope of work.

City's Response:

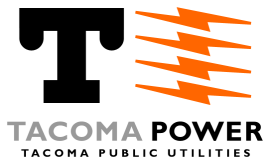
Action: ☐ Approved ☐ Unapproved ☐ Revise and Resubmit (Select only one)

*Prior to any extra work the contractor shall submit a written **Change Order Proposal (COP)**. See Section 01040, Contract Changes, of the specification for this Contract.*

Response By: _____ Attachment Type: _____
(Name) (Supporting Documentation)

Representing: _____ Response Date: _____
(Company) (Date)

Cc:



ENGINEERING CHANGE DIRECTIVE (ECD)

(This form shall be used by the City to transmit new or revised drawings, issue additions or modifications to the contract or furnish any other direction which should be documented.)

ECD No.: (City Assigns)

Date: _____

Project Title: _____

Specification No.: _____ Contract No.: _____

Contractor:

Owner:

Tacoma Power/Generation
3628 South 35th Street
Tacoma, WA 98409

Title: _____

☐ Architectural ☐ Civil ☐ Structural ☐ Mechanical ☐ Electrical ☐ Other

You are hereby directed to make the following modification(s) in the Scope of Work in this Contract:

This document becomes effective upon receipt by the Contractor, with signature of an approved City representative. The Contractor shall then commence with modifications(s) listed above.

Attachment Type: _____
(Supporting Documentation)

Initiated By: _____
(Name)

Representing: _____
(Company)

Contractor's Response:

This ECD: ☐ Will Not ☐ May ☐ Will (select one box only) result in a claim by the Contractor.

*Prior to any extra work the contractor shall submit a written **Change Order Proposal** (COP). See Section 01040, Contract Changes, of the specification for this Contract.*

Attachment Type: _____
(Supporting Documentation)

Response By: _____
(Name)

Response Date: _____
(Date)

Representing: _____
(Company)

Cc:



REQUEST FOR INFORMATION (RFI)

(This form shall be used by the contractor whenever written direction on conflicts in plans, insufficient or unconstructable detail is shown, or any other issue which should be documented arises; or by the City when additional clarification is required.)

RFI No.:

(Contractor Assigns)

Date: _____

Project Title: _____

Specification No.: _____ Contract No.: _____

Contractor:

Owner:

Tacoma Power/Generation
3628 South 35th Street
Tacoma, WA 98409

Subject: _____

☐ Architectural ☐ Civil ☐ Structural ☐ Mechanical ☐ Electrical ☐ Other

Requested Information:

Attachment Type: _____
(Supporting Documentation)

Initiated By: _____
(Name)

Response Required: _____
(Date)

Representing: _____
(Company)

Response:

Attachment Type: _____
(Supporting Documentation)

Response By: _____
(Name)

Representing: _____
(Company)

Prior to any extra work the contractor shall submit a written **Change Order Proposal (COP)**. See Section 01040, Contract Changes, of the specification for this Contract.

Response Date: _____
(Date)

City Approval:

The owner (Tacoma Power) reviewed the foregoing request and finds the response to be in order.

Project Engineer: _____ Response Date: _____
(Name) (Date)

Cc:



PROPOSAL REQUEST (PR)

(This form shall be used by the City to request pricing on a possible change in plans or additional work. The PR may also be used to request credits for deletion or changes in scope of work.)

PR No.:

(City Assigns)

Date: _____

Project Title: _____

Specification No.: _____ Contract No.: _____

Contractor:

Owner:

Tacoma Power/Generation
3628 South 35th Street
Tacoma, WA 98409

Subject: _____

☐ Architectural ☐ Civil ☐ Structural ☐ Mechanical ☐ Electrical ☐ Other

Scope of Request:

Attachment Type: _____

(Supporting Documentation)

This is not a change order or a notice to proceed with the described work. Prior to any extra work the contractor shall submit a written **Change Order Proposal** (COP). See Section 01040, Contract Changes, of the specification for this Contract.

Initiated By: _____

(Name)

Representing: _____

(Company)

Cc:

CONTRACTOR SUBMITTAL TRANSMITTAL

Submittal No.: (Contractor Assigns)

Date: _____

Project Title: _____

Specification No.: _____ Contract No.: _____

Contractor:

Owner:

Tacoma Power/Generation
3628 South 35th Street
Tacoma, WA 98409

Subject: _____

☐ Architectural ☐ Civil ☐ Structural ☐ Mechanical ☐ Electrical ☐ Other

Sending the Following Item(s):

☐ Submittals ☐ Product/Data ☐ Samples ☐ Plans ☐ Shop Drawings ☐ Copies
☐ Specifications ☐ Contract ☐ Other: _____

Copies	Section	Description of Product/Data	Manufacturer

Transmitted as:

☐ For Approval ☐ For Your Use ☐ Per Your Request ☐ For Review and Comment
☐ Other: _____

Remarks:

For Use by Architect/Engineer:

☐ No Exception Taken ☐ Make Corrections Noted ☐ Revise and Resubmit ☐ Rejected (See Response)

Corrections or comments made on the shop drawings during this review do not relieve Contractor from compliance with the requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction, coordinating his work with that of all other contractors and agencies performing his work in a safe and satisfactory manner.

Response Date: _____ Response By: _____
(Date) (Name)

SECTION 01300 - SUBMITTALS AND SHOP DRAWINGS

1.1 SUBMITTALS REQUIRED/REQUESTED WITH BID

In addition to the items listed in the Bidders Checklist, the bidders **shall** submit with their bid package the following information. This information may be used for evaluation purposes.

1. Experience and success of both company and superintendent completing at least three (3) projects of similar scope, complexity, and overall cost. A detailed list of comparable projects with current list of contacts shall be submitted with the bids.

1.2 DOCUMENTS REQUIRED AT PRECONSTRUCTION CONFERENCE

- A. Work Hazard Analysis Report as required in Paragraph 3.06(B) of the General Provisions.
- B. Construction Schedule as required in Section 01040 – Project Coordination.
- C. List of Subcontractors, including each subcontractor's address, telephone number, and contact person to be used on this project.
- D. Name of Job Superintendent.
- E. List of Number and Names of Workers, Equipment List, and Working Site Layout or Requirements.
- F. List of Products.

1.3 SUBMITTALS AND SHOP DRAWINGS DURING CONSTRUCTION

Submittals submitted to the City as specified herein are intended to show compliance with the contract documents. Signatures, corrections or comments made on submittals do not relieve the contractor from compliance with requirements of the drawings and specifications. Neither does acceptance or approval of submittals by signature add to or delete from any contract requirements resulting from these specifications regardless of the wording of the submittals. Submittals will not be reviewed or approved when the term "By Others" is used. Submittals are reviewed or approved for general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions, selecting techniques of construction, coordinating their work with that of other contractors and agencies, and performing their work in a safe and satisfactory manner. Piece-mealing of submittals will not be accepted.

A. PRODUCT DATA

1. Submittal Procedures: Submit for engineer review in accordance with submittal procedures specified in this section. After review, distribute to subcontractors and other applicable entities. Maintain one (1) copy for project record documents to be delivered to engineer at project completion.
2. Identification: Mark each copy to identify specific products, models, options, tolerances, and other pertinent data.
3. Manufacturer's Standard Data: Modify drawings and diagrams to delete inapplicable information. Supplement to provide pertinent information unique to project.

END OF SECTION

SECTION 01400 - QUALITY CONTROL

1.1 REFERENCE STANDARDS

Reference to standards, specifications, manuals or codes of any technical society, organization, or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest Standard Specification manual, code, or laws or regulations in effect at the time of opening of bids (or on the effective date of the agreement if there were no bids), except as may be otherwise specifically stated. However, no provision of any referenced standard, specification, manual, or code (whether or not specifically incorporated by reference in the contract documents) shall be effective to change the duties and responsibilities of City, contractor, engineer, or employees from those set forth in the contract documents.

Any part of the work not specifically covered by these specifications shall be performed in accordance with the applicable section of the latest Edition of the "Standard Specifications for Road, Bridge and Municipal Construction" as prepared by the Washington State Department of Transportation and the Washington State Department of Public Works Association (APWA) as amended by the latest APWA Amendment No. 1 and the latest City of Tacoma Amendment No. 1.

These specifications will herein be referred to as the Standard Specifications.

1.2 INSPECTION, TESTING AND CERTIFICATION

A. INSPECTION

Construction inspection and testing for the City will be performed by a representative as the City may designate, or as the construction situation may dictate. The City inspector will be responsible for insuring that the contractor is complying with the contract plans and specifications.

1. The City will prepare a construction inspection checklist to be presented to the contractor at the preconstruction meeting. The checklist will include all inspections typically required by local, city and county officials as well as other items as deemed important by the engineer.
2. The contractor shall be required to contact the City 24 hours in advance of all of the construction activities listed on the checklist, have the indicated activity inspected, and the City's inspector initial that the work was performed in accordance with the appropriate technical provision.
3. Pre-final Inspection: Contractor shall notify the engineer in writing when all work or portions of work are complete and ready for inspection. The engineer will make a "punchlist" and forward the results to the contractor who shall promptly correct any deficiencies noted.
4. Final Inspection: Contractor shall notify the engineer in writing when all punchlist deficiencies have been completed. The engineer will promptly set a time for final inspection at which time the engineer and contractor shall jointly inspect the work. The contractor will promptly correct any further deficiencies noted.

B. LABORATORY SERVICES

Testing for quality control certification or special inspections as required by the permitting authority will be conducted by Tacoma Power and/or an independent laboratory which will be furnished and paid for by the City. Subsequent sampling and testing of rejected material shall be paid for by the contractor.

Failure of the material to achieve the specified standards will be just cause for rejecting any portion of, and/or all of the material represented by the test. All costs associated with replacement materials or any delays caused by such failure shall be borne by the contractor.

It shall be the contractor's responsibility to prepare test specimens as required for special inspection as required by the permitting authority or the engineer and the cost shall be incidental to the contract.

C. PERMIT INSPECTIONS

The contractor shall comply with the requirements of all permits. It shall be the contractor's responsibility to contact the permitting authority and schedule all required inspections. The contractor shall notify the Tacoma power inspector of all scheduled inspections.

END OF SECTION

SECTION 01500 - CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1.1 UTILITIES

A. ELECTRIC SERVICE

Power will not be provided for this project.

B. TELEPHONE SERVICE

The City will not provide telephone service for the contractor. Mobile telephone service is available at the site.

C. WATER

The City will not provide water to the contractor for this project.

D. SANITARY FACILITIES

Housing shall be provided for the sanitary necessities of all persons employed on the project, beginning with the first person employed and shall be of the chemical type. Such conveniences shall be erected and maintained by the contractor, in the number, manner, and place approved by the engineer immediately upon commencing work. The Sanitation Laws of the State of Washington and any applicable county sanitary laws shall be complied with.

1.2 JOB SHACK

A. JOB SHACK

The contractor shall keep on the job site a full size copy of the drawings and specifications, and shall at all times give the engineer access thereto.

B. STORAGE AREA

An area is available for material storage. This area is available for inspection prior to submittal of bids. This material storage area will be required to be used for storage of all construction material with lead time requirements that is required to be on hand at start of construction. Any modification of the storage area for the convenience of the contractor shall be at the contractor's expense and shall be approved by the engineer. Contractor may use an alternate area for storage of lead time material providing it is at the contractor's expense and available to the engineer for inspection to verify availability.

1.3 SECURITY AND ACCESS

A. SECURITY PROGRAM

Contractor shall comply with Tacoma Power's security policies and procedures and take adequate precaution to protect Tacoma Power's property and employees.

B. ENTRY CONTROL

1. Procedures for the entry and exit of contractor's personnel and materials shall be determined at the preconstruction meeting.
2. Contractor shall maintain a current list of contractor and subcontractor personnel available for on-site inspection.

C. RESTRICTIONS AND OPERATIONAL CONTROL

1. Access for Materials: Every effort shall be made to deliver materials to the construction area during the hours of 7:00 a.m. to 5:00 p.m.

2. Contractor Operations: Access shall be restricted to the immediate work area and access route identified to be used during construction. Contractor shall confine personnel to the immediate work vicinity while on site.

1.4 SAFETY

In addition to Paragraph 3.06 "Safety" of the General Provisions, the contractor shall:

A. WORK HAZARD ANALYSIS

The contractor and their subcontractors shall thoroughly review the scope of work of the proposed project. The contractor will be responsible to indicate a work hazard analysis on the form of "Contractor's Work Hazard Analysis Report" attached with the proposal; i.e., any known or potential safety issues or phases of construction that may require specific safety procedures as identified by WISHA or OSHA regulations, and/or prudent construction practices; i.e., shoring, fall protection, scaffolding, hazardous materials, asbestos removal, etc.

This report shall be completed and submitted to the engineer before the preconstruction conference. A copy of this report will be forwarded to the City Safety Officer for review. A copy of this report shall be maintained at the work site (accessible to the supervisor).

The City will review the submitted report and may require the contractor to clarify their safety procedures submitted or detail their procedures for ensuring safe working conditions for other working conditions not listed in the original submitted report; and/or explain how the procedures meet current safety regulations. In no case, may the contractor commence work until the Job Hazard Analysis Report has been reviewed and approved by the engineer.

1.5 PROTECTION OF ADJACENT AREAS DURING CONSTRUCTION

The contractor shall take any measures, including but not limited to the ones listed below, to protect adjacent areas from the effects of construction.

Installing temporary walls or barriers to completely divide or separate the work area from ongoing Tacoma Power operations. Visqueen or plastic shall form a continuous barrier sufficient to stop all overspray, dust or residue.

1.6 POLLUTION CONTROL

Contractor shall prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris, and other substances resulting from construction activities. No sanitary wastes will be permitted to enter any drain or watercourse other than sanitary sewers. No sediment, debris, or other substances will be permitted to enter sanitary sewers and reasonable measures will be taken to prevent such materials from entering any drain or watercourse.

The contractor shall maintain oil absorption pads on the actual job site whenever any equipment is present to immediately catch and contain any oil and/or fuel leaks.

Nothing in this specification or contract shall be deemed to warrant to the contractor the quality, quantity or usefulness of the property designated for demolition, not designated as salvage, or designated to become the property of the contractor.

END OF SECTION

SECTION 01600 - MATERIAL AND EQUIPMENT

1.1 QUALITY OF WORKMANSHIP AND MATERIAL

A. WORKMANSHIP

The contractor shall employ only competent, skillful, and **orderly** persons to do the work. If, in the engineer's opinion, a person is incompetent, **disorderly** or otherwise unsatisfactory, the engineer shall notify the contractor, in writing, of same. The contractor shall immediately discharge such personnel from the work and shall not again employ those person(s) on said contract again. Work shall conform to the highest industry standards.

See General Provisions, Paragraph 3.08 - Contractor - Supervision and Character of Employees for additional requirements.

B. MATERIALS

Materials shall be delivered to the project site in the manufacturer's original containers, bundles or packages unopened with the seals unbroken and the labels intact. Each type of material shall be of the same make and quality throughout. Manufactured articles, materials and equipment shall be installed in accordance with each manufacturer's written directions, unless otherwise specified.

All materials and equipment to be provided under this contract shall conform to the latest edition of the applicable codes, but in no case shall be contrary to the laws of the State of Washington and/or Federal Government.

The equipment supplied shall meet appropriate ANSI, OSHA, WISHA, and all Federal, state, and local standards for the type of equipment provided for its intended use.

Deliver, store and handle products according to manufacturer's written instructions, using means and methods that will prevent damage, deterioration, and loss, including theft.

1. Schedule delivery to minimize long-term storage and to prevent overcrowding construction spaces.
2. Deliver with labels and written instructions for handling, storing, protecting, and installing.
3. Inspect products at time of delivery for compliance with the contract documents and to ensure items are undamaged and properly protected.
4. Store heavy items in a manner that will not endanger supporting construction.
5. Store products subject to damage on platforms or pallets, under cover in a weather tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required.

1.2 NONSALVAGEABLE MATERIAL

A. PROPERTY OF CONTRACTOR

Demolition, not indicated for salvage, becomes property of contractor. Removed from site at contractor's expense to a legal waste site obtained by the contractor

Materials deemed to be non-salvageable by the engineer's representative shall be disposed by the contractor to a legal dump site obtain by him. All costs to dispose of non-salvageable materials shall be the contractor's responsibility.

END OF SECTION

SECTION 01700 - CONTRACT CLOSEOUT

1.1 DOCUMENTS REQUIRED UPON COMPLETION OF WORK

A. CLOSE OUT PROCEDURES

The contractor shall notify the engineer in writing when identified tasks are complete and ready for inspection. The engineer will make the inspection, forward the results of same to the contractor, who shall promptly correct any deficiencies noted.

The contractor shall notify the engineer in writing when all punchlist deficiencies have been completed. The engineer will promptly set a time for final inspection, at which time the engineer and the contractor shall jointly inspect the work. The contractor will promptly correct any deficiencies noted.

It is possible that other contractors or the City will be working in the project area during the time of construction. It shall be the responsibility of this contractor to coordinate their work with all other agencies and/or contractors within the project area.

B. FINAL DOCUMENTATION

Upon completion of the work and before final payment is made, the contractor shall deliver to the engineer, in addition to such other items specified in these specifications, the following documents:

1. All Guarantees and/or Agreements
 - a. All guarantees, warranties, and/or agreements for materials.
2. Spare Materials
 - a. List of ready-mixed paints and colors used in the building and a list of paint samples given to the engineer.
3. Final Clean Up
 - a. Leave the entire site perfectly clean and ready for occupancy.
 - b. Removal of all temporary facilities and contractor equipment.
 - c. Clean the site. Sweep paved areas and walkways. Remove stains, spills, and foreign deposits.

All surfaces disturbed shall be restored to a condition equal to that before the work began.

Surplus material, tools, temporary structures, dirt and rubbish shall be removed and disposed of by the contractor, and the project area shall be left clean to the satisfaction of the engineer.

Clean up is considered incidental to the project and no measurement and payment will be allowed.

Obtain final inspections from authorities having jurisdiction as necessary.

END OF SECTION

SECTION 01740 – WASTE MANAGEMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

The activities in this section shall include all work that will require handling, storage, sampling, disturbance, removal, transportation, designation, and/or disposal of hazardous materials and hazardous wastes which may include; soil and hazardous substances.

- A. This section is to establish minimum practices to be used for the generation (including soil excavation), handling, storage, and disposal of potentially hazardous materials that may be encountered, and/or generated by the contractor.
 - 1. All non-hazardous solid wastes generated, stored, handled, transported, and disposed of shall be managed in accordance with the standards in WAC 173-350.
 - 2. All hazardous materials and wastes generated, stored, handled, transported, and disposed of shall be managed in accordance with the standards in WAC 173-303.
- B. The contractor shall assume the following:
 - 1. Additional sampling and analysis of materials and/or waste by the contractor may be necessary for the determination of proper handling and disposal requirements in accordance with the standards in WAC 173-303.
 - 2. The cost of removal, handling, storage, sampling, analysis, transportation, and disposal of contaminated and/or hazardous materials and hazardous wastes as part of the execution of this contract shall be incidental to the specific proposal item.

1.2 MANAGEMENT AND ANALYSIS OF WASTES

- A. HAZARDOUS MATERIALS/WASTES
 - 1. The contractor shall be responsible for appropriately handling, transporting and disposing of all hazardous wastes generated and/or encountered under this contract.
 - 2. The contractor shall be responsible for the sampling and analysis of all waste materials (waste streams) generated.
 - 3. Hazardous wastes must be sampled, analyzed, and profiled in accordance with Washington Department of Ecology waste designation requirements as codified in WAC 173-303.
 - 4. Testing shall be performed by a Washington State Department of Ecology accredited laboratory using EPA approved Methodologies for all testing required for waste determination.
 - 5. The contractor shall report all proposed waste characterizations with the engineer prior to any waste transportation and/or disposal efforts are performed. The contractor may deviate from this approach only after providing a written work plan describing in detail the evaluation process and methods. If an alternative is proposed the City of Tacoma Project Engineer must review and approve the plan prior to any work starting.

6. The contractor shall report all proposed hazardous waste disposal locations with the engineer prior to any waste transportation and/or disposal efforts are performed. The contractor may deviate from this approach only after providing a written work plan describing in detail the handling, storage, and disposal location(s) and process(es) that will be used. If an alternative handling, storage, or disposal method is proposed, the City of Tacoma Project Engineer must review and approve the plan prior to any work starting.
7. Testing and waste characterizations may not be required if the waste materials are managed under a Department of Ecology approved recycling exemption (e.g. recycling of scrap steel without removal of coating, recycling of used concrete).

1.3 CODES, LAWS AND REGULATIONS

The following laws, codes, and regulations shall be followed for the removal of soils, hazardous materials, and stormwater management:

- A. Washington State Department of Labor and Industries Chapters 296-155 WAC, 296-24 WAC, 296-62 WAC
- B. Washington State Department of Ecology Chapters 173-303 WAC, 173-304 WAC, 173-350 WAC
- C. Code of Federal Regulations Chapters 29 and 40.

PART 2 EXECUTION

A. HAZARDOUS MATERIALS/WASTES

1. The contractor shall perform a baseline study for each work area where hazardous materials will be disturbed.
 - a. The contractor shall include all aspects of the environment local to the job site.
 - b. The contractor shall submit a plan showing test locations and results to the engineer prior to commencement of work involving the disturbance of hazardous materials at the job site.
 - c. Upon completion of work, including demobilization, the contractor shall perform a post-baseline study and shall submit the study to the engineer.
 - d. The City will not make final payment for work until the engineer has received and reviewed the post-baseline study.
2. All hazardous waste removal work shall be performed by workers that have completed all required training activities and are knowledgeable in the removal of hazardous waste materials.
3. The contractor shall follow all requirements of the above codes and regulations to protect all people who may enter the work area during hazardous waste removal.
4. All requirements of the county health department(s) shall be followed at all times.
5. The contractor shall furnish and require use of respiratory equipment and special protective clothing for all employees exposed to airborne contaminants or other hazardous materials.

6. The contractor shall be responsible for the removal, encapsulation and disposal of all hazardous waste materials disturbed, managed, and/or generated under this contract.
7. If applicable and/or requested by the engineer, the contractor shall include a copy of their lead/asbestos abatement program, management policies and procedures in the Contractor's Work Hazard Analysis Report. The Report shall be submitted to the City for the preconstruction conference in accordance with Section 01500 – Construction Facilities and Temporary Controls.

END OF SECTION

DIVISION 2 – EXISTING CONDITIONS

SECTION 02830 – LEAD & ASBESTOS ABATEMENT AND COATING REMOVAL/APPLICATION

PART 1 GENERAL

1.1 SECTION INCLUDES

The activities in this section shall include all work that will require notification, coverage, or waste management under Environmental Protection Agency, Department of Ecology, Regional, County or City of Tacoma regulation triggered by work performed by the contractor or under the direction of the contractor which may include but not limited to; demolition of building structure or structural members of a building, removal of lead or asbestos bearing materials (including suspected lead or asbestos bearing) or coatings removal activity on City of Tacoma owned property, structures, and/or buildings during project process.

- A. This section is to establish minimum responsibilities and requirements to be used when demolition, abatement, or coatings removal, and/or lead/asbestos materials are generated by the contractor.
 - 1. All demolition, abatement, and coating removal activities shall be managed in accordance with the standards in WAC 173-400, WAC 173-476, CFR 40 and Regional Air Agency regulations based on project location.
 - 2. All contract activities occurring on City of Tacoma owned property inside King and Pierce County shall be managed in accordance with the standards in City of Tacoma Municipal Code Title 12, Department of Ecology Phase I Municipal Stormwater Permit, and City of Tacoma Stormwater Management Plan.
 - 3. All waste generated, stored, handled, transported, and disposed of shall be managed in accordance with the standards in WAC 173-303, WAC 173-350, Regional Air Agency regulations based on project location and all additional waste handling requirements of this contract.
- B. The contractor shall assume the following:
 - 1. Responsible for securing permits/notice/registration and all associated permits/notice/registration requirements triggered by work performed by the contractor or under the direction of the contractor
 - 2. Responsible for securing transfer/partial coverage for any existing permits/notice/registration triggered by work performed by the contractor or under the direction of the contractor
 - 3. Responsible for closure of all permits/notice/registration and associated permits/notice/registration secured by the contractor or under the direction of the contractor
 - 4. The cost of permits/notice/registration associated plan development, sampling, reporting and requirements shall be considered as part of the execution of this contract and shall be incidental to the specific proposal item

5. Additional sampling and analysis of materials and/or waste by the contractor may be necessary for the determination of proper handling, storage, and disposal requirements in accordance with the standards in WAC 173-303 and Regional Air Agency regulations, based on project location. All waste handling, storage, and disposal cost shall be incidental to the specific proposal item.

1.2 DEMOLITION AND LEAD/ASBESTOS ABATEMENT

A. DEMOLITION

1. The contractor shall be responsible for ensuring a lead and asbestos survey has been completed for all structures scheduled for demolition prior to work beginning.
2. The contractor shall be responsible for ensuring all lead and asbestos materials are abated per this contract prior to demolition work beginning.
3. The contractor shall be responsible for securing notification under the Department of Ecology or Regional Air Agency regulations, based on project location, for all demolition activity.
4. The contractor shall be responsible for development, implementation, and management of plans, practices, and procedures to; prevent air quality violations, waste generation minimization, containment of demolition debris/process material, and prevent contamination of surrounding areas.
5. The contractor shall be responsible for the sampling and analysis of all waste materials for disposal determinations
6. Testing shall be performed by a Washington State Department of Ecology accredited laboratory using EPA approved Methodologies for all testing required for waste determination.
7. The contractor shall be responsible for disposal requirements in accordance with the standards in WAC 173-303 and Regional Air Agency regulations, based on project location.
8. The contractor shall be responsible for all Notices of Violation and agency enforcement actions resulting from the contractor activity or activity under the direction of the contractor.
9. The contractor shall report the results of all agency permit inspections and Notice of Violation to the designated City of Tacoma Project Manager within (5) business days of receipt.
10. The contractor shall develop a written Corrective Action plan describing in detail the Non-compliance event, current status of compliance and steps(s) and process(es), with a schedule of completion dates, that will be used to bring project activity into compliance for all City of Tacoma, Regional Air Agency regulations, based on project location, Department of Ecology, and Environmental Protection Agency inspections and Notice of Violation identifying non-compliance status. The Corrective Action plan shall be provided to the City of Tacoma Project Engineer within 10 business days of receipt of permit inspections and Notice of Violation notice. The designated City of Tacoma Project Manager must review and approve the plan prior to any work resuming.

B. ASBESTOS AND LEAD ABATEMENT

1. The contractor shall be responsible for securing notification under the Department of Ecology or Regional Air Agency regulations, based on project location, for all abatement activity.

2. The contractor shall be responsible for development, implementation, and management of plans, practices, and procedures to; prevent air quality violations, waste generation minimization, containment of abatement debris/process material, capture and collection of all abatement generated waste materials, and prevent contamination of surrounding areas.
3. The contractor shall be responsible for the sampling and analysis of all waste materials for disposal determinations.
4. Analyses shall be performed by a Washington State Department of Ecology accredited laboratory using EPA approved Methodologies for all testing required for waste determination.
5. The contractor shall be responsible for disposal requirements in accordance with the standards in WAC 173-303 and Regional Air Agency regulations, based on project location
6. The contractor shall assume responsibility for all reporting required by the Department of Ecology or Regional Air Agency regulations, based on project location.
7. The contractor shall assume responsibility for all Notice of Violation and agency enforcement actions resulting from the contractor activity or activity under the direction of the contractor related to abatement activity.
8. The contractor shall report the results of all agency inspections and Notices of Violation to the City of Tacoma Project Engineer within (5) business days of receipt.
9. The contractor shall develop a written Corrective Action plan describing in detail the Non-compliance event, current status of compliance and steps(s) and process(es), with a schedule of completion dates, that will be used to bring project activity into compliance for all City of Tacoma, Regional Air Agency regulations, based on project location, Department of Ecology, and Environmental Protection Agency inspections and Notice of Violation identifying non-compliance status. The Corrective Action plan shall be provided to the City of Tacoma Project Engineer within 10 business days of receipt of permit inspections and Notice of Violation notice. City of Tacoma Project Engineer must review and approve the plan prior to any work starting.

1.3 COATINGS REMOVAL AND APPLICATION

1. The contractor shall be responsible for securing notification, approvals, and permits required under the Department of Ecology or Regional Air Agency regulations, based on project location, for all coatings application and removal activity
2. The contractor shall be responsible for meeting all applicable City of Tacoma Stormwater Management Plan (SWMP) requirements triggered by work performed by the contractor or under the direction of the contractor
3. The contractor shall be responsible for development, implementation, and management of all plans, programs, procedures, and Best Management Practices triggered by work performed by the contractor or under the direction of the contractor to prevent violation of air quality standards.
4. The contractor shall develop a written plan describing in detail each permit, SWMP, or Regional Air Agency regulation, based on project location, requirement to be met during the project, with a schedule of completion dates, responsible positions, and task description/function that will be used to meet the permit and SWMP requirements. City of Tacoma Project Engineer must review and approve the plan prior to any work starting.

5. The contractor shall be responsible for development, implementation, and management of plans, practices, and procedures to; prevent air quality violations, waste generation minimization, containment of debris/process material, and prevent contamination of surrounding areas.
6. The contractor shall be responsible for the sampling and analysis of all waste materials for disposal determinations
7. The contractor shall be responsible for disposal requirements in accordance with the Waste Management standards provided by the City of Tacoma and WAC 173-303
8. The contractor shall assume responsibility for all reporting required by the Department of Ecology or Regional Air Agency regulations, based on project location
9. The contractor shall assume responsibility for all Notice of Violation and agency enforcement actions resulting from the contractor activity or activity under the direction of the contractor
10. The contractor shall report the results of all agency inspections and Notices of Violation to the City of Tacoma Project Engineer within 5 business days of receipt
11. The contractor shall develop a written Corrective Action plan describing in detail the Non-compliance event, current status of compliance and steps(s) and process(es), with a schedule of completion dates, that will be used to bring project activity into compliance for all City of Tacoma, Regional Air Agency regulations, based on project location, Department of Ecology, and Environmental Protection Agency inspections and Notice of Violation identifying non-compliance status. The Corrective Action plan shall be provided to the City of Tacoma Project Engineer within 10 business days of receipt of permit inspections and Notice of Violation notice. City of Tacoma Project Engineer must review and approve the plan prior to any work starting

1.4 CODES, LAWS AND REGULATIONS

The following laws, codes, and regulations shall be followed when dealing with Demolition, Abatement and Coatings Application/Removal:

- A. Washington State Legislature 90.48 RCW and Department of Ecology Chapters 173-303 WAC, 173-460, WAC, 173-476 WAC, 173-490 WAC,
- B. Code of Federal Regulations Chapter 40.
- C. City of Tacoma Municipal Code Title 12
- D. Regional Air Agencies
 - a. Puget Sound Clean Air Agency Regulation I & III,
 - b. Southwest Clean Air Agency Regulation 400, 476, 490, & 493
 - c. Olympic Region Clean Air Agency Rule 6.3, 8.2, 8.3, 8.5, 8.6, & 8.7

END OF SECTION

DIVISION 9 - FINISHES

SECTION 09900 – PAINTING THREE COAT MOISTURE-CURE URETHANE MICACEOUS IRON OXIDE

PART 1 GENERAL

1.1 SECTION INCLUDES

The work under this section includes:

- A. Cleaning and Surface Preparation: Low-pressure water cleaning in accordance with SSPC-SP12/NACE 5 Water Jetting, supplemented with SSPC-SP1 Solvent Cleaning followed by SSPC-SP2 Hand Tool Cleaning and SSPC-SP3 Power Tool Cleaning on areas of corrosion. Low Pressure Wash cleaning to use minimum of 3000 PSI using rotating nozzle.
- B. Application: All cleaned surfaces, including exposed metal and existing galvanizing shall be painted with a single component, moisture-cure urethane system consisting of a zinc/micaceous iron oxide spot primer on all bare steel where galvanizing is no longer present and full prime coat and a topcoat.

1.2 SUBMITTALS

- A. Submit in accordance with Section 01300 - Submittals and Shop Drawings.
- B. Product data

Submit complete product list

- 1. Arrange in same format as scheduled in this section
- 2. Include manufacturer's publications, performance criteria, recommendations, and limitations.
- 3. Show conformance to specifications.
- C. Samples
 - 1. Color chips: Manufacturer's complete selection
 - 2. Color samples: Size not less than 8-inches x 10-inches on heavy card stock.
- D. Subcontractor's written qualifications: Furnish written qualifications attesting to past satisfactory experience. List last three (3) jobs. Include following information:
 - 1. Start and completion dates
 - 2. Project manager, telephone number

1.3 MATERIAL DESCRIPTION

- A. The coating system for all cleaned surfaces, including exposed metal and existing sound galvanizing, shall incorporate a three coat single-component moisture-cure urethane system consisting of a zinc-rich/micaceous iron oxide-rich spot primer on all exposed bare steel, a micaceous iron oxide-rich full prime coat and a matte finish aliphatic topcoat.
- B. All steel coating products furnished for this project shall be manufactured by the same Manufacturer and shall be compatible with one another.

- C. The manufacturer must certify the protective coatings can be applied in relative humidity as high as 99%, in temperature as low as 20° F, and that there is no restriction on the dew point temperature differential if the surface is visibly dry and free from condensate. The surface must be verified to be free of any frozen water products by an approved third party inspector when application is below 33° F. The use of a 20X-power magnifier is recommended.
- D. All paint shall be prepared at the factory ready for application. The addition of thinner or other material to the paint after the paint has been shipped shall not be permitted, except as recommended by the manufacturer and by permission of the Engineer. Contractor shall furnish paint manufacturer's certification that the paint complies with paint system requirements specified.
- E. Tinting - All tinting materials required shall be added to the paint at the time of paint Manufacture. Field tinting shall not be allowed without approval.
- F. All containers shall be labeled showing the exact title of the paint, the manufacturer's name, date of manufacture, the manufacturer's batch number, and the specification number and the lot number if appropriate. Containers shall be packaged in new approved cans.
- G. Precautions concerning the handling and storage of paint shall be shown on the label of paint and solvent containers.

PART 2 PRODUCTS

2.1 PHYSICAL PROPERTIES

Only single-component Moisture-Cure Urethane Coatings shall be allowed:

A. FULL PRIME COAT

Generic Type: Micaceous Iron Oxide (MIO)* / Zinc-rich, single-component, Moisture-cure polyurethane

Vehicle Type: Moisture-cure polyurethane

Volume Solids: 60% minimum

Pigment Type: Minimum 4 lbs/gal MIO and 4 lbs/gal Zinc Dust

Dry film thickness: 3.0 – 5.0 mils DFT

VOC: VOC 0.8 LB/GAL

Weight per Gallon: Minimum 16 lb/gal (2.38 kg/l)

B. INTERMEDIATE COAT

Generic Type: Micaceous Iron Oxide (MIO)* filled, single-component,
Moisture-cure polyurethane
Vehicle Type: Moisture-cure polyurethane
Volume Solids: 60% minimum
Pigment Type: Minimum 4 lbs/gal MIO and 4 lbs/gal Zinc Dust
Color: Gray or red-oxide
Dry film thickness: 3.0 – 5.0 mils DFT
VOC: VOC 0.8 LB/GAL
Weight per Gallon: Minimum 16.0 lb/gal (1.92 kg/l)

C. FULL TOPCOAT

Generic Type: Micaceous Iron Oxide (MIO)* filled, single-component,
Moisture-cure, aliphatic polyurethane
Vehicle Type: Moisture-cure aliphatic polyurethane
Volume Solids: 60% minimum (50% minimum if approved by the Engineer)
Pigment Type: Minimum 3 lbs/gal MIO
Finish: Semi-gloss or Matte
Color: Gray
Dry Film Thickness: 2.0 - 4.0 mils DFT
VOC: VOC 0.8 LB/GAL
Weight Per Gallon: Minimum 10.0 lb/gal (1.20 kg/l) @ 62% solids
Or minimum 9.0 lb/gal (1.08 kg/l) @ 52% solids

*All Micaceous Iron Oxide products shall conform to ASTM D5532-94, Type 1, and have a Certificate of Conformance.

2.2 PERFORMANCE PROPERTIES

The system identified in this specification meets or exceeds the following test requirements:

A. CORROSION RESISTANCE, ASTM B117, SALT SPRAY TEST

Must pass 4,000 hours minimum with less than 2mm creep from scribe. Panels must be 1/8 inch cold rolled steel minimum, having SSPC-SP10 Near White Blast with 2-3 mils angular profile.

B. ACCELERATED WEATHERING, ASTM G53

Must pass 400 hours QUV B bulb with no chalking, cracking, or gloss loss greater than 20 percent.

C. FORWARD IMPACT, ASTM D2794

Must pass minimum 150 lb. impact.

D. ABRASION RESISTANCE, ASTM D4060

Less than 90 mg loss on CS-17 wheel, 1000 gram/load, 1000 cycles.

B. MOISTURE RESISTANCE, ASTM D4585

Must pass 1000 hours with no change in appearance.

B. FLEXIBILITY, ASTM D522, CONICAL MANDREL BEND TEST

Must pass 1/2 inch mandrel bend with no cracking.

B. ADHESION, ASTM D4541

Must pass minimum 500 psi on certified pull test.

2.3 PRE-APPROVED PRODUCTS AND MANUFACTURE REPRESENTATIVE

A. Local Representative:

Dan (Spud) Wolfe

Wasser NW Rep & Tech Support

360-870-3513

paintspud@earthlink.net

B. Approved Products:

Full Primer: MC-Miozinc 100

Intermediate Coat: MC-Miomastic 100 or MC-Universal 100

Topcoat: MC-Luster 100 STD (Grey SEMI-Gloss) or
MC-Ferrox A 100 STD (Grey Matte)

Accelerator: PURQuik™

Solvent: MC-Thinner & MC-Thinner 100

PART 3 EXECUTION

3.1 SURFACE CLEANING AND PREPARATION

Contractor shall remove all paint as specified below:

- A. Low Pressure Water Washing: Low-pressure water cleaning in accordance with SSPC-SP12/NACE 5 Water Jetting, utilizing equipment capable of a minimum 3000 psi at the nozzle, shall be performed by methods which will remove all dirt, other loose deleterious materials from all the surfaces. SSPC-SP1 Solvent Cleaning, and SSPC-SP2 Hand Tool Cleaning, methods shall be employed as necessary to augment water washing.
- B. Hand/Power Tool Cleaning - Areas of rust which remain following high-pressure water washing, shall be cleaned in accordance with SSPC-SP2, Hand Tool Cleaning, and SSPC SP3, Power Tool Cleaning. The edges of the existing sound galvanizing surrounding the spot-cleaned areas shall be feathered and no loose or abrupt edges shall remain.
- C. Prior to painting, all metal surfaces shall be free of all cleaning residue, supplemented with hand-held brushing and SSPC-SP1 Solvent Wiping, if necessary. Cleaning shall be approved by the engineer prior to painting.
- D. Particular attention shall be given to edges, crevices, nuts, bolts and rivets.

- E. Tight, inaccessible metal-to-metal plates, etc. shall be sealed with a compatible joint sealing compound, as approved by manufacturer.
- F. All bare metal surfaces shall be primed on the same day as cleaning.

3.2 APPLICATION REQUIREMENTS

- A. Dry Film Thickness Schedule:
 - Full Primer: 3 - 5 mils DFT
 - Intermediate: 3 - 5 mils DFT
 - Topcoat: 2 - 4 mils DFT
- B. All painting required under this contract, shall be performed in conformance with the best practices of the trade, with the recommendations of the coating manufacturer, and with applicable portions of the Steel Painting Council Specification SSPC-PA 1; provided that those specifications are not in conflict with these standard specifications.
- C. All surfaces cleaned to bare metal shall be coated with the specified prime coat the same working day. Any cleaned surface that rusts before the application of the prime coat shall be re-cleaned.
- D. Paint film thickness measurements will be made during wet film application, utilizing an approved wet film thickness gauge, in conjunction with an approved magnetic or digital dry film gauge, such as an Elcometer 211 or Positest digital gauge, after the application of each subsequent coat. One hundred percent of all thickness measurements shall be within the specified minimum dry film thickness. Where thickness measurements fall below the specified minimum, additional applications of paint shall be made as necessary to meet the thickness required, at no additional cost to project owner.
- E. Sufficient time shall elapse between successive coats to permit them to dry properly for recoating. **Consult specific product data sheets for proper cure times.**
- F. Apply coatings via spray, brush and/or roll methods, utilizing approved equipment that is standard to the industry, and according to the Wasser application instructions.
- G. A primer stripe coat shall be applied to all exposed metal surfaces as described in Section 3.1-D. All bolts shall be brush stripe coated with an additional brush application of a penetrating nature into tight metal to metal areas prior to application of approved joint sealer, compound as prescribed in Section 3.1-E.

3.3 CLEAN UP

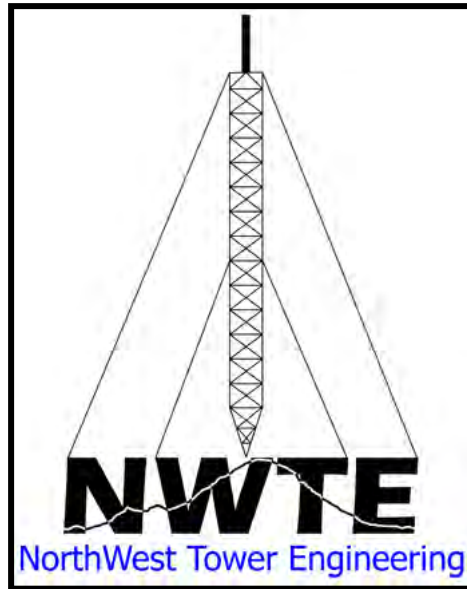
- A. At conclusion of project, thoroughly clean paint and splatters from surfaces including adjacent surfaces. Take care not to scratch or otherwise damage surfaces. Verify chemical compatibility of cleaners to be applied to materials to be cleaned.
- B. Leave premises neat and clean; free from debris and residue from work of this section.

END OF SECTION

APPENDIX A – SITE VISIT REPORTS



NorthWest Tower Engineering



Weatherwax Ridge, WA 70-ft Self-Supporting Tower Tacoma Public Utilities

**Site Visit Report No. 200869.06
June 24, 2020**

Report by: Steven Diamond, P.E.

Checked by: Harvey Carlisle, S.E.



NorthWest Tower Engineering

Weatherwax Ridge, WA

Report No. 200869.06

June 24, 2020

Introduction

NorthWest Tower Engineering (NWTE) visited the 70-foot self-supporting tower site on Weatherwax Ridge in Grays Harbor County, Washington. The site visit was performed at the request of Tacoma Public Utilities (TPU) to visually observe the tower's current physical condition and to obtain pertinent information to perform a structural analysis.

Tower History

NWTE visited the site most recently on 06-11-20. The tower is a Microflex model 60-L210-70' (#12852, January, 1986). A tower elevation drawing and foundation drawings were provided. No soils report was provided.

Antenna Configuration

The following appurtenances are presently on the tower:

Elevation	Location	Appurtenance	Tx Line	Tx Line No.
58'	Leg B	6'x4' Yagi on 3ft Standoff	1/2" Coax	# 7
60'	Leg C	5'x 2.5" Omni on 3ft Standoff	7/8" Coax	# 4
64'	Leg A	6' MW Dish with Radome	EW63	# 5
68'	Leg B	8' HP MW Dish	EW63	# 2

Antenna center elevations are listed for microwave, yagi, and panel type antennas. Base elevations are listed for other antenna types.

The attached drawings show tower geometry, structural member sizes, existing antennas, feed lines, and other supported appurtenances.

Site Visit Results

The following observations were noted during the site visit:

Site:

1. The tower compound is fenced and graveled.
2. No climb warning signs were noted near the tower base.

Tower Base:

1. The tower base is mechanically grounded with (1) 1/8" ground at each leg.
2. The tower leg base plates were installed directly on top of the concrete foundation piers, without the use of grout. There are no weep holes or drainage channels located at the base of pipe legs to allow moisture to escape from inside the pipe (Photo No. 32).
3. The tower leg base plates and anchor bolts are discolored with corrosion (Photo Nos. 25-39).



NorthWest Tower Engineering

Weatherwax Ridge, WA

Report No. 200869.06

June 24, 2020

Tower:

1. The tower's structural members appear to be in fair condition with the following exception:
The tower member galvanizing is discolored, weathered and showing signs of corrosion throughout (Photo Nos. 67-89, 92-96, 103, 104, 108, 112, 113, 132-135, 140, 144, 147, 149, 151).
2. The connection bolts were not torqued down at the following bracing locations:
 - End diagonal brace connection at the 45' level on the N leg (Photo Nos. 97-99).
3. No lightning rod was installed at the top of tower (Photo Nos. 8,12).

Antennas & Mounts:

1. In general, the antennas appear to be installed properly and are in good condition with the following exception:
The antenna mounting hardware for many of the antennas is corroding (Photo Nos. 65,66,101,102,127,141).
Abandoned mount hardware was noted at 46ft (Photo Nos. 100,114,124).
2. Radiofrequency Radiation (RF) was monitored during the tower climb using a Narda model 8845E-0.5 RF warning meter. The meter was not triggered during the climb indicating the RF exposure was below 50 percent of the standard threshold as defined in OSHA standard for exposure to non-ionizing radiation 29CFR, Section 1910.97.

Coaxial Cables:

1. The coaxial cables are neatly supported by the waveguide bracket attached inside the SW leg of the tower. The attached cross section shows feed line arrangement on the tower.
2. The many of coaxial cables do not appear to be grounded at the tower base or top.
3. Coaxial cable and conduits (# 1,3,6) are dead and abandoned on the tower (Photo Nos. 59,60,105,106,121).
4. Many of the coax runs are zipped tied to the tower (Photo Nos. 63,64,80,103,104,108,116-120).

Tower Lighting:

1. The tower is not lighted or painted.

Climb Ladder:

1. The tower has a climb ladder installed near the southwest leg inside the tower.
2. The climb ladder is equipped with a safety climb cable system. The cable is loose (Photo and is also corroding (Photo Nos. 136,137).



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3. The safety cable's rubber guides are weathered and do not securely keep the safety cable (Photo Nos. 90,91).

Recommendations

NWTE recommends the following to improve the tower's **maintenance** condition:

Site:

1. Place climb warning signs at the tower base.

Tower Base:

1. Drill ¼" weep hole at the bottom of each pipe leg to allow moisture to escape from inside the pipe. Fill the inside of pipe below the new weep holes with grout to ensure that water will not pool up on the inside of the pipe.
2. Verify if the tower grounding meets TPU minimum standards and the current revision of the MOTOROLA R56 manual.

Tower:

1. Properly torque/tighten down all loose structural bolts on the tower.
2. Regularly monitor the overall condition of the galvanizing on the tower's structural members. Prepare, treat and paint areas of tower steel that are starting to corrode. Consider establishing a budget to paint the entire tower within the next year.
3. Install a lightning rod at the top of tower and verify if the tower grounding meets TPU minimum standards and the current revision of the MOTOROLA R56 manual.

Antennas & Mounts:

1. Remove all unused and abandoned mount hardware from the tower to reduce wind loading.
2. Prepare, treat and paint the rusting areas of the antenna mounting hardware, as needed. Replace damaged mounting hardware as needed.

Coaxial Cables:

1. Verify that all coaxial cables are properly grounded near the base of the tower.
2. Remove all unused and abandoned equipment from the tower to reduce wind loading.
3. Install all coax using appropriate mounting hardware. Zip ties will deteriorate over time.

Tower Lighting:

1. No recommendations.



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Climb Ladder:

1. Properly tension the safety climb cable, per manufacturer's specifications. Replace the corroding safety cable in the near future.
2. Replace the rubber guides that properly secure the safety cable.

Final Comments:

1. The tower was observed to be in overall fair condition with the exceptions listed above.
2. Please refer to the structural analysis report for further information pertaining to the structure's ability to meet the requirements of the TIA-222-H design standard.



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001 Weatherwax



002 Weatherwax



003 Weatherwax



004 Weatherwax



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005 Weatherwax



006 Weatherwax



007 Weatherwax



008 Weatherwax No L-Rod



NorthWest Tower Engineering

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Report No. 200869.06

June 24, 2020



009 Weatherwax



010 Weatherwax



011 Weatherwax



012 Weatherwax No L-Rod



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June 24, 2020



013 Weatherwax



014 Weatherwax



015 Weatherwax



016 Weatherwax



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017 Weatherwax



018 Weatherwax



019 Weatherwax



020 Weatherwax



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021 Weatherwax



022 Weatherwax



023 Weatherwax



024 Weatherwax Site Signs



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025 Weatherwax



026 Weatherwax



027 Weatherwax



028 Weatherwax



NorthWest Tower Engineering

Weatherwax Ridge, WA

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June 24, 2020



029 Weatherwax



030 Weatherwax



031 Weatherwax



032 Weatherwax



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Weatherwax Ridge, WA

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June 24, 2020



033 Weatherwax



034 Weatherwax



035 Weatherwax



036 Weatherwax



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037 Weatherwax



038 Weatherwax



039 Weatherwax



040 Weatherwax



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041 Weatherwax



042 Weatherwax



043 Weatherwax



044 Weatherwax



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045 Weatherwax



046 Weatherwax



047 Weatherwax



048 Weatherwax



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049 Weatherwax



050 Weatherwax



051 Weatherwax



052 Weatherwax



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053 Weatherwax



054 Weatherwax



055 Weatherwax



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057 Weatherwax



058 Weatherwax



059 Weatherwax Abandoned Dead Conduits



060 Weatherwax Abandoned Dead Conduits



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June 24, 2020



061 Weatherwax



062 Weatherwax



063 Weatherwax Zip-Tie Supports



064 Weatherwax Corrosion & Zip-Tie Supports



NorthWest Tower Engineering

Weatherwax Ridge, WA

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065 Weatherwax Hardware Corrosion



066 Weatherwax Hardware Corrosion



067 Weatherwax Corrosion



068 Weatherwax Corrosion



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069 Weatherwax Corrosion



070 Weatherwax Corrosion



071 Weatherwax Corrosion



072 Weatherwax Corrosion



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073 Weatherwax Corrosion



074 Weatherwax Corrosion



075 Weatherwax Corrosion



076 Weatherwax Corrosion



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June 24, 2020



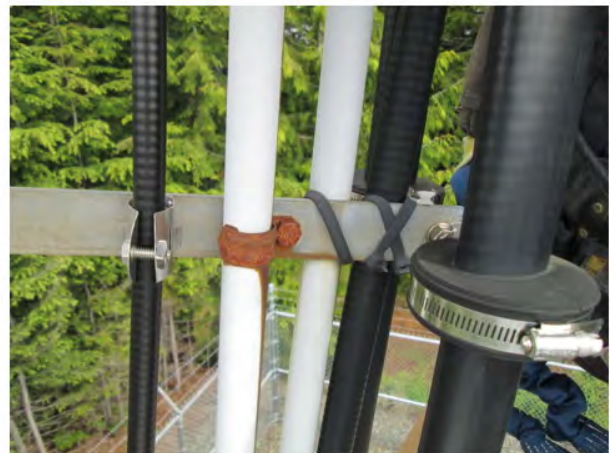
077 Weatherwax Corrosion



078 Weatherwax Corrosion



079 Weatherwax Corrosion



080 Weatherwax Corrosion & Zip-Tie Supports



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081 Weatherwax Corrosion



082 Weatherwax Corrosion



083 Weatherwax Corrosion



084 Weatherwax Corrosion



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085 Weatherwax Corrosion



086 Weatherwax Corrosion



087 Weatherwax Corrosion



088 Weatherwax Corrosion



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089 Weatherwax Corrosion



090 Weatherwax Safety Climb Guide Deteriorating



091 Weatherwax Safety Climb Guide Deteriorating



092 Weatherwax Corrosion



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Weatherwax Ridge, WA

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093 Weatherwax Corrosion



094 Weatherwax Corrosion



095 Weatherwax Corrosion



096 Weatherwax Corrosion



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097 Weatherwax Loose Diagonal Bolt 46' N Leg



098 Weatherwax Loose Diagonal Bolt 46' N Leg



099 Weatherwax Loose Diagonal Bolt 46' N Leg



100 Weatherwax Abandoned Mount Hardware



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June 24, 2020



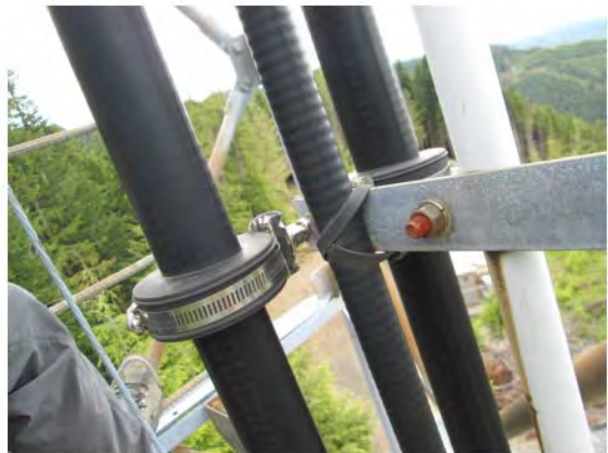
101 Weatherwax Hardware Corrosion



102 Weatherwax Hardware Corrosion



103 Weatherwax Corrosion & Zip-Tie Supports



104 Weatherwax Corrosion & Zip-Tie Supports



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105 Weatherwax Abandoned Dead Conduit



106 Weatherwax Abandoned Dead Conduit



107 Weatherwax Zip-Tie Supports



108 Weatherwax Corrosion & Zip-Tie Supports



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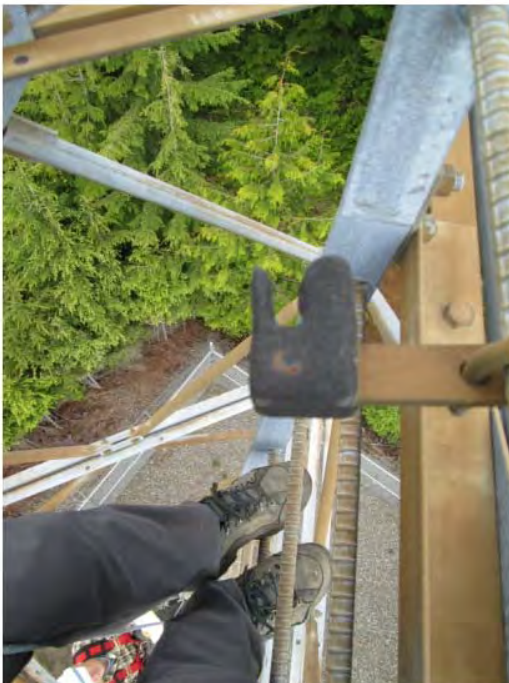
June 24, 2020



109 Weatherwax



110 Weatherwax



111 Weatherwax Safety Climb Guide Deteriorating



112 Weatherwax Corrosion



NorthWest Tower Engineering

Weatherwax Ridge, WA

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113 Weatherwax Corrosion



114 Weatherwax Abandoned Mount Hardware



115 Weatherwax



116 Weatherwax Tape & Zip-Tie Supports



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117 Weatherwax Zip-Tie Supports



118 Weatherwax Zip-Tie Supports



119 Weatherwax Tape & Zip-Tie Supports



120 Weatherwax Zip-Tie Supports



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121 Weatherwax Abandoned Dead Conduit



122 Weatherwax



123 Weatherwax



124 Weatherwax Abandoned Mount Hardware



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125 Weatherwax Zip-Tie Supports



126 Weatherwax Zip-Tie Supports



127 Weatherwax Hardware Corrosion



128 Weatherwax



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129 Weatherwax



130 Weatherwax Zip-Tie Supports



131 Weatherwax Zip-Tie Supports



132 Weatherwax Corrosion



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133 Weatherwax Corrosion



134 Weatherwax Corrosion



135 Weatherwax Corrosion



136 Weatherwax Corrosion Safety Climb



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137 Weatherwax Corrosion Safety Climb



138 Weatherwax



139 Weatherwax



140 Weatherwax Corrosion



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Weatherwax Ridge, WA

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141 Weatherwax Hardware Corrosion



142 Weatherwax



143 Weatherwax



144 Weatherwax Corrosion



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Weatherwax Ridge, WA

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June 24, 2020



145 Weatherwax



146 Weatherwax



147 Weatherwax Corrosion



148 Weatherwax



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June 24, 2020



149 Weatherwax Corrosion



150 Weatherwax



151 Weatherwax Corrosion



152 Weatherwax

Section	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs	P3x.300			P2.5x.276			P2x.218		P4x.237
Leg Grade				A53-B-35					
Diagonals	P1.5x.145		A	P1.25x.140				P2x.154	
Diagonal Grade	A53-B-35		A36		A53-B-35				
Top Girts				N.A.					2L2x3x16
Horizontals	2L1.75x1.75x3/16		B	2L1 3/4x1 3/4x1/8				2L2x2x3/16	
Face Width (ft)	13.3333	11.1146	10.1302	6.68229	5.55208				5
# Panels @ (ft)	2 @ 6.66667	1 @ 5.91667	1 @ 5.91667	4 @ 4.89583	2 @ 3.33333	1 @ 2.8125	1 @ 5.16667	1 @ 5.41667	2 @ 4
Weight (lb)	4328.4	900.1	480.0	963.3	323.4	194.2	282.0	281.5	624.0

70.0 ft

61.0 ft

55.6 ft

50.0 ft

46.7 ft

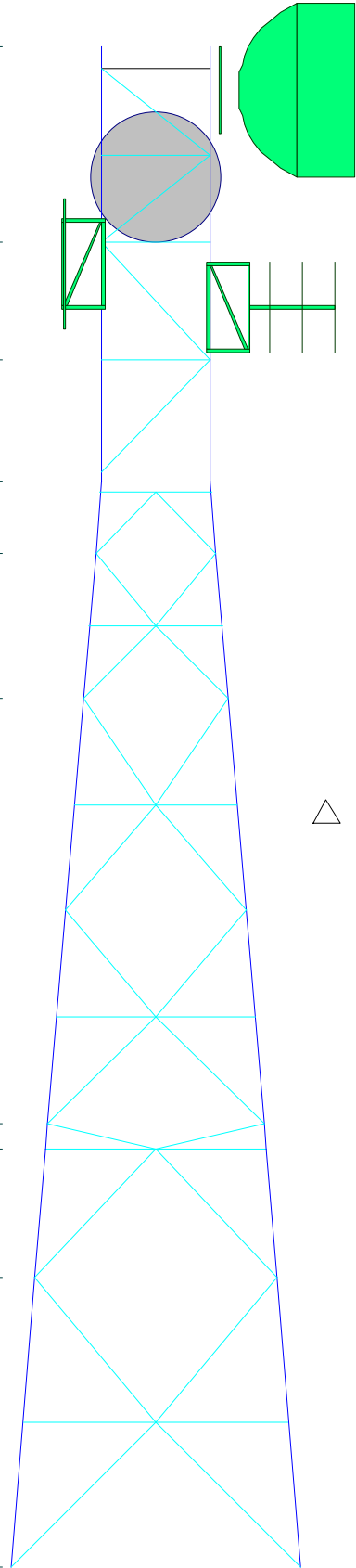
40.0 ft

20.4 ft

19.3 ft

13.3 ft

0.0 ft



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Dish Mount	68	Mast 5'x3"	60
8' MW HP	68	6'x4' yagi	58
6' MW RAD (Andrew)	64	Small Standoff Mount	58
Dish Mount	64	J-Box	56
Small Standoff Mount	60		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	2L2x2x3/16	C	1 @ 1.16667
B	N.A.		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-35	35 ksi	63 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower designed for Exposure B to the TIA-222-H Standard.
2. Tower designed for a 140 mph basic wind in accordance with the TIA-222-H Standard.
3. Tower is also designed for a 30 mph basic wind with 0.50 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category IV.
6. Topographic Category 4 with Crest Height of 1750'

NorthWest Tower Engineering

3426 Broadway Suite 302

Everett, WA 98201

Phone: 425 258 4248

FAX: 425 258 4289

Job: 200869.06 70-ft SS Tower, Weatherwax Ridge, WA

Project: Existing, Vult=140mph and 30mph with 1/2" Ice

Client: TPU

Code: TIA-222-H

Path:

Drawn by: Steven Diamond

Date: 06/30/20

App'd:

Scale: NTS

Dwg No. E-1

NWTE

P:\Projects\2020\TPU\200869.06 70-ft SS Tower\Weatherwax Ridge, WA\TPU Site Visit\200869.06 70 SS Weatherwax Ridge, WA Existing.dwg



NorthWest Tower Engineering
 3426 Broadway Suite 302
 Everett, WA 98201
 Phone: 425-258-4248
 Fax: 425-258-4289

Job Name:

70-ft SS, Weatherwax Ridge, WA

Page:

A-1

Project Number:

200869.06

Date:

6/23/2020

Client Name:

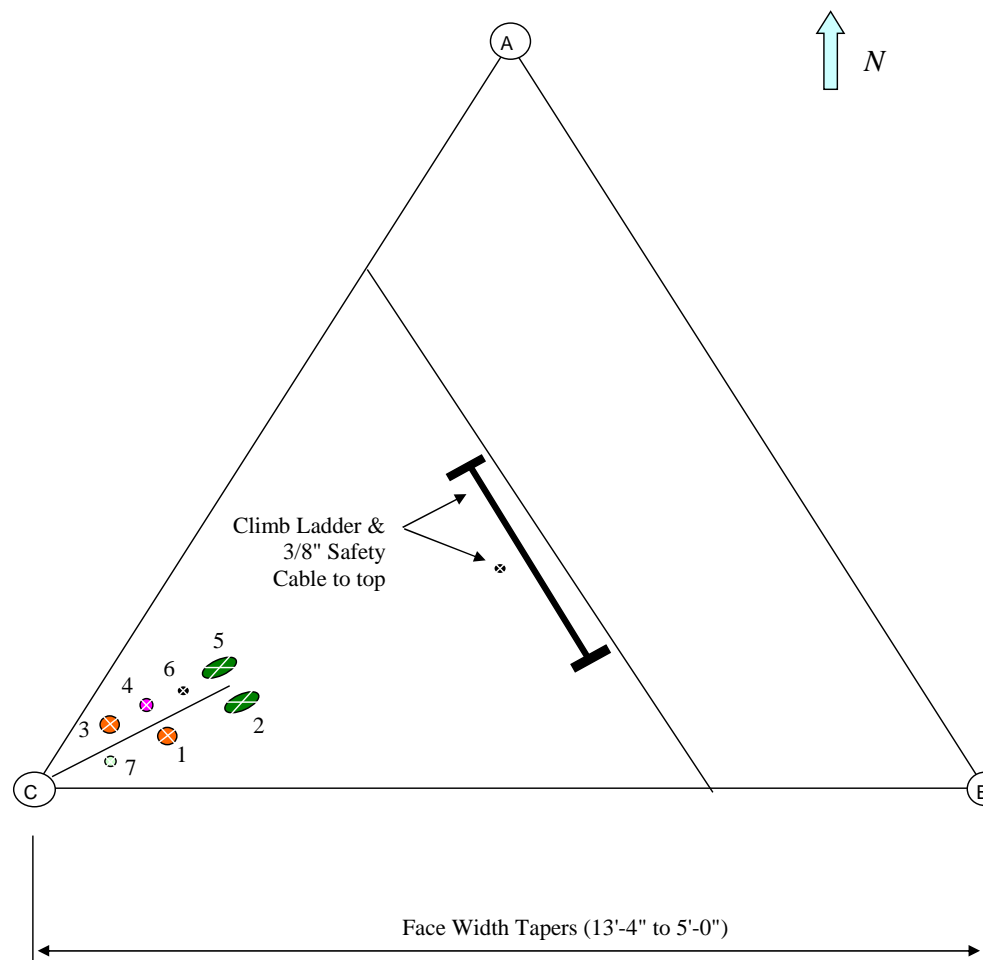
Tacoma Public Utilities

By:

KW/HC

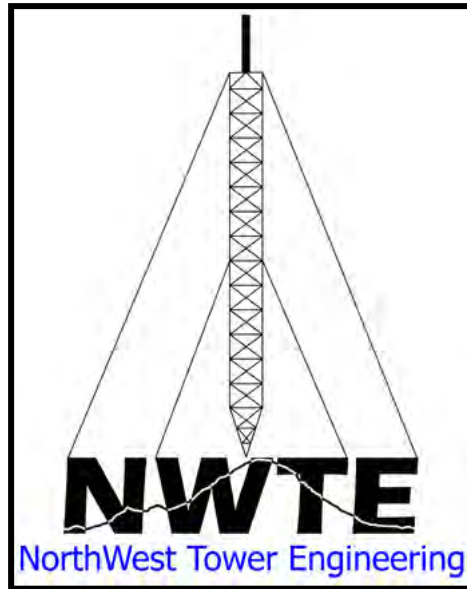
EXISTING FEEDLINES

Coax Number	Coax Description	Termination Elevation	Coax Key
1	1" O.D. Conduit (dead)	56'	⊗
2	EW63	69'	⊗
3	1" O.D. Conduit (dead)	46'	⊗
4	7/8" Coax	60'	⊗
5	EW63	64'	⊗
6	3/8" solid (dead)	46'	⊗
7	1/2" Coax	58'	⊗





NorthWest Tower Engineering



Peterman Hill, WA 140-ft Self-Supporting Tower Tacoma Public Utilities

**Site Visit Report No. 201425.05
June 24, 2020**

Report by: Steven diamond, P.E.

Checked by: Kirk Wieber, P.E.



NorthWest Tower Engineering

Peterman Hill, WA

Report No. 201425.05

June 24, 2020

Introduction

NorthWest Tower Engineering (NWTE) visited the 140-foot self-supporting tower site near the town of Morton in Lewis County, Washington. The site visit was performed at the request of Tacoma Public Utilities (TPU) to visually observe the tower's current physical condition and to obtain pertinent information to perform a structural analysis.

Tower History

NWTE visited the site last on 06-17-20. The tower was designed and manufactured by LeBlanc. LeBlanc tower and foundation drawings were not provided, however we believe the tower is a model 140' LRT-1.8. No soils report was provided.

Antenna Configuration

The following appurtenances are presently on the tower:

Elev.	Location	Appurtenance	Tx Line	Tx Line No.
118'	Leg A	6' MW Dish w/Radome (Glenoma Hill, Lewis County PUD)	EW63	# 4
137'	Leg A	6' MW Dish w/Radome (Mineral Hill)	EW65	# 3
138'	Leg B	6' MW Dish w/Radome (Mossy Rock)	EW63	# 5
142'	Leg A	Anemometer On Standoff Mount	1" Conduit	# 2
143'	Leg C	10' Omni Antenna	7/8" Coax	# 1
142'	Leg C	4' Lightning Rod	N/A	N/A
145'	Face A	(2) Obstruction Lights	1" Conduit	# 2

Antenna center elevations are listed for microwave, yagi, and panel type antennas. Ice shield elevations are listed at center of grating gird. Base elevations are listed for other antenna types.

The attached drawings show tower geometry, structural member sizes, existing antennas, feed lines, and other supported appurtenances.

Site Visit Results

The following observations were noted during the site visit:

Site:

1. The tower is within a fenced compound. The compound and fence appear to be in good condition.
2. No climb warning signs or RF warning signs were noted .



NorthWest Tower Engineering

Peterman Hill, WA

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Tower Base:

1. The tower base grouting, exposed portions of the foundation and mechanical base grounding appear to be in good condition (Photo Nos. 29-40).
2. The tower leg base stub sections, leg base plates and anchor bolts are discolored with mild corrosion, typical (Photo Nos. 29-40).
3. Weep holes in the grout were noted to be plugged.

Tower:

1. The tower's structural members appear to be in fair condition with the exception that the tower galvanizing is discoloring with minor corrosion over the full height of the tower (Photo Nos. 63,65,72-74,80,81,87-93,95-104,107,108,110, 12-115, 117-120).
2. The center connection bolt was not torqued down at the 25' level on the west tower face (Photo No. 25-30).
3. The (2) diagonal bolt was not fully torqued down at the 30' level on the north east and west tower face, bolts maybe to long (Photo No. 32-34).
4. A lightning rod is located at the top of the tower. It is the not the top most appurtenance (Photo Nos. 04, 145).

Antennas & Mounts:

1. In general, the antennas appear to be installed properly and are in good condition with the following exceptions:
2. The mounts and mounting hardware for some of the equipment is corroding. (Photo No. 139-142,148,149).
3. The junction box for the weather monitoring equipment is sealed or fastened shut with black electrical tape (Photo Nos. 135,136).
4. Radiofrequency Radiation (RF) was monitored during the tower climb using a Narda model 8845E-0.5 RF warning meter. The meter was not triggered during the climb indicating the RF exposure was below 50 percent of the standard threshold as defined in OSHA standard for exposure to non-ionizing radiation 29CFR, Section 1910.97.

Coaxial Cables:

1. The coaxial cables are neatly supported by the waveguide ladder attached inside of the tower. The attached cross section shows feed line arrangement on the tower.
2. A portion of the waveguide ladder was installed inverted and allows the water to pool (Photo No. 82-85).
3. Coax are zip tied supports near the tower top (Photo No. 154-157).
4. Coax grounds are damaged at the tower top (Photo No. 158,159).



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5. The wave guide bridge is corroded and damaged and is touching the coax at the tower end (Photo No. 55-60).

Tower Lighting:

1. The lighting power conduit and some of the mounting hardware for the lighting conduit is corroding (Photo Nos. 85,86,105-107,109,116,121,151-152).
2. The lighting junction box near the bottom of tower is poorly weather sealed and corroding (Photo Nos. 69-71).
3. The lighting obstruction at the top of tower is weather sealed with black electrical tape (Photo Nos. 150).
4. The lighting junction box near the top of tower is weather sealed with black electrical tape (Photo Nos. 133).

Climb Ladder:

1. The tower has a climb ladder installed near the northwest leg inside the tower.
2. The climb ladder is equipped with a safety climb cable system. The safety climb cable is fair condition, with galvanizing discoloring and minor corrosion throughout (Photo No. 66,122).

Recommendations

NWTE recommends the following to improve the tower's **maintenance** condition:

Site:

1. Place climb warning signs at the tower base. RF warning signs are specified at the owner's discretion.

Tower Base:

1. Verify if the tower grounding meets TPU minimum standards per MOTOROLA R56 manual dated 03-01-00 or later. Install new grounding system as needed.
2. Regularly monitor the overall condition of the galvanizing at the tower base. Prepare, treat and coat corroded areas with zinc rich paint.
3. Regularly clear the grout weep holes.

Tower:

1. Regularly monitor the overall condition of the galvanizing on the tower's structural members. Prepare, treat and paint areas of tower steel that are starting to corrode. NWTE recommends that the tower be fully painted in the next year.
2. Properly torque/tighten down all loose structural bolts on the tower.
3. Install an extension for the lightning rod at the top of tower and verify if the tower grounding meets regulations per MOTOROLA R56 manual dated 03-01-00 or later.



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Antennas & Mounts:

1. Prepare, treat and paint the rusting areas of the antenna mounts and antenna mounting hardware, as needed. Replace damaged mounting hardware as need.
2. Verify the junction box sealed or fastened shut with black electrical tape meets TPU standards. Repair or replace as needed.

Coaxial Cables:

1. Replace zip tied coax supports with appropriate coax support hardware.
2. Drill weep holes in the inverted portion of the wave guide ladder to allow full drainage.
3. Replace the damaged a corroded wave guide bridge

Tower Lighting:

1. Prepare, treat and paint the rusting areas of the lighting conduit and mounting hardware, as needed. Replace damaged conduit and mounting hardware as need.
2. Verify the lighting conduit junction box sealed with black electrical tape meets TPU standards, repair or replace as needed.

Climb Ladder:

1. Regularly monitor the overall condition of the corrosion of the safety climb cable. Prepare, treat and paint areas that are starting to corrode. NWTE recommends replacement of the safety climb cable.

Final Comments:

1. The tower was observed to be in overall fair condition with the exceptions listed above.
2. Observations and defects noted were made from the climb facility. No x-ray, subsurface excavation, or other similar examination of the tower, foundation system or welded connections was conducted. For portions of the tower and foundation system that were not visually accessible (such as inside surfaces of pipes), no determination regarding the condition or adequacy was made. **The structural deficiencies indicated above, should be corrected immediately to ensure tower stability.** NWTE recommends that following any modification to structural members, that a post-modification inspection be performed by NWTE in order to verify the modifications have been carried out in accordance with the specifications.
3. Bolts were observed visually and hand checked. Torque testing was not performed.
4. Finishes such as paint and galvanizing were not removed or measured for thickness.
5. Please refer to the structural analysis report for further recommendations pertaining to the structure's ability to meet the requirements of the current TIA-222-G design standard.



NorthWest Tower Engineering

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Report No. 201425.05

June 24, 2020



001 Peterman



002 Peterman



003 Peterman



004 Peterman



NorthWest Tower Engineering

Peterman Hill, WA

Report No. 201425.05

June 24, 2020



005 Peterman



006 Peterman



007 Peterman



008 Peterman



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Report No. 201425.05

June 24, 2020



009 Peterman



010 Peterman



011 Peterman



012 Peterman



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013 Peterman



014 Peterman



015 Peterman



016 Peterman



NorthWest Tower Engineering

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June 24, 2020



017 Peterman



018 Peterman



019 Peterman



020 Peterman



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June 24, 2020



021 Peterman



022 Peterman



023 Peterman



024 Peterman



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025 Peterman



026 Peterman



027 Peterman



028 Peterman



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029 Peterman



030 Peterman



031 Peterman



032 Peterman



NorthWest Tower Engineering

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June 24, 2020



033 Peterman



034 Peterman



035 Peterman



036 Peterman



NorthWest Tower Engineering

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June 24, 2020



037 Peterman



038 Peterman



039 Peterman



040 Peterman



NorthWest Tower Engineering

Peterman Hill, WA

Report No. 201425.05

June 24, 2020



041 Peterman



042 Peterman



043 Peterman



044 Peterman



NorthWest Tower Engineering

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June 24, 2020



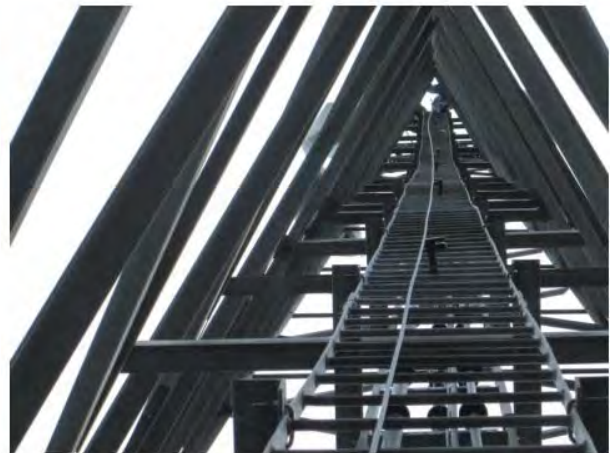
045 Peterman



046 Peterman Loose center stitch E 25ft



047 Peterman



048 Peterman



NorthWest Tower Engineering

Peterman Hill, WA

Report No. 201425.05

June 24, 2020



049 Peterman



050 Peterman



051 Peterman



052 Peterman



NorthWest Tower Engineering

Peterman Hill, WA

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053 Peterman



054 Peterman



055 Peterman Damaged and Corroding WG Bridge



056 Peterman Damaged and Corroding WG Bridge



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June 24, 2020



057 Peterman Coax Contacting WG Bridge



058 Peterman Coax Contacting WG Bridge



059 Peterman Damaged and Corroding WG Bridge



060 Peterman Damaged and Corroding WG Bridge



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061 Peterman



062 Peterman



063 Peterman Corrosion



064 Peterman



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Peterman Hill, WA

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065 Peterman Corrosion



066 Peterman Safety Cable Hardware



067 Peterman



068 Peterman



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069 Peterman Lighting Conduit Weather Seal



070 Peterman Lighting Conduit Weather Seal



071 Peterman Lighting Conduit Weather Seal



072 Peterman Corrosion



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073 Peterman Corrosion



074 Peterman Corrosion



075 Peterman Loose Diagonal Bolt



076 Peterman Loose Diagonal Bolt



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Peterman Hill, WA

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077 Peterman Loose Diagonal Bolt



078 Peterman Loose Diagonal Bolt



079 Peterman Loose Diagonal Bolt



080 Peterman Corrosion



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081 Peterman Corrosion



082 Peterman WG Ladder Intalled Up-Side-Down



083 Peterman WG Ladder Intalled Up-Side-Down



084 Peterman WG Ladder Intalled Up-Side-Down



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085 Peterman Hardware Corrosion



086 Peterman Hardware Corrosion



087 Peterman Corrosion



088 Peterman Corrosion



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089 Peterman Corrosion



090 Peterman Corrosion



091 Peterman Corrosion



092 Peterman Corrosion



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093 Peterman Corrosion



094 Peterman



095 Peterman Corrosion



096 Peterman Corrosion



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097 Peterman Corrosion



098 Peterman Corrosion



099 Peterman Corrosion



100 Peterman Corrosion



NorthWest Tower Engineering

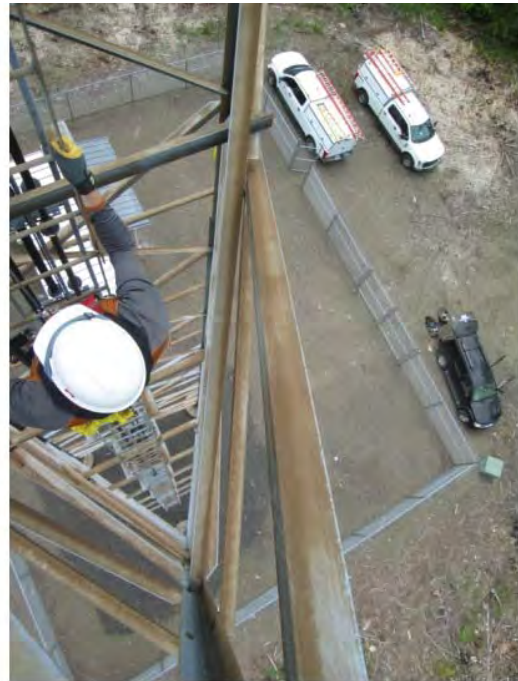
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101 Peterman Corrosion



102 Peterman Corrosion



103 Peterman Corrosion



104 Peterman Corrosion



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105 Peterman Hardware Corrosion



106 Peterman Hardware Corrosion



107 Peterman Corrosion



108 Peterman Corrosion



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109 Peterman Hardware Corrosion



110 Peterman Corrosion



111 Peterman



112 Peterman Corrosion



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113 Peterman Corrosion



114 Peterman Corrosion



115 Peterman Corrosion



116 Peterman Hardware Corrosion



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117 Peterman Corrosion



118 Peterman Corrosion



119 Peterman Corrosion



120 Peterman Corrosion



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121 Peterman Hardware Corrosion



122 Peterman Climb Ladder Corrosion



123 Peterman



124 Peterman



NorthWest Tower Engineering

Peterman Hill, WA

Report No. 201425.05

June 24, 2020



125 Peterman



126 Peterman



127 Peterman Safety Cable Corrosion



128 Peterman Safety Cable Corrosion



NorthWest Tower Engineering

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Report No. 201425.05

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129 Peterman Weather Seal



130 Peterman Weather Seal



131 Peterman Weather Seal



132 Peterman Weather Seal



NorthWest Tower Engineering

Peterman Hill, WA

Report No. 201425.05

June 24, 2020



133 Peterman Lighting J-Box Corrosion



134 Peterman Zip-Tie Support



135 Peterman J-Box Weather Sealing



136 Peterman J-Box Weather Sealing



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June 24, 2020



137 Peterman



138 Peterman Hardware Corrosion



139 Peterman Hardware Corrosion



140 Peterman Hardware Corrosion



NorthWest Tower Engineering

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June 24, 2020



141 Peterman Hardware Corrosion



142 Peterman Hardware Corrosion



143 Peterman



144 Peterman



NorthWest Tower Engineering

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Report No. 201425.05

June 24, 2020



145 Peterman L-rod not top



146 Peterman



147 Peterman



148 Peterman Hardware Corrosion



NorthWest Tower Engineering

Peterman Hill, WA

Report No. 201425.05

June 24, 2020



149 Peterman Hardware Corrosion



150 Peterman OB Light Weather Seal



151 Peterman Lighting Conduit Corrosion



152 Peterman Lighting Conduit Corrosion



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153 Peterman Lighting Support Corrosion



154 Peterman Zip-Tie Coax Support



155 Peterman Zip-Tie Coax Support



156 Peterman Zip-Tie Coax Support



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157 Peterman Zip-Tie Coax Support



158 Peterman Coax Grounding Damage



159 Peterman Coax Grounding Damage



160 Peterman



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161 Peterman



162 Peterman



163 Peterman



164 Peterman



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Peterman Hill, WA

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June 24, 2020



165 Peterman



166 Peterman

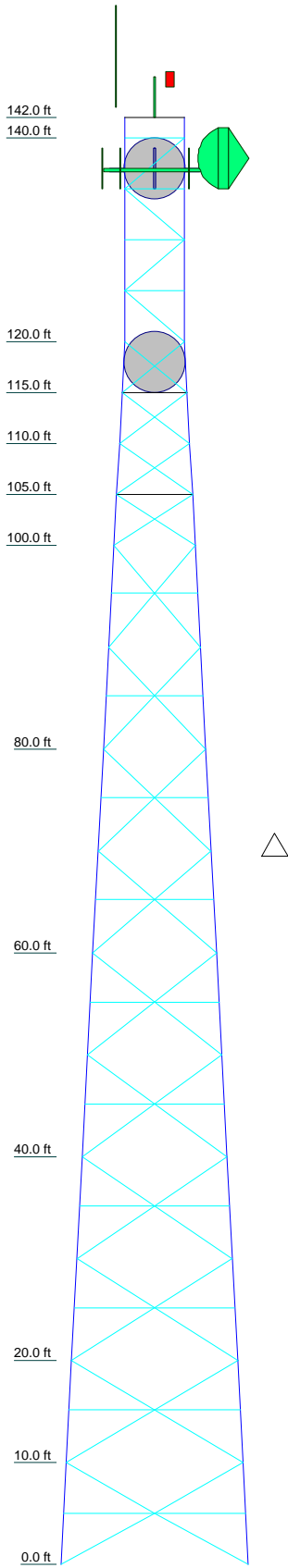


167 Peterman



168 Peterman

Section	T12	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs			V6x6x5/8	V6x6x1/2	V5x5x1/2	V5x5x3/8	V4x4x3/8				V3 1/2x3 1/2x3/8	
Leg Grade							300W					
Diagonals			L3 1/2x3 1/2x1/4		L3x3x1/4	L3x3x3/16					L3x3x1/4	A
Diagonal Grade								A36			300W	A
Top Girts				N.A.				C	N.A.	C	N.A.	B
Horizontals		L3x3x3/16			N.A.						L2x2x3/16	A
Sec. Horizontals	N.A.	L3x3x3/16	L2 1/2x2 1/2x3/16			L2x2x3/16					N.A.	
Face Width (ft)	18.3333	17.2969	16.2578	12.1042	10.0286	7.950527	6.91146	6.39323				5.875
# Panels @ (ft)		2 @ 5		9 @ 10						8 @ 5		D
Weight (lb)	15038.6	1030.3	1987.6	2389.1	2010.2	1467.9	510.2	389.0	471.3	366.0	1132.4	93.6



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(2) Obstruction Lights	145	Pipe Mount	137
10' Omni	143	C6 Face Mount	137
Anemometer	142	C6 Face Mount	137
4' Lightning Rod	142	C6 Face Mount	137
6' MW RAD (Mossy Rock)	138	6' MW RAD (Mineral Hill)	137
Dish Mount	137	Dish Mount	137
Dish Mount	137	Dish Mount	118
Dish Mount	137	6' MW RAD (Lewis Co PUD)	118

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	N.A.	C	L3x3x1/4
B	L2x2x3/16	D	1 @ 2

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
300W	44 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Lewis County, Washington.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 108 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 30 mph basic wind with 0.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category IV.
7. Topographic Category 4 with Crest Height of 1800'

NorthWest Tower Engineering

3426 Broadway Suite 302

Everett, WA 98201

Phone: 425 258 4248

FAX: 425 258 4289

NWTE

Job: **201425.05 140' SS Tower - Peterman Hill, WA**

Project: **Existing, Vult=108-mph & 30-mph with 1/2" Ice**

Client: TPU Drawn by: Steven Diamond App'd:

Code: TIA-222-H Date: 06/30/20 Scale: NTS

Path: P:\Projects\2020\TPU\201425.05 140' SS Tower Hill, WA\TPU 02\SV Analysis\140' SS Tower Hill Existing 201425.dwg Dwg No. E-1



NorthWest Tower Engineering
 3426 Broadway Suite 302
 Everett, WA 98201
 Phone: 425-258-4248
 Fax: 425-258-4289

Job Name:

140-ft S.S. - Peterman Hill, Morton, WA

Page:

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Project Number:

201425.05

Date:

6/24/2020

Client Name:

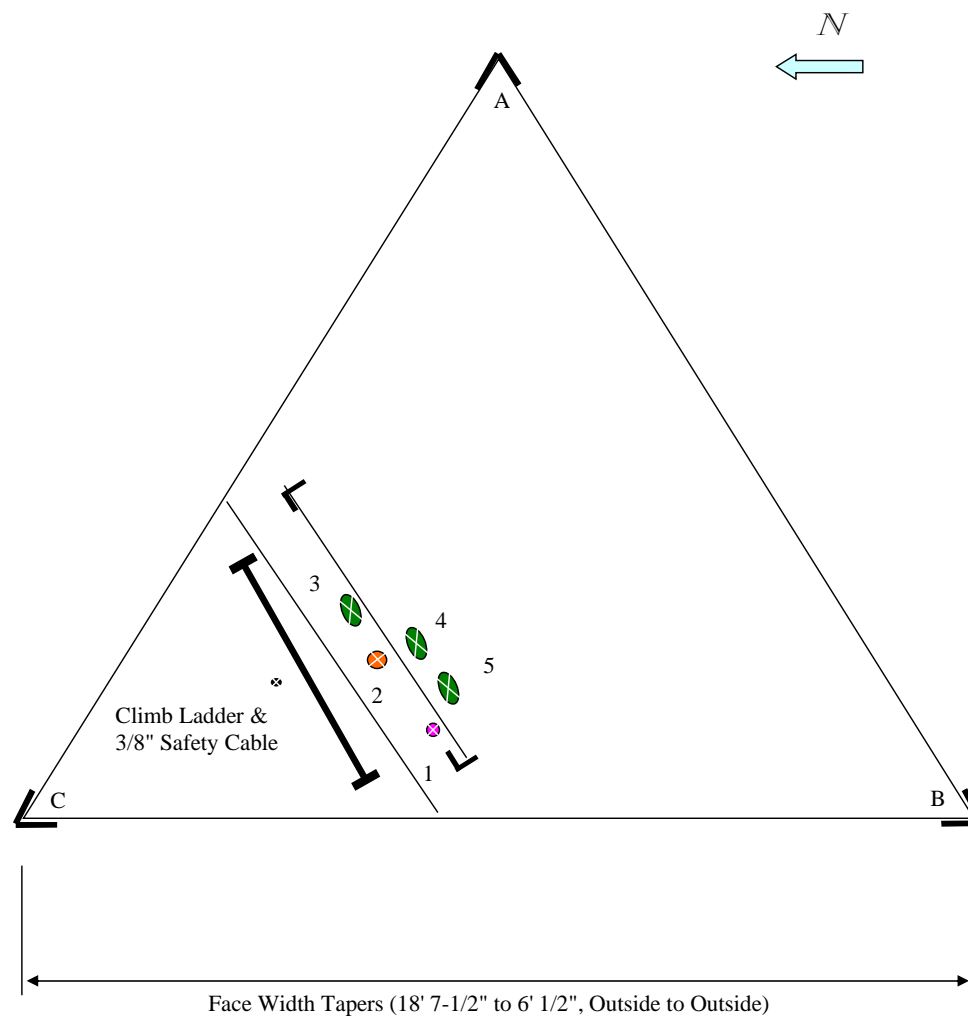
Tacoma Public Utilities

By:

SD

EXISTING FEEDLINES

Coax Number	Coax Description	Termination Elevation	Coax Key
1	7/8" Coax	143'	✳
2	1" O.D. Conduit	145'	⊗
3	EW65	137'	⊗
4	EW63	118'	⊗
5	EW63	138'	⊗



APPENDIX B – COATING PRODUCT SHEETS

MC-Miozinc 100

primer

WASSER
ADVANCED COATINGS TECHNOLOGY

Product Description

MC-Miozinc 100 meets strict VOC specifications for industrial maintenance coatings. Because of the combination of zinc and micaceous iron oxide pigments, this primer is ideal for protecting pitted steel or steel with complex geometry. As a spot primer, it is especially effective when overlapping onto existing coatings. The surface tolerance of MC-Miozinc 100 is its primary benefit offering galvanic and barrier protection when applied to properly prepared steel surfaces. It's a versatile primer for hydro-blasting, wet or dry abrasive blasting, or hand and power tool surface preparation.

Product Features

- Single component Moisture Cure Urethane
- No mixing errors – no pot life
- Zinc stays in solution – no need for continuous agitation
- Easy to apply by brush, roller, mitt or spray methods
- Meets SSPC Paint 40 and SSPC Paint 41.
- VOC Compliant at less than 100 g/l
- Immersion or non-immersion service
- Impact and abrasion resistant
- MIO reinforced film – maintains build on edges threads and weld seams
- No dew point restrictions (substrate must be visibly dry)
- Can be applied at 99% relative humidity (substrate must be visibly dry)
- Can be applied in below freezing temperatures (no ice or frost)
- Surface tolerant Zinc-rich primer/cold galvanize coating
- Compatible with PURQuik® Accelerator for faster re-coat and cure times

Area of Use

Substrates

Over properly prepared:

- Ferrous Metal
- Corten Steel
- Galvanized Metal
- Ductile Iron

Possible Uses

- Water/ Wastewater Treatment Facilities
- Food Processing Facilities
- Pulp and Paper Mills
- Tank Exteriors
- Hydro-power Facilities and Penstocks
- Marine/Port Facilities
- Offshore Platforms
- Chemical Processing Facilities
- Material Handling Equipment
- Refineries
- Structural Steel
- Work Boats
- Bridges

Ready Reference Information

Resin Type:	Single Component Moisture Cure Aromatic Urethane
Pigment type:	Zinc and Micaceous Iron Oxide
Sheen:	Flat
Colors:	Standard Green, custom colors available
Volume Solids:	62.0% ± 2.0
VOC: (Volatile Organic Content)	< 0.8 lb/gal (100g/l)

Theoretical Coverage:

At 1 mil DFT: 994 ft²/gal
At 25 µm DFT: 24.4 m²/l

Recommended Film Thickness:

Wet: 4.8-8.0 mils (122-203 µm)
Dry: 3.0-5.0 mils (76-127 µm)

Recommended Coverage Per Coat:

199 ft²/gal at 5.0 mils DFT - 331 ft²/gal at 3.0 mils DFT
(4.9 m²/l at 127 µm DFT – 8.1 m²/l at 76 µm DFT)

Thinning: MC-Thinner, MC-Thinner 100, MC-Thinner XMT
Clean Up: MC-Thinner, MC-Thinner 100, MC-Thinner XMT

*At 50% Humidity	50°F/10°C		75°F/24°C		95°F/35°C	
	Without PURQuik®	With PURQuik®	Without PURQuik®	With PURQuik®	Without PURQuik®	With PURQuik®
Tack Free	1 hours	--	30 minutes	--	20 minutes	--
Re-coat Minimum¹	6 hours	1 hour	4 hours	30 minutes	3 hours	20 minutes
Full Cure	10 days	7 days	7 days	5 days	5 days	4 days

*Humidity, temperature and coating thickness will affect re-coat and curing times. ¹No outer re-coat window on clean surfaces. Refer to Wasser's PURQuik® Accelerator Product Data for additional information.

Ver. 2005.04.A

MC-Miozinc 100

primer

WASSER
ADVANCED COATINGS TECHNOLOGY

Recommended Systems

Ferrous Metals (Full Removal):

1st Coat: MC-Miozinc 100	3.0-5.0 mils DFT
2nd Coat: Polyflex 102 Rapid Thane	6.0-10.0 mils DFT
Total System DFT:	8.0-14.0 mils DFT

1st Coat: MC-Miozinc 100	3.0-5.0 mils DFT
2nd Coat: MC-Ferrox B 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Or MC-Luster 100	
Total System DFT:	8.0-14.0 mils DFT

Ferrous Metals (Overcoat):

1st Coat: MC-Miozinc 100 (Spot Prime)	3.0-5.0 mils DFT
2nd Coat: MC-Universal 100	4.0-5.5 mils DFT
3rd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Or MC-Luster 100	
Total System DFT:	9.0-14.5 mils DFT

Ferrous Metals (Immersion/NSF):

1st Coat: MC-Miozinc 100	3.0-5.0 mils DFT
2nd Coat: Polyflex 201 PW NSF	30.0-100.0 mils DFT
Total System DFT:	33.0-105.0 mils DFT

1st Coat: MC-Miozinc 100	3.0-5.0 mils DFT
2nd Coat: Polyflex 59 PW NSF	9.0-12.0 mils DFT
3rd Coat: Polyflex 59 PW NSF	9.0-12.0 mils DFT

Total System DFT: 21.0-29.0 mils DFT

Ferrous Metals (Immersion/Severe Service):

1st Coat: MC-Miozinc 100	3.0-5.0 mils DFT
2nd Coat: MC-Tar 100	5.0-7.0 mils DFT
3rd Coat: MC-Tar 100	5.0-7.0 mils DFT
Total System DFT:	13.0-19.0 mils DFT

Ferrous Metals (Immersion/Light Color Topcoat):

1st Coat: MC-Miozinc 100	3.0-5.0 mils DFT
2nd Coat: MC-Tar 100	5.0-7.0 mils DFT
3rd Coat: MC-Ballastcoat 100	3.0-4.0 mils DFT
Total System DFT:	9.0-13.0 mils DFT

Galvanized Metal:

1st Coat: MC-Miozinc 100 (Spot Prime)	3.0-5.0 mils DFT
2nd Coat: MC-Miomastic 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Or MC-Luster 100	
Total System DFT:	8.0-14.0 mils DFT

Corten/Weathering Steel:

1st Coat: MC-Miozinc 100	3.0-5.0 mils DFT
2nd Coat: MC-Ferrox B 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Or MC-Luster 100	
Total System DFT:	8.0-14.0 mils DFT

Two-Coat System Option

1st Coat: MC-Miozinc 100 (Spot Prime)	3.0-5.0 mils DFT
2nd Coat: Polyflex 102 Rapid Thane	6.0-10.0 mils DFT
Total System DFT:	9.0-15.0 mils DFT

*Other Systems are available. Contact your Wasser Representative to answer any questions.

Compatible Coatings

Primers:

MC-Zinc 100
MC-Ferrocold 100
MC-Universal 100

Intermediates:

MC-Miomastic 100
MC-Ferrox B 100
MC-CR 100
MC-Tar 100
MC-Universal 100

Topcoats:

MC-Ferrox A 100
MC-Luster 100
MC-Shieldcoat 100
MC-Tar 100
MC-Ballastcoat 100

Thick Film Topcoats:

Polyflex 102, 103 and 106
Rapid Thane Polyaspartic products

All Wasser Polyflex Polyurea products

Coating Accelerator*

PURQuik® Accelerator

**Use only with a Wasser recommended intermediate*

Surface Preparation

Ferrous Metal, Corten/Weathering Steel

Use SSPC-SP1 solvent cleaning to remove oil and grease or other contaminants prior to employing surface preparation methods.

Blast clean surfaces for severe or immersion service projects to SSPC-SP10/NACE No. 2 Near White Metal finish. Prepare surfaces for atmospheric service projects to SSPC-SP6/NACE No. 3 Commercial Blast Clean finish. For minimum surface preparation use conscientious SSPC-SP2 hand tool cleaning or SSPC-SP3 power tool cleaning methods to remove corrosion and loose or failing paint (feather edges of sound, existing paint back to a firm edge).

High Pressure Water Cleaning SSPC-SP12/NACE No.5 to a minimum WJ3/NV2 may also be used to prepare ferrous metal surfaces for atmospheric service projects. Surface preparation methods should produce a surface profile of 1.5 - 3.5 mils (38.1-88.9 µm).

Galvanized Metal

Prepare surfaces using SSPC-SP1 Solvent Cleaning and SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods to remove surface contamination. Supplement weathered galvanized surface preparation with SSPC-SP2 and SP3 Hand and Power Tool cleaning to remove excessive corrosion and impart surface profile on bare metal. Supplement new galvanized surface cleaning with SSPC-SP16 to impart surface profile and support mechanical adhesion.

Good Practices

The surface to be coated must be dry, clean, dull, and free from dirt, grease, oil, rust, mill scale, salts or any other surface contaminants that interfere with adhesion.

Ensure welds, repair areas, joints, and surface defects exposed by surface preparation are properly cleaned and treated prior to coating application.

Areas of oxidation after surface preparation and prior to coating application, should be prepared to specified standard.

Consult the referenced standards, SSPC-PA1 and your Wasser Representative for additional information or recommendations.

Application Information

MC-Miozinc 100 can be applied by brush, roll, mitt, airless spray and conventional spray. Follow proper mixing instructions before applying.

Mixing:

Material temperature must be 5° F above the dew point before opening and agitating.

Power mix thoroughly prior to application.

Do not keep under constant agitation.

Apply a 3-6 oz solvent float over material to prevent moisture intrusion and cover pail.

Brush/Roller:

Brush: Natural Fiber
Roller: Natural or synthetic fiber cover
Nap: ¼" to ⅜"
Core: Phenolic
Reduction: Typically not required. If necessary, reduce with MC-Thinner 100 or MC-Thinner XMT

Airless Spray:

Pump Ratio: 28 - 40:1
Pressure: 2400 - 2800 psi
Hose: ¼" to ⅜"
Tip Size: 0.013 - 0.017
Filter Size: 60 mesh (250 µm)
Reduction: Typically not required. If necessary, reduce with MC-Thinner 100 or MC-Thinner XMT

Conventional Spray/HVLP:

Fluid Nozzle: E Fluid Tip
Air Cap: 704 or 765
Atomizing Air: 45 - 75 lbs.
Fluid Pressure: 15 - 20 lbs.
Hose: ½" ID; 50' Max
Reduction: Typically not required. If necessary, reduce with MC-Thinner 100 or MC-Thinner XMT

Reducer:

MC-Thinner, MC-Thinner 100, or MC-Thinner XMT. Reduction is typically not required. If desired, thin up to 15% with MC-Thinner or MC-Thinner 100. MC-Thinner XMT is an exempt solvent specially formulated for Series 100 MCU. Thin in accordance with local and federal regulatory standards

Clean up:

MC-Thinner, MC-Thinner 100. If Wasser thinners are not available, use MEK, MIBK, Xylene, a 50:50 blend of Xylene and MEK or MIBK, or acetone for clean up only. Do not add unauthorized solvents to a Wasser coating

Certifications and Qualifications

Meets SSPC Paint 40 and SSPC Paint 41. VOC Compliant ≤ 0.8 lbs/gal (100 gr/ltr) (National Standards for Industrial Maintenance Coating, and SCAQMD Rule 1113 IM Coating, Zinc Rich IM Primer).

Cal Trans – Qualified Product – "Organic Zinc-Rich Primer" List

MC-Miozinc 100

primer

WASSER
ADVANCED COATINGS TECHNOLOGY

Application Conditions

Temperature: 20° - 100° F (-8° - 38° C). This temperature range should be achieved for ambient, surface and material temperature. Substrate must be visibly dry and frost free. On applications below 33° F (0.5° C), Steel temperatures should be 5°F above the dew point temperature. MC-Thinner 100 is recommended for spray application in temperatures above 90° F.

Relative Humidity: 6% - 99%.

Coating Accelerator: PURQuik® Accelerator. See Wasser's PURQuik® Accelerator Product Data for information.

Storage: Store off the ground in a dry, protected area in temperature between 40°F-100°F (4 - 38°C). MCU containers must be kept sealed when not in use. Use a solvent float to reseal partial containers.

Performance Testing Data

**Contact Wasser Corporation for detailed testing of this product*

Ordering Information

Product Numbers: W031.4 (Standard Green)

Package Size: 1 gallon and 3 gallon pails

Shelf Life: 12 months from date of shipment when stored unopened at 75°F (24°C).

Shipping Information

Flash Point: 14.6°C (58.3° F).

Weight/gallon: 20 ± 1.0 lbs.
(2.4 ± .12 kg/l)

DOT HAZARD CLASS 3

DOT PACKAGING GROUP II

DOT LABEL FLAMMABLE LIQUID

DOT SHIPPING NAME PAINT

DOT PLACARD FLAMMABLE LIQUID

UN/NA NUMBER 1263

Safety Precautions

DANGER!

Intended for professional use only. Obtain and Read Wasser's Safety Data Sheet for this before using.

Adequate Ventilation. Do not breathe dust, vapors or spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling. Keep away from heat, sparks and flame. Vapor may cause flash fire.

KEEP OUT OF REACH OF CHILDREN

FIRST AID: If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists or occurs later, consult a physician and have label information available. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If swallowed, get medical attention immediately. If swallowed, do not induce vomiting. Get medical attention immediately. Wash clothing before reuse.

Thoroughly clean or destroy contaminated shoes.

Keep container closed when not in use. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

WARNING: This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.

Obtain and Read Wasser's Safety Data Sheet for this before using.

INTENDED FOR PROFESSIONAL USE ONLY.

Note: Ingredients and VOC may vary for products with catalysts, tint bases, and other colors.

Wasser Corporation's liability on any claim of any kind, including claims based upon Wasser Corporation's negligence or strict liability, for any loss or damage arising out of, connected with or resulting from the use of the Products, shall in no case exceed the purchase price allowable for the Products or part thereof that give rise to the claim. In no event shall Wasser Corporation be liable for consequential or incidental damages. Published Product Data Sheets are subject to change without notice.

Contact your Wasser Representative or the Wasser website for the most current Product Data Sheets.

MC-Miomastic 100

intermediate

WASSER
ADVANCED COATINGS TECHNOLOGY

Product Description

Wasser's premium, surface-tolerant, intermediate coating, MC-Miomastic 100 utilizes an optimum blend of micaceous iron oxide (MIO), zinc and other corrosion inhibiting pigments and resins designed for application over most generic primer/coating systems. The plate-like structure of MIO provides maximum surface tolerance by its ability to overlap most conventional coatings without compromising the existing adhesion characteristics to the substrate and promotes mechanical bonding for top-coating.

Product Features

- Meets SSPC Paint 41
- Nepcoat List-B
- Designed for use over most existing coatings including MCU, epoxy, vinyl, alkyd, acrylic, phenolic and red lead
- Micaceous iron oxide (MIO), maintains build on edges, threads and weld seams
- Single component Moisture Cure Urethane
- Easy to apply by brush, roller, mitt or spray methods
- No mixing errors – no pot life
- VOC compliant at less than 100 g/l
- Can be applied at 99% relative humidity (substrate must be visibly dry)
- Can be applied in below freezing temperatures (no ice or frost)
- No dew point restrictions (substrate must be visibly dry)
- No outer re-coat window on clean surfaces
- Compatible with PURQuik® Accelerator for faster re-coat and cure times

Area of Use

Substrates

Over properly prepared:

- Ferrous Metal
- Galvanized Metal
- Ductile Iron
- Previously Existing Coatings

Possible Uses

- Bridges
- Water and Wastewater Treatment Facilities
- Food Processing
- Pulp and Paper Mills
- Tank Exteriors
- Hydro-power Facilities and Penstocks
- Marine/Port Facilities
- Offshore Platforms
- Sound Walls
- Chemical Processing Facilities
- Refineries
- Floors
- Structural Steel
- Work Boats

Ready Reference Information

Resin Type: Single Component Moisture Cure Aromatic Urethane

Pigment Type: Micaceous Iron Oxide, zinc and proprietary blend of corrosion inhibitors

Sheen: Flat

Colors: Light Grey, Red Oxide

Volume Solids: 64.0% ± 2.0

VOC: <0.8lb/gal (100 g/l)
(Volatile Organic Content)

Theoretical Coverage:

At 1 mil DFT: 1027 ft²/gal

At 25 µm DFT: 25.21 m²/l

Recommended Film Thickness:

Wet: 4.7-7.8 mils (119-198 µm)

Dry: 3.0-5.0 mils (76-127 µm)

Recommended Coverage Per Coat:

205 ft²/gal at 5.0 mils DFT - 342 ft²/gal at 3.0 mils DFT

(5.0 m²/l at 127 µm DFT – 8.4 m²/l at 76 µm DFT)

Thinning: MC-Thinner, MC-Thinner 100, MC-Thinner XMT

Clean Up: MC-Thinner, MC-Thinner 100, MC-Thinner XMT

*At 50% Humidity	50°F/10°C		75°F/24°C		95°F/35°C	
	Without PURQuik®	With PURQuik®	Without PURQuik®	With PURQuik®	Without PURQuik®	With PURQuik®
Tack Free	4 hours	--	2 hours	--	1 hour	--
Re-coat Minimum¹	8 hours	1 hour	6 hours	30 minutes	4 hours	20 minutes
Full Cure	10 days	7 days	7 days	5 days	5 days	4 days

*Humidity, temperature and coating thickness will affect re-coat and curing times. ¹No outer re-coat window on clean surfaces. Refer to Wasser's PURQuik® Accelerator Product Data for additional information.

Ver. 17.08.25A

MC-Miomastic 100

intermediate

WASSER
ADVANCED COATINGS TECHNOLOGY

Recommended Systems

Ferrous Metals (Overcoat):

1st Coat: MC-Miozinc 100	3.0-5.0 mils DFT
Or MC-Miozinc 100 (Spot Prime)	
2nd Coat: MC-Miomastic 100	3.0-5.0 mils DFT
3rd Coat: Polyflex 102 Rapid Thane	6.0-10.0 mils DFT
Total System DFT:	12.0-20.0 mils DFT

Ferrous Metals (Full Removal):

1st Coat: MC-Zinc 100	3.0-5.0 mils DFT
2nd Coat: MC-Miomastic 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
(Nepcoat List-B)	
Total System DFT:	8.0-14.0 mils DFT

1st Coat: MC-Miozinc 100	3.0-5.0 mils DFT
2nd Coat: MC-Miomastic 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Or MC-Luster 100	
Total System DFT:	8.0-14.0 mils DFT

1st Coat: MC-Universal 100	3.0-5.0 mils DFT
2nd Coat: MC-Miomastic 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Or MC-Luster 100	
Total System DFT:	8.0-14.0 mils DFT

Galvanized Metal:

1st Coat: MC-Miomastic 100	3.0-5.0 mils DFT
2nd Coat: Polyflex 102 Rapid Thane	6.0-10.0 mils DFT
Total System DFT:	9.0-15.0 mils DFT

1st Coat: MC-Miomastic 100	3.0-5.0 mils DFT
2nd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Or MC-Luster 100	
Total System DFT:	5.0-9.0 mils DFT

**Other Systems are available. Contact your Wasser Representative to answer any questions.*

Compatible Coatings

Primers:

MC-Zinc 100
MC-Miozinc 100
MC-Ferrocilad 100
MC-Prepbond 100
MC-Universal 100

Topcoats:

MC-Ferrox A 100
MC-Luster 100
MC-Shieldcoat 100
Wasser Polyflex 102 Rapid Thane
Wasser Polyflex 106
Wasser Polyflex 50 series Polyurea

Coating Accelerator
PURQuik® Accelerator

Surface Preparation

Ferrous Metal

Apply to clean, dry, Wasser recommended primers. Refer to the primer Product Data for additional information.

Galvanized Metals

Prepare surfaces using SSPC-SP1 Solvent Cleaning and SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods to remove surface contamination. Supplement weathered galvanized surface preparation with SSPC-SP2 and SP3 Hand and Power Tool cleaning to remove excessive corrosion and impart surface profile on bare metal. Supplement new galvanized surface cleaning with SSPC-SP16 to impart surface profile and support mechanical adhesion.

Previously Existing Coatings

Prepare surfaces using SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods to remove surface contamination. Supplement SSPC-SP 12 LPWC with SSPC-SP1 Solvent Cleaning and SSPC-SP2 and SSPC-SP3 Hand and Power Tool clean areas of corrosion and loose or flaking paint (feather edges of sound, existing paint back to a firm edge). Spot prime clean, bare metal with Wasser recommended primer. Sand glossy surfaces to provide profile. Apply a test sample to a small area to determine coating compatibility.

Good Practices

MC-Miomastic 100 is designed for application to tightly adhering, previously existing coatings. Apply a test sample to a small area to determine coating compatibility. Spot prime any areas cleaned to bare metal with a Wasser recommended primer.

New or weathered galvanized surfaces will accept MC-Miomastic as a prime coat when surfaces are properly prepared. The surface to be coated must be dry, clean, dull, and free from dirt, grease, oil, heavy rust, salts or any other surface contaminants that interfere with adhesion. Ensure welds, repair areas, joints, and surface defects exposed by surface preparation are properly cleaned and treated prior to coating application.

When surfaces are cleaned to bare metal, areas of oxidation after surface preparation and prior to coating application, should be prepared to specified standard prior to applying the Wasser recommended primer. Consult the referenced standards, SSPC-PA1 and your Wasser Representative for additional information or recommendations.

Application Information

MC-Miomastic 100 can be applied by brush, roll, airless spray, mitt and conventional spray methods. Follow proper mixing instructions before applying.

Mixing:

Material temperature must be 5°F above the dew point before opening and agitating. Power mix thoroughly prior to application. **Do not keep under constant agitation.** Apply a 3-6 oz solvent float over material to prevent moisture intrusion and cover pail.

Brush/Roller:

Brush: Natural Fiber
Roller: Natural or synthetic fiber cover
Nap: ¼" to ¾"
Core: Phenolic
Reduction: Typically not required. If necessary, reduce with MC-Thinner 100, or MC-Thinner XMT.

Airless Spray:

Pump Ratio: 28 - 40:1
Pressure: 2100 - 2800 psi
Hose: ¼" to ¾"
Tip Size: 0.013 - 0.019
Filter Size: 60 mesh (250 µm)
Reduction: Typically not required. If necessary, reduce with MC-Thinner 100, or MC-Thinner XMT.

Conventional Spray/HLVP:

Fluid Nozzle: E Fluid Tip
Air Cap: 704 or 765
Atomizing Air: 45 - 75 lbs.
Fluid Pressure: 15 - 20 lbs.
Hose: ½" ID; 50' Max
Reduction: Typically not required. If necessary, reduce with MC-Thinner or MC-Thinner 100.

Reducer:

MC-Thinner, MC-Thinner 100, or MC-Thinner XMT.
Reduction is typically not required. If desired, thin up to 15% with MC-Thinner or MC-Thinner 100. Thin in accordance with local and federal regulatory standards.

Clean up:

MC-Thinner, MC-Thinner 100. If Wasser thinners are not available, use MEK, MIBK, Xylene, a 50:50 blend of Xylene and MEK or MIBK, or acetone for clean up only. Do not add unauthorized solvents to a Wasser coating.

Application Conditions

Temperature: 20° - 100° F (-8° - 38° C). This temperature range should be achieved for ambient, surface and material temperature. Substrate must be visibly dry and frost free. On applications below 33° F (0.5° C), Steel temperatures should be 5°F above the dew point temperature. MC-Thinner 100 is recommended for spray application in temperatures above 90° F.

Relative Humidity: 6% - 99%.

Coating Accelerator: PURQuik® Accelerator. See Wasser's PURQuik® Accelerator Product Data for information. (Do not accelerate when used as prime coat on concrete)

Storage: Store off the ground in a dry, protected area in temperature between 40 - 100°F (4 - 38°C). MCU containers must be kept sealed when not in use. Use a solvent float to reseal partial containers.

Certifications and Qualifications

Meets SSPC Paint 41

VOC ≤0.8 lbs/gal (100gr/ltr)

(National Standard for Industrial Maintenance Coating, Ozone Transportation Commission and SCAQMD Rule 1113 IM Coating effective 1/1/04)

Performance Testing Data

**Contact Wasser Corporation for detailed testing of this product.*

Ordering Information

Product Numbers: W131.0347 Light Grey
W131.35 Red Oxide

Package Size: 1 gallon and 3 gallon pails

Shelf Life: 12 months from date of shipment when stored unopened at 75°F (24°C).

Shipping Information

Flash Point:	59°F (15°C)
Weight/gallon:	18.5 ± 1.0 lbs. (2.22 ± 0.12 kg/l)
DOT HAZARD CLASS	3
DOT PACKAGING GROUP	II
DOT LABEL	FLAMMABLE LIQUID
DOT SHIPPING NAME	PAINT
DOT PLACARD	FLAMMABLE LIQUID
UN/NA NUMBER	1263

Safety Precautions

DANGER!

Intended for professional use only. Obtain and Read Wasser's Safety Data Sheet for this before using.

Adequate Ventilation. Do not breathe dust, vapors or spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling. Keep away from heat, sparks and flame. Vapor may cause flash fire.

KEEP OUT OF REACH OF CHILDREN

FIRST AID: If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists or occurs later, consult a physician and have label information available. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If swallowed, get medical attention immediately. If swallowed, do not induce vomiting. Get medical attention immediately. Wash clothing before reuse.

Thoroughly clean or destroy contaminated shoes.

Keep container closed when not in use. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

WARNING: This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.

Obtain and Read Wasser's Safety Data Sheet for this before using.

INTENDED FOR PROFESSIONAL USE ONLY.

Note: Ingredients and VOC may vary for products with catalysts, tint bases, and other colors.

Wasser Corporation's liability on any claim of any kind, including claims based upon Wasser Corporation's negligence or strict liability, for any loss or damage arising out of, connected with or resulting from the use of the Products, shall in no case exceed the purchase price allowable for the Products or part thereof that give rise to the claim. In no event shall Wasser Corporation be liable for consequential or incidental damages. Published Product Data Sheets are subject to change without notice. Contact your Wasser Representative or the Wasser website for the most current Product Data Sheets.

MC-Universal 100

primer/tie-coat/intermediate

WASSER
ADVANCED COATINGS TECHNOLOGY

Product Description

MC-Universal 100 is non-metallic Direct to Metal (DTM) primer, ideal for protecting non-ferrous metal, pitted steel or steel with complex geometry. Primarily used as a full metal primer, or as a spot primer, MC-Universal 100 is suited for priming concrete for atmospheric and immersion service. The Low environmental impact, and it's ability to provide excellent corrosion protection in a non-metallic metal primer, make this the primer of choice in maintenance painting for plants and other facilities. When applied to properly prepared surfaces, MC-Universal 100 is a versatile primer for hydro-blasting, wet/dry abrasive blasting, or hand and power tool surface preparation.

Product Features

- Single Component Moisture Cure Urethane
- Contains no metallic pigment to interfere with external cathodic protection systems
- No need for continuous agitation
- Easy to apply by brush & roller, mitt, or spray method
- VOC Compliant at less than 100 g/l
- Non-immersion and Immersion Service (with the appropriate top-coat)
- Impact and Abrasion Resistant
- Compatible with PURQuik® Accelerator for faster re-coat and cure times
- No Dew Point Restrictions (Substrate must be visibly dry)
- Can be applied at 99% relative humidity over visibly dry substrate
- Can be applied in below freezing temperatures (no ice or frost)

Area of Use

Substrates

Over properly prepared:

- Ferrous Metal
- Corten Steel
- Galvanized Metal
- Ductile Iron
- Non-Ferrous Metal
- Concrete
- Fiberglass

Possible Uses

- Power Generation Facilities
- Hydro-power Facilities
- Tank Exteriors
- Refineries
- Pulp and Paper Mills
- Chemical Processing Facilities
- Water and Wastewater Treatment Facilities
- Steel Piping
- Material Handling
- Structural Steel
- Work Boats
- Marine/Port Facilities
- Offshore Platforms
- Food Processing Facilities
- Heavy Equipment
- Bridges

Ready Reference Information

Resin Type: Single Component Moisture Cure Aromatic Urethane

Pigment Type: Proprietary Blend

Sheen: Flat

Colors: Off white, gray and red-oxide

Volume Solids: 62.0% ± 2.0%

VOC: <0.8lb/gal (100 g/l)
(Volatile Organic Content)

Theoretical Coverage:

At 1 mil DFT: 994 ft²/gal
At 25 µm DFT: 24.3 m²/l

Recommended Film Thickness:

Wet: 4.8 – 8.1 mils (122 - 206 µm)
Dry: 3.0 – 5.0 mils (76 - 127 µm)

Recommended Coverage Per Coat:

332 ft²/gal at 3.0 mils DFT – 199 ft²/gal at 5.0 mils DFT
(8.1 m²/l at 76 µm DFT – 4.9 m²/l at 127 µm DFT)

Thinning: MC-Thinner, MC-Thinner 100, MC-Thinner XMT
Clean Up: MC-Thinner, MC-Thinner 100, MC-Thinner XMT

*At 50% Humidity	50°F/10°C		75°F/24°C		95°F/35°C	
	Without PURQuik®	With PURQuik®	Without PURQuik®	With PURQuik®	Without PURQuik®	With PURQuik®
Tack Free	3 hours	1 hour	2 hours	30 minutes	1 hour	20 minutes
Re-coat Minimum¹	8 hours	2 hours	6 hours	1 hour	4 hours	45 minutes
Full Cure	10 days	7 days	7 days	5 days	5 days	4 days

*Humidity, temperature and coating thickness will affect re-coat and curing times.. Refer to Wasser's PURQuik® Accelerator Product Data for additional information.

¹No outer re-coat window on clean surfaces.

Ver. 17.09.07_A

MC-Universal 100

primer/tie-coat/intermediate

WASSER
ADVANCED COATINGS TECHNOLOGY

Recommended Systems*

Economical Two-Coat System

1st Coat: MC-Universal 100	3.0-5.0 mils DFT
2nd Coat: MC-Luster	2.0-4.0 mils DFT
OR MC-Ferrox A	
Total System DFT:	5.0-9.0 mils DFT

Ferrous Metals (Full Removal Non-Zinc):

1st Coat: MC-Universal 100	3.0-5.0 mils DFT
2nd Coat: MC-Universal 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A	2.0-4.0 mils DFT
Or MC-Luster	
Total System DFT:	8.0-14.0 mils DFT

Ferrous Metals (Overcoat):

1st Coat: MC-Universal 100 (Spot Prime)	3.0-5.0 mils DFT
2nd Coat: MC-MioMastic 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A	2.0-4.0 mils DFT
Or MC-Luster	
Total System DFT:	8.0-14.0 mils DFT

Galvanized Metal:

1st Coat: MC-Universal 100 (Spot Repair)	3.0-5.0 mils DFT
2nd Coat: MC-Universal 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A	2.0-4.0 mils DFT
Or MC-Luster	
Total System DFT:	8.0-14.0 mils DFT

Concrete:

1st Coat: MC-Universal 100	3.0-5.0 mils DFT
(Thinned 15-20%)	
2nd Coat Options:	
MC-Luster 100	2.0-4.0 mils DFT
MC-Ferrox A 100	
MC-Tar 100 (2 coat Immersion Service)	5-7 mils DFT ea

**Wasser Polyflex Polyurea/Polyaspartic may be substituted as a top-coat for all of the above systems depending on the application.*

10-90 mils DFT

***Other Systems are available. Contact your Wasser Representative to answer any questions.*

Compatible Coatings

Intermediates:

MC-Universal 100
MC-Miomastic 100
MC-Ferrox B 100
MC-CR 100

Topcoats:

MC-Ferrox A 100
MC-Luster 100
MC-Shieldcoat 100
MC-Tar 100
MC-Ballastcoat 100
MC-Anti-graffiti 100
MC-Clear 100

Coating Accelerator*

PURQuik® Accelerator

Polyflex 102, 103 and 106
Rapid Thane Polyaspartic products

All Wasser Polyflex Polyurea products

**Use only with a Wasser recommended intermediate*

Surface Preparation

Ferrous Metal

Use SSPC-SP1 solvent cleaning to remove oil and grease or other contaminants prior to employing surface preparation methods.

Blast clean surfaces for severe or immersion service projects to SSPC-SP10/NACE No. 2 Near White Metal finish. Prepare surfaces for atmospheric service projects to SSPC-SP6/NACE No. 3 Commercial Blast Clean finish. For minimum surface preparation use conscientious SSPC-SP2 hand tool cleaning or SSPC-SP3 power tool cleaning methods to remove corrosion and loose or failing paint (feather edges of sound, existing paint back to a firm edge).

High Pressure Water Cleaning SSPC-SP12/NACE No.5 to a minimum WJ3/NV2 may also be used to prepare ferrous metal surfaces for atmospheric service projects. Surface preparation methods should produce a surface profile of 1.5 - 3.5 mils (38.1-88.9 µms).

Corten/Weathering Steel

Prepare surfaces using SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods. Supplement SSPC-SP 12 LPWC with SSPC-SP2 and SP3 Hand and Power Tool cleaning where areas show excessive corrosion. Use SSPC-SP1 solvent cleaning to remove oil and grease prior to surface preparation methods.

Aluminum/Galvanized/Non-Ferrous Metals

Prepare surfaces using SSPC-SP1 Solvent Cleaning and SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods to remove surface contamination. Supplement weathered galvanized surface preparation with SSPC-SP2 and SP3 Hand and Power Tool cleaning to remove excessive corrosion and impart surface profile on bare metal. Supplement new galvanized surface cleaning with SSPC-SP16 to impart surface profile and support mechanical adhesion.

Concrete/CMU

The surface must be dry, free of surface contaminants, and in sound condition. Grease, and oil should be removed by ASTM D4258-83 (Re-approved 1999) and release agents should be removed by ASTM D4259 - 88 (Re-approved 1999). Refer to SSPC-SP13/NACE No 6 Mechanical or Chemical Surface Preparation methods for preparing concrete to suitable cleanliness for intended service. Surface preparation methods should impart a minimum of CSP1 profile for mechanical adhesion to occur. Ensure surface is thoroughly clean (all traces of latence removed) and dry prior to coating application. For atmospheric service allow a minimum 7 days cure time for new concrete and 14 days for immersion service prior to preparation and application.

MC-Universal 100

primer/tie-coat/intermediate

WASSER
ADVANCED COATINGS TECHNOLOGY

Good Practices

The surface to be coated must be dry, clean, dull, and free from dirt, grease, oil, rust, mill scale, salts or any other surface contaminants that interfere with adhesion. Ensure welds, repair areas, joints, and surface defects exposed by surface preparation are properly cleaned and treated prior to coating application. Areas of oxidation after surface preparation and prior to coating application, should be prepared to specified standard.

Consult the referenced standards, SSPC-PA1 and your Wasser Representative for additional information or recommendations.

Application Information

MC-Universal 100 can be applied by brush, roll, mitt, airless spray and conventional spray application. Follow proper mixing instructions before applying.

Mixing:

Material temperature must be 5°F above the dew point before opening and agitating. Power mix thoroughly prior to application. **Do not keep under constant agitation.** Apply a 3-6 oz solvent float over material to prevent moisture intrusion and cover pail.

Brush/Roller:

Brush:	Natural Fiber
Roller:	Natural or synthetic fiber cover
Nap:	¼" to ¾"
Core:	Phenolic

Reduction: Typically not required. If necessary, reduce with MC-Thinner, MC-Thinner 100, or MC-Thinner XMT.

Airless Spray:

Pump Ratio:	28 - 40:1
Pressure:	2400-2800 psi
Hose:	¼" to ¾"
Tip Size:	0.013-0.017
Filter Size:	60 mesh (250 µm)

Reduction: Typically not required. If necessary, reduce with MC-Thinner, MC-Thinner 100, or MC-Thinner XMT.

Conventional Spray/HVLP:

Fluid Nozzle:	E Fluid Tip
Air Cap:	704 or 765
Atomizing Air:	45 - 75 lbs.
Fluid Pressure:	15 - 20 lbs.
Hose:	3/8" ID; 50' Max

Reduction: If necessary, reduce with MC-Thinner, MC-Thinner 100, or MC-Thinner XMT.

Reducer:

MC-Thinner, MC-Thinner 100, or MC-Thinner XMT. If desired, thin up to 15% with MC-Thinner or MC-Thinner 100. MC-Thinner XMT is an exempt solvent specially formulated for Series 100 MCU. Thin in accordance with local and federal regulatory standards.

Clean up:

MC-Thinner, MC-Thinner 100, or MC-Thinner XMT. If Wasser thinners are not available, use MEK, MIBK, Xylene, or a 50:50 blend of Xylene and MEK or MIBK, or acetone for clean up only. Do not add unauthorized solvents to a Wasser coating.

Application Conditions

Temperature: 20° - 100° F (-8° - 38° C). This temperature range should be achieved for ambient, surface and material temperature. Substrate must be visibly dry and frost free. On applications below 33° F (0.5° C), Steel temperatures should be 5°F above the dew point temperature. MC-Thinner 100 is recommended for spray application in temperatures above 90° F.

Relative Humidity: 6% - 99%.

Coating Accelerator: PURQuik® Accelerator. See Wasser's PURQuik® Accelerator Product Data for information.

Storage: Store off the ground in a dry, protected area in temperature between 40 -100°F (4 - 38°C). MCU containers must be kept sealed when not in use. Use a solvent float to reseal partial containers.

MC-Universal 100

primer/tie-coat/intermediate

WASSER
ADVANCED COATINGS TECHNOLOGY

Certifications and Qualifications

VOC Compliant (National Standard for Industrial Maintenance Coating, Ozone Transportation Commission and SCAQMD Rule 1113 IM Coating effective 1/1/04)

Performance Testing Data

Contact Wasser Corporation for detailed testing of this product

Ordering Information

Product Numbers: W081.71 Off white
W081.35 Red-Oxide
W081.0011 Gray

Package Size: 1 gallon and 5 gallon pails

Shelf Life: 12 months from date of shipment when stored unopened at 75°F (24°C).

Shipping Information

Flash Point:	80°F (26.6°C)
Weight/gallon:	11.93 ± 1.0 lbs.
DOT HAZARD CLASS	3
DOT PACKAGING GROUP	III
DOT LABEL	FLAMMABLE LIQUID
DOT SHIPPING NAME	PAINT
DOT PLACARD	FLAMMABLE LIQUID
UN/NA NUMBER	1263

Safety Precautions

DANGER!

Intended for professional use only. Obtain and Read Wasser's Safety Data Sheet for this before using.

Adequate Ventilation. Do not breathe dust, vapors or spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling. Keep away from heat, sparks and flame. Vapor may cause flash fire.

KEEP OUT OF REACH OF CHILDREN

FIRST AID: If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists or occurs later, consult a physician and have label information available. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If swallowed, get medical attention immediately. If swallowed, do not induce vomiting. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

Keep container closed when not in use. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

WARNING: This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.

Obtain and Read Wasser's Safety Data Sheet for this before using.

INTENDED FOR PROFESSIONAL USE ONLY.

Note: Ingredients and VOC may vary for products with catalysts, tint bases, and other colors.

Wasser Corporation's liability on any claim of any kind, including claims based upon Wasser Corporation's negligence or strict liability, for any loss or damage arising out of, connected with or resulting from the use of the Products, shall in no case exceed the purchase price allowable for the Products or part thereof that give rise to the claim. In no event shall Wasser Corporation be liable for consequential or incidental damages. Published Product Data Sheets are subject to change without notice. Contact your Wasser Representative or the Wasser website for the most current Product Data Sheets.

MC-Luster 100

topcoat

WASSER
ADVANCED COATINGS TECHNOLOGY

Product Description

MC-Luster 100 is Wasser's most specified aliphatic, (Workhorse) semi-gloss, low VOC topcoat solution for projects requiring an aesthetic finish with our corrosion resistant systems. MC-Luster 100 provides a thin-filmed, smooth finish with excellent gloss and color retention properties. MC-Luster 100 is an ideal MCU topcoat with superior resistance to UV, weathering and abrasion; suitable for industrial and commercial maintenance projects.

Product Features

- Meets SSPC Paint 38
- Single component semi-gloss, aliphatic Moisture Cure Urethane
- No mixing errors - No pot life
- Easy to apply by brush, roller, mitt or spray methods
- High performance finish coat for various substrates and service
- VOC Compliant at less than 100 g/l
- UV, impact and abrasion resistant
- Can be applied at 99% relative humidity (substrate must be visibly dry)
- Can be applied in below freezing temperatures (no ice or frost)
- No dew point restrictions (substrate must be visibly dry)
- Compatible with PURQuik® Accelerator for faster re-coat and cure times, (Do not accelerate prime coat on concrete)
- Color matching service is available to support your needs

Area of Use

Substrates

Over properly prepared:

- Galvanized Metal
- Aluminum/Non-Ferrous Metal
- Metallized
- Previously Existing Coatings
- Concrete/Concrete Block

Possible Uses

- Water and Wastewater Treatment Facilities
- Food Processing Facilities
- Pulp and Paper Mills
- Tank Exteriors
- Hydro-power Facilities and Penstocks
- Marine/Port Facilities
- Offshore Platforms
- Sound Walls
- Chemical Processing Facilities
- Refineries
- Structural Steel
- Work Boats
- Bridges
- Floors

Ready Reference Information

Resin Type:	Single Component Moisture Cure Aliphatic Urethane
Pigment Type:	Organic and Inorganic Pigment (Depending on color)
Sheen:	Semi Gloss (standard), Gloss and Matte
Colors:	Standard and Various Colors
Volume Solids:	63.0% ± 3.0
VOC:	<0.8lb/gal (100 g/l) (Volatile Organic Content)

Theoretical Coverage:
At 1 mil DFT: 1010 ft²/gal
At 25 micron DFT: 24.7 m²/l

Recommended Film Thickness:
Wet: 3.2-6.3 mils (63-86 µm)
Dry: 2.0-4.0 mils (51-102µm)

Recommended Coverage Per Coat:
252 ft²/gal at 4.0 mils DFT - 505 ft²/gal at 2.0 mils DFT
(6.2 m²/l at 102 µm DFT - 12.4 m²/l at 51 µm DFT)

Thinning: MC-Thinner, MC-Thinner 100, MC-Thinner XMT
Clean Up: MC-Thinner, MC-Thinner 100, MC-Thinner XMT

*At 50% Humidity	50°F/10°C		75°F/24°C		95°F/35°C	
	Without PURQuik®	With PURQuik®	Without PURQuik®	With PURQuik®	Without PURQuik®	With PURQuik®
Tack Free	3 hours	--	1.5 hours	--	45 minutes	--
Re-coat Minimum¹	10 hours	1 hour	8 hours	30 minutes	6 hours	20 minutes
Full Cure	10 days	7 days	7 days	5 days	5 days	4 days

*Humidity, temperature and coating thickness will affect re-coat and curing times. ¹14 Day outer re-coat window on clean surfaces. Refer to Wasser's PURQuik® Accelerator Product Data for additional information.

MC-Luster 100

topcoat

WASSER
ADVANCED COATINGS TECHNOLOGY

Recommended Systems

Ferrous Metals (Full Removal):

1st Coat: MC-Zinc 100	3.0-5.0 mils DFT
2nd Coat: MC-Miomastic 100	3.0-5.0 mils DFT
3rd Coat: MC-Luster 100	2.0-4.0 mils DFT
Optional Clear Coat	
4th Coat: MC-Antigraffiti 100 or MC-Clear 100	1.5-2.0 mils DFT
Total System DFT:	9.5-16.0 mils DFT

1st Coat: MC-Miozinc 100	3.0-5.0 mils DFT
2nd Coat: MC-Ferrox B 100	3.0-5.0 mils DFT
3rd Coat: MC-Luster 100	2.0-4.0 mils DFT
Optional Clear Coat	
4th Coat: MC-Antigraffiti 100 or MC-Clear 100	1.5-2.0 mils DFT
Total System DFT:	9.5-16.0 mils DFT

1st Coat: MC-Universal 100	4.0-5.5 mils DFT
2nd Coat: MC-Luster 100	2.0-4.0 mils DFT
Optional Clear Coat	
3rd Coat: MC-Antigraffiti 100 or MC-Clear 100	1.5-2.0 mils DFT
Total System DFT:	5.0-8.0 mils DFT

Ferrous Metals (Overcoat):

1st Coat: MC-Miozinc 100 (Spot Prime)	3.0-5.0 mils DFT
2nd Coat: MC-Miomastic 100	3.0-5.0 mils DFT
3rd Coat: MC-Luster 100	2.0-4.0 mils DFT
Optional Clear Coat	
4th Coat: MC-Antigraffiti 100 or MC-Clear 100	1.5-2.0 mils DFT
Total System DFT:	9.5-16.0 mils DFT

1st Coat: MC-Universal 100 (Spot Prime)	4.0-5.5 mils DFT
2nd Coat: MC-Universal 100	4.0-5.5 mils DFT
3rd Coat: MC-Luster 100	2.0-4.0 mils DFT
Optional Clear Coat	
4th Coat: MC-Antigraffiti 100 or MC-Clear 100	1.5-2.0 mils DFT
Total System DFT:	11.5-17.0 mils DFT

Galvanized Metal:

1st Coat: MC-Miomastic 100	3.0-5.0 mils DFT
2nd Coat: MC-Luster 100	2.0-4.0 mils DFT
Total System DFT:	5.0-9.0 mils DFT

Aluminum/Non-Ferrous Metal:

1st Coat: MC-Universal	4.0-5.5 mils DFT
2nd Coat: MC-Luster 100	2.0-4.0 mils DFT
Total System DFT:	6.0-9.5 mils DFT

Concrete /Concrete Block:

1st Coat: MC-Universal 100 (Thinned 15-20%)	4.0-5.5 mils DFT
2nd Coat: MC-Luster 100	2.0-4.0 mils DFT
Total System DFT:	6.0-9.5 mils DFT

1st Coat: MC-CR 100	3.0-4.0 mils DFT
2nd Coat: MC-Luster 100	2.0-4.0 mils DFT
Total System DFT:	5.0-8.0 mils DFT

Thermal Spray Metallizing:

1st Coat: MC-Metallization Sealer (mist coat)	0.6-0.8 mils DFT
Flash off 15 minutes	
2nd Coat: MC-Metallization Sealer	1.0-1.5 mils DFT
3rd Coat: MC-Luster 100	2.0-4.0 mils DFT
Total System DFT:	3.6-6.3 mils DFT

*Other Systems are available. Contact your Wasser Representative to answer any questions.

Compatible Coatings

Primers:

MC-Zinc 100
MC-Miozinc 100
MC-Prepbond 100
MC-Universal 100
MC-CR 100 (for Concrete only)
MC-Metallization Sealer

Intermediates:

MC-Ferrox B 100
MC-Miomastic 100
MC-Universal 100

Topcoats:

MC-Antigraffiti 100
MC-Clear 100

Coating Accelerator

PURQuik® Accelerator

Surface Preparation

Ferrous Metal

Apply to clean, dry, Wasser recommended primers. Refer to the primer Product Data for additional information.

Aluminum/Galvanized/Non-Ferrous Metals

Prepare surfaces using SSPC-SP1 Solvent Cleaning and SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods to remove surface contamination. Supplement weathered galvanized surface preparation with SSPC-SP2 and 3 Hand and Power Tool cleaning to remove excessive corrosion and impart surface profile on bare metal. Supplement new galvanized surface cleaning with SSPC-SP16 to impart surface profile and support mechanical adhesion.

Concrete/Concrete Block

The surface must be dry, free of surface contaminants, and in sound condition. Grease, and oil should be removed by ASTM D4258-83 (Re-approved 1999) and release agents should be removed by ASTM D4259 - 88 (Re-approved 1999). Refer to SSPC-SP13/NACE No 6 mechanical or chemical surface preparation methods for preparing concrete to suitable cleanliness for intended service. Surface preparation methods should impart sufficient surface profile for mechanical adhesion to occur. Ensure surface is thoroughly rinsed and dry prior to coating application. Allow a minimum 7 - 14 days cure time for new concrete prior to preparation and application.

Previously Existing Coatings

Prepare surfaces using SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods to remove surface contamination. Supplement SSPC-SP 12 LPWC with SSPC-SP1 Solvent Cleaning and SSPC-SP2 and SSPC-SP3 Hand and Power Tool clean areas of corrosion and loose or flaking paint (feather edges of sound, existing paint back to a firm edge). Spot prime clean, bare metal with Wasser recommended primer. Sand glossy surfaces to provide profile. Apply a test sample to a small area to determine coating compatibility.

Good Practices

MC-Luster 100 is designed for application to a variety of substrates and tightly adhering, previously existing coatings. Apply a test sample to a small area to determine coating compatibility. Spot prime any areas cleaned to bare metal with a Wasser recommended primer.

The surface to be coated must be dry, clean, dull, and free from dirt, grease, oil, rust, mill scale, salts or any other surface contaminants that interfere with adhesion.

Ensure welds, repair areas, joints, and surface defects exposed by surface preparation are properly cleaned and treated prior to coating application.

Consult the referenced standards, SSPC-PA1 and your Wasser Representative for additional information or recommendations.

Application Information

MC-Luster 100 can be applied by brush, roll, airless spray, mitt and conventional spray methods. Follow proper mixing instructions before applying.

Mixing:

Material temperature must be 5°F above the dew point before opening and agitating. Power mix thoroughly prior to application. **Do not keep under constant agitation.** Apply a 2-4 oz solvent float over material to prevent moisture intrusion and cover pail.

Brush/Roller:

Brush: Natural Fiber
Roller: Natural or synthetic fiber cover
Nap: ¼" to ⅜"
Core: Phenolic
Reduction: Typically not required. If necessary, reduce with MC-Thinner 100, or MC-Thinner XMT.

Airless Spray:

Pump Ratio: 28 - 40:1
Pressure: 2400-2800 psi
Hose: ¼" to ⅜"
Tip Size: 0.011-0.017
Filter Size: 60 mesh (250 µm)
Reduction: Typically not required. If necessary, reduce with MC-Thinner 100, or MC-Thinner XMT.

Conventional Spray/HLVP:

Fluid Nozzle: E Fluid Tip
Air Cap: 704 or 765
Atomizing Air: 45 - 75 lbs.
Fluid Pressure: 15 - 20 lbs.
Hose: ½" ID; 50' Max
Reduction: Typically not required. If necessary, reduce with MC-Thinner or MC-Thinner 100.

Reducer:

MC-Thinner, MC-Thinner 100, or MC-Thinner XMT. Reduction is typically not required. If desired, thin up to 15% with MC-Thinner or MC-Thinner 100. MC-Thinner XMT is an exempt solvent specially formulated for Series 100 MCU. Thin in accordance with local and federal regulatory standards.

Clean up:

MC-Thinner, MC-Thinner 100. If Wasser thinners are not available, use MEK, MIBK, Xylene, or a 50:50 blend of Xylene and MEK or MIBK, or acetone for clean up only. Do not add unauthorized solvents to a Wasser coating.

Application Conditions

Temperature: 20° - 100° F (-8° - 38° C). This temperature range should be achieved for ambient, surface and material temperature. Substrate must be visibly dry and frost free. On applications below 33° F (0.5° C), Steel temperatures should be 5°F above the dew point temperature. MC-Thinner 100 is recommended for spray application in temperatures above 90°.

Relative Humidity: 6% - 99%.

Coating Accelerator: PURQuik® Accelerator. See Wasser's PURQuik® Accelerator Product Data for information. (Do not accelerate when used as prime coat on concrete)

Storage: Store off the ground in a dry, protected area in temperature between 40 - 100°F (4 - 38°C). MCU containers must be kept sealed when not in use. Use a solvent float to reseal partial containers.

MC-Luster 100

topcoat

WASSER
ADVANCED COATINGS TECHNOLOGY

Certifications and Qualifications

VOC Compliant (National Standard for Industrial Maintenance Coating, Ozone Transportation Commission and SCAQMD Rule 1113 IM Coating effective 1/1/04*)

Qualified for use in USDA and FDA inspected facilities.

Meets SSPC Paint 38

**MC-Luster 100 tint based products may have higher VOC than 100g/l, please consult Wasser for specific VOC levels for these products.*

Performance Testing Data

**Contact Wasser Corporation for detailed testing of this product.*

Ordering Information

Product Numbers: W211.XX

Package Size: 1 gallon and 5 gallon pails

Shelf Life: 12 months from date of shipment when stored unopened at 75°F (24°C).

Shipping Information

Flash Point: 4.4°C (39.9°F).
Weight/gallon: 11.0 ± 1.0 lbs
(1.48 ± 0.12 kg/l)

DOT HAZARD CLASS 3
DOT PACKAGING GROUP II
DOT LABEL FLAMMABLE LIQUID
DOT SHIPPING NAME PAINT
DOT PLACARD FLAMMABLE LIQUID
UN/NA NUMBER 1263

Safety Precautions

DANGER!

Intended for professional use only. Obtain and Read Wasser's Safety Data Sheet for this before using.

Adequate Ventilation. Do not breathe dust, vapors or spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling. Keep away from heat, sparks and flame. Vapor may cause flash fire.

KEEP OUT OF REACH OF CHILDREN

FIRST AID: If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists or occurs later, consult a physician and have label information available. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If swallowed, get medical attention immediately. If swallowed, do not induce vomiting. Get medical attention immediately. Wash clothing before reuse.

Thoroughly clean or destroy contaminated shoes.

Keep container closed when not in use. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

WARNING: This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.

Obtain and Read Wasser's Safety Data Sheet for this before using.

INTENDED FOR PROFESSIONAL USE ONLY.

Note: Ingredients and VOC may vary for products with catalysts, tint bases, and other colors.

Wasser Corporation's liability on any claim of any kind, including claims based upon Wasser Corporation's negligence or strict liability, for any loss or damage arising out of, connected with or resulting from the use of the Products, shall in no case exceed the purchase price allowable for the Products or part thereof that give rise to the claim. In no event shall Wasser Corporation be liable for consequential or incidental damages. Published Product Data Sheets are subject to change without notice.

Contact your Wasser Representative or the Wasser website for the most current Product Data Sheets.

MC-Ferrox A 100

topcoat

WASSER
ADVANCED COATINGS TECHNOLOGY

Product Description

MC-Ferrox A 100 is a micaceous iron oxide (MIO) enriched, aliphatic single component moisture cure urethane topcoat. It offers the best possible resistance to UV, weathering and abrasion. The addition of MIO also provides film reinforcement, enhanced adhesion properties and additional barrier protection to the applied coating system. MC-Ferrox A 100 is the topcoat of choice for extended life cycle considerations and consistent aesthetic stability, even in harsh environments.

Product Features

- Meets SSPC Paint 38
- Nepcoat List-B
- Single Component Moisture Cure Urethane
- No mixing errors – no pot life
- Easy to apply by brush, roller, mitt or spray methods
- Micaceous iron oxide (MIO), maintains build on edges, threads, and weld seams
- VOC compliant at less than 100 g/l
- Impact and abrasion resistant
- Resistant to UV and weathering
- Can be applied at 99% relative humidity (substrate must be visibly dry)
- No dew point restrictions (substrate must be visibly dry)
- Can be applied in below freezing temperatures (no ice or frost)
- Compatible with PURQuik® Accelerator for faster re-coat and cure times
- Color matching service is available to support your needs

Area of Use

Substrates

Over properly prepared:

- Galvanized Metal
- Metallized
- Aluminum/Non-Ferrous Metal
- Previously Existing Coatings
- Concrete

Possible Uses

- Water and Wastewater Treatment Facilities
- Pulp and Paper Mills
- Tank Exteriors
- Hydro-power Facilities and Penstocks
- Marine/Port Facilities
- Offshore Platforms
- Highway Barriers/ Sound Walls
- Chemical Processing Facilities
- Refineries
- Floors
- Structural Steel
- Work Boats
- Bridges

Ready Reference Information

Resin Type:	Single Component Moisture Cure Aliphatic Urethane
Pigment Type:	Micaceous Iron Oxide depending on color and gloss
Sheen:	Matte (standard), Semi-Gloss and Gloss
Colors:	Standard and various colors See color chart.
Volume Solids:	63.0% ± 3.0
VOC: (Volatile Organic Content)	<0.8 lb/gal (100 g/l)

Theoretical Coverage:
At 1 mil DFT: 1010 ft²/gal
At 25 micron DFT: 24.7 m²/l

Recommended Film Thickness:
Wet: 3.1-6.3 mils (71-142 µm)
Dry: 2.0-4.0 mils (51-102 µm)

Recommended Coverage Per Coat:
252 ft²/gal at 4.0 mils DFT – 505 ft²/gal at 2.0 mils DFT
(6.2 m²/l at 102 µm DFT – 12.3 m²/l at 51 µm DFT)

Thinning: MC-Thinner, MC-Thinner 100, MC-Thinner XMT
Clean Up: MC-Thinner, MC-Thinner 100, MC-Thinner XMT

*At 50% Humidity	50°F/10°C		75°F/24°C		95°F/35°C	
	Without PURQuik®	With PURQuik®	Without PURQuik®	With PURQuik®	Without PURQuik®	With PURQuik®
Tack Free	3 hours	--	1.5 hours	--	45 minutes	--
Re-coat Minimum¹	10 hours	1 hour	8 hours	30 minutes	6 hours	20 minutes
Full Cure	10 days	7 days	7 days	5 days	5 days	4 days

*Humidity, temperature and coating thickness will affect re-coat and curing times. ¹On clean surface, re-coat within 48 hours. After 48 hours, do a test patch. Surface may require light sanding to provide sufficient anchor profile. Refer to Wasser's PURQuik® Accelerator Product Data for additional information.

Recommended Systems

Ferrous Metals (Full Removal):

1st Coat: MC-Zinc 100	3.0-5.0 mils DFT
2nd Coat: MC-Miomastic 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A 100 (Nepcoat List-B)	2.0-4.0 mils DFT
Optional Clear Coat	
4th Coat: MC-Antigraffiti 100	1.5-2.0 mils DFT
Total System DFT:	9.5-16.0 mils DFT

1st Coat: MC-Zinc 100	3.0-5.0 mils DFT
2nd Coat: MC-Ferrox B 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Total System DFT:	8.0-14.0 mils DFT

1st Coat: MC-Miozinc 100	3.0-5.0 mils DFT
2nd Coat: MC-Miomastic 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Total System DFT:	8.0-14.0 mils DFT

1st Coat: MC-Universal 100	3.0-5.0 mils DFT
2nd Coat: MC-Universal 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Total System DFT:	8.0-14.0 mils DFT

Ferrous Metals (Overcoat):

1st Coat: MC-Miozinc 100 (Spot Prime)	3.0-5.0 mils DFT
2nd Coat: MC-Universal 100	3.0-5.0 mils DFT
3rd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Total System DFT:	8.0-14.0 mils DFT

Galvanized Metal:

1st Coat: MC-Miomastic 100	3.0-5.0 mils DFT
2nd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Total System DFT:	5.0-9.0 mils DFT

Aluminum/Non-Ferrous Metal:

1st Coat: MC-Universal 100	3.0-5.0 mils DFT
2nd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Total System DFT:	5.0-9.0 mils DFT

Concrete /Concrete Block:

1st Coat: MC-Universal 100 (Thinned 15-20%)	3.0-5.0 mils DFT
2nd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Total System DFT:	5.0-9.0 mils DFT

1st Coat: MC-CR 100	3.0-4.0 mils DFT
2nd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Total System DFT:	5.0-8.0 mils DFT

Thermal Spray Metallizing:

1st Coat: MC-Metallization Sealer (mist coat)	0.6-0.8 mils DFT
Flash off 15 minutes	
2nd Coat: MC-Metallization Sealer	1.0-1.5 mils DFT
3rd Coat: MC-Ferrox A 100	2.0-4.0 mils DFT
Total System DFT:	3.6-6.3 mils DFT

*Other Systems are available. Contact your Wasser Representative to answer any questions.

Compatible Coatings

Primers:

MC-Zinc 100
MC-Miozinc 100
MC-Prepbond 100
MC-Universal 100
MC-CR 100 (for Concrete only)
MC-Metallization Sealer

Intermediates:

MC Universal 100
MC-Ferrox B 100
MC-Miomastic 100

Topcoats:

MC-Antigraffiti 100
MC-Clear 100

Coating Accelerator

PURQuik® Accelerator

Surface Preparation

Ferrous Metal

Apply to clean, dry, Wasser recommended primers. Refer to the primer Product Data for additional information.

Aluminum/Galvanized/Non-Ferrous Metals

Prepare surfaces using SSPC-SP1 Solvent Cleaning and SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods to remove surface contamination. Supplement weathered galvanized surface preparation with SSPC-SP2 and SP3 Hand and Power Tool cleaning to remove excessive corrosion and impart surface profile on bare metal. Supplement new galvanized surface cleaning with SSPC-SP16 to impart surface profile and support mechanical adhesion.

Previously Existing Coatings

Prepare surfaces using SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods to remove surface contamination. Supplement SSPC-SP 12 LPWC with SSPC-SP1 Solvent Cleaning and SSPC-SP2 and 3 Hand and Power Tool clean areas of corrosion and loose or flaking paint (feather edges of sound, existing paint back to a firm edge). Spot prime clean, bare metal with Wasser recommended primer. Sand glossy surfaces to provide profile. Apply a test sample to a small area to determine coating compatibility.

Concrete/CMU

The surface must be dry, free of surface contaminants, and in sound condition. Grease, and oil should be removed by ASTM D4258-83 (Re-approved 1999) and release agents should be removed by ASTM D4259 - 88 (Re-approved 1999). Refer to SSPC-SP13/NACE No 6 Mechanical or Chemical Surface Preparation methods for preparing concrete to suitable cleanliness for intended service. Surface preparation methods should impart a minimum of CSP1 profile for mechanical adhesion to occur. Ensure surface is thoroughly clean (all traces of laitance removed) and dry prior to coating application. For atmospheric service allow a minimum 7 days cure time for new concrete and 14 days for immersion service prior to preparation and application.

Good Practices

MC-Ferrox A 100 is designed for application to a variety of substrates and tightly adhering, previously existing coatings. Apply a test sample to a small area to determine coating adhesion and/or compatibility. Spot prime any areas cleaned to bare metal with a Wasser recommended primer.

The surface to be coated must be dry, clean, dull, and free from dirt, grease, oil, rust, mill scale, salts or any other surface contaminants that interfere with adhesion.

Ensure welds, repair areas, joints, and surface defects exposed by surface preparation are properly cleaned and treated prior to coating application.

When surfaces are cleaned to bare metal, areas of oxidation after surface preparation and prior to coating application, should be prepared to specified standard prior to applying the Wasser recommended primer.

Consult the referenced standards, SSPC-PA1 and your Wasser Representative for additional information or recommendations.

Application Information

MC-Ferrox A 100 can be applied by brush, roll, airless spray, mitt and conventional spray application. Follow proper mixing instructions before applying.

Mixing:

Material temperature must be 5°F above the dew point before opening and agitating. Power mix thoroughly prior to application. **Do not keep under constant agitation.** Apply a 3-6 oz solvent float over material to prevent moisture intrusion and cover pail.

Brush/Roller:

Brush: Natural Fiber
Roller: Natural or synthetic fiber cover
Nap: ¼" to ¾"
Core: Phenolic
Reduction: Typically not required. If necessary, reduce with MC-Thinner 100.

Airless Spray:

Pump Ratio: 28 - 40:1
Pressure: 2100-2800 psi
Hose: ¼" to ¾"
Tip Size: 0.013-0.019
Filter Size: 60 mesh (250 µm)
Reduction: Typically not required. If necessary, reduce with MC-Thinner or MC-Thinner 100.

Conventional Spray/HLVP:

Fluid Nozzle: E Fluid Tip
Air Cap: 704 or 765
Atomizing Air: 45 - 75 lbs.
Fluid Pressure: 15 - 20 lbs.
Hose: ½" ID; 50' Max
Reduction: Typically not required. If necessary, reduce with MC-Thinner or MC-Thinner 100.

Reducer:

MC-Thinner, MC-Thinner 100, (if VOC regulations restrict thinning, use MC-Thinner XMT).
Reduction is typically not required. If necessary, thin up to 15% with recommended thinner. Thin in accordance with local and federal regulatory standards.

Clean up:

MC-Thinner, MC-Thinner 100, or MC-Thinner XMT.
If Wasser thinners are not available, use MEK, MIBK, Xylene, a 50:50 blend of Xylene and MEK or MIBK, or acetone for clean up only. Do not add unauthorized solvents to a Wasser coating.

Application Conditions

Temperature: 20° - 100° F (-8° - 38° C). This temperature range should be achieved for ambient, surface and material temperature. Substrate must be visibly dry and frost free. On applications below 33° F (0.5° C), Steel temperatures should be 5°F above the dew point temperature. MC-Thinner 100 is recommended for spray application in temperatures above 90° F.

Relative Humidity: 6% - 99%.

Coating Accelerator: PURQuik® Accelerator. See Wasser's PURQuik® Accelerator Product Data for information.

Storage: Store off the ground in a dry, protected area in temperature between 40 - 100°F (4 - 38°C). MCU containers must be kept sealed when not in use. Use a solvent float to reseal partial containers.

Certifications and Qualifications

VOC Compliant (National Standard for Industrial Maintenance Coating, Ozone Transportation Commission and SCAQMD Rule 1113 IM Coating effective 1/1/04*)
Meets SSPC Paint 38

**MC-Ferrox A 100 tint based products may have higher VOC than 100g/l, please consult Wasser for specific VOC levels for these products.*

Performance Testing Data

**Contact Wasser Corporation for detailed testing of this product.*

Ordering Information

Product Numbers: W231.XX

Package Size: 1 gallon and 5 gallon pails

Shelf Life: 12 months from date of shipment when stored unopened at 75°F (24°C).

Shipping Information

Flash Point:	59°F (15°C)
Weight/gallon:	13.77 ± 1.0 lbs (1.65 ± .12 kg/l)
DOT HAZARD CLASS	3
DOT PACKAGING GROUP	II
DOT LABEL	FLAMMABLE LIQUID
DOT SHIPPING NAME	PAINT
DOT PLACARD	FLAMMABLE LIQUID
UN/NA NUMBER	1263

Safety Precautions

DANGER!

Intended for professional use only. Obtain and Read Wasser's Safety Data Sheet for this before using.

Adequate Ventilation. Do not breathe dust, vapors or spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling. Keep away from heat, sparks and flame. Vapor may cause flash fire.

KEEP OUT OF REACH OF CHILDREN

FIRST AID: If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists or occurs later, consult a physician and have label information available. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If swallowed, get medical attention immediately. If swallowed, do not induce vomiting. Get medical attention immediately. Wash clothing before reuse.

Thoroughly clean or destroy contaminated shoes.

Keep container closed when not in use. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

WARNING: This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.

Obtain and Read Wasser's Safety Data Sheet for this before using.

INTENDED FOR PROFESSIONAL USE ONLY.

Note: Ingredients and VOC may vary for products with catalysts, tint bases, and other colors.

Wasser Corporation's liability on any claim of any kind, including claims based upon Wasser Corporation's negligence or strict liability, for any loss or damage arising out of, connected with or resulting from the use of the Products, shall in no case exceed the purchase price allowable for the Products or part thereof that give rise to the claim. In no event shall Wasser Corporation be liable for consequential or incidental damages. Published Product Data Sheets are subject to change without notice.

Contact your Wasser Representative or the Wasser website for the most current Product Data Sheets.

APPENDIX C – SAMPLE DOCUMENTS



PAYMENT BOND TO THE CITY OF TACOMA

Resolution No.
Bond No.

That we, the undersigned,

as principal, and _____
as a surety, are jointly and severally held and firmly bound to the CITY OF TACOMA, in the penal sum of,
\$ _____, for the payment whereof Contractor and Surety bind themselves,
their executors, administrators, legal representatives, successors and assigns, jointly and severally, firmly by these presents.

This obligation is entered into in pursuance of the statutes of the State of Washington, the Ordinances of the City of Tacoma.

WHEREAS, under and pursuant to the City Charter and general ordinances of the City of Tacoma, the said City has or is about to enter with the above bounden principal, a contract, providing for

Specification No. _____

Specification Title: _____

Contract No. _____

(which contract is referenced to herein and is made a part hereof as though attached hereto), and

WHEREAS, the said principal has accepted, the said contract, and undertake to perform the work therein provided for in the manner and within the time set forth.

This statutory payment bond shall become null and void, if and when the Principal, its heirs, executors, administrators, successors, or assigns shall pay all persons in accordance with RCW 39.08, 39.12, and 60.28, including all workers, laborers, mechanics, subcontractors, and materialmen, and all person who shall supply such contractor or subcontractor with provisions and supplies for the carrying on of such work, and all taxes incurred on said Contract under Titles 50 and 51 RCW and all taxes imposed on the Principal under Title 82 RCW; and if such payment obligations have not been fulfilled, this bond shall remain in full force and effect.

The Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract shall in any way affect its obligation on this bond, and waives notice of any changes, extension of time, alteration or addition to the terms of the Contract or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this bond and notice to Surety is not required for such increased obligation.

No suit or action shall be commenced hereunder by any claimant unless claimant shall have given the written notices to the City, and where required, the Contractor, in accordance with RCW 39.08.030.

The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of claims which may be properly filed in accordance with RCW 39.08 whether or not suit is commenced under and against this bond.

If any claimant shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment and attorney fees as provided by RCW 39.08.030, shall also pay such costs and attorney fees as may be incurred by the City as a result of such suit. Venue for any action arising out of or in connection with this bond shall be in Pierce County, WA.

Surety companies executing bonds must be authorized to transact business in the State of Washington as surety and named in the current list of "Surety Companies Acceptable in Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Department of the Treasury.

Resolution No.
Bond No.
Specification No.
Contract No.

One original bond shall be executed, and be signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed power of attorney for the office executing on behalf of the surety.

Principal: Enter Vendor Legal Name

By: _____

Surety:

By: _____

Agent's Name: _____

Agent's Address: _____



PERFORMANCE BOND TO THE CITY OF TACOMA

Resolution No.
Bond No.

That we, the undersigned,

as principal, and

as a surety, are jointly and severally held and firmly bound to the CITY OF TACOMA, in the penal sum of

\$ _____, for the payment whereof Contractor and Surety bind themselves,

their executors, administrators, legal representatives, successors and assigns, jointly and severally, firmly by these presents.

This obligation is entered into in pursuance of the statutes of the State of Washington, the Ordinances of the City of Tacoma.

WHEREAS, under and pursuant to the City Charter and general ordinances of the City of Tacoma, the said City has or is about to enter with the above bounden principal, a contract, providing for

Specification No. _____

Specification Title: _____

Contract No. _____

(which contract is referenced to herein and is made a part hereof as though attached hereto), and

WHEREAS, the said principal has accepted, the said contract, and undertake to perform the work therein provided for in the manner and within the time set forth.

This statutory performance bond shall become null and void, if and when the principal, its heirs, executors, administrators, successors, or assigns shall well and faithfully perform all of the Principal's obligations under the Contract and fulfill all terms and conditions of all duly authorized modifications, additions and changes to said Contract that may hereafter be made, at the time and in the manner therein specified; and if such performance obligations have not been fulfilled, this bond shall remain in force and effect.

The Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract, or to the work to be performed under the Contract shall in any way affect its obligation on this bond, and waives notice of any change, extension of time, alteration or addition to the terms of the Contract or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this bond and notice to Surety is not required for such increase.

If the City shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgement, shall pay all costs and attorney's fees incurred by the City in enforcement of its rights hereunder. Venue for any action arising out of in connection with this bond shall be in Pierce County, Washington.

Surety companies executing bonds must be authorized to transact business in the State of Washington as surety and named in the current list of "Surety Companies Acceptable in Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Department of the Treasury.

One original bond shall be executed, and signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed power of attorney for the office executing on behalf of the surety.

Principal: Enter Vendor Legal Name

By: _____

Surety:

By: _____

Agent's Name: _____

Agent's Address: _____

CONTRACT

Resolution No.
Contract No.

This Contract is made and entered into effective this _____ day of ,20____, ("Effective Date") by and between the City of Tacoma, a Municipal Corporation of the State of Washington ("City"), and legal name of Supplier including type of business entity ("Contractor").

That in consideration of the mutual promises and obligations hereinafter set forth the Parties hereto agree as follows:

- I. Contractor shall fully execute and diligently and completely perform all work and provide all services and deliverables described herein and in the items listed below each of which are fully incorporated herein and which collectively are referred to as "Contract Documents":

-
1. Specification No. Enter Spec Number and Enter Spec Title together with all authorized addenda.
 2. Contractor's submittal (or specifically described portions thereof) dated Enter Submittal Date submitted in response to Specification No. Enter Spec Number and Enter Spec Title.
 3. Describe with specific detail and list separately any other documents that will make up the contract (fee schedule, work schedule, authorized personnel, etc.) or any other additional items mutually intended to be binding upon the parties.
-

Delete this highlighted sentence, paragraph II and sub-bullets #1 and #2 if there are no additional attachments to the contract (attachments would be things other than a specific, contract, or bonds).

- II. In the event of a conflict or inconsistency between the terms and conditions contained in this document entitled Contract and any terms and conditions contained the above referenced Contract Documents the following order of precedence applies with the first listed item being the most controlling and the last listed item the least controlling:
1. Contract
 2. List remaining Contract Documents in applicable controlling order.
- III. The Contract terminates on xxxxx. {May remove if not applicable}
- IV. The total price to be paid by City for Contracts full and complete performance hereunder may not exceed:
\$ _____, plus any applicable taxes.
- V. Contractor agrees to accept as full payment hereunder the amounts specified herein and in Contract Documents, and the City agrees to make payments at the times and in the manner and upon the terms and conditions specified. Except as may be otherwise provided herein or in Contract Documents Contractor shall provide and bear the expense of all equipment, work and labor of any sort whatsoever that may be required for the transfer of materials and for constructing and completing the work and providing the services and deliverables required by this Contract.
- VI. The City's preferred method of payment is by ePayables (Payment Plus), followed by credit card (aka procurement card), then Electronic Funds Transfer (EFT) by Automated Clearing House (ACH), then check or other cash equivalent. CONTRACTOR may be required to have the capability of accepting the City's ePayables or credit card methods of payment. The City of Tacoma will not accept price changes or pay additional fees when ePayables (Payment Plus) or credit card is used. The City, in its sole discretion, will determine the method of payment for this Contract.
- VII. Failure by City to identify a deficiency in the insurance documentation provided by Contractor or failure of City to demand verification of coverage or compliance by Contractor with these insurance requirements shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- VIII. Contractor acknowledges, and by signing this Contract agrees, that the Indemnification provisions set forth in the controlling Contract Documents, including the Industrial Insurance immunity waiver (if applicable), are totally and fully part of this Contract and, within the context of the competitive bidding laws, have been mutually negotiated by the Parties hereto.

- IX. Contractor and for its heirs, executors, administrators, successors, and assigns, does hereby agree to the full performance of all the requirements contained herein and in Contract Documents.
- X. It is further provided that no liability shall attach to City by reason of entering into this Contract, except as expressly provided herein.

IN WITNESS WHEREOF, the Parties hereto have accepted and executed, as of the Effective Date stated above, which shall be Effective Date for bonding purposes as applicable.

CITY OF TACOMA:

CONTRACTOR:

By:

By:

(City of Tacoma use only - blank lines are intentional)

Director of Finance: _____

City Attorney (approved as to form): _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

Approved By: _____

GENERAL RELEASE TO THE CITY OF TACOMA

The undersigned, named as the contractor for _____
Project / Spec. #
between _____ and the City of Tacoma,
(Themselves or Itself)
dated _____, 20____, hereby releases the City of Tacoma, its
departmental officers and agents from any and all claim or claims whatsoever in any manner
whatsoever at any time whatsoever arising out of and/or in connection with and/or relating
to said contract, excepting only the equity of the undersigned in the amount now retained by
the City of Tacoma under said contract, to-wit the sum of \$ _____.

Signed at Tacoma, Washington this _____ day of _____, 20 ____.

Contractor

By _____

Title _____