City of Tacoma
Environmental Services Department

SPECIFICATION NO.
ES21-0629F

SW & WW MANITOU DISTRICT
GREEN INFRASTRUCTURE
PROJECT

Surface Water – ENV-03031-20
Wastewater – ENV-04023-11
Public Works – PWK-00438-08
Water – WTR-00604-01-12

Funded in part by the Washington State
Department of Ecology
No. WQC-2019-TacoES-00096
CITY OF TACOMA
ENVIRONMENTAL SERVICES DEPARTMENT

REQUEST FOR BIDS, SPECIAL PROVISIONS, BID PROPOSAL AND CONTRACT

FOR

SPECIFICATION NO.
ES21-0629F

SW AND WW MANITOU DISTRICT GREEN INFRASTRUCTURE PROJECT

PROJECT NOs.
Surface Water – ENV-03031-20
Wastewater – ENV-04023-11
Public Works – PWK-00438-08
Water – WTR-00604-01-12

Kirk Myklestad, P.E.
Science & Engineering Division
Environmental Services Department
326 East D Street
Tacoma, Washington 98421-1801
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REQUEST FOR BIDS
City of Tacoma
Environmental Services Department
SW & WW Manitou District Green Infrastructure Project

Submittal Deadline: 11:00 a.m., Pacific Time, Tuesday, November 29th, 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, bids@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: Sealed submittals will be received as follows:

By Email: bids@cityoftacoma.org
Maximum file size: 35 MB. Multiple emails may be sent for each submittal

Bid Opening: Sealed submittals in response to a RFB will be opened Tuesday’s at 11AM by a purchasing representative and read aloud during a public bid opening held at the Tacoma Public Utilities Administrative Building North, 3628 S. 35th Street, Tacoma, WA 98409, conference room M-1, located on the main floor. They will also be held virtually Tuesday’s at 11AM. Attend via this link or call 1 (253) 215 8782. Submittals in response to an RFP, RFQ or RFI will be recorded as received. As soon as possible, after 1:00 PM, on the day of submittal deadline, preliminary results will be posted to www.TacomaPurchasing.org.

Solicitation Documents: An electronic copy of the complete solicitation documents may be viewed and obtained at the City’s plan distribution service provider, ARC, 632 Broadway, Tacoma, WA, or by going to http://www.e-arc.com/location/tacoma. Prospective bidders will be required to pay reproduction costs. A list of vendors registered for this solicitation is also available at their website.

Pre-Proposal Meeting: A pre-proposal meeting will be held virtually from 11:00 am - 12:00 pm on November 21st, 2022 to answer questions regarding the project in general as well as the Equity in Contracting (EIC) and Local Employment and Apprenticeship Training Program (LEAP) requirements included in the Contract. Prospective bidders are encouraged to attend this meeting. You can join the meeting by visiting: https://www.microsoft.com/en-us/microsoft-teams/join-a-meeting and entering: Meeting ID: 245 216 252 478 with Passcode: 49S3KP.

Project Scope: This Contract shall generally consist of the improvement of the following streets:

- S Ferdinand Street between S 64th Street and S 66th Street
- S Cheyenne Street between S 64th and S American Lake Blvd
- S Verde Street between S 64th Street and S Grove St
- S Grove Street between S Cheyenne Street and S Verde Street
- S Stevens Street between S 64th Street and S 66th Street
- S Mason Street between S 62nd Street and S 66th Street

The improvements shall include, but are not limited to, demolition and reconstruction of the existing roadways with hot mix asphalt, permeable asphalt, cement concrete curbs with and without gutters, cement concrete curb ramps, cement concrete driveways, asphalt driveways,

**Estimate:** $6,825,000 (not including sales tax)

**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](https://www.cityoftacoma.org/departments/businesses-and-employment/paid-sick-leave).

**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.

**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 Dawn DeJarlais, Senior Buyer by email to ddejarlais@cityoftacoma.org.

**Protest Policy:** City of Tacoma protest policy, located at [www.tacomapurchasing.org](http://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.
CITY OF TACOMA EQUITY IN CONTRACTING (EIC) AND LEAP PROGRAMS

Bidders Special Instructions

As part of the City of Tacoma's ongoing work to address past disparities and to increase the City’s contracting with and utilization of historically underutilized businesses, the Equity in Contracting (EIC) Program places requirements on City contracts for utilization of businesses certified by the Washington State Office of Minority and Women’s Business Enterprise (OMWBE) and approved by the Equity in Contracting Program (“Certified Businesses”). The EIC Program also provides guidance and technical assistance to Certified Businesses who are interested in providing supplies, services and public works to the City of Tacoma.

The EIC Program requirements are contained in Tacoma Municipal Code Chapter 1.07.

Contractors bidding on City of Tacoma projects are required to meet the stated EIC requirements. Bids will be evaluated on an individual basis to determine EIC compliance. A contractor who fails to meet the stated EIC requirements will be considered non-responsible. Bidders are also subject to the City’s Equal Employment Opportunity policies prohibiting discrimination.

The stated EIC requirements may be met by the contractor or by identified subcontractors. All EIC Requirements may be met by using MBES, WBES, DBEs or SBES from the OMWBE certified list (OMWBE website). It is the bidder’s responsibility to ensure that their firm or identified subcontractors are certified by OMWBE and approved by the City of Tacoma EIC Program at the time of bid submittal. Business certification may be verified by contacting the EIC Office.*

For the OMWBE list, be sure to look for businesses in Pierce, King, Lewis, Mason, Grays Harbor, Thurston, or any counties adjacent to the county in which the work is performed per 1.07.050(2)(b-c). Contact the EIC Office* if you have any questions.

The Equity in Contracting (EIC) forms included in these bid documents must be fully completed (including attachments) and included with bid submittals. Failure to include the required forms will result in the submittal being rejected as nonresponsive.

Post-Award Important Information
For all contracts that have requirements related to the EIC and LEAP policies, the City of Tacoma is utilizing two cloud-based software systems:

- **B2Gnow** - Contractors and subcontractors must report payment information in the B2Gnow System on a monthly basis. The EIC Staff will monitor/audit that retainage is paid by the prime contractor to the subcontractor(s) within 10 [working] days after the subcontractors’ work is satisfactorily completed. This will be monitored/audited using the B2Gnow System.

- **LCP Tracker** - This system must be used for submitting certified payroll(s) for both EIC and LEAP compliance.
Both systems are monitored/audited by EIC and LEAP staff to ensure contract compliance, proactively identify potential issues and track contract progress.

*EIC & LEAP STAFF Contact Information*

- For questions regarding Certifications, EIC Compliance and B2GNow support, contact EIC Staff:
  Malika Godo at (253) 591-5630, or via email at mgodo@cityoftacoma.org
  Gary Lizama at (253) 591-5826, or via email at glizama@cityoftacoma.org

- For questions in regards to LEAP compliance and LCP Tracker support, contact LEAP Staff:
  Deborah Trevorrow at (253) 591-5590, or via email at dtorrow@cityoftacoma.org
SPECIAL REMINDER TO ALL BIDDERS

HEALTH & SAFETY: Be sure to comply with all City of Tacoma health and safety requirements.

PLEASE NOTE: Be sure you have complied with all specifications and requirements and have signed all required documents.

YOUR ATTENTION IS PARTICULARLY CALLED to the following forms, which must be executed in full and submitted with your bid response:

1. **BID PROPOSAL**: The unit prices bid must be shown in the space provided. Check your computations for omissions and errors.

2. **SIGNATURE PAGE**: To be filled in and executed by a duly authorized officer or representative of the bidding entity. If the bidder is a subsidiary or doing business on behalf of another entity, so state, and provide the firm name under which business is hereby transacted.

3. **BID BOND**: The Bid Bond must be executed by the person legally authorized to sign the bid, and must be properly signed by the representatives of the surety company unless the bid is accompanied by a certified check. If Bid Bond is furnished, the form furnished by the City must be followed; no variations from the language thereof will be accepted. The amount of the Bid Bond must be not less than 5% of the total amount bid.

4. **CERTIFICATION OF COMPLIANCE WITH WAGE PAYMENT STATUTES**: Bidder shall complete this form in its entirety to ensure compliance with state legislation (SHB 2017).

5. **STATE RESPONSIBILITY AND RECIPROCAL BID PREFERENCE INFORMATION**: Bidder shall complete this form in its entirety to ensure compliance with state legislation (SHB 2010).

6. **LIST OF SUBCONTRACTOR CATEGORIES OF WORK**: Bidder shall list all subcontractor(s) proposed to perform 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. Bidder shall also list all subcontractor(s) proposed to perform the work of structural steel installation and/or rebar installation.

   **FAILURE TO LIST SUBCONTRACTORS WILL RESULT IN THE BID BEING NON-RESPONSIVE AND THEREFORE VOID.**

7. **EQUITY IN CONTRACTING (EIC) UTILIZATION FORM**
   Bidders shall complete the Equity in Contracting Utilization Form in accordance with the City of Tacoma Equity in Contracting Regulations Manual and Chapter 1.07 of the City of Tacoma Municipal Code (TMC). This form shall be fully and accurately completed and returned with submission of the Bid and will be used to determine if the Bidder is in compliance with the EIC regulations and the TMC.
As part of the City of Tacoma’s ongoing work to address past disparities and to increase the City’s contracting with and utilization of historically underutilized businesses, the Equity in Contracting (EIC) Program places requirements on City contracts for utilization of businesses certified by the Washington State Office of Minority and Women’s Business Enterprise and approved by the Equity in Contracting Program (“Certified Businesses”). The EIC Program also provides guidance and technical assistance to Certified Businesses who are interested in providing supplies, services and public works to the City of Tacoma. The EIC Program requirements are contained in Tacoma Municipal Code Chapter 1.07.

See City of Tacoma – Equity In Contracting Program section for additional information.

POST AWARD FORMS EXECUTED UPON AWARD:

A. CONTRACT: Must be executed by the successful bidder.

B. PAYMENT BOND TO THE CITY OF TACOMA: Must be executed by the successful bidder and his/her surety company.

C. PERFORMANCE BOND TO THE CITY OF TACOMA: Must be executed by the successful bidder and his/her surety company.

D. CERTIFICATE OF INSURANCE: Shall be submitted with all required endorsements.

E. LEAP UTILIZATION PLAN: Shall be submitted at the Pre-Construction Meeting.

F. GENERAL RELEASE.

CODE OF ETHICS: The successful bidder agrees that its violation of the City’s Code of Ethics contained in TMC Chapter 1.46 shall constitute a breach of the contract subjecting the contract to termination.

LOCAL EMPLOYMENT AND APPRENTICESHIP TRAINING PROGRAM (LEAP):

The Local Employment and Apprenticeship Training Program (LEAP) has been adopted to counteract economic and social ills, which accompany high rates of unemployment within the City of Tacoma. The Tacoma City Council established the mandatory LEAP program for public works contracts pursuant to Ordinance No. 28520. The primary goal is to provide an opportunity for City of Tacoma residents and Tacoma Public Utilities ratepayers to enter apprenticeship programs, acquire skills, and perform work that will provide living wages.

LEAP Goals:

1. Local Employment Utilization Goal – Prime contractor is required to ensure that 15 percent of the labor hours worked on the project are performed by residents of the City of Tacoma or local economically distressed areas, whether or not such person is an Apprentice.

2. Apprentice Utilization Goal - Prime contractor is required to ensure that 15 percent of the labor hours worked on the project are performed by Apprentices who reside in the Tacoma Public Utilities service area.
NOTE: If both goals are assigned to this project, the two goals can be satisfied concurrently if the prime contractor utilizes individuals who simultaneously meet the requirements of both goals, such as an apprentice who resides in the City of Tacoma or in a local economically distressed area.

See City of Tacoma – Local Employment and Apprenticeship Training Program section for additional information.
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;
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.

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 bids@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.
It is anticipated that this project will be funded in part by the Washington State Department of Ecology. Neither the State of Washington nor any of its departments or employees are, or shall be, a party to this Contract or any subcontract resulting from this solicitation for bids.

Bidders shall be aware that the Department of Ecology Specifications insert provided in Appendix E is made part of this Contract. The Department of Ecology encourages all bidders to utilize certified minority-owned and women-owned businesses to the extent possible in the performance of this Contract. Bidders shall refer to the Department of Ecology Specifications Insert and note that all bidders must provide a list of MBE/WBE subcontractors they intend to use during the project. The list must be provided with the bid package.
PART I

BID PROPOSAL AND CONTRACT FORMS
The undersigned hereby certifies that he/she has examined the location and construction details of work as outlined on the Plans and Specifications for Project No. ENV-03031-20, ENV-04023-11, PWK-00438-08, WTR-00604-01-12 and has read and thoroughly understands the Plans and Specifications and contract governing the work embraced in this improvement and the method by which payment will be made for said work, and hereby proposes to undertake and complete the work embraced in this improvement in accordance with said Plans, Specifications and contract and at the following schedule of rates and prices:

### NOTE:

1. Unit prices of all items, all extensions and total amount of bid should be shown. Show unit prices in figures only.

2. The notations below the item numbers refer to the specification section where information may be found regarding each contract item. These notations are intended only as a guide and are not warranted to refer to all specification sections where information may be found.

3. Washington State Department of Revenue Rules 170 and 171 shall apply as shown in the Proposal and per Section 1-07.2 of the WSDOT State Amendments to the Standard Specifications. **Items marked with a * signifies both rules may apply.**

### SCHEDULE A: ROADWAY IMPROVEMENTS (Rule 171)

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ITEM DESCRIPTION</th>
<th>ESTIMATED QUANTITY</th>
<th>UNIT PRICE</th>
<th>TOTAL AMOUNT</th>
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<tr>
<td>R1.*</td>
<td>Project Red Line Drawings</td>
<td>1</td>
<td>Lump Sum</td>
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<td>R2.*</td>
<td>SPCC Plan</td>
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<td></td>
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<td>R3.*</td>
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<td>1-09.7</td>
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<td>R4.*</td>
<td>Project Temporary Traffic Control</td>
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<td>Lump Sum</td>
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<td>R5.*</td>
<td>Clearing and Grubbing</td>
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<td></td>
<td>Lump Sum</td>
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<td>R6. 2-01</td>
<td>Special Tree Protection</td>
<td>4</td>
<td>Each</td>
<td></td>
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<tr>
<td>R7.* 2-02</td>
<td>Removal of Structures and Obstructions</td>
<td>1</td>
<td>Lump Sum</td>
<td></td>
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<td>R8. 2-02</td>
<td>Pothole Existing Utility</td>
<td>2</td>
<td>Each</td>
<td></td>
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<tr>
<td>R11. 2-12</td>
<td>Construction Geotextile for Separation</td>
<td>7,225</td>
<td>Sq. Yd.</td>
<td></td>
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<tr>
<td>R12. 2-13</td>
<td>Remove Tree, Class I</td>
<td>2</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>R13.* 2-13</td>
<td>Remove Tree, Class II</td>
<td>2</td>
<td>Each</td>
<td></td>
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<tr>
<td>R14.* 2-14</td>
<td>Remove Existing Pavement, Type I, Class A4</td>
<td>15,120</td>
<td>Sq. Yd.</td>
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<td>R15. 2-14</td>
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<td>R17. 2-15</td>
<td>Remove Curb and Gutter</td>
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<td>Lin. Ft.</td>
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<td>R18.* 4-04</td>
<td>Crushed Surfacing Base Course</td>
<td>1,825</td>
<td>Ton</td>
<td></td>
</tr>
<tr>
<td>R19.* 4-04</td>
<td>Crushed Surfacing Top Course</td>
<td>70</td>
<td>Ton</td>
<td></td>
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<tr>
<td>R20. 4-04</td>
<td>Permeable Ballast</td>
<td>1,875</td>
<td>Ton</td>
<td></td>
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<tr>
<td>R21. 4-05</td>
<td>Filter Sand</td>
<td>2,000</td>
<td>Ton</td>
<td></td>
</tr>
</tbody>
</table>

Contractor’s Name: ________________________________
Specification No. ES21-0629F
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<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ITEM DESCRIPTION</th>
<th>ESTIMATED QUANTITY</th>
<th>UNIT PRICE</th>
<th>TOTAL AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>R22. 4-06</td>
<td>Asphalt Treated Permeable Base, PG 58V-22</td>
<td>1,350 Ton</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R23. 5-04</td>
<td>PHMA Cl. ½&quot; PG 58V-22</td>
<td>900 Ton</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R24. 5-04</td>
<td>Fiber Reinforced HMA Cl. 1/2&quot; PG 58H-22 for Pavement Patch</td>
<td>165 Ton</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>R25. 5-04</td>
<td>Fiber Reinforced HMA Cl. 1/2&quot; PG 58H-22</td>
<td>890 Ton</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R26. 5-04</td>
<td>HMA for Approach Cl. 1/2&quot; PG 58H-22</td>
<td>25 Sq. Yd.</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R27. 5-04</td>
<td>Cold Plant Mix for Temporary Pavement Patch</td>
<td>300 Ton</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R28. 7-05</td>
<td>Adjust Existing Utility to Grade</td>
<td>9 Each</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R29. 8-01</td>
<td>Erosion/Water Pollution Control Force Account</td>
<td>Estimated</td>
<td>$20,000.00</td>
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<tr>
<td>R30. 8-02</td>
<td>Topsoil Type A</td>
<td>740 Cu. Yd.</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R31. 8-02</td>
<td>Landscape Restoration Lump Sum</td>
<td>1 Lump Sum</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>R32. 8-02</td>
<td>PSIPE, Cockspur Hawthorn</td>
<td>19 Each</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>R33. 8-02</td>
<td>PSIPE, Wireless Zelkova</td>
<td>14 Each</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>R34. 8-02</td>
<td>PSIPE, Hinoki Cypress</td>
<td>18 Each</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>R35. 8-02</td>
<td>PSIPE, Black Tupelo</td>
<td>20 Each</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>R36. 8-02</td>
<td>PSIPE, Zelkova</td>
<td>5 Each</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>R37. 8-02</td>
<td>PSIPE, Vanderwolf’s Pyramid Pine</td>
<td>5 Each</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
<td>ESTIMATED QUANTITY</td>
<td>UNIT PRICE</td>
<td>TOTAL AMOUNT</td>
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<tr>
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</tr>
<tr>
<td>R38. 8-02</td>
<td>PSIPE, American Elm</td>
<td>22 Each</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>R39. 8-02</td>
<td>PSIPE, Ponderosa Pine</td>
<td>8 Each</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>R40. 8-02</td>
<td>PSIPE, Italian Oak</td>
<td>13 Each</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>R41. 8-02</td>
<td>Bark or Wood Chip Mulch</td>
<td>38 Cu. Yd.</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R42. 8-02</td>
<td>Root Barrier – 18 in.</td>
<td>2,480 Lin. Ft.</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R43. 8-02</td>
<td>Tree Watering Bag</td>
<td>124 Each</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R44.* 8-04</td>
<td>Cement Conc. Traffic Curb and Gutter</td>
<td>715 Lin. Ft.</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R45. 8-04</td>
<td>Cement Conc. Traffic Curb</td>
<td>4,715 Lin. Ft.</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R46. 8-04</td>
<td>Mountable Cement Conc. Traffic Curb</td>
<td>185 Lin. Ft.</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R47. 8-06</td>
<td>Cement Conc. Driveway Entrance Type I</td>
<td>625 Sq. Yd.</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R48.* 8-13</td>
<td>Poured Monument</td>
<td>7 Each</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R49. 8-14</td>
<td>Cement Conc. Sidewalk</td>
<td>200 Sq. Yd.</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R50. 8-14</td>
<td>Cement Conc. Curb Ramp Type Single Direction</td>
<td>24 Each</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>R51. 8-14</td>
<td>Cement Conc. Curb Ramp Type Parallel A</td>
<td>3 Each</td>
<td>$_________</td>
<td>$_________</td>
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<tr>
<td>R52. 8-14</td>
<td>Cement Conc. Curb Ramp Type Perpendicular A</td>
<td>3 Each</td>
<td>$_________</td>
<td>$_________</td>
</tr>
<tr>
<td>R53. 8-14</td>
<td>Bus Stop Boarding Pad</td>
<td>12 Sq. Yd.</td>
<td>$_________</td>
<td>$_________</td>
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## SCHEDULE A: PERMANENT SIGNING AND PAINT LINE

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<tr>
<th>ITEM NO.</th>
<th>ITEM DESCRIPTION</th>
<th>ESTIMATED QUANTITY</th>
<th>UNIT PRICE</th>
<th>TOTAL AMOUNT</th>
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<tbody>
<tr>
<td>R54. 8-21</td>
<td>Permanent Signing</td>
<td>1  Lump Sum</td>
<td>Lump Sum</td>
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</tr>
<tr>
<td>R55. 8-22</td>
<td>Paint Line</td>
<td>50  Lin. Ft.</td>
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<tr>
<td>R56. 8-30</td>
<td>Hand Railing</td>
<td>80  Lin. Ft.</td>
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## SCHEDULE B: STORM SEWER IMPROVEMENTS (Rule 171)

<table>
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<th>ESTIMATED QUANTITY</th>
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<th>TOTAL AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>S57. 2-09</td>
<td>Structure Excavation Class B</td>
<td>4,185  Cu. Yd.</td>
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<tr>
<td>S58. 2-09</td>
<td>Shoring or Extra Excavation Class B</td>
<td>32,275  Sq. Ft.</td>
<td></td>
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</tr>
<tr>
<td>S59. 2-16</td>
<td>Remove Catch Basin</td>
<td>25  Each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S60. 7-05</td>
<td>Abandon Manhole</td>
<td>1  Each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S61. 7-05</td>
<td>Catch Basin Type 1</td>
<td>26  Each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S62. 7-05</td>
<td>Combination Inlet</td>
<td>18  Each</td>
<td></td>
<td></td>
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<tr>
<td>S63. 7-05</td>
<td>Catch Basin Type 2 48-In. Diam.</td>
<td>1  Each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S64. 7-05</td>
<td>Manhole 48-In. Diam. Type 1</td>
<td>18  Each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S65. 7-05</td>
<td>Manhole 54-In. Diam. Type 1</td>
<td>1  Each</td>
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<td></td>
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<tr>
<td>S66. 7-05</td>
<td>Manhole Additional Height 48-In. Diam. Type 1</td>
<td>3  Lin. Ft.</td>
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<tr>
<td>S67. 7-05</td>
<td>Connect New Sewer Pipe 12-In. Diam. to Existing Structure</td>
<td>4  Each</td>
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<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
<td>ESTIMATED QUANTITY</td>
<td>UNIT PRICE</td>
<td>TOTAL AMOUNT</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------------------------</td>
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</tr>
<tr>
<td>S68. 7-05</td>
<td>Reconnect Existing Sewer Pipe 8-In. Diam. to New Structure</td>
<td>10 Each</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>S69. 7-05</td>
<td>Adjust Existing Manhole, Furnish New Frame and Cover</td>
<td>4 Each</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>S70. 7-05</td>
<td>Adjust Existing Catch Basin, Furnish New Frame and Grate</td>
<td>1 Each</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>S71. 7-08</td>
<td>Temporary Storm Sewer Bypass Plan</td>
<td>1 Lump Sum</td>
<td>Lump Sum</td>
<td>$__________</td>
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<tr>
<td>S72. 7-08</td>
<td>Temporary Storm Sewer Bypass</td>
<td>1 Lump Sum</td>
<td>Lump Sum</td>
<td>$__________</td>
</tr>
<tr>
<td>S73. 7-19</td>
<td>Plugging Existing Pipe</td>
<td>4 Each</td>
<td>$__________</td>
<td>$__________</td>
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<tr>
<td>S74. 7-08</td>
<td>CDF for Pipe Abandonment</td>
<td>2 Cu. Yd.</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>S75. 7-17</td>
<td>Removal and Replacement of Unsuitable Material</td>
<td>3,090 Cu. Yd.</td>
<td>$__________</td>
<td>$__________</td>
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<tr>
<td>S76. 7-17</td>
<td>PVC Storm Sewer Pipe 12-In. Diam.</td>
<td>4,165 Lin. Ft.</td>
<td>$__________</td>
<td>$__________</td>
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<tr>
<td>S77. 7-17</td>
<td>Ductile Iron Storm Sewer Pipe 12-In. Diam.</td>
<td>90 Lin. Ft.</td>
<td>$__________</td>
<td>$__________</td>
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<tr>
<td>S78. 7-17</td>
<td>Testing Sewer Pipe</td>
<td>4,255 Lin. Ft.</td>
<td>$__________</td>
<td>$__________</td>
</tr>
<tr>
<td>S79. 8-01</td>
<td>Inlet Protection</td>
<td>69 Each</td>
<td>$__________</td>
<td>$__________</td>
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<tr>
<td>S80.* 8-01</td>
<td>Stormwater Pollution Prevention Plan (SWPPP)</td>
<td>1 Lump Sum</td>
<td>Lump Sum</td>
<td>$__________</td>
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<tr>
<td>S81.* 8-01</td>
<td>NPDES Construction Stormwater General Permit</td>
<td>1 Lump Sum</td>
<td>Lump Sum</td>
<td>$__________</td>
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</table>

Contractor's Name:__________________________________________
Specification No. ES21-0629F
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## SCHEDULE C: WASTEWATER SEWER IMPROVEMENTS (Rule 170)

<table>
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<tr>
<th>ITEM NO.</th>
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<th>ESTIMATED QUANTITY</th>
<th>UNIT PRICE</th>
<th>TOTAL AMOUNT</th>
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<tbody>
<tr>
<td>WW82. 2-09</td>
<td>Structure Excavation Class B</td>
<td>8,500 Cu. Yd.</td>
<td>$ _________</td>
<td>$ _________</td>
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<tr>
<td>WW83. 2-09</td>
<td>Shoring or Extra Excavation Class B</td>
<td>78,000 Sq. Ft.</td>
<td>$ _________</td>
<td>$ _________</td>
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<tr>
<td>WW84. 2-16</td>
<td>Remove Manhole</td>
<td>18 Each</td>
<td>$ _________</td>
<td>$ _________</td>
</tr>
<tr>
<td>WW85. 7-05</td>
<td>Manhole 48-In. Diam. Type 1</td>
<td>19 Each</td>
<td>$ _________</td>
<td>$ _________</td>
</tr>
<tr>
<td>WW86. 7-05</td>
<td>Manhole Additional Height 48-In. Diam. Type 1</td>
<td>60 Lin. Ft.</td>
<td>$ _________</td>
<td>$ _________</td>
</tr>
<tr>
<td>WW87. 7-05</td>
<td>Reconnect Existing Sewer Pipe 8- In. Diam. to New Structure</td>
<td>8 Each</td>
<td>$ _________</td>
<td>$ _________</td>
</tr>
<tr>
<td>WW88. 7-05</td>
<td>Reconnect Existing Sewer Pipe 12- In. Diam. to New Structure</td>
<td>2 Each</td>
<td>$ _________</td>
<td>$ _________</td>
</tr>
<tr>
<td>WW89. 7-08</td>
<td>Temporary Sanitary Sewer Bypass Plan</td>
<td>1 Lump Sum</td>
<td>$ _________</td>
<td>$ _________</td>
</tr>
<tr>
<td>WW90. 7-08</td>
<td>Temporary Sanitary Sewer Bypass</td>
<td>1 Lump Sum</td>
<td>$ _________</td>
<td>$ _________</td>
</tr>
<tr>
<td>WW91. 7-08</td>
<td>Plugging Existing Pipe</td>
<td>1 Each</td>
<td>$ _________</td>
<td>$ _________</td>
</tr>
<tr>
<td>WW92. 7-08</td>
<td>CDF for Pipe Abandonment</td>
<td>5 Cu. Yd.</td>
<td>$ _________</td>
<td>$ _________</td>
</tr>
<tr>
<td>WW93. 7-17</td>
<td>Removal and Replacement of Unsuitable Material</td>
<td>7,300 Cu. Yd.</td>
<td>$ _________</td>
<td>$ _________</td>
</tr>
<tr>
<td>WW94. 7-17</td>
<td>PVC Sanitary Sewer Pipe 6-In. Diam.</td>
<td>1,780 Lin. Ft.</td>
<td>$ _________</td>
<td>$ _________</td>
</tr>
<tr>
<td>WW95. 7-17</td>
<td>Ductile Iron Sewer Pipe 6-In. Diam.</td>
<td>760 Lin. Ft.</td>
<td>$ _________</td>
<td>$ _________</td>
</tr>
<tr>
<td>WW96. 7-17</td>
<td>PVC Sanitary Sewer Pipe 8-In. Diam.</td>
<td>4,025 Lin. Ft.</td>
<td>$ _________</td>
<td>$ _________</td>
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ITEM NO. | ITEM DESCRIPTION |
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>WW97. 7-17</td>
<td>Testing Sewer Pipe</td>
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<tr>
<td>WW98. 7-19</td>
<td>Sewer Cleanout</td>
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SCHEDULE D: WATER MAIN IMPROVEMENTS (Rule 170)

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<tr>
<th>ITEM NO.</th>
<th>ITEM DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>W99.</td>
<td>Removal/Disposal of existing asphalt, concrete sidewalk/curbing &amp; concrete pavement. Includes all thicknesses and combinations (2-02.3(3))</td>
</tr>
<tr>
<td>W100.</td>
<td>Temporary HMA Class ½” PG58-22, 2-inch minimum depth, installed &amp; removed (5-04 &amp; 9-03.8)</td>
</tr>
<tr>
<td>W101.</td>
<td>HMA Cl ½” PG58-22 pavement for permanent trench patch (5-04 &amp; 9-03.8)-6” in Depth</td>
</tr>
<tr>
<td>W102.</td>
<td>Crushed Surfacing Top Course for trench backfill (7-09.5 &amp; 9-03.9(3))</td>
</tr>
<tr>
<td>W103.</td>
<td>Sand for Pipe Zone Bedding of Polyethylene encased pipe (7-09.1(1)C)</td>
</tr>
<tr>
<td>W104.</td>
<td>8 mil. V-Bio Enhanced Polyethylene Encasement Installed on various sizes of ductile iron pipe and fittings (7-09.3(17))</td>
</tr>
<tr>
<td>W105.</td>
<td>Storm, Sanitary, Side Sewer Restoration (7-04,7-09.5, 7-17, &amp; 7-18)</td>
</tr>
<tr>
<td>W106.</td>
<td>Trench Excavation &amp; Disposal (7-09.3(7) &amp; 7-09.5)</td>
</tr>
<tr>
<td>W107.</td>
<td>Trench Shoring (7-09.3(7) &amp; 7-09.5)</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
</tr>
<tr>
<td>----------</td>
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</tr>
<tr>
<td>W108.</td>
<td>12-inch Ductile Iron Pipe, Push-On Joint, ANSI/AWWA, C151, Special Class Thickness No. 52, to furnish, lay and test (7-09.3(15)A, 7-09.5 &amp; 9-30.1(1))</td>
</tr>
<tr>
<td>W109.</td>
<td>8-inch Ductile Iron Pipe, Push-On Joint, ANSI/AWWA, C151, Special Class Thickness No. 52, to furnish, lay and test (7-09.3(15)A, 7-09.5 &amp; 9-30.1(1))</td>
</tr>
<tr>
<td>W110.</td>
<td>6-inch Ductile Iron Pipe, Push-On Joint, ANSI/AWWA, C151, Special Class Thickness No. 52, to furnish, lay and test (7-09.3(15)A, 7-09.5 &amp; 9-30.1(1))</td>
</tr>
<tr>
<td>W111.</td>
<td>6-inch Ductile Iron Tee, 3-B, M.J., installed (9-30.2(1))</td>
</tr>
<tr>
<td>W112.</td>
<td>12-inch x 6-inch Ductile Iron Tee, M.J., installed (9-30.2(1))</td>
</tr>
<tr>
<td>W113.</td>
<td>8-inch x 6-inch Ductile Iron Tee, 3-B, M.J., installed (9-30.2(1))</td>
</tr>
<tr>
<td>W114.</td>
<td>12-inch x 6-inch Ductile Iron Cross, 4-B, M.J., installed (9-30.2(1))</td>
</tr>
<tr>
<td>W115.</td>
<td>6-inch Ductile Iron Cross, 4-B, M.J., installed (9-30.2(1))</td>
</tr>
<tr>
<td>W116.</td>
<td>12-inch Ductile Iron Ell, M.J., 22 1/2°, installed. (7-09, &amp; 9-30.2(1))</td>
</tr>
<tr>
<td>W117.</td>
<td>8-inch Ductile Iron Ell, M.J., 22 1/2°, installed. (7-09, &amp; 9-30.2(1))</td>
</tr>
<tr>
<td>W118.</td>
<td>6-inch Ductile Iron Ell, M.J., 45°, installed. (7-09, &amp; 9-30.2(1))</td>
</tr>
<tr>
<td>W119.</td>
<td>6-inch Ductile Iron Ell, M.J., 22 1/2°, installed. (7-09, &amp; 9-30.2(1))</td>
</tr>
<tr>
<td>W120.</td>
<td>6-inch Ductile Iron Ell, M.J., 11 1/4°, installed. (7-09, &amp; 9-30.2(1))</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
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<td>---------</td>
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<tr>
<td>W121.</td>
<td>12-inch Transition Coupling with 7-inch center ring, epoxy coating, and stainless steel bolts, A.C. to D.I., installed (7-09.3(19)A, 7-09.5 &amp; 9-30.2(7))</td>
</tr>
<tr>
<td>W122.</td>
<td>8-inch Transition Coupling with 7-inch center ring, epoxy coating, and stainless steel bolts, A.C. to D.I., installed (7-09.3(19)A, 7-09.5 &amp; 9-30.2(7))</td>
</tr>
<tr>
<td>W123.</td>
<td>6-inch Transition Coupling with 7-inch center ring, epoxy coating, and stainless steel bolts, A.C. to D.I., installed (7-09.3(19)A, 7-09.5 &amp; 9-30.2(7))</td>
</tr>
<tr>
<td>W124.</td>
<td>12-inch Ductile Iron Cap, M.J., tapped 2&quot;, installed and removed (9-30.2(1) &amp; 7-09.5)</td>
</tr>
<tr>
<td>W125.</td>
<td>8-inch Ductile Iron Cap, M.J., tapped 2&quot;, installed and removed (9-30.2(1) &amp; 7-09.5)</td>
</tr>
<tr>
<td>W126.</td>
<td>6-inch Ductile Iron Cap, M.J., tapped 2&quot;, installed and removed (9-30.2(1) &amp; 7-09.5)</td>
</tr>
<tr>
<td>W127.</td>
<td>6-inch Ductile Iron Cap, M.J., tapped 2&quot;, installed (9-30.2(1) &amp; 7-09.5)</td>
</tr>
<tr>
<td>W128.</td>
<td>6-inch Ductile Iron Plug, M.J., installed (7-09.5 &amp; 9-30.2(1))</td>
</tr>
<tr>
<td>W129.</td>
<td>2-inch Blow-Off Assembly, installed (Dwg. 17-56-1) (7-09.3(22) &amp; 7-09.5)</td>
</tr>
<tr>
<td>W130.</td>
<td>Temporary 2-inch Blow-Off Assembly, installed and removed (Dwg. 17-56-1) (7-09.3(22) &amp; 7-09.5)</td>
</tr>
<tr>
<td>W131.</td>
<td>12-inch Mechanical Joint Restraining Glands (7-14, 7-09.5 &amp; 9-30.2(6))</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
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</tr>
<tr>
<td>W132.</td>
<td>8-inch Mechanical Joint Restraining Glands (7-14, 7-09.5 &amp; 9-30.2(6))</td>
</tr>
<tr>
<td>W133.</td>
<td>6-inch Mechanical Joint Restraining Glands (7-14, 7-09.5 &amp; 9-30.2(6))</td>
</tr>
<tr>
<td>W134.</td>
<td>6-inch Push on Joint Restraining Gasket, installed</td>
</tr>
<tr>
<td>W135.</td>
<td>Concrete Thrust Anchor, installed. (7-09.3(21) &amp; 7-09.5)</td>
</tr>
<tr>
<td>W136.</td>
<td>Temporary Concrete Thrust Anchor, installed and removed (7-09.3(21) &amp; 7-09.5)</td>
</tr>
<tr>
<td>W137.</td>
<td>Trench Compaction Test (as directed by the Inspector) (7-09.3(11) &amp; 7-09.5)</td>
</tr>
<tr>
<td>W138.</td>
<td>Test Holes (See Special Provisions). (7-09.3(6) &amp; 7-09.5)</td>
</tr>
<tr>
<td>W139.</td>
<td>12-inch Butterfly valve, M.J., ANSI/AWWA, C504, with C.I. valve box (7-12 &amp; 9-30.3)</td>
</tr>
<tr>
<td>W140.</td>
<td>6-inch Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box (7-12 &amp; 9.30.3)</td>
</tr>
<tr>
<td>W141.</td>
<td>6-inch Hydrant, M.J., 4.0-ft bury, with 4-inch Tacoma Standard Threads &amp; 4-inch Quick Coupling (7-14 &amp; 9-30.5(2))</td>
</tr>
<tr>
<td>W142.</td>
<td>6-inch Hydrant, M.J., 4.5-ft bury, with 4-inch Tacoma Standard Threads &amp; 4-inch Quick Coupling (7-14 &amp; 9-30.5(2))</td>
</tr>
<tr>
<td>W143.</td>
<td>6-inch Hydrant, M.J., 5.0-ft bury, with 4-inch Tacoma Standard Threads &amp; 4-inch Quick Coupling (7-14 &amp; 9-30.5(2))</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>W144.</td>
<td>6-inch Hydrant, M.J., 5.5-ft bury, with 4-inch Tacoma Standard Threads &amp; 4-inch Quick Coupling (7-14 &amp; 9-30.5(2))</td>
</tr>
<tr>
<td>W145.</td>
<td>6-inch Hydrant, M.J., 6.5-ft bury, with 4-inch Tacoma Standard Threads &amp; 4-inch Quick Coupling (7-14 &amp; 9-30.5(2))</td>
</tr>
<tr>
<td>W146.</td>
<td>Street cleaning with Self-propelled Pickup and Vacuum Street Sweeper Equipment. (8-01.3(8))</td>
</tr>
<tr>
<td>W147.</td>
<td>Force Account (1-09.6)</td>
</tr>
</tbody>
</table>
SCHEDULE A: ROADWAY IMPROVEMENTS (R) (Rule 171)

Base Bid (Subtotal Items Nos. R1 – R56) $ ___________ (1)

ROADWAY IMPROVEMENTS TOTAL $ ___________ (2)

SCHEDULE B: STORM SEWER IMPROVEMENTS (S) (Rule 171)

Base Bid (Subtotal Items Nos. S57 – S81) $ ___________ (3)

STORM SEWER IMPROVEMENTS TOTAL $ ___________ (4)

SCHEDULE C: WASTEWATER SEWER IMPROVEMENTS (WW) (Rule 170)

Base Bid (Subtotal Items Nos. WW82 - WW98) $ ___________ (5)

10.3% Sales Tax (Items Nos. WW82 – WW98) $ ___________ (6)

WASTEWATER SEWER IMPROVEMENTS TOTAL $ ___________ (7)

SCHEDULE D: WATER MAIN IMPROVEMENTS (W) (Rule 170)

Base Bid (Subtotal Items Nos. W99-W147) $ ___________ (8)

10.3% Sales Tax (Items Nos. W99-W147) $ ___________ (9)

WATER MAIN IMPROVEMENTS TOTAL $ ___________ (10)

TOTAL BASE BID (1) + (3) + (5) + (8) $ ________________
(not including sales tax) Rule 170

Contractor’s Name: ________________________________
Specification No. ES21-0629F
Page 13 of 13
SIGNATURE PAGE

CITY OF TACOMA
ENVIRONMENTAL SERVICES DEPARTMENT

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. ES21-0629F
SW & WW MANITOU GREEN INFRASTRUCTURE PROJECT

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 into Contracts for Bidder/Proposer

Date

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


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.
Herewith find deposit in the form of a cashier’s check in the amount of $______________ which amount is not less than 5-percent of the total bid.

SIGN HERE__________________________________

BID BOND

KNOW ALL MEN BY THESE PRESENTS:
That we, ______________________________________________________________, as Principal, and ______________________________________________________________, as Surety, are held and firmly bound unto the City of Tacoma, as Obligee, in the penal sum of ____________________________ dollars, for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for according to the terms of the proposal or bid made by the Principal therefor, and the Principal shall duly make and enter into a contract with the Obligee in accordance with the terms of said proposal or bid and award and shall give bond for faithful performance thereof, with Surety or Sureties approved by the Obligee; or if the Principal shall, in case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this bond.

SIGNED, SEALED AND DATED THIS _______________ DAY OF __________________, 20______.

PRINCIPAL: 

SURETY: 

____________________, 20______

Received return of deposit in the sum of $ ____________________________
Certification of Compliance with Wage Payment Statutes

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date November 15th, 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.
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
List of Subcontractor Categories of Work

Project Name ___________________________________________________________________

Subcontractor(s) that are proposed to perform the work of heating, ventilation and air conditioning, and/or plumbing, as described in Chapter 18.106 RCW, and electrical as described in Chapter 19.28 RCW must be listed below. **This information must be submitted with the bid proposal or within one hour of the published bid submittal time via email to bids@cityoftacoma.org.**

Subcontractor(s) that are proposed to perform the work of structural steel installation and/or rebar installation must be listed below. **This information must be submitted with the bid proposal or within forty-eight hours of the published bid submittal time via email to bids@cityoftacoma.org.**

Failure to list subcontractors or naming more than one subcontractor to perform the same work will result in your bid being non-responsive. Contractors self-performing must list themselves below. The work to be performed is to be listed below the subcontractor(s) name.

Subcontractor Name _____________________________________________________________

Work to be Performed _____________________________________________________________

Subcontractor Name _____________________________________________________________

Work to be Performed _____________________________________________________________

Subcontractor Name _____________________________________________________________

Work to be Performed _____________________________________________________________

Subcontractor Name _____________________________________________________________

Work to be Performed _____________________________________________________________

G:pur-comm\Forms\Subcontractor List.doc  Revised: 07/08/2022
EIC REQUIREMENT FORM

EQUITY IN CONTRACTING REQUIREMENTS & PROCEDURES:

All bidders must complete and submit with their bid the following solicitation form contained in the bid submittal package:

City of Tacoma – EIC Utilization Form

IMPORTANT NOTE:

It is the bidder’s responsibility to ensure that the subcontractor(s) listed on the EIC Utilization Form are currently certified by the State of Washington’s Office of Minority and Women Business Enterprises (OMWBE) at the time of bid opening. This may be verified by contacting the EIC Office at 253-591-5075 between 8 AM and 5 PM, Monday through Friday or the OMWBE Office at (866) 208-1064. Please refer to the City of Tacoma EIC code.

<table>
<thead>
<tr>
<th>Equity in Contracting Requirements</th>
<th>Minority Business</th>
<th>Women Business</th>
<th>Small Business Enterprise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise Requirement</td>
<td>4%</td>
<td>2%</td>
<td>6%</td>
</tr>
</tbody>
</table>

A list of EIC-eligible companies is available on the following web site addresses:

www.omwbe.diversitycompliance.com*

MATERIAL MISSTATEMENTS CONCERNING COMPLETED ACTIONS BY THE BIDDER IN ANY SWORN STATEMENT OR FAILURE TO MEET COMMITMENTS AS INDICATED ON THE EIC UTILIZATION FORM MAY RENDER THE BIDDER IN DEFAULT OF CITY ORDINANCE 1.07

CCD/SBE: ENV-03031-20-01,02, 03, 04, 05  
ENV-04023-11-01, 02, 03, 04, 05  
PKW-00438-08-01, 02, 03  
WTR-00604-01-12-01, 02, 03  
Date of Record: Aug. 5, 2022

*For the OMWBE list, be sure to look for businesses in Pierce, King, Lewis, Mason, Grays Harbor, Thurston, or any counties adjacent to the county in which the work is performed per 1.07.050(2)(b-c). Contact the EIC Office if you have any questions.
EQUITY IN CONTRACTING UTILIZATION FORM

This form is to document only the contractors, subcontractors, material suppliers or other types of firms that are intended to be used to meet the stated EIC requirements for the contract awarded from this solicitation. This information will be used to determine contract award. Additional forms may be used if needed.

- You must include this form with your bid submittal in order for your bid to be responsive.
- Prime contractors are required to solicit bids from Businesses that are "Certified" by the Office of Minority and Women's Business Enterprises (OMWBE) [www.omwbe.wa.gov] as a MBE, WBE, and SBE to be known as "Certified Business".
- It is the Prime contractor’s responsibility to verify the certification status of the business(s) intended to be utilized prior to the submittal deadline.

Bidder’s Name: ____________________________________________________________

Address: ____________________________________________________________________________ City/State/Zip: ____________________________________________________________________________

Spec. No. _________________ Base Bid * $ __________

Complete business names and phone numbers are required to verify your usage of Certified Businesses

<table>
<thead>
<tr>
<th>a. Business Name and Certification Number(s)</th>
<th>b. MBE, WBE, or SBE (Write all that apply)</th>
<th>c. NAICS code(s)</th>
<th>d. Contractor Bid Amount (100%)</th>
<th>e. Material Supplier Bid Amount (20%)</th>
<th>f. Estimated MBE Usage Dollar Amount</th>
<th>g. Estimated WBE Usage Dollar Amount</th>
<th>h. Estimated SBE Usage Dollar Amount</th>
</tr>
</thead>
<tbody>
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</table>

i. MBE Utilization %  
j. WBE Utilization %  
k. SBE Utilization %

By signing and submitting this form the bidder certifies that the OMWBE Certified Business(s) listed will be used on this project including all applicable change orders.

Type or Print Name of Responsible Officer / Title ______________________________ Signature of Responsible Officer ______________________________ Date ______________________________

CCD/EIC/BID DOCS revised March 4, 2022
INSTRUCTIONS FOR COMPLETING
EIC UTILIZATION FORM

The purpose of these instructions is to assist bidders in properly completing the EIC Utilization Form.

This form when submitted with your bid, provides information to the City of Tacoma to accurately review and evaluate your proposed EIC usage.

1. * Base Bid is the prime contractor’s bid, plus any alternates, additives and deductibles selected by the City of Tacoma. Also, please refer to Items #10-12 below.

2. Column “a” – List all Certified Business(s) that you will be awarding a contract to if you are the successful bidder.

3. Column "b" – Identify if the Certified Business(s) is being utilized as an MBE, WBE, or SBE. (Businesses may count towards multiple requirements).

4. Column "c" – List the appropriate NAICS code(s) for the scope of work, services, or materials/supplies for each Certified Business.

5. Column “d” – The bid amount must be indicated for all listed Certified Businesses that you plan on doing business with. This quote is the price that you and the Certified Businesses have negotiated prior to bid opening.

6. Column “e” – The bid amount must be indicated for all listed Certified Businesses that you plan on doing business with. This quote is the price that you and the material supplier have negotiated prior to bid opening.

7. Column "f” – Estimated MBE Usage Dollar Amount: For all MBE firms used, multiply the amount in Column “d” by 1.0 plus the amount in Column “e” by 0.20. Insert the total amount in this column.

8. Column “g” – Estimated WBE Usage Dollar Amount: For all WBE firms used, multiply the amount in Column “d” by 1.0 plus the amount in Column “e” by 0.20. Insert the total amount in this column.

9. Column “h”– Estimated SBE Usage Dollar Amount: For all MBE, WBE, or SBE firms used, Multiply the amount in Column “d” by 1.0 plus the amount in Column “e” by 0.20. Insert the total amount in this column.

10. Block “i” – The percentage of actual MBE utilization calculated on the Base Bid only. (Divide the sum of Estimated MBE Usage Dollar Amount (Column “f”) by your Base Bid (*) then multiply by 100 to get a percentage: $ amounts from column “f” divided by Base Bid (*) x 100 = MBE usage as a percentage of the Base Bid.)

11. Block “j” – The percentage of actual WBE utilization calculated on the Base Bid only. (Divide the sum of Estimated WBE Usage Dollar Amount (Column “g”) by your Base Bid (*) then multiply by 100 to get a percentage: $ amounts from column “g” divided by Base Bid (*) x 100 = WBE usage as a percentage of the Base Bid.)
12. Block “k” – The percentage of actual SBE utilization calculated on the Base Bid only. (Divide the sum of Estimated SBE Usage Dollar Amount (Column “h”) by your Base Bid (*) then multiply by 100 to get a percentage: $ amounts from column “h” divided by Base Bid (*) x 100 = SBE usage as a percentage of the Base Bid.)

It is the prime contractor’s responsibility to check the status of **Certified Businesses** prior to bid opening. Call the EIC Office at 253-591-5826 or email at EICOoffice@cityoftacoma.org for additional information.
CONTRACT

Resolution No. [########]
Contract No. [########]

This Contract is made and entered into effective as of [Month] [Day], [Year] (“Effective Date”) by and between the City of Tacoma, a Municipal Corporation of the State of Washington (“City”), and [supplier name as it appears in Ariba, including dbas or trade names] (“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. [Spec Number] [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. [Spec Number] [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.

II. If federal funds will be used to fund, pay or reimburse all or a portion of the services provided under the Contract, the terms and conditions set forth at this Appendix A are incorporated into and made part of this Contract and CONTRACTOR will comply with all applicable provisions of Appendix A and with all applicable federal laws, regulations, executive orders, policies, procedures, and directives in the performance of this Contract.

If CONTRACTOR’s receipt of federal funds under this Contract is as a sub-recipient, a fully completed Appendix B, “Sub-recipient Information and Requirements” is incorporated into and made part of this Contract.

III. 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, inclusive of Appendices A and B.
2. List remaining Contract Documents in applicable controlling order.

IV. The Contract terminates on [Termination Date], and may be renewed for [Renewal Term]

V. The total price to be paid by City for Contractor’s full and complete performance hereunder, including during any authorized renewal terms, may not exceed: $[Dollar Amount], plus any applicable taxes.

VI. 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.

VII. 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.
VIII. It is anticipated that this project will be funded in part by the Washington State Department of Ecology. In that event, all parties agree that the State of Washington shall be and is hereby named as an express third party beneficiary of this Contract, with full rights as such in regards to enforce the Contractor’s obligations to perform any Scope of Work paid for thru this funding as required under this Contract and by law.

IX. 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 the insurance requirements contained in the Contract Documents shall not be construed as a waiver of Contractor’s obligation to maintain such insurance.

X. 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.

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 this Contract, as of the Effective Date stated above, which shall be Effective Date for bonding purposes as applicable.

CITY OF TACOMA:            CONTRACTOR:
Signature:                  Signature:

Name:                      Name:
Title:                     Title:

(City of Tacoma use only - blank lines are intentional)

Director of Finance: ______________________________________________________________

Deputy/City Attorney (approved as to form): __________________________________________

Approved By: _________________________________________________________________

Approved By: _________________________________________________________________

Approved By: _________________________________________________________________

Approved By: _________________________________________________________________

Approved By: _________________________________________________________________

Approved By: _________________________________________________________________
APPENDIX A
FEDERAL FUNDING

1. Termination for Breach

CITY may terminate this Contract in the event of any material breach of any of the terms and conditions of this Contract if 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. Prevailing Wages

1. If federal, state, local, or any applicable law requires CONTRACTOR to pay prevailing wages in connection with this Contract, and CONTRACTOR is so notified by the CITY, then CONTRACTOR shall pay applicable prevailing wages and otherwise comply with the Washington State Prevailing Wage Act (RCW 39.12) in the performance of this Contract.

2. 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 made part of the Contract by this reference. If prevailing wages apply to the Contract, CONTRACTOR and its subcontractors shall:
   
   i. 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.

   ii. 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.

   iii. 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, 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.

3. COPELAND ANTI-KICKBACK ACT

For Contracts subject to Davis Bacon Act the following clauses will be incorporated into the Contract:
A. 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. CONTRACTOR or subcontractor shall insert in any subcontracts the clause above and such other clauses federal agencies 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.

4. 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. If the CONTRACTOR does over $10,000 in business a year that is funded, paid or reimbursed with federal funds, CONTRACTOR will take specific and 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:

A. 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. 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.

B. 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.

C. 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.

D. 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.
E. 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.

F. In the event of 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 federally funded 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.

G. CONTRACTOR will include the portion of the sentence immediately preceding paragraph (A) and the provisions of paragraphs (A) through (G) 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. 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 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.

5. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

A. Overtime requirements. Neither 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.

B. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (3)(A) 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 (3)(A) 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 (3)(A) of this section.
C. 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 sub-contractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (3)(B) of this section.

D. Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (3)(A) through (D) 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 (3)(A) through (D) of this section.

6. CLEAN AIR ACT
A. 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.

B. 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.

CONTRACTOR agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal funds.

7. FEDERAL WATER POLLUTION CONTROL ACT
A. 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.

B. 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 appropriate federal agency.

C. CONTRACTOR agrees to include these requirements in each subcontract exceeding $150,000 financed in whole or in part with federal funding.

8. DEBARMENT AND SUSPENSION
A. 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).

B. 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.

C. 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 CITY, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

D. 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 throughout the period of this Contract and to include a provision requiring such compliance in its lower tier covered transactions.

9. BYRD ANTI-LOBBYING AMENDMENT

A. 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.

B. If applicable, CONTRACTOR must sign and submit to the CITY the certification required by Appendix A to 44 CFR Part 18 contained at Appendix A-1 to this Contract.

10. PROCUREMENT OF RECOVERED MATERIALS

A. In the performance of this Contract, CONTRACTOR shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

i. Competitively within a timeframe providing for compliance with the contract performance schedule;

ii. Meeting contract performance requirements; or

iii. At a reasonable price.

B. 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.

C. CONTRACTOR also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.
APPENDIX A-1

APPENDIX A to 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, [Name], 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
APPENDIX B—Sub-recipient information and requirements

Pursuant to 2 CFR 200.332(a)(1) Federal Award Identification

<table>
<thead>
<tr>
<th>(i) Agency Name (must match the name associated with its unique entity identifier)</th>
<th>(ii) Unique Entity Identifier (i.e., DUNS)</th>
<th>City of Tacoma Number for This Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>(iii) Federal Award Identification Number (FAIN)</td>
<td>(iv) Federal Award Date</td>
<td>(v) Federal Period of Performance Start and End Date</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(vi) Federal Budget Period Start and End Date</th>
</tr>
</thead>
</table>

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<tr>
<th>(vii) Amount of Federal Funds Obligated to the agency by this action:</th>
<th>(viii) Total Amount of Federal Funds Obligated to the agency</th>
<th>(ix) Total Amount of the Federal Award Committed to the agency</th>
</tr>
</thead>
<tbody>
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<td>$</td>
<td>$</td>
<td></td>
</tr>
</tbody>
</table>

| (x) Federal Award Project Description: |

CORONAVIRUS STATE AND LOCAL FISCAL RECOVERY FUNDS—City of Tacoma

<table>
<thead>
<tr>
<th>(xi) Federal Awarding Agency:</th>
<th>Pass-Through Entity:</th>
<th>Awarding Official Name and Contact Information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEPARTMENT OF THE TREASURY</td>
<td>City of Tacoma</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(xii) Assistance Listing Number and Name (the pass-through entity must identify the dollar amount made available under each Federal award and the Assistance Listing number at time of disbursement)</th>
<th>(xiii) Identification of Whether the Award is R&amp;D</th>
</tr>
</thead>
</table>

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<tr>
<th>(xiv) Indirect Cost Rate for the Federal Award</th>
<th>Award Payment Method (lump sum payment or reimbursement)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>REIMBURSEMENT</td>
</tr>
</tbody>
</table>
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.
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: _____________________________________

By: _____________________________________

Agent’s Name: _____________________________

Agent’s Address: ___________________________
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 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: ____________________________

Form No. SPEC-100A 04/09/2020
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 __________________________
PART II

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INTRODUCTION
(******)

The following special provisions shall be used in conjunction with the "2022 Standard Specifications for Road, Bridge and Municipal Construction" and "Standard Plans for Road, Bridge, and Municipal Construction" as prepared by the Washington State Department of Transportation (WSDOT). State Standard Specifications are available through WSDOT, by calling (360) 705-7430, emailing engrpubs@wsdot.wa.gov, or may be downloaded, free of charge, from this location on the WSDOT home page:
http://www.wsdot.wa.gov/Publications/Manuals/M41-10.htm

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision either supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The GSPs are labeled under the headers of each GSP, with the date of the GSP and its source, as follows:

(May 18, 2007  APWA GSP)
(August 7, 2006  WSDOT GSP)
(April 2, 2007  Tacoma GSP)

The project specific Special Provisions are labeled under the headers of each Special Provision as follows:
(******)

A pre-bid meeting will be held virtually from 11:00 am - 12:00 pm on November 21st, 2022 to answer questions regarding the project in general as well as the Equity in Contracting (EIC) and Local Employment and Apprenticeship Training Program (LEAP) requirements included in the Contract. Prospective bidders are urged to attend this meeting. You can join the meeting by visiting https://www.microsoft.com/en-us/microsoft-teams/join-a-meeting and entering: Meeting ID: 245 216 252 478 with Passcode: 49S3KP.
DESCRIPTION OF WORK

This Contract shall generally consist of the improvement of the following streets:

- S Ferdinand Street between S 64th Street and S 66th Street
- S Cheyenne Street between S 64th and S American Lake Blvd
- S Verde Street between S 64th Street and S Grove St
- S Grove Street between S Cheyenne Street and S Verde Street
- S Stevens Street between S 64th Street and S 66th Street
- S Mason Street between S 62nd Street and S 66th Street

The improvements shall include, but are not limited to, demolition and reconstruction of the existing roadways with hot mix asphalt, permeable asphalt, cement concrete curbs with and without gutters, cement concrete curb ramps, cement concrete driveways, asphalt driveways, catch basins, storm drainage and wastewater manholes, storm and wastewater pipes, potable water improvements and landscape restoration in accordance with the Contract Plans, these Contract Provisions, and the Standard Specifications.

END OF SECTION
1-01  DEFINITIONS AND TERMS

1-01.3 Definitions (January 4, 2016  APWA GSP)

Delete the heading Completion Dates and the three paragraphs that follow it, and replace them with the following:

Dates

Bid Opening Date
The date on which the Contracting Agency publicly opens and reads the Bids.

Award Date
The date of the formal decision of the Contracting Agency to accept the lowest responsible and responsive Bidder for the Work.

Contract Execution Date
The date the Contracting Agency officially binds the Agency to the Contract.

Notice to Proceed Date
The date stated in the Notice to Proceed on which the Contract time begins.

Substantial Completion Date
The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.

Physical Completion Date
The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Completion Date
The day all the Work specified in the Contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation required by the Contract and required by law must be furnished by the Contractor before establishment of this date.

Final Acceptance Date
The date on which the Contracting Agency accepts the Work as complete.

Supplement this Section with the following:

All references in the Standard Specifications, Amendments, or WSDOT General Special Provisions, to the terms “Department of Transportation”, “Washington State Transportation Commission”, “Commission”, “Secretary of Transportation”, “Secretary”, “Headquarters”, and “State Treasurer” shall be revised to read “Contracting Agency”.

All references to the terms “State” or “state” shall be revised to read “Contracting Agency” unless the reference is to an administrative agency of the State of Washington, a State statute or regulation, or the context reasonably indicates otherwise.
All references to “State Materials Laboratory” shall be revised to read “Contracting Agency designated location”.

All references to “final contract voucher certification” shall be interpreted to mean the Contracting Agency form(s) by which final payment is authorized, and final completion and acceptance granted.

**Additive**
A supplemental unit of work or group of bid items, identified separately in the Bid Proposal, which may, at the discretion of the Contracting Agency, be awarded in addition to the base bid.

**Alternate**
One of two or more units of work or groups of bid items, identified separately in the Bid Proposal, from which the Contracting Agency may make a choice between different methods or material of construction for performing the same work.

**Business Day**
A business day is any day from Monday through Friday except holidays as listed in Section 1-08.5.

**Contract Bond**
The definition in the Standard Specifications for “Contract Bond” applies to whatever bond form(s) are required by the Contract Documents, which may be a combination of a Payment Bond and a Performance Bond.

**Contract Documents**
See definition for “Contract”.

**Contract Time**
The period of time established by the terms and conditions of the Contract within which the Work must be physically completed.

**Notice of Award**
The written notice from the Contracting Agency to the successful Bidder signifying the Contracting Agency’s acceptance of the Bid Proposal.

**Notice to Proceed**
The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract time begins.

**Traffic**
Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

*This section is supplemented with the following:*
(April 15, 2020 Tacoma GSP)

All references to the acronym UDBE” shall be revised to read “DBE/EIC”.

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4
All references in the Standard Specifications to the term “Proposal Bond” shall be revised to read “Bid Bond.”

**Base Bid**
The summation of Bid Item amounts (extensions) in the Bid Forms, excluding Additives, Alternates, Deductives, Force Accounts, and taxes collected separately pursuant to Section 1-07.2.

**Calendar Day**
The time period of 24 hours measured from midnight to the next midnight, including weekends and holidays.

**Change Order**
A written order to the Contractor, issued by the Contracting Agency after execution of the contract, authorizing an addition, deletion, or other revision in the Work, within the scope of the Contract Documents, and establishing the basis of payment and time adjustments, if any, for the Work affected by the change.

**Day**
Unless otherwise specified, a calendar day.

**Deductive**
A supplemental unit of work or group of Bid Items, identified separately in the Bid, which may, at the discretion of the Contract Agency, be deducted from the Base Bid should the Contract Agency choose not to Award the total Base Bid.

**Grand Total Price**
The Grand Total Price of the Contract will include the Base Bid, Additives, Alternates, Deductives, Force Accounts, and taxes collected separately pursuant to Section 1-07.2.

**Standard Specifications**
Divisions One through Nine of the specified edition of the WSDOT “Standard Specifications for Road, Bridge, and Municipal Construction.”

END OF SECTION
1-02 BID PROCEDURES AND CONDITIONS

1-02.1 Qualifications of Bidder
(January 24, 2011 APWA GSP)

Before award of a public works contract, a bidder must meet at least the minimum qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified to be awarded a public works project.

1-02.2 Plans and Specifications
(June 27, 2011 APWA GSP)

Information as to where Bid Documents can be obtained or reviewed can be found in the Call for Bids (Advertisement for Bids) for the work.

After award of the contract, plans and specifications will be issued to the Contractor at no cost as detailed below:

<table>
<thead>
<tr>
<th>To Prime Contractor</th>
<th>No. of Sets</th>
<th>Basis of Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced plans (11” x 17”)</td>
<td>6</td>
<td>Furnished automatically upon award.</td>
</tr>
<tr>
<td>Contract Provisions</td>
<td>6</td>
<td>Furnished automatically upon award.</td>
</tr>
<tr>
<td>Large plans (e.g., 22” x 34”)</td>
<td>2</td>
<td>Furnished only upon request.</td>
</tr>
</tbody>
</table>

Additional plans and Contract Provisions may be obtained by the Contractor from the source stated in the Call for Bids, at the Contractor’s own expense.

1-02.4(1) General
(August 15, 2016 APWA GSP Option B)

The first sentence of the seventh paragraph, beginning with “Any prospective Bidder desiring…”, is revised to read:

Any prospective Bidder desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business 6 business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

Delete the last two paragraphs and replace it with the following:

Refer to 8-01.1 of the special provisions for Construction Stormwater General Permit.
1-02.4(2) Subsurface Information
(March 8, 2013 APWA GSP)
The third sentence in the first paragraph is revised to read:
The Summary of Geotechnical Conditions and the boring logs, if and when included as an appendix to the Special Provisions, shall be considered as part of the Contract.

1-02.5 Proposal Forms
(July 31, 2017 APWA GSP)
Delete this section and replace it with the following:
The Proposal Form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder’s name, address, telephone number, and signature; the bidder’s UDBE/DBE/M/WBE commitment, if applicable; a State of Washington Contractor’s Registration Number; and a Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the Proposal Form.

The Contracting Agency reserves the right to arrange the proposal forms with alternates and additives, if such be to the advantage of the Contracting Agency. The bidder shall bid on all alternates and additives set forth in the Proposal Form unless otherwise specified.

1-02.6 Preparation of Proposal
(December 10, 2020 APWA GSP, Option B)
Supplement the second paragraph with the following:
4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.
5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid.

Delete the last two paragraphs, and replace them with the following:
The Bidder shall submit with their Bid a completed Contractor Certification Wage Law Compliance form, provided by the Contracting Agency. Failure to return this certification as part of the Bid Proposal package will make this Bid Nonresponsive and ineligible for Award. A Contractor Certification of Wage Law Compliance form is included in the Proposal Forms.

The Bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner.
A bid by a corporation shall be executed in the corporate name, by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign).
A bid by a partnership shall be executed in the partnership name, and signed by a partner. A copy of the partnership agreement shall be submitted with the Bid Form if any UDBE requirements are to be satisfied through such an agreement.

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture. A copy of the joint venture agreement shall be submitted with the Bid Form if any UDBE requirements are to be satisfied through such an agreement.

*The fourth paragraph is revised to read:*

**(October 18, 2013 Tacoma GSP)**

The bidder shall submit the following completed forms:

1. City of Tacoma – Equity in Contracting Utilization Form

**1-02.7 Bid Deposit**

**(April 1, 2012 Tacoma GSP)**

*Delete this section and replace it with the following:*

A deposit of at least 5 percent of the total Bid shall accompany each Bid. This deposit may be cash, certified check, cashier’s check, or a proposal bond (Surety bond). Any proposal bond shall be on a form acceptable to the Contracting Agency and shall be signed by the Bidder and the Surety. A proposal bond shall not be conditioned in any way to modify the minimum 5 percent required. The Surety shall: (1) be registered with the Washington State Insurance Commissioner, and (2) appear on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner.

Original bid bonds or cashier’s check will be delivered to:

City of Tacoma Procurement & Payables Division
Tacoma Public Utilities
3628 S. 35th St
Tacoma, WA 98409

The failure to furnish a Bid deposit of a minimum of 5 percent shall make the Bid nonresponsive and shall cause the Bid to be rejected by the Contracting Agency.

If a Bid Bond is furnished, the form furnished by the Contracting Agency must be followed. No variations from the language thereof will be accepted.

**1-02.9 Delivery of Proposal**

**(April 1, 2018 Tacoma GSP)**

*Delete this section and replace it with the following:*

Each Proposal shall be submitted electronically, with the subject line to include the Project Name and Project Number, or as otherwise required in the Bid Documents.

The Bidder shall submit to the Contracting Agency a signed “Certification of Compliance with Wage Payment Statutes” document where the Bidder under penalty of perjury verifies that the Bidder is in compliance with responsible bidder criteria in RCW 39.04.350 subsection (1) (g), as required per Section 1-02.14. The “Certification of
Compliance with Wage Payment Statutes” document shall be received with the Bid Proposal.

1-02.10 Withdrawing, Revising, or Supplementing Proposal
(March 16, 2016 Tacoma GSP)
Delete this section and replace it with the following:

After submitting a Bid Proposal to the Contracting Agency, the Bidder may withdraw, revise, or supplement it if:

1. The Bidder submits a written request signed by an authorized person, and
2. The Contracting Agency receives the request before the time set for receipt of Proposals.
3. The revised or supplemented Bid Proposal (if any) is received by the Contracting Agency before the time set for receipt of Bid Proposals.

The original Bid Proposal may be supplemented, or revised and resubmitted as the official Bid Proposal if the Contracting Agency receives it before the time set for receipt of Proposals.

1-02.13 Irregular Proposals
(October 18, 2013 Tacoma GSP)
Delete this section and replace it with the following:

1. A proposal will be considered irregular and will be rejected if:
   a. The Bidder is not prequalified when so required;
   b. The authorized proposal form furnished by the Contracting Agency is not used or is altered;
   c. The completed proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
   d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
   e. A price per unit cannot be determined from the Bid Proposal;
   f. The Proposal form is not properly executed;
   g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable, as required in Section 1-02.6;
   h. The bidder fails to submit or properly complete the EIC forms as required in Section 1-02.6;
   i. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
   j. More than one proposal is submitted for the same project from a Bidder under the same or different names.

2. A Proposal may be considered irregular and may be reject if:
   a. The Proposal does not include a unit price for every Bid item;
   b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Contracting Agency;
   c. Receipt of Addenda is not acknowledged;
   d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
   e. If Proposal form entries are not made in ink.
A Bidder will be deemed not responsible if:

1. the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended; or
2. evidence of collusion exists with any other Bidder or potential Bidder. Participants in collusion will be restricted from submitting further bids; or
3. the Bidder, in the opinion of the Contracting Agency, is not qualified for the work or to the full extent of the bid, or to the extent that the bid exceeds the authorized prequalification amount as may have been determined by a prequalification of the Bidder; or
4. an unsatisfactory performance record exists based on past or current Contracting Agency work or for work done for others, as judged from the standpoint of conduct of the work; workmanship; or progress; affirmative action; equal employment opportunity practices; termination for cause; or Disadvantaged Business Enterprise, Minority Business Enterprise, or Women’s Business Enterprise utilization; or
5. there is uncompleted work (Contracting Agency or otherwise) which in the opinion of the Contracting Agency might hinder or prevent the prompt completion of the work bid upon; or
6. the Bidder failed to settle bills for labor or materials on past or current contracts, unless there are extenuating circumstances acceptable to the Contracting Agency; or
7. the Bidder has failed to complete a written public contract or has been convicted of a crime arising from a previous public contract, unless there are extenuating circumstances acceptable to the Contracting Agency; or
8. the Bidder is unable, financially or otherwise, to perform the work, in the opinion of the Contracting Agency; or
9. there are any other reasons deemed proper by the Contracting Agency; or
10. the Bidder fails to meet the Project-specific supplemental bidder responsibility criteria listed in the Special Notice to Bidders; or
11. The bidder fails to meet the EIC requirements as described in Section 1-02.6.

As evidence that the Bidder meets the bidder responsibility criteria above, the apparent two lowest Bidders must submit to the Contracting Agency within 24 hours of the bid submittal deadline, documentation (sufficient in the sole judgment of the Contracting Agency) demonstrating compliance with all applicable responsibility criteria, including all documentation specifically listed in the supplemental criteria. The Contracting Agency reserves the right to request such documentation from other Bidders as well, and to request further documentation as needed to assess bidder responsibility.

The basis for evaluation of Bidder compliance with these supplemental criteria shall be any documents or facts obtained by Contracting Agency (whether from the Bidder or third parties) which any reasonable owner would rely on for determining such compliance, including but not limited to: (i) financial, historical, or operational data from the Bidder; (ii) information obtained directly by the Contracting Agency from owners for whom the Bidder has worked, or other public agencies or private enterprises; and (iii) any additional information obtained by the Contracting Agency which is believed to be relevant to the matter.
If the Contracting Agency determines the Bidder does not meet the bidder responsibility criteria above and is therefore not a responsible Bidder, the Contracting Agency shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within 24 hours of receipt of the Contracting Agency's determination by presenting its appeal to the Contracting Agency. The Contracting Agency will consider the appeal before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the final determination.

1-02.15 Pre Award Information
(August 14, 2013 APWA GSP)

Revise this section to read:

Before awarding any contract, the Contracting Agency may require one or more of these items or actions of the apparent lowest responsible bidder:

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

END OF SECTION
1-03 AWARD AND EXECUTION OF CONTRACT

1-03.1 Consideration of Bids
(January 23, 2006 APWA GSP)
Revise the first paragraph to read:

After opening and reading proposals, the Contracting Agency will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. If a minimum bid amount has been established for any item and the bidder’s unit or lump sum price is less than the minimum specified amount, the Contracting Agency will unilaterally revise the unit or lump sum price, to the minimum specified amount and recalculate the extension. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or alternates as selected by the Contracting Agency, will be used by the Contracting Agency for award purposes and to fix the Awarded Contract Price amount and the amount of the contract bond.

1-03.2 Award of Contract
(March 27, 2003 Tacoma GSP)

All references to 45 calendar days shall be revised to read 60 calendar days.

1-03.3 Execution of Contract
(October 1, 2005 APWA GSP)
Revise this section to read:

Copies of the Contract Provisions, including the unsigned Form of Contract, will be available for signature by the successful bidder on the first business day following award. The number of copies to be executed by the Contractor will be determined by the Contracting Agency.

Within 10 calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, and a satisfactory bond as required by law and Section 1-03.4. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

Until the Contracting Agency executes a contract, no proposal shall bind the Contracting Agency nor shall any work begin within the project limits or within Contracting Agency-furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the contract is executed by the Contracting Agency.

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of 10 additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.
1-03.4 Contract Bond
(July 23, 2015 APWA GSP)

Delete the first paragraph and replace it with the following:

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. The bond may be a combined payment and performance bond; or be separate payment and performance bonds. In the case of separate payment and performance bonds, each shall be for the full contract amount. The bond(s) shall:

1. Be on Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
   a. Is registered with the Washington State Insurance Commissioner, and
   b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:
   a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or
   b. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;
4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
5. Be accompanied by a power of attorney for the Surety’s officer empowered to sign the bond; and
6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

1-03.5 Failure to Execute Contract
(April 15, 2020 Tacoma GSP)

The first sentence is revised to read:

Failure to return the insurance certification and bond with the signed contract as required in Section 1-03.3, or failure to provide Equity In Contracting (EIC) information if required in the contract, or failure or refusal to sign the Contract, or failure to register as a contractor in the state of Washington, or failure to return the completed Transfer of Coverage for the Construction Stormwater General Permit to the Contracting Agency when provided shall result in forfeiture of the bid bond or deposit of this Bidder
1-04  SCOPE OF THE WORK

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda
(March 13, 2012 APWA GSP)

Revise the second paragraph to read:

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 over 3, 3 over 4, and so forth):

1. Addenda,
2. Proposal Form,
3. Special Provisions,
4. Contract Plans,
5. Amendments to the Standard Specifications,
6. Standard Specifications,
7. Contracting Agency’s Standard Plans or Details (if any), and
8. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

1-04.6 Variation in Estimated Quantities
(May 25, 2006 APWA GSP)

This section is supplemented with the following:

The quantities for “Pothole Existing Utility,” “Cold Plant Mix for Temporary Pavement Patch,” “Crushed Surfacing Base Course,” “Crushed Surfacing Top Course” and “Removal and Replacement of Unsuitable Material” have been entered into the Proposal only to provide a common proposal for bidders. Actual quantities will be determined in the field as the work progresses, and will be paid at the original bid price, regardless of final quantity. These bid items shall not be subject to the provisions of 1-04.6 of the Standard Specifications.

END OF SECTION
1-05  CONTROL OF WORK

1-05.3 Plans and Working Drawings
(January 6, 2015 Tacoma GSP)

This section is deleted in its entirety and replaced with the following:

1-05.3 Submittals

The Contractor shall not install materials or equipment, which requires submittals, until reviewed by the Contracting Agency. Late submissions by the Contractor shall not be cause for time extension.

Submittals shall be made per Bid Item, rather than per material. The Contractor shall be responsible for ensuring that each submittal includes cut sheets and/or other information for all pertinent materials necessary to complete the work for each Bid Item. It is understood that producing submittals for each Bid Item may require multiple submittals of common materials that are associated with more than one Bid Item. The Contractor shall also be responsible for producing submittals that may only be associated with a Specification Section, not a particular Bid Item.

The Contractor shall submit electronic copies of each submittal required by the Contract Documents through the Contracting Agency’s web based project management software, e-BUILDER® (see Section 1-05.19), unless otherwise required in these Special Provisions. This includes, but is not limited to:

- Shop Drawings/Plans
- Product Data
- Samples
- Reports
- Material Submittals (Ref. 1-06)
- Progress Schedules (Ref. 1-08.3)
- Guarantees/Warranties (Ref. 1-05.10)

Physical samples shall be delivered with a hardcopy transmittal of the e-BUILDER® submittal.

The Engineer will return reviewed submittals through the e-BUILDER® web based project management software for the Contractor’s use.

1-05.3(1) Submittal Schedule

In conformance with section 1-08.3, the progress schedule shall be submitted and reviewed prior to commencing any work. No delay claim shall be entertained for Contractor’s failure to comply.

No claim will be allowed for damages or extension of time resulting from rejection of a submittal or the requirement of resubmittals as outlined by this section.
The Engineer’s review will be completed as quickly as possible, but may require up to ten (10) working days from the date the submittals or resubmittals are received until they are sent to the Contractor. If more than ten (10) working days are required for the Engineer’s review of any individual submittal or resubmittal, an extension of time will be considered in accordance with Section 1-08.8.

1-05.3(2) Submittal Procedures

Contractor submittals shall be in accordance with the following:

The Contractor shall thoroughly review each submittal for dimensions, quantities, and details of the material or item shown. The Contractor shall review each submittal and note any errors, omissions, or deviations with the Contract Documents. The Contractor shall accept full responsibility for the completeness of each submittal.

Each submittal shall have a unique number assigned to it (via e-Build®). On each page, indicate the page number, and total number of pages in each submittal.

Each submittal shall indicate the following:

1. The intended use of the item in the work;
2. Clearly indicate only applicable items on any catalog cut sheets;
3. The current revision, issue number, and data shall be indicated on all drawings and other descriptive data.
4. Description of Submittal.
5. Related Specification Section and/or plan sheet.
6. Each material submittal shall clearly indicate the name and address of all suppliers, processors, distributors, and/or producers from which the Contractor directly purchased each material.

When submitting product data, the Contractor shall modify drawings to delete any information not applicable to the project and add information that is applicable to the project. The Contractor shall mark copies of printed material to clearly identify the pertinent materials, products or models.

Samples submitted shall be of sufficient size and quantity to clearly illustrate functional characteristics of product or material and full range of colors available. Field samples and mock-ups, where required, shall be erected at the project site where directed by the Engineer.

The Contractor shall notify the Engineer, in writing at time of submission, of deviations in submittals from requirements of the contract documents.

The City shall not be responsible for delays in reviewing submittals not submitted in accordance with these specifications.

1-05.3(3) Engineer’s Review of Submittals

The Engineer’s review of drawings and data submitted by the Contractor will cover only general conformity with the Contract drawings and specifications. The Engineer’s review of submittals shall not relieve the Contractor from responsibility for errors, omissions, deviations, or responsibility for compliance with the Contract documents.
Review of a separate item does not constitute review of an assembly in which the item functions.

When the submittal or resubmittal is marked “REVIEWED” no further correspondence is required. When the submittal is marked “REVIEWED WITH COMMENTS” the Contractor shall comply with any comments on the return submittal.

1-05.3(4) Resubmittals

When a submittal is marked “REVISE AND RESUBMIT” or “REJECTED,” the Contractor shall make the corrections as noted and instructed by the Engineer and resubmit via e-BUILDER®. The Contractor shall not install material or equipment that has received a review status of “REVISE AND RESUBMIT” or REJECTED.

When corrected copies are resubmitted, the Contractor shall in writing direct specific attention to all revisions and shall list separately any revision made other than those called for by the Engineer on previous submittals. e-BUILDER® will assign the resubmittal number of the original submittal followed by a revision number (1, 2, etc.) to indicate the sequence of the resubmittal.

Each submittal shall have a unique number assigned to it (via e-BUILDER®).

The Contractor shall revise returned submittals as required and resubmit until final review is obtained. Any associated progress delay due to the Contractor’s need to revise and resubmit is the Contractor’s sole responsibility.

The Contractor shall verify that all exceptions previously noted by the Engineer have been accounted for.

1-05.3(5) Submittal Requirements by Section

The following is a general summary of submittal requirements. This summary is not inclusive of all submittal requirements and does not relieve the Contractor of their responsibility to provide submittals as noted in subsequent sections of the specifications. The Contractor shall review each bid item and individual section in the applicable provisions or specifications, as noted below, for specific requirements.
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1-05.3(6) Project Red Line Drawings

The Contractor shall submit Project Red Line Drawings in accordance with the following.

Red line drawings refer to those documents maintained and annotated by the Contractor during construction and is defined as, a neatly and legibly marked set of Contract drawings showing any changes made to the original details of work.
The Contractor shall maintain drawings in good condition; protect from deterioration and keep in a clean, dry, and secure location. The Project Red Line Drawings shall not be used for construction purposes.

The Contractor shall provide to the City, access to Project Red Line Drawings at all times during normal working hours.

Red line drawings shall be updated on a continuous basis. The Contractor shall bring the up-to-date drawings to a monthly “red line review” meeting where the Engineer will verify the maintenance of the Project Red Line Drawings as part of the condition precedent to approving the monthly progress payment disbursement process. Monthly progress payments to the Contractor may not be processed, if red line information for the involved work to date has not been accurately recorded on the Project Red Line Drawings.

At the completion of the construction work, prior to pre-final payment, all Project Red Line Drawings shall be submitted to the Engineer.

A. Project Red Line Drawings:

Do not permanently conceal any work until required information has been recorded. Mark drawings to show the actual installation where the installation varies from the work as originally shown on the Contract drawings or indicated in the Contract specifications. Give particular attention to information on concealed elements that would be difficult to measure and record at a later date.

1. Changes and information shall be clearly drawn, described and shown technically correct.
2. Mark drawings with red erasable pencil.
3. Record data as soon as possible after obtaining it.
5. Keep accurate measurements of horizontal and vertical locations of underground services and utilities.
6. Mark any changes made where installation varies from that shown originally, such as, in materials, equipments, locations, alignments, elevations, and any other dimensions of the work.
7. For any work not demolished, abated, or salvaged, cross out and appropriately annotate “Not Complete”.
8. Indicate revisions to drawings with a “cloud” drawn around the revision and note date the revision(s) was made.
9. Note Request For Change (RFC), Request For Information (RFI), and similar identification, where applicable.

B. Format:

Identify and date each print; include the designation “PROJECT RED LINE DRAWINGS” in a prominent location.

1. Prints: Organize Red Line Drawings into manageable sets. Include identification on cover sheets.
2. Identify cover sheets as follows:
   • Specification No.
   • Project Name
   • Date
   • “PROJECT RED LINE DRAWINGS”
   • Name of Engineer
   • Name of Contractor


The lump sum Contract price for “Project Red Line Drawings” shall be full pay for all costs associated with, including but not limited to, documenting, revising, updating, maintaining, and submitting red line drawings at the completion of construction work.

1-05.3(8) Clarifications

Clarifications of the Contract intent shall be submitted via a Request for Information (RFI) using e-Builder® as described in Section 1-05.19 of the Special Provisions. The Contractor shall provide a clear and concise clarification question, specific project document reference such as plan detail number or specification number, proposed solution to the clarification question, and provide any supporting documentation necessary to understand the clarification question.

Request for Information responses provided by the Contracting Agency shall be incorporated into the Project Red-Line Drawings, if resulting in a change to the Contract Plans.

Request for Information responses provided by the Contracting Agency shall not be construed to be a change to the Contract Documents.

1-05.4 Conformity With and Deviations from Plans and Stakes

Add the following two new sub-sections:

1-05.4(1) Roadway and Utility Surveys
(October 1, 2005 APWA GSP, Option 1)

The Engineer shall furnish to the Contractor one time only all principal lines, grades, and measurements the Engineer deems necessary for completion of the work. These shall generally consist of one initial set of:

1. Slope stakes for establishing grading;
2. Curb grade stakes;
3. Centerline finish grade stakes for pavement sections wider than 25 feet; and
4. Offset points to establish line and grade for underground utilities such as water, sewers, and storm drains.

On alley construction projects with minor grade changes, the Engineer shall provide only offset hubs on one side of the alley to establish the alignment and grade.
1-05.4(2) Bridge and Structure Surveys
(October 1, 2005 APWA GSP, Option 2)

For all structural work such as bridges and retaining walls, the Contractor shall retain as a part of Contractor’s organization an experienced team of surveyors.

The Contractor shall provide all surveys required to complete the structure, except the following primary survey control which will be provided by the Engineer:

1. Centerline or offsets to centerline of the structure.
2. Stations of abutments and pier centerlines.
3. A sufficient number of bench marks for levels to enable the Contractor to set grades at reasonably short distances.
4. Monuments and control points as shown in the Plans.

The Contractor shall establish all secondary survey controls, both horizontal and vertical, as necessary to assure proper placement of all project elements based on the primary control points provided by the Engineer. Survey work shall be within the following tolerances:

- Stationing +0.01 foot
- Alignment +0.01 foot (between successive points)
- Superstructure Elevations +0.01 foot (from plan elevations)
- Substructure Elevations +0.05 foot (from plan elevations)

During the progress of the work, the Contractor shall make available to the Engineer all field books including survey information, footing elevations, cross sections and quantities.

The Contractor shall be fully responsible for the close coordination of field locations and measurements with appropriate dimensions of structural members being fabricated.

1-05.7 Removal of Defective and Unauthorized Work
(October 1, 2005 APWA GSP)

Supplement this section with the following:

If the Contractor fails to remedy defective or unauthorized work within the time specified in a written notice from the Engineer, or fails to perform any part of the work required by the Contract Documents, the Engineer may correct and remedy such work as may be identified in the written notice, with Contracting Agency forces or by such other means as the Contracting Agency may deem necessary.

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Contracting Agency or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.

Direct or indirect costs incurred by the Contracting Agency attributable to correcting andremedying defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from
monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor’s unauthorized work.

No adjustment in Contract time or compensation will be allowed because of the delay in the performance of the work attributable to the exercise of the Contracting Agency’s rights provided by this Section.

The rights exercised under the provisions of this section shall not diminish the Contracting Agency’s right to pursue any other avenue for additional remedy or damages with respect to the Contractor’s failure to perform the work as required.

1-05.11 Final Inspection
Delete this section and replace it with the following:

1-05.11 Final Inspections and Operational Testing
(October 1, 2005 APWA GSP)

1-05.11(1) Substantial Completion Date

When the Contractor considers the work to be substantially complete, the Contractor shall so notify the Engineer and request the Engineer establish the Substantial Completion Date. The Contractor’s request shall list the specific items of work that remain to be completed in order to reach physical completion. The Engineer will schedule an inspection of the work with the Contractor to determine the status of completion. The Engineer may also establish the Substantial Completion Date unilaterally.

If, after this inspection, the Engineer concurs with the Contractor that the work is substantially complete and ready for its intended use, the Engineer, by written notice to the Contractor, will set the Substantial Completion Date. If, after this inspection the Engineer does not consider the work substantially complete and ready for its intended use, the Engineer will, by written notice, so notify the Contractor giving the reasons therefore.

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work.

The above process shall be repeated until the Engineer establishes the Substantial Completion Date and the Contractor considers the work physically complete and ready for final inspection.

1-05.11(2) Final Inspection and Physical Completion Date

When the Contractor considers the work physically complete and ready for final inspection, the Contractor by written notice, shall request the Engineer to schedule a final inspection. The Engineer will set a date for final inspection. The Engineer and the
Contractor will then make a final inspection and the Engineer will notify the Contractor in writing of all particulars in which the final inspection reveals the work incomplete or unacceptable. The Contractor shall immediately take such corrective measures as are necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously, diligently, and without interruption until physical completion of the listed deficiencies. This process will continue until the Engineer is satisfied the listed deficiencies have been corrected.

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor, take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7. The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer’s right hereunder.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the Contracting Agency, in writing, of the date upon which the work was considered physically complete. That date shall constitute the Physical Completion Date of the Contract, but shall not imply acceptance of the work or that all the obligations of the Contractor under the contract have been fulfilled.

1-05.11(3) Operational Testing

It is the intent of the Contracting Agency to have at the Physical Completion Date a complete and operable system. Therefore when the work involves the installation of machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation systems; buildings; or other similar work it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the physical completion date. Whenever items of work are listed in the Contract Provisions for operational testing they shall be fully tested under operating conditions for the time period specified to ensure their acceptability prior to the Physical Completion Date. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so that the Engineer may determine their suitability for the purpose for which they were installed. The Physical Completion Date cannot be established until testing and corrections have been completed to the satisfaction of the Engineer.

The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit Contract prices related to the system being tested, unless specifically set forth otherwise in the proposal. Operational and test periods, when required by the Engineer, shall not affect a manufacturer’s guaranties or warranties furnished under the terms of the Contract.
1-05.12 Final Acceptance

Add the following new section:

1-05.12(1) One-Year Guarantee Period
(March 8, 2013 APWA GSP)

The Contractor shall return to the project and repair or replace all defects in workmanship and material discovered within one year after Final Acceptance of the Work. The Contractor shall start work to remedy any such defects within 7 calendar days of receiving Contracting Agency’s written notice of a defect, and shall complete such work within the time stated in the Contracting Agency’s notice. In case of an emergency, where damage may result from delay or where loss of services may result, such corrections may be made by the Contracting Agency’s own forces or another Contractor, in which case the cost of corrections shall be paid by the Contractor. In the event the Contractor does not accomplish corrections within the time specified, the work will be otherwise accomplished and the cost of same shall be paid by the Contractor.

When corrections of defects are made, the Contractor shall then be responsible for correcting all defects in workmanship and materials in the corrected work for one year after acceptance of the corrections by Contracting Agency.

This guarantee is supplemental to and does not limit or affect the requirements that the Contractor’s work comply with the requirements of the Contract or any other legal rights or remedies of the Contracting Agency.

1-05.13 Superintendents, Labor and Equipment of Contractor
(August 14, 2013 APWA GSP)

Delete the sixth and seventh paragraphs of this section.

1-05.15 Method of Serving Notices
(March 25, 2009 APWA GSP)

Revise the second paragraph to read:

All correspondence from the Contractor shall be directed to the Project Engineer. All correspondence from the Contractor constituting any notification, notice of protest, notice of dispute, or other correspondence constituting notification required to be furnished under the Contract, must be in paper format, hand delivered or sent via mail delivery service to the Project Engineer’s office. Electronic copies such as e-mails or electronically delivered copies of correspondence will not constitute such notice and will not comply with the requirements of the Contract.

Add the following new section:

1-05.16 Water and Power
(October 1, 2005 APWA GSP)

The Contractor shall make necessary arrangements, and shall bear the costs for power and water necessary for the performance of the work, unless the Contract includes power and water as a pay item.
Add the following new section:

1-05.19 Project Management Communications
(March 16, 2018 Tacoma GSP)

1-05.19(1) Summary

The Contractor shall use the Internet web based project management communications tool, e-Builder® ASP software, and protocols included in that software during this project. The use of project management communications as herein described does not replace or change any contractual responsibilities of the participants.

User registration, electronic and computer equipment, and internet connections are the responsibility of each project participant.

Nothing in this specification or the subsequent communications supersedes the parties’ obligations and rights for copyright or document ownership as established by the Contract Documents. The use of CAD files, processes, or design information distributed in this system is intended only for the project specified herein.

1-05.19(2) Training & Support

A group training session scheduled by the Contracting Agency will be provided for the Contractor at a City of Tacoma training facility. The training session duration is generally 4 hours. The Contractor’s e-Builder® users are required to attend the scheduled training sessions that they are assigned to. Requests for specific scheduled classes will be on a first come first served basis by availability.

1-05.19(3) Authorized Users

Access to the web site will be by individuals who are licensed users.

1. The City will provide the Contractor with up to four licensed user accounts for the duration of the project. The sharing of user accounts is prohibited.
2. Additional licensed user accounts may be purchased from e-Builder®.
3. Authorized users will be contacted via e-mail with a temporary user password. The user shall update the required information at their first log-in and be responsible for proper password protection.
4. Only entities with a direct Contract with the Contracting Agency will be allowed to be an authorized user.

1-05.19(4) Communications

The use of fax, email and courier communication for this project is discouraged in favor of using e-Builder® to send messages. Communication functions are as follows:

1. Document Integrity and Revisions: Documents, comments, drawings and other data posted to the system remain a permanent component of the project. The originator, time and date are recorded for each document submitted to the system. Submitting a new document or record with a unique ID, originator, and time stamp is the method used to make modifications or corrections.
2. Document Security: The system provides a method for communication of documents. Documents allow security group assignment to respect the contractual parties' communication with the exception that the Contracting Agency Administrative Users have access to everything. DO NOT POST PRIVATE OR CONFIDENTIAL ITEMS IN THE DATABASE.

3. Notifications and Distribution: Document distribution to project members may be accomplished both within the e-Builder® system and via email depending on user settings. Project document distribution to parties outside of the project communication system may be accomplished by secure email of outgoing documents and attachments, readable by a standard email client.

4. Except for paper documents which require original signatures and large format documents (greater than 11 x 17 inches), all other documents shall be submitted by transmission in electronic form to the e-Builder® web site by licensed users.
   a. Large format documents may be transmitted by hardcopy and electronically via e-Builder® as otherwise agreed, or as otherwise noted in the specifications.
   b. Electronic processes and document types that shall be managed via e-Builder® include, but are not limited to:
      i. Request for Information (RFI)
      ii. Change Order (CO)
      iii. Submittals
      iv. Transmittals, including record of documents and materials delivered in hard copy
      v. Meeting Minutes
      vi. Application for Payments
      vii. Review Comments
      viii. Inspector’s Daily Field Reports (IDR)
      ix. Construction Photographs
      x. Drawings
      xi. Supplemental Sketches
      xii. Schedules
      xiii. Specifications
      xiv. Inspection Reports
      xv. Survey Requests
      xvi. TV Inspection Requests

1-05.19(5) Record Keeping

1. The Contracting Agency, their representatives, and the Contractor shall respond to electronic documents received from e-Builder® and consider them as if received in paper document form.

2. The Contracting Agency, their representatives, and the Contractor reserve the right to reply or respond through e-Builder® to documents actually received in paper document form.

3. The following are examples of paper documents which may require an original signature:
   a. Contract
   b. Change Orders
   c. Application & Certificates for Payment
   d. Force Account and Protested Force Account forms
In addition to other requirements specified in this Section, the Contractor shall be responsible for providing suitable computers, necessary software and internet access to utilize e-Builder®. Furthermore, Microsoft Word, Microsoft Excel, and Adobe Acrobat Reader (compatible with current versions) are required. Contact e-Builder® for any additional equipment requirements and support at the following website: http://www.e-builder.net/services/support.

No separate payment will be made for the use of e-Builder®, as this will be considered incidental to the Contract. All costs incurred to carry out the requirements of utilizing and maintaining e-Builder®, including but not limited to, labor, training, equipment, and required software are the sole responsibility of the Contractor.

END OF SECTION
1-06  CONTROL OF MATERIAL

1-06.1 Approval of Materials Prior To Use
(September 15, 2010 Tacoma GSP)
The first sentence is revised to read:

All materials and equipment shall be submitted for review in accordance with section 1-05.3 of these special provisions.

For aggregates, the Contractor shall notify the Engineer of all proposed aggregates. The Contractor shall use the Aggregate Source Approval (ASA) Database.

All equipment, materials, and articles incorporated into the permanent Work:

1. Shall be new, unless the Special Provisions or Standard Specifications permit otherwise;
2. Shall meet the requirements of the Contract and be approved by the Engineer;
3. May be inspected or tested at any time during their preparation and use; and
4. Shall not be used in the Work if they become unfit after being previously approved.

1-06.1(1) Qualified Products List (QPL)
This section is revised in its entirety to read:

QPL’s are not accepted by the City.

1-06.1(2) Request for Approval of Material (RAM)
This section is deleted in its entirety.

END OF SECTION
1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.1 Laws to be Observed
(October 1, 2005 APWA GSP)
Supplement this section with the following:

In cases of conflict between different safety regulations, the more stringent regulation shall apply.

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor’s care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor’s care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor’s plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor’s performance does not, and shall not, be intended to include review and adequacy of the Contractor’s safety measures in, on, or near the project site.

May 13, 2020, WSDOT GSP, Option 4)

COVID-19 Health and Safety Plan
In response to COVID-19, the Contractor shall prepare a project specific COVID-19 health and safety plan (CHSP) in conformance with Section 1-07.4(2) as supplemented in these specifications, COVID-19 Health and Safety Plan (CHSP).

1-07.2 State Taxes
(January 6, 2015 TACOMA GSP)
Supplement this section with the following:

Washington State Department of Revenue Rules 170 and 171 shall apply as shown in the Proposal and per Section 1-07.2 of the WSDOT and APWA Standard Specifications for Road, Bridge, and Municipal Construction.

1-07.2(3) Services

The Contractor shall not collect retail sales tax from the Contracting Agency on any contract wholly for professional or other services (as defined in Washington State Department of Revenue Rules 138 and 244).
1-07.4 Sanitation

1-07.4(2) Health Hazards
(May 13, 2020 WSDOT GSP, Option 2)

Supplement this section with the following:

COVID-19 Health and Safety Plan (CHSP)

The Contractor shall prepare a project specific COVID-19 health and safety plan (CHSP). The CHSP shall be prepared and submitted as a Type 2 Working Drawing prior to beginning physical Work. The CHSP shall be based on the most current State and Federal requirements. If the State or Federal requirements are revised, the CHSP shall be updated as necessary to conform to the current requirements.

The Contractor shall update and resubmit the CHSP as the work progresses and new activities appear on the look ahead schedule required under Section 1-08.3(2)D. If the conditions change on the project, or a particular activity, the Contractor shall update and resubmit the CHSP. Work on any activity shall cease if conditions prevent full compliance with the CHSP.

The CHSP shall address the health and safety of all people associated with the project including State workers in the field, Contractor personnel, consultants, project staff, subcontractors, suppliers and anyone on the project site, staging areas, or yards.

COVID-19 Health and Safety Plan (CHSP) Inspection

The Contractor shall grant full and unrestricted access to the Engineer for CHSP Inspections. The Engineer (or designee) will conduct periodic compliance inspections on the project site, staging areas, or yards to verify that any ongoing work activity is following the CHSP plan. If the Engineer becomes aware of a noncompliance incident either through a site inspection or other means, the Contractor will be notified immediately (within 1 hour). The Contractor shall immediately remedy the noncompliance incident or suspend all or part of the associated work activity. The Contractor shall satisfy the Engineer that the noncompliance incident has been corrected before the suspension will end.

1-07.9 Wages

1-07.9(5) Required Documents
(March 1, 2004 Tacoma GSP)
The first sentence of the third paragraph is revised to read:
Weekly certified payrolls shall be submitted for the Contractor and all lower tier subcontractors or agents.

This section is supplemented with the following:
Where fringe benefits are paid in cash, certified payrolls shall include the fringe benefit dollar amount paid to each employee for each employee classification.
Where fringe benefits are paid into approved plans, funds, or programs, the amount of the fringe benefits shall be identified in the “Benefit Distribution” section of the Certified Payroll Affirmation form.

1-07.15 Temporary Water Pollution/Erosion Control
(March 23, 2010 Tacoma GSP)
This section is supplemented with the following:

Stormwater or dewatering water that has come in contact with concrete rubble, concrete pours, or cement treated soils shall be maintained to pH 8.5 or less before it is allowed to enter waters of the State or the City stormwater system. If pH exceeds 8.5, the Contractor shall immediately discontinue work and initiate treatment according to the plan to lower the pH. Work may resume, with treatment, once the pH of the stormwater is 8.5 or less or it can be demonstrated that the runoff will not reach surface waters or the City stormwater system.

High pH process water shall not be discharged to waters of the State or the City stormwater system. Unless specific measures are identified in the Special Provisions, high pH water may be infiltrated, dispersed in vegetation or compost, or discharged to a sanitary sewer system. Disposal shall be in accordance with the City of Tacoma Surface Water Management Manual or to City wastewater system with proper approval. Water being infiltrated or dispersed shall have no chance of discharging directly to waters of the State or the City stormwater system, including wetlands or conveyances that indirectly lead to waters of the State. High pH process water shall be treated to within a range of 6.5 to 8.5 pH units prior to infiltration to ensure the discharge does not cause a violation of groundwater quality standards. If water is discharged to the sanitary sewer, the Contractor shall provide a copy of permits and requirements for placing the material into a sanitary sewer system prior to beginning the work. Process water may be collected and disposed of by the Contractor off the project site. The Contractor shall provide a copy of the permit for an approved waste site for the disposal of the process water prior to the start of work that generates the process water. A Special Approved Discharge permit shall be required for all discharges to the sanitary sewer system.

(******)
This section is supplemented with the following:

Protection of the Environment: No construction related activity shall contribute to the degradation of the environment, allow material to enter surface or ground waters, or allow particulate emissions to the atmosphere, which exceed state or federal standards. Any actions that potentially allow a discharge to state waters must have prior approval of the Washington State Department of Ecology.

1-07.15(1) Spill Prevention, Control and Countermeasures Plan
(February 9, 2011 Tacoma GSP)
This section is revised to read:

The Contractor shall prepare a project-specific spill prevention, control, and countermeasures plan (SPCC Plan) that will be used for the duration of the project. The Contractor shall submit the plan to the Project Engineer no later than the date of the preconstruction conference. No on-site construction activities may commence until the Contracting Agency accepts an SPCC Plan for the project.
The SPCC Plan shall address all fuels, petroleum products, hazardous materials, and other materials as defined in Chapter 447 of the WSDOT Environmental Procedures Manual (M 31-11). Occupational safety and health requirements that may pertain to SPCC Plan implementation are contained in, but not limited to, WAC 296-824 and WAC 296-843.

**Implementation Requirements**

The SPCC Plan shall be updated by the Contractor throughout project construction so that the written plan reflects actual site conditions and practices. The Contractor shall update the SPCC Plan at least annually and maintain a copy of the updated SPCC Plan on the project site. All project employees shall be trained in spill prevention and containment, and they shall know where the SPCC Plan and spill response kits are located and have immediate access to them.

If hazardous materials are encountered or spilled during construction, the Contractor shall do everything possible to control and contain the material until appropriate measures can be taken. The Contractor shall supply and maintain spill response kits of appropriate size within close proximity to hazardous materials and equipment.

The Contractor shall implement the spill prevention measures identified in the SPCC Plan before performing any of the following:

1. Placing materials or equipment in staging or storage areas.
2. Refueling, washing, or maintaining equipment.

**SPCC Plan Element Requirements**

The SPCC Plan shall set forth the following information in the following order:

1. **Responsible Personnel**
   - Identify the name(s), title(s), and contact information, including a 24/7 emergency contact number, for the personnel responsible for implementing and updating the plan, including all spill responders.

2. **Spill Reporting**
   - List the names and telephone numbers of the Federal, State, and local agencies the Contractor shall notify in the event of a spill. The City of Tacoma contact will be the Wastewater Treatment Plant Operations number at 253.591.5595 and the City Source Control Spill Response number at 253.502.2222.

3. **Project and Site Information**
   - Describe the following items:
     A. The project Work.
     B. The site location and boundaries.
     C. The drainage pathways from the site, including both stormwater and sanitary conveyance pathways.
     D. Nearby waterways and sensitive areas and their distances from the site.
4. Potential Spill Sources
Describe each of the following for all potentially hazardous materials brought or
generated on-site (including materials used for equipment operation, refueling,
maintenance, or cleaning):
A. Name of material and its intended use.
B. Estimated maximum amount on-site at any one time.
C. Location(s) (including any equipment used below the ordinary high water line)
where the material will be staged, used, and stored and the distance(s) from
nearby waterways and sensitive areas.
D. Decontamination location and procedure for equipment that comes into
contact with the material.
E. Disposal procedures.
F. Include a Material Safety Data Sheet (MSDS) for each potentially hazardous
material.

5. Pre-Existing Contamination
Describe any pre-existing contamination and contaminant sources (such as
buried pipes or tanks) in the project area that are described in the Contract
documents. Identify equipment and work practices that will be used to prevent
the release of contamination.

6. Spill Prevention and Response Training
Describe how and when all personnel (including refueling Contractors and
Subcontractors) will be trained in spill prevention, containment, and response in
accordance with the Plan. Describe how and when all spill responders will be
trained in accordance with WAC 296-824.

7. Spill Prevention
Describe the following items:
A. Spill response kit contents and location(s).
B. Security measures for potential spill sources.
C. Secondary containment practices and structures for all containers to handle
the maximum volume of potential spill of hazardous materials.
D. Methods used to prevent stormwater from contacting hazardous materials.
E. Site inspection procedures and frequency.
F. Equipment and structure maintenance practices.
G. Daily inspection and cleanup procedures that ensure all equipment used
below the ordinary high water line is free of all external petroleum-based
products.
H. Refueling procedures for equipment that cannot be moved from below the
ordinary high water line.

8. Spill Response
Outline the response procedures the Contractor will follow for each scenario
listed below. Include a description of the actions the Contractor shall take and the
specific on-site spill response equipment that shall be used to assess the spill,
secure the area, contain and eliminate the spill source, and clean up and dispose
of spilled and contaminated material.

Response procedures shall be outlined in the Spill Response section and shall
include notification to the City of Tacoma Wastewater Treatment Plant
Operations number at 253.591.5595 and the City Source Control Spill Response number at 253.502.2222.

A. A spill of each type of hazardous material at each location identified in 4, above.
B. Stormwater that has come into contact with hazardous materials.
C. Drainage pathways from the site, including both stormwater and sanitary conveyance pathways.
D. A release or spill of any unknown pre-existing contamination and contaminant sources (such as buried pipes or tanks) encountered during project Work.
E. A spill occurring during Work with equipment used below the ordinary high water line.

If the Contractor will use a Subcontractor for spill response, provide contact information for the Subcontractor under item 1 (above), identify when the Subcontractor will be used, and describe actions the Contractor shall take while waiting for the Subcontractor to respond.

9. Project Site Map
Provide a map showing the following items:

A. Site location and boundaries.
B. Site access roads.
C. Drainage pathways from the site.
D. Nearby waterways and sensitive areas.
E. Hazardous materials, equipment, and decontamination areas identified in 4, above.
F. Pre-existing contamination or contaminant sources described in 5, above.
G. Spill prevention and response equipment described in 7 and 8, above.

10. Spill Report Forms
Provide a copy of the spill report form(s) that the Contractor will use in the event of a release or spill.

Payment
Payment will be made in accordance with Section 1-04.1 for the following Bid item when it is included in the Proposal:

“SPCC Plan,” lump sum.

When the written SPCC Plan is accepted by the Contracting Agency, the Contractor shall receive 50-percent of the lump sum Contract price for the plan.

The remaining 50-percent of the lump sum price will be paid after the materials and equipment called for in the plan are mobilized to the project.

The lump sum payment for “SPCC Plan” shall be full pay for:

1. All costs associated with creating the accepted SPCC Plan.
2. All costs associated with providing and maintaining the on-site spill prevention equipment described in the accepted SPCC Plan.

3. All costs associated with providing and maintaining the on-site standby spill response equipment and materials described in the accepted SPCC Plan.

4. All costs associated with implementing the spill prevention measures identified in the accepted SPCC Plan.

5. All costs associated with updating the SPCC Plan as required by this Specification.

As to other costs associated with releases or spills, the Contractor may request payment as provided for in the Contract. No payment shall be made if the release or spill was caused by or resulted from the Contractor’s operations, negligence, or omissions.

1-07.16 Protection and Restoration of Property

1-07.16(1) Private/Public Property
(January 13, 2011 Tacoma GSP)
This section is supplemented with the following:

Stockpiling in City of Tacoma right-of-way or on existing or new improvements shall not occur unless approved by the Engineer. All stockpile sites shall be restored to as good or better condition.

The Contractor shall contact all property owners and tenants in the vicinity of this project, via newsletter/mailing, a minimum of one (1) week prior to start of construction. The Contractor shall submit a draft of the property owner notification prior to posting/mailing.

The newsletter/mailing shall advise the owners and tenants of the construction schedule and indicate the Contractor’s name, contact person, and telephone numbers.

1-07.16(2) Vegetation Protection and Restoration
(August 2, 2010 WSDOT GSP, Option 1)
Section 1-07.16(2) is supplemented with the following:

Vegetation and soil protection zones for trees shall extend out from the trunk to a distance of 1 foot radius for each inch of trunk diameter at breast height.

Vegetation and soil protection zones for shrubs shall extend out from the stems at ground level to twice the radius of the shrub.

Vegetation and soil protection zones for herbaceous vegetation shall extend to encompass the diameter of the plant as measured from the outer edge of the plant.

*****
This section is supplemented with the following:

Special Tree Protection measures as noted on the Plans shall meet the requirements of Section 2-01.3(3).
1-07.17 Utilities and Similar Facilities  
(March 7, 2017 Tacoma GSP)  
*The first paragraph is supplemented with the following:*

Public and private utilities or their Contractors will furnish all work necessary to adjust, relocate, replace, or construct their facilities unless otherwise provided for in the Plans or these Special Provisions. Such adjustment, relocations, replacement, or construction will be done within the time for performance of this project. The Contractor shall coordinate their work with such adjustment, relocation, or replacement of utility work.

This may require the Contractor to phase their work in a manner that will allow for the utility work.

The Contractor shall coordinate their work with all utilities and other organizations, which have to adjust or revise their facilities within the project area. These may include, but are not limited to:

- City of Tacoma Light Division, Contact: Kevin Kelley, phone: (253) 502-8229
- City of Tacoma Water Division, Contact: Kimberly Baard, phone: (253) 396-3317, Troy Saghaferi, phone: (253) 502-8746
- City of Tacoma Traffic Division, Signal/Streetlight Shop, phone: (253) 591-5287
- CLICK! Network, Contact: Ken Mathes, phone: (253) 502-8851
- Puget Sound Energy, Contact: Mike Klapperich, Electric, phone: (253) 313-3790
  OR Amber Uhls, Gas, phone: (253) 476-6137
- Lumen, Contact: Robert Bair, phone: (253) 831-2059
- Comcast, Contact: Todd Gallant, phone: (253) 878-4955
- AT&T Broadband Information Services, Contact: Dan McGeough, phone: (425) 896-9830
- Level 3 Communications, Level3NetworkRelocations@Level3.com
- One-Number Locator Service “One Call System” telephone **1-800-424-5555**
- Verizon, Contact: David Lacombe, phone: (206) 305-5366
- MCI Metro Utility, Contact: Brad Landis, phone: (425) 229-3123

If the Contractor plans to excavate or trench within ten (10) feet of any utility pole or other electric or water utility structure owned by the City of Tacoma, the Contractor shall contact the City of Tacoma, Department of Public Utilities, Field Coordinator, telephone number 502-8044, and arrange for an inspection before proceeding. The Contractor shall perform, at the Contractor's expense, such additional work as is required to protect the pole or structure from subsidence. The Contractor may be directed to suspend work at the site of any such excavation until such utility structures are adequately protected.

Garbage, recycling, and yard waste pick up within the project limits is on Thursdays.

1-07.18 Public Liability and Property Damage Insurance  
*Delete this section in its entirety, and replace it with the following:*

1-07.18 Insurance  
(December 17, 2019 Tacoma GSP)

During the course and performance of the services herein specified, the Contractor will 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 and deliverables provided under this Contract. The City of Tacoma Insurance Requirements document is fully incorporated herein by reference.

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

1-07.18(5)K Professional Liability
(January 4, 2016 APWA GSP)

The Contractor and/or its Subcontractor(s) and/or its design consultant providing construction management, value engineering, or any other design-related non-construction professional services shall provide evidence of Professional Liability insurance covering professional errors and omissions.

Such policy shall provide the following minimum limits:

$1,000,000 per claim and annual aggregate

If the scope of such design-related professional services includes work related to pollution conditions, the Professional Liability insurance shall include coverage for Environmental Professional Liability.

If insurance is on a claims made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract.

1-07.23 Public Convenience and Safety

1-07.23(1) Construction under Traffic
(March 1, 2004 Tacoma GSP)

This section is supplemented with the following:

The following special traffic requirements shall be adhered to during all phases of construction:

The following roadways are considered local roadways and may be closed to through traffic with submitted and approved traffic control plan (indicating scope of work, duration of closure, and any adjacent concurrent work, closures, and any other temporary traffic control provisions) and proper advanced notice per the City of Tacoma Traffic Control Handbook. Concurrent local road closures may not be permitted in the same area if it causes undue circulation and/or access issues. Access (vehicular and non-motorized) to/from local residences and/or businesses must still be maintained:

- S Ferdinand Street between S 64th Street and S 66th Street
- S Cheyenne Street between S 64th and S American Lake Blvd
- S Verde Street between S 64th Street and S Grove St
- S Grove Street between S Cheyenne Street and S Verde Street
- S Stevens Street between S 64th Street and S 66th Street
• S Mason Street between S 62\textordmasculine}nd Street and S 66\textordmasculine}th Street

S 62\textordmasculine}nd Street shall remain fully open to vehicular and pedestrian traffic at all times.

S 64\textordmasculine}th Street shall remain fully open to vehicular and pedestrian traffic at all times with the exception of its intersection with S Mason Street which may be closed to through traffic similar to the local roadways listed above. The closure would be subject to the same prerequisites and may not be permitted concurrent with other active work zones, closures, etc. depending on the cumulative traffic and neighborhood impact.

S 66\textordmasculine}th Street shall remain fully open to all vehicular traffic (two-way in separate lanes) and all pedestrian traffic at all times with the following exceptions:

• Single-lane closures maintaining two-way traffic flow in shifted/temporary lanes (with concurrent parking lane closure(s)) will be allowed at certain intersections/blocks between the hours of 7 a.m. and 6 p.m. on weekdays with an accompanying traffic control plan (submitted at least 10 working days before work begins) and the approval of the Engineer. Encroachments and/or intersection work at S Stevens Street and/or S Mason Street cannot be concurrent with the arrival or dismissal periods (8:30 to 9:30 AM; 2:30 to 4:00 PM; or 9:30 to 10:30 AM/ 2:30 to 4:00 PM on Wednesdays) for Manitou Elementary School. The Contractor will be responsible for coordinating this work with the Engineer for approval. To minimize disruption to Pierce Transit operations and access to adjacent properties, the closure area shall be limited to that area of active work and necessary for appropriate lane closure tapers. The Contractor shall stage work to maintain access to and egress from all properties at all times.

• With support and concurrence of extenuating circumstances and as reflected in a submitted traffic control plan (at least 10 working days before work begins), traffic flow may be considered by the City to be permitted to operate in a two-way flagger-controlled lane. This shall not be a default traffic control scenario and would only be considered for use/approval with supporting reasoning and explicit overall benefit to the traveling public and/or adjacent neighborhood. If considered and approved, the plan would need to reflect use of and advance deployment of PCMS and the plan would only be permitted to be in use during the hours of 9:30 AM (10:30 AM on Wednesdays) to 2:30 PM based on proximity to Manitou Elementary School and associated arrival/dismissal traffic needs. Regardless of the approved temporary traffic control affecting South 66\textordmasculine}th Street operations, the extent shall be limited to affecting only two (or less) intersections along the corridor at a time; and if two intersections are affected at the same time, they must be adjacent to one another and utilize a comprehensive temporary traffic control plan.

• The Contractor shall coordinate disruptions to Pierce Transit routes and/or bus stops, and including Tacoma School District buses, at least five (5) working days prior to impacts to/encroachments into S 66\textordmasculine}th Street.

In addition, advance coordination with the Tacoma School District and Manitou Elementary School is required to disseminate (with City review and approval) construction and parking/intersection impact information to parents and school visitors.
The temporary traffic control devices defining any right-of-way encroachments shall be affixed with Type C steady burn lights for increased conspicuity if they will be in use during low-light/night-time conditions.

Portable Changeable Message Signs (PCMS) must be established at least seven (7) days in advance of work starting on a given arterial roadway (e.g., South 66th Street) to advise traveling public of upcoming work and lane closures/restrictions at beginning of work zone corridor and on any approaches to the work zone corridor from intermediate arterial roadways. PCMS shall be maintained even after temporary traffic control provisions have been established, but PCMS must be redeployed at least seven (7) days in advance of a new stage/area of work that requires new notice to the traveling public as determined by the City.

A safe pedestrian access shall be provided at all times through the project area. Project work at/near intersection corners that also preclude use of the sidewalk and/or pedestrian ramps shall allow for pedestrian passage to and through the corner (in a direction, or directions, commensurate with work zone allowances) through existing conditions or temporarily established conditions meeting or exceeding the level of accessibility that existed prior to the project. Additionally, spotters shall be provided to assist pedestrians (and particularly students) as part of the temporary traffic control provisions for any locations identified as a school walking route/crossing.

Any road/lane closures shall be coordinated with the adjacent properties, businesses, other contractors working within the project vicinity, local transit agencies and the City.

Where, in the opinion of the Engineer, parking is a hazard to through traffic or to the construction work, parking may be restricted either entirely or during the time when it creates a hazard. Signs for restricting parking shall be approved by the City and placed by the Contractor at least seventy-two (72) hours in advance. The Contractor shall be responsible for and shall maintain all such signs. The replacement of signs restricting parking shall be as approved by the Engineer through their inclusion in a submitted traffic control plan (provided at least 10 working days before work begins).

The Contractor shall notify all property owners and tenants of detours, street and alley closures, or other restrictions that may interfere with their access. Notification shall be at least five (5) days in advance.

Emergency traffic, such as police, fire, and disaster units, shall be provided access at all times. In addition, the Contractor shall coordinate Contractor activities with all disposal firms and transit bus service that may be operating in the project area.

If street closures or lane restrictions, not provided for in the Specifications, are allowed subsequent to award of the contract, an equitable adjustment of the Contract amount shall be negotiated.

It is the intent of the Contract to effectively prevent the deposition of debris on streets in areas of public traffic or where such debris may be transported into a drainage system. When construction operations are such that debris from the work is deposited on the streets, the Contractor shall, at a minimum, remove on a daily basis any deposits or debris which may accumulate on the roadway surface. Should daily removal be
insufficient to keep the streets clean, the Contractor shall perform removal operations on
a more frequent basis. If the Engineer determines that a more frequent cleaning is
impractical or if the Contractor fails to keep the streets free from deposits and debris
resulting from the work, the Contractor shall, upon order of the Engineer, provide
facilities for and remove all deposits from the tires or between wheels before trucks or
other equipment will be allowed to travel over paved streets. Should the Contractor fail
or refuse to clean the streets in question, or the trucks or equipment in question, the
Engineer may order the work suspended at the Contractor’s risk until compliance with
Contractor’s obligations is assured, or the Engineer may order the streets in question
cleaned by others and such costs incurred by the City in achieving compliance with
these contract requirements, including cleaning of the streets, shall be deducted from
moneys due or to become due the Contractor on monthly estimate. The Contractor shall
have no claim for delay or additional costs should the Engineer choose to suspend the
Contractor’s work until compliance is achieved.

**The fifth paragraph of this section is supplemented with the following:**

An all-weather, functional roadway shall consist of a minimum four inch (4”) layer of
crushed surfacing base material to be provided and maintained on all roadway areas
disturbed by construction and used to maintain vehicular traffic as required by these
Special Provisions.

The unit Contract price for "Crushed Surfacing Base Course," at per ton, as listed in the
Proposal shall be full pay for all labor, equipment, and materials required to furnish,
place, compact, and grade the material necessary to maintain an all weather functional
roadway.

The Proposal quantity for "Crushed Surfacing Base Course" is intended to provide for
the additional material necessary to maintain an all-weather, functional roadway as
described above and is an estimate only.

**The sixth paragraph of this section is supplemented with the following:**

Trenches backfilled with CDF shall be protected from traffic with steel plates. The plates
shall remain in place for 24-hours after placement of the CDF or until CDF is compacted
or hardened to prevent rutting by construction equipment or traffic.

**1-07.23(2) Construction and Maintenance of Detours**

(October 1, 2018 Tacoma GSP)

This section is supplemented with the following:

Detour signing during any allowed road closures shall be in accordance with Detour
Plans, when included in the Contract Documents. When plans are not included in the
Contract Documents, the Contractor shall submit plans for detours in accordance with
the “Manual on Uniform Traffic Control Devices (MUTCD)”. In addition, where the
Contractor believes an alternate plan will safely and adequately maintain vehicular and
pedestrian traffic, the Contractor may submit alternate plans to those for traffic control
and detours required by MUTCD or contract documents. Such alternate plans must
comply with the MUTCD and shall be in writing and submitted to the Engineer at least
ten (15) days in advance of their intended use. In general, detouring of arterial traffic
must be accomplished on streets designated as City Arterials. Detouring of arterial
traffic on non-arterial streets will not be allowed. The acceptance of any alternate plan
shall be entirely at the discretion of the Engineer and the Contractor shall have no claim by reason of a plan being rejected or modified, nor shall there be any additional payment by reason of using a substitute plan.

The Contractor shall notify the Engineer of implementation of any street closures/detours allowed under the Contract via traffic control plans submitted for review/approval at least 10 working days prior to the start of work. Advance notice signing shall be placed a minimum of five (5) working days prior to implementation of any street closure/detour.

A minimum of five (5) working days prior to any street closure, the Contractor shall notify all entities below:

- Tacoma Fire Dept. (253-591-5775)
- Tacoma Police Dept. (253-591-5932)
- LESA Communications Center (253-798-4721 - Opt.#2)
- Tacoma Public Schools Transportation Office (253-571-1853)
- Pierce Transit (253-581-8001)
- Tacoma Environmental Services Solid Waste (253-591-5544)
- Tacoma Public Works Engineering Division (253-591-5500)
- Tacoma Public Works Streets and Grounds (253-591-5495)

1-07.24 Rights of Way (July 23, 2015 APWA GSP)

Delete this section and replace it with the following:

Street Right of Way lines, limits of easements, and limits of construction permits are indicated in the Plans. The Contractor’s construction activities shall be confined within these limits, unless arrangements for use of private property are made.

Generally, the Contracting Agency will have obtained, prior to bid opening, all rights of way and easements, both permanent and temporary, necessary for carrying out the work. Exceptions to this are noted in the Bid Documents or will be brought to the Contractor’s attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public Right of Way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Contracting Agency from the owner of the private property. Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Contracting Agency in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.
Each property owner shall be given 48 hours notice prior to entry by the Contractor. This includes entry onto easements and private property where private improvements must be adjusted.

The Contractor shall be responsible for providing, without expense or liability to the Contracting Agency, any additional land and access thereto that the Contractor may desire for temporary construction facilities, storage of materials, or other Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall file with the Engineer a written permission of the private property owner, and, upon vacating the premises, a written release from the property owner of each property disturbed or otherwise interfered with by reasons of construction pursued under this contract. The statement shall be signed by the private property owner, or proper authority acting for the owner of the private property affected, stating that permission has been granted to use the property and all necessary permits have been obtained or, in the case of a release, that the restoration of the property has been satisfactorily accomplished. The statement shall include the parcel number, address, and date of signature. Written releases must be filed with the Engineer before the Completion Date will be established.

Add the following new sections:

1-07.28 Third Party Beneficiary

All parties agree that the State of Washington shall be and is hereby named as an express third-party beneficiary of this contract, with full rights as such.

1-07.29 State Interest Exclusion Clause

It is anticipated that this project will be funded in part by the Washington State Department of Ecology. Neither the State of Washington nor any of its departments or employees are, or shall be, a party to this contract or any subcontract.

END OF SECTION
1-08 PROSECUTION AND PROGRESS

Add the following new section:
1-08.0 Preliminary Matters
(May 25, 2006 APWA GSP)

1-08.0(1) Preconstruction Conference
(October 10, 2008 APWA GSP)

Prior to the Contractor beginning the work, a preconstruction conference will be held between the Contractor, the Engineer and such other interested parties as may be invited. The purpose of the preconstruction conference will be:

1. To review the initial progress schedule;
2. To establish a working understanding among the various parties associated or affected by the work;
3. To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;
4. To establish normal working hours for the work;
5. To review safety standards and traffic control; and
6. To discuss such other related items as may be pertinent to the work.

The Contractor shall prepare and submit at the preconstruction conference the following:

1. A breakdown of all lump sum items;
2. A preliminary schedule of working drawing submittals; and
3. A list of material sources for approval if applicable.

Add the following new section:

1-08.0(2) Hours of Work
(March 3, 2008 Tacoma GSP)

Except in the case of emergency or unless otherwise approved by the Contracting Agency, the normal straight time working hours for the contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. of a working day with a maximum 1-hour lunch break and a 5-day work week. The normal straight time 8-hour working period for the contract shall be established at the preconstruction conference or prior to the Contractor commencing the work.

If a Contractor desires to perform work on holidays, Saturdays, Sundays, or before 7:00 a.m. or after 6:00 p.m. on any day, the Contractor shall apply in writing to the Engineer for permission to work such times. Permission to work longer than an 8-hour period between 7:00 a.m. and 6:00 p.m. is not required. Such requests shall be submitted to the Engineer no later than noon on the working day prior to the day for which the Contractor is requesting permission to work.

Permission to work between the hours of 9:00 p.m. and 7:00 a.m. during weekdays and between the hours of 9:00 p.m. and 9:00 a.m. on weekends or holidays may also be subject to noise control requirements. Approval to continue work during these hours may be revoked at any time the Contractor exceeds the Contracting Agency’s noise control regulations or complaints are received from the public or adjoining property owners regarding the noise from the Contractor’s operations. The Contractor shall have no claim for damages or delays should such permission be revoked for these reasons.
Permission to work Saturdays, Sundays, holidays or other than the agreed upon normal straight time working hours Monday through Friday may be given subject to certain other conditions set forth by the Contracting Agency or Engineer. These conditions may include but are not limited to: requiring the Engineer or such assistants as the Engineer may deem necessary to be present during the work; requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency employees who worked during such times, on non Federal aid projects; considering the work performed on Saturdays and holidays as working days with regards to the contract time; and considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period. Assistants may include, but are not limited to, survey crews; personnel from the Contracting Agency’s material testing lab; inspectors; and other Contracting Agency employees when in the opinion of the Engineer, such work necessitates their presence.

**Add the following new section:**

**1-08.0(3) Reimbursement for Overtime Work of Contracting Agency Employees**

*(September 29, 2009 Tacoma GSP)*

Where the Contractor elects to work on a Saturday, Sunday, or holiday, or longer than an 8-hour work shift on a regular working day, as defined in the Standard Specifications, such work shall be considered as overtime work. On all such overtime work, city staff may be required at the discretion of the Engineer. In such case, the Contracting Agency may deduct from amounts due or to become due to the Contractor for the costs in excess of the straight-time costs for employees of the Contracting Agency required to work overtime hours.

The Contractor by these specifications does hereby authorize the Engineer to deduct such costs from the amount due or to become due to the Contractor.

**1-08.1 Subcontracting**

*(September 29, 2009 Tacoma GSP)*

*The eighth paragraph is revised to read:*

On all projects funded with Contracting Agency funds only, the Contractor shall certify to the actual amounts paid Disadvantaged, Minority, or Women’s Business Enterprise firms that were used as subcontractors, lower tier subcontractors, manufacturers, regular dealers, or service providers on the contract. This certification shall be submitted to the Engineer, on the form provided by the Engineer, 20 calendar days after physical completion of the contract.

**1-08.1 Subcontracting**

*(May 17, 2018 APWA GSP, Option B)*

*Delete the eighth paragraph.*

*Revise the ninth paragraph to read:*

The Contractor shall comply with the requirements of RCW 39.04.250, 39.76.011, 39.76.020, and 39.76.040, in particular regarding prompt payment to Subcontractors.
Whenever the Contractor withholds payment to a Subcontractor for any reason including disputed amounts, the Contractor shall provide notice within 10 calendar days to the Subcontractor with a copy to the Contracting Agency identifying the reason for the withholding and a clear description of what the Subcontractor must do to have the withholding released. Retainage withheld by the Contractor prior to completion of the Subcontractors work is exempt from reporting as a payment withheld and is not included in the withheld amount. The Contracting Agency’s copy of the notice to Subcontractor for deferred payments shall be submitted to the Engineer concurrently with notification to the Subcontractor.

1-08.4 Prosecution of Work
Delete this section and replace it with the following:

1-08.4 Notice to Proceed and Prosecution of Work
(July 23, 2015 APWA GSP)

Notice to Proceed will be given after the contract has been executed and the contract bond and evidence of insurance have been approved and filed by the Contracting Agency. The Contractor shall not commence with the work until the Notice to Proceed has been given by the Engineer. The Contractor shall commence construction activities on the project site within ten days of the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

When shown in the Plans, the first order of work shall be the installation of high visibility fencing to delineate all areas for protection or restoration, as described in the Contract. Installation of high visibility fencing adjacent to the roadway shall occur after the placement of all necessary signs and traffic control devices in accordance with 1-10.1(2). Upon construction of the fencing, the Contractor shall request the Engineer to inspect the fence. No other work shall be performed on the site until the Contracting Agency has accepted the installation of high visibility fencing, as described in the Contract.

1-08.5 Time for Completion
(March 16, 2016 Tacoma GSP)
Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day following the Notice to Proceed Date. Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any partial or whole day the Engineer declares as unworkable. Within 10 calendar days after the date of each statement, the Contractor shall file a written protest of any alleged discrepancies in it. To be considered by the Engineer, the protest shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of time disputed. By not filing such detailed protest in
that period, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor is approved to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

Revise the sixth paragraph to read:

The Engineer will give the Contractor written notice of the completion date of the contract after all the Contractor’s obligations under the contract have been performed by the Contractor. The following events must occur before the Completion Date can be established:

1. The physical work on the project must be complete; and
2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:
   a. Certified Payrolls (per Section 1-07.9(5)).
   b. Material Acceptance Certification Documents
   c. Reports of Amounts Credited as EIC Participation, as required by the Contract Provisions.
   d. Final Contract Voucher Certification
   e. Copies of the approved “Affidavit of Prevailing Wages Paid” for the Contractor and all Subcontractors
   f. Property owner releases per Section 1-07.24

This section is supplemented with the following:

(March 1, 2004 Tacoma GSP)

This project shall be physically completed within 230 working days.

1-08.9 Liquidated Damages
(August 14, 2013 APWA GSP)

Revise the fourth paragraph to read:

When the Contract Work has progressed to Substantial Completion as defined in the Contract, the Engineer may determine that the work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For overruns in Contract time occurring after the date so established, the formula for liquidated damages shown above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

END OF SECTION
1-09 MEASUREMENT AND PAYMENT

1-09.2 Weighing Equipment

1-09.2(1) General Requirements for Weighing Equipment
(July 23, 2015 APWA GSP, Option 1)

Revise the third paragraph to read:

Scale Operations – “Contractor-provided scale operations” are defined as operations where a scale is set up by the Contractor specifically for the project and most, if not all, material weighed on the scale is utilized for Contract Work. In this situation, the Contractor shall provide, set up, and maintain the scales necessary to perform this Work. The Contracting Agency will provide a person to operate the project scale, write tickets, perform scale checks and prepare reports.

1-09.2(1) General Requirements for Weighing Equipment
(July 23, 2015 APWA GSP, Option 2)

Revise item 4 of the fifth paragraph to read:

4. Test results and scale weight records for each day’s hauling operations are provided to the Engineer daily. Reporting shall utilize WSDOT form 422-027, Scaleman’s Daily Report, unless the printed ticket contains the same information that is on the Scaleman’s Daily Report Form. The scale operator must provide AM and/or PM tare weights for each truck on the printed ticket.

1-09.6 Force Account
(October 10, 2008 APWA GSP)

Supplement this Section with the following:

The Contracting Agency has estimated and included in the Proposal, dollar amounts for all items to be paid per force account, only to provide a common proposal for Bidders. All such dollar amounts are to become a part of Contractor's total bid. However, the Contracting Agency does not warrant expressly or by implication, that the actual amount of work will correspond with those estimates. Payment will be made on the basis of the amount of work actually authorized by Engineer.

(January 13, 2011 Tacoma GSP)

Item #3 of this Section is supplemented with the following:

The Contractor shall submit a comprehensive summary list of all equipment anticipated to be used on the project and their associated AGC/WSDOT Equipment Rental Rates. The list shall include the contractor’s equipment number, make, model, year, operation rate, standby rate, applicable attachments and any other applicable information necessary to determine the applicable rates in accordance with this section. In addition, the contractor shall submit an Equipment Watch rate sheet (www.equipmentwatch.com) for each piece of equipment in the summary list. Access to the Equipment Watch website is available at the City’s Construction Management Office.
The basis of payment will be the actual quantities of Work performed according to the Contract and as specified for payment.

The Contractor shall submit a breakdown of the cost of lump sum bid items at the Preconstruction Conference, to enable the Project Engineer to determine the Work performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown, the Project Engineer will make a determination based on information available. The Project Engineer's determination of the cost of work shall be final.

Progress payments for completed work and material on hand will be based upon progress estimates prepared by the Engineer. A progress estimate cutoff date will be established at the preconstruction conference.

The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month thereafter until the Completion Date. Progress estimates made during progress of the work are tentative, and made only for the purpose of determining progress payments. The progress estimates are subject to change at any time prior to the calculation of the final payment.

The value of the progress estimate will be the sum of the following:

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor’s lump sum breakdown for that item, or absent such a breakdown, based on the Engineer’s determination.
3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;
2. The amount of progress payments previously made; and
3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.
This section is supplemented with the following:
(January 6, 2015 Tacoma GSP)

Breakdowns of all lump sum items shall be provided for all lump sum items and shall include all costs for labor, equipment, materials, and taxes (as applicable) associated with the lump sum item. Washington State Department of Revenue Rules 170 and 171 apply to lump sum items per Section 1-07.2 of the WSDOT State Amendments to the Standard Specifications.

Stockpiled Material - The point of acceptance of stockpiled material for payment and quality shall be at the time of incorporation into the contract.

1-09.9(1) Retainage
(May 10, 2006 Tacoma GSP)
The fourth paragraph is supplemented with the following:

6. A “General Release to the City of Tacoma” is on file with the Contracting Agency.
7. A release has been obtained from the City of Tacoma’s City Clerk’s Office.

1-09.13(3)A Administration of Arbitration
(October 1, 2005 APWA GSP)
Revise the third paragraph to read:

The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of the county in which the Contracting Agency’s headquarters are located. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the contract as a basis for decisions.

END OF SECTION
1-10  TEMPORARY TRAFFIC CONTROL

1-10.1 General

1-10.1(2) Description
(July 22, 2019 Tacoma GSP)
The first sentence of the fourth paragraph is revised to read:
The Contractor shall keep lanes, on-ramps, and off-ramps open to traffic at all times except when Work requires closure(s) that have been requested and approved in accordance with section 1-10.2(2).

The third sentence of the fourth paragraph is revised to read:
Approved lane and ramp closures shall be for the minimum time required to complete the Work.

This section is supplemented with the following:
Existing signs shall not be removed until the Contractor has provided for temporary measures sufficient to safeguard and direct traffic after existing signs have been removed. Preservation of temporary traffic control and street name signs shall be the sole responsibility of the Contractor.

As the work progresses and permits, temporarily relocated and/or removed traffic signs shall be reset in their permanent location. Permanent signs and other traffic control devices damaged or lost by the Contractor shall be replaced or repaired at the Contractor's expense.

1-10.2 Traffic Control Management

1-10.2(1) General
(January 3, 2017 WSDOT GSP, Option 1)
Section 1-10.2(1) is supplemented with the following:

Only training with WSDOT TCS card and WSDOT training curriculum is recognized in the State of Washington. The Traffic Control Supervisor shall be certified by one of the following:
The Northwest Laborers-Employers Training Trust
27055 Ohio Ave.
Kingston, WA 98346
(360) 297-3035

Evergreen Safety Council
12545 135th Ave. NE
Kirkland, WA 98034-8709
1-800-521-0778
The fifth paragraph is revised to read:

Signs, posts, or supports that are lost, stolen, damaged, destroyed, or which the Engineer deems to be unacceptable while their use is required on the project shall be replaced by the Contractor at their expense.

1-10.3(3)C Portable Changeable Message Sign

This section is supplemented with the following:

Portable Changeable Message Signs shall be required on arterials streets where construction occurs for durations longer than seven (7) calendar days. Signs shall be solar charged and programmable. Signs shall be provided a minimum of seven (7) calendar days prior to construction and remain through the duration of the construction on the arterial street. Signs shall be provided on each end of the arterial street construction zone notifying oncoming traffic of the construction conditions. All costs associated with providing and maintaining the signs for the required duration shall be included in the proposal item, “Project Temporary Traffic Control”, per lump sum.

To prevent a hacker from getting access to the Portable Changeable Message Signs (PCMS), the contractor is required to change the default password and to take other appropriate measures for field access to message control features on the PCMS. In addition, the contractor shall verify the PCMS control box, if any, is secured and locked from tampering during the daily review of the work zone set up and conditions of the traffic control devices.

1-10.4 Measurement

1-10.4(2) Item Bids with Lump Sum for Incidentals

This section is supplemented with the following:

No unit of measure will apply to the position of traffic control manager and it will be considered included in other unit contract prices in the Bid Proposal.
1-10.5 Payment

1-10.5(1) Lump Sum Bid for Project (No Unit Items)
(******)

Section 1-10.5(1) is supplemented with the following:

Costs for layout, installation, removal, and transport of project identification signs, including Department of Ecology project identification signs, shall be included with the Contract lump sum price for “Project Temporary Traffic Control”. This Bid item shall also constitute full compensation for all labor, tools, equipment, and materials necessary and incidental to providing traffic and pedestrian control as required throughout the project duration in compliance with the MUTCD including, but not limited to, temporary illumination, reflective signage, barricades, lights, traffic cones, and temporary pavement markings. Provide flaggers and a Traffic Control Supervisor during all periods of construction activities and include all costs associated with preparing and receiving approval for the Traffic Control Plans, including all revisions and updates necessary throughout the duration of the project. The lump sum cost also includes all payment for obtaining and maintaining traffic control permits and shall be included in the lump sum Bid item “Project Temporary Traffic Control”.

END OF SECTION
2-01  CLEARING, GRUBBING, AND ROADSIDE CLEANUP
(March 17, 2016 Tacoma GSP)

2-01.1 Description
The first sentence of the first paragraph is revised to read:
The Contractor shall clear, grub, and cleanup those areas contained within the “Clearing & Grubbing” limits indicated on the Plans.

This section is supplemented with the following:

This Work shall also include Special Tree Protection measures for retaining specific trees as identified for protection on the Plans.

2-01.2 Disposal of Usable Material and Debris
The second paragraph is revised to read:
The Contractor shall dispose of all debris in accordance with Section 2-01.2(2).

2-01.3 Construction Requirements

2-01.3(1) Clearing
This section is revised to read:
1. Fell trees only within the area to be cleared.
2. Close-cut parallel to the slope of the ground all stumps to be left in the cleared area outside the slope stakes.
3. Close cut all stumps that will be buried by fills 5-feet or less in depth.
4. Follow these requirements for all stumps that will be buried by fills deeper than 5-feet from the top, side, or end surface of the embankment or any structure and are in a location that will not be terraced as described in Section 2-03.3(14):
   a. Close-cut stumps under 18-inches in diameter.
   b. Trim stumps that exceed 18-inches in diameter to no more than 12-inches above original ground level.
5. Leave standing any trees or native growth indicated by the Engineer.
6. Trim all trees to be left standing to the height specified by the Engineer, with a minimum height of eight (8) feet above sidewalk and fourteen (14) feet above the roadway surface. Neatly cut all limbs close to the tree trunk.
7. Thin clumps of native growth as the Engineer may direct.
8. Protect, by fencing if necessary, all trees or native growth from any damage caused by construction operations.

2-01.3(2) Grubbing
Item e is revised to read:
Upon which embankments will be placed, except stumps may be close-cut or trimmed as allowed in Section 2-01.3(1) item 4.
Section 2-01.3(3), including title, is revised to read as follows:

2-01.3(3) Special Tree Protection

Trees which shall require Special Tree Protection and which shall be retained and which require arborist monitoring by a Certified Arborist have been identified on the Plans. For these trees, a Tree Protection Zone (TPZ) has been defined on the Plans. Work within the TPZ must be approved and monitored at all times by the Certified Project Arborist.

Tree protection for these trees shall consist of a 6-foot chain link fence installed at the limits of the TPZ as approved by the Certified Project Arborist. Fence posts shall be installed per City of Tacoma Standard Plan LS-09. Where work is planned within the TPZ, install fencing at the edge of TPZ and move to limits of disturbance at the time that the work within the TPZ is planned to occur. Where trees are protected at the edge of the project boundary, construction limits fencing shall be incorporated as the boundary of tree protection fencing.

Silt fencing within the TPZ of retained trees shall be installed in a manner that does not sever roots. No parking, foot traffic, materials storage or dumping (including excavated soils) is allowed within the TPZ.

Heavy machinery shall remain outside of the TPZ. Access to the TPZ requires approval by the Owner. If the Certified Project Arborist allows, heavy machinery shall only enter the TPZ if soils are protected from the additional load. Acceptable methods of soil protection from heavy machinery include applying ¾ inch plywood over 4 to 6 inches of wood chip mulch over the entire ground surface to be accessed by the heavy machinery. All wood chip mulch placed within the TPZ shall be kept 1 foot away from the base of trees and 6 inches from retained understory vegetation. Wood chip mulch placed in TPZ shall meet the requirements of Section 9-14.5(3).

Contractor shall retain existing paved surfaces within or at the edge of the TPZ for as long as possible. Hardscape removal within the TPZ shall be completed in a manner that does not require machinery to traverse newly exposed soil. Where equipment must traverse the newly exposed soil, all soil protection methods and arborist monitoring requirements within this section apply.

Excavation within the TPZ shall use alternative methods such as pneumatic air excavation or hand digging. If heavy machinery is used within the TPZ, the Contractor shall use flat front buckets. When roots are encountered within the TPZ, the Contractor shall stop all excavation and cleanly sever roots using a sharp saw. Contractor shall not fracture or break roots with excavation equipment. All root severing shall be observed by the Certified Project Arborist. Upon root severing or exposure of roots, the Contractor shall immediately cover the root with soil or mulch and maintain root moisture. The Contractor shall water the roots to maintain a moist condition until the area is back filled.

Fill within the TPZ shall be limited to 1-foot depth maximum of uncompacted well-draining soil. In areas where fill is required, the Certified Project Arborist must review for acceptance. All fill materials must be kept 1-foot at a minimum away from the trunks of trees.
Pruning of trees to be retained for construction or safety clearance shall be done in accordance with American National Standards Institute ANSI-A300 2017 Standard Practices for Pruning. Pruning of trees to remain shall be monitored by the Certified Arborist.

The Certified Project Arborist shall be on site and monitor all ground disturbing work at the edge of or within the TPZ as noted on the Plans. The Certified Project Arborist shall at a minimum have an International Society of Arboriculture (ISA) Certification and ISA Tree Risk Assessment Qualification. Contractor shall provide two (2) weeks advance notice to arborist prior to working within the designated TPZ. All costs for arborist monitoring will be supplied by the Contracting Agency. Contact information for the Certified Project Arborist is:

- Tree Solutions, Contact: Joseph Sutton-Holcomb, phone: (206) 457-9346

**2-01.4 Measurement**

This section is supplemented with the following:

Special Tree Protection will be measured per each tree to be protected and retained.

No separate measurement for payment will be made for all other tree protection as identified on the Plans.

No separate measurement for payment will be made for trimming and cleanup but shall instead be incidental to other items in the Proposal.

**2-01.5 Payment**

This section is supplemented with the following:

“Special Tree Protection”, per each.

The unit Contract price for “Special Tree Protection” per each shall be full payment for all labor, tools, equipment, materials, and permitting necessary to install chain link fence around the TPZ, soil protection methods, wood chip mulch, alternative methods of excavation around existing roots, root severing, mulch, backfill, special root protection methods, and all other work necessary to protect trees to be retained in accordance with these Special Provisions.

END OF SECTION
2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

(******)

2-02.1 Description
This section is supplemented with the following:
The Work included in “Removal of Structures and Obstructions” shall include removal of all structures and obstructions that require removal for completion of the project and that are not included in other bid items, but are shown in the Contract plans.

2-02.3 Construction Requirements

2-02.3(3) Removal of Pavement, Sidewalks, and Curbs
This section is deleted.

Section 2-02.3 is supplemented with the following:

2-02.3(4) Pothole Existing Utility
Add the following new section:

Locations of known possible utility crossings between the planned improvements and existing utilities are shown on the Plans based on available records provided during the design phase of this project. Based on the actual location of utility markings, it may be necessary to uncover existing utilities and determine their exact location.

After completion of field marking of the existing utilities, the Contractor shall determine if an existing utility may be in conflict with the planned improvements. Should a conflict seem likely, the Contractor shall notify the City. If the City concurs or after review of field markings determines a conflict is likely, the Contractor will be directed to expose the location of the subject utility (pothole). When potholing is required by the City, the Contractor shall expose the location of the existing utility and record the size of pipe and horizontal and vertical location on the Contractor’s Record Drawings. Upon receipt of this information, the Engineer will determine if a conflict exists.

2-02.4 Vacant
Section 2-02.4, including title, is modified to read as follows:

2-02.4 Measurement
This section is supplemented with the following:

No specific unit of measure will apply to the lump sum item “Removal of Structure and Obstruction”.

“Pothole Existing Utility” will be measured per each.

2-02.5 Payment
This section is supplemented with the following:
“Removal of Structure and Obstructions”, per lump sum.

The unit contract price for “Removal of Structure and Obstruction” shall be full compensation for all labor, tools, equipment, and materials necessary to remove, haul, and dispose of the material off-site at a Contractor-obtained legal disposal site, or retain items and reinstall as noted on the Plans and as directed by the Engineer. In addition, all backfill and compaction of backfill, as defined in the Plans and these Specifications needed to fill the void left after the removal shall be included in the lump sum cost for “Removal of Structure and Obstruction.”

“Pothole Existing Utility”, per each.

The unit contract price for “Pothole Existing Utility” per each shall be full compensation for all labor, tools, equipment, and materials necessary to expose the locations of existing utilities, record vertical and horizontal locations, backfill, and compact excavated areas per City guidelines. This unit price shall also include the cost for rescheduling work as required to allow the Engineer to issue any design modifications as may be required.

END OF SECTION
2-03 ROADWAY EXCAVATION AND EMBANKMENT

(******)

2-03.1 Description
The last sentence of the first paragraph is deleted.

2-03.3(5) Slope Treatment
This section is deleted.

2-03.3(14) Embankment Construction

2-03.3(14)C Compacting Earth Embankments
This section is supplemented with the following:

Contractor shall use Method C unless otherwise approved by the Engineer.

2-03.3(14)E Unsuitable Foundation Excavation
This section is supplemented with the following:

Following roadway excavation and/or clearing and grubbing to expose the subgrade, unsuitable foundation material shall be removed from the subgrade and the void shall be backfilled and compacted with crushed surfacing base course as directed by the Engineer to provide an unyielding base for roadway embankment.

Subgrade is defined as native soils located below existing pavements, roadway surfacing, roadway excavation, and/or vegetated surfaces, including any duff layer.

2-03.3(19) Removal of Pavement, Sidewalks, Curbs, and Gutters
This section is deleted.

END OF SECTION
2-06 SUBGRADE PREPARATION

2-06.1 Description

Supplement this section with the following:

The Work consists of preparing graded Roadbed for permeable ballast for paving permeable roadway that is designed to infiltrate into the native ground.

The Work shall include the construction of a filter sand layer beneath the permeable ballast for permeable pavement where shown on the Plans. The filter sand layer shall meet Special Provisions Section 9-03.13. Contractor shall install the filter sand layer per Special Provisions Section 4-05.

2-06.3 Construction Requirements

Add the following new section:

2-06.3(3) Subgrade for Permeable Pavements

(March 9, 2016 APWA GSP)

Before placing permeable ballast the Contractor shall bring the Subgrade to the required line, grade, and cross-section. The Contractor shall compact the Subgrade to a depth of 6 inches to at least 90 percent, but not more than 92 percent, of the maximum density as determined by the compaction control tests described in Section 2-03.3(14)D. Two (2) density tests will be conducted for every 5,000 square feet of prepared subgrade; or four (4) tests per 200 lineal feet of roadway or sidewalk. All subgrade shall be firm and unyielding as determined by the Engineer.

The Contractor shall take measures to protect the prepared and approved subgrade from traffic, water run-on, standing water, or other damage. Subgrade that has been over compacted shall be scarified to a minimum depth of eight (8) inches and recompacted.

Material used to protect the Subgrade from traffic or provide access to adjacent facilities shall be removed and the subgrade compacted prior to placing geotextile, if used and/or permeable ballast.

2-06.5 Measurement and Payment

(March 9, 2016 APWA GSP)

Supplement this section with the following:

Measurement for Subgrade for Permeable Pavement will be in accordance with 2-06.5.

Preparing, maintaining, testing, and restoring (as necessary) subgrade for permeable pavement shall not be measured for payment.

END OF SECTION

2-07 WATERING

(August 3, 2009 Tacoma GSP)
2-07.3 Construction Requirements

The last sentence of the first paragraph is revised to read:

The Engineer may direct that the Contractor apply water during non-working hours such as evenings, weekends, or recognized holidays.

Section 2-07.3 is supplemented with the following:

2-07.3(1) Water Supplied from Hydrants

There is no guarantee that all fire hydrants will be available for use for cleaning, lining, or any other construction activities associated with this project. Prior to construction activities, it shall be the Contractor's responsibility to verify which hydrants will be available by contacting Tacoma Water. The Contractor shall use only those hydrants designated by Tacoma Water.

Water supplied from hydrants governed by Tacoma Water shall be used in strict compliance with the "Operating Procedures for the use of Water Division Hydrants" available at the Tacoma Water Permit Counter.

The Contractor shall obtain a Hydrant Permit prior to start of work by contacting the Water Permit Counter at (253) 502-8247, 2nd floor, Tacoma Public Utilities, Administrative Building, 3628 South 35th Street, Tacoma, WA 98409. A copy of the approved Hydrant Permit shall be submitted to the Engineer.

Contractor personnel shall be in possession of a valid Tacoma Public Utilities Hydrant Certification Card prior to obtaining a permit. If necessary, contractor personnel shall undergo training to receive the required certification. Contact the Water Permit Counter to set up training as necessary.
2-09 STRUCTURE EXCAVATION
(March 17, 2016 Tacoma GSP)

2-09.3 Construction Requirements
Section 2-09.3 is supplemented with the following:

Shoring shall be constructed with provisions made to allow the Inspector to enter the shored trench at any time.

2-09.3(1) General Requirements

2-09.3(1)D Disposal of Excavated Material
Section 2-09.3(1)D is supplemented with the following:

All unsuitable material removed as structure excavation shall be disposed of off-site at a legal disposal site.

2-09.4 Measurement
This section is supplemented with the following:

Longitudinal Limits. For all storm and sanitary sewers, the longitudinal measurement will be from center of manhole to center of manhole or to the inside face of catch basins and similar type structures.

The fourth paragraph is revised to read:

There will be no specific unit of measure for the excavation required for manholes, catch basins, grate inlets, and drop inlets.

2-09.5 Payment
The pay item for “Structure Excavation Class B” is supplemented with the following:

“Structure Excavation Class B”, per cubic yard.

The unit Contract price for “Structure Excavation Class B” shall be full payment for all excavation, removal of water; storing, protecting and re-handling of suitable backfill material; backfilling of the trench, compaction of backfill, and all other work necessary for the construction of the sewer trench.

END OF SECTION
2-12 CONSTRUCTION GEOSYNTHETIC
*****

2-12.1 Description
This section is supplemented with the following:
This work shall consist of furnishing and installing geotextile for separation in conjunction
with the filter sand layer installation under the permeable pavement areas.

2-12.2 Materials
This section is supplemented with the following:
The Geotextile for Separation shall be a non-woven geotextile meeting the requirements
of Section 9-33.2(1), Table 3.

2-12.3 Construction Requirements
This section is supplemented with the following:
The geomembrane liner shall be jointed / seamed as per the manufacture’s
recommendations.

2-12.4 Measurement
This section is modified with the following:
Construction Geotextile for Separation used in conjunction with the filter sand layer
installation shall be measured as “Construction Geotextile for Separation”, per square
yard.
Add the following new section:

2-13 VEGETATION REMOVAL
(March 17, 2003 Tacoma GSP)

2-13.1 Description
This Work shall consist of the removal and disposal of vegetation identified on the Plans.

2-13.2 Definition of Vegetation
A “tree” is defined as any self-supporting, woody perennial plant having a main stem (trunk) and which normally attains a height of at least ten (10) feet at maturity, usually with one (1) main stem or trunk and many branches.

A “shrub” is defined as any woody perennial plant which normally attains a height of less than ten (10) feet at maturity and which can be construed to have some landscape value.

2-13.3 Construction Requirements
All stumps not identified for removal shall be close-cut parallel to the slope of the ground.

All stumps identified for removal shall be ground to eight inches below final grade.

Disposal of all debris shall be in accordance with Section 2-01.2(2).

2-13.4 Measurement
Trees shall be classified by the measured circumference at a point four and one-half (4-1/2) feet above average ground level. Trees that have several stems at the four and one-half (4-1/2) foot height will be considered a tree clump. The largest diameter single stem will be measured and will dictate the class rating. Only the largest, single stem in the clump will be utilized for measurement and payment.

Stumps shall be classified by the measured circumference at the highest point of the stump above the average ground level or a point four and one-half (4-1/2) feet above the average ground level, which ever is less.

Trees and stumps will be classified as follows:

<table>
<thead>
<tr>
<th>Diameter Range</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 12 inches</td>
<td>Class 0</td>
</tr>
<tr>
<td>12 inches up to but not including 36 inches</td>
<td>Class I</td>
</tr>
<tr>
<td>36 inches up to but not including 72 inches</td>
<td>Class II</td>
</tr>
<tr>
<td>72 inches up to but not including 127 inches</td>
<td>Class III</td>
</tr>
<tr>
<td>127 inches or more (Tree height greater than 30 feet)</td>
<td>Class IV</td>
</tr>
<tr>
<td>127 inches or more (Tree height of 30 feet or less)</td>
<td>Class V</td>
</tr>
</tbody>
</table>

Remove Tree and Remove Stump will be measured per each for each class.

Remove Shrub will be measured per each.
2-13.5 Payment

Payment will be made in accordance with Section 1-04.1.

“Remove Tree, Class__”, per each

“Remove Stump”, per each

“Remove Shrub”, per each

The unit Contract price shall be full pay to remove and dispose of the vegetative matter.

The unit Contract price for “Remove Tree, Class 0” and “Remove Tree, Class I” shall include the removal of the stump.

END OF SECTION
Add the following new section:

2-14  PAVEMENT REMOVAL
(March 17, 2003 Tacoma GSP)

2-14.1 Description

The Work described in this section includes the removal and disposal of pavement surfaces identified on the Plans or as marked in the field.

2-14.2 Pavement Classification

Removal of pavement will be according to type and class based on composition and thickness, as defined below:

- **Type I**: Pavement removal where all or portions of the existing pavement is being removed in conjunction with street construction or any other removal not described below for Type II or Type III.
- **Type II**: Pavement removal required for the placing of utilities at greater and varying depths, such as sewers.
- **Type III**: Pavement removal required for narrow and shallow utility cuts in order to install light cables, conduits and similar shallow utilities.
- **Class A2**: Class A2 pavement removal shall apply to the removal of asphalt concrete, bituminous road surfacing, multiple lift bituminous surface treatments or any combination of these components having an average thickness of two inches or less.
- **Class A4**: Class A4 pavement removal shall apply to the removal of asphalt concrete, bituminous road surfacing, multiple lift bituminous surface treatments or any combination of these components having an average thickness between two inches and four inches.
- **Class A8**: Class A8 pavement removal shall apply to the removal of asphalt concrete, bituminous road surfacing, multiple lift bituminous surface treatments or any combination of these components having an average thickness between four inches and eight inches.
- **Class C6**: Class C6 pavement removal shall apply to all non-reinforced cement concrete pavements or slabs having an average thickness of six inches or less. After the curbs and pavement have been constructed, the Contractor may be required to remove additional sidewalk necessary to provide proper connections and grades, as determined by the Engineer.
- **Class C12**: Class C12 pavement removal shall apply to all non-reinforced cement concrete pavements or slabs having an average thickness of between 6 inches and 12 inches.
2-14.3 Construction Requirements

All final meetlines shall be sawcut.

Where monolithic cement concrete pavement and curb are being removed, the curb removal shall be considered as pavement removal, and the measurement for payment will be to the back of the curb.

The removal of existing street improvements shall be conducted in such a manner as not to damage utilities and any portion of the improvement that is to remain in place. Any deviation in this matter will obligate the Contractor, at no expense to the Contracting Agency, to repair, replace, or otherwise make proper restoration to the satisfaction of the Engineer.

In the event a pavement averages more than the maximum thickness specified for its class, an additional payment will be made to cover the extra thickness removed by a proportional conversion into additional square yards.

2-14.4 Measurement

Pavement removal will be measured per square yard.

Type I pavement removal will be measured in its original position through the use of survey techniques.

2-14.5 Payment

Payment will be made in accordance with Section 1-04.1.

"Remove Existing Pavement, Type ___Class___", per square yard

All costs associated with saw cutting meet lines shall be included in the unit Contract price for pavement removal.

END OF SECTION
Add the following new section:

2-15  CURB AND CURB AND GUTTER REMOVAL
(March 17, 2003 Tacoma GSP)

2-15.1 Description

The Work described in this section includes the complete removal and disposal of curbs and curb and gutter identified on the Plans or as marked in the field.

2-15.2 Curb Classification

Removal of curb and/or curb and gutter will be based on composition, as defined below:

**Integral Curb** - Integral curb shall consist of curb that is constructed monolithic with the adjacent cement concrete pavement.

**Curb** - Curb may consist of cement concrete curb, granite curb, or any other combination of rigid material that extends below the pavement surface elevation.

**Extruded/PreCast Curb** - Extruded or precast curb may consist of asphalt or concrete extruded or precast curb that is installed on a pavement surface.

**Curb and Gutter** - Curb and gutter may be cement concrete, or a cement concrete curb with a brick gutter on a cement concrete base, or other combination of rigid material.

2-15.3 Construction Requirements

Integral curb removal shall consist of the removal of the curb and the integral base section under the curb. The removal shall be accomplished by sawcutting along the face of the curb.

The removal of the curb and/or curb and gutter shall be conducted in such a manner as not to damage utilities and any portion of the improvement that is to remain in place. Any deviation in this matter will obligate the Contractor, at no expense to the Contracting Agency, to repair, replace, or otherwise make proper restoration to the satisfaction of the Engineer.

2-15.4 Measurement

Curb and curb and gutter removal will be measured per linear foot.

2-15.5 Payment

Payment will be made in accordance with Section 1-04.1.

“Remove Curb and Gutter”, per linear foot

All costs associated with saw cutting necessary for the removal of curb and/or curb and gutter shall be included in the unit Contract price for removal.

END OF SECTION
Add the following new section:

2-16  REMOVAL OF CATCH BASINS, MANHOLES, CURB INLETS, ETC.
(March 17, 2003 Tacoma GSP)

2-16.1 Description
The Work described in this section includes the complete removal and disposal of catch basins, manholes, and curb inlets as identified on the Plans.

2-16.2 Vacant

2-16.3 Construction Requirements
Where the structures are removed, the excavation shall be backfilled with native material if deemed suitable by the Engineer or imported backfill material. Material determined by the Engineer to be unsuitable at the time of excavation shall be removed and replaced with imported backfill material. Payment will be made at the unit contract price of the item in the proposal, or as extra work under Section 1-04.4 if not included as an item in the proposal.

All pipe openings shall be plugged in accordance with 7-08.3(4).

The removal of the structures shall be conducted in such a manner as not to damage utilities and any portion of the improvement that is to remain in place. Any deviation in this matter will obligate the Contractor, at no expense to the Contracting Agency, to repair, replace, or otherwise make proper restoration to the satisfaction of the Engineer.

2-16.4 Measurement
The removal of catch basins, manholes, and curb inlets will be measured per each.

2-16.5 Payment
Payment will be made in accordance with Section 1-04.1.

“Remove Catch Basin”, per each

“Remove Manhole”, per each

“Remove Curb Inlet”, per each

All costs associated with the placement and compaction of the backfill material shall be included in the unit Contract price for removal.

END OF SECTION
3-04  ACCEPTANCE OF AGGREGATE
(April 1, 2012 Tacoma GSP)

3-04.1 Description
The first and third paragraphs are deleted.
The fourth paragraph is revised to read:

Nonstatistical evaluation will be used for the acceptance of aggregate materials.

3-04.3(1) General
The first sentence is revised to read:

For the purpose of acceptance sampling and testing, all test results obtained for a material type will be evaluated collectively.

3-04.3(4) Testing Results
This section is replaced with the following:

The results of all acceptance testing will be provided by the City’s Project Engineer within 3 working day of testing.

3-04.3(6) Statistical Evaluation
This section is deleted:

END OF SECTION
4-04 BALLAST AND CRUSHED SURFACING
(******)

4-04.1 Description
This section is supplemented with the following:

Recycled crushed concrete material shall not be utilized as permeable ballast

4-04.3 (5) Shaping and Compaction
(March 9, 2016 APWA GSP)
This section is supplemented with the following:

Immediately following spreading and final shaping each layer of surfacing shall be lightly compacted in one lift until no visible movement of aggregate is observed resulting in a firm and unyielding condition, as determined by the Engineer.

4-04.5 Payment
This section is supplemented with the following:

All costs for labor, equipment, and materials required to furnish, place, and compact the crushed surfacing top course for all asphalt concrete approaches and non-paved approaches shall be included in the unit Contract price for “Crushed Surfacing Top Course”, per ton.

“Permeable Ballast”, per ton.

All costs for labor, equipment, and materials required to furnish, place and compact the permeable ballast shall be included in the unit contract price for “Permeable Ballast”, per ton.

END OF SECTION
Add the following new section:

4-05  FILTER SAND

4-05.1 Description

This work shall consist of constructing one layer of filter sand upon prepared subgrade in accordance with these Special Provisions and in conformity with the line, grades, depths and typical cross sections. The filter sand installation provides treatment and promotes infiltration along the entire permeable pavement subgrade, stabilizes the base layer, and protects the underlying soil from compaction.

4-05.2 Materials

Materials shall meet the requirements of the following Section:

Filter Sand Layer  Special Provision 9-03.13

4-05.3 Construction Requirements

Filter sand shall be uniformly spread upon the prepared subgrade to the depth, width, and cross-section where shown on the Plans. Filter sand shall be compacted with a minimum 10-ton vibratory roller, making two passes in static mode.

4-05.4 Measurement

“Filter Sand” will be measured by the ton based on certified truck tickets collected by the inspector at the end of each working day. Tickets will be accepted for payment after the end of each working day only when prior arrangements have been made with the inspector.

4-05.5 Payment

Payment will be made in accordance with Section 1-04.1 for the following Bid Item:

“Filter Sand”, per ton

The contract Bid shall be full compensation for all labor, materials, tools, and equipment necessary or incidental to satisfactorily completing the work as defined in these Special Provisions and the Plans, including procuring, hauling, placing, compacting, and grading.

END OF SECTION
Add the following new section:

4-06 PERMEABLE ASPHALT TREAT BASE (PATB)

4-06.1 Description

Permeable asphalt treated permeable base (PATB) consists of a compacted course of base material which has been weatherproofed and stabilized by treatment with an asphalt binder.

This work consists of constructing one or more courses of permeable asphalt treated base (PATB) upon a prepared foundation or base in accordance with these Specifications and in conformity with the lines, grades, thicknesses, and typical cross-sections shown in the Plans or as established by the Engineer.

4-06.2 Materials

Materials shall meet the requirements of the following sections:

- Asphalt  
- Anti-Stripping Additive

4-06.2(1) Aggregates for Permeable Asphalt Treated Base (PATB)

General Requirements

Aggregates for permeable asphalt treated base shall be manufactured from ledge rock, talus, or gravel, in accordance with the provisions of Section 3-01 that meet the following test requirements:

- Los Angeles Wear, 500 Rev. 30% maximum
- Degradation Factor 15 minimum

4-06.2(2) Grading

Aggregates for permeable asphalt treated base (PATB) shall meet the following requirements for grading:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing *</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/2&quot;</td>
<td>100</td>
</tr>
<tr>
<td>1&quot;</td>
<td>90 - 100</td>
</tr>
<tr>
<td>3/4&quot; square</td>
<td>80-95</td>
</tr>
<tr>
<td>1/2&quot; square</td>
<td>35-65</td>
</tr>
<tr>
<td>3/8&quot; square</td>
<td>25-45</td>
</tr>
<tr>
<td>U.S. No. 4</td>
<td>0 - 30</td>
</tr>
</tbody>
</table>
The aggregate shall consist of a combination of crushed and natural aggregates with a percent fracture greater than 75% on one face on the No. 4 sieve and above, in accordance with the field operating procedures for AASHTO T 335.

### 4-06.2(3) Test Requirements

When the aggregates are combined within the limits set forth in Section 9-03.6(2) and mixed in the laboratory with the designated grade of asphalt, the mixture shall meet the following test values:

<table>
<thead>
<tr>
<th>Test Requirement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Theoretical Maximum</td>
<td>80 @ 75 gyrations (approximate)</td>
</tr>
<tr>
<td>Specific Gravity (Gmm)</td>
<td>= 20% void space</td>
</tr>
<tr>
<td>AASHTO T324, WSDOT TM T718 or ASTM D3625</td>
<td>Pass (Acceptable anti-strip evaluation tests)</td>
</tr>
</tbody>
</table>

The sand equivalent value of the mineral aggregate for permeable asphalt treated base (PATB) shall not be less than 35.

### 4-06.2(4) Paving Asphalt

The grade of paving asphalt binder shall be PG 58V-22 unless otherwise specified by the Contract.

The manufacture of PATB may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming that allow for lower mixing and placement temperatures without impacting the final PATB pavement properties.

### 4-06.3 Construction Requirements

#### 4-06.3(1) Asphalt Mixing Plant

Asphalt mixing plants for PATB shall meet the following requirements:

##### 4-06.3(1)A Heating

The plant shall be capable of heating the aggregates to the required temperature.

##### 4-06.3(1)B Proportioning

The mixing plant shall be capable of proportioning: the aggregates to meet the Specifications, and the asphalt binder at the rate specified in the approved job mix formula (JMF). If the aggregates are supplied in two or more sizes, means shall be
provided for proportioning or blending the different sizes of aggregates to produce material meeting the Specification requirements

4-06.3(1)C Mixing
The mixer shall be capable of producing a uniform mixture of uniformly coated aggregates meeting the requirements of these Specifications.

4-06.3(2) Preparation of Aggregates
Aggregates for PATB shall be stockpiled before use in accordance with the requirements of Section 3-02. The aggregates shall be heated in the Asphalt Mixing Plant in compliance with the JMF and related temperature viscosity curves for the asphalt binder grade specified.

4-06.3(2)A Mix Design
The asphalt binder for PATB shall be PG 58V-22 polymer modified or higher grade unless otherwise stated. Binder content shall be between 3.0% and 4.5% by total weight of the mix, and will be the highest percentage that passes void requirements test at N\textsubscript{design} = 75 gyrations. The binder content tolerance shall be ± 0.3% during production/placement of the PATB. The Contractor shall adjust the aggregate to meet the targeted void space specification.

Target void space shall be approximately 20% per ASTM D3203 to determine binder content. Field placed density shall meet the requirements in section 4-06.3(9) for Density & Infiltration Testing for Acceptance.

The Contractor shall include a mix design submittal documenting the PATB mix design test results presented alongside the mix design specification criteria included in this Specification, along with the submittal temperature-viscosity curves from the polymer-modified asphalt binder supplier showing the recommended mixing and compaction temperatures developed for dense graded HMA applications.

The Contractor shall determine anti-strip requirements for PATB and provide data for anti-strip dosage as part of the mix design approval process. The PATB mix shall be tested for its resistance to stripping by water in accordance with ASTM D-3625. If the estimated coating area is not above 95 percent, a Qualified Products List (QPL) anti-stripping agent shall be added to the PATB to a level that achieves 95 percent plus asphalt binder retention using ASTM D-3625. The Contractor shall be responsible for conducting the anti-stripping evaluation and providing a report to the Engineer. A documented anti-strip evaluation (either AASHTO T324 or WSDOT TM T718) of an existing dense graded hot mix asphalt (HMA) from the same aggregate source and binder supplier as the proposed PATB may be used to document acceptable anti-strip dosage rates in lieu of ASTM D-3625 testing.
4-06.3(4) Mixing

The asphalt treated permeable base shall be mixed in accordance with the requirements of Section 5-04.3(8).

4-06.3(5) Hauling Equipment

Hauling equipment for asphalt treated permeable base shall conform to the requirements of Section 5-04.3(2).

4-06.3(6) Spreading and Finishing

Permeable asphalt treated base shall be spread with a spreading machine equipped with a stationary, vibratory, or oscillating screed or cut-off device, subject to the approval of the Engineer. Approval of the equipment shall be based on a test section demonstrating that the finished product will meet all requirements of the Specifications. Automatic controls will not be required.

The internal temperature of the PATB mixture at the time final rolling and targeted consolidation is achieved shall be a minimum of 185°F. Rollers shall only be operated in the static mode when the internal temperature of the PATB in less than 175°F.

Unless otherwise directed by the Engineer the nominal compacted depth for any layer of PATB shall not exceed 0.40 feet. A light tack coat (approximately 0.02 gallons/square yard residual asphalt) shall be applied between lifts of PATB. A tack coat shall also be applied between the PATB surface and the subsequent paving lifts when cleaning of the PATB surface is necessary.

Tack coat shall be uniformly applied to cover the existing porous pavement with a thin film of residual asphalt free of streaks and bare spots. A heavy application of tack coat shall be applied to all joints. The spreading equipment shall be equipped with a thermometer to indicate the temperature of the tack coat material.

Equipment shall not operate on tacked surfaces until the tack has broken and cured. If the Contractor’s operation damages the tack coat it shall be repaired prior to placement of the PHMA.

Unless otherwise approved by the Engineer, the tack coat shall be CSS-1 or CSS-1h emulsified asphalt. The CSS-1 and CSS-1h emulsified asphalt may be diluted with water at a rate not to exceed one part water to one part emulsified asphalt. The tack coat shall not exceed the maximum temperature recommended by the emulsified asphalt manufacturer.

4-06.3(7) Subgrade Protection Course

Unless otherwise specified by the Engineer, the Contractor shall place the PATB as a protection for the prepared foundation or base on all sections of individual Roadways which are to receive PATB as soon as 1,500 square yards of prepared foundation or base is completed. This requirement shall not be limited to contiguous areas on the project.
The surface of the prepared foundation or base protection layer when constructed on a grading project shall conform to grade and smoothness requirements that apply to the prepared foundation or base upon which it is placed.

4-06.(8) Finish Course

The final surface course of the PATB, excluding shoulders, shall not deviate at any point more than ¼ inch from the bottom of a 10-foot straightedge laid in any direction on the surface on either side of the Roadway crown. Failure to meet this requirement shall necessitate sufficient surface correction to achieve the required tolerance, as approved by the Engineer, at no expense to the Contracting Agency.

When portland cement concrete pavement is placed on an asphalt base, the surface tolerance of the asphalt base shall be such that no elevation lies more than 0.05 feet below nor 0.00 feet above the plan grade minus the specified plan depth of portland cement concrete pavement. Prior to placing the portland cement concrete pavement, any such irregularities shall be brought to the required tolerance by grinding or other means approved by the Engineer, at no expense to the Contracting Agency.

4-06.3(9) Density & Infiltration Testing for Acceptance

The PATB shall be consolidated to a firm and unyielding state. The Contractor will develop a roller pattern that will initially consolidate the pavement structure and then use static rolling only thereafter to prevent over compaction. The PATB shall be compacted to a density of not less than 80% of the maximum theoretical (Rice) density established for the mix by WSDOT FOP for AASHTO T209. In place Nuclear Density Gauge testing shall be performed by the Contractor to monitor the consolidation effort and to avoid over compaction. The frequency of these tests shall be at the discretion of the Engineer. The use of equipment which results in damage to the materials, over consolidates the PATB or produces substandard workmanship will not be permitted.

Pneumatic tire rollers shall not be used.

The Contractor shall conduct infiltration tests on the finished PATB per ASTM C1701 at locations chosen by the Engineer. Newly-placed PATB shall have a minimum infiltration rate of 150 inches/hour. Infiltration tests shall be completed every 150 linear feet of roadway and conducted in accordance with ASTM C1701. Target density may be adjusted and used for acceptance, at the discretion of the Engineer, if the PATB is consistently meeting the 150 inches/hour acceptance standard.

If the measured infiltration rate is less than 150 inches/hour, the Contractor shall conduct four additional tests as follows in line with the paver direction of travel. Two tests upstream and two tests downstream of the initial test location shall be taken at distances of 20 feet and 40 feet. Results of the additional tests will be averaged. The Contractor shall conduct additional testing upstream and downstream to identify areas to be removed. If the average infiltration rate is less than required the Contractor shall remove and replace the failing PATB areas at the direction of the Engineer and at no cost to the Contracting Agency.
4-06.4 Measurement

PATB will be measured by the ton in accordance with Section 1-09.2, based on certified truck tickets collected on the day of placement. No deductions will be made for the weight of asphalt binder, anti-stripping additive, tack coating between lifts or any other component of the mixture.

4-06.5 Payment

Payment will be made for the following Bid item:

“Asphalt Treated Permeable Base, PG ___ ER”, per ton.

The unit contract price per ton for “Asphalt Treated Permeable Base, PG ___ ER” shall be full pay for all labor, equipment, and materials required to construct the PATB including joints, where required, haul, compaction, tack coat, anti-stripping additive, if required, and Contractor testing as specified.

END OF SECTION
5-04 HOT MIX ASPHALT
(April 1, 2018 Tacoma GSP)

The title of this section is revised to read:

5-04 POROUS ASPHALT AND HOT MIX ASPHALT
(April 1, 2018 Tacoma GSP)

This section is revised according to the following overriding provisions:

Nonstatistical or test point evaluation shall be the method for HMA compaction acceptance for all HMA pavement, except where visual or commercial evaluation is specified. Visual evaluation shall be considered synonymous with commercial evaluation. The Contracting Agency will not be required to perform any acceptance by statistical evaluation.

All references to “statistical” are revised to read “nonstatistical”, and “nonstatistical” evaluation shall be considered synonymous with “test point” evaluation. Thus, all Specifications for test procedures, methods, construction requirements, and requirements for evaluation and acceptance shall apply to the Work with the following exceptions:

• The Contracting Agency shall not be required to perform statistical analysis of any acceptance test results.
• Quantities for sublots and lots shall be as determined by the Engineer. If test results are found not to be within specification requirements, additional testing as needed to determine a CPF may be performed.
• The Contracting Agency shall not be required to make price adjustments based on pay factors and composite pay factors.

5-04.1 Description

This section is supplemented with the following:

HMA pavement may also consist of fiber reinforcement evenly distributed throughout the approved mix.

5-04.2 Materials

5-04.2(1) How to Get an HMA Mix Design on the QPL
(April 1, 2018 Tacoma GSP)

For Subsection 5-04.2(1) the term “Contracting Agency” is revised to read “WSDOT”.

Add this new section:

5-04.2(1)D Fiber Reinforced HMA

Fiber reinforcement shall consist of Aramid fibers and polyolefin fibers, with the polyolefin fibers intended to keep the Aramid fibers together until incorporation into the HMA mix. Once incorporated into the mix and during the HMA production process polyolefin fibers will melt and/or become plastically deformed allowing Aramid fibers to separate.
Aramid fibers shall meet the following requirements:

- **Length**: ¾" (19mm)
- **Form**: Monofilament
- **Acid/Alkali Resistance**: Inert
- **Tensile Strength**: 400,000 psi
- **Specific Gravity**: 1.44
- **Operating Temperatures**: -300° F to 800° F (-73° C to 427° C)

Polyolefin fibers shall meet the following requirements:

- **Length**: ¾" (19mm)
- **Form**: Fillibrated
- **Acid/Alkali Resistance**: Inert
- **Specific Gravity**: 0.91

### 5-04.2(2) Mix Design – Obtaining Project Approval
(April 1, 2018 Tacoma GSP)

*This section is revised to read:*

The Contactor shall submit each HMA mix design to the Contracting Agency on WSDOT Form 350-042. The Contractor shall provide a mix design based upon 3 million ESAL’s.

No paving shall begin prior to the HMA mix design acceptance by the Engineer for the Job Mix Formula (JMF) that will be used for the same paving. The Contracting Agency will evaluate HMA mix design submittals according to Visual Evaluation per Table 1. The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the approval of the Project Engineer and must be made in accordance with Section 9-03.8(7).

Mix designs for HMA shall have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2) and 9-03.8(6). The Contractor shall determine anti-strip additive requirements for the HMA and submit laboratory test data for anti-stripping and rutting in accordance with the following options:

- Hamburg Wheel track Test and Section 9-03.8(2), or
- Tensile Strength Ratio (TSR) Test per AASHTO T 283, or
- Previous WSDOT Lab mix design verification test data and stripping evaluation, per the Engineer’s discretion and as stated below.

With the HMA mix design submittal the Contractor shall provide one of the following mix design verification certifications for Contracting Agency review:

- The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.
- The proposed HMA mix design on WSDOT Form 350-042 with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.**
- The Mix Design Report for the proposed HMA mix design developed by a qualified City or County laborat that is within one year of the approval date.**
**The mix design shall be performed by a lab accredited by a national authority such as Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction Materials Engineering Council (CMEC’s) ISO 17025 or AASHTO Accreditation Program (AAP) and shall supply evidence of participation in the AASHTO resource proficiency sample program.

At the discretion of the Engineer, the Contracting Agency may accept verified mix designs older than 12 months from the original verification date with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

For the use of Commercial HMA, the Contractor shall select a class of HMA and design level of Equivalent Single Axle Loads (ESAL’s) appropriate for the required use. Commercial HMA can be accepted by a Contractor certificate of compliance letter stating the material meets the HMA requirements defined in the Contract.

5-04.2(2)B Using HMA Additives (April 1, 2018 Tacoma GSP)

This section is revised to read:

The Contractor may, at the Contractor’s discretion, elect to use additives that reduce the optimal mixing temperature or serve as a compaction aid for producing HMA. Additives include organic additives, chemical additives and foaming processes. The use of Additives is subject to the following:

- Do not use additives that reduce the mixing temperature in the production of High RAP/Any RAS mixtures.
- Before using additives, obtain the Engineer’s approval using WSDOT Form 350-076 to describe the proposed additive and process.

Add this new sub-section (equals March 9, 2016 APWA GSP except for PG 58V-22):

5-04.2(2)C Mix Design for PHMA (April 1, 2018 Tacoma GSP)

Mix Designs for PHMA shall be submitted to the Engineer on Washington State DOT Form 350-042 with the additional PHMA test data required by this specification provided as a one page supplemental attachment. The supplemental test data form is available at http://www.wsdot.wa.gov/partners/apwa/PorousAsphaltPavement.pdf.

The asphalt binder for PHMA shall be PG 58V-22 polymer modified or higher grade. (PG 58V-22 was formerly PG70-22) Binder content shall be between 6.0% and 7.0% by total weight of the mix, and will be the highest percentage that passes both the drain down and void requirements tests at N_{design} = 75 gyrations. The binder content tolerance shall be ±0.3% during production/ placement of the PHMA. The Contractor shall adjust the aggregate to meet the maximum drain down test requirements within the ranges provided below.

1. Drain down shall be 0.3 %, maximum, according to ASTM D6390
2. Void ratio shall be 16% to 25% per ASTM D3203 at $N_{\text{design}} = 75$ gyrations.

The Contractor shall include with the submittal temperature-viscosity curves from the polymer-modified asphalt binder supplier showing the recommended mixing and compaction temperatures developed for dense graded HMA applications.

The Contractor shall determine anti-strip requirements for PHMA and provide data for anti-stripping. The asphaltic mix shall be tested for its resistance to stripping by water in accordance with ASTM D-3625. If the estimated coating area is not above 95 percent, anti-stripping agents shall be added to the asphalt. Contractor shall be responsible for conducting the anti-stripping evaluation and providing a report to the Engineer.

Alternately, anti-strip evaluation of an existing dense graded hot mix asphalt of the same maximum nominal aggregate class and from the same aggregate materials source may be used to set the anti-stripping requirements for PHMA. The anti-strip requirement for the PHMA shall be equivalent to the anti-stripping requirement for the HMA.

Commercial or Visual evaluation will be the basis for acceptance of PHMA Mix Designs.

5-04.3 Construction Requirements

5-04.3(2) Paving Under Traffic
(April 1, 2018 Tacoma GSP)

The second paragraph is supplemented with the following:

No traffic shall be allowed on any newly placed pavement without the approval of the Engineer.

5-04.3(3)A Mixing Plant
(April 1, 2018 Tacoma GSP)

Supplement this section with the following:

Plants used for preparation of PHMA shall conform to the following requirements:

Fiber Supply System

When fiber stabilizing additives are determined necessary to achieve drain down criteria per APWA GSP 5-04.2(2)/C of these Specifications, a separate feed system that meets the following shall be required:

1. Accurately proportions by weight the required quantity into the mixture in such a manner that uniform distribution will be obtained.
2. The fibers shall be uniformly distributed prior to the injection of the asphalt binder into the mixture. When a continuous or drier-drum type plant is used, the fiber shall be added to the aggregate and uniformly dispersed prior to the injection of asphalt binder.

Surge and Storage Systems

The storage time for PHMA mixtures shall be no more than four (4) hours for non-insulated silos or eight (8) hours for insulated silos. Placement temperature specifications shall be met regardless of silo storage time.
5-04.3(3) Equipment

5-04.3(3)B Hauling Equipment
(April 1, 2018 Tacoma GSP)
This section is supplemented with the following:

The temperature of the mix at the time of discharge from the haul vehicle shall be within the temperature range identified in the approved PHMA submittal.

5-04.3(3)C Pavers
(April 1, 2018 Tacoma GSP)
The second paragraph is deleted.

5-04.3(3)D Material Transfer Device or Material Transfer Vehicle
(April 1, 2018 Tacoma GSP)
The first paragraph is revised to read:

A Material Transfer Device/Vehicle (MTD/V) shall not be used unless specific paving areas are specified below. A MTD/V shall only be used according to this special provision for the following paving areas:

None.

5-04.3(4)C Pavement Repair
(April 1, 2018 Tacoma GSP)
This section is revised to read:

Pavement repair shall be in accordance with the City of Tacoma Right-of-Way Restoration Policy found at:

Pavement repair consists of asphalt concrete saw-cutting, removing asphalt concrete pavement, removing crushed surfacing and subgrade, and installing Construction Geotextile for Separation, placing crushed surfacing top course over the Construction Geotextile, and HMA in accordance with the Contract or as directed by the Engineer.

Pavement repair excavation may also be performed by the use of a milling machine of a type that has operated successfully on work comparable with that to be done under the Contract and shall be approved by the Engineer prior to use. If a milling machine is used for excavation, the excavation shall be as directed by the Engineer.

In all types of excavation, after the removal of the asphalt, the base material will be evaluated by the Engineer to determine if it is suitable. If the base is determined not to be suitable, the Contractor shall remove the base material and restore the sub-grade in accordance with Section 2-06 and the Plans, regardless of the method used for excavation.

Estimated plan quantities for pavement repair are approximate and are provided for bidding purposes only. The actual dimensions to be used will be verified by the
Engineer at the time of construction. Contrary to Section 1-04.6, no changes to the unit prices bid for the various items will be permitted due to any increase or decrease in the amount of pavement repair.

Payment for pavement repair shall be by the unit Bid prices according to the Contract for all materials, labor, and equipment required to complete the pavement repair. Items not included in the Proposal shall be paid for according to Section 1-04.1(2).

5-04.3(6) Mixing
(Aug 1, 2020 Tacoma GSP)
The first paragraph is revised to read:

The asphalt supplier shall add any recycling agent and anti-stripping additive to the liquid asphalt binder prior to shipment to the asphalt mixing plant, when the mix design includes these additives. The Contractor shall submit the anti-stripping additive amount and the manufacturer’s certification, together with the HMA mix design submittal in accordance with Section 5-04.2. Paving shall not begin before the anti-stripping additive submittal is accepted by the Engineer.

5-04.3(7) Spreading and Finishing
(April 1, 2018 Tacoma GSP)
Supplement this section with the following:

Placement temperature of the mixture shall be within the temperature range identified in the approved PHMA submittal.

5-04.3(8) Aggregate Acceptance prior to Incorporation in HMA
(Aug 1, 2020 Tacoma GSP)
This section is revised to read:

Sample aggregate in accordance with Section 3-04 prior to being incorporated into HMA. The Contracting Agency shall evaluate the aggregate according to Special Provision 3-04. Aggregate contributed from RAP or RAS shall not be evaluated under Section 3-04.

The combined aggregate bulk specific gravity (Gsb) blend as shown on the HMA Mix Design report or evaluation report per Special Provision 5-04.2(2) will be used for VMA calculations. The Contracting Agency shall not be required to perform a Gsb test.

5-04.3(9) HMA Mixture Acceptance
(April 1, 2018 Tacoma GSP)
The first paragraph is revised to read:

The Contracting Agency will evaluate the HMA mixture by nonstatistical or visual evaluation as determined from the criteria in Table 7 or as determined by the Engineer.

5-04.3(9)A Test Sections
(April 1, 2018 Tacoma GSP)
The first paragraph is revised to read:

At the start of paving, if requested by the Contractor, a compaction test section shall be constructed as directed by the Engineer to determine the compactibility of the mix
design. Compactibility shall be based on the ability of the mix to attain the specified
minimum density (91 percent of the maximum density determined by WSDOT SOP 729,
and FOP for AASHTO T 209). Note that for PHMA the compaction requirements are
different and are in accordance with Special Provision Section 5-04.3(10)A.

Following determination of compactibility, the Contractor is responsible for the control of
the compaction effort. If the Contractor does not request a test section, the mix will be
considered compactible. See also Section 5-04.3(10)C2.

The Contractor shall also construct a test section when requested by the Engineer. Test
sections that are in complete compliance with the requirements of Section 5-04 can be
incorporated into the Work, and shall be included in the quantities for related Bid Items;
otherwise, the Contractor shall remove the defective pavement in failed test sections as
determined by the Engineer and at no cost to the Contracting Agency. The Contracting
Agency will only pay for HMA pavement that is accepted and incorporated into the
project at the discretion of the Engineer. See also Section 5-04.3(10)C2.

The second paragraph is revised to read:

The purpose of a test section is to determine whether or not the Contractor’s mix design
and production processes will produce HMA meeting the Contract requirements related
to mixture. Construct HMA mixture test sections at the beginning of paving, using at
least 100 tons and a maximum of 800 tons or as specified by the Engineer. Each test
section shall be constructed in one continuous operation.

5-04.3(9)B Mixture Acceptance – Statistical Evaluation
(April 1, 2018 Tacoma GSP)
The title of this Section is revised to read:
5-04.3(9)B Mixture Acceptance – Nonstatistical Evaluation

5-04.3(9)B1 Mixture Statistical Evaluation – Lots and Sublots
(April 1, 2018 Tacoma GSP)
The title of this Section is revised to read:
5-04.3(9)B1 Mixture Nonstatistical Evaluation – Lots and Sublots
(April 1, 2018 Tacoma GSP)

This Section is revised to read:

For HMA in a structural application, sampling and testing for total project quantities less
than 400 tons is at the discretion of the engineer. For HMA used in a structural
application and with a total project quantity less than 800 tons but more than 400 tons, a
minimum of one acceptance test shall be performed:

i. If test results are found to be within specification requirements, additional
testing will be at the engineer’s discretion.

ii. If test results are found not to be within specification requirements,
additional testing as needed to determine a CPF shall be performed.

iii. For a mixture lot in progress with a mixture CPF less than 0.75, a new
mixture lot will begin at the Contractor’s request after the Engineer is
satisfied that material conforming to the Specifications can be produced.
See also Section 5-04.3(11)F.
iv. If, before completing a mixture lot, the Contractor requests a change to the JMF which is approved by the Engineer, the mixture produced in that lot after the approved change will be evaluated on the basis of the changed JMF, and the mixture produced in that lot before the approved change will be evaluated on the basis of the unchanged JMF; however, the mixture before and after the change will be evaluated in the same lot. Acceptance of subsequent mixture lots will be evaluated on the basis of the changed JMF.

5-04.3(9)E Mixture Acceptance – Notification of Acceptance Test Results
(Aug 1, 2020 Tacoma GSP)
This section is revised to read:

The Contracting Agency will endeavor to provide written notification (via email to the Contractor’s designee) of acceptance test results within 24 hours of the sample being made available to the Contracting Agency. However, the Contractor agrees:

1. Quality control, defined as the system used by the Contractor to monitor, assess, and adjust its production processes to ensure that the final HMA mixture will meet the specified level of quality, is the sole responsibility of the Contractor.

2. The Contractor has no right to rely on any testing performed by the Contracting Agency, nor does the Contractor have any right to rely on timely notification by the Contracting Agency of the Contracting Agency’s test results (or statistical analysis thereof), for any part of quality control and/or for making changes or correction to any aspect of the HMA mixture.

3. The Contractor shall make no claim for untimely notification by the Contracting Agency of the Contracting Agency’s test results (or statistical analysis thereof).

5-04.3(10)A HMA Compaction – General Compaction Requirements
(April 1, 2018 Tacoma GSP)
Supplement this section with the following:

Compaction of PHMA Additional Requirements:

1. Pneumatic tire rollers shall not be used.
2. The Contractor shall develop a roller pattern that will initially consolidate the pavement structure as well as target 15% to 18% final air voids (82% to 85% of maximum theoretical (Rice) density). The Contractor shall monitor compaction during placement of PHMA with a pavement density gauge.

5-04.3(10)B HMA Compaction - Cyclic Density
(April 1, 2018 Tacoma GSP)
This section is deleted.
5-04.3(10)C1 HMA Compaction Statistical Evaluation – Lots and Sublots
(April 1, 2018 Tacoma GSP)
This section is deleted.

5-04.3(10)C2 HMA Compaction Statistical Evaluation – Acceptance Testing
(April 1, 2018 Tacoma GSP)

The title of this section is revised to read:
5-04.3(10)C2 HMA Compaction Nonstatistical Evaluation – Acceptance Testing

The second paragraph is revised to read:

Compaction tests will be performed at a minimum of 5 various locations, as determined by the Engineer, for each 400 tons placed. The locations will be determined by the stratified random sampling procedure conforming to WSDOT Test Method T 716. For an area in progress with a CPF less than 0.75, a new compaction sequence will begin at the Contractor’s request after the Project Engineer is satisfied that material conforming to the Specifications can be produced. The Compaction Test Procedures will be provided to the Contractor by the Contracting Agency at the Pre-Construction Conference or a Pre-Paving Meeting, prior to the placement of HMA material on site.

This Section is supplemented with the following:

Cores may be used as an addition to the nuclear density gauge tests. When cores are taken by the Engineer at the request of the Contractor, the request shall be made by noon of the first working day following placement of the mix. The Engineer shall be reimbursed for the coring expenses.

The Engineer will inform the Contractor of field compaction test results as work is being performed. Formal Test Report(s) will be provided to the Contractor within 3 Working Days.

HMA for preleveling shall be compacted to the satisfaction of the Engineer.

Porous Asphalt (PHMA) Acceptance Infiltration Test
Contractor shall conduct infiltration tests on the finished PHMA per ASTM C1701 at locations chosen by the Engineer. Newly-placed PHMA/PHWA shall have a minimum infiltration rate of 100 inches/hour. Infiltration tests shall be completed every 150 linear feet of roadway and conducted in accordance with ASTM C1701.

If the measured infiltration rate is less than 100 inches/hour, the Contractor shall conduct an additional four infiltration tests in line with the paver direction of travel. Two tests upstream and two tests downstream of the initial test locations shall be taken at distances of 20 feet and 40 feet. Results of the additional tests will be averaged. The Contractor shall conduct additional testing upstream and downstream to identify area to be removed. If the average infiltration rate is less than required remove and replace the failing section at the direction of the Engineer and at no cost to the Contracting Agency.
Add this new section
5-04.3(17) Fiber Reinforced HMA
(******)

Fiber reinforcement shall be added to the approved HMA mix at a rate of 1 pound of fiber per 1 ton of HMA.

Fiber shall be added to the HMA mix through specialized equipment that can accurately proportion and/or meter, by weight, the proper amount per batch for batch plants, or continuously and in a steady uniform manner for drum plants. Alternatively, upon approval of the engineer, fiber may be added manually using pre-weighed dissolvable bags.

Specialized equipment shall be of the type and capable of controlling the weight of fibers added as recommended by the fiber manufacturer.

Fiber shall be mixed with the HMA in accordance with the fiber manufacturer’s recommendations.

5-04.4 Measurement
(******)

The first paragraph is revised to read:

Fiber Reinforced HMA Cl. ___ PG ___, Fiber Reinforced HMA Cl. ___ PG ___, and Commercial HMA will be measured by the ton in accordance with Section 1-09.2, with no deduction being made for the weight of asphalt binder, blending sand, mineral filler, anti-stripping additive, or any other component of the mixture; and the measurement shall include asphalt wedge curbs, and thickened edges in accordance with the Plans or as directed by the Engineer. If the Contractor elects to remove and replace mix as allowed in Section 5-04.3(11), the material removed will not be measured.

The second paragraph is revised to read:

No specific unit of measure will apply to roadway cores, which shall be included in the measurements for the HMA items that are included in the Proposal.

This section is supplemented with the following:

HMA for Approach Cl. ___ PG 58H-22 shall be measured per square yard of finished driveway and approach.

No specific unit of measure will apply to Anti-Stripping Additive, which shall be included in the measurements for the HMA items that are included in the Proposal.

5-04.5 Payment
(******)

Pay items for “Job Mix Compliance Price Adjustment” and “Compaction Price Adjustment” are deleted.

This section is supplemented with the following:
“Fiber Reinforced HMA Cl. ___ PG ___”, per ton.
“Fiber Reinforced HMA Cl. ___ PG ___ for Pavement Patch”, per ton.

The unit Contract price per ton for “Fiber Reinforced HMA Cl. ___ PG ___”, and “Fiber Reinforced HMA Cl. ___ PG ___ for Pavement Patch” shall be full payment for all costs incurred to carry out the requirements of Section 5-04, including coring and testing, and shall include anti-stripping additive, asphalt wedge curbs, thickened edges, curb drains, and connection to existing drains in accordance with the Contract. Any costs that are already included in other Bid items in the Proposal shall not be included in the unit Contract prices per ton for these HMA Bid items.

“Cold Plant Mix for Temporary Pavement Patch”, per ton.

The unit Contract price for “Cold Plant Mix for Temporary Pavement Patch” shall be full pay for all labor, equipment, and materials required to furnish and install; maintain; and remove and dispose of the temporary patch.

Temporary pavement patches placed between October 1st and March 31st shall be HMA Cl. ½” PG 58H-22.

*The pay item “HMA for Approach Cl. _PG_” is revised to read:*

“HMA for Approach Cl. __PG 58H-22”, per square yard.

The unit Contract price per square yard for “HMA for Approach Cl. __PG 58H-22” shall be full payment for all costs incurred to carry out the requirements of Section 5-04, including anti-stripping additive; and shall include asphalt wedge curbs, thickened edges, curb drains, and connection to existing drains in accordance with the Contract. Any costs that are already included in other Bid items in the Proposal shall not be included in the unit Contract price per square yard for this HMA Bid item. The Contractor shall also include all costs associated with excavating for driveways and approach, including haul and disposal in the unit Contract price per square yard for “HMA for Approach Cl. __PG 58H-22”, regardless of the depth.

“PHMA CL. __ PG __”, per ton.

The unit Contract price per ton for “PHMA CL. __ PG __” shall be full compensation for all costs, including anti-stripping additive and tack coat, incurred to carry out requirements of Section 5-04 except for those costs included in other items which are included in this Subsection and which are included in the Proposal.

END OF SECTION
6-02.3(2)B Commercial Concrete

This section is supplemented with the following:

Where concrete Class 3000 is specified for driveways, the Contractor may use commercial concrete.

6-02.3(4) Ready-Mix Concrete

The first paragraph is revised to read

All concrete shall be batched in a prequalified manual, semi-automatic, or automatic plant as described in Section 6-02.3(4)A.

END OF SECTION
This section is deleted. The requirements of Section 7-17 shall apply to storm sewers.

END OF SECTION
7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS

(*****)

7-05.1 Description

This section is supplemented with the following:

All references to sanitary sewers shall be construed to also mean storm sewers.

7-05.3 Construction Requirements

The first sentence of the eleventh paragraph is revised to read:

A flexible pipe-to-manhole connector shall be used in all connections of rigid and thermoplastic pipes to new precast concrete manholes to provide a watertight joint between the pipe and the manhole, unless otherwise directed by the Engineer. The connector shall be “Kor-N-Seal” with “Wedge Korband” (Type I or II as required for pipe diameter), manufactured by NPC, Inc., Milford, New Hampshire, or Engineer approved equal. The connectors shall be installed in accordance with the manufacturer’s recommendations.

7-05.3(1) Adjusting Manholes and Catch Basins to Grade

This section is revised to read:

7-05.3(1) Adjusting Utility Structures to Grade

Where shown in the Plans or where directed by the Engineer, utility structures shall be adjusted to grade as staked or as otherwise designated by the Engineer.

The materials and methods of construction shall conform to the requirements specified in Section 7-05.3 and Standard Plan No. SU-25. The finished structure shall conform to the requirements of the standard plan for the specific structure.

7-05.3(3) Connections to Existing Manholes

The first sentence is revised to read:

The Contractor shall inspect the existing manholes in the field to verify invert elevations and the scope of work necessary to make the connection(s) prior to construction.

7-05.4 Measurement

The sixth paragraph is revised to read:

Connections to existing structures will be measured per each.

This section is supplemented with the following:

Reconnecting existing sewer pipes to new manhole structures will be measured per each.

Manholes with Cast-in-Place Base will be measured per each.

Adjust existing utility to grade will be measured per each.
**7-05.5 Payment**

(******)

*The first paragraph is supplemented with the following:*

The unit Contract price for “Manhole____” shall be full pay for all work required to furnish and install the new manhole to finished grade, including, but not limited to, excavating for, furnishing backfill, compaction of backfill, connection of new pipe(s), channeling, covers, frames, ladders, steps, and handholds, as applicable per Standard Plans.

The unit Contract price for “Catch Basin____” shall be full pay for all work required to furnish and install the new catch basin to finished grade, including, but not limited to, excavating for, furnishing backfill, compaction of backfill, connection of new pipe(s), frame, cover, as applicable per Standard Plans.

The unit Contract price for “Combination Inlet” shall be full pay for all work required to furnish and install the new catch basin to finished grade, including, but not limited to, excavating for, furnishing backfill, compaction of backfill, connection of new pipe(s), frame, cover, as applicable per Standard Plans.

*The pay item for “Connection to Drainage Structure” is revised to read:*

“Connect New Sewer Pipe ___-In. Diam. to Existing Structure”, per each

*This section is supplemented with the following:*

“Reconnect Existing Sewer Pipe, ___-In. Diam., to New Structure”, per each.

The unit Contract price per each shall be full pay for all labor, equipment and materials necessary to reconnect the existing sewer pipe to the new structure as specified in Section 7-05.3.

"Adjust Existing Catch Basin, Furnish New Frame and Grate", per each

The unit Contract price per each for “Adjust Existing Catch Basin, Furnish New Frame and Grate” shall be full pay for all costs associated with adjusting the frame and grate to finished grade, including but not limited to, excavating, furnish and place backfill, furnishing and installing the new frame and grate, compacting, surfacing, and restoration.

"Adjust Existing Manhole, Furnish New Frame and Cover", per each

The unit Contract price per each for “Adjust Existing Manhole, Furnish New Frame and Cover” shall be full pay for all costs associated with adjusting the frame and cover to finished grade, including but not limited to, excavating, furnish and place backfill, furnishing and installing the new frame and cover, compacting, surfacing, and restoration.
“Adjust Existing Utility to Grade”, per each

The unit Contract price per each for “Adjust Existing Utility to Grade” shall be full pay for all costs associated with adjusting the valve chamber, junction box, catch basin, manhole, or other existing utility to finished grade, including but not limited to, excavating, furnish and place backfill, compacting, surfacing, and restoration.

END OF SECTION
7-07.3 Construction Requirements

Item three of paragraph two is revised to read:

3. If sediment and water from structures does not meet the conditions described in 1 or 2 above, the Contractor shall collect and dispose of all water used and all debris generated in cleaning operations. No cleaning water or debris shall be flushed downstream beyond the limits of the work.

END OF SECTION
7-08 GENERAL PIPE INSTALLATION REQUIREMENTS
(September 20, 2018 Tacoma GSP)

7-08.3 Construction Requirements

7-08.3(1)A Trenches
The tenth paragraph of this section is deleted. All dewatering requirements are found in section 8-01.3(1)C.

7-08.3(1)C Bedding the Pipe
This section is supplemented with the following:

Pipe bedding for sanitary and storm sewers shall be in accordance with City of Tacoma Standard Plan No. SU-16.

7-08.3(2)F Plugs and Connections
This section is supplemented with the following:

Rigid Couplings, manufactured by Romac Industries, Inc., or Engineer approved equal, shall be used at any pipe joint in which bell and spigot or fused joints are not used. Flexible couplings are not permitted, except for side sewer installation where a strong back fernco of approved equivalent is required.

7-08.3(2)G Jointing of Dissimilar Pipe
This section is revised to read:

Dissimilar pipe shall be joined by use of rigid couplings manufactured by Romac Industries, Inc., or Engineer approved equal, except for side sewer installation.

7-08.3(3) Backfilling
The second paragraph is revised to read:

Pipe zone bedding and trench backfill shall be in accordance with City of Tacoma Standard Plan No. SU-16. (Pipe zone backfill shall meet the requirements of Section 9-03.9(3) for Crushed Surfacing Top Course. Backfill above pipe zone and extra excavation area backfill material shall meet the requirements of Section 9-03.12(2), Gravel Backfill for Walls.) Recycled concrete shall not be used for pipe zone bedding, pipe zone backfill, backfill above pipe zone, and extra excavation area backfill.

The fourth paragraph is revised to read:

Backfill above the pipe zone shall be accomplished in such a manner that the pipe will not be shifted out of position nor damaged by impact or overloading. If pipe is being placed in a new embankment, backfill above the pipe zone shall be placed in accordance with Section 2-03.3(14)C. If pipe is being placed under existing paved areas, or roadways, backfill above the pipe zone shall be placed in horizontal layers no more than 12-inches thick and compacted to 95-percent maximum density. If pipe is being placed in non-traffic areas, backfill above the pipe zone shall be placed in horizontal layers no more than 12-inches thick and compacted to 85-percent maximum density. All compaction shall be in accordance with the Compaction Control Test of Section 2-03.3(14)D. Material excavated from the trench shall be used for backfill above
the pipe zone, except that organic material, frozen lumps, wood, rocks, or pavement
chunks larger than 6-inches in maximum dimension shall not be used. Material
determined by the Engineer to be unsuitable for backfill at the time of excavation shall be
removed and replaced with imported backfill material meeting the requirements of
Section 9-03.12(2). Material determined to be suitable for backfill at the time of
evacuation shall be stockpiled and used for backfill material. If the stockpiled material
becomes unsuitable, the Contractor shall furnish suitable material in an amount equal to
that, which became unsuitable, at no expense to the Contracting Agency.

Add the following new sections:
7-08.3(5) Temporary Bypass Pumping
7-08.3(5)A General Requirements

The Contractor shall design, operate, and install a bypass pumping system to maintain
operation of the existing sewer systems throughout the duration of the project without
any interruption of sewer service. The Contractor shall divert all flows around each
segment of the pipe designated for replacement. This diversion shall consist of pumping
flow from an upstream manhole and discharging it to a manhole downstream of
the replacement operation. After the pipe replacement work is completed and accepted
by the Contracting Agency, flow shall be returned to the reconstructed sewer. The area
affected by the bypass operation shall be fully restored.

Flow from the bypass system shall be discharged into the same system downstream of
the work unless prior approval is obtained from the Engineer to utilize a nearby pipe
network. The Engineer will determine if the nearby system has capacity to receive the
additional bypass flow.

To determine locations of upstream and downstream manholes for bypass purposes,
Bidders may view pipe networks on the City of Tacoma GIS map
at https://tmap.cityoftacoma.org/. Pipe networks are viewable by navigating to the
intersection/street, selecting the Layer list icon in the upper right corner, and checking
the box adjacent to either the Wastewater Network or Stormwater Network, as
applicable.

Bypass pumping shall be done in such a manner as not to damage private or public
property, or create a nuisance or public menace. The pumped sewage
or stormwater shall be in enclosed hoses or pipes that are adequately protected from
traffic, and shall be redirected into the appropriate sewer system. The discharge of
sewage to private property, city streets, sidewalks, storm sewer, or any location other
than an approved sanitary sewer is prohibited. The Contractor shall be liable for all
cleanup, damages, and resultant fines should the Contractor’s operation cause any
backups, overflows, or property damage.

The Contractor shall be required to test the bypass pumping system in the presence of
the Engineer prior to taking any sewer system out of service.

Silenced pumps shall be used in all areas of night time work to minimize noise disruption
and meet the noise control requirements of Tacoma Municipal Code Chapter 8.122.
The Contractor shall use hard pipe to bypass sewers 12-inches in diameter or greater. The Contractor shall not block any driveways or intersections, but shall bury the pipe to allow continuous access through intersections and driveways.

The Contractor may use lay-flat hose to bypass storm and sanitary sewers that are less than 12 inches in diameter. The Contractor shall ensure that sewage spills do not occur with the use of lay flat hoses. If sewage spills occur, the Contractor will be required to use hard pipe for all sanitary sewers.

7-08.3(5)B Backup Equipment and Monitoring

Bypass pumping shall be scheduled for continuous operation with back-up pumps, generators, and other equipment available on-site at all times for periods of maintenance and refueling or failure of the primary bypass pump(s). The Contractor shall provide experienced monitoring personnel on site at all times to verify the bypass pumping system remains functional. These individuals shall have the experience to operate and maintain the bypass system to ensure there is continuous operation of the bypass system.

7-08.3(5)C Flow for Bypass System Design

The Contractor's bypass operation shall be sized to handle, at a minimum, the full pipe capacity in each subject line removed from service. If flow conditions are greater than full pipe, the Contractor may elect to wait for flow conditions to subside prior to removing the subject line from service. Working days may be adjusted per Specification 1-08.5. Once the Contractor removes a section of line from service he/she is responsible to bypass any and all flow in the system during construction, even in the event the system surcharges and exceeds the full pipe capacity, until the line is returned to service.

7-08.3(5)D Bypass Pumping Plan

The Contractor shall submit a Bypass Pumping Plans for each location included in this Contract in accordance with Section 1-05. The Contractor's plan for bypass pumping shall be reviewed by the Contracting Agency before the Contractor will be allowed to commence bypass pumping. The review of the bypassing system and equipment by the Engineer shall in no way relieve the Contractor of his responsibility and public liability. At a minimum, the bypass pumping plan for each location shall include the following:

1. Location of pumps and generators
2. Method, type, and size of plugs
3. Size, material, location, and method of installation of suction piping
4. Size, material, location, and method of installation of discharge piping
5. Bypass pump sizes, capacity, number of each to be on site
6. For pipes sized 12-inches and greater (excluding catch basins), calculations of static lift, friction losses, and flow velocity, including pump performance curves showing pump operating range
7. Power generator and standby size and location
8. Method of noise control for pumps and generators to comply with the City’s noise ordinance, Tacoma Municipal Code Chapter 8.122 if necessary
9. Calculations for selection of bypass pumping pipe sizes
10. Method of protecting discharge manholes from erosion or damage

11. All backup equipment including pumps, hoses, generators, and pipe

12. Contractor's 24-hour emergency contact name and phone number

13. Description of proposed contingency plan and clean up method for any spills that may occur.

14. Temporary traffic control plan to be in place for duration of temporary bypass pumping as necessary.

7-08.3(6) Abandon Existing Pipe

If construction of the new sewer pipe does not result in the removal of the existing pipe due to differing alignments, then the existing pipe shall be abandoned in place as shown in the Plans. The Contractor shall plug all pipe branches, stubs, or other open ends of the pipe to be abandoned and fill with CDF. The Contractor shall submit a Pipe Abandonment Plan in accordance with Section 1-05.3 describing the proposed methods for filling the pipes with CDF, specifically addressing how the pipes will be filled in a manner that will prevent air pockets from being left in the abandoned pipe. The CDF mix design shall meet the requirements of Section 2-09.3(1E).

If the pipes to be abandoned are removed and disposed of during construction of the new sewers, all costs for the removal and disposal shall be included in the unit contract price for “Structure Excavation, Class B,” at per cubic yard.

7-08.4 Measurement

This section is supplemented with the following:

No specific measurement shall apply to the lump sum item “Temporary ___ Sewer Bypass”.

No specific measurement shall apply to the lump sum item “Temporary ___ Sewer Bypass Plan”.

Abandonment of existing sewer pipes will be measured by the cubic yard of CDF necessary to fill the existing pipes.

7-08.5 Payment

This section is supplemented with the following:

"Temporary ___ Sewer Bypass", per lump sum.

The lump sum Contract prices for “Temporary ___ Sewer Bypass” shall be full payment for labor, equipment, and materials, including but not limited to, personnel, fuel, monitoring, power, pumps, piping, barricades, emergency stand-by equipment, trenching, surface restoration costs, and all other work necessary to maintain uninterrupted storm and sanitary sewer services by bypassing the applicable sewer system flows.

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“Temporary ___ Sewer Bypass Plan”, per lump sum

The lump sum Contract price for “Temporary ___ Sewer Bypass Plan” shall be full pay for all costs, including but not limited to, preparing, submitting, revising, and resubmitting revisions for the Temporary Bypass Plan.

“CDF for Pipe Abandonment”, per cubic yard.

The unit Contract price for “CDF for Pipe Abandonment” shall be full payment for all labor, materials, and equipment necessary to abandon the sewer pipes.

END OF SECTION
7-17  SANITARY SEWERS

(******)

7-17.1 Description

This section is supplemented with the following:

All references to sanitary sewer shall also mean storm sewers.

7-17.2 Materials

The first paragraph is revised to read:

Pipe materials used for storm and sanitary sewers shall be as shown on plans. All references to PVC shall mean Solid Wall PVC Sewer Pipe. Profile Wall PVC will not be permitted.

This section is supplemented with the following:

Polyvinyl Chloride (PVC) Pressure Pipe (4-inches and over) 9-30.1(5)A

(******)

This section is supplemented with the following:

Ductile iron pipe shall conform to Section 9-30.1(1) and shall be Class 52 minimum.

7-17.3 Construction Requirements

7-17.3(2) Cleaning and Testing

7-17.3(2)A General

The first paragraph is revised to read:

Sewers and appurtenances shall be cleaned and tested after backfilling by either exfiltration or low-pressure air method at the option of the Contractor, except where the ground water table is such that the Engineer may require the infiltration test.

7-17.3(2)H Television Inspection

This section is revised to read:

The Contractor shall hire a third-party television inspection company to perform television inspection services on all new full segments and partial segments of sanitary and storm sewer mains and side sewers, including the connection point between new and existing pipes, and newly constructed manholes. The inspection video and associated database file shall be submitted for review and final acceptance of the pipes prior to paving where paving occurs over sewers, or prior to final acceptance in non-paved areas, and allowing for any review timeframes as described below.

The Contractor shall provide the Contracting Agency 72 hours of advance notice so that the Engineer may be present during the inspection if so elected. The video shall be submitted for review which may take up to five (5) working days. If more than five (5) working days are required for the Engineer’s review of the videos, an extension of time will be considered in accordance with 1-08.8. At a minimum, the video files shall
meet the technical requirements of 7-17.3(3). No claim will be allowed for damages, or extensions of time resulting from the rejection of a video due to not meeting the technical requirements or construction defects identified in the video.

CCTV inspection work shall be completed by certified National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) trained operator(s) using established PACP coding and observations. Coding and observation results shall be recorded and presented on a per asset basis, manhole to manhole. A pipe asset is defined as one continuous pipe from the upstream manhole to the downstream manhole. Footage shall be recorded with the starting and ending points being the center of the manholes, with the exception that if partial segments are constructed in this Contract, including side sewers, the inspection only needs to show all new work up to and including the connection to the existing pipe. The camera operator shall also pan around and record the inside of each manhole constructed in this project at the start and end of each inspection. The television camera shall have a resolution of 700 lines minimum and shall have a source of illumination attached to it.

The video files shall be recorded and submitted in MPEG-2 format and include an unmodified NASSCO-PACP Certified Access Database conducted entirely in digital format with electronic reference to the survey which is intended to be imported into the City’s viewing software, GraniteNet. The PACP database shall include the City’s SAP pipe segment ID. No other file format will be accepted unless approved by the City.

All videos and database files shall be submitted via the Internet web-based project management communications tool, e-Builder software.

The Contractor shall provide video identifying the pipe segment by manhole numbers and pipe segment number. The inspection shall identify all connections, general conditions of the sewer pipelines, problem areas, location of all connections or problem areas by linear footage, and observations concerning the condition of the pipe joints. The camera system used shall be capable of travelling up to 500 linear feet.

Although newly constructed, the sewers will likely be in service with flow present during inspections. The lens shall remain clean and clear for the duration of the CCTV inspection. Should the lens become soiled, or fogged, or otherwise impaired to any degree that impedes the ability to clearly see the condition of the pipe, the inspection shall be halted to clean and clear the lens. No additional compensation will be made for re-inspections required by the City due to soiled, fogged, or otherwise impaired camera lenses.

The Contractor shall maintain sufficient light levels within the main to allow for visual inspection of the pipe walls for a minimum of four feet for all pipe sizes. Additionally, the Contractor shall make certain that the light levels are not so bright that visual inspection is impeded.

Each individual video inspection shall also include the associated video inspection report for that segment which shall include the following information:
- Date of Inspection
- Main segment number (SAP)
- Upstream and Downstream Manhole Numbers (SAP)
- Street Location
- Setup (Normal or Reverse Flow)
- Pipe size and material
- Status (Active or Inactive) of all side sewers
- Location, length, and depth of water of sags
- Location and description of all other defects

The CCTV Inspection shall be a continuous, unedited video and shall include the following information:
- Date of Inspection
- Main segment number
- Upstream and downstream manhole numbers
- Current distance along the mainline

In addition, the Contractor shall perform wastewater side sewer inspections where they exist via a mainline camera with a lateral launching setup. The lateral launch camera shall be capable of extending at least 30 feet from the main into side sewers and shall include an on-screen footage counter. The quality of the side sewer inspection shall meet the same requirements as the mainline camera. The lateral launch camera shall be self-leveling and shall also include a sonde transmitter to locate the side sewer in the event of a defect.

The Contractor shall bear all costs incurred in correcting any deficiencies found during television inspection including the cost of any additional television inspection that may be required by the Engineer to verify the correction of said deficiency.

The Contractor shall be responsible for all costs incurred in any television inspection performed solely for the benefit of the Contractor.

7-17.4 Measurement

This section is supplemented with the following:

Removal and replacement of unsuitable, contaminated and non-contaminated, backfill material will be determined by the cubic yard in place, based on a neat line measurement per this Section and Section 2-09. Any removal and replacement of unsuitable material outside neat line measurement shall be incidental to the Bid item.

Horizontal Limits: The horizontal limits shall be as defined in Section 2-09.4.

Longitudinal Limits: The longitudinal limits shall be as defined in Section 2-09.4.

Lower Limits: The lower limits shall be the top of the pipe zone as shown on Standard Plan No. SU-16.

Upper Limits: The upper limits shall be the subgrade elevation of the proposed roadway section or pavement patch section.

All costs associated with the disposal of material located above the upper limits shall be included in the unit contract price for other items of work, unless a proposal item is included for this specific item of work.
Pipe zone limits are as defined in Standard Plan SU-16.

No specific unit of measurement will apply for Contractor provided Television Inspection. All costs shall be included in the per foot price of pipe installed.

7-17.5 Payment
The first paragraph is supplemented with the following:

“PVC Storm Sewer Pipe ___ In. Diam.”, per linear foot.

“Ductile Iron Storm Sewer Pipe __ In. Diam.”, per linear foot.

The second paragraph is revised to read:

The unit Contract price per linear foot for sewer pipe of the kind and size specified shall be full pay for the furnishing, hauling, and assembling in place the complete installation, including but not limited to, disposal of material excavated within the pipe zone, furnishing and installing pipe bedding and backfill material within the pipe zone, and all wyes, tees, special fitting, joint materials, and other appurtenances necessary for the completion of the installation to the required line and grade, unless proposal items are included for these specific items of work.

The pay item “Removal and Replacement of Unsuitable Material” is revised to read:

“Removal and Replacement of Unsuitable Material”, per cubic yard.

The unit Contract price per cubic yard for “Removal and Replacement of Unsuitable Material” shall be full pay for all work required to haul and dispose of the unsuitable material as specified in Section 7-08.3(1)A and the furnishing of suitable backfill material as specified in Section 7-08.3(3).

For the purpose of providing a common proposal for bidders, the proposal quantity for “Removal and Replacement of Unsuitable Material” is based on removal and replacement of all backfill material.

END OF SECTION
7-18 SIDE SEWERS
(March 4, 2014 Tacoma GSP)

7-18.1 Description
This section is supplemented with the following:

The Contractor shall remove and replace existing side sewers as defined on the Plans
and reconnect the existing side sewer. The location of the side sewer at the main is
estimated based on a TV inspection of the main and may vary in either direction. The
actual location at the point of reconnection is unknown.

7-18.3(1) General
This section is supplemented with the following:

The Contractor shall use solid wall PVC pipe meeting the requirements of Section 9-
05.12(1) for all side sewers located 10 feet or more from a water service. If the side
sewer is located within 10 feet of a water service, the Contractor shall use solid wall PVC
pressure pipe meeting the requirements of Section 9-30.1(5)A. If the side sewer crosses
above a water main, the side sewer shall be encased per the Department of Ecology
Criteria for Sewage Works Design (Orange Book) Section C1-9.1.4A. Any encasement
of side sewers shall be paid for under force account per Section 1-09.6.

7-18.4 Measurement
This section is supplemented with the following:

Measurement for payment shall be by the linear foot of pipe installed, and shall be along
the pipe invert, through tees, wyes and other fittings, from the centerline of the main to
the centerline of the cleanout.

7-18.5 Payment
The second paragraph is revised to read:

The unit Contract price per linear foot for sewer pipe of the various kind and size
specified shall be full pay for furnishing, hauling and assembling in place the completed
installation including all wyes, tees, special fittings, joint materials, bedding material, and
end pipe marker, and any other items necessary for the completion of the installation,
unless Proposal items are included for these specific items of Work.

END OF SECTION
7-19 SEWER CLEANOUTS
(May 13, 2009 Tacoma GSP)

7-19.3 Construction Requirements
The third sentence of the first paragraph is deleted.

The fourth sentence of the third paragraph is deleted.

7-19.5 Payment
The third paragraph is revised to read:

The unit Contract price for “Sewer Cleanout” shall be full pay for furnishing and placing
the wye, pipe, pipe bends, pipe plug, castings, and collar as specified herein and as
shown on Standard Plan SU-24.

END OF SECTION
8-01 EROSION CONTROL AND WATER POLLUTION CONTROL
(April 1, 2018 Tacoma GSP)

8-01.1 Description
This section is supplemented with the following:

The City of Tacoma Stormwater Management Manual is available on the City’s website at www.cityoftacoma.org/stormwatermanual.

The City of Tacoma will be issued a Washington State Department of Ecology NPDES Construction Stormwater General Permit for this project prior to Contractor commencing work.

This Work also consists of administration and compliance with the requirements of this permit for this project. A copy of this permit will be provided to the contractor prior to commencing work, see Appendix F of these Special Provisions.

8-01.3(1) General
This section is supplemented with the following:

The Contractor shall perform all work in compliance with the NPDES Construction Stormwater General Permit issued for this project.

The permit shall be transferred to the Contractor prior to issuance of a Notice to Proceed and terminated upon completion of the project per the following:

1. The City will provide the Contractor with a Transfer of Coverage form prior to issuing a Notice to Proceed.
2. The Contractor shall sign and return the Transfer of Coverage form to the City.
3. The City will process the transfer and pay any associated transfer fees to the Washington State Department of Ecology.
4. Once the transfer is complete and a Notice to Proceed has been issued, the Contractor is responsible for performing all work in compliance with the permit and the plans and specifications.
5. The Contractor shall pay any renewal fees if the need for permit renewal is caused by contractor, otherwise the City will pay all renewal fees.
6. Upon Physical Completion of the Work the Contractor shall submit a Notice of Termination to the Washington State Department of Ecology and provide the City documentation that the termination is effective.

8-01.3(1)A Submittals
This section is revised to read:

The Contractor shall prepare and implement a project-specific Construction Stormwater Pollution Prevention Plan (SWPPP) in accordance with the City of Tacoma Stormwater Management Manual (SWMM), Volume 2. The SWPPP is a document that describes the potential for pollution problems on a construction site and explains and illustrates the measures to be taken on the construction site to control those problems.
The Construction SWPPP shall be prepared as a stand-alone document consisting of
two sections: Section 1) Construction SWPPP Narrative and Section 2) Temporary
Erosion and Sediment Control (TESC) Plans.

The Contracting Agency has prepared the Construction Stormwater Pollution Prevention
Plan Checklist to aid the Contractor in development of the SWPPP. This checklist
provides the Contractor with a tool to determine if all the major items are included in the
Construction SWPPP and on the TESC Plans and can be found in Volume 2, Chapter 2
of the SWMM. Contractors are encouraged to complete and submit this checklist with
the Construction SWPPP.

The Department of Ecology has prepared a SWPPP template that can be used for
projects in the City of Tacoma. The template can be found on Ecology’s website at:
The Contractor developing the SWPPP must ensure that all references are appropriate
for the City of Tacoma.

The SWPPP is considered a “living” document that shall be revised to account for
additional erosion control/pollution prevention BMPs as they become necessary and are
implemented in the field during project construction. A copy of the most current SWPPP
and TESC Plan shall remain on-site at all times and an additional copy shall be
forwarded to the Engineer. At the Contractor’s preference, revisions to the SWPPP and
TESC Plan may be forwarded to the Engineer rather than submitting a complete
document. Revisions to the SWPPP and TESC Plan may be kept on-site in a file along
with the original SWPPP document.

The Contractor shall provide Stormwater Pollution Prevention Plan inspection reports or
forms per 8-01.3(1) B to the Project Engineer no later than the end of the next working
day following the inspection.

8-01.3(1)B Erosion and Sediment Control (ESC) Lead
This section is revised to read:

The Contractor shall identify the ESC Lead at the Preconstruction Meeting and the
contact information for the ESC Lead shall be added to the Stormwater Pollution
Prevention Plan (SWPPP) Report and the Temporary Erosion and Sediment Control
(TESC) Plan Sheet. The ESC Lead shall maintain, for the life of the contract, a current
Certified Erosion and Sediment Control Lead (CESCL) certificate or maintain a current
Certified Professional in Erosion and Sediment Control (CPESC) certificate from a
course approved by the Washington State Department of Ecology. The CESCL or
CPESC shall be listed on the Emergency Contact List required under Section 1-05.13(1).

The CESCL or CPESC shall direct implementation of the measures identified in the
SWPPP and as shown on the TESC plan. Implementation shall include, but is not
limited to the following:

1. Installing and maintaining all temporary erosion and sediment control Best
Management Practices (BMPs) included in the SWPPP and as shown on the
TESC plan. Damaged or inadequate BMPs shall be corrected as needed to
assure continued performance of their intended function in accordance with BMP specifications and Permit requirements.

2. Performing monitoring as required by the NPDES Construction Stormwater General Permit.

3. Inspecting all on-site erosion and sediment control BMPs at least once every calendar week and within 24 hours of any discharge from the site. A SWPPP Inspection report or form shall be prepared for each inspection and shall be included in the SWPPP file. A copy of each SWPPP Inspection report or form shall be submitted to the Engineer no later than the end of the next working day following the inspection. The report or form shall include, but not be limited to the following:
   a. When, where, and how BMPs were installed, maintained, modified, and removed.
   b. Observations of BMP effectiveness and proper placement.
   c. Recommendations for improving future BMP performance with upgraded or replacement BMPs when inspections reveal SWPPP inadequacies.
   d. Approximate amount of precipitation since last inspection and when last inspection was performed.

4. Updating and maintaining a SWPPP file on site that includes, but is not limited to the following:
   a. SWPPP Inspection Reports or Forms.
   b. SWPPP narrative.
   c. National Pollutant Discharge Elimination System Construction Stormwater General Permit (Notice of Intent).
   d. All documentation and correspondence related to the NPDES Construction Stormwater General Permit.
   e. Other applicable permits.

Upon request, the file shall be provided to the Engineer for review.

8-01.3(1)C Water Management

This section is revised to read:

General. The Contractor is responsible for keeping excavations free from standing water during construction and disposing of the water in a manner that will not cause pollution, injury to public or private property, or cause a nuisance to the public. Groundwater flowing toward, into, or within excavations shall be controlled to prevent sloughing of excavation walls, boils, uplift, and heave in the excavation, and to eliminate interference with orderly progress of construction. The control of groundwater shall be such that softening of the bottom of excavations, or formation of “quick” conditions or “boils” during excavation, shall not occur. The Contractor is responsible for all foundation material required due to lack of dewatering efforts.

See Geotechnical analysis of groundwater elevations in Appendix C of these Special Provisions for additional information.

8-01.3(2) Temporary Seeding, Fertilizing, and Mulching
8-01.3(2)B Temporary Seeding

The first paragraph is supplemented with the following:

Temporary seeding with “Temporary Erosion Control Seed Mix” shall meet the following:

<table>
<thead>
<tr>
<th>Type of Seed</th>
<th>% by Weight</th>
</tr>
</thead>
</table>
| Chewings or Annual Bluegrass  
*Festuca rubra var. commutate or Poa anna*       | 40          |
| Perennial Rye  
*Lolium perenne*                                   | 50          |
| Redtop or Colonial Bentgrass  
*Agrostis alba or Agrostis tenuis*                 | 5           |

The rate of application shall be 120 lbs. per acre.

The fourth paragraph is supplemented with the following:

Seed shall be distributed uniformly over the designated area. Half of the seed shall be sown with the sower moving in one direction, and the remainder with the sower moving at right angles to the first sowing.

8-01.3(2)D Mulching

The first paragraph is supplemented with the following:

Moderate-Term Mulch shall be applied at a rate of 3,500 lbs. per acre.

8-01.3(2)E Tackifiers

This section is supplemented with the following:

Organic Tackifier shall be applied at a rate per manufacture’s instructions

8-01.3(8) Street Cleaning

The third paragraph is revised to read:

Street washing with water shall not be permitted.

8-01.3(9) Sediment Control Barriers

8-01.3(9)D Inlet Protection

Replace the third paragraph of this section with the following:

When the depth of accumulated sediment and debris reaches approximately 1/3 the height of an internal device or 1/3 the height of the external device (or less when so specified by the manufacturer), or as designated by the Engineer, the sediment and debris shall be removed and disposed of per SWMM BMP C220 or as specified on the Plans or within the SWPPP.
The section is supplemented with the following:

Only bag-type filters are allowed for use in the public right of way.

8-01.4 Measurement
This section is supplemented with the following:

No specific unit of measurement shall apply to the lump sum item “Stormwater Pollution Prevention Plan (SWPPP)”.

No specific unit of measurement shall apply to the lump sum item “Dewatering Plan”.

No specific unit of measurement shall apply to the lump sum item “NPDES Construction Stormwater General Permit”.

No measurement will be made for “normal trench dewatering”.

8-01.5 Payment

The pay item “Erosion/Water Pollution Control”, by force account as provided in Section 1-09.6 is revised to read:

Installation, maintenance, and removal of erosion and water pollution control devices including removal and disposal of sediment, stabilization and rehabilitation of soil disturbed by these activities and any additional Work deemed necessary by the Engineer to control erosion and water pollution will be paid by force account in accordance with Section 1-09.6. Directing implementation by ESC Lead of the measures identified in the SWPPP, shown on the TESC plan, and all other work as included in Section 8-01.3(1)B shall be paid by force account as provided in Section 1-09.6.

This section is supplemented with the following:

“Stormwater Pollution Prevention Plan (SWPPP)”, per lump sum. The lump sum contract price for “Stormwater Pollution Prevention Plan (SWPPP)” shall be full pay for all costs, including but not limited to, preparing, submitting, revising, and resubmitting revisions for the Stormwater Pollution Prevention Plan. Where removal of erosion control BMPs is directed by the Engineer according to 8-01.3(16) or according to these specification and the plans, removal shall be included in the lump sum or unit cost for these respective BMPs.

“NPDES Construction Stormwater General Permit”, per lump sum. The lump sum contract price for “NPDES Construction Stormwater General Permit” shall be full pay for all costs, including but not limited to, transfer of coverage, sampling, monitoring, reporting, coordinating, inspecting, materials and labor, and all fees and any other expenses necessary to fully comply with the requirements of the Permit up to and including termination of the Permit and completion of the Work. The lump sum price shall also include all costs necessary to supply the City of Tacoma with all information as necessary to ensure compliance with the permit.

No payment will be made for “normal trench dewatering”.

END OF SECTION
8-02 ROADSIDE RESTORATION
(April 1, 2018 Tacoma GSP)

8-02.2 Materials
This section is supplemented with the following:

Root Barrier
Root barrier shall be rigid-type root barrier module panels and shall be at least
75 percent recycled polypropylene or high-impact polystyrene with added ultraviolet
inhibitors. Material shall have 0.060-inch to 0.075-inch wall thickness, 18-inch height.
Panels shall have reinforcing ribs 1/2-inch deep, raised vertical ribs running
perpendicular to sheet, 6 inches on center.

Tree Watering Bag
The Tree Watering Bag materials shall be Treegator® Original or approved equal.

8-02.3 Construction Requirements

Root Barrier
The Contractor shall stake location for approval of the Engineer before proceeding with
installation. Assemble the appropriate number of root barrier panels as required in the
Plans. Trench immediately adjacent to hardscape to the appropriate depth for installation
of specified root barrier so that top of barrier is 1/2 inch to 1 inch (12.7 mm to 25.4 mm)
above finished soil grade. Place root barrier in trench, vertical ribs facing toward planting
area and tree roots. Where possible, use pavement edge as a guide for root barrier
alignment. Backfill adjacent planting soil against the root barrier to promote clean fit to
hardscape. Fill to finish grade.

Tree Watering Bag
The Contractor shall install one Tree Watering Bag per tree as shown on the plans.
Install Tree Watering Bag in accordance with manufacturer’s instructions.

8-02.3(5) Roadside Seeding, Lawn and Planting Area Preparation
This section is supplemented with the following:

All grades shall be maintained in the areas to be planted in a true and even condition.
The contractor shall be careful not to disturb any of the existing or cut slopes. Where
final grades have not been established, the areas shall be finish graded and all surfaces
left in an even and compacted condition. The finished grade shall be such that after
planting, the grade shall be flush with adjoining surfaces; positive drainage shall also be
maintained.

8-02.3(8)C Pruning, Staking, Guying and Wrapping
This section is supplemented with the following:

Crossed or rubbing branches shall be removed providing the natural shape of the tree is
preserved. Under no circumstances shall pruning be done prior to inspection and
approval of plants by the Engineer. All cuts shall be made flush with the parent stem
leaving no stubs. Pruning cuts shall be made in a manner to favor the earliest possible
covering of the wound by callus growth. Cuts that produce large wounds and weaken
the tree will not be acceptable.

Top growth removal to compensate for root loss shall not exceed one-third (1/3) of the
top growth unless otherwise specified or directed by the Engineer. Cuts created 3/4 inch
in diameter shall be treated with an approved tree wound dressing. All pruning shall
produce a clean cut without bruising or tearing the bark and shall be in living wood
where the wood can properly heal over.

Evergreens shall not be pruned, except to remove injured branches. The use of pole
shears and/or hedge shears for pruning deciduous and evergreen trees will not be
permitted. All trimmings and other debris left over from the planting operations shall be
collected and disposed of off the site.

All evergreen trees and deciduous trees over 15 feet in height shall be guyed with three
wires or cables.

All deciduous and evergreen trees shall be staked the same day of planting.

8-02.3(10) Lawn Installation

8-02.3(10)A Dates and Conditions for Lawn Installation
The second paragraph is supplemented with the following:

Where no irrigation system is to be installed, the lawn shall be placed during the
following period only:

March 1st – June 30th
September 1st - October 25

8-02.3(10)B Lawn Seeding and Sodding
The first paragraph is supplemented with the following:

Lawn Installation with “Low-Growing Turf Seed Mix” shall meet the following:

<table>
<thead>
<tr>
<th>Type of Seed</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwarf Tall Fescue (several varieties) Festuca arundinacea var.</td>
<td>45</td>
</tr>
<tr>
<td>Dwarf Perennial Rye (Barclay) Lolium perenne var. Barclay</td>
<td>30</td>
</tr>
<tr>
<td>Red Fescue</td>
<td>20</td>
</tr>
<tr>
<td>Colonial Bentgrass Agrostis tenuis</td>
<td>5</td>
</tr>
</tbody>
</table>

The rate of application shall be 120 lbs per acre.
The third paragraph is supplemented with the following:

Topsoil shall be imported in accordance with City of Tacoma Standard Plan GSI-01d. On sloped areas, sod strips shall be laid perpendicular to the flow of water.

8-02.3(10)C Lawn Establishment
This section is supplemented with the following:

Lawn that is replaced shall be of the same mixture and grade as the surviving lawn.

8-02.3(11) Mulch

8-02.3(11) Bark or Wood Chip Mulch
The third sentence of the first paragraph is revised to read:

Mulch shall be feathered to plant material trunks, stems, canes, or root collars, and level with the top of junction and valve boxes, curbs and pavement edges.

This section is supplemented with the following:

Bark or wood chip mulch in accordance with Section 9-14.4(3) shall be applied to a depth of 4 inches at the location indicated on the Plans or as directed by the Engineer.

8-02.4 Measurement
The first paragraph is revised to read:

Topsoil, mulch and soil amendments will be measured by the cubic yard in the haul conveyance at the point of delivery.

This section is supplemented with the following:

Irrigation water used to establish vegetation will be considered included in the cost of plants.

“Root Barrier – 18 In.” will be measured per linear foot.

“Tree Watering Bag” will be measured per each.

No specific unit of measure will apply to the lump sum item “Landscape Restoration”

8-02.5 Payment
The pay item for “Plant Selection” is revised to read

Paragraphs 7 through 18, pertaining to partial payment, are deleted.

The pay unit of square yards will be used in lieu of acres.

The following pay items are revised to read:

“Topsoil Type___”, per cubic yard
The unit contract price per cubic yard for “Topsoil Type ___” shall be full pay for providing the source of material for Topsoil Type ___, for pre-excavation weed control, excavating, loading, hauling, intermediate windrowing, stockpiling, weed control on stockpiles or windrows, and removal, placing, spreading, processing, cultivating, and compacting topsoil Type ___.

“Bark or Wood Chip Mulch”, per cubic yard

The unit contract price per cubic yard for “Bark of Wood Chip Mulch” shall be full pay for furnishing and spreading the compost onto the existing soil.

This section is supplemented with the following:

The lump sum contract price for “Landscape Restoration” shall include any restoration of landscape (and associated items not covered under a bid item) necessary to restore surface areas as shown on the Plans where pavement has been removed or where excavation has occurred in construction of storm, sewer, and side sewers, pavement, sidewalks and curb ramps. Payment for “Landscape Restoration” shall be full pay for all materials, labor, tools, equipment and supplies necessary for complete restoration and necessary for weed control within planting areas, seeding, fertilizing and mulching, soil amendment, installation of bark or wood chip mulch, installation of topsoil, planting area preparation, fine grading, planting, cultivating, and clean-up for the particular items called for in the Plans until the physical completion date of the contract. Any restoration needed due to damage or disturbance caused by Contractor beyond the limits of work shall be performed at the Contractor’s expense.

“Root Barrier – 18 In.”, per linear foot.

The unit contract price per linear foot for “Root Barrier – 18 In.” shall be full pay for all labor, tools, materials, and equipment necessary to furnish the materials, install, and place the root barrier as shown in the Plans.

“Tree Watering Bag”, per each.

The unit contract price per each for “Tree Watering Bag” shall be full pay for furnishing and installing the bags where shown on plans.

END OF SECTION
Section 8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways

The first paragraph is revised to read:

Cement concrete curb, curb and gutters, gutters, and spillways shall be constructed with air entrained concrete Class 3000 conforming to the requirements of Section 6-02.

Section 8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways is supplemented with the following:

8-04.3(6) Cold Weather Work

The following additional requirements for placing concrete shall be in effect from November 1 to April 1:

- The Engineer shall be notified at least 24 hours prior to placement of concrete.
- All concrete placement shall be completed no later than 2:00 p.m. each day.
- Where forms have been placed and the subgrade has been subjected to frost, no concrete shall be placed until the ground is completely thawed. At that time, the forms shall be adjusted and subgrade repaired as determined by the Engineer.

END OF SECTION
8-06 CEMENT CONCRETE DRIVEWAY ENTRANCES

8-06.3 Construction Requirements

The first paragraph is revised to read:

Cement concrete driveway approaches shall be constructed with Class 4000 concrete conforming to the requirements of Section 6-02. Contractor shall utilize high early strength concrete as necessary to open driveways as quickly as possible following concrete pour.

The contractor shall coordinate all driveway closures with affected property owners to minimize disruption.

This section is supplemented with the following sub-section:

8-06.3(1) Cold Weather Work

The following additional requirements for placing concrete shall be in effect from November 1 to April 1:

• The Engineer shall be notified at least 24 hours prior to placement of concrete.
• All concrete placement shall be completed no later than 2:00 p.m. each day.
• Where forms have been placed and the subgrade has been subjected to frost, no concrete shall be placed until the ground is completely thawed. At that time, the forms shall be adjusted and subgrade repaired as determined by the Engineer.

8-06.5 Payment

The third paragraph is revised to read:

Excavation required for the construction of the driveway entrance, including costs associated with excavating such as haul and disposal, shall be included in the unit Contract price for “Cement Conc. Driveway Entrance Type ____” regardless of depth.
8-13 MONUMENT CASES
(March 17, 2003 Tacoma GSP)
This section is revised to read:

8-13.1 Description
This Work shall consist of constructing monuments in accordance with the Standard
Plan and these Specifications, in conformity with the lines and locations shown in the
Plans or as staked by the Engineer.

8-13.2 Materials
Concrete shall be Class 3000 in accordance
with the requirements of Section 6-02.
‘Ready Mix’ bag concrete shall not be used.
Bronze markers will be supplied by the Contracting Agency on City funded projects.

8-13.3 Construction Requirements
The Contractor shall construct the poured monument in accordance with the City of
Tacoma Standard Plan SU-01.

8-13.4 Measurement
Measurement of the poured monument will be per each.

8-13.5 Payment
Payment will be made in accordance with Section 1-04.1.
"Poured Monument", per each.
The unit Contract price per each for “Poured Monument” shall be full pay for all labor,
equipment, and materials required to furnish and install the monument, including the
removal of existing monuments and necessary pavement removal to accommodate the
installation in accordance with the standard plan and specifications.

END OF SECTION
8-14 CEMENT CONCRETE SIDEWALKS
(******)

8-14.1 Description
This section supplemented with the following:

This Work also consists of constructing Bus Stop Boarding Pad in accordance with the
details shown in the Plans and these Specifications and in conformity to the lines and
grades shown in the Plans or as established by the Engineer.

8-14.3 Construction Requirements

8-14.3(3) Placing and Finishing Concrete
The fourth paragraph is revised to read:

Curb ramps shall be of the type specified in the Plans. The detectable warning pattern
shall have the truncated dome shape shown in the Standard Plans.

8-14.3(4) Curing
The second sentence is revised to read:

Curing shall be in accordance with Section 5-05.3(13).

Section 8-14 is supplemented with the following:

8-14.3(20) Cold Weather Work

The following additional requirements for placing concrete shall be in effect from
November 1 to April 1:

- The Engineer shall be notified at least 24 hours prior to placement of concrete.
- All concrete placement shall be completed no later than 2:00 p.m. each day.
- Where forms have been placed and the subgrade has been subjected to frost, no
  concrete shall be placed until the ground is completely thawed. At that time, the
  forms shall be adjusted and subgrade repaired as determined by the Engineer.

8-14.4 Measurement
Section 8-14.4 is supplemented with the following:

Detectable warning surfaces will not be measured separately for payment.

Bus Stop Boarding Pad will be measured by the square yard of finished surface.

8-14.5 Payment
The sixth paragraph is revised to read:

Excavation required for the construction of the sidewalk or curb ramp, including costs
associated with excavating such as haul and disposal, shall be included in the unit
contract price for “Cement Conc. Sidewalk” and/or “Cement Conc. Curb Ramp Type ___”
regardless of depth.
Section 8-14.5 is supplemented with the following:

No payment will be made for detectable warning surfaces called for in the plans and/or standard plans. Payment for detectable warning surfaces shall be included in other related bid items included in the proposal.

“Bus Stop Boarding Pad”, per square yard.

The unit Contract price per square yard for “Bus Stop Boarding Pad” shall be full pay for installing the Bus Stop Boarding Pad as specified in the Plans.

END OF SECTION
8-21 PERMANENT SIGNING

(******)

8-21.1 Description
Section 8-21.1 is supplemented with the following:

The Work shall include removing existing signs and posts, installing new signs and posts, and re-installing existing signs in accordance with the Plans and as directed by the Engineer.

8-21.5 Payment
Section 8-21.5 is supplemented with the following:

The lump sum contract price for “Permanent Signing” shall include all costs for removal of existing signs and posts, installation of new signs and posts, and re-installation of existing signs.

END OF SECTION
8-22.3 Construction Requirements

8-22.3(3)E Installation
This section is supplemented with the following for applying Type B material:

Effective Performance Life: When properly applied, in accordance with manufacturer’s instructions, the preformed marking materials shall be neat and durable. The markings shall remain skid resistant and show no lifting, shrinkage, tearing, roll back, or other signs of poor adhesion.

Packaging: The flexible preformed marking material, for use as transverse or bike symbols as well as legends, shall be available in flat form material up to a maximum of 2 foot width by 4 foot length. The material shall be packed in suitable cartons clearly labeled for ease of identifying the contents. Packaging shall not use plastic liners within to separate material from itself. Product packaging shall identify part number and mil thickness.

Material Replacement Provisions: Any properly applied preformed marking materials that shall smear or soften independent of pavement movement or condition within a period of one year from date of application shall be replaced by the supplier.

Installation: The preformed marking materials shall be applied in accordance with the manufacturer’s recommendations on clean and dry surfaces. New Portland concrete cement surfaces must be sandblasted to entirely remove curing compound. Marking configuration shall be in accordance with the “Manual on Uniform Traffic Control Devices,” where applicable.

New Surfaces: Preformed marking materials specified for newly paved asphalt road surfaces shall be capable of being applied as the original permanent marking on the day the surface is paved.

Fusion: The preformed marking materials shall be fusible to the pavement by means of a propane torch recommended by the manufacturer.

Technical Services: The supplier shall provide technical services as may be required.

8-22.3(4) Tolerances for Lines
The allowable tolerance for “Length of Line“ is revised to read:

Length of Line: The longitudinal accumulative error within a 32-foot length of skip stripe shall not exceed plus or minus 1 inch.
8-30  HAND RAILING

(*****)

8-30.1 Description

This work shall consist of constructing hand railings in accordance with details shown in the Standard Plans and these Specifications and in conformity to lines and grades shown in the Plans or as established by the Engineer.

8-30.2 Materials

Materials shall meet the following requirements:

Steel pipe hand railing:
Standard weight steel pipe conforming to ASTM Designation A 120

Grade A Nuts and Bolts 9-06.5(1)
Anchor Bolts 9-06.5(4)
Bolts, Washers, and Other Hardware 9-06.22
Grout 9-20.3
Epoxy Grout 9-26.3

8-30.3 Construction Requirements

8-30.3(1) Hand Rail

Hand rails shall be constructed at the locations shown on the Plans.

The top rail height shall be a minimum of 42-inch from finished grade at the fence alignment. The City of Tacoma will accept a top rail height of up to 48-inch. The installed railing shall be in true alignment, proper grade, and all posts plumb.

The Contractor shall construct and assemble the railing after the concrete has been placed, finished and cured. Railing posts shall be plumb and mounted by means of base plates with anchor bolts into the finished concrete sidewalk.

Base plates shall be a minimum of 5-inch square, with 4 bolt holes. Anchor bolts shall be grouted into drill holes in the concrete back of walk for about 3-inch depth. The base plates shall be fabricated to conform to the sidewalk slope with plumb vertical posts. The Contractor may use grout to fill any imperfections or gaps between the concrete surface and the base plates. Welds shall be made by experienced welders and each weld shall be ground and buffed to a smooth surface.

The Contractor shall submit shop drawings to the Engineer and shall only begin fabrication after the Engineer reviews the shop drawings.

8-30.3(1)A Hand Rail Painting

Painting shall meet the requirements of Section 6-07 of the Standard Specifications.
Paint shall be as follows:


8-30.4 Measurement

Measurement of hand rail shall be per linear foot along the finished ground and railing alignment of the hand rail.

8-30.5 Payment

“Hand Railing”, per linear foot.

The unit Contract price per linear foot for “Hand Rail” shall be full pay for all labor, equipment, and materials, required to construct and complete the railing in accordance with the Plans and Specifications.

END OF SECTION
9-03 AGGREGATES
(September 20, 2018 Tacoma GSP)

9-03.1 Aggregates for Concrete
The title of Section 9-03.1 is revised to read as follows:

9-03.1 Aggregates for Portland Cement Concrete

9-03.1(1) General Requirements
(June 16, 2016 Tacoma GSP)
The seventh paragraph is deleted

9-03.8 Aggregates for Hot Mix Asphalt
Supplement section 9-03.8 with the following:

9-03.8(1)A Aggregates for Porous Hot Mix Asphalt/Porous Warm Mix Asphalt (PHMA/PWMA)

General Requirements
Aggregates for Porous Hot Mix Asphalt (PHMA) or Porous Warm Mix Asphalt (PWMA) shall be manufactured from ledge rock, talus, or gravel, in accordance with the provisions of Section 3-01 that meet the following test requirements:

| Los Angeles Wear, 500 Rev. | 30% max. |
| Degradation Factor | 15 min. |

9-03.8(3)C Grading
Aggregates for PHMA/PWMA shall meet the following requirements for grading:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>¾” square</td>
<td>100</td>
</tr>
<tr>
<td>½” square</td>
<td>90 - 100</td>
</tr>
<tr>
<td>⅝” square</td>
<td>55 - 90</td>
</tr>
<tr>
<td>U.S. No. 4</td>
<td>10 - 40</td>
</tr>
<tr>
<td>U.S. No. 8</td>
<td>0 - 20</td>
</tr>
<tr>
<td>U.S No. 40</td>
<td>0 - 13</td>
</tr>
<tr>
<td>U.S No. 200</td>
<td>0 - 5</td>
</tr>
</tbody>
</table>

* All percentages are by weight.

The aggregate for PHMA/PWMA shall consist of crushed stone with a percent fracture greater than 90% on two faces on the No. 4 sieve and above, and shall be tested in accordance with the field operating procedures for AASHTO T 335.
9-03.8(3)C1 Admixture for Hot Mix Asphalt and Porous Asphalt

FORTA-Fl® Reinforcing Fibers:

- High tensile strength synthetic aramid fiber blend specially formulated to reinforce hot mix asphalt.
- Fiber reinforced asphalt concrete (FRAC) has greater resistance to rutting, thermal cracking, fatigue cracking, and reflective cracking as compared to conventional non-fiber asphalt mixes.

FORTA-Fl® Reinforcing Fibers:

1. Provide a reinforcing fiber blend of virgin polyolefins and virgin aramids that meets the following requirements:

<table>
<thead>
<tr>
<th>Reinforcing Fiber Material Properties</th>
<th>Polyolefin</th>
<th>Aramid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Fibrillated</td>
<td>Monofilament</td>
</tr>
<tr>
<td>Nominal Specific Gravity</td>
<td>0.91</td>
<td>1.44</td>
</tr>
<tr>
<td>Tensile Strength¹ (psi)</td>
<td>NA²</td>
<td>400,000</td>
</tr>
<tr>
<td>Maximum Length (in)</td>
<td>0.75</td>
<td>0.75</td>
</tr>
</tbody>
</table>

1. ASTM D7269, Standard Test Method for Tensile Testing of Aramid Yarns
2. Polyolefin fibers will melt or become plastically deformed during production

2. FORTA-Fl® ¾" HMA blend manufactured by Forta Corporation is an acceptable product to use.

3. If an alternative reinforcing fiber product that is not a blend of aramid and polyolefin fibers is proposed for use on the project, follow submittal requirements in part 2 of section 5-04.3(7)A1 below.

9-03.9(2) Permeable Ballast

Revise section to read as follows:

Permeable ballast base course shall be manufactured from ledge rock, talus, or gravel in accordance with the provisions of WSDOT Standard Specifications Section 3-01. Recycled concrete is not permitted as permeable ballast base course. The materials shall be uniform in quality and substantially free from wood, roots, bark, and other extraneous material and shall meet the following quality test requirements
The grading and quality requirements are as follows:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1/2&quot;</td>
<td>100</td>
</tr>
<tr>
<td>2&quot;</td>
<td>90-100</td>
</tr>
<tr>
<td>1-1/2&quot;</td>
<td>35-70</td>
</tr>
<tr>
<td>1&quot;</td>
<td>0-15</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>0-5</td>
</tr>
<tr>
<td>No. 100</td>
<td>0-3</td>
</tr>
<tr>
<td>% Fracture</td>
<td>95</td>
</tr>
</tbody>
</table>

The sand equivalent value and dust ratio requirements do not apply.

Los Angeles Wear, 500 Rev. 30% maximum (WSDOT Test Method T 96)
Degradation Factor 30 minimum (WSDOT Test Method T 113)

The fracture requirement shall be at least two (2) fractured faces and will apply to the combined aggregate retained on the No. 4 sieve in accordance with WSDOT FOP for AASHTO T 335.

The minimum void ratio of the aggregate shall be 30 percent as determined by AASHTO T 19.

The fracture requirement shall be at least two fractured face and will apply the combined aggregate retained on the No. 4 sieve in accordance with field operating procedure for AASHTO T335. Permeable ballast base course shall meet the requirements for grading and quality when placed in hauling vehicles for delivery to the site, after placement in temporary location, when in stockpiles on site, during installation, after installation and when in place after compacted to project specifications.

Permeable ballast material may be conditionally approved based on Contractor submitted sampled materials prior to delivery to the site. Final Acceptance will be based on conformance testing completed on material that has been delivered, installed, and compacted on site. The exact point of acceptance will be determined by the Engineer. Material out of conformance with the project specifications will be removed and replaced at the Contractor’s expense.
Add the following new section:

9-03.13(2) Filter Sand

Filter Sand shall meet the following grading requirements:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>#4</td>
<td>95-100</td>
</tr>
<tr>
<td>#8</td>
<td>70-100</td>
</tr>
<tr>
<td>#16</td>
<td>40-90</td>
</tr>
<tr>
<td>#30</td>
<td>25-75</td>
</tr>
<tr>
<td>#50</td>
<td>2-25</td>
</tr>
<tr>
<td>#100</td>
<td>0-4</td>
</tr>
<tr>
<td>#200</td>
<td>0-2</td>
</tr>
</tbody>
</table>

All percentages are by weight.

9-03.21 Recycled Material

9-03.21(1) General Requirements

This section is supplemented with the following:

Recycled materials will only be permitted upon approval of the Engineer. Recycled concrete shall not be permitted for use as pipe zone backfill, backfill above pipe zone, and extra excavation area backfill material.

END OF SECTION
9-14  EROSION CONTROL AND ROADSIDE PLANTING
(******)

9-14.2 Topsoil

9-14.2(1) Topsoil Type A
This section is supplemented with the following:

Topsoil Type A shall meet the following:

<table>
<thead>
<tr>
<th>Component</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>greater than 0.05 mm to less than 2 mm – 30-40% by volume</td>
</tr>
<tr>
<td>Compost</td>
<td>50% by volume</td>
</tr>
<tr>
<td>Silt</td>
<td>greater than 0.002 mm to less than 0.05 mm - maximum of 20%¹</td>
</tr>
<tr>
<td>Clay</td>
<td>less than 0.002 mm - maximum of 10%¹</td>
</tr>
<tr>
<td>Organic Content</td>
<td>Percent of dry weight – 20% Minimum</td>
</tr>
<tr>
<td>Acidity (pH)</td>
<td>5.5 to 7.5</td>
</tr>
</tbody>
</table>

¹ Clay and Silt combined - no greater than 20%

The Contractor shall send a minimum of one representative sample of Topsoil Type A to an approved testing laboratory for fertility testing analysis 30 days prior to use on the project site. All testing shall be done in accordance with the current version of the Methods of Soil Analysis published by the Soil Science Society of America. The soil fertility test analysis and report shall include the following:

**Extractable analysis:** nitrate nitrogen, ammonium nitrogen, phosphorus, potassium, calcium, magnesium, copper, zinc, manganese and iron.

**Saturation extract values:** calcium, magnesium, potassium, sodium, boron, sulfate, pH, lime content, salinity and sodium adsorption ratio (SAR).

The Contractor shall be responsible for adding fertilizers and additives as recommended by the testing laboratory reports. All cost associated with fertility testing and adding fertilizers and additives to the topsoil shall be the responsibility of the Contractor.

END OF SECTION
9-28 SIGNING MATERIALS AND FABRICATION
(April 1, 2012 Tacoma GSP)

9-28.1 General
The second sentence of the first paragraph is hereby revised to read:
Permanent signs which measure 36 inches or less on a side and are to be mounted on a single post shall be constructed of single 0.080-inch aluminum panels.

The third sentence of the first paragraph is hereby revised to read:
Sign overlay panels shall be 0.050-inch aluminum panels.

9-28.9 Fiberglass Reinforced Plastic Signs
This section is deleted in its entirety.

END OF SECTION

END OF SPECIAL PROVISIONS
APPENDIX A

CITY OF TACOMA

AND

WSDOT STANDARD PLANS
NOTES

1. As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the ALTERNATIVE PRECAST BASE SECTION. Wire mesh shall not be placed in the knockouts.

2. The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification Section 9-04.3.

3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).

4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.

5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.

6. The opening shall be measured at the top of the Precast Base Section.

7. All pickup holes shall be grouted full after the basin has been placed.
NOTES
1. No steps are required when height is 4' or less.
2. The bottom of the precast catch basin may be sloped to facilitate cleaning.
3. The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
4. Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification Section 9-04.3.

**CATCH BASIN DIMENSIONS**

<table>
<thead>
<tr>
<th>CATCH BASIN DIAMETER</th>
<th>MIN. WALL THICKNESS</th>
<th>MIN. BASE THICKNESS</th>
<th>MAXIMUM KNOCKOUT SIZE</th>
<th>MINIMUM DISTANCE BETWEEN KNOCKOUTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>48&quot;</td>
<td>4&quot;</td>
<td>6&quot;</td>
<td>36&quot;</td>
<td>8&quot;</td>
</tr>
<tr>
<td>54&quot;</td>
<td>4.5&quot;</td>
<td>8&quot;</td>
<td>42&quot;</td>
<td>8&quot;</td>
</tr>
<tr>
<td>60&quot;</td>
<td>5&quot;</td>
<td>8&quot;</td>
<td>48&quot;</td>
<td>8&quot;</td>
</tr>
<tr>
<td>72&quot;</td>
<td>6&quot;</td>
<td>8&quot;</td>
<td>60&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>84&quot;</td>
<td>8&quot;</td>
<td>12&quot;</td>
<td>72&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>96&quot;</td>
<td>8&quot;</td>
<td>12&quot;</td>
<td>84&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>120&quot;</td>
<td>10&quot;</td>
<td>12&quot;</td>
<td>96&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>144&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>108&quot;</td>
<td>12&quot;</td>
</tr>
</tbody>
</table>

**PIPE ALLOWANCES**

<table>
<thead>
<tr>
<th>CATCH BASIN DIAMETER</th>
<th>PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CONCRETE</td>
</tr>
<tr>
<td>48&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>54&quot;</td>
<td>30&quot;</td>
</tr>
<tr>
<td>60&quot;</td>
<td>36&quot;</td>
</tr>
<tr>
<td>72&quot;</td>
<td>42&quot;</td>
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<td>84&quot;</td>
<td>54&quot;</td>
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<tr>
<td>96&quot;</td>
<td>60&quot;</td>
</tr>
<tr>
<td>120&quot;</td>
<td>66&quot;</td>
</tr>
<tr>
<td>144&quot;</td>
<td>78&quot;</td>
</tr>
</tbody>
</table>

- Corrugated Polyethylene Storm Sewer Pipe
- See Standard Specification Section 9-06.12(1)
- Polypropylene Pipe (See Standard Specification Section 9-05.24)
NOTES

1. This inlet requires the precast catch basin unit to be rotated 90 degrees so that the narrow side is parallel to the curb line. When calculating offsets from curb to centerline (CL) of the precast catch basin, please note that the CL of the grate is not the CL of the precast catch basin. See Section A.

2. The dimensions of the frame and hood may vary slightly among different manufacturers. The Frame may have cast features intended to support a debris guard. Hood units may be mounted inside or outside of the frame. The methods for fastening the safety bar / debris guard rod to the hood may vary. The hood may include casting lugs. The top of the hood may be cast with a pattern.

3. Attach the hood to the frame with two 3/4" (in) × 2" (in) hex head bolts, nuts, and oversize washers. The washers shall have diameters adequate to ensure full bearing across the slots.

4. Bolt-down capability is required on all frames, grates and covers, unless specified otherwise in the Contract. Provide two holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC × 2" (in) hex head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer. See BOLT-DOWN DETAIL, Standard Plan B-30.10.

5. Only ductile iron Vaned Grates shall be used. See Standard Plans B-30.30 and B-30.40 for grate details. Refer to Standard Specification Section 9-05.15(2) for additional requirements.

6. This plan is intended to show the installation details of a manufactured product. This plan is not intended to show the specific details necessary to fabricate the castings depicted in this drawing.
NOTES

1. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC x 2" (in) Allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.

2. Refer to Standard Specification Section 9-05.15 and 9-05.16(2) for additional requirements.

3. For frame details, see Standard Plan B-30.10.

BOLT-DOWN DETAILS
SEE NOTE 1

RECESSED ALLEN HEAD CAP SCREW
304 S.S. 5/8" (IN) - 11 NC x 2" (IN)

GRATE
FRAME
HOLE

STANDARD PLAN B-30.30-03

RECTANGULAR VANED GRATE
NOTES:
1. The Contractor will provide necessary control points for striping, stop lines, legends, crosswalks, traffic arrows, and signs. City inspection required before striping or associated sign installation begins.
2. Use of RPMs as shown correspond with paint striping. If striping consists of thermoplastic (or similar) then Type 1Y/W-RPMs are omitted.
3. RPMs shall not be placed over longitudinal or transverse joints of the pavement surface.

32' REPEATING INTERVAL

TYPE 1Y-RPM

YELLOW CENTER SKIP LINE (4"

32' REPEATING INTERVAL

TYPE 1W-RPM

WHITE LANE LINE (4"

32' REPEATING INTERVAL

TYPE 1W-RPM

WHITE GORE LINE (8"

32' REPEATING INTERVAL

TYPE 1W-RPM

WHITE GORE SKIP LINE (8"

DOUBLED CENTER LINE (4" X 2"

32' REPEATING INTERVAL

TYPE 1Y-RPM

YELLOW TWO WAY LEFT TURN LINE (4" X 2"

32' REPEATING INTERVAL

TYPE 1W-RPM

WHITE GORE LINE (8"

32' REPEATING INTERVAL

TYPE 1W-RPM

WHITE GORE SKIP LINE (8"

DIRECTION OF TRAVEL

DIRECTION OF TRAVEL

THROUGH LANE
OPTION 4: Import topsoil mix of sufficient organic content and depth to meet the requirements. All soil areas disturbed or compacted during construction, and not covered by buildings or pavement, shall be restored as described below.

Scarification: scarify or till subgrade in two direction to 6 inches depth. Entire surface shall be disturbed by scarification. Do not scarify within drip line of existing trees to be retained.

<table>
<thead>
<tr>
<th>A. Planting Beds</th>
<th>B. Turf (Lawn) Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use imported topsoil mix containing 10% organic matter (typically around 40% compost). Soil portion must be sand or sandy loam as defined by the USDA. Place 3 inches of imported topsoil mix on surface and till into 2 inches of soil. Place second lift of 3 inches topsoil mix on surface.</td>
<td>Use imported topsoil mix containing 5% organic matter (typically around 25% compost). Soil portion must be sand or sandy loam as defined by the USDA. Place 3 inches of imported topsoil mix on surface and till into 2 inches of soil. Place second lift of 3 inches topsoil mix on surface.</td>
</tr>
<tr>
<td>Rake beds to smooth and remove surface rocks larger than 2 inches diameter. Mulch planting beds with 3&quot; - 4&quot; of organic mulch or stockpiled diff.</td>
<td>Water or roll to compact to 85% of maximum dry density. Rake to level and remove surface rocks larger than 1 inch diameter.</td>
</tr>
</tbody>
</table>

Setbacks: to prevent uneven settling, do not compost-amend soils within 3 feet on center of utility infrastructure (poles, vaults, meters etc.). Within, one foot of pavement edge, curbs and sidewalks; soil should be compacted to approximately 90% max. modified proctor density (ASTM D1557) to ensure a firm surface. Do not compact within tree protection zone. See Std. Plans LS-06 and LS-09.

See SWMM BMP L613 for additional information.
1. Planting includes removal of stakes one year after installation.
2. Shape soil surface to provide 4' dia watering ring.
3. Tree clearance shall be per STD PLAN LS-02.
4. See STD PLAN LS-03 for tree well dimension detail.
5. Root barriers shall be an injection molded or extruded modular component made of high density polypropylene or polyethylene plastic. 18" depth x 10' length root barrier is required along edge of roadways, curbs, driveways, trails, sidewalks, or other structures where root ball is within 4 feet. install root barrier for newly planted trees only.

"CHAINLOCK" OR EQUAL TREE TIE MATERIAL (1" SEID) NAIL OR STAPLE TREE TIE MATERIAL TO STAKE TO HOLD VERTICALLY. LOOP EACH TIE AROUND HALF TREE LOOSELY TO PROVIDE 1" SLACK FOR TRUNK GROWTH

3"-4" (SETTLED) ARBORIST WOOD CHIP MULCH DEPTH, TAPERED AT TRUNK

TOP OF ROOT BARRIER 1" ABOVE FINISH GRADE

18" DEEP LINEAR ROOT BARRIER, PLACE PRIOR TO PLACEMENT OF NEW PAVEMENT TO PREVENT UNDERMINING

ROUGHEN SIDES OF PLANTING PIT TO MAXIMIZE EXCAVATED AREA WITHOUT UNDERMINING ADJACENT PAVING/CURB

REMOVE ALL WIRE, STRINGS AND BURLAP MATERIAL FROM ROOTBALL

UNDISTURBED SUBGRADE (PROVIDES FIRM BASE SO ROOTBALL WILL NOT SINK)

MIN WIDTH OF TREE PIT = 2 TIMES ROOTBALL DIAMETER

MULCH AREA TO BE CLEAR OF GRASS, WEEDS ETC.

TREE TIE ATTACHMENT TO TRUNK NO GREATER THAN 1/3 TREE HEIGHT

STAKE TREE WITH (2) TREATED 2'0 ROT RESISTANT DOWELED WOOD TREE STAKES 6'-0" TO 8'-0" IN LENGTH LOCATED OUTSIDE OF ROOT MASS

SET TOP OF ROOT CROWN 2" ABOVE ADJACENT CURB & SIDEWALK GRADE

DRIVE STAKE OUTSIDE OF ROOT MASS EDGE

PLANTING SOIL LEVEL 1" BELOW ADJACENT PAVING/CURB

STD. CURB ANC GUTTER

TREE PIT DEPTH = FOOTBALL DEPTH (MEASURE BEFORE DIGGING TO AVOID OVEREXCAVATION)

DRIVE STAKES 6" TO 1'-0" INTO UNDISTURBED SOIL BELOW FOOTBALL

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

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STREET TREE PLANTING

STANDARD PLAN NO. LS-01
NOTES:

1. Street trees shall have a trunk free of branches up to the height listed below when planted:
   A. Small trees, whose mature height is 15 to 25 feet, shall have a trunk free of branches up to a minimum of 4 feet.
   B. Conifer/evergreen trees shall have a trunk free of branches up to a minimum of 2 feet.
   C. Trees with ascending branches (examples - Ulmus Americana and Zelkova Serrata) may be branched 1 foot or More below the standard height and still provide proper clearance when planted.
   D. All other trees shall have a trunk free of branches up to a minimum of 6 feet.

2. Street trees shall not be less than 1.5 inches in caliper for broadleaf trees or 6 feet in height for evergreen/conifers.

3. For minimum unpaved planting area dimensions refer to tree well dimension detail, STANDARD PLAN NO. LS-03.

4. The accessible portion of the sidewalk must be a minimum of 5 feet and be free of obstructions.

MINIMUM TREE SETBACKS (AT PLANTING):

| Centerline of tree to centerline of: | 25'-0"
| Street corner (extension of outside face of curb) | 25'-0"
| Stop or yield sign | 15'-0"
| Utility pole | 5'-0"
| Other traffic control sign | 5'-0"

Centerline of tree to edge of:

| Driveway | 5'-0"
| Face of curb | 2'-6"
| Pavement | 2'-0"

Edge of tree to edge of:

| Utility worker access lids | 5'-0"
| Gas shutoff valves | 5'-0"
| Fire hydrant & hydrant branch | 10'-0"
| Water meter, water service & water mains | 5'-0"
| Storm inlet, cl, & manhole | 5'-0"
| Storm/sanitary service connections & mains | 5'-0"

MINIMUM TREE CLEARANCES (AT MATURITY):

| Lowest branch to surface of: | 14'-0"
| Streets | 8'-0"
| Sidewalks | 8'-0"

CITY OF TACOMA
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STREET TREE CLEARANCE

STANDARD PLAN NO. LS-02
**ZONE A (CRITICAL ROOT ZONE)**
The Critical Root Zone is the area under a tree measuring 1 foot of radius per 1 inch of diameter at breast height (DBH) from the trunk outwards and 24 inches in depth. For example: for a 10 inch dbh tree, the Critical Root Zone is located at least 10 feet out from the trunk and 24 inches deep.

**RESTRICTIONS**
1. No disturbance allowed without site-specific inspection and approval of methods to minimize root damage.
2. If roots larger than 2" IN DIA. are encountered, inspection and approval is required before proceeding trenching/excavation work.
3. Tunneling is required to install lines 3'-0" below grade or deeper.

**ZONE C (FEEDER ROOT ZONE)**
The Feeder Root Zone is the area under a tree measuring 2 feet of radius per 1 inch of DBH from the trunk outwards and 24 inches in depth. For example: for a ten inch diameter tree, The Critical Root Zone is located at least 20 feet out from the trunk and 24 inches deep.

**RESTRICTIONS**
1. Operation of heavy equipment and/or stockpiling of materials subject to approval. "Surface protection measures required.
2. Trenching permitted as follows:
   - Excavation by hand or WITH hand-driven trencher may be required
   - Minimize trench width to the extent possible
   - Maintain 2/3 or more of ZONE C in an undisturbed condition

**ZONE B (DRIP LINE)**
The Drip Line is the area below the tree in which the boundary is designated by the edge of the tree's crown.

**RESTRICTIONS**
1. Operation of heavy equipment and/or stockpiling of materials subject to approval. *Surface protection measures required.
2. Trenching permitted as follows:
   - Excavation by hand or with a hand-driven trencher may be required
   - Minimize trench width to the extent possible
   - No disturbance permitted within ZONE A
   - Maintain 2/3 or more of ZONE B in an undisturbed condition
3. Tunneling may be required for trenches deeper than 3'-0"

**SURFACE PROTECTION MEASURES**
1. Wood chip mulch layer, 6"-12" depth; or
2. 4" wood chip mulch layer under 3/4" plywood; or
3. 4" gravel over staked geotextile fabric
4. 4" wood chip mulch layer under steel plates;
5. 4" wood chip mulch layer under logging road mats
TREE PROTECTION ZONE (TPZ)
The Tree Protection Zone is an arborist defined area surrounding the trunk intended to protect the roots and soil to ensure future tree health and safety.

The location of the Tree Protection Zone is at the edge of the Critical Root Zone OR Drip Line, whichever is greater, or area as defined by the project's arborist.

For Critical Root Zone and Drip Line measurements see TREE PROTECTION DURING CONSTRUCTION STANDARD PLAN NO. LS-08.

TREE PROTECTION FENCING

1. Erect readily visible six-foot (6'-0") high chain link fencing at the edge of the Tree Protection Zone, and at the boundary of any open space tracts or conservation easements that abut the construction site except where, due to space restrictions, a specific distance is specified by the project's arborist.

2. Fencing shall be secured 6 foot metal posts with movable footings located above ground. metal posts shall not be more than 10 feet apart.

3. Fencing shall be flush with the initial undisturbed grade.

4. Signs shall be attached to the fencing stating that the tree is designated for protection and the area inside the fencing is a TPZ, which is not to be disturbed unless prior approval has been obtained from the city and/or the projects' arborist.

5. Maintain the fencing in place until the city authorizes removal or a final certificate of occupancy is issued, whichever occurs first.

6. Ensure that any landscaping done in the TPZ, subsequent to the removal of the fencing, shall be accomplished with light machinery or hand labor.

7. No construction activity shall occur within the TPZ, including but not limited to:
   - Dumping or storage of materials such as building supplies, soil, waste items, and storage of vehicles or equipment
NOTES:
1. Tree protection requirements included in this standard detail are for trees which are directly adjacent to paved surfaces which will be retained through construction.
2. Required protection measures for trees other than those in tree wells and planting strips are contained in the TYPICAL TREE PROTECTION FENCING STANDARD PLAN NO. LS-09.
3. Reusable temporary tree and landscape protection fencing can be substituted for chain link fencing in tree wells and planting strips (SEE REUSABLE TREE PROTECTION FENCING FOR PAVED AREAS STANDARD PLAN NO. LS-11).
4. Consider traffic turning visibility and pedestrian visibility when selecting fence height; typically shorter fencing around tree pits between sidewalk and roadway is desired.
NOTES:

1. Concrete base shall be poured in place. Hand mixed concrete is prohibited. Concrete base need not be formed.

2. Notice to surveyors: any monument set in the City of Tacoma must bear the land surveyor number of the surveyor setting the monument. Monuments set as part of an approved plat are exempt.

3. The surveyor is to supply the City of Tacoma with a copy of the calculations used to determine all monument positions before the monuments are set.

4. Brass marker for City of Tacoma funded projects will be supplied by the City, all other brass markers to be supplied by the contractor.

5. Monument must be magnetically locatable.

6. Prior to removing or destroying a monument, the surveyor or engineer shall apply for a permit from the Department of Natural Resources in accordance with WAC 332-120.
NOTES:
A. When used on high side of roadways, the cross slope of the gutter shall match the cross slope of the adjacent pavement. The height of the curb shall be 6", unless otherwise shown on plans.

B. Flush with gutter pan at curb ramp entrance or 3/4" vertical lip at driveway entrance.

Cement Concrete Traffic Curb & Gutter

Integral Cement Concrete Traffic Curb

Cement Concrete Valley Gutter

Type "C" Mountable Cement Concrete Curb & Gutter

Type "D" Mountable Cement Concrete Curb & Gutter

NOTES:
1. For trench crossings, curb and gutter shall be removed to a minimum 2' cut back over undisturbed soil.
2. In all projects, any remaining sections of curb and gutter less than 5' in length between the project area and the nearest control joint shall also be removed and replaced.
3. All joints shall be saw cut full depth prior to restoration and 3/8" expansion joint installed.
4. Concrete finish shall match existing.
5. Cutting wheel run-out beyond the limits of the opening shall be filled in accordance with WSDOT Standard Specification 5-05.3(8)B for cement concrete surfaces and 5-04.3(5)C for asphalt concrete surfaces.
6. Foundations shall be fully compacted prior to form placement.
7. Unsuitable foundation shall be replaced with 3/4" crushed surfacing top course.
NOTE:
B Flush with gutter pan at curb ramp entrance or 3/4" vertical lip at driveway entrance.

TYPE "C" MOUNTABLE INTEGRAL CEMENT CONCRETE CURB

TYPE "D" MOUNTABLE INTEGRAL CEMENT CONCRETE CURB

HMA WEDGE CURB DOWNHILL SIDE OF FULL STREET WARP

CEMENT CONCRETE PEDESTRIAN CURB

CEMENT CONCRETE TRAFFIC CURB

CEMENT CONCRETE OR ASPHALT CONCRETE SIDEWALK, PATH, CURB RAMP, OR LANDING.

3/8" PREMOLDED JOINT FILLER WHEN ADJACENT TO CEMENT CONCRETE HARD SURFACE

NOTES:
1. For trench crossings, curb and gutter shall be removed to a minimum 2' cut back over undisturbed soil.
2. In all projects, any remaining sections of curb and gutter less than 5' in length between the project area and the nearest control joint shall also be removed and replaced.
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6. Foundations shall be fully compacted prior to form placement.
7. Unsuitable foundation shall be replaced with 3/8" crushed surfacing top course.
NOTES:

1. Sidewalks shall be designed and constructed in accordance with 2010 ADA Standards, 28 CFR, Part 35 and as supplemented by the Public Right of Way Accessibility Guidelines (PROWAG). City of Tacoma prefers sidewalk cross slopes to be designed to a maximum of 1.5% and a minimum of 1.0%.

2. When placing walk adjacent to existing curb and gutter, curb and gutter will be repaired as necessary before placing concrete forms for walk.

3. Staking is required where no curb is present.

4. Thickened edge shall be constructed using cement concrete on all radii. All other locations shall be backfilled and compacted.

5. Combination walk shall be 7' min. on all commercial sites and arterial streets. Combination walk shall be a minimum of 5' on non arterial streets. Dimensions are from back of curb to back of walk. See contract plans for width and placement of sidewalk.

6. All expansion joints shall be full depth with 3/4" premolded joint filler.

7. All joints shall be cleaned and edged. External edges shall be 3/4" radius. Internal joints shall be 3/4" radius.

8. All soft and yielding foundation material shall be removed and replaced with crushed surfacing top course (CSTC) per Section 9-03.9(3) of the WSDOT Standard Specifications.

9. All sidewalk shall be replaced to the nearest expansion or contraction joint. All joints shall be saw cut full depth prior to restoration and 3/4" expansion joint installed. Cutting wheel run-out beyond the limits of the opening shall be filled in accordance with WSDOT Standard Specification 5-05.3(8)B for cement concrete surfaces and 5-04.3(5)C for asphalt concrete surfaces.

10. For sidewalks within the North Slope Historical District area use Standard Plan HD-NS03. See Standard Plan HD-NS01 for North Slope Historic District site map.

HEAVY BROOM FINISH (TYP.)

TOP SURFACE SHALL BE BROOMED IN THE SAME DIRECTION AS THE EXPANSION JOINT

4" SHINER AROUND 15’ PANEL 3/4” EXPANSION JOINT

4’ CURB

5’ 5’ 5’ 5’ 5’ 5’ 5’

15’ 15’

CITY OF TACOMA

CEMENT CONCRETE SIDEWALK

STANDARD PLAN NO. SU-04
GENERAL NOTES:

1. Provide a separate directional curb ramp for each marked or unmarked crosswalk. Directional curb ramps are preferred over 45 degree ramps. Curb ramp location shall be placed within the width of the associated crosswalk, or as shown on the Contract Plans. The curb ramp centerline shall be parallel to the direction of the crossing. Forty-five (45) degree curb ramps shall be installed only after approval by the City's ADA Coordinator or the Street Operations Division Manager.

2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface plane shall be flush and perpendicular to the direction of travel. There shall be no vertical discontinuity between the base of curb ramp and gutter line.

3. Do not place grates, junction boxes, access covers, or other appurtenances in front of the curb ramp or on any part of the curb ramp or turning space. Placement on or in front of ramp flares is allowed.


5. A thickened edge shall be constructed to full depth of adjacent curb along entire curb radius.

6. For sidewalk and curb ramps within the North Slope Historical District area see North Slope Historic District Site Map, HD-NS01. Apply Lamp Black 1lb. per cubic yard of cement concrete or as required for discoloration in accordance with ASTM D209-81 Standard Specifications for Lamp Black pigment.

7. The running slope of a curb ramp shall not exceed 8.3% but does not require the ramp length to exceed 15 feet to avoid chasing the slope indefinitely when connecting to steep grades.

8. Curb ramp, turning space and flares shall receive a broom finish, see WSDOT Standard Specifications 8-14.

9. Return curbs, (pedestrian curbs), may only be used with landscaping or raling. Return curbs, (pedestrian curbs), shall not be used to prevent pedestrians from crossing streets.

10. All curb ramp designs shall be stamped by a Washington State licensed Professional Engineer. If meeting the current design standards is not possible, curb ramps shall be constructed to the maximum extent feasible as indicated by an Engineer's note on the stamped drawings. Rationale supporting the design variance shall be provided by the Engineer and shall include a description of the scope of work, the site-specific factors affecting compliance, and the measures implemented to improve compliance.

11. Pedestrian traffic should be aligned to the receiving curb ramp. The existing curb ramps shall be evaluated using criteria in the City's Curb Ramp Installation Matrix.

12. Consult the City's Curb Ramp Installation Matrix and the Right Of Way Restoration Policy for additional requirements.

13. Conduit for APS equipment shall be installed during curb ramp construction at all signalized intersections and at intersections where signalization is anticipated within the next 6 years. Coordinate with Public Works - Engineering, Traffic Section.

14. A Pedestrian Accessibility Control Plan shall be developed in conjunction with each project-specific Temporary Traffic Control Plan for all work in the ROW.

15. Pedestrian traffic shall NOT be directed behind the stop bar.

16. Curb ramp alignment should be consistent with crosswalk alignment.

17. Curb ramp shall be 5’ minimum in width.

18. Catch basins shall be located upstream of curb ramps outside of flare/wing for new construction or when performing storm sewer upgrades.

19. For constructability purposes, the City recommends designing to less than the maximum allowable slopes.
CURB RAMP/TURNING SPACE WIDTH 5'-0" MIN.
- SEE CONTRACT PLANS

GRADE BREAKS SHALL BE
PERPENDICULAR TO THE
DIRECTION OF TRAVEL

3/8" EXPANSION JOINT (TYP.)
CURB AND GUTTER

FOR SIDEWALK WIDTHS, SEE
STANDARD PLAN SU-04 AND
CONTRACT PLANS, OR MATCH
EXISTING (TYP.)

TAPER CURB (TYP.)

5'-0" MIN.
SEE CONTRACT PLANS
OR MATCH NEAREST JOINT

4" (TYP.)
TURNING SPACE

CEMENT CONCRETE
PEDESTRIAN CURB, SEE NOTE 4

5'-0" MIN.
SEE CONTRACT PLANS
OR MATCH NEAREST JOINT

2.0% MAX.
CURB & GUTTER,
SEE NOTE 4

18" THICKENED EDGE,
SEE NOTE 5

3/8" EXPANSION JOINT (TYP.)

DETECTABLE WARNING SURFACE,
SEE STANDARD PLAN SU-05G
GRADE BREAK
cOUNTER SLOPE 5.0% MAX.
GRADE BREAK
TOP OF ROADWAY

5'-0"
SEE CONTRACT PLANS

15'-0" MAX., SEE NOTE 7
GRADE BREAK
8.3% MAX.
GRADE BREAK
8.3% MAX.

15'-0" MAX., SEE NOTE 7

5'-0"
SEE CONTRACT PLANS

15'-0" MAX., SEE NOTE 7
GRADE BREAK
8.3% MAX.
GRADE BREAK
8.3% MAX.

DETECTABLE WARNING SURFACE,
SEE STANDARD PLANS SU-5G
TURNING SPACE FLUSH WITH GUTTER

PLAN VIEW

ISOMETRIC VIEW

SECTION DETAIL A-A

SECTION DETAIL B-B

NOTES:
See Standard Plan SU-05 for
referenced notes

LEGEND
SLOPE IN EITHER
DIRECTION

REVIEWED BY
GMS
PUBLIC WORKS
ENVIRONMENTAL SERVICES
TACOMA POWER
TACOMA WATER
APPROVED FOR PUBLICATION
CITY OF TACOMA
PARALLEL CURB RAMP
TYPE 'A'
STANDARD PLAN NO. SU-05D

8/16/16
DATE
NOTES
1. The Detectable Warning Surface shall extend the full width of the curb ramp (exclusive of flares).
2. The rows of truncated domes in a Detectable Warning Surface shall be parallel with the direction of wheelchair travel.
4. If a curb is not present, place the Detectable Warning Surface at the edge of the pavement.
5. Detectable Warning Surfaces shall be either cast-in-place from Armor Tile, ADA Solutions, or an approved equal or surface applied from Vanguard or an approved equal. No detectable warning fasteners such as glue, bolts, or screws are allowed. Surface applied detectable warning surfaces may be used only when the curb ramp has associated features to deter vehicles from driving over the ramp area. Examples of such features include pedestrian curbing, utility/signal/streetlight poles, and fire hydrants.
6. Detectable warning surface shall be yellow and shall match SAE AMS Standard 595, Color 33538.

TRUNCATED DOME DETAILS
TRUNCATED DOME SPACING

SECTION DETAIL A-A
TRUNCATED DOME

MIN. | MAX.
A | 1.60" | 2.40"
B | 0.65" | -
C | 0.45" | 0.90"
D | 0.90" | 1.40"
E | 0.20" | 0.20"

DIRECTION OF TRAVEL
CURB RAMP, TURNING SPACE
PASS-THROUGH OR WALKWAY

DETECTABLE WARNING SURFACE DETAIL

SOME DETECTABLE WARNING PRODUCTS REQUIRE A CONCRETE BORDER FOR PROPER INSTALLATION. THIS CONCRETE BORDER SHALL NOT EXCEED 2 INCHES.

PLACE AT BACK OF CURB LINE, UNLESS OTHERWISE NOTED

MATCH TO WIDTH OF CURB RAMP, TURNING SPACE, PASS-THROUGH OR WALKWAY

FLUSH WITH GUTTER

RAMP OR TURNING SPACE

ENVIRONMENTAL SERVICES
TACOMA POWER
TACOMA WATER

APPROVED FOR PUBLICATION
CITY ENGINEER
04/19/2021

RVDR
PUBLIC WORKS
TACOMA POWER

CITY OF TACOMA
DETECTABLE WARNING SURFACE DETAILS
STANDARD PLAN NO. SU-05G
USE LOCATION A IF DISTANCE FROM BACK OF CURB TO GRADE BREAK IS LESS THAN OR EQUAL TO 5 FT.

USE LOCATION B IF DISTANCE FROM BACK OF CURB TO GRADE BREAK IS GREATER THAN 5 FT.

WIDTH OF PASS-THROUGH (TYP.)
2'-0" MIN.

WIDTH OF WALKWAY

MEDIAN PASS-THROUGH
2'-0" MIN.

ISLAND PASS-THROUGH
2'-0" MIN.

ROUNDABOUT SPLITTER ISLAND
2'-0" MIN.

NOTES
1. The Detectable Warning Surface shall extend the full width of the curb ramp (exclusive of flares).
2. The edge of the Detectable Warning Surface shall be placed along the back of the curb line unless otherwise noted.
3. The Detectable Warning Surface shall be within 2" (max.) of the edge of the ramp.
4. The rows of truncated domes in the Detectable Warning Surface shall be parallel with the direction of travel.
6. If a curb is not present, place the Detectable Warning Surface at the edge of the pavement.
7. See Standard Plan SU-05G for Detectable Warning Surface Details.
NOTES:
1. Use the following as a guide of when each Entrance or Access Type should be used:
1.a. Cement Concrete Driveway Entrances Type 1 (Entrances) or Accesses Type 1 (Accesses) shall be used at driveways where the planting strip width is 5' or greater.
1.b. Cement Concrete Driveway Entrances Type 2 (Entrances) or Access Type 2 (Accesses) shall be used at driveways and alleys where the planting strip is less than 5' wide.
1.c. Cement Concrete Driveway Entrances Type 3 (Entrances) or Accesses Type 3 (Accesses) shall be used at alleys where the planting strip is 5' wide or greater.
2. Standard Concrete shall be a minimum compressive strength of 3,000 PSI.
3. Concrete Joints:
3.a. All joints shall be cleaned & edged.
3.b. All expansion or isolation joints shall be full depth.
3.c. External joints to the driveway shall be 1/2" radius. Internal joints to the driveway shall be 1/4" radius.
3.d. All joints shall be saw cut full depth prior to restoration and 3/8" expansion joint installed. Cutting wheel run-out beyond the limits of the opening shall be filled in accordance with WSDOT Standard Specification 5-05.3(8(b) for cement concrete surfaces and 5-04.3(5(c) for asphalt concrete surfaces.
4. Entrances and Accesses wider or narrower than shown on this plan require approval of the Director of Public Works.
5. Entrances and Accesses shall have a brushed finish in a transverse direction to the center line of Entrance or Access.
6. Entrances or Accesses wider than 20' require a center line expansion joint.
7. When trenching through an Entrance or Access:
7.a. If Entrance or Access is 20' or less in width, full replacement is required.
7.b. If Entrance or Access is greater than 20' in width, a minimum 2' wide cut back over undisturbed soil is required and replacement shall extend to the nearest control joint.
8. Transition panel from new Entrance or Access to sidewalk shall be a minimum of 5 feet.
9. For Entrances or Accesses within the North Slope Historical District area use Standard Plan HD-NS02. See Standard Plan HD-NS01 for map of Historical District area limits.
10. Permeable surfacing may be allowed for Entrances or Accesses. Refer to Standard Plans PD-01 and PD-02 as applicable. Do not compact subgrade for permeable surfacing and refer to APWA GSP-206.3(3) Subgrade for Permeable Pavements. A soils report is required and modeling may be necessary per SWMM BMP L63.
13. A 2" x 2 PVC Sch. 80 Pipe with capped ends shall be installed as shown, per TMC 10.14.070. Pipe shall be buried 24 inches below finished grade and have a pull string and location wire per WSDOT 9-29.3(2)(A).
14. Detectable Warning Surface shall be placed at alleys if the ADT is greater than 700, in the downtown area, located near a high pedestrian volume area, or where there are sight distance concerns. The detectable warning pattern, if needed, shall be placed on the full width of the sidewalk in accordance with City of Tacoma Standard Plan SU-05A.
15. When an existing entrance or access does not meet current ADA standards as defined by the City of Tacoma's Design Manual, the entire entrance or access shall be replaced to current ADA standards.
FOR SIDEWALK WIDTHS, SEE STANDARD PLAN SU-04 AND CONTRACT PLANS, OR MATCH EXISTING, (TYP.)

EX. SIDEWALK, TYP.

3/8" FULL DEPTH EXPANSION JOINT (TYP.) ISOLATION JOINT FOR PERVERIOUS CONCRETE (TYP.)

TRANSITION PANEL, 5' MIN

DRIVEWAY WIDTHS:
- NON SINGLE FAMILY RESIDENCE / DUPLEX / TRIPLEX
  24' MIN TO 30' MAX
- SINGLE FAMILY RESIDENCE / DUPLEX / TRIPLEX
  14' MIN TO 20' MAX

TRANSITION PANEL, 5' MIN

2" Ø PIPE, SEE NOTES 12 AND 13 ON SU-07A

#4 GRADE 60 REBAR EACH SIDE, 6" ON CENTER, 3" CLEARANCE EACH CONCRETE FACE

3/4" LIP WITH 1/4" R

3/4" EXPANSION JOINT

VARIABLE

CRUSHED SURFACING

COMPACTED SUBGRADE

CRUSHED SURFACING TOP COURSE, 2" DEPTH

6" (MIN) RESIDENTIAL
8" (MIN) COMMERCIAL

ROADWAY PAVEMENT DISTURBED DURING CONSTRUCTION OF DRIVEWAY SHALL BE RESTORED IN ACCORDANCE WITH STANDARD PLANS SU-14 OR SU-15.

NOTE: DESIGNED SECTION REQUIRED FOR PERMEABLE SURFACING. SEE NOTES 10 AND 11 ON SU-07A.

STANDARD CONCRETE SECTION DETAIL A-A

NTS

REVIEWED BY
DCS PUBLIC WORKS
N/A TACOMA POWER

APPROVED FOR PUBLICATION
ENVIRONMENTAL SERVICES N/A TACOMA WATER

CITY ENGINEER DATE
CITY OF TACOMA CEMENT CONCRETE DRIVEWAY ENTRANCE AND ACCESS TYPE 1
STANDARD PLAN NO. SU-07B
1. All pavement restoration work shall also meet the requirements of the City of Tacoma's Right of Way Restoration Policy. See Standard Plan SU-15B for any streets exempt from this policy.

2. Temporary Surface Restoration:
   - Arterials, industrial areas and/or roads with bus traffic: Temporary patches shall be compacted and leveled to a minimum of 3-inches of hot-mix asphalt (HMA).
   - Residentials and alleys: Temporary patches shall be compacted and leveled to a minimum of 2-inches of either HMA or cold-mix asphalt. Temporary patches between October 1st and March 31st shall be made with HMA unless otherwise approved.

3. All permanent final patches shall be rectangular in shape and constructed parallel and perpendicular to the road centerline.

4. Where existing pavement defects are in close proximity to the new cut, the inspector may require additional pavement removal to eliminate the pavement defect.

5. The final cut edge of paved surfaces shall be smooth and straight, consistent with grading or saw cutting devices. No jagged, broken, or undermined edges are allowed. Cutting wheel run-out beyond the limits of the opening shall be filled in accordance with WSDOT Standard Specification 5-05.3(8)B for cement concrete surfaces and 5-04.3(3)C for asphalt concrete surfaces.

6. Final compaction of HMA shall be 91% of maximum density.
   - Isolated patches: Minimum 1 test per patch up to 150 square feet, and 1 test required every additional 300 square feet, thereafter.
   - Trench patches: 1 test every 150 linear feet of trench with a minimum of 2 tests per trench.

   Testing shall be performed by a certified independent testing laboratory or certified tester, as approved by the City's Construction Division. Tests shall be completed and reports identifying the project number submitted to the City Construction Division within 48 hours of test.

7. All joints between the new and original asphalt pavement shall be sealed with hot asphalt or asphalt emulsion and covered with dry paving sand before the asphalt solidifies. Existing surfaces shall be prepared in accordance with WSDOT Standard Specification 5-04.3(5)A prior to placing any new pavement surfaces.

8. Longitudinal construction joints shall only be located at the center or edge of affected lanes.

   Streets and courts 20 feet or less in width and all alleys are considered one-lane streets. Non-arterial streets and courts greater than 20 feet in width with no traffic channelization are considered two-lane streets with one-lane either side of the centerline of the street.

   Non-arterial streets greater than 32 feet in width with no traffic channelization may be considered three lane streets upon prior approval from the City Engineer.

9. Transverse construction joints terminate at the edge of the 2" cut back.

10. HMA pavement shall not be placed over CDF until approved by the City.

---

**TABLE 1**

<table>
<thead>
<tr>
<th>PAVEMENT REPLACEMENT DEPTH IN CUT BACK ZONE</th>
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<tbody>
<tr>
<td><img src="image.png" alt="Diagram" /></td>
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<table>
<thead>
<tr>
<th>MIN.</th>
<th>MAX.</th>
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</thead>
<tbody>
<tr>
<td>ARTERIALS, INDUSTRIAL AREAS &amp; ROADS WITH BUS TRAFFIC</td>
<td>MATCH EXISTING +1&quot;, OR 4&quot;, WHICHEVER IS GREATER</td>
</tr>
<tr>
<td>RESIDENTIALS AND ALLEYS</td>
<td>MATCH EXISTING +1&quot;, OR 3&quot;, WHICHEVER IS GREATER</td>
</tr>
</tbody>
</table>

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**CITY OF TACOMA**

**DEPARTMENT OF PUBLIC WORKS**

**APPROVED FOR PUBLICATION**

**CITY ENGINEER**

**DATE**

**TYPICAL PAVEMENT RESTORATION FOR ASPHALT CONCRETE/OIL MAT PAVEMENT**

**STANDARD PLAN NO.** SU-15A
NOTES:
1. Provide uniform support under barrel and provide pockets in bedding for pipe bells.
2. Hand tamp under haunches.
3. Trench width shall be as specified in Section 2-09.4 of the WSDOT Standard Specifications.
4. Pipe zone backfill and backfill above pipe zone shall meet the material requirements of WSDOT Standard Specification Section 9-03.12(2) for gravel backfill for walls.
5. All trenches shall be compacted in accordance with SU-28.
6. Pipe zone bedding shall meet the material requirements of WSDOT Standard Specification Section 9-03.9(3) for crushed surfacing top course.
NOTES:

1. For details showing grade ring, ladder, steps, handholds and top slabs, see Standard Plan No. SU-21.
2. Non-reinforced concrete in channel and shelf shall be Class 3000. All precast concrete shall be Class 4000.
3. Rubber gaskets shall be used in tongue and groove joints of pre-cast sections.
4. A flexible pipe-to-manhole connector shall be employed in all connections of rigid and flexible pipes to new precast concrete manholes. The connector shall be "Kor-N-Seal" with "Wedge Korband" manufactured by NPC, Inc., or approved equal.
5. Base reinforcing steel shall be per manufacturer's recommendation.

<table>
<thead>
<tr>
<th>MANHOLE DIMENSION TABLE</th>
</tr>
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<tbody>
<tr>
<td>INSIDE DIAMETER</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>48&quot;</td>
</tr>
<tr>
<td>54&quot;</td>
</tr>
<tr>
<td>60&quot;</td>
</tr>
</tbody>
</table>

SEPARATE PRECAST BASE

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

CITY ENGINEER

MANHOLE-TYPE 1
48", 54" AND 60"

STANDARD PLAN NO. SU-17
96" FLAT SLAB TOP

72" FLAT SLAB TOP

48", 54", OR 60" FLAT SLAB TOP

ONE #3 BAR HOOP FOR 6"
TWO #3 BAR HOOP FOR 12"

RECTANGULAR ADJUSTMENT SECTION

NOTE:
As an acceptable alternate to rebar, wire mesh having a minimum area of 0.12 square inches per foot may be used for adjustment sections.
NOTES:

1. Covers shall have the word "SANITARY" in 2 inch raised letters when used with sanitary sewer installations, or "STORM" when installed with storm sewers. All covers shall have the words "CITY OF TACOMA" in 1-1/2 inch raised letters and the words "CONFINED SPACE" in 1-inch raised letters.

2. Lids must be interchangeable, any lid shall fit any and all frames.

3. Frame and cover shall be designed for H-20 loading.

4. Frame shall be grey-iron conforming to the requirements of AASHTO M 105, grade 30B.

5. Covers shall be ductile iron conforming to ASTM A 536, grade 80-55-06.

6. Per WSDOT Standard Specification 9-05.15, metal castings shall not be dipped, painted, welded, plugged, or repaired.
NOTES:
1. Romac style "CB" sewer saddle or approved equal.
2. Core drill sewer main.
3. Portions of the City's sanitary sewer system have been lined.
   If a lined pipe is encountered during connection of the new side sewer, the Construction Division shall be contacted at (253) 591-5760 for further instructions.
4. Sewer laterals shall not extend beyond the interior wall of the sanitary sewer main.
CAST IRON FRAME AND COVER, SEE DETAIL MATCH EXISTING GRADE

12" Ø PVC PIPE, SDR 35

6" PVC PIPE CLEANOUT RISER
6" PVC PIPE

TO MAIN SIDE SEWER

SEE STANDARD BEDDING DETAIL

CLEANOUT DETAIL
NOT TO SCALE

NOTE:
When no curb and gutter or sidewalk exist, locate cleanout in future planting strip.

FRAME AND COVER DETAIL
NOT TO SCALE

WEDGE CURB

ALLEY

CLEANOUT

TYPICAL ALLEY SECTION

CURB & GUTTER

PLANTING STRIP

SIDEWALK

CLEANOUT

TYPICAL SIDEWALK SECTION

CURB & GUTTER

SIDEWALK

CLEANOUT

TYPICAL COMBINATION SIDEWALK SECTION

STANDARD CLEANOUT LOCATION
NOT TO SCALE

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

SIDE SEWER CLEANOUT
AND COVER DETAIL

STANDARD PLAN NO. SU-24

CITY ENGINEER
DATE

James Penney
12 Jun 2009
PROGRESSION OF WORK

PRIOR TO EXCAVATING OR RESURFACING:
Contractor shall:
Remove frame and risers to a depth 8-inches below subgrade.
Install steel protective plate in accordance with Detail A.
Reference the location of the utility structure.

CONSTRUCTION OF SURFACING:
Gravel surfacing:
Install base materials and gravel over protective steel plate.
Asphalt surfacing:
Install base materials and asphalt over protective steel plate.
Concrete surfacing:
Adjust frame and grate to final grade prior to placing concrete surfacing.

UPON COMPLETION OF SURFACING:
The asphalt concrete pavement or gravel surfacing shall be removed in a neat circle in accordance with Detail B.
The location of the asphalt or gravel removal shall be based upon the reference location established by the Contractor.
Crushed surfacing and base materials shall be removed and disposed of to allow the removal of the steel protective plate.
The structure shall be adjusted to finish grade utilizing the same methods of construction as specified for new construction in Section 7-05.
For hot mix asphalt, the area shall then be backfilled with Class 3000 cement concrete to an elevation of 3 to 4 inches below the finished pavement surface. 24-hours after placing the concrete, HMA pavement Cl. 3/8" PG 64-22 shall be placed in accordance with Standard Plan No. SU-15.
For non-paved surfaces, the area shall be backfilled with Class 3000 cement concrete to an elevation of 3 to 4 inches below the top of the casting and then backfilled with crushed surfacing top course and compacted.

NOTE:
All general provisions, construction and warranty requirements of the Right of Way Restoration Policy will be followed.
ABBREVIATIONS

F.C.       FACE OF CURB
C.G.       CURB GRADE
F.L.       FLOW LINE
F.WALL.    FACE OF WALL
SH.GR.     SHOULDER GRADE
C.B.       CATCH BASIN
M.H.       MAN HOLE
L.H.       LAMP HOLE
S.G.       SUBGRADE
B.G.       BALLAST GRADE
CR.R.GR.   CRUSHED ROCK GRADE
P.C.       POINT OF CURVATURE
P.T.       POINT OF TANGENCY
V.G.       VERTICAL CURVE
E.P.       EDGE OF PAVING

* DESIGNATES DISTANCE FROM GUARD STAKE TO GRADE OR LINE HUB. (OPTIONAL)

STAKES SHALL HAVE STATIONS ON BACK SIDE

LINE POINTS

GUTTER GRADE
GRADE POINTS

LINE & GRADE POINTS
FOR WALKS - WHICHEVER SIDE IS STAKED

ALLEY SLABS

WALKS

SIDE OR BACK

CURBS

SLOPE STAKES

SEWERS

WALLS

APPROVED FOR PUBLICATION

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

STANDARD PROCEDURE
FOR MARKING
CONSTRUCTION STAKES

CITY ENGINEER

DATE

STANDARD PLAN NO.  SU-26

12 Jan 2009
NOTES:
1. The existing pavement shall be cut full depth with an eight inch diameter core drill. The subbase material shall be removed using a vacuum excavator, keeping the excavation as minimal as possible.
2. Backfill the excavation with a six inch cushion of crushed rock over the utility then place the remaining void with CDF or compacted CSTC.
3. For asphalt concrete streets, repair the cored pavement section with HMA Class 1/2 PG 64-22 and seal the joint.
4. For cement concrete pavement streets, replace the cored section with Class 6000 cement concrete.
5. If excavation is larger than 8" core, restoration shall comply with the Right of Way Restoration Policy.
<table>
<thead>
<tr>
<th>DEPTH</th>
<th>TESTING FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURFACE (BELOW HMA)</td>
<td>VERTICAL N/A 1 TEST EVERY 150 LINEAR FEET OF TRENCH OR MINIMUM 2 PER TRENCH</td>
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<td></td>
<td>HORIZONTAL 1 TEST FOR 150 SQUARE FEET FOR ISOLATED PATCHES</td>
</tr>
<tr>
<td>1 TO 4 FEET (OR MIN 18 IN. ABOVE PIPE)</td>
<td>VERTICAL 1 EVERY 12 INCHES SAME AS FOR SURFACE</td>
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<td></td>
<td>HORIZONTAL NO SPECIFIC REQUIREMENT - MAY BE REQUIRED BY COT INSPECTOR FOR VERIFICATION OF COMPACTION</td>
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</table>

A. TESTING SHALL BE PERFORMED BY A CERTIFIED INDEPENDENT TESTING LABORATORY OR A CERTIFIED TESTOR AS APPROVED BY THE CITY'S CONSTRUCTION DIVISION. THE COST OF TESTING IS THE RESPONSIBILITY OF THE PERMITTEE. TESTS SHALL BE COMPLETED AND REPORTS IDENTIFYING THE PROJECT NUMBER SUBMITTED TO THE CONSTRUCTION DIVISION WITHIN 48 HOURS OF TESTS.

B. ONLY ONE COMPACTION TEST WILL BE REQUIRED FOR MULTIPLE TRENCHES WITHIN A 150 SF AREA PROVIDED COMPACTION PROCEDURES ARE THE SAME.

C. EACH LIFT SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY, AS VERIFIED BY COMPACTION TESTING, BEFORE PROCEEDING TO THE NEXT LIFT. COT INSPECTOR MAY REQUIRE EXCAVATION AND REMOVAL OF SOIL WHERE COMPACTION IS IN QUESTION.

NOTES:

1. Compact backfill material in max. 12 in. lifts. Compact backfill material to 95% max. modified proctor density (ASTM 1557) except directly over pipe, hand tamp only.

2. Native backfill will require laboratory testing to determine max. modified proctor density. Imported backfill will require submittal of proctor test results from supplier.

3. See WSDOT Standard Specification Section 2-09.3(1)E for material requirements on "Controlled Density Fill" (CDF). CDF may be used for trenches less than 24 in. wide or as approved by the City Engineer. CDF shall be vibrated/compacted.
NOTES:
1. Surface mounting of sign posts, especially within traffic islands or medians, is only allowable with special authorization from the city’s traffic engineering group. (Exception: Surface mounting of flexible post object markers within islands or medians is permitted).
2. If finished ground line is a hard surface, then compacted native backfill material shall be concrete with the top of foundation being smooth, dense, and uniform to finished ground line.

SIGN SUPPORT DETAIL FOR STEEL SIGN POST

BASE PLATE DETAIL FOR STEEL SIGN POST SURFACE MOUNTING (SEE NOTE 1)
APPENDIX B

CITY OF TACOMA INSURANCE REQUIREMENTS
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
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.
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:

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

4.3 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 and property damage coverage for owned (if any), non-owned, hired, or leased vehicles.
4.4 **Workers’ Compensation**

4.4.1 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.

4.5 **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.

4.6 **Excess or Umbrella Liability Insurance**

Contractor shall provide Excess or Umbrella Liability Insurance with limits not less than Ten Million Dollars ($10,000,000) per occurrence and in the aggregate. This coverage shall apply, at a minimum, in excess of primary underlying Commercial General Liability, Employer’s Liability, Pollution Liability, Marine General Liability, Protection and Indemnity, and Automobile Liability if required herein.

4.7 **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:

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

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

4.8 **Installation Floater Insurance**

Contractor shall maintain during the term of the Contract, at its own expense, Installation Floater Insurance covering Contractor’s labor, materials, and equipment to be used for completion of the work performed under this Contract against all risks of direct physical loss, excluding earthquake and flood, for an amount equal to the full amount of the Contract improvements.

4.9 **Builder’s Risk Insurance**

Contractor shall maintain during the term of the Contract and until final acceptance of the work by the City of Tacoma, a policy of Builder’s Risk Insurance providing coverage for all-risk of physical injury to all structures to be constructed according to the Contract. City of Tacoma shall be included as a named insured (not named as additional insured) on the
policy. Builder’s Risk Insurance policy shall:

4.9.1 Have a deductible of no more than Five Thousand Dollars ($5,000) for each occurrence, the payment of which will be the responsibility of Contractor. Any increased deductibles accepted by City of Tacoma will remain the responsibility of Contractor.

4.9.2 Be on an ISO Special Form Causes of Loss or equivalent and shall insure against the perils flood, earthquake, theft, vandalism, malicious mischief, and collapse.

4.9.3 Include coverage for temporary buildings, debris removal, and damage to materials in transit or stored off-site.

4.9.4 Be written in the amount of the completed value of the structures, with no coinsurance provisions exposure on the part of Contractor or City of Tacoma.

4.9.5 Contain a Waiver of Subrogation provision whereby each insured waives their subrogation rights to the extent the loss is covered by this insurance.

4.9.6 Grant permission to occupy, allowing the building or structure to be partially occupied prior to completion, without detrimental effect to the coverage provided.

4.9.7 Include coverage for the testing and startup of the building’s operating systems.

4.9.8 Include coverage for City of Tacoma’s loss of use or business interruption arising out of a covered loss which delays completion.

4.9.9 Include resultant damage coverage for loss due to faulty workmanship and defective material.

Contractor and City of Tacoma waive all rights against each other, their respective subcontractors, agents, and representatives for damages caused by fire or other perils to the extent covered by Builder’s Risk Insurance or other property insurance applicable to the work. The policies shall provide such waivers by endorsement or otherwise.

4.10 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.
APPENDIX C

SUMMARY OF GEOTECHNICAL CONDITIONS
Geotechnical Engineering Services Report

City of Tacoma - Permeable Pavement Study
Manitou Neighborhood
Tacoma, Washington

for
City of Tacoma

December 20, 2019
Geotechnical Engineering Services Report

City of Tacoma - Permeable Pavement Study
Manitou Neighborhood
Tacoma, Washington

for
City of Tacoma

December 20, 2019

GeoEngineers

1101 South Fawcett Avenue, Suite 200
Tacoma, Washington 98402
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Geotechnical Engineering Services Report

City of Tacoma – Permeable Pavement Study
Manitou Neighborhood
Tacoma, Washington

File No. 0570-146-00
December 20, 2019

Prepared for:
City of Tacoma
Environmental Services Department
326 East D Street
Tacoma, Washington 98421

Attention: Kirk Myklestad, PE

Prepared by:
GeoEngineers, Inc.
1101 South Fawcett Avenue, Suite 200
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Geotechnical Engineer

Dennis J. (DJ) Thompson, PE
Associate

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1.0 INTRODUCTION AND PROJECT UNDERSTANDING

This report presents the results of our geotechnical engineering services for the Manitou Neighborhood Permeable Pavement Infiltration Study in Tacoma, Washington. The project area is comprised of South Cheyenne Street, South Verde Street, South Stevens Street and South Mason Avenue between South 64th Street and South 66th Street and the section of South 64th Street between South Mason Avenue and South Tyler Street. A Vicinity Map showing the project area is provided as Figure 1.

Our understanding of the project is based on discussions with you and our experience on similar projects within the City. We understand that the existing pavements of streets described above are to be replaced with permeable pavements. Permeable pavements will be designed in accordance with the 2016 City of Tacoma Stormwater Management Manual (SWMM). The purpose of this study was to complete subsurface explorations within the improvement area as a basis for providing design soil infiltration rates for the permeable pavement section. This study is a continuation of prior work where we investigated soil conditions and evaluated permeable pavement feasibility in seven neighborhoods around Tacoma. The results of our prior study are presented in a Geotechnical Report dated October 16, 2017 (2017 Report) and a Report Addendum dated June 1, 2018. Our work is being completed in accordance with our Signed Agreement for this project dated March 1, 2016.

2.0 SCOPE OF SERVICES

Our scope of services for this study were provided to the City of Tacoma (Kirk Myklestad) in an email dated October 1, 2019 and included the following tasks.

■ Obtaining a street use permit and coordinating subcontractors to complete explorations within the study area.
■ Drilling up to six borings within the study area to investigate soil and groundwater conditions and collecting representative soil samples.
■ Submitting selected soil samples for laboratory testing including grain size analyses, cation exchange capacity (CEC) testing and organic content testing.
■ Developing recommended long-term infiltration rates for the soils encountered based on the soil grain size analysis method presented in the SWMM.
■ Preparing this report summarizing the results of our study.

3.0 SITE CONDITIONS

3.1. Surface Conditions

The improvement area is located in a residential neighborhood of South Tacoma. The existing roadways in the improvement areas are surfaced with asphalt concrete (AC) pavement in varying states of disrepair. Curbs are not present. The roadway shoulders are generally unpaved and surfaced with gravel and grass. Site grades generally decrease from north to south. The approximate change in elevation from the north end of the site to the south end of the site is on the order of 5 to 10 feet.
3.2. Geology Review

We reviewed the “Geologic Map of the Tacoma” (Schuster and others, 2015). The geologic map indicates soils in the project vicinity generally consist of “Recessional Outwash, Steilacoom gravel” (Qg0sg). Steilacoom gravel deposits are described in the literature as loose to dense, poorly to well sorted sands and gravels that were deposited during glacial lake outburst floods. Steilacoom gravel soils are typically medium dense to dense and can contain gravel and boulders. These soils were deposited after the most recent regional glaciation and were not glacially consolidated after deposition.

According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey the site is likely underlain primarily by “Spanaway gravelly sandy loam” which is a Hydraulic Soil Group “A” soil.

3.3. Subsurface Explorations and Laboratory Testing

We explored subsurface conditions within the study area by advancing six hollow-stem auger borings (B-1 through B-6). The locations of the borings are shown on the Site Plan, Figure 2. Details of the exploration program are provided in Appendix A. A key to the exploration logs and the summary exploration logs are provided as Figures A-1 through A-7.

Soils samples collected from our borings were submitted to our laboratory for gradation analyses. A summary of our laboratory testing program is provided in Appendix B. Grain size analysis test results are shown on the exploration logs and are attached as Figures B-1 and B-2. We also submitted samples to a subcontracted laboratory for CEC and organic content testing. A summary of the CEC and organic content test results are summarized in Figure B-3.

As part of our 2017 Report, we advanced one exploration in the project area. The location of the exploration is shown on the Site Plan and the summary exploration log, a key to the log and the associated laboratory test results are provided in Appendix C.

3.4. Soil Conditions

With the exception of B-1, the explorations for this study were advanced within unpaved roadway shoulder areas surfaced with crushed rock. B-1 was advanced through the roadway asphalt. Asphalt thickness in B-1 was on the order of ¾ inch. Starting below the asphalt in B-1 and below the surfacing gravel in B-2 through B-6, we observed what we interpret to be fill or reworked native soil. Fill generally consisted of loose to medium dense silty sand with gravel and extended to depths between about 1.5 and 4.75 feet below existing ground surface (bgs). Below the fill, we observed medium dense to dense sand and gravel with variable silt content. We interpreted these soils to be Steilacoom gravel deposits. Steilacoom gravel deposits extended to the full depth explored in our borings (about 8.5 feet bgs).

Soil conditions observed in the explorations completed for this study are generally consistent with the conditions observed in the explorations completed as part of our 2017 Report and the mapped geology.

3.5. Groundwater Conditions

We did not observe what we interpret to be the regional groundwater table in our explorations. We did not observe areas of perched groundwater in our explorations; however, isolated areas of perched groundwater could be present at the site. We expect that areas of perched groundwater will likely be influence by season,
precipitation events and irrigation activities. We do not expect that significant volumes of water will collect in perched zones.

We reviewed the United States Geological Survey report titled “Hydrogeologic Framework, Groundwater Movement, and Water Budget in the Chambers-Clover Creek Watershed and Vicinity, Pierce County, Washington” (Scientific Investigations Report 201-5055). According to this report the regional groundwater aquifer in the project area is likely between Elevation 200 feet and Elevation 225 feet (about 35 to 60 feet bgs).

Based on our understanding of groundwater conditions in the area, the conditions observed in our explorations and our experience, in our opinion it is unlikely that regional groundwater levels at the site will rise to within 20 feet of the ground surface during a given water-year.

4.0 STORMWATER INFILTRATION

4.1. General

Section 2.2.2.5, Volume 6 of the SWMM provides criteria to consider when designing permeable pavements. The SWMM requires that 1 foot of vertical separation is maintained between the bottom of the permeable pavement section (including base course) and the seasonal high groundwater elevation or other impermeable layer. Groundwater was not observed in our explorations (which typically extended to around 8.5 feet bgs). Based on our understanding of groundwater conditions we do not anticipate that separation from the groundwater table will be an issue in the proposed permeable pavement areas. We did not observe what we interpret to be an impermeable layer in our explorations.

Based on our understanding of soil and groundwater conditions at the site in our opinion stormwater infiltration is feasible for this project.

4.2. Stormwater Infiltration Rate

According to the SWMM the design infiltration rate for soils “unconsolidated by glacial advance” can be determined using the Soil Grain Size Analysis Method. This criterion applies to the geologic conditions at the site and in our opinion the Grain Size Analysis Method is suitable for establishing design infiltration rate. The hydraulic saturated conductivity obtained from the soil Grain Size Analysis Method is an initial rate and is reduced through correction factors to produce a long-term design infiltration rate. The correction factors recommended for use in permeable pavement design are outlined in Section 2.2.2.5.8, Volume 6 of the SWMM. We used the following correction factors in our determination of the long-term infiltration rates:

- Site variability and number of locations tested (CFv) = 0.8, corresponding to low to moderate site variability
- Test Method (CFt) = 0.45 for grain-size test method
- Quality of Pavement Aggregate Base Material (CFm) = 0.9

The total correction factor applied to determine the design rate is equal to the product of the partial correction factors listed above.
Table 1 summarizes the initial (short-term) infiltration rates and long-term design infiltration rates calculated using the grain-size analysis method.

**TABLE 1. GRAIN-SIZE ANALYSIS INFILTRATION RATE SUMMARY**

<table>
<thead>
<tr>
<th>Exploration</th>
<th>Sample Depth (feet)</th>
<th>Geologic Unit</th>
<th>USCS Soil Type</th>
<th>Percent Fines</th>
<th>(^1\text{Ksat}_i) (in/hr)</th>
<th>(^2\text{Ksat}_d) (in/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-1</td>
<td>1</td>
<td>Fill</td>
<td>SP-SM</td>
<td>8</td>
<td>38.7</td>
<td>12.5</td>
</tr>
<tr>
<td>B-2</td>
<td>4</td>
<td>Steilacoom gravel</td>
<td>SP</td>
<td>4</td>
<td>77.9</td>
<td>25.2</td>
</tr>
<tr>
<td>B-3</td>
<td>1</td>
<td>Fill</td>
<td>SP-SM</td>
<td>10</td>
<td>32.2</td>
<td>10.4</td>
</tr>
<tr>
<td>B-4</td>
<td>4.25</td>
<td>Steilacoom gravel</td>
<td>SP</td>
<td>5</td>
<td>65.8</td>
<td>21.3</td>
</tr>
<tr>
<td>B-5</td>
<td>4</td>
<td>Fill</td>
<td>SM</td>
<td>12</td>
<td>17.9</td>
<td>5.8</td>
</tr>
<tr>
<td>B-6</td>
<td>4</td>
<td>Steilacoom gravel</td>
<td>SP</td>
<td>5</td>
<td>60.3</td>
<td>19.5</td>
</tr>
<tr>
<td>S. 64th B-3 (2017 Study)</td>
<td>1</td>
<td>Fill</td>
<td>SM</td>
<td>14</td>
<td>14.6</td>
<td>4.7</td>
</tr>
<tr>
<td>S. 64th B-3 (2017 Study)</td>
<td>5</td>
<td>Steilacoom gravel</td>
<td>SP-SM</td>
<td>7</td>
<td>33.4</td>
<td>10.8</td>
</tr>
</tbody>
</table>

Notes:

1. Initial saturated hydraulic conductivity as determined by the grain-size analysis method presented in the 2016 SWMM without correction factors.

2. Long-term design infiltration rate including correction factors.

Based on the geologic unit thickness observed in the explorations and our understanding of the project (existing grades expected to be maintained) we anticipate that the bottom of the permeable pavement sections will be established within fill or reworked soils. Accordingly, the infiltration rate associated with the fill should be used for design of the pavement section. In our opinion, a long-term infiltration rate of 4.7 inches per hour is suitable for design of permeable pavement sections at the site.

### 4.3. Stormwater Water Quality Treatment

According to the SWMM, to be suitable for water quality treatment, soils must have minimum CEC of 5 meq/100 g (miliequivalents per 100 grams) a minimum organic content of 1 percent and have an initial (unfactored) saturated infiltration rate of less than 9 inches per hour.

Results of CEC and organic content testing for selected samples are presented in Appendix B. Test results indicate that soils meet the minimum organic content requirement for water quality treatment; however, not all of the tested samples meet CEC requirements. The unfactored infiltration rate of the site soils exceed 9 inches per hour and, therefore, do not meet the treatment requirements in the SWMM. We expect that a treatment layer will be needed within the permeable pavement section to provide the required water quality treatment.

### 5.0 ADDITIONAL CONSIDERATIONS

Subgrades below permeable pavement sections should be lightly compacted to a firm and unyielding condition before constructing the permeable pavement section; however, overcompaction of the subgrade should be avoided. Prepared subgrades should be protected from construction traffic, standing water or
other disturbance. If portions of the subgrade become disturbed or are overcompacted, the subgrade should be scarified to a minimum depth of 8 inches and recompacted.

The silty sand fill materials at the site contain a significant amount of fines and are moisture sensitive. These soils could be difficult or impossible to grade, shape, and properly compact when wet. If practical, we recommend that earthwork take place during dry weather months. If earthwork takes place during the wet season, we recommend that provisions be included in the project documents for managing and protecting moisture sensitive soils.

6.0 LIMITATIONS

We have prepared this report for the City of Tacoma for the Manitou Neighborhood Permeable Pavement Infiltration Study in Tacoma, Washington. City of Tacoma may distribute copies of this report to owner and owner’s authorized agents and regulatory agencies as may be required for the Project.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted practices for geotechnical engineering in this area at the time this report was prepared. The conclusions, recommendations, and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty, express or implied, applies to the services or this report.

Please refer to Appendix D titled “Report Limitations and Guidelines for Use” for additional information pertaining to use of this report.
Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Mapbox Open Street Map, 2016
Projection: NAD 1983 UTM Zone 10N
Notes:
1. Below existing ground surface at time of drilling. See report text for additional information.
2. Based on City of Tacoma Grain Size Analysis Methodology, includes correction factors and accounts for soil layering.
3. The locations of all features shown are approximate.
4. This drawing is for information purposes. It is intended to assist in viewing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of the drawing. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Legend
- Boring by GeoEngineers (2019)
- Boring by GeoEngineers (2016)

City of Tacoma - Permeable Pavement Study
Tacoma, Washington

Figure 2

Projection: NAD 1983 StatePlane Washington South FIPS 4602 Feet

Data Source: Aerial from ESRI - Clarity, Street basemap from Mapbox, Open Street Map, 2016, Roads from Pierce County Roads
APPENDIX A
SUBSURFACE EXPLORATIONS

General

Subsurface conditions were explored at the project site on November 22, 2019. Exploration locations were located in the field using a GPS device. Locations and elevations should be considered approximate. Soils were classified in general accordance with Figure A-1, which includes a Key to Exploration Logs. The boring logs are included as Figures A-2 through A-7.

Boring Advancement and Sample Collection

The explorations were advanced by Holocene Drilling, Inc. using a truck-mounted drill rig under subcontract to GeoEngineers. Hollow-stem auger drilling methods were used to advance the borings. The borings were advanced to depths of about 8.5 feet bgs.

We obtained disturbed soil samples borings using either a 1.5-inch or 2.4-inch-inside-diameter split-spoon sampler driven into the soil using a 140-pound hammer free-falling a distance of 30 inches. The number of blows required to drive the sampler the last 12 inches or other indicated distance is recorded on the logs as the blow count.

Our representative assisted with locating the borings, continuously monitored the borings, maintained a log of the subsurface conditions, and observed sample attempts, generally at 3-foot-depth intervals.

Boring Waste Disposal and Boring Completion

Cuttings generated from drilling were contained, transported off site and disposed of by Holocene Drilling. All borings were backfilled by Holocene Drilling following Washington State Department of Ecology standards. Holocene Drilling used fast setting lean mix concrete to patch the pavement sections of the roadway.
## Measured groundwater level in exploration, well, or piezometer

- GW: Clean gravels, gravel, gravel - sand mixtures
- GP: Poorly-graded gravels, gravel - sand mixtures
- GM: Silty gravels, gravel, gravel - sand mixtures
- GC: Clayey gravels, gravel, gravel - sand mixtures

## Material Description Contact

- SW: Well-graded sands, gravelly sands
- SP: Poorly-graded sands, gravelly sands
- SM: Silty sands, sand - silt mixtures
- SC: Clayey sands, sand - clay mixtures

## Graph Log Contact

- Distinct contact between soil strata
- Approximate contact between soil strata

## Laboratory / Field Tests

- Percent fines (%F)
- Percent gravel (%G)
- Atterberg limits (AL)
- Chemical analysis (CA)
- Laboratory compaction test (CP)
- Consolidation test (CS)
- Dry density (DD)
- Direct shear (DS)
- Hydrometer analysis (HA)
- Moisture content (MC)
- Moisture content and dry density (MD)
- Mohs hardness scale (Mohs)
- Organic content (OC)
- Permeability or hydraulic conductivity (PM)
- Plasticity index (PI)
- Point load test (PL)
- Pocket penetrometer (PP)
- Sieve analysis (SA)
- Triaxial compression (TX)
- Unconfined compression (UC)
- Vane shear (VS)

## Sheen Classification

- No Visible Sheen (NS)
- Slight Sheen (SS)
- Moderate Sheen (MS)
- Heavy Sheen (HS)

### Sampler Symbol Descriptions

- 2.4-inch I.D. split barrel
- Standard Penetration Test (SPT)
- Shelby tube
- Piston
- Direct-Push
- Bulk or grab
- Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.
No base course, cuttings consist of brown silty fine to coarse gravel with sand.

Asphalt, thickness approximately ¾ inch

Dark brown fine to coarse sand with silt and gravel (medium dense, moist) (fill)

Brown silty fine to coarse gravel with silt and sand (medium dense, moist) (Steilacoom gravel)

Grades to loose

Notes:

No base course, cuttings consist of brown silty fine to coarse gravel with sand.

No recovery with SPT, large diameter sampler driven for recovery.

Groundwater not observed at time of exploration.

Start Drilled 11/22/2019 11/22/2019 Total Depth (ft) 8.5

Logged By CIL Driller Holocene Drilling, Inc.

Hammer Data 140 (lbs) / 30 (in) Drop

Drilling Equipment Diedrich D-120 Truck

Drilling Method Hollow-stem Auger

Surface Elevation (ft) Vertical Datum 261 NAVD88

Easting (X) Northing (Y) 1143696 686250

System Datum WA State Plane South

Notes:

Coordinates Data Source: Horizontal approximated based on USGS Topo. Vertical approximated based on USGS Topo.

GeoEngineers

Log of Boring B-1

City of Tacoma - Permeable Pavement Study

Tacoma, Washington

0570-146-00
Gravel in sampler shoe

Approximately 1 inch crushed rock

Dark brown silty fine to medium sand with gravel (loose, moist) (fill)

Brownish gray fine to medium sand with trace silt and occasional gravel (medium dense, moist) (Steilacoom gravel)

Notes:

Groundwater not observed at time of exploration

Notes: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on USGS Topo. Vertical approximated based on USGS Topo.

Log of Boring B-2

Project: City of Tacoma - Permeable Pavement Study
Project Location: Tacoma, Washington
Project Number: 0570-146-00
### Log of Boring B-3

**Project:** City of Tacoma - Permeable Pavement Study  
**Project Location:** Tacoma, Washington  
**Project Number:** 0570-146-00  
**Figure A-4**  

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP</td>
<td>Approximately 1 inch crushed rock</td>
</tr>
<tr>
<td>SP-SM</td>
<td>Dark brown fine sand with silt and occasional gravel (loose, moist) (fill)</td>
</tr>
<tr>
<td>SP-SM</td>
<td>Brown fine to medium sand with silt, trace gravel (loose, moist) (Steilacoom gravel)</td>
</tr>
<tr>
<td>GP-GM</td>
<td>Brown fine to coarse gravel with silt and sand (dense, moist)</td>
</tr>
</tbody>
</table>

**FIELD DATA**

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Interval</th>
<th>Recovered (in)</th>
<th>Blowing/foot</th>
<th>Collected Sample</th>
<th>Moisture Content (%)</th>
<th>Fines Content (%)</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>14</td>
<td>8</td>
<td>1</td>
<td>GP</td>
<td>14</td>
<td>10</td>
<td>Low recovery with SPT, large diameter sampler driven for recovery</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>25</td>
<td>2</td>
<td>SP-SM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>4</td>
<td>41</td>
<td>3</td>
<td>GP-GM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

- See Figure A-1 for explanation of symbols.
- Coordinates Data Source: Horizontal approximated based on USGS Topo. Vertical approximated based on USGS Topo.

**Graph Log**

- Elevation (feet)
- Depth (feet)
- Interval
- Recovered (in)
- Blowing/foot
- Collected Sample
- Moisture Content (%)
No recovery with SPT, large diameter sampler driven for recovery

Approximately 1 inch crushed rock

Dark brown silty fine to medium sand with gravel (medium dense, moist) (fill)

Gray fine to medium sand with trace silt and occasional gravel (medium dense, moist) (Steilacoom gravel)

Gray-brown fine to coarse gravel with silt and sand (dense, moist)

Notes:

Groundwater not observed at time of exploration

Log of Boring B-4

GeoEngineers

Project: City of Tacoma - Permeable Pavement Study
Project Location: Tacoma, Washington
Project Number: 0570-146-00
<table>
<thead>
<tr>
<th>Start Drilled</th>
<th>End Drilled</th>
<th>Total Depth (ft)</th>
<th>Logged By CIL</th>
<th>Driller Holocene Drilling, Inc.</th>
<th>Drilling Method Hollow-stem Auger</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/22/2019</td>
<td>11/22/2019</td>
<td>8.5</td>
<td>264 NAVD88</td>
<td>140 (lbs) / 30 (in) Drop</td>
<td>Diedrich D-120 Truck</td>
</tr>
<tr>
<td>Surface Elevation (ft) Vertical Datum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Groundwater not observed at time of exploration</td>
</tr>
<tr>
<td>Easting (X)</td>
<td>Northing (Y)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1144330</td>
<td>686566</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

- Approximately 1 inch crushed rock
- Dark brown silty fine sand with occasional gravel (loose, moist) (fill)
- Grades to medium dense
- Brown to gray fine to medium sand with trace silt (medium dense, moist) (Steilacoom gravel)
- Grades to with trace gravel

**Log of Boring B-5**

**Project:** City of Tacoma - Permeable Pavement Study
**Project Location:** Tacoma, Washington
**Project Number:** 0570-146-00

**Figure A-6**

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on USGS Topo. Vertical approximated based on USGS Topo.
### Field Data

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Recovered (in)</th>
<th>Blowing Foot</th>
<th>Collected Sample</th>
<th>Sample Name</th>
<th>Testing</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
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<td>5</td>
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<td>12</td>
<td>1</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Material Description

<table>
<thead>
<tr>
<th>Group</th>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP</td>
<td>Approximately 1 inch crushed rock</td>
<td></td>
</tr>
<tr>
<td>SM</td>
<td>Brown silt to medium sand with gravel (medium dense, moist)</td>
<td></td>
</tr>
<tr>
<td>SP-SM</td>
<td>Gray fine sand with silt (medium dense, moist) (Steilacoom gravel)</td>
<td></td>
</tr>
<tr>
<td>SP</td>
<td>Brown fine to medium sand with trace silt (medium dense, moist)</td>
<td></td>
</tr>
</tbody>
</table>

### REMARKS

- Moisture Content (%): 5
- Fines Content (%): 5

### Notes:

- See Figure A-1 for explanation of symbols.
- Coordinates Data Source: Horizontal approximated based on USGS Topo. Vertical approximated based on USGS Topo.

### Log of Boring B-6

- **Project:** City of Tacoma - Permeable Pavement Study
- **Project Location:** Tacoma, Washington
- **Project Number:** 0570-146-00

**Figure A-7**

**Sheet 1 of 1**
APPENDIX B
Laboratory Testing
APPENDIX B
LABORATORY TESTING

General
Soil samples obtained from the borings were returned to our laboratory for further examination and testing. Our laboratory testing program consisted of grain-size distribution analyses. We also sent selected samples to a subcontracted laboratory for cation exchange capacity (CEC) and organic content (OC) tests. Details of the tests performed are provided in the sections below.

Grain-Size Analysis
Grain-size analyses were performed on selected soil samples in general accordance with ASTM Test Method D 6913. This test provides a quantitative determination of the distribution of particle sizes in soils. Figures B-1 and B-2 present the results of the grain-size analyses.

Cation Exchange Capacity and Organic Content Analysis
We submitted samples to a subcontracted laboratory for CEC and OC testing. A summary of the CEC and OC test results are summarized on Figure B-3.
### Sieve Analysis Results

**City of Tacoma – Permeable Pavement Study**

**Tacoma, Washington**

**Figure B-1**

The grain size analysis results were obtained in general accordance with ASTM C 136. GeoEngineers 17425 NE Union Hill Road Ste 250, Redmond, WA 98052

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Boring Number</th>
<th>Depth (feet)</th>
<th>Moisture (%)</th>
<th>Laboratory Soil Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-1</td>
<td>1</td>
<td>7</td>
<td>Fine to coarse sand with silt and gravel (SP-SM)</td>
<td></td>
</tr>
<tr>
<td>B-2</td>
<td>4</td>
<td>5</td>
<td>Fine to medium sand with silt and occasional gravel (SP-SM)</td>
<td></td>
</tr>
<tr>
<td>B-3</td>
<td>1</td>
<td>14</td>
<td>Fine to medium sand with silt and occasional gravel (SP-SM)</td>
<td></td>
</tr>
<tr>
<td>B-4</td>
<td>4.25</td>
<td>6</td>
<td>Fine to medium sand with occasional gravel (SP-SM)</td>
<td></td>
</tr>
</tbody>
</table>

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.
### Sieve Analysis Results

City of Tacoma – Permeable Pavement Study

**Figure B-2**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Boring Number</th>
<th>Depth (feet)</th>
<th>Moisture (%)</th>
<th>Laboratory Soil Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B-5</td>
<td>4</td>
<td>9</td>
<td>Silty fine to medium sand with occasional gravel (SM)</td>
</tr>
<tr>
<td></td>
<td>B-6</td>
<td>4</td>
<td>5</td>
<td>Fine to medium sand (SP)</td>
</tr>
</tbody>
</table>

Note: This report may not be reproduced, except in full, without written approval of GeoEngineers, Inc. Test results are applicable only to the specific sample on which they were performed, and should not be interpreted as representative of any other samples obtained at other times, depths or locations, or generated by separate operations or processes.

The grain size analysis results were obtained in general accordance with ASTM C 136. GeoEngineers 17425 NE Union Hill Road Ste 250, Redmond, WA 98052
<table>
<thead>
<tr>
<th>Exploration</th>
<th>Sample Depth (feet)</th>
<th>Geologic Unit</th>
<th>Cation Exchange Capacity (meq/100g)</th>
<th>Organic Content (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-3</td>
<td>1.5</td>
<td>Fill</td>
<td>3.2</td>
<td>1.5</td>
</tr>
<tr>
<td>B-5</td>
<td>1</td>
<td>Fill</td>
<td>6.8</td>
<td>3.8</td>
</tr>
<tr>
<td>S. 64th B-3</td>
<td>8.5</td>
<td>Steilacoom Gravel outwash</td>
<td>50.5</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Summary of Cation Exchange Capacity and Organic Content Results

City of Tacoma – Permeable Pavement Study
Tacoma, Washington

Data Source: City of Tacoma Environmental Services Laboratory
APPENDIX C

Exploration Log and Laboratory Testing from 2017 Study
**Log of Boring South 64th B-3**

**City of Tacoma - Permeable Pavement Study**

**Tacoma, Washington**

**Project Number:** 0570-146-00

---

**FIELD DATA**

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Interval</th>
<th>Elevation (feet)</th>
<th>Recovered (in)</th>
<th>Blows/foot</th>
<th>Group Classification</th>
<th>Sample Name</th>
<th>Testing</th>
<th>Water Level</th>
<th>Graphic Log</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>SM</td>
<td>CR</td>
<td>1</td>
<td>CR</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>2</td>
<td>16</td>
<td>47</td>
<td>SM</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>4</td>
<td>16</td>
<td>50/6&quot;</td>
<td>SM</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**MATERIAL DESCRIPTION**

- **Gray crushed rock (fill)**
- **Gray and brown occasional orange silt fine to coarse sand with occasional gravel (medium dense, moist) (Steilacoom gravel outwash)**
- **Light brown and orange fine to coarse sand with silt and gravel (medium dense, moist)**
- **Light brown and orange silt (very stiff, moist)**
- **Light brown and orange fine to coarse sand with silt and gravel (medium dense, moist)**

**REMARKS**

- CEC = Cation Exchange Capacity

---

**Drilled** 4/27/2016  
**End** 4/27/2016  
**Total Depth (ft)** 10  
**Logged By** EWH  
**SST** 283 NAVD88  
**Hammer Data** Autohammer 140 (lbs) / 30 (in) Drop  
**Checked By** EWH  
**Driller** Holocene Drilling, Inc.  
**Drilling Method** Hollow Stem Auger  
**Drilling Equipment** Diedrich D-120 Truck Mounted  
**System** Geographic  
**Datum** NAVD88  
**Groundwater Datum** Geoid  
**Date Measured** 4/27/2016  
**Metadata** Holocene Drilling, Inc.

**Notes:** 4.25 ID CFA

---

**Notes:** See Figure A-1 for explanation of symbols.
Figure C-2: Sieve-Hydrometer Analysis Results

City of Tacoma - Permeable Pavement Study
Tacoma, Washington

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The grain size analysis results were obtained in general accordance with ASTM D 6913.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Boring Number</th>
<th>Depth (feet)</th>
<th>Moisture (%)</th>
<th>USCS Soil Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>▲</td>
<td>South 64th B-3</td>
<td>1</td>
<td>5</td>
<td>Silty sand with gravel (SM)</td>
</tr>
<tr>
<td>●</td>
<td>South 64th B-3</td>
<td>5</td>
<td>7</td>
<td>Poorly graded sand with silt and gravel (SP-SM)</td>
</tr>
</tbody>
</table>

COBBLES | GRAVEL | SAND | SILT OR CLAY
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>COARSE</td>
<td>FINE</td>
<td>COARSE</td>
<td>MEDIUM</td>
</tr>
</tbody>
</table>
This appendix provides information to help you manage your risks with respect to the use of this report.

Read These Provisions Closely

It is important to recognize that the geoscience practices (geotechnical engineering, geology and environmental science) rely on professional judgment and opinion to a greater extent than other engineering and natural science disciplines, where more precise and/or readily observable data may exist. To help clients better understand how this difference pertains to our services, GeoEngineers includes the following explanatory “limitations” provisions in its reports. Please confer with GeoEngineers if you need to know more how these “Report Limitations and Guidelines for Use” apply to your project or site.

Geotechnical Services are Performed for Specific Purposes, Persons and Projects

This report has been prepared for City of Tacoma and for the Project(s) specifically identified in the report. The information contained herein is not applicable to other sites or projects.

GeoEngineers structures its services to meet the specific needs of its clients. No party other than the party to whom this report is addressed may rely on the product of our services unless we agree to such reliance in advance and in writing. Within the limitations of the agreed scope of services for the Project, and its schedule and budget, our services have been executed in accordance with our Professional Services Contract between GeoEngineers and the City of Tacoma dated March 1, 2016 and amended on December 16, 2016 (Amendment 1), January 25, 2017 (Amendment 2), April 13, 2017 (Amendment 3), December 20, 2017 (Amendment 4) and December 21, 2018 (Amendment 5) and generally accepted geotechnical practices in this area at the time this report was prepared. We do not authorize, and will not be responsible for, the use of this report for any purposes or projects other than those identified in the report.

A Geotechnical Engineering or Geologic Report is based on a Unique Set of Project-Specific Factors

This report has been prepared for the City of Tacoma – Permeable Pavement Study in Tacoma, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, it is important not to rely on this report if it was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

For example, changes that can affect the applicability of this report include those that affect:

- the function of the proposed structure;

---

1 Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org.
- elevation, configuration, location, orientation or weight of the proposed structure;
- composition of the design team; or
- project ownership.

If changes occur after the date of this report, GeoEngineers cannot be responsible for any consequences of such changes in relation to this report unless we have been given the opportunity to review our interpretations and recommendations. Based on that review, we can provide written modifications or confirmation, as appropriate.

Environmental Concerns are Not Covered

Unless environmental services were specifically included in our scope of services, this report does not provide any environmental findings, conclusions, or recommendations, including but not limited to, the likelihood of encountering underground storage tanks or regulated contaminants.

Information Provided by Others

GeoEngineers has relied upon certain data or information provided or compiled by others in the performance of our services. Although we use sources that we reasonably believe to be trustworthy, GeoEngineers cannot warrant or guarantee the accuracy or completeness of information provided or compiled by others.

Subsurface Conditions Can Change

This geotechnical or geologic report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the site, new information or technology that becomes available subsequent to the report date, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. If more than a few months have passed since issuance of our report or work product, or if any of the described events may have occurred, please contact GeoEngineers before applying this report for its intended purpose so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

Information Provided by Others

GeoEngineers has relied upon certain data or information provided or compiled by others in the performance of our services. Although we use sources that we reasonably believe to be trustworthy, GeoEngineers cannot warrant or guarantee the accuracy or completeness of information provided or compiled by others.

Geotechnical and Geologic Findings are Professional Opinions

Our interpretations of subsurface conditions are based on field observations from widely spaced sampling locations at the site. Site exploration identifies the specific subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied its professional judgment to render an informed opinion about subsurface conditions at other locations. Actual subsurface conditions may differ, sometimes significantly, from the opinions presented in this report. Our report, conclusions and interpretations are not a warranty of the actual subsurface conditions.
Geotechnical Engineering Report Recommendations are Not Final

We have developed the following recommendations based on data gathered from subsurface investigation(s). These investigations sample just a small percentage of a site to create a snapshot of the subsurface conditions elsewhere on the site. Such sampling on its own cannot provide a complete and accurate view of subsurface conditions for the entire site. Therefore, the recommendations included in this report are preliminary and should not be considered final. GeoEngineers’ recommendations can be finalized only by observing actual subsurface conditions revealed during construction. GeoEngineers cannot assume responsibility or liability for the recommendations in this report if we do not perform construction observation.

We recommend that you allow sufficient monitoring, testing and consultation during construction by GeoEngineers to confirm that the conditions encountered are consistent with those indicated by the explorations, to provide recommendations for design changes if the conditions revealed during the work differ from those anticipated, and to evaluate whether earthwork activities are completed in accordance with our recommendations. Retaining GeoEngineers for construction observation for this project is the most effective means of managing the risks associated with unanticipated conditions. If another party performs field observation and confirms our expectations, the other party must take full responsibility for both the observations and recommendations. Please note, however, that another party would lack our project-specific knowledge and resources.

A Geotechnical Engineering or Geologic Report Could Be Subject to Misinterpretation

Misinterpretation of this report by members of the design team or by contractors can result in costly problems. GeoEngineers can help reduce the risks of misinterpretation by conferring with appropriate members of the design team after submitting the report, reviewing pertinent elements of the design team’s plans and specifications, participating in pre-bid and preconstruction conferences, and providing construction observation.

Do Not Redraw the Exploration Logs

Geotechnical engineers and geologists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. The logs included in a geotechnical engineering or geologic report should never be redrawn for inclusion in architectural or other design drawings. Photographic or electronic reproduction is acceptable, but separating logs from the report can create a risk of misinterpretation.

Give Contractors a Complete Report and Guidance

To help reduce the risk of problems associated with unanticipated subsurface conditions, GeoEngineers recommends giving contractors the complete geotechnical engineering or geologic report, including these “Report Limitations and Guidelines for Use.” When providing the report, you should preface it with a clearly written letter of transmittal that:

- advises contractors that the report was not prepared for purposes of bid development and that its accuracy is limited; and
- encourages contractors to confer with GeoEngineers and/or to conduct additional study to obtain the specific types of information they need or prefer.
Contractors are Responsible for Site Safety on Their Own Construction Projects

Our geotechnical recommendations are not intended to direct the contractor’s procedures, methods, schedule or management of the work site. The contractor is solely responsible for job site safety and for managing construction operations to minimize risks to on-site personnel and adjacent properties.

Biological Pollutants

GeoEngineers’ Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this project. The term “Biological Pollutants” includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.
APPENDIX D

TACOMA PUBLIC UTILITIES

WATER SPECIAL PROVISIONS
This appendix contains specifications for the Tacoma Public Utilities portion of the project work. These specifications are for a typical water main project in the street right-of-way so some details (such as street repair) and some restoration details are included in the City of Tacoma project specifications that this is an appendix to.
CONSTRUCTING WATER MAINS
in accordance with approved plans for
WATER MAIN REPLACEMENT PROJECT NO. MRP 2020-07

Manitou Neighborhood
S. Ferdinand St. (from S 64th St. to S 66th St.): S. Cheyenne St. (from S 64th St. to S American Lake Blvd): S. Verde St. (from S 64th to S. Cheyenne St.): S. Stevens St. (from S 64th St. to S 66th St.): S.
Mason Ave. (from S. 62nd St. to S. 66th St.)
CITY OF TACOMA
TACOMA PUBLIC UTILITIES
TACOMA WATER

SPECIAL PROVISIONS
FOR

SPECIFICATION ES21-0629F

MAIN REPLACEMENT PROJECT NO. MRP 2020-07

IN

Manitou Neighborhood

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INTRODUCTION
April 1, 2020

The following special provisions shall be used in conjunction with the applicable sections of the 2020 M41-10 Washington State Department of Transportation Standard Specifications for Road, Bridge and Municipal Construction and the American Water Works Association (AWWA) Standard Specifications. State Standard Specifications are available through WSDOT, by calling (360) 705-7430, or may be downloaded, free of charge, from this location on the WSDOT home page: www.wsdot.wa.gov/Publications/Manuals/M41-10.htm

These Special Provisions are applicable only to the water main replacement portion of the project.

DESCRIPTION OF WORK
(******)

The work to be performed under these Specifications consists of furnishing all labor, tools and materials for constructing approximately 5,557 lineal feet of 6-inch and 268 lineal feet of 12-inch water mains together with all necessary valves, specials, etc., all in accordance with these specifications and approved plans. The work is located in:

South Ferdinand Street, South Cheyenne Street, South Grove Street, South Verde Street, South Stevens Street and South Mason Street.


This project is in conjunction with City of Tacoma Environmental Services Specification Number ES21-0629F, Manitou Neighborhood Permeable Pavement Project. All materials required and not listed herein, to be furnished by Tacoma Water, shall be furnished by the Contractor. The modifications to the water distribution system shown on the Water Division Plans will be constructed as a part of this contract. These Special Provisions are applicable to water distribution work only and supersede any conflicting provisions that may appear elsewhere in the Contract Documents or Standard Specifications in regard to the water distribution main facility scope of work. Proposal items within the Tacoma Water section of the proposal are applicable to the water main scope of work only and shall not be construed to apply to other subsections of the Contract.

END OF SECTION

DEFINITIONS AND TERMS

1-01.2 Abbreviations

1-01.2(1) Associations and Miscellaneous
This section is supplemented with the following:

DIPRA Ductile Iron Pipe Research Association
EWO Extra Work Order
LOI Letter of Instruction
1-01.3 Definitions
This section is supplemented with the following:

Contracting Agency
Agency of Government that is responsible for the execution and administration of the contract to include: “City”, “City of Tacoma”, “Tacoma Public Utilities” and “Tacoma Water”.

Traffic
Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

END OF SECTION

1-03 AWARD AND EXECUTION OF THE CONTRACT

1-03.3 Execution of Contract
This section is supplemented with the following:

A Pre-construction meeting will be scheduled by Geff Yotter, Tacoma Water Construction Operations Manager following review by TPU Legal, Finance Department, Small Business Enterprise Office, for contracts over $500,000 approval by Contract and Awards Board, and the Tacoma Public Utility Board is required. The meeting agenda will cover contract compliance, safety and construction. The Contractor is encouraged to have representatives from his/her Sub-Contractors and their on-site forepersons in attendance. Contact Geff Yotter at (253) 502-8742 concerning questions.

In addition to the contract, the payment bond, the performance bond, insurance and other documentation that is required during the contract execution process the Contractor shall submit the following construction documents prior to, or at, the preconstruction meeting.

___1. Approved Traffic Control Plan
___2. Materials Submittals
___3. Storage & Stockpile Site
___4. Emergency Contact List
___5. Unsuitable Disposal Site
___6. Construction Schedule (updated bi-weekly)
1-03.5 Failure to Execute Contract
The first sentence is revised to read:

Failure to return the insurance certification and bonds with the signed contract as required in Section 1-03.3, or failure to provide Small Business Enterprise (SBE) information if required in the contract, or failure or refusal to sign the contract shall result in forfeiture of the bid bond or deposit of this bidder.

END OF SECTION

1-04 SCOPE OF THE WORK

1-04.2 Coordination of Contract Documents, Plans, Special Provisions Specifications and Addenda
Second paragraph is revised to read:

Any inconsistency in the parts of the contract regarding the water main replacement portion of the project shall be resolved by the following order of precedence (e.g. 1 presiding over 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12; 2 presiding over 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12; and so forth):

1. Jurisdictional Right of Way Permits
2. Addenda
3. Proposal Form
5. Environmental Services Special Provisions
6. Contract Plans/Drawings
7. Standard Plans/Drawings
8. AWWA Standards
9. DIPRA Standards
11. Amendments to the Standard Specifications
12. Standard Specifications

END OF SECTION

1-05 CONTROL OF WORK

1-05.3 Plans and Drawings
This section is supplemented with the following:

Bidders can request one (1) full-size plan set by calling Todd Honey at (253)-502-8295. Full size plans are available to all bidders upon request. Copies of requested plans must be picked up by the bidder at Tacoma Water’s permit counter.

1-05.5 Vacant
This section, including heading, is revised to read:
1-05.5 Submittals

Submittals must be approved by Tacoma Water and may be forwarded directly to Craig West, Engineering Construction Coordinator, electronically at cwest@cityoftacoma.org, or mailed to 3628 S. 35th St., Tacoma, WA 98409-3192. (253) 405-8821.

Before any material is shipped or installed, the Contractor shall furnish to the Engineer full details, shop drawings, dimensions, catalog cuts, and other descriptive matter as required to fully describe the equipment proposed to be included in this contract. The names, addresses and phone numbers for the representative of each piece of equipment shall also be included.

Should any item which deviates from these Specifications be included, the deviation shall be clearly indicated and explained at the time of submittal.

The Contractor shall provide electronic copies of submittal information. Submittals shall be complete, neat, orderly, and indexed. The Contractor shall check submittals for number of copies, adequate identification, correctness, and compliance with the Plans and Specifications, and shall initial all copies. A copy of this Specification shall be included with the submittals. The Contractor shall revise and/or resubmit all submittal information until it is acceptable to the Engineer. After review, one set of submittals will be returned to the Contractor.

Review of submittal information by the Engineer shall not relieve the Contractor of responsibility for meeting the requirements of the Plans and Specifications, or for errors and omissions in submittals. Reviews by the City do not constitute an undertaking on the part of the City to assure or determine compliance with the Plans and Specifications.

The following is a summary of submittal requirements. This summary is not inclusive of all submittal requirements. The Contractor shall review each individual section in the applicable provisions or specifications, as noted below, for specific requirements.

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1-05.13(1) Emergency Contact List
*This section is supplemented with the following*

**Agencies and telephone numbers:**

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<tr>
<th><strong>Tacoma Water Emergency</strong></th>
<th><strong>253-502-8344</strong></th>
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<tr>
<td>Troy Saghafi</td>
<td>Tacoma Water Project Engineer</td>
</tr>
<tr>
<td>Geff Yotter</td>
<td>Tacoma Water Construction Operations Manager</td>
</tr>
<tr>
<td>Phill Ringrose</td>
<td>Tacoma Water Construction Manager</td>
</tr>
<tr>
<td>Todd Honey</td>
<td>Tacoma Water Utility Service Specialist</td>
</tr>
<tr>
<td>Tacoma Water Distribution LID/Engineering fax</td>
<td>253-502-8694</td>
</tr>
<tr>
<td>Kirk Myklestad</td>
<td>Environmental Services Project Engineer</td>
</tr>
<tr>
<td>Utilities Underground Location Center</td>
<td>800-424-5555</td>
</tr>
<tr>
<td>Washington State Dept. of Labor and Industries</td>
<td>253-596-3895</td>
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<td>James Southern</td>
<td>Tacoma Water Safety Office</td>
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<tr>
<td>Pierce Transit</td>
<td>253-581-8021</td>
</tr>
<tr>
<td>Puget Sound Energy-Gas</td>
<td>888-225-5773</td>
</tr>
<tr>
<td>Century Link Communications</td>
<td>800-573-1311</td>
</tr>
<tr>
<td>Tacoma Traffic Engineering</td>
<td>253-591-5500</td>
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<td>Tacoma Fire Dept. (non-emergency)</td>
<td>253-591-5733</td>
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<td>Tacoma Police Dept. (non-emergency)</td>
<td>253-591-5950</td>
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<td>LESA Communications Center (opt. #1)</td>
<td>253-798-4721</td>
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<td>Tacoma Public Schools Transportation Office</td>
<td>253-571-1893</td>
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<td>253-591-5544</td>
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END OF SECTION

1-06 CONTROL OF MATERIAL

1-06.4 Handling and Storing Materials
*This section is supplemented with the following*

The Contractor shall obtain written approval for the storage site from property owner and provide a copy to Geff Yotter, Tacoma Water Construction Operations Manager, prior to start of construction. No gravel, topsoil, mulch, or any other item used in the construction of this project shall be stockpiled on existing or newly constructed streets or sidewalks. All costs to provide a stockpile site shall be incidental to the cost of the contract.

END OF SECTION
1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

1-07.6 Permits and Licenses
This section is supplemented with the following:

Before beginning water main work, the Contractor shall obtain and comply with all provisions of the latest revision to Tacoma Municipal Code 2.09. Permit fees in accordance with 2.09.120, Table IX, Special and Miscellaneous Service Fees, A7. “Trench for water line, etc. (miscellaneous trench)” are the responsibility of the Contractor. The permit fee shall be calculated based on the total lineal feet of the project. The Contractor is encouraged to reference the Tacoma Municipal Code to calculate the fee prior to bid submittal. Fees are subject to CPI adjustments.

The permit may be obtained at the City of Tacoma Planning and Development Services Department, 3rd Floor, 747 Market St, Tacoma (253-591-5030). The Contractor shall provide approximate lineal feet and specification number to the permit personnel. A copy of the permit shall be provided to Tacoma Water as part of the submittals.

Traffic control plans shall be submitted to Tacoma Public Works, Traffic Engineering, room 520, 747 Market St, Tacoma, (253) 591-5275, for review and comment. When using the WSDOT Standard “K” Plans, the street names are to be listed on the plans with construction start date and intended working hours.

Water used during construction can be obtained from an approved Tacoma Water fire hydrant. The Contractor will be billed for the water used and shall pay for a “Hydrant Use Permit” and make a deposit on the water meter. The Contractor shall contact the Water Permit Counter at (253) 502-8247, for information regarding water consumption fees, Hydrant Use Permit fees, meter deposits and approved Tacoma Water hydrant locations. Permit fees and deposits shall be paid prior to using an approved Tacoma Water hydrant.

1-07.16(2) Vegetation Protection and Restoration
This section is supplemented with the following:

Care shall be taken when directed by the Field Inspector to save existing landscaping and trees. The Contractor shall remove any unnecessary debris and rocks and leave landscaping areas in a prepared fashion. Any necessary landscape restoration resulting from water main construction shall be completed by Tacoma Public Utility landscape crews.

1-07.16(4) Archaeological and Historical Objects
This section is supplemented with the following:

Whenever the Contractor identifies a situation during water main construction that may involve the discovery of unanticipated cultural resources, the Contractor will immediately cease work and notify the City Inspector. Situations involving the discovery of unanticipated cultural resources include but are not limited to human skeletal remains, Anthropogenic soil horizons (areas showing the influence of humans on nature), occupational surfaces (areas showing evidence of human activity or habitation), midden
(dunghill or refuse heap), stone tools or waste flakes (arrowheads or stone chips),
bones, burned rocks, other food related material in association with stones tools or
flakes, cluster of cans or bottles, tunnels, or logging or agricultural equipment more than
50 years old. The Contractor will take all steps necessary to protect and secure the
suspected cultural resource until the City Inspector is able to assess the discovery and
determine whether work can resume. Delays of greater than one hour will be
considered standby time and will be compensated. If a significant delay is anticipated,
the Inspector may direct the Contractor to temporarily abandon the excavation and move
to a more distant location to resume work until the situation can be addressed. Tacoma
Water will take responsibility for contacting the appropriate state and local agencies.

1-07.18 Public Liability and Property Damage Insurance
_This section is deleted in its entirety:_

1-07.23 Public Convenience and Safety

1-07.23(1) Construction Under Traffic
_This section is supplemented with the following:_

All traffic control devices must meet the requirements established by the Manual on Uniform Traffic Control Devices.

The Contractor shall prepare a traffic control plan (TCP) and submit to Tacoma Public Works, Traffic Engineering, room 520, 747 Market St, Tacoma, (253) 591-5275, for review and comment per 1-10.2(1)A. The approved traffic control plan must be on site and accessible for inspection at all times by local law enforcement or inspectors. An approved copy of the traffic control plan shall be submitted to Geff Yotter, Tacoma Water’s Construction Operations Manager, prior to start of construction.

Persons in charge of maintaining or establishing traffic control and channelization must have a certified flagger control card in their possession and must be on the site at all times or be represented by another knowledgeable certified person.

A flagger shall not be used to direct traffic flow through a signalized intersection against the signal indications. When flaggers are used near signalized intersections, care will be used to clear the intersection of traffic before the signal change. In some situations, the local Traffic Engineer may turn the signal to an all way stop for flagger control. Prior approval must be obtained from the local Traffic Engineer.

The Contractor may close non-arterial streets to through traffic, if allowed in the approved traffic control plan, provided that local access is maintained at all times with a minimum of a 20-foot wide access lane. The Contractor shall coordinate any closures and cooperate with the various businesses and/or residences adjacent to the project site. A minimum of one access shall be maintained to all properties at all times.

Whenever, during the course of construction, it becomes necessary because of the nature of the work, for the Contractor to barricade any street or any part thereof, or to place any obstruction which will impede the flow of traffic in any public thoroughfare within and outside the project area, then the Contractor will be required to give notice of the intended interruption to traffic, setting forth the period and necessity.
The Contractor shall coordinate with the Traffic Engineer of the local jurisdiction on all matters pertaining to the movement of vehicular and pedestrian traffic past the project area.

Any permits required for obstruction or closure of thoroughfares shall be obtained by the Contractor, incidental to Contract.

The Contractor shall at all times exercise adequate precautions for the safety of all persons, including employees, in the performance of this contract and shall comply with all applicable provisions of federal, state, county and municipal safety laws and regulations.

Tacoma Water’s Inspector and/or Engineer may advise the Contractor and the Public Utilities Safety Officer of any safety violations. It is the Contractor’s responsibility to correct the violation. Failure to correct safety violations shall be grounds for a cease order from the Public Utilities Safety Officer, Engineer, or Inspector. Time and wages lost due to such safety shutdowns shall be at the sole cost of the Contractor. Time lost due to cease orders for safety violations will still be counted in the required number of days the Contractor has to complete the contract.

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

1-08 PROSECUTION AND PROGRESS

1-08.3 Progress Schedule
This section is supplemented with the following:

The Contract shall be completed in phases to allow Tacoma Water crews access to begin the service transfer process. All costs for phasing the work and completing the work as specified shall be included in the various bid items of the proposal.

Each phase of this project will be tested, sampled, flushed and put into service in segments. This will allow Tacoma Water crews to start service transfers within that segment immediately following successful testing, sampling and flushing on that segment. The Tacoma Water inspector will coordinate test sections and connections, to insure customers are kept in service and fire protection is not diminished. The Contractor shall be required to make connections and install hydrants as sampled sections become available and services are transferred; not wait until all mainline is constructed.

Please note; Service transfer work by Tacoma Water will not commence until such time as the section of water main has been placed into service and the trench has been successfully backfilled, as demonstrated through receipt of successful compaction test results for that portion of water main to be placed in service.

For water service transfers:
- For water services two inches and smaller, the Contractor shall anticipate one working day per service for Tacoma Water crews to complete service transfers.
• For water services larger than 2- inches, the Contractor shall anticipate one and one half working days per service for Tacoma Water crews to complete service transfers.

END OF SECTION

1-09 MEASUREMENT AND PAYMENT

1-09.6 Force Account

This section is supplemented with the following:

Tacoma Water has estimated the cost of the bid item for “Force Account” and has entered the amount in the bid proposal to become a part of the total bid by the Contractor. It is for the purpose of providing a common proposal for all bidders and for that purpose only.

END OF SECTION

1-10 TEMPORARY TRAFFIC CONTROL

1-10.2(1) A Traffic Control Management

This section is supplemented with the following:

Traffic control plans (TCP) shall be submitted to Tacoma Public Works, Traffic Engineering, room 520, 747 Market St, Tacoma, (253) 591-5275, for review and comment. When using the WSDOT Standard “K” Plans, the street names are to be listed on the plans with construction start date, the intended working hours and the project number.

When any road closure, lane closure, flagger operation, or sidewalk closure occurs, the Contractor shall refer to “The Traffic Control Handbook” for requirements; located at:


1-10.4 Measurement

1-10.4(1) Lump Sum Bid for Project (No Unit Items)

This section is supplemented with the following:

Project Temporary traffic control labor for the water main replacement portion of this contract is per lump sum.

1-10.5 Payment

This section is supplemented with the following:

“Project Temporary traffic control labor for the water main replacement portion of this contract”, lump sum.
The lump sum bid price for “Project Temporary traffic control labor for the water main replacement portion of this contract” will include all labor, materials, signs, barricades, flaggers, spotters, uniform police officers, etc. for all phases of construction. TCS labor is incidental to the contract.

END OF SECTION

2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP

2-01.2(2) Disposal Method No. 2 – Waste Site
This section is supplemented with the following:

All excess material from this contract, disposed at sites within the City of Tacoma, shall be placed in accordance with Ordinance No. 26310 - Section 2.02.330 EXCAVATION AND GRADING Amendment to Appendix Chapter 33 of the 1997 UNIFORM BUILDING CODE. Excess material disposed outside the limits of the City of Tacoma shall be placed in accordance with all applicable state, county and municipal regulations.

All costs associated with wasting the excess material, as required above, shall be included in the contract.

END OF SECTION

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.3 Construction Requirements
This section is supplemented with the following:

As indicated on the plans or as directed by the Engineer all old pipe (except wood stave and Asbestos Cement pipe), valves, hydrants and fittings salvaged from replaced pipe lines shall be delivered by the Contractor to the Water Storeroom at South 35th and Union Avenue (Tacoma, WA) at no additional cost. Otherwise, haul and disposal of the said items (valves, fittings, and hydrants) is incidental to the contract.

The existing water mains abandoned by this contract shall be removed to allow for the installation of the new water mains. Removal and disposal of water mains abandoned by this project shall be incidental to the contract.

Salvage methods shall be used which will save all material intact and undamaged.

2-02.3(3) Removal of Pavement, Sidewalks, Curbs, and Gutters
This section is revised to read:

Removal and disposal of existing pavement, sidewalks, curbs, and gutters associated with the water main installation includes all combinations and thicknesses. No additional compensation shall be made for varying combinations and thicknesses.
All costs for the removal and disposal of existing concrete curb, sidewalk, driveways, and alley approaches for the water main or related appurtenances shall be included in the unit contract bid price.

Any slurry generated by saw cutting shall be collected by a wet-vacuum and kept out of the storm sewer system. The Contractor shall not violate the requirement of WSDOT Standard Specifications, 2020 M 41-10, and section 1-07.5 (Fish and Wildlife and Ecology Regulations).

2-02.4 Measurement
This section is revised to read:

Measurement for Removal and disposal of existing pavement, sidewalks, curbs, and gutters associated with the water main installation will be made by the square yard.

No measurement for removal and reclaiming salvaged material shall be made and shall be considered incidental to the contract.

2-02.5 Payment
This section is revised to read:

“Removal and disposal of existing pavement, sidewalks, curbs, and gutters includes all thicknesses & combinations”, per square yard.

“Removal and disposal of existing pavement, sidewalks, curbs, and gutters, includes all thicknesses & combinations”, shall include all costs for saw cutting, wheel trenching, hydro hammering, chipping, grinding, etc., the existing street for main construction and hydrant laterals. The wheel trencher may be used for the thicker initial cuts for main/hydrant installation. Additional cuts to square up the permanent patch for concrete base and asphalt concrete will be made after trenching and pouring the concrete base, respectively, when applicable, and will encompass areas disturbed by service transfers. All costs for additional cuts shall be included in the unit contract bid price.

END OF SECTION

2-13 CONTROL AND MANAGEMENT OF CONTAMINATED MATERIALS
This section is added with the following:

2-13.1 Construction Requirements

2-13.1(1) General

Whenever the Contractor identifies a situation that may involve contaminated/hazardous wastes, the Contractor will immediately cease work and notify the City Inspector. Situations involving contaminated/hazardous wastes may be identified by uncharacteristic odors, soil appearance, texture, containers such as drums or cans, and color. The inspector will seek the assistance of TPU environmental professionals to determine the next course of action. The Contractor will take all steps necessary to protect personnel until all risks are identified and safe work can resume.
Delays of greater than one hour will be considered standby time and will be compensated under the Force Account. If significant risks or contaminated/hazardous wastes are encountered requiring significant delays, the inspector may direct the Contractor to temporarily abandon the excavation and move to a more distant location to resume work until the situation can be addressed. Tacoma Water will take responsibility for sampling, testing and identification of proper disposal of all hazardous wastes.

A determination for method of disposal will be made upon receipt of sampling results. Excavated spoils will be the responsibility of the Contractor for proper disposal. All hazardous waste must be disposed in an appropriately licensed solid waste facility. The Contractor must identify the facility they will utilize prior to beginning work.

Transport and Disposal of Contaminated/Hazardous Waste includes all costs for the excavation, transportation and disposal of all excavated material which must be disposed in a solid waste landfill. Payment per ton will be determined by the actual weight delivered to the permitted landfill, which must be listed on the scale ticket from the landfill. The original weight ticket from the landfill must be delivered to the inspector or provided with invoice for payment.

There are no estimated numbers for this item, but the cost will be applied if any waste is encountered. This item is not considered for calculation of the total bid amount. Any costs under this item will be covered under the Force Account or Change Order item.

**END OF SECTION**

**5-04 HOT MIX ASPHALT**

**5-04.2 Materials**

*This section is supplemented with the following:*

If utilized, the amount of Recycled Asphalt Pavement (RAP) shall not exceed 10-percent of the total weight of the Hot Mix Asphalt (HMA).

**Tack Coat**

All coatings for tack coat shall be considered as incidental to and included in the unit contract price for HMA.

**5-04.3 Construction Requirements**

*This section is supplemented with the following:*

In areas with existing pavement, a minimum of two (2) inches of HMA shall be placed and maintained as temporary surfacing in open cut areas of streets, driveways and sidewalks disturbed during water main construction. Temporary HMA paving shall be done so that, in areas with existing pavement, the entire pavement cut will receive a temporary patch by the conclusion of the day’s work to allow resumption of normal traffic patterns. Temporary paving shall be placed such that it will hold up to heavy traffic for an extended period of time. All paving shall be saw-cut or neat spade prior to excavation.
The Contractor shall maintain a temporary patch while Tacoma Water personnel renew the services and transfer them to the new main, after which he/she shall start with additional street repairs. The Contractor shall make permanent street repairs for all pavement disturbed by Tacoma Water personnel during service renewal/transfer at the unit price bid in the Proposal for those items.

The Contractor shall inform himself/herself of Tacoma Public Works requirements for surface repairs and adjustment of facilities. All manhole rings and valve boxes shall be removed/lowered prior to paving and set to grade after final HMA paving per dwg. SU-25 or dwg 17-56-1, incidental to contract.

The Contractor shall confine his/her operations as much as possible, such that there is minimal damage to existing pavement.

It shall be the Contractor’s responsibility to protect the edge of the paved roadway at all times. The expense for pavement repairs beyond the neat line of the trench due to over-excavation or damage to the roadway edge caused by heavy equipment, spoil cleanup or other operations of the Contractor shall be the responsibility of the Contractor.

No permanent street repairs will be made until the services are transferred to the new main. The removal of trench backfill for permanent street repairs will be incidental to the bid, including additional areas disturbed during the service transfers.

5-04.4 Measurement
This section is supplemented with the following:

Temporary HMA Class ___” PG____, _____-inch minimum depth, installed & removed will be measured by the surface square yardage.

HMA Cl. ______ PG_____, will be measured by the ton. Copies of the weigh tickets shall be given to the Construction Inspector daily.

5-04.5 Payment
This section is replaced in its entirety with the following:

Payment will be made in accordance with Section 1-04.1, for the following Bid item when is it included in the Proposal:

“Temporary HMA Cl____ PG_____, ___-inch minimum depth, installed & removed”, per square yard.

The unit contract price per square yard for “Temporary HMA Cl____ PG_____, ___-inch minimum depth, installed & removed” shall be full compensation for all costs including mobilization, preparation, placement, compaction, maintenance and removal in preparation for permanent street repairs.

“HMA Cl. _____ PG _____”, per ton.

The unit contract price per ton for “HMA Cl. _____ PG _____” shall be full compensation for all costs incurred for mobilization, preparation, trimming, grinding, pre-
leveling, hot mix asphalt pavement, sweeping, tack coat, joint sealing, saw-cutting, pavement compaction tests and fog seal in accordance with plan details, City of Tacoma Standard Plans, and WSDOT Standard Specifications, 2020, M41-10, section 5-04. All manhole rings and valve boxes shall be removed/lowered prior to paving and set to grade after final HMA paving per dwg. SU-25 or dwg 17-56-1, incidental to contract.

END OF SECTION

7-04 STORM SEWERS

7-04.3 Construction Requirements
*This section is supplemented with the following:

Storm sewers may be encountered at various locations throughout this project. Prior to the start of the storm sewer repair, the Inspector and/or Contractor shall notify the Inspector. C900 PVC, Ductile Iron or 3034 PVC may be used on storm line repairs. The repair of the storm sewer shall be made three feet outside of the water main trench. No additional compensation shall be made for the extended connection and material. Mechanical couplings (Romac or equivalent) shall be installed at both ends of the storm sewer restoration forming a rigid connection between the new and existing pipe. Rigid PVC slip couplings for PVC pipe and Romac mechanical style for concrete pipe only. Repair/replacement/restoration will be at the inspector’s discretion and the local jurisdiction.

7-04.4 Measurement
*This section is revised in its entirety with the following:

Storm sewer repair will be measured per each.

7-04.5 Payment
*This section is revised in its entirety with the following:

“Storm, Sanitary, and Side Sewer Restoration”, per each.

“Storm, Sanitary, and Side Sewer Restoration”, includes any work and materials required to remove and replace storm, sanitary, and side sewers shall be included in the bid item. This is a per each bid item that includes all costs but is not limited to pipe, fittings, pea gravel, labor, and equipment, etc. to repair sewers.

END OF SECTION

7-09 WATER MAINS

7-09.1 Description
*The first paragraph is revised to read:

This work consists of constructing water mains 24-inch in diameter and smaller in accordance with the Tacoma Water Plans, these Special Provisions, the Standard
Specifications and the Standard Plans, at the location shown on the Tacoma Water Plans.

This section is supplemented with the following:

All pipe, fittings, valves, hydrants and other materials to be installed and placed under these specifications are intended to form a durable section of the distribution system of ample strength and capacity for the operating pressures in the area covered for domestic, commercial and fire protection uses and must be completed in condition to supply potable water of the highest sanitary quality. All material must be selected and the work planned and carried out to accomplish this purpose.

The cost of any item of work to be completed or materials to be furnished on the contract drawings or stated in the project specifications and having no special bid item in the Proposal, shall be considered included in the various bid items of the contract and no separate payment will be made. All materials required and not specifically listed herein to be furnished by Tacoma Water shall be furnished by the Contractor.

Any part of work not specifically covered by these specifications shall be in accordance with the American Water Works Association (AWWA) Standard Specifications and the Ductile Iron Pipe Research Association (DIPRA).

7-09.1(1) C Gravel Backfill for Pipe Zone Bedding
This section is supplemented with the following:

To avoid puncturing or tearing of the polyethylene sleeve, Contractor shall install a clean washed sand encasement (Pipe Zone Bedding) 6-inches below designed grade of the pipe, trench width, to 6-inches above top of pipe, and a minimum of 6-inches of pipe zone bedding on each side of pipe. Note, the profile shows the invert elevation of the pipe, not the bottom of the trench. The sand used for “Pipe Zone Bedding” shall meet the requirements of Section 9-03.1(2), Class 2 as described in 2020 WSDOT Standard Specifications.

The “Pipe Zone Bedding” sand shall be compacted by water settling and/or mechanical equipment. The remaining trench section shall be compacted with mechanical equipment to the standards as specified in “7-09.3(11) Compaction of Backfill”.

7-09.1(1) D Pipe Zone Backfill
This section is revised to read:

Aggregates for the trench section above the “Pipe Zone Bedding” will conform to the requirements for Trench Backfill 7-09.1(1)E.

7-09.2 Aggregate Materials
Under the heading Aggregates:

“Gravel Backfill for Pipe Zone Bedding 9-03.12(3)” is revised to read:

Gravel Backfill for Pipe Zone Bedding 9-03.1(2)B, Class 2.

“Trench Backfill 9-03.15 or 9-03.19” is revised to read:

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This section is supplemented with the following:

All materials shall conform to American Water Works Association (AWWA) and the Ductile Iron Pipe Research Association (DIPRA). No recycled material shall be used for water main trench backfill.

7-09.3 Construction Requirements

7-09.3(1) General
This section is supplemented with the following:

Trench Excavation shall be loaded directly onto trucks. Trench Excavation shall not be stockpiled along the trench or on paved streets, driveways, and sidewalks.

Alignment and grade stakes will be provided by Tacoma Water. The Contractor shall provide a minimum of 5 days working days’ notice for staking by Tacoma Water. Request for survey shall be made through Geff Yotter, Tacoma Water Construction Operations Manager, (253) 502-8742. The Contractor shall use a string line to maintain true grade, and alignment between stakes. Use of electronic leveling devices for grade and alignment shall be at the discretion of the Inspector where string line is impractical.

7-09.3(1) A Trench Foundation
This section is added with the following:

Trench areas found to be inadequate for a solid pipe line trench foundation shall be over excavated and quarry spalls shall be placed until an adequate foundation is accomplished then sand bedding. Note, the profile shows the invert elevation of the pipe, not the bottom of the trench.

7-09.3(5) Grade and Alignment
The first sentence of the third paragraph is revised to read:

The depth of trenching for water mains shall be such as to give a minimum cover of 53 inches over the top of pipe unless otherwise specified on the Tacoma Water Plans, within these Special Provisions, or approved by the Engineer.

7-09.3(6) Existing Utilities
This section is supplemented with the following:

The lump sum bid item for of “Test Holes” is for the purpose of pre-determining and resolving conflicts with existing utilities and is required to be completed prior to the water main installation. Proper test holes cannot be accomplished until utility “one call” locates have established and maintained. The selection of methods materials or equipment used for test holes is at the discretion of the Contractor. No additional compensation will be made for any particular or specialized equipment or technique utilized by the Contractor. The work shall include all techniques as necessary to field verify and locate all existing utilities, whether shown on the plans or located via one call.
utility locates, at all new main crossings. Test-hole excavation shall be done in the presence of the Construction Inspector. Test-hole data shall be provided to the inspector prior to main construction and adequate time given to the engineer to re-design if necessary. If the elevation/alignment of the existing utilities is in conflict with the new main installation, the elevation/alignment design will be adjusted by the engineer/inspector.

Additional compensation for any extra excavation required will be made to the Contractor through Extra Trench Excavation and Disposal item as supplemented in these Special Provisions.

Sanitary side sewers and storm catch basin laterals that are unmarked or not locatable and are damaged during water main construction will be repaired and/or replaced as necessary. Prior to the start of the repair, the Inspector and/or Contractor shall notify agency responsible for system and make repairs to their standards and make the repair available for the agencies inspection if required or requested. Repair/replacement/restoration will be at the inspector’s discretion and in accordance with sections 7-04, 7-17, 7-18 and the Washington State Department of Ecology, Criteria for Sewer Works Design, sections C1-8 and C1-9.

7-09.3(7) Trench Excavation
*The third sentence of the second paragraph of this section is revised to read:*

The minimum trench width shall be the nominal pipe diameter plus 16 inches. The maximum trench width shall not exceed 30-inches, or 1.5 times the outside diameter of the pipe plus 18-inches, whichever is greater, unless otherwise approved by the Engineer to allow for proper construction of the pipeline, fittings and other appurtenances.

*This section is supplemented with the following:*

When shown on plans or as directed by the Engineer, the Contractor shall install trench dams on water main per standard plan SU-33.

7-09.3(7) A Dewatering of Trench
*This section is supplemented with the following:*

The Contractor is responsible for having proper and operational equipment for dewatering. The Contractor will have operational de-watering equipment on site prior to main shutdown. The cost of all labor, equipment and materials for de-watering shall be included in the various bid items of the contract. No additional compensation will be made for dewatering.

The Contractor is responsible for keeping excavations free from water during construction and disposing of the water in a manner that will not cause injury to public or private property, or to cause a nuisance or a menace to the public. The Contractor shall maintain dry working conditions at all times and under all conditions. Groundwater flowing toward or into excavations shall be controlled to prevent sloughing of excavation walls, boils, uplift, and heave in the excavation, and to eliminate interference with orderly progress of construction. While the excavation is open, the water level shall continuously be maintained at least two (2) feet below the working level. The control of
groundwater shall be such that softening of the bottom of excavations, or formation of “quick” conditions or “boils” during excavation, shall not occur. The Contractor is responsible for all foundation material required due to lack of dewatering efforts.

All costs associated with dewatering and discharge to the sanitary sewer shall be incidental to Trench Excavation and Disposal, Section 7-09.3(8) of these specifications.

7-09.3(7) C Extra Trench Excavation
The 4th paragraph of this section is revised to read:

Additional excavations, as directed by the inspector shall be classified as Extra Trench Excavation and Disposal.

7-09.3(8) Removal and Replacement of Unsuitable Materials
This section heading is revised to read:

7-09.3(8) Trench Excavation and Disposal
This section is supplemented with the following:

Unless specified elsewhere in the plans or special provisions the scope of this Contract shall include the export and disposal of 100% of all excavated materials and the import of 100% of all trench backfill material.

7-09.3(9) Bedding the Pipe
The first sentence of the first paragraph is revised to read:

When installing Polyethylene encasement on ductile iron pipe, to avoid puncturing or tearing of the polyethylene sleeve, a clean washed sand encasement 6-inches below designed grade of the pipe, trench width, to 6-inches above top of pipe shall be installed. Note, the profile shows the invert elevation of the pipe, not the bottom of the trench. The sand bedding around the pipe shall be compacted by water settling and/or mechanical equipment. The remaining trench section shall be compacted with mechanical equipment to the standards as specified in “7-09.3(11) Compaction of Backfill”. The sand used for “Pipe Zone Bedding” shall meet the requirements of Section 9-03.1(2) B, Class 2 as described in 2020 WSDOT Standard Specifications.

7-09.3(10) Backfilling Trenches
This section is supplemented with the following:

For the trench section above the “Pipe Zone Bedding”, unless otherwise specified, Tacoma Water will require full depth Crushed Surfacing Top Course (CSTC), for trench backfill and compacted in accordance with the 2020 WSDOT Standard Specifications. The Contractor will be required to provide a current proctor of material for compaction testing. Compaction testing will be paid under a separate bid item.

CSTC shall also be placed in areas of existing rock surfacing disrupted by the water main construction and in any other areas where directed by the inspector, and rolled with a power roller.
7-09.3(11) Compaction of Backfill
This section is revised to read:

Backfill, shall be compacted to at least 95-percent of maximum density as specified in Section 2-03.3(14) D.

At locations where paved streets, roadway shoulders, driveways, or sidewalks will be constructed or reconstructed over the trench, the backfill shall be spread in layers and compacted by mechanical tampers. In such cases, the backfill material shall be placed in successive layers not exceeding 12-inches in loose thickness (or as specified in City of Tacoma Standard Plan SU-28, whichever is less), and each layer shall be compacted with mechanical tampers to the density specified herein. Mechanical tampers shall be of the impact type as approved by the Engineer.

Compaction test locations shall be at 150 linear foot intervals, with a minimum of two compaction test locations per trench, or as directed by the Engineer. The Contractor shall perform compaction testing each day main is installed.

At each compaction test location, compaction tests shall be taken on each compacted layer, starting 18-inches above the pipe and finishing at the final ground surface. Each layer shall be compacted to 95% modified proctor density, as verified by compaction testing, before proceeding to place and compact the next layer. Compaction testing will be performed by a licensed testing company with trained personnel in the presence of the Tacoma Water Construction Inspector. Passing test will be based on a current proctor of material used. Costs incurred for any proctor test, and failed compaction tests, are the responsibility of the Contractor.

Service transfer work by Tacoma Water will not commence until such time as the trench has been successfully backfilled, as demonstrated through receipt of successful compaction test results for that portion of water main to be placed in service.

7-09.3(12) General Pipe Installation
The first sentence of the first paragraph is revised to read:

Pipe shall be installed in accordance with the manufacturer’s printed specifications and instructions, and to the standards of the AWWA and DIPRA for installing the type of pipe used.

7-09.3(14) Cutting Pipe
This section is supplemented with the following:

Short lengths of field cut pipe used for bell and spigot joints shall have a bevel of 30° from center and 1/4" from the end.

7-09.3(16) Cleaning and Assembling Joint
This section is supplemented with the following:

Only food-grade pipe lubricant as specified by the pipe manufacturer for potable water shall be used on joints. It shall be delivered to the job in closed containers and shall be kept clean. Pipe lubricant shall be in accordance with AWWA C111/A21.11-95 paragraph. 4.4.4, and NSF/ANSI Standard 61, latest edition.
7-09.3(17) Laying Ductile Iron Pipe with Polyethylene Encasement

This section is supplemented with the following:

Where noted on the plans and as per the Engineer, the water main, fittings, valves, laterals, and appurtenances shall be encased with a minimum 8-mil thick V-Bio Enhanced Polyethylene Encasement, as supplied by the United States Pipe and Foundry Company, the American Cast Iron Pipe company, the Pacific States Cast Iron Pipe Company, or approved equal. Polyethylene encasement for use with ductile iron pipe systems shall consist of three layers of co-extruded linear low density polyethylene (LLDPE), fused into a single thickness of not less than eight mils. The inside surface of the polyethylene wrap to be in contact with the pipe exterior shall be infused with a blend of antimicrobial compound to mitigate microbiologically influenced corrosion and volatile corrosion inhibitor to control galvanic corrosion.

The Polyethylene Encasement shall be installed in accordance with Ductile Iron Pipe Research Association (DIPRA) and American Water Works Association (AWWA) C105 section A21.5 and the following recommended method:

The pipe shall be raised about 3 feet above the ground at the side of the trench using either pipe tongs or a sling. The polyethylene sleeve cut approximately 2 feet longer than the length of the pipe, is slipped over the spigot end of the pipe and bunched up accordion fashion between the end of the pipe and the sling. The pipe is lowered into the trench and joined with adjacent installed pipe in the normal manner with a shallow bell hole to facilitate the wrapping of the joint. The sling is removed from the center of the pipe and hooked into the bell cavity. The bell is raised 3 to 4 inches and the polyethylene sleeve is slipped along the full length of the pipe barrel leaving enough sleeve at each end of the pipe to overlap the adjoining pipe about one foot. The sleeve is then pulled over the bell of the pipe, folded around the adjacent pipe barrel and wrapped with two circumferential turns of the 2-inch wide polyethylene adhesive tape to seal the sleeve to the pipe. The sleeve on the adjacent pipe is then pulled over the first wrap on the pipe bell and sealed in place behind the bell using two circumferential turns of the 2-inch wide polyethylene adhesive tape to complete the joint seal. The resulting loose wrap on the barrel of the pipe is pulled snugly around the barrel of the pipe, the excess material folded over the top, and the fold is held in place by means of short strips of the adhesive tape at intervals of about 3 feet along the pipe barrel.

Where valves, tees or other fittings are installed, the sleeve shall be cut to provide an overlap of about one foot and shall be slit and taped as required to provide openings for the branch lines, hydrant laterals (which shall also be encased in polyethylene) or gate valve bonnets. All pipe, fittings, valves and hydrants shall be encased in a polyethylene sleeve.

All punctures, tears or other damage to the polyethylene sleeve shall be repaired with additional polyethylene material and/or polyethylene adhesive tape to restore full protection to the water main to the satisfaction of the Tacoma Water Construction Inspector.

7-09.3(19) A Connections to Existing Mains

This section is supplemented with the following:
When connecting new mains to existing, the Contractor shall swab out all new material that will go into immediate service with a chlorine solution prior to installation. When shutdowns for connection are required, the Contractor will coordinate and schedule with the inspector, a minimum of three working days prior to the scheduled time of shutdown, to allow 48-hour notification to all customers. Cancellations of the shutdown by the Contractor after customer notification is made may result in a charge to the Contractor for re-notification.

The Contractor is advised that existing valves used to shut down mains for connections are subject to leakage due to age and condition. The Contractor shall be prepared to deal with water from leaking valves encountered. No additional compensation will be made.

The Contractor is advised that only Tacoma Water crews may operate system valves.

The existing pipe shall be kept clean and free of debris as much as possible.

Coordination is an important part of this project so proper notification for shutdowns is necessary, such that they can be scheduled without causing delays to the Contractor or unanticipated interruption of service to Tacoma Water customers.

7-09.3(19) B Maintaining Service
This section is supplemented with the following:

Tacoma Water will furnish all labor and materials necessary to provide temporary (hi-line) mains and services when necessary or as determined by the Construction Inspector. The Contractor may have some down time waiting for services to be hi-lined. No extra compensation will be made to the Contractor for down time due to work by City forces. No time will be charged towards the contract’s time of completion while services are transferred.

Where existing services are to be transferred from old to new mains, the work of the Contractor shall be so planned and coordinated with that of Tacoma Water that consumers will be shut off as briefly as possible.

7-09.3(21) Concrete Thrust Blocking
The first paragraph is supplemented with the following:

Concrete thrust blocking shall conform to Standard Drawing 17-56-1, with concrete having a minimum compressive strength of 3,000 psi at 28 days. Concrete used for thrust blocking on mains eight inch and smaller may meet the requirements of 6-02.3(4) B Jobsite Mixing. Temporary thrust blocking may be revised or altered as approved by the Tacoma Water Construction Inspector.

7-09.3(23) Hydrostatic Pressure Test
Paragraph 13 is deleted:

This section is supplemented with the following:
Testing will only be accomplished with the approval and in the presence of the Tacoma Water Construction Inspector. The Tacoma Water Construction Inspector will provide a set of pressure gauges. Testing will conform to DIPRA standards.

7-09.3(23) A Testing Extensions from Existing Mains
This section is supplemented with the following:

Testing will only be accomplished with the approval and in the presence of the Tacoma Water Construction Inspector. The Tacoma Water Construction Inspector will provide a set of pressure gauges. Testing will conform to DIPRA standards.

7-09.3(23) B Testing Section with Hydrants Installed
This section is supplemented with the following:

Testing will only be accomplished with the approval and in the presence of the Tacoma Water Construction Inspector. The Tacoma Water Construction Inspector will provide a set of pressure gauges. Testing will conform to DIPRA standards.

7-09.3(24) A Flushing
This section is revised to read:

In laying mains, care shall be taken to insure that the interior of the pipe is kept free of foreign matter or trench water. Upon completion of construction, the line shall be filled slowly under the direction of the Engineer and a pressure test conducted.

Sections of pipe to be disinfected shall first be flushed to remove any solids or contaminated material that may have become lodged in the pipe. If a hydrant is not installed at the end of the main, then a tap shall be provided large enough to develop a flow velocity of at least 2.5 feet per second in the water main.

Tacoma Water crews will flush, sample, and de-chlorinate newly installed water mains. The Contractor is advised that only Tacoma Water crews shall operate system valves.

Water for testing and sterilizing will be furnished without charge to the Contractor at such points as may be designated by the Inspector, in such quantities and at such times as will not interfere with service to Tacoma Water customers.

7-09.3(24) K Retention Period Flushing
This section is revised to read:

The chlorinated water resulting from the initial filling shall be retained in the line for a period of not less than 24 hours. After this period, the chlorine residual at the pipe extremities and at other representative points shall be at least 25 ppm. After which Tacoma Water will remove the chlorinated water and thoroughly flush the line. Tacoma Water shall take initial bacterial test samples of water flowing in the line upon completion of the flushing.

A second set of bacterial test samples will be taken after a 24-hour retention period of the water remaining in the pipe after the initial flushing. Should the samples not test free of E coli and zero coli-form bacteria, the line shall be re-disinfected and re-
flushed, at the expense of the Contractor, until two successive satisfactory samples are obtained.

Forty-eight hours is the minimum time required by the bacteriological laboratory to process samples.

7-09.3(24) N Final Flushing and Testing
The second paragraph is deleted:
This section is supplemented with the following

The Tacoma Water Construction Inspector will determine location of sample stations and coordinate with Tacoma Water crews for installation. Corporation stops with copper pipe stubs will be installed by Tacoma Water crews at selected points along the pipeline for use as sampling stations and points to release air, and apply test pressure.

The sampling stations will be removed by Tacoma Water crews after bacterial tests and pressure tests are completed unless the station will be used for a new water service lateral. Installation and removal of sample stations will be coordinated with the Contractor. The water main Contractor shall complete any excavation required for installation and/or removal of the sample stations. The cost of all labor, equipment and materials involved in the installation and removal of sample stations shall be included in the various bid items of the contract.

Unless specified on Contract Plans, Tacoma Water will furnish all labor and materials necessary to provide new services or to transfer present services to the new mains and to provide the required taps for testing and sterilizing.

Water for testing and sterilizing will be furnished without charge to the Contractor at such points as may be designated by the Inspector, in such quantities and at such times as will not interfere with service.

7-09.4 Measurement
The ninth paragraph is revised to read:

Trench shoring: The measurement of shoring will by the linear foot of pipe laid and shall be measured along the pipe through fittings, valves and couplings. The single lineal foot measurement will be for both sides of the trench that is shored. Over-excavation to bypass the use of shoring/shielding is not considered a safety system and no payment will be made. Any extra quantities materials (pavement removal and replacement, trench excavation and disposal, trench backfill) attributed to over-excavation will not be paid for by Tacoma Water. Shoring/shielding requirements will be in accordance with WISHA standards and the 2020 M41-10 Washington State Department of Transportation Standard Specifications Section 7-09.3(7).

This section is supplemented with the following:

The unit prices bid in the Proposal shall include all the accessories, gaskets, follower glands, nuts, bolts, etc., necessary to complete the project on the approved plans.
Extra Trench Excavation and Disposal: Measurement of Extra Trench Excavation and Disposal as defined in Section 7-09.3(7) C will be measured by the cubic yard of material removed as measured by the Engineer. The depth shall be the actual depth removed for the changed line or grade in accordance with Section 7-09.3(5) or as ordered by the Engineer in accordance with Section 1-04.4. The width shall be the actual width removed for the changed line or grade, but in no case shall the measured width exceed the allowable widths specified in Section 7-09.3(7). This bid item shall also include the corresponding amount of CSTC and Gravel Backfill for Pipe Zone Bedding, as applicable, installed and compacted, for trench backfill.

“_____ -inch Ductile Iron Pipe, _____ Joint, ANSI/AWWA, C151, Special Thickness Class No. 52, installed (various sizes): Measurement for water mains will be by the linear foot measured along the pipe less fittings, valves and couplings.

Mechanical Joint Fittings and couplings (various sizes and combinations): Measurement for fittings and couplings shall be per each.

_____ -inch Blow-Off Assembly, installed: Measurement for this item will be per each.

Temporary _____ -inch Blow-Off Assembly, installed and removed: Measurement for this item will be per each.

_____ -inch Mechanical Joint Restraining Glands (various sizes): Measurement for these items will be per each.

Push-On Joint Restraining Gaskets (various sizes): Measurement for these items will be per each.

_____ -inch Transition couplings with _____ -inch center ring, _____ coating, and _____ bolts, _____ to _____ (various sizes): Measurement for these items will be per each.

_____ -inch End Cap Couplings, tapped _____ -inch with _____ -inch center ring, _____ coating, & _____ bolts (various sizes): Measurement for these items will be per each.

Concrete Thrust Anchor, installed: Measurement for this item will be per each.

Concrete Thrust Anchor with Hair Pins and min. one CY Concrete, installed: Measurement for this item will be per each.

Temporary Thrust Anchor, installed, install and remove: Measurement for this item will be per each. The use of blocking/preformed structures will be at the discretion of the inspector.

 Crushed Surfacing Top Course (CSTC) for shoulder restoration as directed by Tacoma Water Inspector: Measurement for this item shall be per ton. It is the Contractor’s responsibility to provide gravel tickets to Tacoma Water’s inspector daily as materials are delivered.
Trench Compaction Test (as directed by the inspector), shall be per each for passing compaction test as per section 7-09.3(11). Test will be performed by a licensed testing facility with trained personnel in the presence of the Tacoma Water Construction Inspector. Passing test will be based on a current proctor of material used. Costs incurred for any proctor test and failing compaction test are responsibility of the Contractor.

Test Holes: No unit of measurement shall apply to the lump sum price for Test Holes.

Trench Dam: Measurement for this item will be per each.

Force Account: The item shall conform to Section 1-09.6 of the Standard Specifications.

“____-inch x ____inch Tapping Sleeve, installed”. Measurement for this item shall be per each.

7-09.5 Payment
This section is revised to read:

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

“Trench shoring”, per linear foot.

The single lineal foot measurement will be full pay for both sides of the trench that is shored. Over-excavation to bypass the use of a shoring/shielding is not considered a safety system and no payment will be made.

“____-inch Ductile Iron Pipe, (Push-On Joint/mechanical joint), ANSI/AWWA, C151, Special Thickness Class No. 52, to furnish, lay and test” per linear foot.

The unit contract price per linear foot for each size “____-inch Ductile Iron Pipe, (Push-On Joint/mechanical joint), ANSI/AWWA, C151, Special Thickness Class No. 52, to furnish, lay and test” shall be full pay for all labor and materials to complete the installation of the water main including but not limited to furnishing, laying, jointing pipe, gaskets, gland/bolt kits, as well as the labor and materials for installing 8 mil. V-Bio Enhanced Polyethylene Encasement around various diameter pipe, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe, compaction of trench backfill, pressure testing, flushing, disinfecting the pipeline and cleanup. Note, the Compaction testing of trench backfill shall be paid by bid item “Trench Compaction Test (as directed by the Engineer)”.

Payment for restoration will be made under the applicable items shown in the Proposal. If no pay items for restoration are included in the Proposal, restoration shall be considered incidental to the work of constructing the water main, and all costs thereof shall be included in the unit contract price for “____-inch Ductile Iron Pipe, (Push-On Joint/mechanical joint), ANSI/AWWA, C151, Special Thickness Class No. 52, to furnish, lay and test’’.
"Extra Trench Excavation and Disposal" per Cubic Yard

The unit contract price for "Extra Trench Excavation and Disposal" shall be full pay for extra trench excavation and disposal as defined in Section 7-09.3(7)C and will be measured by the cubic yard of material removed. This bid item shall also include the corresponding amount of CSTC, Gravel Backfill Pipe Zone Bedding, as applicable, installed and compacted, for trench backfill.

The unit contract price for "Crushed Surfacing Top Course (CSTC) per section 9-03.9(3) of the _____WSDOT Standard Specifications, for shoulder restoration as directed by Tacoma Water Inspector", shall be full pay for all labor, equipment and materials required for furnishing and installing the specified item including delivery, spreading, compacting and rolling

"_____inch Ductile Iron Reducer, _____ M.J. with concrete anchor, (dwg.17-56-1) installed", per each.

The unit contract price for "_____inch Ductile Iron Reducer, _____ M.J. with concrete anchor, (dwg.17-56-1) installed", shall be full pay for all labor, equipment and materials required for furnishing and installing these items including concrete anchor, gaskets and gland/bolts kits, as well as the labor and materials for installing 8 mil. V-Bio Enhanced Polyethylene Encasement around various diameter reducer, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding, and compaction of Trench backfill and pipe zone backfill.

"_____inch Ductile Iron (fitting), M.J. ______ installed", per each.

The unit contract price for "_____inch Ductile Iron (fitting), M.J. ______ installed" shall be full pay for all labor, equipment and materials required for furnishing and installing these items including gaskets and gland/bolts kits, as well as the labor and materials for installing 8 mil. V-Bio Enhanced Polyethylene Encasement around various diameter fitting, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe, and compaction of Trench backfill and pipe zone backfill.

"_____inch Ductile Iron (cap/plug), M.J., tapped _____-inch, installed & removed", per each.

The unit contract price for "_____inch Ductile Iron (cap/plug), M.J., tapped _____-inch, installed & removed" shall be full pay for all labor, equipment and materials required for furnishing, installing and removing these items including gaskets gland/bolts kits, as well as the labor and materials for installing 8 mil. V-Bio Enhanced Polyethylene Encasement around various diameter cap/plug, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe, and compaction of Trench backfill and pipe zone backfill.

"_____inch Ductile Iron (Cap/plug), M.J., tapped _____-inch, installed", per each.
The unit contract price for “____-inch Ductile Iron (cap/plug), M.J., tapped _____-inch, installed” shall be full pay for all labor, equipment and materials required for furnishing, and installing these items including gaskets gland/bolts kits, as well as the labor and materials for installing 8 mil. V-Bio Enhanced Polyethylene Encasement around various diameter cap/plug, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe, and compaction of Trench backfill and pipe zone backfill.

“____-inch Transition Coupling with _____-inch center ring, _____coating, and _____bolts, _____ to D.I.”, per each.

The unit contract price for “____-inch Transition Coupling with _____-inch center ring, _____coating, and _____bolts, _____ to D.I.”, shall be full pay for all labor, equipment and materials required for furnishing and installing these items, as well as the labor and materials for installing 8 mil. V-Bio Enhanced Polyethylene Encasement around various diameter coupling, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe, and compaction of Trench backfill and pipe zone backfill.

“____-inch End Cap Coupling tapped _____-inch, with _____inch center ring, _____coating, and _____bolts,” per each.

The unit contract price for “____-inch End Cap Coupling tapped _____-inch, with _____inch center ring, _____coating, and _____bolts,” shall be full pay for all labor, equipment and materials required for furnishing and installing these items, as well as the labor and materials for installing 8 mil. V-Bio Enhanced Polyethylene Encasement around various diameter coupling, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe, and compaction of Trench backfill and pipe zone backfill.

“Temporary____-inch End Cap Coupling tapped _____-inch, with _____inch center ring, _____coating, and _____bolts, installed and removed,” per each.

The unit contract price for “Temporary____-inch End Cap Coupling tapped _____-inch, with _____inch center ring, _____coating, and _____bolts, installed and removed,” shall be full pay for all labor, equipment and materials required for furnishing, installing and removing these items, as well as the labor and materials for installing 8 mil. V-Bio Enhanced Polyethylene Encasement around various diameter coupling, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe, and compaction of Trench backfill and pipe zone backfill.

“____-inch Blow-Off Assembly, installed”, per each.

The unit contract price bid per each for “____-inch Blow-Off Assembly, installed” shall be full pay for all work to install the blow-off assembly per drawing 17-56-1, including but not limited to excavating, backfilling, laying and jointing pipe, pipe and fittings, valve box, meter box, and cleanup. Bid item to include raising valve box to finished grade per drawing 17-56-1, and to include concrete pad and asphalt patch at valve box.
“Temporary ____-inch Blow-Off Assembly, installed & removed”, per each.

The unit contract price bid per each for “Temporary ____-inch Blow-Off Assembly, installed & removed” shall be full pay for all work to install the blow-off assembly per dwg. 17-56-1, including but not limited to excavating, backfilling, laying and jointing pipe, pipe and fittings, gate valve, meter box, cleanup and removal.

“____-inch Mechanical Joint Restraining Gland, installed”, per each.

The unit contract price for “____-inch Mechanical Joint Restraining Gland, installed”, shall be full pay for all labor, equipment and materials required for furnishing and installing the specified item.

“____-inch Push-On Joint Restraining Gasket, installed”, per each.

The unit contract price for “____-inch Push-On Joint Restraining Gasket, installed”, shall be full pay for all labor, equipment and materials required for furnishing and installing the specified item.

“Concrete Thrust Anchor, installed”, per each.

The unit contract price for “Concrete Thrust Anchor, installed” shall be full pay for all labor, equipment and materials required for furnishing and installing the specified item, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe, and compaction of trench backfill.

“Concrete Thrust Anchor with Hair Pins and min. one CY Concrete, installed”, per each.

The unit contract price for “Concrete Thrust Anchor with Hair Pins and min. one CY Concrete, installed” shall be full pay for all labor, equipment and materials required for furnishing and installing the specified item. Hairpins to be supplied by Tacoma Water.

“Temporary Concrete Thrust Anchor, installed & removed”, per each.

The unit contract price for “Temporary Concrete Thrust Anchor, installed & removed”, shall be full pay for all labor, equipment and materials required for furnishing, installing and removing the specified item, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe, and compaction of trench backfill.

“Trench Compaction Test (as directed by the inspector)”, per each.

The unit contract price for “Trench Compaction Test (as directed by the inspector)”, shall be for passing compaction test as per section 7-09.3(11), by a licensed company in the presence of Tacoma Water Construction Inspector, and shall be measured per each passed test.

“Trench Dam”, per each.
The unit contract price for “Trench Dam” shall be full pay for all labor and materials required to install trench dams on water main as directed by Engineer or as shown on approved plans, per City of Tacoma Standard Plan SU-33. Bid item shall include furnishing and installing polyethylene sleeve on main, as well as furnishing and installing CDF, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, and compaction of trench backfill.

“Test Holes”, per lump sum.

The lump sum contract price for “Test Holes” shall be full pay for all labor, equipment and materials required to perform the specified excavations including all flagging required to field verify existing utilities, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, and compaction of trench backfill. Progress payment will be made based on the percentage completion of the total work encompassed within the lump sum item.

“____-inch x ____inch Tapping Sleeve, installed”. per each.

The unit contract price for “____-inch x ____inch Tapping Sleeve, installed” shall be full pay for all labor, equipment and materials required for furnishing and installing the specified item, as well as the labor and materials for installing 8 mil. V-Bio Enhanced Polyethylene Encasement around various diameter sleeves, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe and compaction of trench backfill.

END OF SECTION

7-10 VACANT
This section including heading is revised to read:

7-10 Casing Pipe for Water Main, Sewer, or Side Sewer

7-10.1 Description

When the inspector determines it is necessary for the new water main to be installed beneath an existing sanitary sewer or side sewer, at the direction of the inspector both the new water main and the sanitary sewer or side sewer shall be installed within a casing pipe extending a minimum of 10 feet either side of the crossing. See detail on plan sheet.

7-10.2 Material

7-10.2(1) Casing Pipe

In each location where a casing pipe is necessary, the casing pipe shall be a continuous 20 foot length of ____” PVC Pipe, AWWA C900, DR-25.
The following table lists the water main, sewer, or side sewer sizes and their corresponding casing size:

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Casing Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>6” DI</td>
<td>12”</td>
</tr>
<tr>
<td>8” DI</td>
<td>14”</td>
</tr>
<tr>
<td>10” DI</td>
<td>18”</td>
</tr>
</tbody>
</table>

7-10.2(2) Casing Spacers

Casing spacers shall be a minimum of 8-inches wide and shall be fabricated with runner heights to provide a standard carrier pipe configuration. The spacers shall be constructed of a coated steel band with 2-inch glass reinforced plastic runners. The casing spacers shall be Model C8G-2 as manufactured by Pipeline Seal and Insulator (PSI) Company, Inc. or approved equal. The contractor shall be responsible for sizing insulators to provide required clearance of pipe bells and to properly fit the carrier pipe.

7.10.2(3) End Seals

The end seals shall be rubber seals with stainless steel straps and shall be Model W by Pipeline Seal and Insulator (PSI) Company, Inc. or approved equal.

7-10.4 Measurement

Measurement for ____-inch PVC Casing Pipe, AWWA C900/C905, DR-25, 20-foot minimum length, including end seals and casing spacers shall be per lineal feet, installed on water main, sanitary sewer, or side sewer.

7-10.5 Payment

“____-inch PVC Casing Pipe, AWWA C900/C905, DR-25, 20-foot minimum length, including end seals and casing spacers”, per lineal feet.

The unit contract price for “____-inch PVC Casing Pipe, AWWA C900/C905, DR-25, 20-foot minimum length, including end seals and casing spacers” shall be full pay for all labor, equipment and materials to provide a fully functional casing pipe in place as shown on the plans. The item shall include all costs for installing and assembling all components necessary to install water main, sanitary sewer, or side sewer, within casing pipe to the line and grade shown in the plans. Costs for Trench excavation and Backfill, CSTC for trench backfill, and compaction of trench backfill, to install the casing pipe shall be included in the unit contract price for this item.

END OF SECTION

7-12 VALVES FOR WATER MAINS

7-12.2 Materials

This material list in this section is supplemented with the following:

Check Valves

Tacoma Water Special Provisions 35 8/24/2021 TH
7-12.4 Measurement
This section is supplemented with the following:

Measurement for _____-inch Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box, will be per each.

Measurement for _____-inch Butterfly Valve, M.J., ANSI/AWWA, C504, with C.I. Valve Box, will be per each.

Measurement for _____-inch Tapping Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box, will be per each.

7-12.5 Payment
This section is supplemented with the following:

“_____ -inch Gate Valve, M.J., ANSI/AWWA, C-509/515, with C.I. Valve Box”, per each.

The unit bid price for “_____ -inch Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box, installed, per each”, shall be full pay for all labor, equipment and materials required to furnish and install this item. Bid item to include raising valve box to finished grade per drawing 17-56-1, and to include concrete pad and asphalt patch at valve box, as well as the labor and materials for installing 8 mil. V-Bio Enhanced Polyethylene Encasement around various diameter valves, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe, and compaction of Trench backfill and pipe zone backfill.

“_____ -inch Butterfly Valve, M.J., ANSI/AWWA, C504, with C.I. Valve Box, per each.

The unit bid price for “_____ -inch Butterfly Valve, M.J., ANSI/AWWA, C504, with C.I. Valve Box” shall be full pay for all labor, equipment and materials required to furnish and install valve. Bid item to include raising valve box to finished grade per drawing 17-56-1, and to include concrete pad and asphalt patch at valve box, as well as the labor and materials for installing 8 mil. V-Bio Enhanced Polyethylene Encasement around various diameter valves, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe, and compaction of Trench backfill and pipe zone backfill.

“_____ -inch Tapping Gate Valve, M.J., ANSI/AWWA, C509/C515, with C.I. Valve Box”, per each.

The unit contract price for “_____ -inch Tapping Gate Valve, M.J., ANSI/AWWA, C509/C515, with C.I. Valve Box, in place” shall be full pay for all labor, equipment and materials required for furnishing, installing and tapping. Bid item to include raising valve box to finished grade per drawing 17-56-1, and to include concrete pad and asphalt patch at valve box, as well as the labor and materials for installing 8 mil. V-Bio Enhanced Polyethylene Encasement around various diameter valves, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe, and compaction of Trench backfill and pipe zone backfill.
Pipe Zone Bedding of polyethylene encased pipe, and compaction of Trench backfill and pipe zone backfill.

END OF SECTION

7-14 HYDRANTS

7-14.3(1) Setting Hydrants
The second paragraph is revised to read:

All hydrants shall be set on concrete blocks as shown on standard detail 17-56-1. The hydrant barrel drain shall waste into a pit of porous gravel material meeting specification 9-03.12(5), and situated at the base of the hydrant as shown on standard detail 17-56-1.

This section is supplemented with the following:

Hydrant installation will conform to AWWA and DIPRA standards, and drawing 17-56-1. No barrel extensions will be approved for new installations. The Contractor is responsible for ensuring the proper bury of hydrant for grade is installed.

7-14.3(2)A Hydrant Restraints
This section is supplemented with the following:

Only approved restraining glands will be installed for hydrant restraints, unless shackle rods are specified. No poured concrete thrust block will be placed on the back side of the fire hydrants. If the hydrant lateral is longer than one full length of pipe, either mechanical joint (MJ) pipe, approved push-on joint restraining gaskets or a ductile iron solid sleeve with restraining glands will be installed to ensure correct location and restraint of hydrant.

7-14.3(2)C Hydrant Guard Posts
This section is supplemented with the following:

Guard posts will be installed as per drawing 17-56-1.

7-14.3(4) Moving Existing Hydrants
This section is supplemented with the following:

The Engineer and/or Inspector will determine if the existing hydrant lateral tee will be removed and replaced with new pipe or plugged, depending on type of pipe and joint.

7-14.3(6) Hydrant Extensions
This section is revised to read:

No hydrant barrel extensions are approved on new installations.
7-14.3(7) Removing Abandoned Hydrants  
This section is added with the following:

The Contractor shall remove existing abandoned fire hydrants which were taken out of service by this project or as noted to be removed on plans. Abandoned fire hydrants shall be removed at the foot, laterals plugged and fire hydrants delivered to the Tacoma Water Storeroom at South 35th Street and Union Avenue. All labor and equipment costs are incidental to the contract.

7-14.4 Measurement  
This section is supplemented with the following:

Measurement of hydrants will be made per each, per bury length.

Measurement of Hydrant Guard Post installed per standard drawing 17-56-1, will be made per each.

7-14.5 Payment  
This section is supplemented with the following:

“6-inch Hydrant, M.J., _____-ft. bury, with _____-inch _______ Threads & ____-inch Quick Connect Coupling”, per each.

The unit bid price for “6-inch Hydrant, M.J., _____-ft. bury, with _____-inch _______ Threads & ____-inch Quick Connect Coupling”, shall be full pay for all labor, equipment and materials required for furnishing and installing the hydrant including drain rock and hydrant block, as well as the labor and materials for installing 8 mil. V-Bio Enhanced Polyethylene Encasement around hydrant, Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, Gravel Backfill for Pipe Zone Bedding of polyethylene encased pipe, and compaction of Trench backfill and pipe zone backfill. Restraining glands,______ gaskets, lateral pipe, tee, and valve will be paid under separate bid items.

“Hydrant Guard Post installed”, per each.

The unit bid price for “Hydrant Guard Post installed”, shall be full pay for all labor, equipment and materials required to fabricate and install hydrant guard post per drawing 17-56-1 and as directed by Tacoma Water Construction Inspector.

END OF SECTION

7-15 SERVICE CONNECTIONS  
This section is supplemented with the following:

There are 122 water service transfers throughout the project. Tacoma Water will commence with service transfers following the successful completion of testing and sampling the new water main. The Contractor shall anticipate down time waiting for Tacoma Water crews to complete service transfers. For water services two inches and smaller, the Contractor shall anticipate one working day per service for Tacoma Water crews to complete service transfers. For water services larger than 2- inches, the
Contractor shall anticipate one and one half working days per service for Tacoma Water crews to complete service transfers. All costs shall be included in the various bid items in the proposal and no extra compensation will be made to the Contractor for down time due to work by City forces. No time will be charged towards the contract’s time of completion while services are being transferred.

Please note; service transfer work by Tacoma Water will not commence until such time as the section of water main has been placed into service and the trench has been successfully backfilled, as demonstrated through receipt of successful compaction test results for that portion of water main to be placed in service.

For water service transfers:
- For water services two inches and smaller, the Contractor shall anticipate one working day per service for Tacoma Water crews to complete service transfers.
- For water services larger than 2- inches, the Contractor shall anticipate one and one half working days per service for Tacoma Water crews to complete service transfers.

END OF SECTION

7-17 SANITARY SEWERS

7-17.3 Construction Requirements
This section is supplemented with the following:

Sanitary sewers may be encountered at various locations throughout this project. Prior to the start of the sanitary sewer repair, the Inspector and/or Contractor shall notify, Tacoma Public Works Inspector. C900 PVC shall be used on sanitary repairs. The repair of the sewer shall be made three feet outside of the water main trench or to the limits and material standards of Washington State Department of Ecology, Criteria for Sewer Works Design, section C1-9.1.4 If the sewer pipe falls into the unusual condition as specified by the Washington State Department of Ecology, Criteria for Sewer Works Design, sections C1-9.1.4 Unusual Conditions (Perpendicular), sub-section A, the sewer pipe shall comply with the requirements of a full length of pipe centered over the water main to the material standards of Table C1-4. No additional compensation shall be made for the extended connection and material. Mechanical couplings (Romac or equivalent) shall be installed at both ends of the sewer restoration forming a rigid connection between the new and existing pipe. Rigid PVC slip couplings for PVC pipe and Romac mechanical style for concrete pipe only. Repair/replacement/restoration will be at the inspector’s discretion and in accordance with Washington State Department of Ecology, Criteria for Sewer Works Design, sections C1-8 and C1-9.

7-17.4 Measurement
This section is revised to read:

“Storm, Sanitary, and Side Sewer Restoration” will be measured per each.

7-17.5 Payment
This section is revised to read:
“Storm, Sanitary, and Side Sewer Restoration”, per each.

The unit bid price for “Storm, Sanitary, and Side Sewer Restoration”, includes all labor and materials required to remove and replace storm, sanitary, and side sewers. This is a per each bid item that includes all costs but is not limited to pipe, fittings, pea gravel, labor, and equipment, etc. to repair sewers, as well as Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, and compaction of Trench backfill.

END OF SECTION

7-18 SIDE SEWERS

7-18.3 Construction Requirements
This section is supplemented with the following:

Side sewers may be encountered at various locations throughout this project. Prior to the start of the sanitary side sewer repair, the Inspector and/or Contractor shall notify Tacoma Public Works Inspector. C900 PVC shall be used on side sewer repairs. The repair of the side sewer shall be made three feet outside of the water main trench or to the limits and material standards of Washington State Department of Ecology, Criteria for Sewer Works Design, section C1-9.1.4 If the side sewer pipe falls into the unusual condition as specified by the Washington State Department of Ecology, Criteria for Sewer Works Design, sections C1-9.1.4 Unusual Conditions (Perpendicular), subsection A, the side sewer pipe shall comply with the requirements of a full length of pipe centered over the water main to the material standards of Table C1-4. No additional compensation shall be made for the extended connection and material. Mechanical couplings (Romac or equivalent) shall be installed at both ends of the sewer restoration forming a rigid connection between the new and existing pipe. Rigid PVC slip couplings for PVC pipe and Romac mechanical style for concrete pipe only. Repair/replacement/restoration will be at the inspector’s discretion and in accordance with Washington State Department of Ecology, Criteria for Sewer Works Design, sections C1-8 and C1-9.

7-18.4 Measurement
This section is revised to read:

“Storm, Sanitary, and Side Sewer Restoration”, will be measured per each.

7-18.5 Payment
This section is revised to read:

“Storm, Sanitary, and Side Sewer Restoration”, per each.

The unit bid price for “Storm, Sanitary, and Side Sewer Restoration”, includes all labor and materials required to remove and replace storm, sanitary, and side sewers. This is a per each bid item that includes all costs but is not limited to pipe, fittings, pea gravel, labor, and equipment, etc. to repair sewers.

END OF SECTION
8-01.3(8) STREET CLEANING
This section is revised to read:

Self-propelled pickup and vacuum street sweepers shall be used, whenever required by the Engineer to prevent transport of sediment and other debris off the project site. Street sweepers without vacuums will not be allowed. Street sweepers shall be designed and operated to meet air quality standards.

8-01.4 Measurement
The sixth sentence is replaced with the following:

Street cleaning with self-propelled pickup and vacuum street sweeper equipment will be measured by the hour for the actual time spent cleaning pavement, as authorized by the Inspector. Time to move the equipment to or from the area on which street cleaning is required will not be measured.

8-01.5 Payment
The tenth sentence is replaced with the following:

“Street cleaning with Self-propelled pickup and vacuum street sweeper equipment”, per hour.

The unit bid price for “Street cleaning with self-propelled pickup and vacuum street sweeper equipment” will be for a self-propelled pickup and vacuum street sweeper and operator.

END OF SECTION

9-03 AGGREGATES

9-03.21 Recycled Material
This section is supplemented with the following:

No recycled material shall be used for trench backfill of water main.

END OF SECTION

9-30 WATER DISTRIBUTION MATERIALS
The first paragraph of this section is revised to read:

This specification addresses pipe and appurtenances 24-inch in diameter and smaller. Water distribution material incorporated in the work shall be new. Prior to construction, the Contractor shall submit 3 copies of material submittals to the Engineer for approval.

9-30.1(1) Ductile Iron Pipe
This section is revised to read:
Ductile iron pipe shall be centrifugally cast and meet the requirements of AWWA C151. Ductile iron pipe shall have a cement mortar lining meeting the requirements of AWWA C104. Ductile iron pipe shall be a minimum of Special Thickness Class 52 and manufactured by the following:

- Tyton Joint:
  - Pacific States Cast Iron Pipe Company
  - U.S. Pipe and Foundry Company

- Fastite Joint:
  - American Cast Iron Pipe Company

- Mechanical Joint:
  - American Cast Iron Pipe Company
  - Pacific States Cast Iron Pipe Company
  - U.S. Pipe and Foundry Company

Non-restrained joints shall be rubber gasket, push-on type, or mechanical type meeting the requirements of AWWA C111.

Restrained joints shall be as specified in Section 9-30.2(6).

*Note: When Tacoma Water Plans and Special Provisions require push-on joints to be restrained with nitrile gaskets, only American Ductile Iron Pipe and Fastite Fast-Grip® restraining gaskets are allowed.

**9-30.1(3) Rubber Gaskets**

*This section is added with the following:*

All gaskets furnished with pipe shall be styrene butadiene rubber (SBR), unless specified otherwise by the project engineer. When deemed necessary, "Nitrile" (NBR) gaskets will be required. When NBR gaskets are required they must be color-coded and/or marked in color so as to be easily identifiable as nitrile. When nitrile push-on joint restraining gaskets are required, they shall be Fastite Fast-Grip® manufactured by American Cast Iron Pipe Company or approved equal. All gaskets must conform to ANSI/AWWA C111. The gasket requirements for the specific project will be indicated on the face of the plan for the project.

**9-30.2 Fittings**

*This section is revised to read:*

Ductile iron flanges and flanged ductile iron spool pieces shall be in accordance with ANSI/AWWA C 115.

Gaskets for steel flanged joints shall be cloth inserted rubber made by Johns-Manville, JM-109 or approved equal.

Unless specified otherwise, all T-head bolts and nuts supplied for mechanical joint fittings, valves, sleeves, couplings, hydrants, tapping sleeves, etc., shall be made of high-strength, low alloy steel, conforming to ANSI/AWWA C111 (Corrosion-Resistant Steel "Cor-Ten"). All other bolts and nuts shall be hot dipped galvanized or electroplated and conform to ASTM A 307, Grade B.
All bolts shall be of sufficient length that, when assembled and tightened to proper torque, a minimum of one thread will extend outside of the nut.

Tie rods and nuts for hydrant laterals, etc., shall be made of high strength, low alloy steel conforming to ANSI/AWWA C111 (“Cor-Ten”), unless specified otherwise in the plans or Special Provisions.

All ductile iron fittings shall conform to the latest ANSI/AWWA C110 Specifications or ANSI/AWWA CI53 for Mechanical Joint Compact Ductile Iron Class 350 fittings. All fittings shall have either cement-mortar lining conforming to ANSI/AWWA C104 or fusion bonded epoxy internal lining per ANSI/AWWA C153. Mechanical joint glands supplied with the above fittings shall be ductile iron in accordance with the above specifications. The mechanical joint fittings/pipe shall be installed and the bolts tightened in the sequence and to the torque specified in DIPRA published by the Ductile Iron Pipe Research Association. Type of joints or other special items shall be specified in section 7-10 or on the Tacoma Water Plans.

9-30.2(6) Restrained Joints
This section is supplemented with the following:

Mechanical joint restraint shall be incorporated in the design of the follower gland and shall include a restraining mechanism which, when actuated, imparts multiple wedging action against the pipe, increasing its resistance as the pressure increases. Joint flexibility shall be maintained after burial. Glands shall be manufactured of ductile iron conforming to ASTM A 536-80. Dimensions of the gland shall be such that it can be used with the standardized mechanical joint bell and tee-head bolts conforming to ANSI/AWWA C111/A21.11 and ANSI/AWWA C153/A21.53. Twist-off nuts, sized same as tee-head bolts, shall be used to insure proper actuating of restraining devices. The mechanical joint restraint device shall have a working pressure of at least 250-psi with a minimum safety factor of 2:1 and shall be manufactured by:

- EBAA Iron, Inc., MEGALUG
- Romac “RomaGrip”
- Uniflange Series 1400
- Stargrip® series 3000
- Tyler Union “TUFGrrip Series 1000”
- or approved equal

Tyton joint restraint shall be made with Field-Lok 350® restraining gaskets or approved equal. Fastite joint restraint shall be made with Fast-Grip® restraining gaskets or approved equal.

9-30.2(7) Bolted, Sleeve Type Couplings for Plain End Pipe
The first two sentences in this section are revised to read:

Bolted, sleeve-type couplings, reducing couplings, or transition couplings will be mechanical style flexible coupling meeting AWWA C219, with minimum 7 inch center ring, epoxy coating, and stainless steel nuts and bolts.
End Cap Couplings will be mechanical style flexible coupling meeting AWWA C219, with minimum 7 inch center ring, epoxy coating, stainless steel nuts and bolts, and tapped 2-inch.

9-30.3(1) Gate Valves (3 inches to 16 inches)

This section is revised to read:

The end flanges of flanged gate valves shall conform in dimensions and drilling to the Standard ANSI B16.1 for cast iron flanges and flanged fittings, Class 125 unless specifically provided otherwise in plans or supplementary specifications. The bolt holes shall straddle the vertical centerline.

All gate valves shall be resilient seat and shall comply with the ANSI/AWWA standard as listed below:

All Resilient Seat Gate Valves shall conform to the latest revision of AWWA Standard C-509/515 and be UL listed, FM approved. They shall be as manufactured by:

- American Flow "Series 2500"
- AVK-series 25 or 65
- Clow model "2638, 2639 and 2640"
- Kennedy model "KS-FW" and "KS-RW"
- M&H: Style "4067"
- M&H: Style "7000 series"
- Mueller Style "2360"
- NIBCO 619-RW Series
- US Pipe "Metroseal 250"
- East Jordan "Flowmaster"
- or approved equal

All Resilient Seat Gate Valves shall meet the following requirements:

- Shall have the body and bonnet coated with a fusion bonded epoxy coating meeting all the application and performance requirements of AWWA C-550.
- All gate valve ends shall be as shown on the Tacoma Water Plans and conform to the applicable ANSI/AWWA standard. Flanged ends shall conform to ANSI B16.1 class 125 or C110 A21.10. Mechanical joint and push-on joint must conform to ANSI/WWA C111, A21.11.
- All bonnet and packing nuts and bolts shall be stainless steel.

9.30.3(4) Valve Boxes

This section is revised in its entirety with the following:

Cast iron valve boxes and lids shall be as indicated on the attached Tacoma Water Drawing No. 17-56-1. All buried valves shall be provided with a valve box and lid with an extension of cast iron soil pipe as necessary. The Contractor shall maintain the location and provide access to all valves within the project. No valve shall remain buried during construction.
9-30.3(8) Tapping Sleeve and Valve Assembly

The fourth sentence is revised to read:

Valves specifically designed for tapping meeting the requirement of AWWA C500, and valves meeting the requirements of AWWA C509/C515 will be permitted. All nuts and bolts shall be stainless steel.

The sixth sentence is revised to read:

Tapping sleeves shall be ductile iron, mechanical joint type or the fabricated steel type, whichever is specified in the bid proposal.

This section is supplemented with the following:

The fabricated steel sleeves shall have epoxy coating and stainless steel bolts and shall be:

- Model JCM 412 manufactured by JCM Industries*
- Model JCM 414 manufactured by JCM Industries
- Model FTS 420 manufactured by Romac Industries, Inc*
- SST III manufactured by Romac Industries, Inc.
- Smith Blair Style 623
- or approved equal

*Models JCM 412 and FTS 420 will only be allowed when tapping ductile iron pipe and the size of the tap is less than half of the size of the pipe being tapped.

Ductile iron, mechanical joint sleeves shall be:

- Model H-615 manufactured by Mueller Co.
- Model H-619 manufactured by Mueller Co.
- Or approved equal.

9-30.5 Hydrants

This section is revised to read:

Fire hydrants furnished under these Specifications shall conform to the ANSI/AWWA C502, Specifications for Dry-Barrel Fire Hydrants, with the following limitations and exceptions, and be installed per Tacoma Water Drawing 17-56-1.

a. Drawings - Drawings of adequate size showing principal dimensions, material and finish shall be furnished with the bid for fire hydrants not listed below as acceptable.

b. Make –

- Clow “Medallion”
- Kennedy “Guardian K81D”
- M&H 929, “Reliant” (casting date of 1997 or later.)
- Mueller “Super Centurion 250”
- U.S. Pipe “M-94”
- Waterous “Pacer/WB67-250, Tacoma”
c. **Capacity** - Standard size - two-hose and one-pumper nozzle.
d. **Size** - Standard size shall be 5-1/4-inch main valve with 6-inch inlet bell.
   All hose nozzles shall be 2-1/2 inches. Unless otherwise indicated in the special Provisions and/or the Drawings, all pumper nozzles and quick connect fittings shall be as specified on standard drawing 17-56-1.
e. **Length** - Contractor shall verify proper depth of bury of fire hydrant prior to installation.
f. **Hydrant Inlet** - All hydrants shall be provided with mechanical joint inlet.
g. **Operating Mechanism** - All moving contact surfaces shall be bronze on bronze or bronze on iron or steel as may be approved by the Superintendent. The hydrants shall have the main valve seat threaded into a bronze sub-seat in the shoe of the hydrant to permit easy removal of the main valve seat. The bronze sub seat shall be; threaded into the shoe of the fire hydrant, or the sub seat shall be attached to the shoe of the fire hydrant independently from the barrel to shoe connection.
h. **Direction of Opening** - All hydrants shall open by turning the operating nut to the left (counter-clockwise).
i. **Hydrant Barrels** - All hydrant barrels shall have a flange located at least 2 inches above the finished grade line and flanged extension sections shall be available in increments of 6 inches.
j. **Operating Nuts for Stem and Nozzle Caps** - The operating stem and cap nut shall be pentagonal in shape. The pentagon shall measure 1.35 inches from the point to the flat, at the base of the nut and 1.23 inches at the top. The faces shall be tapered uniformly and the height of the nut shall not be less than 1.0 inches. The point to the flat dimension shall be measured to the theoretical point where the faces would intersect were there no rounding off of the corners. All nozzles shall be fitted with cast iron threaded caps with operating nut of the same design and proportions as the stem nut. Caps shall be threaded to fit the corresponding nozzles and shall be fitted with suitable gaskets for positive water tightness.
k. **Fire Hydrant Quick Connect Coupling** – The fire hydrant quick Connect Coupling (aka Storz Coupling) shall be in compliance with the latest version of “NFPA 1963, for non-threaded Metal-Faced Hydrant Connections”. The size of the Quick Connect Coupling and hydrant pumper nozzle threads will be as shown on standard drawing 17-56-1.
l. **Nuts and Bolts** - All nuts and bolts below ground level shall be stainless steel.

**9-30.5(2) Hydrant Dimensions**

*This section is revised to read:*

<table>
<thead>
<tr>
<th>Hydrant connection D.I. Pipe ins. dia.</th>
<th>6-inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard, minimum dia.</td>
<td>6-7/8 inch</td>
</tr>
<tr>
<td>Length of 4.5 ft. bury, hydrant from bottom of hydrant connection to sidewalk ring.</td>
<td>4 feet, 8 inches</td>
</tr>
<tr>
<td>Valve opening minimum dia.</td>
<td>5-1/4 inches</td>
</tr>
<tr>
<td>Hose Nozzles-number and size</td>
<td>2 - 2-1/2-inch</td>
</tr>
<tr>
<td>Thread (Nat. Board Fire Underwriters)</td>
<td>7-1/2 per inch</td>
</tr>
<tr>
<td>Outside dia. Finished</td>
<td>3-1/16 inch</td>
</tr>
<tr>
<td>Dia. at root of thread</td>
<td>2.8715 inch</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Pattern of thread</td>
<td>60° V thread</td>
</tr>
<tr>
<td>Total length of threaded male Nipple</td>
<td>1-inch</td>
</tr>
<tr>
<td>Pumper Nozzles-number and size</td>
<td>1 - 4-inch</td>
</tr>
<tr>
<td>Thread, outside dia. finished (with .02” cut off top)</td>
<td>5.09-inch</td>
</tr>
<tr>
<td>Dia. at root of thread (with .02” left in valley)</td>
<td>4.74-inch</td>
</tr>
<tr>
<td>Threads (Tacoma Std.)</td>
<td>4 per inch</td>
</tr>
<tr>
<td>Pattern of thread-modified</td>
<td>60° V thread</td>
</tr>
<tr>
<td>Total length of threaded male nipple</td>
<td>1-1/8-inch</td>
</tr>
</tbody>
</table>

9-30.5(3) Hydrant Extensions
*This paragraph is revised to read:*

No hydrant barrel extensions are approved on new installations.

END OF SECTION

9-30.6 Water Service Connections
*This section does not apply to the contract.*

END OF SECTION
TACOMA WATER

STANDARD DETAILS

17-56-1
APPENDIX E

WASHINGTON STATE DEPARTMENT OF ECOLOGY
SPECIFICATIONS INSERT
General
Partial funding of this project is being provided by the Washington State Department of Ecology’s (Ecology) Stormwater Grant Program.

Compliance with State and Local Laws
The construction of the project, including all subcontracted work, shall conform to the applicable requirements of state and local laws and ordinances.

State Interest Exclusion
It is anticipated that this project will be funded in part by the Washington State Department of Ecology. Neither the State of Washington nor any of its departments or employees are, or shall be, a party to this contract or any subcontract.

Third Party Beneficiary
Partial funding of this project is being provided through the Washington State Department of Ecology Stormwater Grant Program. All parties agree that the State of Washington shall be, and is hereby, named as an express third-party beneficiary of this contract, with full rights as such.

Access to the construction site and to records
The contractor shall provide for the safe access to the construction site and to the contractor's records by Washington State Department of Ecology personnel.

The Contractor shall maintain accurate records and accounts to facilitate the Owner’s audit requirements and shall ensure that all subcontractors maintain auditable records.

These Project records shall be separate and distinct from the Contractor’s other records and accounts.

All such records shall be available to the Owner and to Washington State Department of Ecology personnel for examination. All records pertinent to this project shall be retained by the Contractor for a period of three (3) years after the final audit.

Protection of the Environment
No construction related activity shall contribute to the degradation of the environment, allow material to enter surface or ground waters, or allow particulate emissions to the atmosphere, which exceed state or federal standards. Any actions that potentially allow a discharge to state waters must have prior approval of the Washington State Department of Ecology.
Inadvertent Discovery of Archeological Resources
The contractor shall obtain a copy of the Inadvertent Discovery Plan from the Project Owner. The contractor shall keep a copy of the inadvertent discovery plan for the project on the work site at all times. The contractor shall immediately stop all work if human remains, cultural, or archeological resources are discovered in the course of construction. The contractor shall follow the inadvertent discovery plan in dealing with the human remains, cultural, or archeological resources.

Project Signs
The Contractor shall display Ecology’s logo in a manner that informs the public that the project received financial assistance from the Washington State Stormwater Grant Program.

Utilization of Minority and Women Business Enterprises
All bidders are encouraged to utilize certified minority-owned and women-owned businesses to the extent possible in the performance of this contract. All prospective bidders or persons submitting qualifications should take the following steps, when possible.

1. Include qualified minority and women's businesses on solicitation lists.
2. Assure that qualified minority and women's businesses are solicited whenever they are potential sources of services or supplies.
3. Divide the total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by qualified minority and women's businesses.
4. Establish delivery schedules, where work requirements permit, which will encourage participation of qualified minority and women's businesses.
5. Use the services and assistance of the State Office of Minority and Women's Business Enterprises (OMWBE) and the Office of Minority Business Enterprises of the U.S. Department of Commerce, as appropriate.

All prospective bidders must provide a list of the MBE/WBE subcontractors they intend to use during the project. This list must be provided with the bid package.

Revised 3/25/15
APPENDIX F

NPDES CONSTRUCTION STORMWATER GENERAL PERMIT
October 3, 2022

Kirk Myklestad
City of Tacoma
326 E D St
Tacoma, WA 98421

RE: Coverage under the Construction Stormwater General Permit

<table>
<thead>
<tr>
<th>Permit number:</th>
<th>WAR311813</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Name:</td>
<td>Manitou Green Infrastructure Project</td>
</tr>
<tr>
<td>Location:</td>
<td>Intersection of S 66th Street and S Cheyenne Street</td>
</tr>
<tr>
<td></td>
<td>Tacoma, WA</td>
</tr>
<tr>
<td>County:</td>
<td>Pierce</td>
</tr>
<tr>
<td>Disturbed Acres:</td>
<td>2.54</td>
</tr>
</tbody>
</table>

Dear Kirk Myklestad:

The Washington State Department of Ecology (Ecology) received your Notice of Intent for coverage under Ecology’s Construction Stormwater General Permit (CSWGP). This is your permit coverage letter. Your permit coverage is effective October 3, 2022.

Retain this letter as an official record of permit coverage for your site. You may keep your records in electronic format if you can easily access them from your construction site. You can get the CSWGP, permit forms, and other information at Ecology’s [CSWGP eCoverage Packet webpage](http://www.ecology.wa.gov/eCoverage-packet). Contact your Permit Administrator, listed below, if you want a copy of the CSWGP mailed to you. Please read the permit and contact Ecology if you have any questions.

**Electronic Discharge Monitoring Reports (WQWebDMR)**

This permit requires you to submit monthly discharge monitoring reports (DMRs) for the full duration of permit coverage (from the first full month of coverage to termination). Your first sampling and reporting period will be for the month of November and your first DMR must be submitted by December 15, 2022.

1 http://www.ecology.wa.gov/eCoverage-packet
You must submit your DMRs electronically using Ecology’s secure online system, WQWebDMR. To sign up for WQWebDMR go to Ecology’s WQWebPortal guidance webpage. If you have questions, contact the portal staff at (360) 407-7097 (Olympia area), or (800) 633-6193/Option 3, or email WQWebPortal@ecy.wa.gov.

Appeal Process
You have a right to appeal coverage under the general permit to the Pollution Control Hearing Board (PCHB). Appeals must be filed within 30 days of the date of receipt of this letter. Any appeal is limited to the general permit’s applicability or non-applicability to a specific discharger. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. “Date of receipt” is defined in RCW 43.21B.001(2). For more information regarding your right to appeal, please reference Ecology’s Focus Sheet: Appeal of General Permit Coverage.

Annual Permit Fees
RCW 90.48.465 requires Ecology to recover the costs of managing the permit program. Permit fees are invoiced annually until the permit is terminated. Termination conditions are described in the permit. For permit fee related questions, please contact the Water Quality Fee Unit at wqfeeunit@ecy.wa.gov or (800) 633-6193/Option 2.

Ecology Field Inspector Assistance
If you have questions regarding stormwater management at your construction site, please contact your Regional Inspector, Joseph McCord of Ecology’s Southwest Regional Office in Lacey at joseph.mccord@ecy.wa.gov, or (360) 407-0246.

Questions or Additional Information
Ecology is here to help. Please review our Construction Stormwater General Permit webpage for more information. If you have questions about the Construction Stormwater General Permit, please contact your Permit Administrator, Melinda Wilson at melinda.wilson@ecy.wa.gov, or (360) 870-8290.

Sincerely,

Jeff Killelea, Manager
Program Development Services Section
Water Quality Program

---

4 www.ecology.wa.gov/constructionstormwaterpermit
APPENDIX G

PSE Main Relocation Design Plans
PART III

CITY OF TACOMA
EQUITY IN CONTRACTING PROGRAM
CHAPTER 1.07
EQUITY IN CONTRACTING

Sections:
1.07.010 Policy and purpose.
1.07.020 Definitions.
1.07.030 Discrimination prohibited.
1.07.040 Program administration.
1.07.050 Approval as a Certified Business.
1.07.060 Program requirements.
1.07.070 Evaluation of submittals.
1.07.080 Contract compliance.
1.07.090 Program monitoring.
1.07.100 Enforcement.
1.07.110 Remedies.
1.07.120 Unlawful acts.
1.07.130 Severability.
1.07.140 Review of program.

1.07.010 Policy and purpose.

It is the policy of the City of Tacoma that citizens be afforded an opportunity for full participation in our free enterprise system and that historically underutilized business enterprises shall have an equitable opportunity to participate in the performance of City contracts. The City finds that in its contracting for supplies, services and public works, there has been historical underutilization of small and minority-owned businesses located in certain geographically and economically disfavored locations and that this underutilization has had a deleterious impact on the economic well-being of the City. The purpose of this chapter is to remedy the effects of such underutilization through use of narrowly tailored contracting requirements to increase opportunities for historically underutilized businesses to participate in City contracts. It is the goal of this chapter to facilitate a substantial procurement, education, and mentorship program designed to promote equitable participation by historically underutilized businesses in the provision of supplies, services, and public works to the City. It is not the purpose of this chapter to provide any person or entity with any right, privilege, or claim, not shared by the public, generally, and this chapter shall not be construed to do so. This chapter is adopted in accordance with Chapter 35.22 RCW and RCW 49.60.400.

(Ord. 28625 Ex. A; passed Nov. 5, 2019: Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.020 Definitions.

Terms used in this chapter shall have the following meanings unless defined elsewhere in the Tacoma Municipal Code (“TMC”), or unless the context in which they are used clearly indicates a different meaning.

1.07.020.B

A. “Bid” means an offer submitted by a Respondent to furnish Supplies, Services, and/or Public Works in conformity with the Specifications and any other written terms and conditions included in a City request for such offer.

B. “Bidder” means an entity or individual who submits a Bid, Proposal or Quote. See also “Respondent.”

1.07.020.C

“Certified Business” means an entity that has been certified as a Disadvantaged Business Enterprise (“DBE”), Small Business Enterprise (“SBE”), Minority Business Enterprise (“MBE”), Women Business Enterprise (“WBE”), or Minority and Women’s Business Enterprise (“MWBE”) by the Washington State Office of Minority and Women’s Business Enterprise and meets the criteria set forth in Section 1.07.050 (2) of this chapter and has been approved as meeting that criteria by the Community and Economic Development Department Program Manager.

“City” means all Departments, Divisions and agencies of the City of Tacoma.

“Contract” means any type of legally binding agreement regardless of form or title that governs the terms and conditions for procurement of Public Works and Improvements and/or Non-Public Works and Improvements Supplies and Services. Contracts include the terms and conditions found in Specifications, Bidder or Respondent Submittals, and purchase orders issued by the City. A “Contract” as used in this chapter shall include an agreement between the City and a non-profit entity to perform construction-related services for Public Works. A “Contract” does not include: (1) awards made by the City with
federal/state grant or City general funds monies to a non-profit entity where the City offers assistance, guidance, or supervision on a project or program, and the recipient of the grant awards uses the grant moneys to provide services to the community; (2) sales transactions where the City sells its personal or real property; (3) a loan transaction where the City is acting as a debtor or a creditor; (4) lease, franchise; (5) agreements to use City real property (such as Licenses, Permits and Easements) and, (6) banking and other financial or investment services.

“Contractor” means any Person that presents a Submittal to the City, enters into a Contract with the City, and/or performs all or any part of a Contract awarded by the City, for the provision of Public Works, or Non-Public Works and Improvements, Supplies or Services.

1.07.020.G

“Goals” means the annual level of participation by Certified Businesses in City Contracts as established in this chapter, the Program Regulations, or as necessary to comply with applicable federal and state nondiscrimination laws and regulations. Goals for individual Contracts may be adjusted as provided for in this chapter and shall not be construed as a minimum for any particular Contract or for any particular geographical area.

1.07.020.N

“Non-Public Works and Improvements” means all competitively solicited procurement of Supplies and/or Services by the City not solicited as Public Works.

1.07.020.P

“Person” means individuals, companies, corporations, partnerships, associations, cooperatives, any other legally recognized business entity, legal representative, trustee, or receivers.

“Program Manager” means the individual appointed, from time to time, by the City’s Community and Economic Development Director to administer the Program Regulations.

“Program Regulations” means the written regulations and procedures adopted pursuant to this chapter for procurement of Supplies, Services and Public Works.

“Proposal” means a written offer to furnish Supplies or Services in response to a Request for Proposals. This term may be further defined in the Purchasing Policy Manual and/or in competitive solicitations issued by the City.

“Public Works (or “Public Works and Improvements)” means all work, construction, alteration, repair, or improvement other than ordinary maintenance, executed at the cost of the City, or that is by law a lien or charge on any property therein. This term includes all Supplies, materials, tools, and equipment to be furnished in accordance with the Contract for such work, construction, alteration, repair, or improvement.

1.07.020.Q

“Quote” means a competitively solicited written offer to furnish Supplies or Services by a method of procurement that is less formalized than a Bid or a Proposal. This term may be further defined in the Purchasing Policy Manual.

1.07.020.R

“Respondent” means any entity or Person, other than a City employee, that provides a Submittal in response to a request for Bids, Request for Proposals, Request for Qualifications, request for quotes or other request for information, as such terms are defined in Section 1.06.251 TMC. This term includes any such entity or Person whether designated as a supplier, seller, vendor, proposer, Bidder, Contractor, consultant, merchant, or service provider that; (1) assumes a contractual responsibility to the City for provision of Supplies, Services, and/or Public Works; (2) is recognized by its industry as a provider of such Supplies, Services, and/or Public Works; (3) has facilities similar to those commonly used by Persons engaged in the same or similar business; and/or (4) distributes, delivers, sells, or services a product or performs a Commercially Useful Function.

1.07.020.S

“Services” means non-Public Works and Improvements services and includes professional services, personal services, and purchased services, as such terms are defined in Section 1.06.251 TMC and/or the City’s Purchasing Policy Manual.

“Submittal” means Bids, Proposals, Quotes, qualifications or other information submitted in response to requests for Bids, Requests for Proposals, Requests for Qualifications, requests for Quotations, or other City requests for information, as such terms are defined in Section 1.06.251 TMC.

“Supplies” means materials, Supplies, and other products that are procured by the City through a competitive process for either Public Works procurement or Non-Public Works and Improvements procurement unless an approved waiver has been granted by the appropriate authority.
1.07.020.T
“Tacoma Public Utilities Service Area” means any ZIP code in which Tacoma Public Utilities maintains infrastructure or provides retail services.

1.07.020.W
“Waiver” means a discretionary decision by the City that the one or more requirements of this chapter will not be applied to a Contract or Contracts.


1.07.030 Discrimination prohibited.
A. No person that is engaged in the construction of public works for the City, engaged in the furnishing of laborers or craftspeople for public works of the City, or is engaged for compensation in the provision of non-public works and improvements supplies and/or services to the City, shall discriminate against any other person on the basis of race, religion, color, national origin or ancestry, sex, gender identity, sexual orientation, age, marital status, familial status, or the presence of any sensory, mental or physical disability in employment. Such discrimination includes the unfair treatment or denial of normal privileges to a person as manifested in employment upgrades, demotions, transfers, layoffs, termination, rates of pay, recruitment of employees, or advertisement for employment.

B. The violation of the terms of RCW 49.60 or Chapter 1.29 TMC by any person that is engaged in the construction of public works for the City, is engaged in the furnishing of laborers or craftspeople for public works of the City, or is engaged for compensation in the provision of non-public works and improvements supplies and/or services shall result in the rebuttable presumption that the terms of this chapter have also been violated. Such violation may result in termination of any City contract the violator may have with the City and/or the violator’s ineligibility for further City Contracts.

(Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.040 Program administration.
A. The Community and Economic Development Director, or their designated Program Manager, shall be responsible for administering this chapter and obtaining compliance with respect to contracts entered into by the City and/or its contractors. It shall be the duty of the Director to pursue the objectives of this chapter by conference, conciliation, persuasion, investigation, or enforcement action, as may be necessary under the circumstances. The Director is authorized to implement an administrative and compliance program to meet these responsibilities and objectives.

B. The Director is hereby authorized to adopt and to amend administrative regulations known as the Program Regulations, to properly implement and administer the provisions of this chapter. The Program Regulations shall be in conformance with City of Tacoma policies and state and federal laws and be designed to encourage achievement of the Goals set forth herein.


1.07.050 Approval as a Certified Business.
A. The Program Manager shall approve an entity as a Certified Business if all of the following criteria are satisfied:
1. The entity is certified as a DBE, SBE, MBE, WBE, or MWBE through the state of Washington’s Office of Minority & Women Business Enterprises; and
2. The entity can demonstrate that it also meets at least one of the following additional requirements:
   a. The personal residence of the owner is located within the City of Tacoma or Tacoma Public Utilities Service Area, or
   b. The entity’s business offices are located in any county of the Tacoma Public Utilities Service Area or any county adjacent to Pierce County, or
   c. When the work is performed outside of Pierce County, the entity’s business offices may be located in an adjacent county in which the work is performed, or
   d. Such additional information as the Program Manager or designee may require.
3. When another governmental entity has an equivalent business classification process, the City may enter into an interlocal cooperative agreement for mutual recognition of certifications.
B. Appeals.

The applicant may appeal any approval determination by the Program Manager under this chapter to the Director. The appeal must be made in writing and must set forth the specific reasons for the appeal. The Director shall make a decision on the appeal request within a reasonable time, which decision shall be final unless further appeal is made to the Hearing Examiner. In that event, the Hearing Examiner Rules of Procedure for Hearings, Chapter 1.23 TMC, shall be applicable to that appeal proceeding.


1.07.060 Program requirements.

A. The program shall meet the following requirements:

1. Establishment of Annual Goals.

The Program Regulations adopted pursuant to this chapter shall state reasonably achievable cumulative annual goals for utilization of Certified Businesses in the provision of supplies, services, and public works procured by the City. Cumulative annual goals for the participation of Certified Businesses in City contracts shall be based on the number of qualified Certified Businesses operating within the Tacoma Public Utilities Service Area. The dollar value of all contracts awarded by the City to Certified Businesses in the procurement of supplies, services, and public works shall be counted toward the accomplishment of the applicable goal.


The Program Manager shall consult with City departments/divisions to establish department/division specific goals for competitively solicited contracts in accordance with this chapter and the Program Regulations.

B. Exceptions:

City departments/divisions or the Program Manager may request an exception to one or more of the requirements of this chapter as they apply to a particular Contract or Contracts. Exceptions may be granted in any one or more of the following circumstances:

1. Emergency:

The supplies, services and/or public works must be provided with such immediacy that neither the City nor the contractor can comply with the requirements herein. Such emergency will be deemed documented whenever a waiver of competitive solicitation for emergency situations is authorized under Tacoma Municipal Code Chapter 1.06.257 or as may be hereinafter amended.

2. Not Practicable:

The Contract involves special facilities or market conditions or specially tailored or performance criteria-based products, such that compliance with the requirements of this chapter would cause financial loss to the City or an interruption of vital services to the public. Such circumstances must be documented by the department/division awarding the Contract and approved by the senior financial manager or, for Contracts where the estimated cost is over $500,000 (excluding sales tax), approved by the Board of Contracts and Awards ("C&A Board").

3. Sole source:

The supplies, services, and/or public works are available from only one feasible source, and subcontracting possibilities do not reasonably exist as documented by the department/division awarding the Contract and approved by the senior financial manager or, for Contracts where the estimated cost is over $500,000 (excluding sales tax), approved by the C&A Board.


The Contract or Contracts are the result of a federal, state or inter-local government purchasing agreement and the use of such agreement in lieu of a bid solicitation conducted by the City is approved by the senior financial manager.

5. Lack of certified contractors:

An insufficient number of qualified contractors exist to create any utilization opportunities as documented by the Program Manager.

C. Waiver:
Tacoma Municipal Code

If, after receipt of Submittals but prior to Contract award, it is determined that due to unforeseen circumstances, waiver of goals is in the best interests of the City, the Director or Superintendent of the department/division awarding the Contract may request in writing that the City Manager or designee, on behalf of General Government, or the Director of Utilities or designee, on behalf of the Department of Public Utilities, approve such waiver.

Waivers may be granted only after determination by the City Manager or Director of Utilities that compliance with the requirements of this chapter would impose unwarranted economic burden on, or risk to, the City of Tacoma as compared with the degree to which the purposes and policies of this chapter would be furthered by requiring compliance.


1.07.060 Evaluation of submittals.

A. All submittals for a supplies, services, or public works and improvements contracts shall be evaluated for attainment of the Certified Business requirements established for that contract in accordance with this chapter and the Program Regulations.

B. The determination of Certified Business usage and the calculation of Certified Business requirements per this section shall include the following considerations:

1. General.

The dollar value of the contract awarded by the City to a Certified Business in the procurement of supplies, services, or public works shall be counted toward achievement of the respective goal.

2. Supplies.

A public works and improvements contractor may receive credit toward attainment of the Certified Business requirement(s) for expenditures for supplies obtained from a Certified Business; provided such Certified Business assumes the actual and contractual responsibility for delivering the supplies with its resources. The contractor may also receive credit toward attainment of the Certified Business goal for the amount of the commission paid to a Certified Business resulting from a supplies contract with the City; provided the Certified Business performs a commercially useful function in the process.


Any bid by a Certified Business or a bidder that utilizes a Certified Business shall receive credit toward requirement attainment based on the percentage of Certified Business usage demonstrated in the bid. A contractor that utilizes a Certified Business as a subcontractor to provide services or public works shall receive a credit toward the contractor’s attainment of the respective requirement based on the value of the subcontract with that firm.


Certified Business acting as brokers, fronts, or similar pass-through arrangements (as such terms are defined in the Program Regulations) shall not count toward the requirement attainment unless the activity reflects normal industry practices and the broker performs a commercially useful function.

C. Evaluation of competitively solicited submittals for public works and improvements and for services when a requirement has been established for the contract to be awarded shall be as follows:

1. When contract award is based on price.

The lowest priced bid submitted by a responsive and responsible bidder will be reviewed to determine if it meets the requirement. Certified Businesses may self-count utilization on such bids if they will perform the work for the scope the requirement is based upon.

a. If the low bidder meets the requirements, the bid shall be presumed the lowest and best responsible bid for contract award.

b. Any bidder that does not meet the stated Certified Business requirements shall be considered a non-responsible bidder unless a waiver of one or more of the requirements of this chapter is granted, in the City’s sole discretion, pursuant to the criteria and processes in Tacoma Municipal Code 1.07.060.C.

2. When contract award is based on qualifications or other performance criteria in addition to price, solicitations shall utilize a scoring system that promotes participation by certified contractors. The Program Regulations may establish further requirements and procedures for final selection and contract award, including:

a. Evaluation of solicitations for Architectural and Engineering (A&E) services;

b. Evaluation and selection of submittals in response to requests for proposals; and
c. Selection of contractors from pre-qualified roster(s).


1.07.080 Contract compliance.
A. The contractor awarded a contract based on Certified Business participation shall, during the term of the contract, comply with the requirements established in said contract. To ensure compliance with this requirement following contract award, the following provisions apply:

1. Any substitutions for or failure to utilize Certified Business projected to be used must be approved in advance by the Program Manager. Substitution of one Certified Business with another shall be allowed where there has been a refusal to execute necessary agreements by the original Certified Business, a default on agreements previously made or other reasonable excuse; provided that the substitution does not increase the dollar amount of the bid.

2. Where it is shown that no other Certified Business is available as a substitute and that failure to secure participation by the Certified Business identified in the solicitation is not the fault of the respondent, substitution with a non-Certified Business shall be allowed; provided, that, the substitution does not increase the dollar amount of the bid.

3. If the Program Manager determines that the contractor has not reasonably and actively pursued the use of replacement Certified Business, such contractor shall be deemed to be in non-compliance.

B. Record Keeping.
All contracts shall require contractors to maintain relevant records and information necessary to document compliance with this chapter and the contractor's utilization of Certified Businesses, and shall include the right of the City to inspect such records.


1.07.090 Program monitoring.
A. An Advisory Committee shall monitor compliance with all provisions of this chapter and the related Regulations. The Program Manager shall establish procedures to collect data and monitor the effect of the provisions of this chapter to assure, insofar as is practical, that the remedies set forth herein do not disproportionately favor one or more racial, gender, ethnic, or other protected groups, and that the remedies do not remain in effect beyond the point that they are required to eliminate the effects of under utilization in City contracting, unless such provisions are supported by a Disparity Study. The Program Manager shall have the authority to obtain from City departments/divisions, respondents, and contractors such relevant records, documents, and other information as is reasonably necessary to determine compliance.

B. The Program Manager shall submit an annual report to the Community and Economic Development Director, Director of Utilities, and the City Manager detailing performance of the program. The report shall document Certified Business utilization levels, waivers, proposed modifications to the program, and such other matters as may be specified in the Program Regulations.


1.07.100 Enforcement.
The Director, or designee, may investigate the employment practices of contractors to determine whether or not the requirements of this chapter have been violated. Such investigation shall be conducted in accordance with the procedures established in the Program Regulations.


1.07.110 Remedies.
A. Upon receipt of a determination of contractor violation by the Program Manager, the City Manager or Director of Utilities, as appropriate, may take the following actions, singly or together, as appropriate:

1. Forfeit the contractor’s bid bond and/or performance bond;
2. Publish notice of the contractor’s noncompliance;
3. Cancel, terminate, or suspend the contractor’s contract, or portion thereof;
4. Withhold funds due contractor until compliance is achieved; and/or
5. Recommend appropriate action including, but not limited to, disqualification of eligibility for future contract awards by the City (debarment) per Section 1.06.279 TMC;

B. Prior to exercise of any of the foregoing remedies, the City shall provide written notice to the contractor specifying the violation and the City’s intent to exercise such remedy or remedies. The notice shall provide that each specified remedy becomes effective within ten business days of receipt unless the contractor appeals said action to the Hearing Examiner pursuant to Chapter 1.23 TMC.

C. When non-compliance with this chapter or the Program Regulations has occurred, the Program Manager and the department/division responsible for enforcement of the contract may allow continuation of the contract upon the contractor’s development of a plan for compliance acceptable to the Director.


1.07.120 Unlawful acts.

It shall be unlawful for any Person to willfully prevent or attempt to prevent, by intimidation, threats, coercion, or otherwise, any Person from complying with the provisions of this chapter.

(Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.130 Severability.

If any section of this chapter or its application to any Person or circumstance is held invalid by a court of competent jurisdiction, then the remaining sections of this chapter, or the application of the provisions to other Persons or circumstances, shall not be affected.

(Ord. 27867 Ex. A; passed Dec. 15, 2009)

1.07.140 Review of program.

This chapter shall be in effect through and until December 31, 2024, unless the City Council shall determine at an earlier date that the requirements of this chapter are no longer necessary. If this chapter has not been repealed by July 1, 2024, the City Council shall determine by the end of that year whether substantial effects or lack of opportunity of MWBEs and/or SBEs remain true in the relevant market and whether, and for how long, some or all of the requirements of this chapter should remain in effect.

PART IV

LOCAL EMPLOYMENT AND

APPRENTICESHIP TRAINING PROGRAM (LEAP)

REGULATIONS FOR

PUBLIC WORKS CONTRACTS
LEAP
LOCAL EMPLOYMENT AND APPRENTICESHIP TRAINING PROGRAM
ABBREVIATED PROGRAM REQUIREMENTS

LEAP is a mandatory City of Tacoma program adopted to provide employment opportunities for City of Tacoma residents and residents of Economically Distressed Areas of the Tacoma Public Utilities Service Area. It requires Prime Contractors performing qualifying public works projects or service contracts to ensure that 15 percent of the total labor hours worked on the project are performed by LEAP-Qualified apprentices approved by the Washington State Apprenticeship Council (SAC), youth, veterans, residents of Tacoma, residents of surrounding Economically Distressed Areas, and/or TPU Service Areas (as outlined below). Compliance may be met through any combination LEAP-Qualified employees.

Prime Contractors may obtain further information by contacting the City of Tacoma’s LEAP Coordinator, Deborah Trevorrow, at (253) 591-5590, or e-mail leap@cityoftacoma.org. The LEAP Coordinator can assist contractors in the recruitment of qualified entry-level workers to work on City of Tacoma Public Works projects. The LEAP Office is in the Tacoma Municipal Building, 747 Market Street, Rm 900.

LEAP PROGRAM REQUIREMENTS:
1. LOCAL EMPLOYMENT GOAL: The Prime Contractor is required to ensure that 15 percent of the total Labor Hours worked on the project are performed by residents of the City of Tacoma or Economically Distressed ZIP Codes for the following projects:
   a) Civil Projects over $250,000
   b) Building Projects over $750,000

2. APPRENTICE GOAL: The Contractor is required to ensure that 15 percent of the total Labor Hours worked on any project over $1,000,000 are performed by Apprentices who are residents of the Tacoma Public Utilities Service Area. This is in addition to the Local Employment Goal.

3. SUBCONTRACTOR NOTIFICATION: Prime Contractors shall notify all Subcontractors of the LEAP Program requirement. Subcontractor labor hours may be utilized towards achievement of the LUG. Owner/Operator hours may be used for the Local Employment Goal.

4. FAILURE TO MEET LEAP UTILIZATION GOAL: Contractors shall be assessed an amount for each hour that is not achieved. The amount per hour shall be based on the extent the Contractor met its goal. The amount per hour that shall be assessed shall be as follows:
   - 100% achievement $0.00 penalty
   - 99% to 90% achievement $2.00 penalty *Penalty may be waived in the best interests of the City of Tacoma.
   - 89% to 75% achievement $3.50 penalty
   - 74% to 50% achievement $5.00 penalty
   - 49% to 1% achievement $7.50 penalty
   - 0% achievement $10.00 penalty
LEAP DOCUMENT SUBMITTALS**:

1. **LEAP EMPLOYEE VERIFICATION FORM**: The Contractor must provide the LEAP Office with a form for every person whom the contractor thinks will assist with attaining credit towards meeting the LUG with at least one piece of verifying documentation. The LEAP Office staff will respond regarding whether or not the employee is LEAP-Qualified.

2. **LEAP WEEKLY PAYROLL REPORT**: The Prime and Subcontractors must complete and attach this form to the front of each weekly certified payroll when submitting payrolls in LCP Tracker.

3. **WEEKLY CERTIFIED PAYROLL**: The Prime and Subcontractors must submit weekly Certified Payrolls that include, employee name, address, social security number, craft/trade, class, hours worked on this job, rate of pay, and gross wages paid including benefits for this job.

4. **DEPARTMENT OF LABOR & INDUSTRIES (L&I)**: The Prime must enter the project in the L&I project site under the ‘Tacoma, City of’ account and notify the LEAP Office when this has been completed.

**WITHHOLDING PROGRESS PAYMENTS**: The LEAP Coordinator may withhold progress payments for failure to follow the above-outlined procedures.
In the attached packet, you will find the LEAP forms that are required to be submitted by the Prime and Sub Contractors.

- **LEAP Abbreviated Program Requirements**: brief overview of LEAP Program requirements
- **LEAP Employee Verification Form**: to be submitted on an ongoing basis for each employee who may be a LEAP-qualified employee
- **LEAP Weekly Payroll Report**: must be attached and filled out to the front of each certified payroll
- **Tacoma Public Utilities Service Area Map and List, Economically Distressed ZIP Codes Map and List**: for your reference on LEAP-qualified zoning areas

In addition, the City of Tacoma will also require from the Prime Contractor and all its Subcontractors:

- **Weekly Certified Payrolls**: to be submitted via LCP Tracker weekly, biweekly or monthly with the LEAP Payroll Report attached as scheduled by the Prime
- **Statement of Intent to Pay Prevailing Wages**: to be submitted prior to commencing work
- **Affidavit of Wages Paid**: to be submitted upon completion of each contractor’s work
- **Document Verification**: provide required information when requested from LEAP Office

Please submit above documents as instructed by the LEAP Coordinator.

If you have any questions or request further information, please feel free to contact the City of Tacoma’s LEAP Program at (253) 591-5590 or email dtrevorrow@cityoftacoma.org
CHAPTER 1.90
LOCAL EMPLOYMENT AND APPRENTICESHIP TRAINING PROGRAM

Sections:
1.90.010 Purpose.
1.90.020 Scope.
1.90.030 Definitions.
1.90.040 LEAP goals.
1.90.050 Repealed.
1.90.060 Effect of program on prime contractor/subcontractor relationship.
1.90.070 Apprentice utilization requirements – Bidding and contractual documents.
1.90.080 Enforcement.
1.90.090 Compliance with applicable law.
1.90.100 Review and reporting.
1.90.105 Authority
1.90.110 Interpretation.

1.90.010 Purpose.

The purpose of this Chapter is to establish a means of providing for the development of a trained and capable workforce possessing the skills necessary to fully participate in the construction trades.

(Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.020 Scope.

The provisions of this Chapter shall apply to all Public Works or Improvements funded in whole or in part with City funds or funds which the City expends or administers in accordance with the terms of a grant.

(Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.030 Definitions.

As used in this chapter, the following terms shall have the following meanings:

A. “Apprentice” shall mean a person enrolled in a course of training specific to a particular construction trade or craft, which training shall be approved by the Washington State Apprenticeship and Training Council established pursuant to RCW 49.04.010.

B. “Building Projects” shall mean all Public Works or Improvements having an Estimated Cost greater than $750,000.00, and for which a building permit must be issued pursuant to Chapter 1 of the current edition of the state building code (Uniform Building Code).

C. “City” shall mean all divisions and departments of the City of Tacoma, and all affiliated agencies, provided, however, that the Tacoma Community Redevelopment Authority shall not be included within this definition.

D. “Civil Projects” shall mean all Public Works or Improvements that are not defined as a “Building Project,” provided that those projects having an Estimated Cost of less than $250,000.00 shall not be included in this definition.

E. “Contractor or Service Provider” means a person, corporation, partnership, or joint venture entering into a contract with the City to construct a Public Work or Improvement.

F. “Director” shall mean the Director of Community and Economic Development, or the Director’s Designee.

G. “Economically Distressed ZIP Codes” shall mean ZIP codes in the Tacoma Public Utilities Service Area that meet two out of three (2/3) of the thresholds of:

1. High concentrations of residents living under 200% of the federal poverty line in terms of persons per acre (69th percentile)
2. High concentrations of unemployed people in terms of persons per acre (45th percentile)
3. High concentrations of people 25 years or older without a college degree in terms of persons per acre (75th percentile)

Said thresholds shall be updated within 30 days following any Prevailing Wage updates issued by the Washington State Labor and Industry. All updates are to be published on the first business day in August and in February of each calendar year.
H. “Electrical Utility” and “Water Utility” shall mean, respectively, the Light Division of the Department of Public Utilities of the City of Tacoma, and shall include the electrical and telecommunications services of that Division, and the Water Division of the Department of Public Utilities of the City of Tacoma.

I. “Estimated Cost” shall mean the anticipated cost of a Public Work or Improvement, as determined by the City, based upon the expected costs of materials, supplies, equipment, and labor, but excluding taxes and contingency funds.

J. “Estimated Labor Hours” shall mean the anticipated number of Labor Hours determined by the City to be necessary to construct a Public Work or Improvement and set forth in the specifications for the project, or as may be subsequently revised due to contract or project adjustment, or pursuant to an agreed upon change order.

K. “Existing Employee” shall mean an employee whom the Contractor or Service Provider can demonstrate was actively employed by the Contractor or Service Provider for at least 1000 hours in the calendar year prior to bid opening plus one month following bid opening, and who was performing work in the construction trades.

L. “Labor Hours” shall mean the actual number of hours worked by workers receiving an hourly wage who are employed on the site of a Public Work or Improvement, and who are subject to state or federal prevailing wage requirements. The term “Labor Hours” shall include hours performed by workers employed by the Contractor or Service Provider and all Subcontractors, and shall include additional hours worked as a result of a contract or project adjustment or pursuant to an agreed upon change order. The term “Labor Hours” shall not include hours worked by workers who are not subject to the prevailing wage requirements set forth in either RCW 39.12 or the Davis-Bacon Act - 40 U.S.C. 276 (a).

M. “LEAP Coordinator” shall mean the City of Tacoma staff member who administers LEAP.

N. “LEAP Program” or “Program” shall mean the City of Tacoma’s Local Employment and Apprenticeship Training Program, as described in this chapter.

O. “LEAP Regulations” or “Regulations” shall mean the rules and practices established in this document.

P. “LEAP Utilization Plan” shall mean the document submitted by the Contractor to the LEAP Coordinator which outlines how the associated goals will be met on the project.

Q. “Priority Hire Resident” shall mean any resident within the Economically Distressed ZIP Codes.

R. “Project Engineer” shall mean the City employee who directly supervises the engineering or administration of a particular construction project subject to this chapter.

S. “Public Work or Improvement” shall have the same meaning as provided in Section 39.04.010 RCW, as that Section may now exist or hereafter be amended.

T. “Resident of Tacoma” shall mean any person, not defined as a Resident of the Community Empowerment Zone, who continues to occupy a dwelling within the boundaries of the City of Tacoma, has a present intent to continue residency within the boundaries of the City, and who demonstrates the genuineness of that intent by producing evidence that the person’s presence is more than merely transitory in nature.

U. “Service Area - Electrical” or “Electrical Service Area” shall mean that area served with retail sales by the Electrical Utility of the City of Tacoma at the time a bid is published by the Electrical Utility for a Public Work or Improvement to be performed primarily for the Electrical Utility.

V. “Service Area - Water” or “Water Service Area” shall mean that area served with retail sales by the water utility of the City of Tacoma at the time a bid is published by the water utility for a Public Work or Improvement to be performed primarily for the water utility.

W. “Service Contract” shall mean all City contracts relating to a Public Work or Improvement which utilize labor at a City site and which are not within the exceptions to not defined as “Building Projects” or “Civil Projects.”

X. “Subcontractor” means a person, corporation, partnership, or joint venture that has contracted with the Contractor or Service Provider to perform all or part of the work to construct a Public Work or Improvement by a Contractor.

Y. “Tacoma Public Utilities” means the City of Tacoma, Department of Public Utilities.

Z. “Tacoma Public Utilities Service Area” shall mean every ZIP code listed by Tacoma Public Utilities as an area that either receives services or maintains infrastructure to provide services.

AA. Washington State Labor and Industry Prevailing Wage shall mean the hourly wage, usual benefits and overtime, paid in the largest city in each county, to the majority of workers, laborers, and mechanics. Prevailing wages are established, by the Department of Labor & Industries, for each trade and occupation employed in the performance of public work. They are established separately for each county, and are reflective of local wage conditions.
1.90.040 LEAP goals.

A. Utilization Goals.

1. All Contractors constructing Civil Projects or Building Projects, and all Service Providers involved with the construction of a Public Work or Improvement, shall ensure that at least 15 percent of the total Labor Hours actually worked on the Project are performed by persons having their residence within the boundaries of the City of Tacoma or Economically Distressed ZIP Codes, whether or not any such person is an Apprentice.

a. The thresholds for this section shall be $250,000.00 for Civil Projects and $750,000.00 for Building Projects.

2. Fifteen percent (15%) of the Total Labor Hours on contracts above one-million dollars ($1,000,000.00) shall have work performed by Apprentices who are residents of the Tacoma Public Utilities Service Area consistent with RCW 39.04.320(1)(a), subject to waiver based on exceptions as specified in RCW 39.04.320(2)(a), (b), and (c).

3. Labor Hours performed by non-residents of the State of Washington will be deducted from a project’s total Labor Hours for purposes of determining compliance with the requirements of this chapter.

4. All Contractors and Service Providers shall submit a LEAP Utilization Plan as provided for in the regulations adopted under this chapter, and shall meet with the LEAP Coordinator to review said Plan prior to being issued a Notice to Proceed. Failure to submit a LEAP Utilization Plan may be grounds for the City to withhold remittance of a progress payment until such Plan is received from the responsible Contractor or Provider. A meeting with the LEAP Coordinator prior to issuance of a Notice to Proceed shall be excused only when the LEAP Coordinator is unavailable to meet prior to the scheduled date for issuance of the Notice to Proceed and the Contractor and the LEAP Coordinator have otherwise scheduled a meeting for the coordinator to review the Contractor’s or Provider’s plan.

The Contractor or Service Provider shall be responsible for meeting the LEAP utilization goal requirements of the contract, including all amendments and change orders thereto, and shall be responsible for overall compliance for all hours worked by Subcontractors. To the extent possible, the Contractor or Service Provider shall recruit Apprentices from multiple trades or crafts.

B. Failure to Meet Utilization Goal.

1. Contracts for the construction of Building projects or Civil projects and Service Contracts shall provide that Contractors or Service Providers failing to meet the LEAP utilization goals shall be assessed an amount for each hour that is not achieved. The amount per hour shall be based on the extent the Contractor or Service Provider met its goal. The amount per hour that shall be assessed shall be as follows:

<table>
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<th>Percent of Goal Met</th>
<th>Assessment per unmet hour</th>
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<tr>
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</tr>
<tr>
<td>90% - 99%</td>
<td>$ 2.00</td>
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<tr>
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<td>$ 3.50</td>
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<tr>
<td>50% to 74%</td>
<td>$ 5.00</td>
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<td>1% to 49%</td>
<td>$ 7.50</td>
</tr>
<tr>
<td>0%</td>
<td>$10.00</td>
</tr>
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</table>

When determining the percent of goal that is met, all rounding shall be down to the nearest whole percent. No penalty shall be waived by the City unless it is determined by the Director to be in the best interests of the City, which determination shall be made after consultation with the LEAP Coordinator.

2. Deposit of Assessments. All assessments imposed pursuant to this section shall be deposited into a separate account and utilized to support the City’s pre-apprenticeship and training program. The policies and regulations adopted by the City Manager and Director of Utilities pursuant to this chapter shall address issues pertaining to a Contractor’s existing workforce. Contributions need not be made for Labor Hours that have been adjusted in accordance with Section 1.90.040(E).

C. LEAP Reports.

Notwithstanding the provisions of TMC 1.90.100, the Director shall, not less than annually, publish a LEAP report setting forth Contractor compliance with this chapter. Said report shall include information on all contracts and all Contractors to which this chapter applies, and shall detail the level and nature of LEAP participation by contract and by Contractor, The
Director’s LEAP report may include such other information as may be helpful to assuring fair and accurate representation of the contracts, Contractors or projects covered in the report. The Director’s LEAP reports may be considered by the Board of Contracts and Awards in its determinations as to bidder responsibility.

D. LEAP Goal Adjustments.

1. LEAP utilization goals may be adjusted prior to bid opening and/or as a result of a contract amendment or change order on a Building Project, Civil Project, or Service Contract.

a. If LEAP utilization goals are adjusted prior to bid opening, they shall be set forth in the bid or Request For Proposal advertisement and specification documents or in an addendum timely provided to prospective bidders, provided that such adjustment shall be based upon a finding by the Project Engineer that the reasonable and necessary requirements of the contract render LEAP utilization unfeasible at the required levels. The Director shall concur with the Project Engineer’s finding, provided that should the Project Engineer and the Director fail to reach agreement on the Project Engineer’s finding, then in that circumstance the matter shall be referred to the City Manager or the Director of Utilities, as appropriate, for ultimate resolution. Notwithstanding any other provision of this chapter to the contrary, the decision of the City Manager or the Director of Utilities with regard to LEAP goal adjustment may not be appealed.

b. If LEAP utilization goals are adjusted due to contract amendment or change order, the amount of adjustment shall be consistent with the utilization goals set forth in this chapter and shall be determined pursuant to regulations adopted pursuant to this chapter for administration of LEAP utilization goal adjustments.

2. The methodology of determining the appropriate adjustments to LEAP utilization goals shall be determined in consultation with the LEAP Advisory Committee, established pursuant to this ordinance for so long as the LEAP Advisory Committee remains in existence.

3. LEAP utilization goals shall not apply to those portions of a project that are funded by sources other than (a) City funds, or (b) funds which the City expends or administers in accordance with the terms of a grant to the City, provided that the Project Engineer shall notify the Director of such non-application prior to bid advertisement. For the purposes of this paragraph, credits extended by another entity for the purpose of providing project funding shall not be considered to be City funds.

E. Utilization - Electrical Projects Outside Electrical Service Area.

Civil Projects or Building Projects that are constructed primarily for the benefit or use by the City’s Electrical Utility, which are wholly situated outside the Electrical Service Area, and for which the estimated cost is less than $1,000,000.00, are exempt from the requirements of this chapter.

F. Utilization - Water Projects Outside Water Service Area.

Civil Projects or Building Projects that are constructed primarily for the benefit or use by the City’s water utility, which are wholly situated outside the Water Service Area, and for which the estimated cost is less than $1,000,000.00 are exempt from the requirements of this chapter.

G. Utilization - Projects Outside Tacoma Public Utilities Service Area.

Civil Projects or Building Projects that are constructed primarily for the benefit or use by Tacoma Public Utilities, which are wholly situated outside the retail service area of the Tacoma Public Utilities Service Area, and for which the estimated cost is less than $1,000,000.00 are exempt from the requirements of this chapter. Projects wholly situated outside the Tacoma Public Utilities Service Area, and for which the estimated cost is more than $1,000,000.00, shall be exempt from 15% utilization goal specified in subsection A1. of this section. The 15% utilization goal specified in subsection A2. of this section may be met if project work is performed by Apprentices who are enrolled in a course of training specific to a particular construction trade or craft, provided such training has been approved by the Washington State Apprenticeship and Training Council in accordance with Chapter 49.04, RCW.

H. Emergency.

This chapter shall not apply in the event of an Emergency. For the purposes of this section, an “Emergency” means unforeseen circumstances beyond the control of the City that either: (a) present a real, immediate threat to the proper performance of essential functions; or (b) will likely result in material loss or damage to property, bodily injury, or loss of life if immediate action is not taken.

I. Conflict with State or Federal Requirements.

If any part of this chapter is found to be in conflict with federal or state requirements which are a prescribed condition to the allocation of federal or state funds to the City, then the conflicting part of this chapter is inoperative solely to the extent of the conflict and with respect to the City departments directly affected. This provision does not affect the operation of the
remainder of this chapter. Administrative rules or regulations adopted under this chapter shall meet federal and state requirements which are a necessary condition to the receipt of federal or state funds by the City.

(Ord. 28520 Ex. A; passed Jul. 17, 2018; Ord. 28147 Ex. B; passed May 7, 2013; Ord. 27815 Ex. A; passed Jun. 30, 2009; Ord. 27368 § 2; passed Jun. 21, 2005; Ord. 26992 § 1; passed Oct. 15, 2002; Ord. 26698 § 2; passed Sept. 12, 2000; Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.050 Repealed by Ord. 27368. Good faith efforts.

(Ord. 27368 § 3; passed Jun. 21, 2005; Ord. 26698 § 3; passed Sept. 12, 2000; Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.060 Effect of program on prime contractor/service provider - subcontractor relationship.

The LEAP Program shall not be construed so as to modify or interfere with any relationship between any Contractor or Service Provider and Subcontractor. The LEAP Program shall not grant the City any authority to control the manner or method of accomplishing any construction work that is additional to any authority retained by the City in a Public Works contract.

(Ord. 26698 § 4; passed Sept. 12, 2000; Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.070 Apprentice utilization requirements – Bidding and contractual documents.

All packages of bid documents for every Building Project and every Civil Project shall incorporate provisions satisfactory to the City Attorney so as to allow enforcement of the provisions contained in this Chapter. Such contractual provisions may include liquidated damages, calculated to reimburse the City for the Contractor’s breach of these performance requirements, which shall be published with the City’s call for bids.

(Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.080 Enforcement.

A. The Director shall review the Contractor’s or Service Provider’s and all Subcontractor’s employment practices during the performance of the work for compliance with LEAP Program requirements. On-site visits may be conducted as necessary to verify compliance with the requirements of the LEAP Program. The Contractor, Service Provider, or Subcontractors shall not deny to the City the right to interview its employees, provided that the Director shall make reasonable efforts to coordinate employee interviews with employers.

B. Any knowing failure or refusal to cooperate in compliance monitoring may disqualify the defaulting Contractor, Service Provider, or Subcontractor from eligibility for other City contracts.

C. The making of any material misrepresentation may disqualify the defaulting Contractor, Service Provider, or Subcontractor from eligibility for other City contracts.

D. Any action by the City, its officers and employees, under the provisions of this Chapter may be reviewed by the Board of Contracts and Awards, upon written application of the party so affected. Application shall be made within twenty (20) days of the date of the action upon which the appeal is based, and provided to the City by certified mail or by personal service. Any action taken by the Board of Contracts and Awards may be appealed to the City Council or Public Utility Board, as appropriate, and thereafter if desired, to the Superior Court of Pierce County, Washington, within fifteen (15) days of the previous decision.

(Ord. 26698 § 5; passed Sept. 12, 2000; Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.090 Compliance with applicable law.

Nothing in this Chapter shall excuse a Prime Contractor, Service Provider, or Subcontractor from complying with all relevant federal, state, and local laws.

(Ord. 26698 § 6; passed Sept. 12, 2000; Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.100 Review and reporting.

The City Manager and Director of Utilities shall review the Program on or before January 1, 2000, and every two (2) years thereafter, and shall report to the City Council and Public Utility Board the Manager’s and Director’s findings, conclusions, and recommendations as to the continued need for the Program, and any revisions thereto that should be considered by the Council and Board.
(Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.105 Authority.
The City Manager and the Director of Utilities shall have authority to jointly adopt policies and regulations consistent with this chapter to implement the LEAP program.

(Ord. 26698 § 7; passed Sept. 12, 2000; Ord. 26301 § 1; passed Oct. 6, 1998)

1.90.110 Interpretation.
This Chapter shall not be interpreted or construed so as to conflict with any state or federal law, nor shall this Chapter be enforced such that enforcement results in the violation of any applicable judicial order.

(Ord. 26301 § 1; passed Oct. 6, 1998)
LOCAL EMPLOYMENT AND APPRENTICESHIP TRAINING PROGRAM (LEAP)

LEAP REQUIREMENTS & PROCEDURES:

The LEAP office enforces post-award mandatory requirements. Bidders do not have to submit any information in the bid submittal package to be in compliance with LEAP.

Post-award Submittals:
- **LEAP Employee Verification Form.** This form is to be completed for employees who may be LEAP-Qualified and may be able to help meet the LEAP Goals.
- **LEAP Weekly Payroll Report.** This form is to be completed and submitted with each certified payroll.

The City of Tacoma’s LEAP office enforces two mandatory requirements on City projects based on certain monetary thresholds.

Local Employment Utilization Goal - the Prime Contractor performing a qualifying public works project must ensure that 15 percent of the total labor hours worked on the project are performed by residents of the City of Tacoma or Economically Distressed Zip Codes, whether or not any such person is an apprentice.

Apprenticeship Utilization Goal – for contracts above one-million dollars, the Prime Contractor performing a qualifying public works project must ensure that 15 percent of the total labor hours worked on the project are performed by Apprentices who are residents of the City of Tacoma or Tacoma Public Utilities Service Area. The accompanying LEAP Regulations, forms, and maps are included in these specifications.

*Exceptions: If the project is located outside of the retail service area of the Tacoma Public Utilities Service Area, then Apprentices may come from the county in which the work is performed.

This project is above $1 million and is thusly subject to the:
1. 15% Local Employment Utilization Goal
2. 15% Apprentice Utilization Goal

LEAP staff can assist contractors in the recruitment, screening and selection of qualified City of Tacoma residents, Economically Distressed Area residents, and Apprentices. Contractors may obtain further information by contacting the City’s LEAP Office at (253) 316-3057 or (253) 591-5590. The LEAP Office is located in the Tacoma Municipal Building, 747 Market Street, Room 900, Tacoma, WA 98402. www.cityoftacoma.org/leap

Revised 02-2022    DT
No Work Performed (NWP) Report

Prime/Sub Contractor: ___________________________________________________________

Specification Number: ___________________________________________________________

Project Description: _____________________________________________________________

Payroll Week Ending Date: __________________________           Payroll Number: __________

I, the undersigned, do hereby certify under penalty of perjury, that the information contained herein is true and correct.

__________________________________  ______________________       __________
Signature of Responsible Officer     Title              Date
LEAP EMPLOYEE VERIFICATION FORM

Contractor/Sub: ___________________________   Specification Number: ___________________________

Project Description: _____________________________________________________________

Employee Name: ___________________________________________  Craft: ___________________________

Ethnic Group (optional): □ Asian/Pac Isl. □ Black □ Hispanic □ Native American □ White □ Other

Gender (optional): □ MALE □ FEMALE

Complete Physical Address (No PO Boxes): _____________________________________________

City:_________ State:_______ Zip:_______ Telephone:____________ Date of Hire:____________

Apprenticeship County:_________  Apprentice Registration I.D. (if applicable):_______________

Age:_____  Copy of DD-214:_______

*****Please fill out entire form for tracking LEAP performance*****

LEAP qualified employee categories: (check all that apply and provide evidence for each check)

_____ a. Resident (journey level or certified apprentice) within the geographic boundaries of the City of Tacoma

_____ b. Resident (journey level or certified apprentice) within Economically Distressed ZIP Codes of the Tacoma Public Utilities Service Area

_____ c. WA State Approved Apprentice living in the Tacoma Public Utilities Service Area (Only valid for projects over $1,000,000)

_____ d. WA State Approved Apprentice *(Only valid for contracts where 100% of work is performed outside of Pierce County)

Signature of Employee: ___________________________________________  Date:____________________

Contractor Representative: _______________________________  Date:____________________

Revised 04/2022 DT
LEAP EMPLOYEE VERIFICATION FORM

To be Completed by Contractor or Subcontractor

Please attach a legible copy of one or more of the following document(s) showing the address of residence as proof of local (Tacoma) and/or Economically Distressed Area and/or TPU Service Areas residency. For youth, see first line and for veteran status, see second line.

For Youth - Copy of Birth Certificate or WA State ID or WA Driver’s License (projects advertised after 05-20-13)

For Veterans – Copy of DD-214(Projects advertised after 05-20-13)

Driver’s License with current address

Utility Bill/Phone Bill/Cell Bill/Cable Bill with current address

Copy of current tax form W-4

Rental Agreement/Lease (residential)

Computer Printout From Other Government Agencies

Property Tax Records

Apprentice Registration I.D.

Food Stamp Award Letter

Housing Authority Verification

Insurance Policy (Residence/Auto)

*Any of the above must have a complete physical address verified by the www.govme.org website.
No PO Boxes

Contractor Representative: _______________________________ Date: ________________

Title: ___________________________________________________________________
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Updated 11/2020: CA
### Economically Distressed ZIP Codes (Journeyman AND Apprentice)

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<th>25+ College</th>
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Updated 11/2020: CA
PART V

STATE PREVAILING WAGE RATES
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 site is located in Pierce County.

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.