SPECIFICATION NO.
PW23-0036F

East 64th Phase II
McKinley to Portland

Project No. PWK-G0042
CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

REQUEST FOR BIDS, SPECIAL PROVISIONS, BID PROPOSAL AND CONTRACT

FOR

SPECIFICATION NO.
PW23-0036F

East 64th Phase II
McKinley to Portland

PROJECT NO. PWK-G0042

Division 1
Chris Storey, Project Manager, P.E.
Room 522, Tacoma Municipal Building
Engineering Division
Public Works Department
Tacoma, Washington 98421-2711

Division 2 – 9
Jacob, Hammes, P.E.
Room 544, Tacoma Municipal Building
Engineering Division
Public Works Department
Tacoma, Washington 98421-2711
TABLE OF CONTENTS

NOTE: ALL BIDDERS MUST HAVE A COPY OF THE SPECIFICATIONS AND THE BID SUBMITTAL PACKAGE

REQUEST FOR BIDS

SPECIAL REMINDER TO ALL BIDDERS

SPECIAL NOTICE TO BIDDERS

PART I  BID PROPOSAL AND CONTRACT FORMS

1  Bid Proposal
2  Signature Page
3  Bid Bond
4  Certification Of Compliance With Wage Payment Statutes
5  State Responsibility and Reciprocal Bid Preference Information
6  List of Subcontractor Categories of Work
7  City of Tacoma – Equity in Contracting Requirement Form
8  City of Tacoma – Equity in Contracting Utilization Form
9  Contract
10  Payment Bond to the City of Tacoma
11  Performance Bond to the City of Tacoma
12  General Release Form

PART II  SPECIAL PROVISIONS

Division 1  General Requirements
Division 2  Earthwork
Division 3  Production from Quarry and Pit Sites and Stockpiling
Division 4  Bases
Division 5  Surface Treatments and Pavements
Division 6  Structures
Division 7  Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits
Division 8  Miscellaneous Construction
Division 9  Materials

Department of Public Utilities Tacoma Water Specifications

Appendix A  City of Tacoma and WSDOT Standard Plans
Appendix B  Arborist Report
Appendix C  NPDES Permit and Transfer Form

PART III  CITY OF TACOMA – EQUITY IN CONTRACTING PROGRAM

PART IV  CITY OF TACOMA - LOCAL EMPLOYMENT AND APPRENTICESHIP TRAINING PROGRAM (LEAP) REGULATIONS FOR PUBLIC WORKS CONTRACTS

PART VI  STATE PREVAILING WAGE RATES AND GENERAL REQUIREMENTS
City of Tacoma
Public Works Engineering

REQUEST FOR BIDS  PW23-0036F
East 64th Phase II McKinley to Portland

Submittal Deadline: 11:00 a.m., Pacific Time, Tuesday, March 5, 2024

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

For electronic submittals, the City of Tacoma will designate the time of receipt recorded by our email, sendbid@cityoftacoma.org, as the official time of receipt. This clock will be used as the official time of receipt of all parts of electronic bid submittals. For in person submittals, the City of Tacoma will designate the time of receipt recorded by the timestamp located at the lobby security desk, as the official time of receipt. Late submittals will be returned unopened and rejected as non-responsive.

Submittal Delivery: Sealed submittals will be received as follows:

<table>
<thead>
<tr>
<th>By Email:</th>
<th>In Person:</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="mailto:sendbid@cityoftacoma.org">sendbid@cityoftacoma.org</a></td>
<td>Tacoma Public Utilities Administration Building North, Main Floor, Lobby Security Desk 3628 South 35th Street Tacoma, WA 98409 Monday – Friday 8:00 am to 4:30 pm</td>
</tr>
</tbody>
</table>

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

Bid Opening: Submittals in response to a RFB will be opened Tuesday’s at 11:15 AM 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 11:15 AM. 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 not be held.

Project Scope: The project will include bike lanes, sidewalks and a new street. Street lights, retaining walls and artwork will also be installed as part of the work.

Estimate: $7,000,000

Paid Sick Leave: The City of Tacoma requires all employers to provide paid sick leave in accordance with Washington State law.

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 the contact listed below in the Additional Information section.

Title VI Information: “The City of Tacoma” in accordance with provisions of Title VI of the Civil Rights Act of 1964, (78 Stat. 252, 42 U.S.C. sections 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin in consideration of award.
Additional Information: Requests for information regarding the specifications may be obtained by contacting Carly Fowler by email to CFowler@cyoftacoma.org.

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

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

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.

Example LEAP Requirements:

1. Local Employment Utilization Requirement – 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 Requirement - 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: Depending on the number of requirements assigned to this project, the requirements could be satisfied concurrently. For example if the prime contractor utilizes individuals who simultaneously meet more than one assigned requirement, such as an apprentice who resides in the City of Tacoma or in a local economically distressed area, then the hours worked by that individual will be applied toward both requirements.

See City of Tacoma – Local Employment and Apprenticeship Training Program section for additional information and LEAP Requirements.
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 chapters 18.27 RCW, 18.106 RCW, 70.87 RCW, 19.28 RCW, which must have been in effect at the time of bid submittal;
2. Have a current Washington Unified Business Identifier (UBI) number;
3. If applicable:
   a. Have Industrial Insurance (workers’ compensation) coverage for the bidder’s employees working in Washington, as required in Title 51 RCW;
   b. Have a Washington Employment Security Department number, as required in Title 50 RCW;
   c. Have a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW and;
4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 (unlicensed or unregistered contractors) or 39.12.065(3) (prevailing wage).
5. Have received training on the requirements related to public works and prevailing wage under this chapter and chapter 39.12 RCW and must designate a person or persons to be trained on these requirements. The training must be provided by the department of labor and industries or by a training provider whose curriculum is approved by the department. Bidders that have completed three or more public works projects and have had a valid business license in Washington for three or more years are exempt from this subsection.

B. RECIPROCAL PREFERENCE FOR RESIDENT CONTRACTORS:

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

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

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

The state of residence for a non-resident contractor is the state in which the contractor was incorporated, or if not a corporation, the state in which the contractor’s business entity was formed.
The City of Tacoma will evaluate all non-resident contractors for an out of state bidder preference. If the state of the non-resident contractor provides an in state contractor preference, a comparable percentage disadvantage will be applied to the non-resident contractor’s bid prior to contract award. The responsive and lowest and best responsible bidder after application of any non-resident disadvantage will be awarded the contract.

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

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

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

C. SUBCONTRACTOR RESPONSIBILITY

1. The Contractor shall include the language of this subcontractor responsibility section in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. The requirements of this section apply to all subcontractors regardless of tier.

2. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:

   a. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;

   b. Have a current Washington Unified Business Identifier (UBI) number;

   c. If applicable, have:

      a. Have Industrial Insurance (workers' compensation) coverage for the bidder’s employees working in Washington, as required in Title 51 RCW;
      b. A Washington Employment Security Department number, as required in Title 50 RCW;
      c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
      d. An electrical contractor license, if required by Chapter 19.28 RCW;
      e. An elevator contractor license, if required by Chapter 70.87 RCW and;

3. Not be disqualified from bidding on any public works contract under RCW 39.06.010 (unlicensed or unregistered contractors) or 39.12.065(3) (prevailing wage).
II. CITY OF TACOMA

A. SUPPLEMENTAL RESPONSIBILITY CRITERIA – CITY OF TACOMA:

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

1. Adequate financial resources or the ability to secure such resources;
2. The necessary experience, stability, organization and technical qualifications to perform the proposed contract;
3. The ability to comply with the required performance schedule, taking into consideration all existing business commitments;
4. A satisfactory record of performance, integrity, judgment and skills; and
5. Be otherwise qualified and eligible to receive an award under applicable laws and regulations.

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.

Revised: 07/23/2023
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.
PART I

BID PROPOSAL AND CONTRACT FORMS
BID PROPOSAL

SPECIFICATION NO. PW23-0036F

East 64th Phase II – McKinley to Portland

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. PWK-G0042 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.

All bid items are sorted in the following groups

Schedule A: Roadway, Bid Items R1 – R125
Schedule B: Waste Water. WW1-WW21
Schedule C: Water Main Replacement, W1 – W49
<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ITEM DESCRIPTION</th>
<th>ESTIMATED QUANTITY</th>
<th>UNIT</th>
<th>PRICE</th>
<th>TOTAL AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1. 1-04.4</td>
<td>Minor Change</td>
<td>1</td>
<td>Force Account</td>
<td>Estimated</td>
<td>$75000</td>
</tr>
<tr>
<td>R2. 1-05</td>
<td>Roadway Surveying</td>
<td>1</td>
<td>Lump Sum</td>
<td></td>
<td>$____________</td>
</tr>
<tr>
<td>R3. 1-05</td>
<td>Project Redline Drawings</td>
<td>1</td>
<td>Lump Sum</td>
<td></td>
<td>$____________</td>
</tr>
<tr>
<td>R4. 1-07</td>
<td>SPCC Plan</td>
<td>1</td>
<td>Lump Sum</td>
<td></td>
<td>$____________</td>
</tr>
<tr>
<td>R5. 1-09</td>
<td>Mobilization</td>
<td>1</td>
<td>Lump Sum</td>
<td></td>
<td>$____________</td>
</tr>
<tr>
<td>R6. 1-10</td>
<td>Uniformed Police Officer for Traffic Control</td>
<td>60</td>
<td>Lump Sum</td>
<td></td>
<td>$____________</td>
</tr>
<tr>
<td>R7. 1-10</td>
<td>Pedestrian Traffic Control</td>
<td>1</td>
<td>Lump Sum</td>
<td></td>
<td>$____________</td>
</tr>
<tr>
<td>R8. 1-10</td>
<td>Project Temporary Traffic Control</td>
<td>1</td>
<td>Hours</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R9. 2-01</td>
<td>Certified Arborist</td>
<td>1</td>
<td>Lump Sum</td>
<td></td>
<td>$____________</td>
</tr>
<tr>
<td>R10. 2-01</td>
<td>Certified Arborist Assessment Report Compliance</td>
<td>1</td>
<td>Force Account</td>
<td>Estimated</td>
<td>$5000</td>
</tr>
<tr>
<td>R11. 2-01</td>
<td>Clearing and Grubbing</td>
<td>1</td>
<td>Lump Sum</td>
<td></td>
<td>$____________</td>
</tr>
<tr>
<td>R12. 2-02</td>
<td>Test Hole</td>
<td>200</td>
<td>Lin. Ft.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R13. 2-02</td>
<td>Removal of Structures and Obstructions</td>
<td>1</td>
<td>Lump Sum</td>
<td></td>
<td>$____________</td>
</tr>
<tr>
<td>R14. 2-03</td>
<td>Roadway Excavation Incl. Haul</td>
<td>6339</td>
<td>Cu. Yd.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R15. 2-03</td>
<td>Embankment Compaction</td>
<td>240</td>
<td>Cu. Yd.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
<td>ESTIMATED QUANTITY</td>
<td>UNIT PRICE</td>
<td>TOTAL AMOUNT</td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------------</td>
<td>--------------------</td>
<td>------------</td>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>R16. 2-06</td>
<td>Subgrade Maintenance and Protection</td>
<td>1</td>
<td>Lump Sum</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R17. 2-06</td>
<td>Subgrade Protection Plan</td>
<td>1</td>
<td>Lump Sum</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R18. 2-09</td>
<td>Structure Excavation Class A Incl. Haul</td>
<td>470</td>
<td>Cu. Yd.</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R19. 2-09</td>
<td>Shoring or Extra Excavation Class A</td>
<td>1</td>
<td>Lump Sum</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R20. 2-09</td>
<td>Structure Excavation Class B</td>
<td>809</td>
<td>Cu. Yd.</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R21. 2-09</td>
<td>Shoring or Extra Excavation Class B</td>
<td>5202</td>
<td>Sq. Ft.</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R22. 2-12</td>
<td>Construction Geotextile for Soil Stabilization</td>
<td>10250</td>
<td>Sq. Yd.</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R23. 2-14</td>
<td>Remove Existing Pavement, Type I, Class A2</td>
<td>315</td>
<td>Sq. Yd.</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R24. 2-14</td>
<td>Remove Existing Pavement, Type I, Class A4</td>
<td>13020</td>
<td>Sq. Yd.</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R25. 2-14</td>
<td>Remove Existing Pavement, Type I, Class C6</td>
<td>3025</td>
<td>Sq. Yd.</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R26. 2-14</td>
<td>Remove Existing Stairs</td>
<td>230</td>
<td>Lin. Ft.</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R27. 2-15</td>
<td>Remove Curb</td>
<td>1675</td>
<td>Lin. Ft.</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R28. 2-16</td>
<td>Remove Catch Basin</td>
<td>14</td>
<td>Each</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R29. 2-16</td>
<td>Remove Manhole</td>
<td>2</td>
<td>Each</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R30. 4-04</td>
<td>Crushed Surfacing Top Course</td>
<td>335</td>
<td>Tons</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R31. 4-04</td>
<td>Crushed Surfacing Base Course</td>
<td>4410</td>
<td>Tons</td>
<td>$________</td>
<td></td>
</tr>
</tbody>
</table>

Contractor’s Name: ____________________________________________
Specification No. PW23-0036F
Page 3 of 18
<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>R32. 4-06</td>
<td>Asphalt Treated Base</td>
<td>2040 Tons</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R33. 5-04</td>
<td>Planing Bituminous Pavement</td>
<td>825 Sq. Yd.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R34. 5-04</td>
<td>HMA CL 3/8&quot; PG 58H-22</td>
<td>325 Tons</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R35. 5-04</td>
<td>HMA for Approach CL 1/2&quot; PG 58H-22</td>
<td>220 Sq. Yd.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R36. 5-04</td>
<td>Fiber Reinforced HMA CL 1/2&quot; PG 58H-22</td>
<td>2800 Tons</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R37. 5-04</td>
<td>Temporary Pavement Patch</td>
<td>300 Tons</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R38. 7-05</td>
<td>Adjust Existing Manhole, Furnish New Frame and Cover</td>
<td>10 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R39. 7-05</td>
<td>Adjust Existing Valve Chamber to Grade</td>
<td>23 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R40. 7-05</td>
<td>Adjust to Grade</td>
<td>5 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R41. 7-05</td>
<td>Catch Basin Type 1</td>
<td>22 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R42. 7-05</td>
<td>Catch Basin Type 2, 48 In. Diam.</td>
<td>2 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R43. 7-05</td>
<td>Manhole 48 In. Diam. Type 1</td>
<td>1 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R44. 7-05</td>
<td>Manhole 60 In. Diam. Type 1</td>
<td>2 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R45. 7-05</td>
<td>Manhole Additional Height 60 In. Diam. Type 1</td>
<td>3 Lin. Ft.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R46. 7-05</td>
<td>Reconnect Existing Sewer Pipe, 4-In. Diam., to New Structure</td>
<td>1 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
<td>ESTIMATED QUANTITY</td>
<td>UNIT</td>
<td>TOTAL AMOUNT</td>
</tr>
<tr>
<td>---------</td>
<td>------------------------------------------------------</td>
<td>--------------------</td>
<td>------</td>
<td>--------------</td>
</tr>
<tr>
<td>R47. 7-05</td>
<td>Reconnect Existing Sewer Pipe, 8-In. Diam., to New Structure</td>
<td>2 Each</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R48. 7-05</td>
<td>Reconnect Existing Sewer Pipe, 12-In. Diam., to New Structure</td>
<td>1 Each</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R49. 7-05</td>
<td>Reconnect Existing Sewer Pipe, 18-In. Diam., to New Structure</td>
<td>2 Each</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R50. 7-05</td>
<td>Reconnect Existing Sewer Pipe, 21-In. Diam., to New Structure</td>
<td>2 Each</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R51. 7-05</td>
<td>Connect New Sewer Pipe, 12-In Diam., to Existing Structure</td>
<td>8 Each</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R52. 7-08</td>
<td>CDF for Pipe Abandonment</td>
<td>3 Cu. Yd.</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R53. 7-08</td>
<td>Temporary Storm Sewer Bypass</td>
<td>1 Lump Sum</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R54. 7-08</td>
<td>Temporary Storm Sewer Bypass plan</td>
<td>1 Lump Sum</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R55. 7-17</td>
<td>Removal and Replacement of Unsuitable Material</td>
<td>563 Cu. Yd.</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R56. 7-17</td>
<td>Ductile Iron Sewer Pipe 12 In. Diam.</td>
<td>365 Lin. Ft.</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R57. 7-17</td>
<td>Ductile Iron Sewer Pipe 4 In. Diam.</td>
<td>10 Lin. Ft.</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R58. 7-17</td>
<td>Ductile Iron Sewer Pipe 6 In. Diam.</td>
<td>20 Lin. Ft.</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R59. 7-17</td>
<td>PVC Storm Sewer Pipe 12 In. Diam.</td>
<td>0 Lin. Ft.</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R60. 7-17</td>
<td>Testing Sewer Pipe</td>
<td>395 Lin. Ft.</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
<td>ESTIMATED QUANTITY</td>
<td>UNIT</td>
<td>PRICE</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------------</td>
<td>--------------------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>R61. 7-20</td>
<td>Residential Storm Drain Under Sidewalk</td>
<td>1970 Lin. Ft.</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R62. 7-20</td>
<td>Trench Drain, 6 In. Wide</td>
<td>94 Lin. Ft.</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R63. 8-01</td>
<td>Erosion/Water Pollution Control</td>
<td>1 Lump Sum</td>
<td>Lump Sum</td>
<td>$________</td>
</tr>
<tr>
<td>R64. 8-01</td>
<td>Stormwater Pollution Prevention Plan (SWPPP)</td>
<td>1 Lump Sum</td>
<td>Lump Sum</td>
<td>$________</td>
</tr>
<tr>
<td>R65. 8-01</td>
<td>NPDES Construction Stormwater General Permit</td>
<td>1 Lump Sum</td>
<td>Lump Sum</td>
<td>$________</td>
</tr>
<tr>
<td>R66. 8-02</td>
<td>Seeded Lawn Installation</td>
<td>211 Sq. Ft.</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R67. 8-02</td>
<td>PSIPE Juniperus Virginiana/Eastern Red Cedar, 6'-7' Ht.</td>
<td>8 Each</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R68. 8-02</td>
<td>PSIPE Tsuga Mertensiana/Mountain Hemlock, 6'-7' Ht.</td>
<td>12 Each</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R69. 8-02</td>
<td>PSIPE Zelkova Serrata 'Wireless'/Zelkova (Dwarf), 2'' Cal.</td>
<td>12 Each</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R70. 8-02</td>
<td>PSIPE Parraotia Persica/Persian Ironwood, 2'' Cal.</td>
<td>16 Each</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R71. 8-02</td>
<td>PSIPE Prunus Virginiana/Canada Red chokecherry, 2'' Cal.</td>
<td>6 Each</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R72. 8-02</td>
<td>PSIPE Pinus Parviflora/Japanese White Pine, 6'-7' Ht.</td>
<td>10 Each</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R73. 8-02</td>
<td>PSIPE Ulmus Americana/American Elm, 2'' Cal.</td>
<td>2 Each</td>
<td>$________</td>
<td></td>
</tr>
</tbody>
</table>

Contractor’s Name: ________________________________________________
Specification No. PW23-0036F
Page 6 of 18
<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>R74. 8-02</td>
<td>PSIPE Cedrus Deodora/Deodore Cedar, 6'-7' ht.</td>
<td>4 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R75. 8-02</td>
<td>PSIPE Festuca Glaucum 'Elijah Blue'/Elijah Blue Fescue, 1 Gal.</td>
<td>3864 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R76. 8-02</td>
<td>PSIPE Bouteloua Gracilis 'Blonde Ambition'/Blonde Ambition Blue Grama Grass, 1 Gal.</td>
<td>750 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R77. 8-02</td>
<td>PSIPE Pennisetum Alopecuroide/Dwarf Fountain Grass, 1 Gal.</td>
<td>750 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R78. 8-02</td>
<td>PSIPE Helictotrichon Sempervirens 'Saphirspудel'/Sapphire Fountain Blue Oat Grass, 1 Gal.</td>
<td>750 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R79. 8-02</td>
<td>PSIPE Santolina Chamaecyparissus/Lavender Cotton, 1 Gal.</td>
<td>677 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R80. 8-02</td>
<td>Topsoil Type A</td>
<td>425 Cu. Yd.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R81. 8-02</td>
<td>Bark or Wood Chip Mulch</td>
<td>275 Cu. Yd.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R82. 8-02</td>
<td>Root Barrier</td>
<td>1900 Lin. Ft.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R83. 8-02</td>
<td>Site Restoration</td>
<td>1 Lump Sum</td>
<td>$________</td>
<td></td>
</tr>
<tr>
<td>R84. 8-04</td>
<td>Cement Conc. Traffic Curb and Gutter</td>
<td>6870 Lin. Ft.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>R85. 8-04</td>
<td>Cement Conc. Pedestrian Curb</td>
<td>1590 Lin. Ft.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
<td>ESTIMATED QUANTITY</td>
<td>UNIT</td>
<td>PRICE</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------</td>
<td>--------------------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>R86. 8-04</td>
<td>Cement Conc. Valley Gutter</td>
<td>970</td>
<td>Lin. Ft.</td>
<td>$________</td>
</tr>
<tr>
<td>R87. 8-06</td>
<td>Cement Conc. Driveway Entrance</td>
<td>2078</td>
<td>Sq. Yd.</td>
<td>$________</td>
</tr>
<tr>
<td>R88. 8-09</td>
<td>Raised Pavement Marker Type 2</td>
<td>2</td>
<td>Hundred</td>
<td>$________</td>
</tr>
<tr>
<td>R89. 8-12</td>
<td>Cedar Fence, 4 Foot Height</td>
<td>492</td>
<td>Lin. Ft.</td>
<td>$________</td>
</tr>
<tr>
<td>R90. 8-12</td>
<td>Cedar Fence, 6 Foot Height</td>
<td>714</td>
<td>Lin. Ft.</td>
<td>$________</td>
</tr>
<tr>
<td>R91. 8-12</td>
<td>Chain Link Fence, Type 1</td>
<td>130</td>
<td>Lin. Ft.</td>
<td>$________</td>
</tr>
<tr>
<td>R92. 8-12</td>
<td>Chain Link Fence, Type 6</td>
<td>1812</td>
<td>Lin. Ft.</td>
<td>$________</td>
</tr>
<tr>
<td>R93. 8-12</td>
<td>Chain Link Fence, 7 Foot Height</td>
<td>150</td>
<td>Lin. Ft.</td>
<td>$________</td>
</tr>
<tr>
<td>R94. 8-12</td>
<td>Privacy Slats, White</td>
<td>150</td>
<td>Lin. Ft.</td>
<td>$________</td>
</tr>
<tr>
<td>R95. 8-12</td>
<td>Temporary Security Fence</td>
<td>12</td>
<td>Each</td>
<td>$________</td>
</tr>
<tr>
<td>R96. 8-13</td>
<td>Poured Monument</td>
<td>3</td>
<td>Each</td>
<td>$________</td>
</tr>
<tr>
<td>R97. 8-14</td>
<td>Cement Conc. Sidewalk</td>
<td>3684</td>
<td>Sq. Yd.</td>
<td>$________</td>
</tr>
<tr>
<td>R98. 8-14</td>
<td>Decorative Colored Stamped Cement Conc. Sidewalk</td>
<td>661</td>
<td>Sq. Yd.</td>
<td>$________</td>
</tr>
<tr>
<td>R99. 8-14</td>
<td>Cement Conc. Curb Ramp</td>
<td>44</td>
<td>Each</td>
<td>$________</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
<td>ESTIMATED QUANTITY</td>
<td>UNIT</td>
<td>PRICE</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------</td>
<td>--------------------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>R100.</td>
<td>Detectable Warning Surface, Green</td>
<td>440</td>
<td>Sq. Ft.</td>
<td></td>
</tr>
<tr>
<td>R101.</td>
<td>Detectable Directional Tile</td>
<td>5441</td>
<td>Lin. Ft.</td>
<td></td>
</tr>
<tr>
<td>R102.</td>
<td>House Number Stamp</td>
<td>51</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>R103.</td>
<td>Mailbox Support</td>
<td>45</td>
<td>Lump Sum</td>
<td>Lump Sum</td>
</tr>
<tr>
<td>R104.</td>
<td>Traffic Signal System, E 64th St &amp; Portland Ave E, Complete</td>
<td>1</td>
<td>Lump Sum</td>
<td>Lump Sum</td>
</tr>
<tr>
<td>R105.</td>
<td>Illumination System</td>
<td>1</td>
<td>Lump Sum</td>
<td>Lump Sum</td>
</tr>
<tr>
<td>R106.</td>
<td>Pedestrian-Activated Crosswalk Beacon, E 64th St &amp; E 'L' St</td>
<td>1</td>
<td>Lump Sum</td>
<td>Lump Sum</td>
</tr>
<tr>
<td>R107.</td>
<td>School Zone Beacon, Complete</td>
<td>1</td>
<td>Lump Sum</td>
<td>Lump Sum</td>
</tr>
<tr>
<td>R108.</td>
<td>Interconnect System, Complete</td>
<td>1</td>
<td>Lump Sum</td>
<td>Lump Sum</td>
</tr>
<tr>
<td>R109.</td>
<td>Permanent Signing</td>
<td>1</td>
<td>Lump Sum</td>
<td>Lump Sum</td>
</tr>
<tr>
<td>R111.</td>
<td>Plastic Wide Lane Line</td>
<td>325</td>
<td>Lin. Ft.</td>
<td></td>
</tr>
<tr>
<td>R113.</td>
<td>Plastic Traffic Letter</td>
<td>28</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>R114.</td>
<td>Plastic Traffic Arrow</td>
<td>4</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
<td>ESTIMATED QUANTITY</td>
<td>UNIT</td>
<td>PRICE</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------------------------</td>
<td>--------------------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>R115. 8-22</td>
<td>Plastic Crosswalk Line</td>
<td>820 Lin. Ft.</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R116. 8-22</td>
<td>Plastic Bicycle Lane Symbol</td>
<td>38 Each</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R117. 8-22</td>
<td>Plastic Bicycle Detection Symbol</td>
<td>2 Each</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R118. 8-22</td>
<td>Green Durable Product</td>
<td>820 Sq. Ft.</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R119. 8-24</td>
<td>Boulder, 3-Man</td>
<td>30 Each</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R120. 8-24</td>
<td>Boulder, 4-Man</td>
<td>20 Each</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R121. 8-30</td>
<td>Public Art</td>
<td>1 Lump Sum</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R122. 8-31</td>
<td>Cement Conc. Stairway</td>
<td>181 Step</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R123. 8-31</td>
<td>Wrought Iron Hand Rail</td>
<td>142 Lin. Ft.</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R124. 8-32</td>
<td>Segmental Concrete Retaining Wall</td>
<td>6950 Sq. Ft.</td>
<td>$_______</td>
<td>$_______</td>
</tr>
<tr>
<td>R125. 8-33</td>
<td>Cement Conc. Wall</td>
<td>483 Lin. Ft.</td>
<td>$_______</td>
<td>$_______</td>
</tr>
</tbody>
</table>

(1) **Base Bid**  
(Subtotal Items Nos. R1 - R125)  
$__________________________
### Schedule B: Wastewater Improvements (Rule 170)

<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>WW1. 1-05</td>
<td>Roadway Surveying</td>
<td>1</td>
<td>Lump Sum</td>
<td>$________</td>
</tr>
<tr>
<td>WW2. 1-05</td>
<td>Project Redline Drawings</td>
<td>1</td>
<td>Lump Sum</td>
<td>$________</td>
</tr>
<tr>
<td>WW3. 1-07</td>
<td>SPCC Plan</td>
<td>1</td>
<td>Lump Sum</td>
<td>$________</td>
</tr>
<tr>
<td>WW4. 1-09</td>
<td>Mobilization</td>
<td>1</td>
<td>Lump Sum</td>
<td>$________</td>
</tr>
<tr>
<td>WW5. 1-10</td>
<td>Project Temporary Traffic Control</td>
<td>1</td>
<td>Lump Sum</td>
<td>$________</td>
</tr>
<tr>
<td>WW6. 2-09</td>
<td>Structure Excavation Class B</td>
<td>1020</td>
<td>Cu. Yd.</td>
<td>$________</td>
</tr>
<tr>
<td>WW7. 2-09</td>
<td>Shoring or Extra Excavation Class B</td>
<td>8875</td>
<td>Sq. Ft.</td>
<td>$________</td>
</tr>
<tr>
<td>WW8. 2-16</td>
<td>Remove Manhole</td>
<td>2</td>
<td>Each</td>
<td>$________</td>
</tr>
<tr>
<td>WW9. 5-04</td>
<td>Temporary Pavement Patch</td>
<td>70</td>
<td>Tons</td>
<td>$________</td>
</tr>
<tr>
<td>WW10. 7-05</td>
<td>Manhole 48 In. Diam. Type 1</td>
<td>3</td>
<td>Each</td>
<td>$________</td>
</tr>
<tr>
<td>WW11. 7-05</td>
<td>Manhole Additional Height 48 In. Diam. Type 1</td>
<td>1</td>
<td>Lin. Ft.</td>
<td>$________</td>
</tr>
<tr>
<td>WW12. 7-05</td>
<td>Reconnect Existing Sewer Pipe, 8-In. Diam., to New Structure</td>
<td>1</td>
<td>Each</td>
<td>$________</td>
</tr>
<tr>
<td>WW13. 7-08</td>
<td>Temporary Sanitary Sewer Bypass</td>
<td>1</td>
<td>Lump Sum</td>
<td>$________</td>
</tr>
<tr>
<td>WW14. 7-08</td>
<td>Temporary Sanitary Sewer Bypass plan</td>
<td>1</td>
<td>Lump Sum</td>
<td>$________</td>
</tr>
<tr>
<td>WW15. 7-17</td>
<td>Removal and Replacement of Unsuitable Material</td>
<td>850</td>
<td>Cu. Yd.</td>
<td>$________</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
<td>ESTIMATED QUANTITY</td>
<td>UNIT</td>
<td>PRICE</td>
</tr>
<tr>
<td>---------</td>
<td>------------------</td>
<td>--------------------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>WW16.</td>
<td>PVC Sanitary Sewer Pipe 6 In. Diam.</td>
<td>105</td>
<td>Lin. Ft.</td>
<td>$_______</td>
</tr>
<tr>
<td>WW17.</td>
<td>PVC Sanitary Sewer Pipe 8 In. Diam.</td>
<td>435</td>
<td>Lin. Ft.</td>
<td>$_______</td>
</tr>
<tr>
<td>WW18.</td>
<td>PVC Sanitary Sewer Pipe, C900 6 In. Diam.</td>
<td>385</td>
<td>Lin. Ft.</td>
<td>$_______</td>
</tr>
<tr>
<td>WW19.</td>
<td>Testing Sewer Pipe</td>
<td>925</td>
<td>Lin. Ft.</td>
<td>$_______</td>
</tr>
<tr>
<td>WW20.</td>
<td>Sewer Cleanout</td>
<td>14</td>
<td>Each</td>
<td>$_______</td>
</tr>
<tr>
<td>WW21.</td>
<td>Erosion/Water Pollution Control</td>
<td>1</td>
<td>Lump Sum</td>
<td>$_______</td>
</tr>
</tbody>
</table>

(3) **Base Bid**  
*(Subtotal Items Nos. WW1 - WW21)*  

$_________________
### Schedule C: Water Improvements (Rule 170)

<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>W1. 1-09</td>
<td>Mobilization (1-09.7)</td>
<td>1</td>
<td>Lump Sum</td>
<td>$________</td>
</tr>
<tr>
<td>W2. 1-10</td>
<td>Project Temporary Traffic Control (1-10)</td>
<td>1</td>
<td>Lump Sum</td>
<td>$________</td>
</tr>
<tr>
<td>W3. 2-02</td>
<td>Removal/Disposal of existing asphalt, concrete sidewalk/curbing &amp; concrete pavement. Includes all thicknesses and combinations (2-02.3(3))</td>
<td>683</td>
<td>Sq. Yd.</td>
<td>$________ $________</td>
</tr>
<tr>
<td>W4. 5-04</td>
<td>Temporary HMA Class ½&quot; PG58-22, 2-inch minimum depth, installed &amp; removed (5-04)</td>
<td>683</td>
<td>Sq. Yd.</td>
<td>$________ $________</td>
</tr>
<tr>
<td>W5. 7-09</td>
<td>Crushed Surfacing Top Course for trench backfill (7-09.5 &amp; 9-03.9(3))</td>
<td>1751</td>
<td>Ton</td>
<td>$________ $________</td>
</tr>
<tr>
<td>W6. 7-04</td>
<td>Storm, Sanitary, Side Sewer Restoration (7-04,7-09.5, 7-17, &amp; 7-18)</td>
<td>10</td>
<td>Each</td>
<td>$________ $________</td>
</tr>
<tr>
<td>W7. 7-09</td>
<td>Trench Excavation &amp; Disposal (7-09.3(7) &amp; 7-09.5)</td>
<td>1128</td>
<td>Cu. Yd.</td>
<td>$________ $________</td>
</tr>
<tr>
<td>W8. 7-09</td>
<td>Trench Shoring (7-09.3(7) &amp; 7-09.5)</td>
<td>2050</td>
<td>Lin. Ft.</td>
<td>$________ $________</td>
</tr>
<tr>
<td>W9. 7-09</td>
<td>Sand for pipe bedding of PVC pipe (7-09)</td>
<td>252</td>
<td>Ton</td>
<td>$________ $________</td>
</tr>
<tr>
<td>W10. 7-09</td>
<td>16-inch Ductile Iron Pipe, Push-On Joint, ANSI/AWWA, C151, Special Class Thickness No. 52, to furnish, lay and test, (7-09.3(15)A, 7-09.5 &amp; 9-30.1(1))</td>
<td>153</td>
<td>Lin. Ft.</td>
<td>$________ $________</td>
</tr>
<tr>
<td>W11. 7-09</td>
<td>6-inch Ductile Iron Pipe, Push-On Joint, ANSI/AWWA, C151, Special Class Thickness No. 52, to furnish, lay and test, (7-09.3(15)A, 7-09.5 &amp; 9-30.1(1))</td>
<td>160</td>
<td>Lin. Ft.</td>
<td>$________ $________</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
<td>ESTIMATED QUANTITY</td>
<td>UNIT PRICE</td>
<td>TOTAL AMOUNT</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>------------</td>
<td>--------------</td>
</tr>
<tr>
<td>W12. 7-09</td>
<td>8-inch PVC Pipe, Push-On Joint, ANSI/AWWA, C900, DR14, with tracer wire, to furnish, lay and test</td>
<td>1656 Lin. Ft.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W13. 7-09</td>
<td>4-inch PVC Pipe, Push-On Joint, ANSI/AWWA, C900, DR14, with tracer wire, to furnish, lay and test</td>
<td>255 Lin. Ft.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W14. 7-09</td>
<td>16-inch x 6-inch Ductile Iron Tee, 3-B, M.J., installed (9-30.2(1))</td>
<td>5 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W15. 7-09</td>
<td>8-inch x 6-inch Ductile Iron Tee, 3-B, M.J., installed (9-30.2(1))</td>
<td>1 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W16. 7-09</td>
<td>8-inch Ductile Iron Tee, 3-B, M.J., installed (9-30.2(1))</td>
<td>1 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W17. 7-09</td>
<td>6-inch Ductile Iron Tee, 3-B, M.J., installed (9-30.2(1))</td>
<td>1 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W18. 7-09</td>
<td>6-inch x 4-inch Ductile Iron Reducer, M.J., installed. (7-09, &amp; 9-30.2(1))</td>
<td>1 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W19. 7-09</td>
<td>16-inch Transition Coupling with 14-inch center ring, epoxy coating, and stainless steel bolts, C.I. to D.I. (7-09.3(19)A, 7-09.5 &amp; 9-30.2(7))</td>
<td>24 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W20. 7-09</td>
<td>6-inch Transition Coupling with 7-inch center ring, epoxy coating, and stainless steel bolts, C.I. to D.I., installed (7-09.3(19)A, 7-09.5 &amp; 9-30.2(7))</td>
<td>1 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W21. 7-09</td>
<td>8-inch Ductile Iron Cap, M.J., tapped 2&quot;, installed and removed (7-09.5 &amp; 9-30.2(1))</td>
<td>2 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W22. 7-09</td>
<td>8-inch Ductile Iron Plug, M.J., installed and removed (7-09.5 &amp; 9-30.2(1))</td>
<td>2 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
<td>ESTIMATED QUANTITY</td>
<td>UNIT PRICE</td>
<td>TOTAL AMOUNT</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>------------</td>
<td>--------------</td>
</tr>
<tr>
<td>W23. 7-09</td>
<td>4-inch Ductile Iron Solid Sleeve (Long Pattern) M.J., installed. (7-09.5, &amp; 9-30.2(1))</td>
<td>2 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W24. 7-09</td>
<td>Temporary 2-inch Blow-Off Assembly, installed and removed (Dwg. 17-56-1) (7-09.3(22) &amp; 7-09.5)</td>
<td>4 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W25. 7-14</td>
<td>8-inch Mechanical Joint Restraining Glands (7-14, 7-09.5 &amp; 9-30.2(6))</td>
<td>6 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W26. 7-14</td>
<td>6-inch Mechanical Joint Restraining Glands (7-14, 7-09.5 &amp; 9-30.2(6))</td>
<td>28 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W27. 7-14</td>
<td>4-inch Mechanical Joint Restraining Glands (7-14, 7-09.5 &amp; 9-30.2(6))</td>
<td>4 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W28. 7-14</td>
<td>6-inch Push on Joint Restraining Gasket, installed</td>
<td>1 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W29. 7-09</td>
<td>Concrete Thrust Anchor, installed. (7-09.3(21) &amp; 7-09.5)</td>
<td>3 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W30. 7-05</td>
<td>Excavate, remove and dispose of existing valve chamber, piping, conduits and other appurtenances (7-05)</td>
<td>9 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W31. 7-05</td>
<td>Adjust Existing Supply Manhole (7-05)</td>
<td>5 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W32. 7-05</td>
<td>Adjust Supply Main Vent Pipe Adjustment (7-05)</td>
<td>3 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W33. 7-09</td>
<td>Removal, haul and disposal of abandoned C.I. pipe, all sizes. (2-02.3) (7-09.4 &amp; 7-09.5)</td>
<td>176 Lin. Ft.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W34. 7-09</td>
<td>Removal, haul and disposal of abandoned D.I. pipe, all sizes. (2-02.3) (7-09.4 &amp; 7-09.5)</td>
<td>232 Lin. Ft.</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>ITEM NO.</td>
<td>ITEM DESCRIPTION</td>
<td>ESTIMATED QUANTITY</td>
<td>UNIT PRICE</td>
<td>TOTAL AMOUNT</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>------------</td>
<td>--------------</td>
</tr>
<tr>
<td>W35. 7-09</td>
<td>Temporary Concrete Thrust Anchor, installed and removed (7-09.3(21) &amp; 7-09.5)</td>
<td>4 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W36. 7-09</td>
<td>Trench Compaction Test (as directed by the Inspector) (7-09.3(11) &amp; 7-09.5)</td>
<td>41 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W37.</td>
<td>Test Holes (See Special Provisions). (7-09.3(6) &amp; 7-09.5)</td>
<td>1 Lump Sum</td>
<td>Lump Sum</td>
<td>$________</td>
</tr>
<tr>
<td>W38. 7-12</td>
<td>16-inch B/F Valve, M.J., ANSI/AWWA, C504 with C.I. Valve Box, installed</td>
<td>7 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W39. 7-12</td>
<td>8-inch Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box (7-12 &amp; 9.30.3)</td>
<td>2 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W40. 7-12</td>
<td>6-inch Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box (7-12 &amp; 9.30.3)</td>
<td>7 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W41. 7-12</td>
<td>4-inch Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box (7-12 &amp; 9.30.3)</td>
<td>1 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W42. 7-09</td>
<td>16-inch x 8-inch Tapping Sleeve. installed (7-09 &amp; 9-30.3)</td>
<td>1 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W43. 7-09</td>
<td>8-inch Tapping Sleeve. installed (7-09 &amp; 9-30.3)</td>
<td>1 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W44. 7-12</td>
<td>8-inch Tapping Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box (7-12 &amp; 9.30.3)</td>
<td>2 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W45. 7-14</td>
<td>6-inch Hydrant, M.J., 4.5-ft bury, with 4-inch Tacoma Standard Threads &amp; 5-inch Quick Coupling (7-14 &amp; 9-30.5(2))</td>
<td>1 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>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>------------</td>
<td>--------------</td>
</tr>
<tr>
<td>W46. 7-14</td>
<td>6-inch Hydrant, M.J., 5.5-ft bury, with 4-inch Tacoma Standard Threads &amp; 5-inch Quick Coupling (7-14 &amp; 9-30.5(2))</td>
<td>5 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W47. 7-14</td>
<td>6-inch Hydrant, M.J., 6.0-ft bury, with 4-inch Tacoma Standard Threads &amp; 5-inch Quick Coupling (7-14 &amp; 9-30.5(2))</td>
<td>1 Each</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W48. 8-01</td>
<td>Street cleaning with Self-propelled Pickup and Vacuum Street Sweeper Equipment. (8-01.3(8))</td>
<td>34 Hour</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>W49. 1-09</td>
<td>Force Account (1-09.6)</td>
<td>1 Force Account</td>
<td>Estimated</td>
<td>$60000</td>
</tr>
</tbody>
</table>

(6) Base Bid (Subtotal Items Nos. W1 - W49) $ __________________________

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

Base Bid (Subtotal Items Nos. R1 – R125) $ ___________ (1)

ROADWAY IMPROVEMENTS TOTAL $ ___________ (2)

SCHEDULE B: WASTE WATER IMPROVEMENTS (W) (Rule 170)

Base Bid (Subtotal Items Nos. WW1-WW21) $ ___________ (3)

10.3% Sales Tax (Items Nos. WW1-WW21) $ ___________ (4)

WASTE WATER MAIN IMPROVEMENTS TOTAL $ ___________ (5)
**SCHEDULE C: WATER MAIN IMPROVEMENTS (W) (Rule 170)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Bid (Subtotal Items Nos. W1-W49)</td>
<td>$___________ (6)</td>
</tr>
<tr>
<td>10.3% Sales Tax (Items Nos. W1-W49)</td>
<td>$___________ (7)</td>
</tr>
<tr>
<td>WATER MAIN IMPROVEMENTS TOTAL</td>
<td>$___________ (8)</td>
</tr>
</tbody>
</table>

**TOTAL BASE BID**  (2) + (5) + (8)  
(not including sales tax) Rule 170  
$_____________________

---

**Proposal for Incorporating Recycled Materials into the Project**

In compliance with a new law that went into effect January 1, 2016 (SHB1695), the Bidder shall propose below, the total percent of construction aggregate and concrete materials to be incorporated into the Project that are recycled materials. Calculated percentages must be within the amounts allowed in Section 9-03.21(1)E, Table on Maximum Allowable Percent (By Weight) of Recycled Material, of the Standard Specifications. Proposed total percentage: _____________________________ percent.

*Note: Use of recycled materials is highly encouraged within the limits shown above, but does not constitute a Bidder Preference, and will not affect the determination of award, unless two or more lowest responsive Bid totals are exactly equal, in which case proposed recycling percentages will be used as a tie-breaker, per the APWA GSP in Section 1-02.6 of the Special Provisions. Regardless, the Bidder’s stated proposed percentages will become a goal the Contractor should do its best to accomplish. Bidders will be required to report on recycled materials actually incorporated into the Project, in accordance with the APWA GSP in Section 1-06.6 of the Special Provisions.*

Bidder:  
Signature of Authorized Official:  
Date:  

---
SIGNATURE PAGE
CITY OF TACOMA
PUBLIC WORKS ENGINEERING

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.PW23-0036F
East 64th Phase II McKinley to Portland

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

Address

City, State, Zip

Authorized Signatory E-Mail Address


E-Mail Address for Communications

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

Date

Printed Name and Title

(Area Code) Telephone Number / Fax Number

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.)

Addendum acknowledgement #1_____ #2_____ #3_____ #4_____ #5_____
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 (February 13, 2024), 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: __________________________

Washington Employment Security Department Number

Number: __________________________

Washington Department of Revenue state excise tax Registration number:

Number: __________________________

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
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 sendbid@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 sendbid@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.

<table>
<thead>
<tr>
<th>Subcontractor Name</th>
<th>Work to be Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subcontractor Name</th>
<th>Work to be Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subcontractor Name</th>
<th>Work to be Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subcontractor Name</th>
<th>Work to be Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subcontractor Name</th>
<th>Work to be Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.

EQUITY IN CONTRACTING REQUIREMENTS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12%</td>
<td>2%</td>
<td>16%</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/EIC: PWK-G0042-01
Date of Record: 01/03/2023
Project Spec#: PW23-0036F
Project Title: E 64th Phase II – McKinley to Portland

*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.
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 know 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 * $ __________________________

<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>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</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 EICOffice@cityoftacoma.org for additional information.
CONTRACT

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 xxxxx, and may be renewed for xxxxxxxx

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. 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.

IX. Contractor and for its heirs, executors, administrators, successors, and assigns, does hereby agree to the full performance of all the requirements contained herein and in Contract Documents.

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: ________________________________

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, in the manner requested by the CITY, prior to any payment by the CITY hereunder, and an Affidavit of Wages Paid and/or other or additional documentation required by federal law must be received or verified by the CITY prior to final Contract payment.

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

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

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

____________________
Signature of Contractor’s Authorized Official

____________________
Name and Title of Contractor’s Authorized Official

_______________ Date
**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></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(iii) Federal Award Identification Number (FAIN)</th>
<th>(iv) Federal Award Date</th>
<th>(v) Federal Period of Performance Start and End Date</th>
<th>(vi) Federal Budget Period Start and End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<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>
<tr>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(x) Federal Award Project Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORONAVIRUS STATE AND LOCAL FISCAL RECOVERY FUNDS—City of Tacoma</td>
</tr>
</tbody>
</table>

<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>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<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. [Enter Reso # Here]  
Bond No. 

That we, the undersigned, [Supplier name]  
as principal, and
as a surety, are jointly and severally held and firmly bound to the CITY OF TACOMA, in the penal sum of, 
$[dollar value], plus any applicable taxes , 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 

<table>
<thead>
<tr>
<th>Specification No.</th>
<th>[Enter Spec # Here]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specification Title</td>
<td>[Enter Spec Title Here]</td>
</tr>
<tr>
<td>Contract No.</td>
<td>[Enter Contract # Here]</td>
</tr>
</tbody>
</table>

(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 waivers 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: [Supplier name]

________________________________________________________

By: _________________________________________________

Surety:

________________________________________________________

By: _________________________________________________

Agent's Name: __________________________________________

Agent's Address: ________________________________________
That we, the undersigned, [Supplier Name] as principal, and [Supplier Name] as a surety, are jointly and severally held and firmly bound to the CITY OF TACOMA, in the penal sum of $[dollar value], plus any applicable taxes, 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

<table>
<thead>
<tr>
<th>Specification No.</th>
<th>[Enter Spec # Here]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specification Title</td>
<td>[Enter Spec Title Here]</td>
</tr>
<tr>
<td>Contract No.</td>
<td>[Enter Contract # Here]</td>
</tr>
</tbody>
</table>

(which contract is referenced to herein and is made a part hereof as though attached hereto), and

WHEREAS, the said principal has accepted, the said contract, and undertake to perform the work therein provided for in the manner and within the time set forth.

This statutory performance bond shall become null and void, if and when the principal, its heirs, executors, administrators, successors, or assigns shall well and faithfully perform all of the Principal's obligations under the Contract and fulfill all terms and conditions of all duly authorized modifications, additions and changes to said Contract that may hereafter be made, at the time and in the manner therein specified; and if such performance obligations have not been fulfilled, this bond shall remain in force and effect.

The Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract, or to the work to be performed under the Contract shall in any way affect its obligation on this bond, and waives notice of any change, extension of time, alteration or addition to the terms of the Contract or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this bond and notice to Surety is not required for such increase.

If the City shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgement, shall pay all costs and attorney's fees incurred by the City in enforcement of its rights hereunder. Venue for any action arising out of in connection with this bond shall be in Pierce County, Washington.

Surety companies executing bonds must be authorized to transact business in the State of Washington as surety and named in the current list of “Surety Companies Acceptable in Federal Bonds” as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Department of the Treasury.

One original bond shall be executed, and signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed power of attorney for the office executing on behalf of the surety.

Principal: [Supplier name]

By: ________________________________

Surety:

______________________________

By: ________________________________

Agent's Name: ________________________________

Agent's Address: ________________________________
GENERAL RELEASE TO THE CITY OF TACOMA

The undersigned, named as the contractor for [Project / Spec. #] between [Contractor's Name] (Themselves or Itself) and the City of Tacoma, dated [Date], 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 $[Amount].

Signed at Tacoma, Washington this _____ day of ______, 20___.

__________________________________________
Contractor

By __________________________

Title __________________________
PART II

SPECIAL PROVISIONS
INTRODUCTION ........................................................................................................... 18
DESCRIPTION OF WORK ............................................................................................ 18
1-01 DEFINITIONS AND TERMS ............................................................................... 19
1-01.3 Definitions ...................................................................................................... 19
1-02 BID PROCEDURES AND CONDITIONS ............................................................ 22
1-02.1 Prequalification of Bidders .............................................................................. 22
1-02.1 Qualifications of Bidder ................................................................................... 22
1-02.2 Plans and Specifications ................................................................................. 22
1-02.4(1) General ..................................................................................................... 22
1-02.5 Proposal Forms .............................................................................................. 22
1-02.6 Preparation of Proposal ............................................................................... 23
1-02.6(1) Recycled Materials Proposal ................................................................. 24
1-02.7 Bid Deposit ..................................................................................................... 24
1-02.9 Delivery of Proposal ........................................................................................ 24
1-03 AWARD AND EXECUTION OF CONTRACT ...................................................... 30
1-03.1 Consideration of Bids ...................................................................................... 30
1-03.1(1) Identical Bid Totals .................................................................................... 30
1-03.2 Award of Contract ........................................................................................... 30
1-03.3 Execution of Contract ..................................................................................... 30
1-03.4 Contract Bond .............................................................................................. 31
1-03.5 Failure to Execute Contract ............................................................................ 32
1-04 SCOPE OF THE WORK ..................................................................................... 33
1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda .................................................................................... 33
1-04.4 Changes ...................................................................................................... 33
1-04.4(1) Minor Changes ........................................................................................... 33
1-05 CONTROL OF WORK ..................................................................................... 34
1-05.3 Working Drawings ......................................................................................... 34
1-05.3 Submittals ....................................................................................................... 34
1-05.3(1) Submittal Schedule .................................................................................... 34
1-10.3(2)F Signalized Intersections ................................................................. 73
1-10.3(3)A Construction Signs ...................................................................... 74
1-10.3(3)C Portable Changeable Message Sign ............................................ 74
1-10.3(3)L Business Open Signs .................................................................... 74
1-10.4(2) Item Bids with Lump Sum for Incidentals ........................................ 75
1-10.5 Payment ............................................................................................... 75
1-10.5(2) Item Bids with Lump Sum for Incidentals ........................................ 75

2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP ..................... 76
  2-01.1 Description ....................................................................................... 76
  2-01.2 Disposal of Usable Material and Debris ............................................. 76
  2-01.3(1) Clearing ....................................................................................... 76
  2-01.3(1)A Tree Protection .......................................................................... 77
  2-01.3(2) Grubbing ...................................................................................... 77
  2-01.3(5) Certified Arborist .......................................................................... 77
  2-01.3(6) Definition of Vegetation ................................................................. 78
  2-01.3(7) Tree and Stump Classifications ...................................................... 78
  2-01.4 Measurement .................................................................................... 78
  2-01.5 Payment ............................................................................................ 78

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS ......................... 80
  2-02.1 Description ....................................................................................... 80
  2-02.3 Construction Requirements ............................................................. 80
  2-02.3(3) Removal of Pavement, Sidewalks, and Curbs ................................ 80
  2-02.3(5) Existing Traffic Signs .................................................................... 80
  2-02.3(6) Test Holes .................................................................................... 80
  2-02.4 Measurement .................................................................................... 81
  2-02.5 Payment ............................................................................................ 81

2-03 ROADWAY EXCAVATION AND EMBANKMENT ............................... 82
  2-03.1 Description ....................................................................................... 82
  2-03.3(5) Slope Treatment .......................................................................... 82
  2-03.3(19) Removal of Pavement, Sidewalks, Curbs, and Gutters ................ 82

2-06 SUBGRADE PREPARATION ................................................................. 83
  2-06.3 Construction Requirements ............................................................. 83
  2-06.5 Measurement and Payment ............................................................... 83
  2-06.5(2) Subgrade Not Constructed Under Same Contract ......................... 84

2-07 WATERING ............................................................................................ 85
  2-07.3 Construction Requirements ............................................................. 85
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-06.2</td>
<td>Materials</td>
<td>94</td>
</tr>
<tr>
<td>4-06.3</td>
<td>Construction Requirements</td>
<td>94</td>
</tr>
<tr>
<td>4-06.3(1)</td>
<td>Asphalt Mixing Plant</td>
<td>94</td>
</tr>
<tr>
<td>4-06.3(2)</td>
<td>Preparation of Aggregates</td>
<td>95</td>
</tr>
<tr>
<td>4-06.3(2)A</td>
<td>Mix Design</td>
<td>95</td>
</tr>
<tr>
<td>4-06.3(3)</td>
<td>Vacant</td>
<td>95</td>
</tr>
<tr>
<td>4-06.3(4)</td>
<td>Mixing</td>
<td>95</td>
</tr>
<tr>
<td>4-06.3(5)</td>
<td>Hauling Equipment</td>
<td>95</td>
</tr>
<tr>
<td>4-06.3(6)</td>
<td>Spreading and Finishing</td>
<td>95</td>
</tr>
<tr>
<td>4-06.3(6)A</td>
<td>Subgrade Protection Course</td>
<td>95</td>
</tr>
<tr>
<td>4-06.3(7)</td>
<td>Density</td>
<td>96</td>
</tr>
<tr>
<td>4-06.3(8)</td>
<td>Anti-Stripping Additive</td>
<td>96</td>
</tr>
<tr>
<td>4-06.4</td>
<td>Measurement</td>
<td>96</td>
</tr>
<tr>
<td>4-06.5</td>
<td>Payment</td>
<td>96</td>
</tr>
<tr>
<td>5-04</td>
<td>HOT MIX ASPHALT</td>
<td>97</td>
</tr>
<tr>
<td>5-04.1</td>
<td>Description</td>
<td>97</td>
</tr>
<tr>
<td>5-04.2</td>
<td>Materials</td>
<td>97</td>
</tr>
<tr>
<td>5-04.2(1)</td>
<td>How to Get an HMA Mix Design on the QPL</td>
<td>97</td>
</tr>
<tr>
<td>5-04.2(1)D</td>
<td>Fiber Reinforced HMA</td>
<td>97</td>
</tr>
<tr>
<td>5-04.2(2)</td>
<td>Mix Design – Obtaining Project Approval</td>
<td>98</td>
</tr>
<tr>
<td>5-04.2(2)B</td>
<td>Using HMA Additives</td>
<td>99</td>
</tr>
<tr>
<td>5-04.3</td>
<td>Construction Requirements</td>
<td>99</td>
</tr>
<tr>
<td>5-04.3(2)</td>
<td>Paving Under Traffic</td>
<td>99</td>
</tr>
<tr>
<td>5-04.3(3)C</td>
<td>Pavers</td>
<td>99</td>
</tr>
<tr>
<td>5-04.3(3)D</td>
<td>Material Transfer Device or Material Transfer Vehicle</td>
<td>99</td>
</tr>
<tr>
<td>5-04.3(4)C</td>
<td>Pavement Repair</td>
<td>100</td>
</tr>
<tr>
<td>5-04.3(6)</td>
<td>Mixing</td>
<td>100</td>
</tr>
<tr>
<td>5-04.3(9)</td>
<td>HMA Mixture Acceptance</td>
<td>100</td>
</tr>
<tr>
<td>5-04.3(9)A</td>
<td>Test Sections</td>
<td>101</td>
</tr>
<tr>
<td>5-04.3(9)B</td>
<td>Mixture Acceptance – Statistical Evaluation</td>
<td>101</td>
</tr>
<tr>
<td>5-04.3(9)B</td>
<td>Mixture Acceptance – Nonstatistical Evaluation</td>
<td>101</td>
</tr>
<tr>
<td>5-04.3(9)B1</td>
<td>Mixture Statistical Evaluation – Lots and Sublots</td>
<td>101</td>
</tr>
<tr>
<td>5-04.3(9)B1</td>
<td>Mixture Nonstatistical Evaluation – Lots and Sublots</td>
<td>101</td>
</tr>
<tr>
<td>5-04.3(9)E</td>
<td>Mixture Acceptance – Notification of Acceptance Test Results</td>
<td>102</td>
</tr>
<tr>
<td>5-04.3(10)B</td>
<td>HMA Compaction - Cyclic Density</td>
<td>102</td>
</tr>
<tr>
<td>5-04.3(10)C1</td>
<td>HMA Compaction Statistical Evaluation – Lots and Sublots</td>
<td>102</td>
</tr>
</tbody>
</table>
7-08.3(1)A Trenches ........................................................................................................ 117
7-08.3(1)C Bedding the Pipe ........................................................................................ 117
7-08.3(2)F Plugs and Connections ............................................................................. 117
7-08.3(2)G Jointing of Dissimilar Pipe ......................................................................... 117
7-08.3(3) Backfilling ................................................................................................... 117
7-08.3(5) Temporary Bypass Pumping ....................................................................... 118
7-08.3(5)A General Requirements ............................................................................ 118
7-08.3(5)B Backup Equipment and Monitoring ......................................................... 119
7-08.3(5)C Flow for Bypass System Design .............................................................. 119
7-08.3(5)D Bypass Pumping Plan ............................................................................. 119
7-08.3(6) Abandon Existing Pipe ............................................................................. 120
7-08.4 Measurement .................................................................................................. 120
7-08.5 Payment .......................................................................................................... 120

7-17 SANITARY SEWERS ....................................................................................... 122
7-17.1 Description ...................................................................................................... 122
7-17.2 Materials ......................................................................................................... 122
7-17.3(2)A General .................................................................................................... 122
7-17.3(2)H Television Inspection ............................................................................. 122
7-17.3(2)J Jointing of Dissimilar Pipe ...................................................................... 124
7-17.4 Measurement .................................................................................................. 124
7-17.5 Payment .......................................................................................................... 125

7-18 SIDE SEWERS ................................................................................................. 126
7-18.1 Description ...................................................................................................... 126
7-18.3(1) General ....................................................................................................... 126
7-18.3(2)A Jointing of Dissimilar Pipe ...................................................................... 126
7-18.4 Measurement .................................................................................................. 126
7-18.5 Payment .......................................................................................................... 126

7-19 SEWER CLEANOUTS ...................................................................................... 127
7-19.3 Construction Requirements .......................................................................... 127
7-19.5 Payment .......................................................................................................... 127

7-20 RESIDENTIAL STORM DRAIN UNDER SIDEWALK .................................... 128
7-20.1 Description .................................................................................................... 128
7-20.2 Materials ....................................................................................................... 128
7-20.3 Construction Requirements .......................................................................... 128
7-20.4 Measurement ................................................................................................ 128
7-20.5 Payment ........................................................................................................ 128
8-01 EROSION CONTROL AND WATER POLLUTION CONTROL ........................................ 129
8-01.1 Description ..................................................................................................... 129
8-01.3(1) General ..................................................................................................... 129
8-01.3(1)A Submittals .............................................................................................. 129
8-01.3(1)B Erosion and Sediment Control (ESC) Lead ......................................... 130
8-01.3(1)C Water Management ............................................................................. 131
8-01.3(2) Temporary Seeding and Mulching ........................................................... 133
8-01.3(2)B Temporary Seeding ............................................................................... 133
8-01.3(2)D Temporary Mulching .......................................................................... 134
8-01.3(2)E Tackifiers ............................................................................................ 134
8-01.3(7) Stabilized Construction Entrance ......................................................... 134
8-01.3(8) Street Cleaning .................................................................................... 134
8-01.3(9)D Inlet Protection .................................................................................. 134
8-01.3(10) Wattles ............................................................................................... 134
8-01.4 Measurement ............................................................................................ 134
8-01.4(2) Item Bids ............................................................................................... 134
8-01.5 Payment .................................................................................................. 135
8-01.5(2) Item Bids ............................................................................................... 135
8-02 ROADSIDE RESTORATION ....................................................................... 137
8-02.1 Description ............................................................................................... 137
8-02.2 Materials .................................................................................................. 137
8-02.3 Construction Requirements ...................................................................... 137
8-02.3(1) Responsibility During Construction ...................................................... 137
8-02.3(2)A Roadside Work Plan .......................................................................... 138
8-02.3(4) Topsoil ................................................................................................ 138
8-02.3(4)A Topsoil Type A .................................................................................. 138
8-02.3(4)B Topsoil Type B .................................................................................. 138
8-02.3(4)C Topsoil Type C .................................................................................. 138
8-02.3(5) Roadside Seeding, Lawn and Planting Area Preparation ....................... 138
8-02.3(5)A Seeding Area Preparation .................................................................. 139
8-02.3(5)B Lawn Area Preparation ...................................................................... 139
8-02.3(5)C Planting Area Preparation .................................................................. 139
8-02.3(6) Mulch and Amendments ...................................................................... 139
8-02.3(6)A Compost ........................................................................................... 140
8-02.3(6)B Fertilizers .......................................................................................... 140
8-02.3(8)C Pruning, Staking, Guying, and Wrapping ............................................. 141
8-02.3(10) Lawn Installation..................................................................................... 141
8-02.3(10)A Dates and Conditions for Lawn Installation ................................. 141
8-02.3(10)B Lawn Seeding and Sodding............................................................. 141
8-02.3(10)C Lawn Establishment....................................................................... 142
8-02.3(11)B Bark or Woodchip Mulch .............................................................. 142
8-02.3(13) Plant Establishment ....................................................................... 142
8-02.3(14) Plant Replacement ........................................................................... 143
8-02.3(16) Roadside Maintenance Under Construction .................................... 143
8-02.3(17) Tree Protection ............................................................................... 143
8-02.4 Measurement ....................................................................................... 143
8-02.5 Payment ............................................................................................... 144
8-03 IRRIGATION SYSTEM .............................................................................. 146
8-03.1 Description ............................................................................................ 146
8-03.3(1) General Requirements ..................................................................... 146
8-03.3(7)A Irrigation Sleeves .......................................................................... 146
8-03.3(9)B Irrigation Heads ............................................................................. 146
8-03.3(9)C Valve, Valve Boxes, Hose Bibs ....................................................... 146
8-03.3(9)E Controller ...................................................................................... 146
8-03.3(9)G Electrical Wire Installation ............................................................. 146
8-03.10 Flushing and Testing ........................................................................... 146
8-03.3(10)A General Requirements ................................................................ 146
8-03.3(10)B Mainline or Lateral Flushing ......................................................... 147
8-03.3(10)C Mainline or Lateral Hydrostatic Pressure Testing ....................... 147
8-03.3(13) As-Built Plans, M&O Manuals, and Operating Tools ..................... 147
8-03.3(13)C Operating Tools .......................................................................... 147
8-04 CURBS, GUTTERS, AND SPILLWAYS ...................................................... 148
8-04.2 Materials .............................................................................................. 148
8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways ............................. 148
8-04.3(1)C Integral Cement Concrete Curb .................................................... 148
8-04.3(6) Cold Weather Work ....................................................................... 148
8-04.5 Payment ............................................................................................... 149
8-06 CEMENT CONCRETE DRIVEWAY ENTRANCES .................................. 150
8-06.2 Materials .............................................................................................. 150
8-06.3 Construction Requirements ................................................................. 150
8-06.3(1) Cold Weather Work ....................................................................... 150
8-06.5 Payment ............................................................................................... 150
8-20  ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, INTELLIGENT TRANSPORTATION SYSTEMS, AND ELECTRICAL ................................................................. 163
8-20.1(3) Permitting and Inspections ................................................................. 163
8-20.2 Materials ................................................................................................ 163
8-20.2(1) Equipment List and Drawings ............................................................ 163
8-20.3 Construction Requirements ................................................................... 164
8-20.3(1) General .............................................................................................. 164
8-20.3(4) Foundations ....................................................................................... 165
8-20.3(5) Conduit .............................................................................................. 165
8-20.3(5)A General ......................................................................................... 165
8-20.3(5)B Conduit Type ............................................................................... 166
8-20.3(5)D Conduit Placement ........................................................................ 166
8-20.3(5)E1 Open Trenching .......................................................................... 166
8-20.3(6) Junction Boxes, Cable Vaults, and Pull boxes .................................... 167
8-20.3(7) Messenger Cable, Fittings ................................................................. 167
8-20.3(8) Wiring ................................................................................................ 168
8-20.3(8)A Splices ........................................................................................... 168
8-20.3(9) Bonding, Grounding ........................................................................ 169
8-20.3(10) Service, Transformer, and Intelligent Transportation System (ITS) Cabinets .............................................................. 169
8-20.3(11) Testing ............................................................................................. 169
8-20.3(11)B Traffic Signal System Turn-On ....................................................... 169
8-20.3(13) Illumination Systems ....................................................................... 169
8-20.3(13)A Light Standards .......................................................................... 169
8-20.3(13)B Vacant ........................................................................................ 170
8-20.3(13)B Temporary Lighting .................................................................... 170
8-20.3(13)C Luminaires ................................................................................ 170
8-20.3(14) Signal Systems .............................................................................. 170
8-20.3(14)A Signal Controllers ...................................................................... 170
8-20.3(14)B Signal Heads .............................................................................. 171
8-20.3(14)C Induction Loop Vehicle Detectors ................................................ 171
8-20.3(14)E Signal Standards ........................................................................ 171
8-20.3(14)F Thermal, Microwave, Fish-Eye, and LED Optical Vehicle Detection .... 171
8-20.3(17)B “As Built” Plans ......................................................................... 172
8-20.4 Measurement ....................................................................................... 172
8-20.5 Payment ............................................................................................... 172
8-22  PAVEMENT MARKING ......................................................................... 174

T-12
8-32.1 Description ........................................................................................................ 183
8-32.1(1) Certification .................................................................................................. 183
8-32.1(2) Delivery, Storage, and Handling ................................................................. 183
8-32.2 Material ............................................................................................................ 183
8-32.2(1) Segmental Concrete Retaining Wall Units .................................................... 183
8-32.2(2) Cap Adhesive ............................................................................................... 184
8-32.2(3) Perforated Drain Pipe ................................................................................ 184
8-32.2(4) Base Leveling Pad Material ......................................................................... 184
8-32.2(5) Geogrid Reinforcement ............................................................................. 185
8-32.2(6) Backfill for over-excavation class A ............................................................ 185
8-32.2(7) Drainage Zone Wall Backfill ...................................................................... 185
8-32.3 Construction Requirements ............................................................................ 185
8-32.3(1) Subgrade Preparation .................................................................................. 185
8-32.3(2) Base Leveling Pad ...................................................................................... 186
8-32.3(3) Segmental Concrete Unit Installation ......................................................... 186
8-32.3(4) Structural Geogrid Installation .................................................................. 186
8-32.3(5) Wall Backfill Placement ............................................................................ 187
8-32.3(6) Perforated Drain Pipe Placement ............................................................... 188
8-32.3(7) Cap Block Placement ................................................................................ 188
8-32.3(8) Fence Installation Top of Wall .................................................................. 188
8-32.3(9) Structure Excavation ................................................................................ 188
8-32.3(10) Shoring or Extra Excavation .................................................................... 188
8-32.3(11) Anti-graffiti Coating ................................................................................ 188
8-32.4 Measurement .................................................................................................. 188
8-32.5 Payment .......................................................................................................... 189
8-33 CEMENT CONCRETE RETAINING WALL ......................................................... 190
8-33.1 Description ...................................................................................................... 190
8-33.2 Materials .......................................................................................................... 190
8-33.3 Construction .................................................................................................... 190
8-33.3(1) Anti-graffiti Coating ................................................................................... 190
8-33.4 Measurement .................................................................................................. 190
8-33.4 Payment .......................................................................................................... 191
9-03 AGGREGATES .................................................................................................. 192
9-03.1 Aggregates for Portland Cement Concrete .................................................... 192
9-03.1(1) General Requirements ............................................................................. 192
9-03.6 Vacant ............................................................................................................ 192
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-03.6</td>
<td>Aggregates for Asphalt Treated Base (ATB)</td>
<td>192</td>
</tr>
<tr>
<td>9-03.6(1)</td>
<td>General Requirements</td>
<td>192</td>
</tr>
<tr>
<td>9-03.6(2)</td>
<td>Grading</td>
<td>192</td>
</tr>
<tr>
<td>9-03.6(3)</td>
<td>Test Requirements</td>
<td>192</td>
</tr>
<tr>
<td>9-03.8</td>
<td>Aggregates for Hot Mix Asphalt</td>
<td>193</td>
</tr>
<tr>
<td>9-03.12</td>
<td>Gravel Backfill</td>
<td>193</td>
</tr>
<tr>
<td>9-03.12(3)</td>
<td>Gravel Backfill for Pipe Zone Bedding</td>
<td>193</td>
</tr>
<tr>
<td>9-03.21</td>
<td>Recycled Material</td>
<td>194</td>
</tr>
<tr>
<td>9-03.21(1)</td>
<td>General Requirements</td>
<td>194</td>
</tr>
<tr>
<td>9-08</td>
<td>PAINTS AND RELATED MATERIALS</td>
<td>195</td>
</tr>
<tr>
<td>9-08.20</td>
<td>Painting Surfaces Systems</td>
<td>195</td>
</tr>
<tr>
<td>9-08.20(1)</td>
<td>Steel</td>
<td>195</td>
</tr>
<tr>
<td>9-08.20(2)</td>
<td>Concrete</td>
<td>195</td>
</tr>
<tr>
<td>9-08.20(3)</td>
<td>Wood</td>
<td>195</td>
</tr>
<tr>
<td>9-14</td>
<td>EROSION CONTROL AND ROADSIDE PLANTING</td>
<td>196</td>
</tr>
<tr>
<td>9-14.2</td>
<td>Topsoil</td>
<td>196</td>
</tr>
<tr>
<td>9-14.2(1)</td>
<td>Topsoil Type A</td>
<td>196</td>
</tr>
<tr>
<td>9-14.5(8)</td>
<td>Compost</td>
<td>196</td>
</tr>
<tr>
<td>9-28</td>
<td>SIGNING MATERIALS AND FABRICATION</td>
<td>198</td>
</tr>
<tr>
<td>9-28.1</td>
<td>General</td>
<td>198</td>
</tr>
<tr>
<td>9-28.9</td>
<td>Fiberglass Reinforced Plastic Signs</td>
<td>198</td>
</tr>
<tr>
<td>9-29</td>
<td>ILLUMINATION, SIGNALS, ELECTRICAL</td>
<td>199</td>
</tr>
<tr>
<td>9-29.1(4)</td>
<td>is supplemented with the following new section:</td>
<td>199</td>
</tr>
<tr>
<td>9-29.1(4)E</td>
<td>Service Entrance Cap Fittings</td>
<td>199</td>
</tr>
<tr>
<td>9-29.1(6)</td>
<td>Detectable Underground Warning Tape</td>
<td>199</td>
</tr>
<tr>
<td>9-29.2</td>
<td>Junction Boxes, Cable Vaults and Pull Boxes</td>
<td>199</td>
</tr>
<tr>
<td>9-29.2(1)A2</td>
<td>Non-Concrete Junction Boxes</td>
<td>199</td>
</tr>
<tr>
<td>9-29.2(4)</td>
<td>Cover Markings</td>
<td>199</td>
</tr>
<tr>
<td>9-29.2(5)C</td>
<td>Standard Duty Non-Concrete Junction Boxes</td>
<td>199</td>
</tr>
<tr>
<td>9-29.3</td>
<td>Fiber Optic Cable, Electrical Conductors, and Cable</td>
<td>199</td>
</tr>
<tr>
<td>9-29.3(1)C</td>
<td>Sealed Fiber Optic Splice Closures</td>
<td>200</td>
</tr>
<tr>
<td>9-29.3(1)D</td>
<td>Fiber Optic Termination Box</td>
<td>200</td>
</tr>
<tr>
<td>9-29.3(2)A</td>
<td>Single Conductor</td>
<td>201</td>
</tr>
<tr>
<td>9-29.3(2)A1</td>
<td>Single Conductor Current Carrying</td>
<td>201</td>
</tr>
<tr>
<td>9-29.3(2)A2</td>
<td>Grounding Electrode Conductor</td>
<td>201</td>
</tr>
<tr>
<td>9-29.3(2)B</td>
<td>Multi-Conductor Cable</td>
<td>201</td>
</tr>
</tbody>
</table>
9-29.3(2)F Detector Loop Wire ................................................................................ 201
9-29.3(2)I Twisted Pair Communication Cable ......................................................... 201
9-29.4 Messenger Cable, Fittings ............................................................................ 201
9-29.6 Light and Signal Standards ........................................................................... 202
9-29.6(3) Timber Light Standards, Timber Strain Poles, Timber Service Supports... 202
9-29.6(5) Foundation Hardware ............................................................................. 202
9-29.6(6) City of Tacoma Universal Pole ................................................................. 202
9-29.6(6)A Steel Strain Poles .................................................................................. 203
9-29.6(6)B Luminaire Mast Arms ............................................................................ 205
9-29.10 Luminaires ................................................................................................. 205
9-29.10(1) Conventional Roadway Luminaires ....................................................... 205
9-29.10(1)A Luminaire Classifications ..................................................................... 207
9-29.11 Control Equipment ..................................................................................... 208
9-29.11(2) Photoelectric Controls ........................................................................... 209
9-29.12 Electrical Splice Materials .......................................................................... 209
9-29.12(1) Illumination Circuit Splices ..................................................................... 209
9-29.12(2) Traffic Signal Splice Material ................................................................. 210
9-29.12(3) Splice Enclosures ................................................................................... 210
9-29.12(4) Re-Enterable Splice Enclosure .................................................................. 210
9-29.13 Control Cabinet Assemblies ....................................................................... 210
9-29.13(1) Traffic Control Cabinets ......................................................................... 210
9-29.13(1)A Cabinet Enclosures ............................................................................. 211
9-29.13(2) Wiring .................................................................................................... 212
9-29.13(3) Electrical Design .................................................................................... 212
9-29.13(3)B1 Power Supply Interface Panel ........................................................... 212
9-29.13(3)B2 SDLC Interface Panel ......................................................................... 212
9-29.13(3)B3 Video Detection Interface Panel ........................................................ 212
9-29.13(3)B5 Power Panel ...................................................................................... 213
9-29.13(3)B6 Communication Interface Panel ........................................................ 213
9-29.13(4) Auxiliary Equipment ............................................................................. 214
9-29.13(4)A Traffic Signal Controller ...................................................................... 214
9-29.14 Vacant ....................................................................................................... 214
9-29.14 School Zone Beacon Controls ..................................................................... 214
9-29.15 Flashing Beacon Control ............................................................................ 215
9-29.15 Pedestrian-Activated Crosswalk Beacons ................................................... 215
9-29.15(1) Pedestrian Crossing Beacon Assembly .................................................. 215
9-29.15(2) Pedestrian Crossing Beacon Control Cabinet ............................................. 216
9-29.15(3) AC Powered Installations ........................................................................ 216
9-29.16 Vehicular Signal Heads, Displays, and Housing ........................................... 216
9-29.16(2)B Signal Housing ....................................................................................... 216
9-29.16(3) Polycarbonate Traffic Signal Heads .......................................................... 217
9-29.17 Signal Head Mounting Brackets and Fittings ............................................... 217
9-29.18 Vehicle Detector ........................................................................................... 217
9-29.18(3) Gridsmart Detection System ..................................................................... 217
9-29.19 Pedestrian Push Buttons ................................................................................ 218
9-29.20 Pedestrian Signals ......................................................................................... 218
9-29.24 Service Cabinets ........................................................................................... 218
9-29.24(2) Electrical Circuit Breakers and Contactors .............................................. 219
9-29.25 Amplifier, Transformer, and Terminal Cabinets ........................................... 219
9-33 CONSTRUCTION GEOSYNTHETIC ................................................................. 6
9-33.2 Geosynthetic Properties .................................................................................. 6
9-33.2(1) Geotextile Properties .................................................................................. 6
INTRODUCTION
(March 31, 2023 Tacoma GSP)

The following special provisions shall be used in conjunction with the "2023 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 conference will not be held.

DESCRIPTION OF WORK
(******)

This Contract shall generally consist of improve include replacing the road, adding separated bike lanes, replacing sidewalks and curb ramps with ramps meeting ADA standards, and upgrading water and storm water lines, and adding an illumination system. The work will be along East 64th Street from McKinley Avenue East to Portland Avenue.

END OF SECTION
1-01 DEFINITIONS AND TERMS

1-01.3 Definitions
(January 19, 2022 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 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”. 


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 Prequalification of Bidders
Delete this section and replace it with the following:

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

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.

To reduce paper waste and promote sustainability, the Contracting Agency will only provide electronic copies of the project plans and specifications. If printed copies of the plans and specifications are necessary, the Contractor may obtain them from the source stated in the Call for Bids, at the Contractor’s own expense. Prior to Notice to Proceed, the Contracting Agency may issue revised plans and specifications incorporating addenda published during the bid period. The Contractor should inquire with the Contracting Agency, before ordering plans and specifications, to determine if revisions are forthcoming.

1-02.4(1) General
(January 19, 2022 APWA GSP Option B)
The first sentence of the last paragraph is revised to read, 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.

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
(July 11, 2018 APWA GSP)

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:

If no Subcontractor is listed, the Bidder acknowledges that it does not intend to use any Subcontractor to perform those items of work.

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:

City of Tacoma – Equity in Contracting Utilization Form

Add the following new section:
1-02.6(1) Recycled Materials Proposal
(January 4, 2016  APWA GSP)

The Bidder shall submit with the Bid, its proposal for incorporating recycled materials into the project, using the form provided in the Contract Provisions.

1-02.7 Bid Deposit
(March 1, 2021 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 the Contracting Agency’s form 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.

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 submitting your bid electronically, a scanned version of the original bid bond or cashier’s check shall accompany your electronic bid submittal. The original bid bond or cashier’s check shall be sent to the Contracting Agency and received by the Contracting Agency within 7 calendar days of the bid opening or the bidder may be deemed non-responsive.

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

If so stated in the Contract Provisions, cash will not be accepted for a bid deposit.

1-02.9 Delivery of Proposal
(March 1, 2021 Tacoma GSP)

Delete this section and replace it with the following:

Each Proposal shall be submitted in a sealed envelope or shall be submitted electronically via email to sendbid@cityoftacoma.org, with the Project Name and Project Number as stated in the Call for Bids clearly marked on the outside of the envelope, or as otherwise required in the Bid Documents, to ensure proper handling and delivery.
To be considered responsive on a FHWA-funded project, the Bidder may be required to submit the following items, as required by Section 1-02.6:

- DBE Written Confirmation Document from each DBE firm listed on the Bidder’s completed DBE Utilization Certification (WSDOT 272-056);
- Good Faith Effort (GFE) Documentation
- DBE Bid Item Breakdown (WSDOT 272-054)
- DBE Trucking Credit Form (WSDOT 272-058)

These documents, if applicable, shall be received either with the Bid Proposal or as a Supplement to the Bid. The documents shall be received no later than 48 hours (not including Saturdays, Sundays and Holidays) after the time for delivery of the Bid Proposal.

If submitted after the Bid Proposal is due, the document(s) shall be submitted as follows:

1. In a sealed envelope labeled the same as for the Proposal, with “Supplemental Information” added, or
2. By e-mail to sendbid@cityoftacoma.org with “Supplemental Information” noted in the subject line.

All other information required to be submitted with the Bid Proposal must be submitted with the Bid Proposal itself, at the time stated in the Call for Bids.

Proposals that are received as required will be publicly opened and read as specified in Section 1-02.12. The Contracting Agency will not open or consider any Bid Proposal that is received after the time specified in the Call for Bids for receipt of Bid Proposals, or received in a location other than that specified in the Call for Bids. The Contracting Agency will not open or consider any “Supplemental Information” (DBE confirmations or GFE documentation) that is received after the time specified above, or received in a location other than that specified in the Call for Bids.

If an emergency or unanticipated event interrupts normal work processes of the Contracting Agency so that Proposals cannot be received at the office designated for receipt of bids as specified in Section 1-02.12 the time specified for receipt of the Proposal will be deemed to be extended to the same time of day specified in the solicitation on the Tuesday on which the normal work processes of the Contracting Agency resume.

1-02.9 Delivery of Proposal
(May 17, 2018 APWA GSP, Option A)
Delete this section and replace it with the following:

Each Proposal shall be submitted in a sealed envelope, with the Project Name and Project Number as stated in the Call for Bids clearly marked on the outside of the envelope, or as otherwise required in the Bid Documents, to ensure proper handling and delivery.
To be considered responsive on a FHWA-funded project, the Bidder may be required to submit the following items, as required by Section 1-02.6:

- DBE Written Confirmation Document from each DBE firm listed on the Bidder’s completed DBE Utilization Certification (WSDOT 272-056)
- Good Faith Effort (GFE) Documentation
- DBE Bid Item Breakdown (WSDOT 272-054)
- DBE Trucking Credit Form (WSDOT 272-058)

These documents, if applicable, shall be received either with the Bid Proposal or as a supplement to the Bid. These documents shall be received no later than 24 hours (not including Saturdays, Sundays and Holidays) after the time for delivery of the Bid Proposal.

If submitted after the Bid Proposal is due, the document(s) must be submitted in a sealed envelope labeled the same as for the Proposal, with “Supplemental Information” added. All other information required to be submitted with the Bid Proposal must be submitted with the Bid Proposal itself, at the time stated in the Call for Bids.

The Contracting Agency will not open or consider any Bid Proposal that is received after the time specified in the Call for Bids for receipt of Bid Proposals, or received in a location other than that specified in the Call for Bids. The Contracting Agency will not open or consider any “Supplemental Information” (DBE confirmations, or GFE documentation) that is received after the time specified above, or received in a location other than that specified in the Call for Bids.

1-02.12 Public Opening of Proposals
(March 1, 2021 Tacoma GSP)

Proposals will be opened and publicly read via webcast at the time indicated in the call for Bids unless the Bid opening has been delayed or canceled.

This public bid opening will be held via webinar. Please use the link below or on the Request for Bids page to join the webinar:

https://us06web.zoom.us/j/88402680573?pwd=eThSaXZxNER0TWRhUGx6U0F2cURMZz09

Preliminary and final bid results are posted at www.TacomaPurchasing.org.

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;
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.

---

1-02.14 Disqualification of Bidders
(October 18, 2013 Tacoma GSP)

Delete this section and replace it with the following:

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.
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.

1-03.1(1) Identical Bid Totals
(January 4, 2016 APWA GSP)
Revise this section to read:

After opening Bids, if two or more lowest responsive Bid totals are exactly equal, then the tie-breaker will be the Bidder with an equal lowest bid, that proposed to use the highest percentage of recycled materials in the Project, per the form submitted with the Bid Proposal. If those percentages are also exactly equal, then the tie-breaker will be determined by drawing as follows: Two or more slips of paper will be marked as follows: one marked “Winner” and the other(s) marked “unsuccessful”. The slips will be folded to make the marking unseen. The slips will be placed inside a box. One authorized representative of each Bidder shall draw a slip from the box. Bidders shall draw in alphabetic order by the name of the firm as registered with the Washington State Department of Licensing. The slips shall be unfolded and the firm with the slip marked “Winner” will be determined to be the successful Bidder and eligible for Award of the Contract. Only those Bidders who submitted a Bid total that is exactly equal to the lowest responsive Bid, and with a proposed recycled materials percentage that is exactly equal to the highest proposed recycled materials amount, are eligible to draw.

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
(January 19, 2022 APWA GSP)
Revise this section to read:

Within 3 calendar days of Award date (not including Saturdays, Sundays and Holidays), the successful Bidder shall provide the information necessary to execute the Contract to the Contracting Agency. The Bidder shall send the contact information, including the full name, email address, and phone number, for the authorized signer and bonding agent to the Contracting Agency.
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, a satisfactory bond as required by law and Section 1-03.4. the Transfer of Coverage form for the Construction Stormwater General Permit with sections I, III, and VIII completed when provided. 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 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

(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.

1-04.4 Changes

(January 19, 2022 APWA GSP)

The first two sentences of the last paragraph of Section 1-04.4 are deleted.

1-04.4(1) Minor Changes

(May 30, 2019 APWA GSP)

Delete the first paragraph and replace it with the following:

Payments or credits for changes amounting to $10,000 or less may be made under the Bid item “Minor Change”. At the discretion of the Contracting Agency, this procedure for Minor Changes may be used in lieu of the more formal procedure as outlined in Section 1-04.4, Changes. All “Minor Change” work will be within the scope of the Contract Work and will not change Contract Time.

END OF SECTION
1-05  CONTROL OF WORK

1-05.3 Working Drawings
(January 13, 2011 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 require submittals, until reviewed by the Contracting Agency.

The Contractor shall submit four (4) copies to the Engineer of all submittals required by the Contract Documents, 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)

The Engineer will return one (1) copy to the Contractor.

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 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, and the transmittals shall be sequentially numbered. The numbering of resubmittals shall meet the requirements of
Section 1-05.3(4). On each page, indicate the page number, and total number of pages in each submittal.

Each submittal shall indicate the intended use of the item in the work. When catalog pages are submitted, applicable items shall be clearly identified. The current revision, issue number, and data shall be indicated on all drawings and other descriptive data.

Each submittal should be transmitted with the “Submittal Transmittal Form” found at the end of this section. Upon request, an electronic copy of the Submittal Transmittal Form will be made available to the Contractor.

In lieu of utilizing the Submittal Transmittal Form, the Contractor may display the following information on each submittal, in a clear space on the front of the submittal:

- Project Name: East 64th Phase II, McKinley to Portland
- Project Specification Number: PW23-0036F
- Project No. PWK-G0042
- Submittal Date
- Description of Submittal
- Sequential, unique submittal number.
- Related Specification Section and/or plan sheet
- The following statement: “This document has been detail-checked for accuracy of content and for compliance with the Contract documents. The information contained herein has been fully coordinated with all involved Subcontractors.”
- Printed or typed name and signature of Contractor.

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”, or “REVIEWED WITH COMMENTS”, no additional copies need to be furnished. The Contractor shall comply with any comments on the return submittal.

1-05.3(4) Resubmittals

When a submittal is marked “AMEND AND RESUBMIT” or “REJECTED, SEE REMARKS,” the Contractor shall make the corrections as noted and instructed by the Engineer and resubmit four (4) copies. The Contractor shall not install material or equipment that has received a review status of “AMEND AND RESUBMIT” or REJECTED, SEE REMARKS”.

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. Resubmittals shall bear the number of the original submittal followed by a letter (A, B, etc.) to indicate the sequence of the resubmittal.

The Contractor shall revise returned submittals as required and resubmit until final review is obtained.

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 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.
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.

1-05.4 Conformity with and Deviations from Plans and Stakes

Bridge and Structure Surveys
(July 23, 2015 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.

Supplement this section with the following:

1-05.4 Conformity with Deviations from Plans and Stakes - Roadway and Utility
(June 1, 2023 Tacoma GSP)

All surveying for this project shall be the responsibility of the Contractor.
Copies of the Contracting Agency provided primary survey control data are available for
the bidder’s inspection at the office of the Engineer.

The Contractor shall be responsible for setting, maintaining, and resetting all alignment
stakes, slope stakes, and grades necessary for the construction of the roadbed,

drainage, surfacing, paving, channelization and pavement marking, illumination and

signals, guardrails and barriers, signing, and sanitary and storm sewer utilities. Except

for the survey control data to be furnished by the Contracting Agency, calculations,

surveying, and measuring required for setting and maintaining the necessary lines and

grades shall be the Contractor’s responsibility.

The Contractor shall inform the Engineer when monuments are discovered that were not
identified in the Plans and construction activity may disturb or damage the monuments.

All monuments noted on the plans “DO NOT DISTURB” shall be protected throughout

the length of the project or be replaced at the Contractor’s expense.

Detailed survey records shall be maintained, including a description of the work

performed on each shift, the methods utilized, and the control points used. The record

shall be adequate to allow the survey to be reproduced. A copy of each day’s record

shall be provided to the Engineer within three working days after the end of the shift.

The meaning of words and terms used in this provision shall be as listed in “Definitions

of Surveying and Associated Terms” current edition, published by the American

Congress on Surveying and Mapping and the American Society of Civil Engineers.

The survey work shall include but not be limited to the following:

- Verify the primary horizontal and vertical control furnished by the Contracting
  Agency, and expand into secondary control by adding stakes and hubs as well
  as additional survey control needed for the project. Provide descriptions of
  secondary control to the Contracting Agency. The description shall include
  coordinates and elevations of all secondary control points.

- Establish, the centerlines of all alignments, by placing hubs, stakes, or marks on
  centerline or on offsets to centerline at all curve points (PCs, PTs, and PIs) and
  at points on the alignments spaced no further than 50 feet.

- Establish clearing limits, placing stakes at all angle points and at intermediate
  points not more than 50 feet apart. The clearing and grubbing limits shall be 5
  feet beyond the toe of a fill and 10 feet beyond the top of a cut unless otherwise
  shown in the Plans.

- Establish grading limits, placing slope stakes at centerline increments not more
  than 50 feet apart. Establish offset reference to all slope stakes. If Global
  Positioning Satellite (GPS) Machine Controls are used to provide grade control,
  then slope stakes may be omitted at the discretion of the Contractor.

- Establish the horizontal and vertical location of all drainage features, placing
  offset stakes to all drainage structures and to pipes at a horizontal interval not
  greater than 25 feet.
Establish roadbed and surfacing elevations by placing stakes at the top of subgrade and at the top of each course of surfacing. Subgrade and surfacing stakes shall be set at horizontal intervals not greater than 50 feet in tangent sections, 25 feet in curve sections with a radius less than 300 feet, and at 10-foot intervals in intersection radii with a radius less than 10 feet. Transversely, stakes shall be placed at all locations where the roadway slope changes and at additional points such that the transverse spacing of stakes is not more than 12 feet. If GPS Machine Controls are used to provide grade control, then roadbed and surfacing stakes may be omitted at the discretion of the Contractor.

Establish intermediate elevation benchmarks as needed to check work throughout the project.

Provide as-built staking for existing flowlines for the specified limits.

Provide references for paving pins at 25-foot intervals or provide simultaneous surveying to establish location and elevation of paving pins as they are being placed.

For all other types of construction included in this provision, (including but not limited to channelization and pavement marking, illumination and signals, guardrails and barriers, signing, and sanitary and storm sewer utilities) provide staking and layout as necessary to adequately locate, construct, and check the specific construction activity.

Contractor shall determine if changes are needed to the profiles or roadway sections shown in the Contract Plans in order to achieve proper smoothness and drainage where matching into existing features, such as a smooth transition from new pavement to existing pavement. The Contractor shall submit these changes to the Engineer for review and approval 10 days prior to the beginning of work.

The Contractor shall provide the Contracting Agency copies of any calculations and staking data when requested by the Engineer.

To facilitate the establishment of these lines and elevations, the Contracting Agency will provide the Contractor with primary survey control information consisting of descriptions of two primary control points used for the horizontal and vertical control, and descriptions of two additional primary control points for every additional three miles of project length. Primary control points will be described by reference to the project alignment and the coordinate system and elevation datum utilized by the project. In addition, the Contracting Agency will supply horizontal coordinates for the beginning and ending points and for each Point of Intersection (PI) on each alignment included in the project.

The Contractor shall ensure a surveying accuracy within the following tolerances:

<table>
<thead>
<tr>
<th>Stakes Type</th>
<th>Vertical</th>
<th>Horizontal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slope stakes</td>
<td>±0.10 feet</td>
<td>±0.10 feet</td>
</tr>
<tr>
<td>Subgrade grade stakes set 0.04 feet below grade</td>
<td>±0.01 feet</td>
<td>±0.5 feet (parallel to alignment)</td>
</tr>
</tbody>
</table>
Stationing on roadway N/A ±0.1 feet (normal to alignment)
Alignment on roadway N/A ±0.04 feet
Surfacing grade stakes ±0.01 feet ±0.5 feet (parallel to alignment) ±0.1 feet (normal to alignment)
Roadway paving pins for surfacing or paving ±0.01 feet ±0.2 feet (parallel to alignment) ±0.1 feet (normal to alignment)

The Contracting Agency may spot-check the Contractor's surveying. These spot checks will not change the requirements for normal checking by the Contractor.

When staking roadway alignment and stationing, the Contractor shall perform independent checks from different secondary control to ensure that the points staked are within the specified survey accuracy tolerances.

The Contractor shall calculate coordinates for the alignment. The Contracting Agency will verify these coordinates prior to issuing approval to the Contractor for commencing with the work. The Contracting Agency will require up to seven calendar days from the date the data is received.

Contract work to be performed using contractor-provided stakes shall not begin until the stakes are approved by the Contracting Agency. Such approval shall not relieve the Contractor of responsibility for the accuracy of the stakes.

Stakes shall be marked in accordance with Standard Plan A10.10. When stakes are needed that are not described in the Plans, then those stakes shall be marked, at no additional cost to the Contracting Agency as ordered by the Engineer.

Payment
Payment will be made for the following bid item when included in the Proposal:
"Roadway Surveying", lump sum.

The lump sum contract price for "Roadway Surveying" shall be full pay for all labor, equipment, materials, and supervision utilized to perform the Work specified, including any resurveying, checking, correction of errors, replacement of missing or damaged stakes, and coordination efforts.

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 and
remedying 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.

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.
SUBMITTAL TRANSMITTAL FORM

East 64th Phase II, McKinley to Portland
Project Number PWK-G0042
Specification No. PW23-0036F

ATTN: Construction Division Date: ________________________

Submittal Number __________

Specification Number ____________ Bid Item No. __________

Submittal Description ______________________________________

We are sending you:

<table>
<thead>
<tr>
<th>Copies</th>
<th>Date</th>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Transmitted: ☐ Submittals (Product Data) for information only.

☐ Submittals for review and comment.

Remarks:
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

Certify Either A or B:

☐ A. This document has been detail-checked for accuracy of content and for compliance with the Contract documents (no exceptions). The information contained herein has been fully coordinated with all involved Subcontractors.

☐ B. This document has been detail-checked for accuracy of content and for compliance with the Contract documents except for the attached deviations. The information contained herein has been fully coordinated with all involved Subcontractors.

Certified By: ____________________________________________

Signature

END OF SECTION
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.

1-06.6 Recycled Materials
(January 4, 2016 APWA GSP)
Delete this section, including its subsections, and replace it with the following:

The Contractor shall make their best effort to utilize recycled materials in the construction of the project. Approval of such material use shall be as detailed elsewhere in the Standard Specifications.

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier).

The Contractor’s report shall be provided on DOT form 350-075 Recycled Materials Reporting.

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.

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(1) State Sales Tax — Rule 171

WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work.
1-07.2(2) State Sales Tax — Rule 170

WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. This includes, but is not limited to, the construction of streets, roads, highways, etc., owned by the state of Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

For work performed in such cases, the Contractor shall collect from the Contracting Agency, retail sales tax on the full contract price. The Contracting Agency will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

Exception: The Contracting Agency will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other contract amount.

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).

1-07.9 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.
1-07.11(2) Contractual Requirements

Section 1-07.11(2) is supplemented with the following:

(January 24, 2024)

11. The Contractor shall comply with the following nondiscrimination provisions, and the Contractor shall ensure the nondiscrimination provisions are included in all subcontracts:

   a. Nondiscrimination Requirement. During the term of this Contract, the Contractor, including all subcontractors, shall not discriminate on the bases enumerated at RCW 49.60.530(3). In addition, the Contractor, including all subcontractors, shall give written notice of this nondiscrimination requirement to any labor organizations with which the Contractor, or subcontractor, has a collective bargaining or other agreement.

   b. Obligation to Cooperate. The Contractor, including all subcontractors, shall cooperate and comply with any Washington state agency investigation regarding any allegation that the Contractor, including any subcontractor, has engaged in discrimination prohibited by this Contract pursuant to RCW 49.60.530(3).

   c. Default. Notwithstanding any provision to the contrary, the Contracting Agency may suspend the Contract in accordance with Section 1-08.6, upon notice of a failure to participate and cooperate with any state agency investigation into alleged discrimination prohibited by this Contract, pursuant to RCW 49.60.530(3). Any such suspension will remain in place until the Contracting Agency receives notification that Contractor, including any subcontractor, is cooperating with the investigating state agency. In the event the Contractor, or subcontractor, is determined to have engaged in discrimination identified at RCW 49.60.530(3), the Contracting Agency may terminate this Contract in whole or in part in accordance with Section 1-08.10(1), and in addition to the sanctions listed in Section 1-07.11(5), the Contractor, subcontractor, or both, may be referred for debarment as provided in RCW 39.26.200. The Contractor or subcontractor may be given a reasonable time in which to cure this noncompliance, including implementing conditions consistent with any court-ordered injunctive relief or settlement agreement.

   d. Remedies for Breach. Notwithstanding any provision to the contrary, in the event of Contract termination or suspension for engaging in discrimination, the Contractor, subcontractor, or both, shall be liable for contract damages as authorized by law including, but not limited to, any cost difference between the original contract and the replacement or cover contract and all administrative costs directly related to the replacement contract, which damages are distinct from any penalties imposed under Chapter 49.60, RCW. The Contracting Agency shall have the right to deduct from any monies due to Contractor or subcontractor, or that thereafter become due, an amount for damages Contractor or subcontractor will owe Contracting Agency for default under this Provision.
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.

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.

1-07.17 Utilities and Similar Facilities
(June 1, 2023 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
- City of Tacoma Traffic Division, Signal/Streetlight Shop, phone: (253) 591-5287
- Rainier Connect, Contact: Brian Munson, phone: (253) 312-2819;
  Brian.Munson@Rainierconnect.net
- Puget Sound Energy, Contact: Mike Klapperich, Electric, phone: (253) 313-3790;
  michael.klapperich@pse.com OR Amber Uhls, Gas, phone: (253) 476-6137;
  amber.uhls@pse.com
- Lumen, Contact: Al (Aliyah) Skaro, relocations@lumen.com
- Terra Tech LLC, Contact: Chris Janoski, phone: (303) 552-8545;
  chrisjanoski@terratechllc.net
- Comcast, Contact: Todd Gallant, phone: (253) 878-4955;
  todd_gallant@cable.comcast.com
• AT&T/Siena Engineering Group, Contact: Louie Van Hollebeke, phone: (425) 896-9850; louie.vanhollebeke@sienaengineeringgroup.com OR Steve Duppenthaler, phone: (425) 286-3822; sd1891@att.com OR Roberta Anderson, phone: (425) 896-9839; roberta.anderson@sienaengineeringgroup.com

• 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

• T-Mobile, Contact: Steven Schauer, Phone: (360) 402-7725; sschauer@cogentco.com

• Zayo Communications, Contact: Phil Braum, phil.braum@zayo.com; zayo.relo.washington@zayo.com

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 Wednesdays.

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.

This section is supplemented with the following;

The project specific Insurance Requirements for the Contractor are included in Part VI of these specifications.

1-07.23 Public Convenience and Safety
Revise the third sentence of the second paragraph to read:

Accessibility to existing or temporary pedestrian push buttons shall not be impaired; if approved by the Contracting Agency activating pedestrian recall timing or other accommodation may be allowed during construction.

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:

East 64th Street (arterial), McKinley Avenue East (arterial), East Portland Avenue (arterial), East I Street, East J Street, East K Street, East L Street, East M Street, East N Street, East Q Street, East 65th Street, and all associated alleys shall remain fully open to two-way vehicular (in separate lanes) and pedestrian traffic at all times.

EXCEPTION:

1. Non-arterial classified roadways are permitted to be closed to traffic for corresponding active construction work, in accordance with the following situations:
   i. During potential construction working hours (i.e., weekdays 7 AM to 7 PM) when arrangements for local/property/business access have been made in advance through coordination between the requestor (if specific), the contractor, and the City (which would represent the unspecific needs of the public); and
   ii. During potential construction working hours (i.e., weekdays 7 AM to 7 PM) so long as special and/or emergency access can be provided when needed.

2. During non-construction hours, the project area shall be left in a state that permits walkability, mobility, and/or on-street parking (as was allowable prior to project start) so long as the permitted vehicular, pedestrian, and/or parking access does not hamper the flow of traffic, temporary traffic control, safety, and/or the state of the area does not preclude legal access (unless otherwise arranged) for affected properties.

3. Project work areas along, within, and/or adjacent to arterials (as identified above), or intersecting other arterial streets, shall not hinder the safety or traffic operations of any arterial street such that two-way vehicular traffic cannot be maintained at all times (which can include parking restrictions to allow for the roadway space needed). If the work occurring (during active construction or during non-construction hours) on an arterial street cannot practicably be completed while maintaining two-way traffic (and the specifications within Except #6 below could not be met), then a road closure plan that still allows an uninterrupted single direction of travel and provides an accompanying directional
detour must be established using an alternate arterial-based route to be submitted for review and approval by the City. The temporary control of traffic in this manner shall only be considered for use during the hours between 9 AM and 3 PM and shall be limited to the shortest extent possible and/or phased in a manner than minimizes the impact to the arterial roadway and associated transportation network. An intersection specific traffic control plan must be developed for work areas that include arterial streets intersecting one another and that plan must be submitted for City review and approval at least 15 working days in advance of the work commencing.

4. Spotters to assist pedestrians through or around the work zone must be available when called for in the Traffic Control Plans, and as noted below, and/or when deemed necessary for safe traffic operations by the City.
   • Intersection of East 64th Street and East Portland Avenue

5. Any demolition, or closure of pedestrian accessibility, at a given corner of an intersection must be limited to that given corner, with the remaining three corners at the intersection (at a minimum) being used to facilitate a pedestrian detour, until full accessibility or an accessible connection with at least one other corner can be re-established. Any temporary pedestrian access path/route that may be employed shall provide equivalent to, or better, accessibility than the unavailable path/route in accordance with the Americans with Disabilities Act and the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG) and shall only direct pedestrians to approved pedestrian routes and legal locations for roadway crossings.

6. East 64th Street, between McKinley Avenue East and East Portland Avenue, may be reduced to one-lane flagger controlled two-way operations for appropriate stages of work occurring during weekdays from 9AM to 3PM that would only require temporary holding/queuing of a given direction of traffic. Held traffic and resulting traffic queues would not be permitted to impact/accumulate into the nearby intersections of McKinley Avenue East/East 64th Street and East Portland Avenue/East 64th Street and any intermediate intersections affected would require additional flaggers positioned to assist with traffic (vehicle and pedestrian) movements. If that result was expected or observed, then a directional closure of East 64th Street would need to be proposed as part of a traffic control plan and associated arterial-based detour plan (for the closed direction of traffic).

7. Proposed work and associated temporary traffic control plans, even if abiding by the above allowances, may not always be permitted to occur concurrently depending on the nature of the work, the temporary traffic control provisions in use, and/or the impact of the work/traffic control. Any proposed concurrency shall be indicated in the contractor’s temporary traffic control plan submittal, which will then be reviewed by the City, and approved as allowable.

To minimize the disruption to access to adjacent properties/businesses, and to Pierce Transit operations, the lane 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. This could require
multiday advance coordination with businesses that have specific access needs during construction, which could result in phased concrete pours or weekend work.

A safe pedestrian access shall be provided at all times through the project area. All lane closures shall be coordinated with the adjacent 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. 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.

The Contractor shall notify and coordinate with all property owners, business owners, and tenants of detours, street and alley closures, or other restrictions that may interfere with their access. Notification shall be at least seventy-two (72) hours in advance for residential properties and at least five (5) working days in advance for commercial properties.

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.
1-07.23(2) Construction and Maintenance of Detours
(April 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 fifteen (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 three (3) working days in advance of implementation of any street closures/detours allowed under the Contract. Advance notice signing shall be placed a minimum of three (3) working days prior to implementation of any street closure/detour.

The contractor shall give Pierce Transit notification a minimum of 10 working days prior to any street closure. The Contractor shall notify all other entities listed below a minimum of five (5) working days prior to any street closure:

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.

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(5) Restrictions on Subcontracting
(August 8, 2023 Tacoma GSP)

This section is deleted.

1-08.1(7A) Payment Certification
(August 8, 2023 Tacoma GSP)

This section is deleted.

Replace 1-08.1(8) in its entirety with the following:

1-08.1(8) Subcontracting – Equity in Contracting
(August 8, 2023 Tacoma GSP)

The Contractor shall follow the Equity in Contracting Program included in Part III, which shall be considered part of the Contract.
Required Subcontract Clauses

1-08.1(9) Clauses Required in Subcontracts of All Tiers

The second paragraph of Section 1-08.1(9)B is supplemented with the following:

(January 24, 2024)

a. 16. 1-07.11 Requirements for Nondiscrimination – Item 11 from Section 1-07.11(2).

1-08.3(2)A Type A Progress Schedule

(March 13, 2012 APWA GSP)

Revise this section to read:

The Contractor shall submit 6 copies of a Type A Progress Schedule no later than at the preconstruction conference, or some other mutually agreed upon submittal time. The schedule may be a critical path method (CPM) schedule, bar chart, or other standard schedule format. Regardless of which format used, the schedule shall identify the critical path. The Engineer will evaluate the Type A Progress Schedule and approve or return the schedule for corrections within 15 calendar days of receiving the submittal.

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 200 working days.

1-08.9 Liquidated Damages
(March 3, 2021 APWA GSP, Option B)

Revise the second and third paragraphs to read:

Accordingly, the Contractor agrees:

1. To pay (according to the following formula) liquidated damages for each working day beyond the number of working days established for Physical Completion,
2. To authorize the Engineer to deduct these liquidated damages from any money
due or coming due to the Contractor.

**Liquidated Damages Formula**

LD = 0.15C/T

Where:

LD = liquidated damages per working day (rounded to the nearest dollar)

C = original Contract amount

T = original time for Physical Completion

When the Contract Work has progressed to Substantial Completion as defined in the
Contract, the Engineer may determine the Contract 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

1-09.6 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 web site is available at the City’s Construction Management Office.

1-09.9 Payments
(March 13, 2012 APWA GSP)
 Delete the first four paragraphs and replace them with the following:

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.
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
(April 7, 2014, WSDOT GSP)
This section is supplemented with the following:

Temporary Pedestrian Access
(*******/
All pedestrian access paths shall be maintained per Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG) and Specification Sections 1-07.23, and 1-10. The Contractor shall submit the proposed material type for “Temporary Pedestrian Access” to the Engineer for approval prior to construction. The Contractor shall maintain each pedestrian access and make repairs as directed for the duration of the construction, until the sidewalk and entry ways are finished at each respective location.

Automated Flagger Assistance Devices
Automated Flagger Assistance Devices (AFADs) shall meet the requirements of the MUTCD.

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:
Only uniformed off-duty police officers shall be used to control traffic when it is necessary to override or provide traffic control at signalized intersections. Off-duty City of Tacoma Police Department officers are preferred within the jurisdiction of the Tacoma PD, and the Contractor shall grant the Tacoma PD the “first right of refusal” by contacting the Tacoma PD first as stated below.

The City will make all necessary temporary adjustments to existing traffic signals and traffic signal activators.
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.

Traffic Control Management
1-10.2(1) General

(January 10, 2022, WSDOT GSP)

Section 1-10.2(1) is supplemented with the following:

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
https://www.nwlett.edu

Evergreen Safety Council
12545 135th Ave. NE
Kirkland, WA 98034-8709
1-800-521-0778
https://www.esc.org

The American Traffic Safety Services Association
15 Riverside Parkway, Suite 100
Fredericksburg, Virginia 22406-1022
Training Dept. Toll Free (877) 642-4637
Phone: (540) 368-1701
https://altssa.com/training

Integrity Safety
13912 NE 20th Ave.
Vancouver WA 98686
(360) 574-6071
https://www.integritysafety.com

US Safety Alliance
(904) 705-5660
https://www.ussafetyalliance.com

K&D Services Inc.
2719 Rockefeller Ave. Everett, WA 98201
(800) 343-4049
https://www.kndservices.net

1-10.3 Traffic Control Labor, Procedures, and Devices
1-10.3(1) Traffic Control Labor
The first paragraph is revised to read:

The Contractor shall furnish all personnel for flagging and spotting, for the execution of all procedures related to temporary traffic control and for the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations.

1-10.3(1)A Flaggers
This heading is revised to read:

1-10.3(1)A Flaggers and Spotters
(******)

This section is supplemented with the following:

The Contractor shall provide a spotter where needed and when indicated on the plans and/or with these Specifications. The spotters sole duties are as follows: the spotter shall walk ahead of the construction vehicle in the direction of vehicle travel to insure no student, school employee, school visitors, or other pedestrians are in the path of vehicle travel, as well as exclusively assisting with the navigation of pedestrians through, around, adjacent to, and/or through the work zone or adjoining traffic control areas as indicated in the traffic control plans or as directed to do so on-site. In the course of these responsibilities, the spotter shall signal the vehicle to stop should a student, school employee, visitor, or other pedestrian be in the immediate path of the vehicle. The vehicle shall remain stopped under the direction of the spotter until all pedestrians are out of the immediate path of the vehicle.

1-10.3(1)B Other Traffic Control Labor
This section is revised to read:

In addition to flagging duties, the Contractor shall provide personnel for all other traffic control procedures required by the construction operations and for the labor and equipment to install, maintain, and remove any traffic control devices shown on Traffic Control Plans.

1-10.3(2) Traffic Control Procedures
Section 1-10.3(2) is supplemented with the following:

1-10.3(2)F Signalized Intersections
(******)

When construction operations are such that an existing traffic signal is required to be overridden to allow for traffic control measures, the signal shall be overridden only by a uniformed off-duty police officer. Use of uniformed off-duty police officers shall be used only when approved by the City.

All off-duty officers shall be commissioned within the State of Washington. Tacoma Police Department officers shall be the first choice for traffic control that overrides any traffic signal within within the jurisdiction of the City of Tacoma PD. The Contractor shall
first contact Tacoma Police Department, Special Events Sergeant (contact information below), to schedule police officers for the specified traffic control duty.

Tacoma Police Department
Special Events Sergeant
(253) 591-5932
TacomaPoliceEvents@ci.tacoma.wa.us

All costs associated with the use of uniformed off-duty police officers shall be included in the lump sum price for, “Project Temporary Traffic Control”.

Only in the case that the Tacoma PD cannot supply officers, and only after the Engineer notifies the Contractor in writing, shall the Contractor be authorized to contact other jurisdictions for off-duty police officers. If the Contractor fails to comply with this special provision, the City of Tacoma shall not owe the Contractor any compensation for off-duty officers from other jurisdictions.

1-10.3(3)A Construction Signs
(January 11, 2006 Tacoma GSP)
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
(August 4, 2010 Tacoma GSP)
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 maintain the signs for the required duration shall be included in the proposal item, “Project Temporary Traffic Control”, per lump sum

(******)
To prevent hackers from getting access to the Portable Change 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.

Section 1-10.3(3) is supplemented with the following:
1-10.3(3)L Business Open Signs
(******)
Eight (8) Business Open Signs ("BUSINESSES OPEN DURING CONSTRUCTION", or similar) mounted on as many as eight A-boards shall be required on the project. The signs shall be metal, 24" x 30" wide, with white font (at size appropriate for overall sign size and legibility) on “traffic blue” background (non-retroreflective), shall be easily visible by passing drivers but not blocking inter-visibility for or causing confusion related to access points, sidewalks/pedestrian ramps, or other critical traffic control devices. Acceptable sign locations will be identified by the City. Signs may be required to be relocated, or removed for certain durations, during the work.

All costs associated with designing, submitting, manufacturing, installing on/and providing A-boards, relocating and maintaining the signs over the life of the project shall be included in the lump sum price for “Project Temporary Traffic Control,” according to Section 1-10.

1-10.4(2) Item Bids with Lump Sum for Incidentals
(January 11, 2006 Tacoma GSP)
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.

The bid proposal contains the item “Project Temporary Traffic Control”, lump sum and the additional temporary traffic control items listed below. The provisions of Section 1-10.4(1), Section 1-10.4(3), and Section 1-10.5(3) shall apply.

***
“Pedestrian Traffic Control”, per lump sum
***

1-10.5 Payment

1-10.5(2) Item Bids with Lump Sum for Incidentals
(January 11, 2006 Tacoma GSP)
This section is supplemented with the following:

The Bid Item “Pedestrian Traffic Control” is supplemented with the following:

All costs incurred for “Temporary Pedestrian Access” and “Spotter” shall be included in the price per lump sum for “Pedestrian Traffic Control”, according to Section 1-10.

END OF SECTION
2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP

(******)

2-01.1 Description

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

Contractor shall clear, grub, and cleanup those areas contained within the “Clearing & Grubbing” limits indicated on the Plans and as needed to complete the Contract Work.

This section is supplemented with the following:

Trees, stumps, shrubs, and brush located outside the Clearing & Grubbing limits shall be considered as part of “Clearing and Grubbing” when identified for removal 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(1) Clearing

This section is revised to read:

The Contractor Shall:

1. Fell trees only within the area to be cleared as shown on the Plans.
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 and certified Arborist, 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. All tree trimming must be done by or under the direction of a certified Arborist.
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 in accordance with Standard Plans LS-08 through LS-11.
9. Trim all shrubs and brush which covers sidewalks, curb, curb and gutter, and curb ramps to a minimum of four inches from the edge of sidewalk or as directed by the Engineer or Certified Arborist.
10. Remove and dispose of, or relocate the following existing features where necessary within the project limits or as indicated on the Plans:
   a. Cement concrete gutter boxes.
b. Large rocks used for the purpose of landscaping or as a barrier when inside the paving limits.
c. Wood curbs, logs, railroad ties, and other timber used for landscaping when inside the paving limits.
d. Bollards inside the paving area and not designated to remain.
e. Ecology Blocks in conflict with the project work.

11. Perform all work as required by the certified Arborist Reports, attached in the appendix to protect, remove, trim, prune roots or limbs, and any other works detailed in the Arborist Reports. This includes all labor, time, and materials for this work. This work shall be performed on Force Account per Section 1-09.6.

12. Remove trees as indicated on the plans or as directed by the Engineer or certified Arborist. The tree removal shall include stump grinding to eight inches below final grade and removal of roots according to the Plans and Specifications, and as directed by the Engineer and certified Arborist, such that a new tree can be planted in the same area.

13. All stumps identified for stump grinding or as directed by the Engineer or certified Arborist shall be ground to eight inches below final grade.

2-01.3(1) A Tree Protection

Trees not marked for removal or in clearing and grubbing limits shall be protected in accordance with Standard Specifications, Urban Forestry Manual, City of Tacoma Standard Plan, and certified arborist recommendations. Protection activities shall include, but are not limited to, use of straight edge buckets for excavation, hand digging where necessary, clean cutting roots that need removal, root shaving, installing wire mesh and fencing, protecting cut roots.

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.

2-01.3(5) Certified Arborist

The Contractor shall provide a certified Arborist on site to assess and provide Arborist Reports for all work within the Tree Protection Zone of a tree in accordance with the Urban Forestry Manual and the Tacoma Municipal Code 13.06.502. All work done in the critical root zone shall be in compliance with the Arborist Report provided by the certified Arborist or under the direction of the certified Arborist.

The certified Arborist shall be on site to assess and provide direction for all tree trimming, limb or root pruning of greater than 4 inches, and tree removals as specified in the Plans or other tree work as directed by the Engineer. The certified Arborist shall submit an Arborist Report to the Engineer in accordance with the Special Provisions.

The Arborist shall be certified by the International Society of Arboriculture (ISA).
2-01.3(6) 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.

“Brush” is defined as any perennial vegetation which normally attains a height of ten (10) feet or less at maturity, which is not maintained as part of a landscape feature, which is “volunteer” growth or which exists in a naturalized state. Examples include but are not limited to stands of blackberries and scotch broom.

2-01.3(7) Tree and Stump Classifications

Trees shall be classified by the measured diameter at a point four and one-half (4-½) feet above average ground level. Trees that have several stems at the four and one-half (4-½) 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 diameter 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, whichever is less.

Trees and stumps will be classified as follows:

<table>
<thead>
<tr>
<th>Diameter Range</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 4 inches</td>
<td>Class 0</td>
</tr>
<tr>
<td>4 inches up to but not including 12 inches</td>
<td>Class I</td>
</tr>
<tr>
<td>12 inches up to but not including 24 inches</td>
<td>Class II</td>
</tr>
<tr>
<td>24 inches up to and including 42 inches</td>
<td>Class III</td>
</tr>
<tr>
<td>Greater than 42 inches (Tree height greater than 30 feet)</td>
<td>Class IV</td>
</tr>
<tr>
<td>Greater than 42 inches (Tree height of 30 feet or less)</td>
<td>Class V</td>
</tr>
</tbody>
</table>

2-01.4 Measurement

This section is supplemented with the following:

No specific unit of measurement shall apply to the lump sum item “Certified Arborist”.

No specific unit of measurement shall apply to “Certified Arborist Assessment Report Compliance”, by force account.

2-01.5 Payment

The Bid item “Clearing and Grubbing” is supplemented with the following:

In addition, the lump sum Contract price for “Clearing and Grubbing” shall be full pay for native growth protection and tree protection, including tree protection fencing in accordance with Standard Plans LS-08 thru LS-11.
This section is supplemented with the following:

“Certified Arborist”, lump sum

The lump sum contract price for “Certified Arborist” shall be full pay for all labor, materials, and equipment to provide a certified Arborist on site prior to and during construction to perform all tree assessments, provide tree assessment reports, direct and assess all tree trimming, root and limb pruning, tree removals or other tree works as directed by the Engineer or Specifications. No extra payment shall be made for any delays in construction schedule to provide a certified Arborist and provide tree assessment reports.

“Certified Arborist Assessment Report Compliance”, by force account

An estimated amount is entered into the bid proposal for “Certified Arborist Assessment Report Compliance”, by force account. The Contractor will be compensated by force account per Section 1-09.6 for all Work related to the Arborist Assessment Report as directed by the Certified Arborist as specified in Section 2-01.3(5).

END OF SECTION
2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

2-02.1 Description
The first sentence of the first paragraph is revised to read:
The Work described in this section includes relocating, removing and disposing of, or salvaging, materials named in the Special Provisions or as shown on the plans, including all such items that are omitted in bid items outside of Section 2-02.

This section is supplemented with the following:
The Work described in this section also includes test holes according to this special provision, for determining the location and depth of existing utilities or structures. Backfilling of trenches, holes, or pits resulting from this Work is included.

2-02.3 Construction Requirements
The first sentence of the first paragraph is revised to read:
With certain exceptions, the Contractor shall raze, remove, and dispose of all buildings and foundations, structures, fences, and other obstructions that lie wholly or partially within the Right of Way or Construction Easement areas.

This section is supplemented with the following:
At the request of the property owner, any material to be removed from an easement area shall be relocated to another portion of the property outside of the easement areas.

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

2-02.3(5) Existing Traffic Signs
Section 2-02.3 is supplemented with the following:
Any street name signs, traffic signs, and parking signs that exist in the work area shall be removed, and, when shown on the plans, salvaged for reinstallation or back to the Contracting Agency.

2-02.3(6) Test Holes
The engineer may at certain locations on the project site need to discover or locate an existing utility or structure that does not have proper as-built information. The contractor shall excavate a small test hole, where directed by the engineer, in determining the location and depth of the existing utility or structure.

The test hole may be excavated by conventional excavation methods or by the use of a vacuum truck. The test hole for the conventional method shall be a minimum of 48" by 48" in width. The test hole shall be no deeper than 17 feet in depth. Gravel borrow shall be used to backfill the excavated hole. The gravel borrow shall be compacted in
accordance to section 2-09 of the standard specifications. Three inches of asphalt shall be placed on top of the gravel borrow to provide a driving surface in a travel lane.

2-02.4 Measurement
This section is supplemented with the following:
Measurement of the test hole shall be measured per linear foot from the surface of the existing ground to the bottom of the excavated test hole.

2-02.5 Payment
This section is supplemented with the following:
Payment will be made in accordance with Section 1-04.1, for the following Bid items when they are included in the Proposal:

“Removal of Structures and Obstructions”, per lump sum
Any demolition, relocation, and removal work not specifically included in other bid items shall be paid for under “Removal of Structure and Obstruction”, per lump sum.

“Test Hole”, per linear foot
The unit contract price per linear foot for “Test Hole” shall be full pay for all labor, equipment, and materials required to perform potholing, complete and close the test hole, and construct temporary pavement repair in accordance with these specifications, and section 5-04.

For the purpose of providing a common Proposal for all Bidders, the quantity for “Test Hole” has been entered in the Proposal based on 20 test holes to be excavated to locate utility conflicts. Payment shall be made for the actual quantity used.

END OF SECTION
2-03 ROADWAY EXCAVATION AND EMBANKMENT
(******)

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

This section is supplemented with the following:

The Contractor shall provide an inclusive roadway excavation work plan, for review by the Engineer, addressing the following:

- Methods of excavating to subgrade to mitigate areas exposed to inclement weather.
- Methods to protect subgrade after roadway excavation work is complete. Include a detailed list of materials and equipment.
- Plan to proceed with roadway excavation when inclement weather is forecasted.

The contractor shall be limited to 350 linear feet of roadway excavation and embankment construction at a given time unless written approval is granted by the Engineer. Submit written approval requests (3) working days in advance.

No work for roadway excavation shall proceed without prior approval of the work plan. Payment for all work and materials associated with this work plan shall be included in other contract work. There will be no consideration of payment for amending and resubmitting the work plan for engineer approval.

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

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

END OF SECTION
2-06 SUBGRADE PREPARATION
(* ***** *)

2-06.3 Construction Requirements
This section is supplemented with the following:

Subgrade Repair for Subgrade Not Constructed Under Same Contract
Upon removal of pavement, the Contractor and City Inspector shall walk the subgrade surface to determine and delineate any subgrade areas that need to be repaired. Any Subgrade areas that require repair, from the initial walkthrough, shall be determined solely by the City Inspector. Any initial subgrade repairs shall be paid for according to Section 2-06.5(2). Subgrade repair shall be performed in accordance with Section 2-06 and immediately after it has been determined and delineated. In order to minimize damage to the subgrade, the Contractor is encouraged to minimize pavement removal during the work.

Subgrade Maintenance and Protection
Immediately after the contractor constructs the subgrade or completes initial subgrade repair to the City’s satisfaction, the contractor shall maintain and protect the subgrade. Any defects or damage of the subgrade thereafter shall be repaired or replaced according to Section 2-06, at the Contractor’s expense before placement of any succeeding courses or pavement. Maintenance and protection of the subgrade shall be the responsibility of the Contractor. The Contractor shall be required to take precautionary measures to prevent damage by heavy loads or equipment, as well as from inclement weather.

The Contractor and City Inspector should walk the exposed subgrade on a daily basis to determine if there is damage to the subgrade. Any Subgrade areas that require repair according to this section shall be determined solely by the City Inspector.

Subgrade Protection plan
The contractor shall submit and have an approved subgrade protection plan prior to pavement removal. The subgrade protection plan shall contain, at a minimum, the following:

- General protection procedures and materials, including protection from damage caused by traffic and construction equipment.
- Protection procedures and materials to be used prior to and during inclement weather events.
- Protection procedures and materials to be used during utility trenching.
- Repair methods and materials to be used in the event of subgrade damage.

The subgrade protection plan is considered a living document and shall be updated if the Engineer deems the procedures and materials inadequate at any time during construction.

2-06.5 Measurement and Payment
This section is supplemented with the following:

Subgrade Maintenance and Protection shall be paid by lump sum and shall apply to all subgrade.
“Subgrade Maintenance and Protection”, per lump sum

The lump sum price for “Subgrade Maintenance and Protection” shall be full pay for all material, labor, and equipment for implementation of subgrade maintenance and protection, as determined by the City Inspector.

If the contractor fails to protect the subgrade so that additional subgrade repairs are required as determined by the City Inspector, then the city shall not owe payment for these additional subgrade repairs in accordance with Section 2-06.3.

“Subgrade Protection Plan”, per lump sum.

The lump sum contract price for “Subgrade Protection Plan” shall be full pay for all costs, including but not limited to, preparing, submitting, revising, and resubmitting revisions for the Subgrade Protection Plan.

2-06.5(2) Subgrade Not Constructed Under Same Contract

Item 5 under this section is deleted.

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:  
Tacoma Public Utilities  
Administrative Building, 2nd floor  
3628 South 35th Street  
Tacoma, WA 98409  
(253) 502-8247  

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.  

END OF SECTION
2-09 STRUCTURE EXCAVATION
(March 17, 2016 Tacoma GSP)

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 revised to read:_

“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
2-14 PAVEMENT REMOVAL

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.
**Class CA**  
Class CA pavement removal shall apply to all pavements that have a wearing surface of asphalt concrete upon a cement concrete pavement or, cement concrete base, and for which the total combined thickness of the pavement averages between six inches and twelve inches.

**Class H**  
Class H pavement removal shall apply to early type pavement of a cement concrete base with a brick or cobblestone surface and potentially an additional layer of asphalt concrete pavement for which the total combined thickness of the pavement averages between ten inches and twenty 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.  
Contractor shall provide a relief sawcut 1-ft in front of all existing buildings.

**2-14.3(1) Stair Removal**

Removing staircases involves removal and disposal of all concrete, wood, and steel that is part of the staircase including handrails and reinforcing steel. All work shall be done in a manner as not to damage existing features that are not marked for removal.

**2-14.4 Measurement**

Pavement removal will be measured per square yard.  
Type I pavement removal will be measured in its original position.  
Removal of existing stairs will be measured by the linear foot along the centerline of each tread of the staircase, including landings, but excluding the vertical rise of the step.

**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.

“Remove Existing Stairs”, per linear foot.

The unit contract price for “Remove Existing Stairs” shall be full pay for all labor, materials, and equipment to perform this work including, but not limited to, cutting of concrete and reinforcing steel, removal of handrail and steps, hauling from the site, and disposing of the removed material.

END OF SECTION
2-15 CURB AND CURB AND GUTTER REMOVAL

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”, per linear foot

The unit price per linear foot for “Remove Curb” shall include all classifications of concrete curb removal. 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
2-16 REMOVAL OF CATCH BASINS, MANHOLES, CURB INLETS, ETC.

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 imported backfill material.

Where the storm and wastewater sewer structures are removed, the excavation shall be backfilled with imported backfill material.

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

3-04.1 Description
This Section is revised to read:

This work shall consist of acceptance of aggregate as provided for under nonstatistical evaluation.

3-04.3(1) General
This Section is revised to read:

For the purpose of acceptance sampling and testing, all test results obtained for a material type will be evaluated collectively. Sublot sampling and testing will be performed on a random basis at the frequency of one sample per sublot. Based on plan quantities, the sublot size will be determined to the nearest 100 tons (50 cy). The maximum sublot size will be as defined in Table 1.

3-04.3(4) Testing Results
This Section is revised to read:

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

3-04.3(5) Nonstatistical Evaluation
This Section is revised to read:

Each lot of aggregate materials produced under nonstatistical evaluation and having all constituents falling within the specification limits shall be accepted with no further evaluation. When one or more constituents fall outside the specification limits, the material will be evaluated by more sample tests. A minimum of three sublots will be sampled and tested, when less than three sublots exist additional samples shall be tested to provide a minimum of three sets of results for evaluation. The test results of the sublots shall be evaluated in accordance with Section 1-06.2 using the price adjustment factors from Table 2 to determine the appropriate CPF. The maximum CPF shall be 1.00.

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:
Contractors are encouraged to use recycled material in place of crushed stone according to these special provisions.

4-04.2 Materials
This section is supplemented with the following:
Permeable Ballast 4-04.3(11) & 9-03.9(2)
Crushed Surfacing Top Course 9-03.9(3)
Crushed Surfacing Base Course 9-03.9(3)
Recycled material shall be according to Section 9-03.21. Recycled Concrete Aggregate may be used as a crushed surfacing material under HMA pavement. The contractor is encouraged to also use recycled concrete aggregate as a crushed surfacing material to replace unsuitable subgrade in the road, and for foundation under cement concrete sidewalk, curbs, curb ramps, and concrete driveway approaches.

4-04.3 Construction Requirements
This section is supplemented with the following:
Where Recycled Material is used in place of any specified material in this section, the construction requirements shall apply as they are for the replaced material.
The contractor may use Recycled Concrete Aggregate instead of Crushed Surfacing as shown per the plans, and according to Sections 9-03.21 and 9-03.9(3), and the table in Section 9-03.21(1)E.

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.

END OF SECTION
Supplement Division 4 with the following new section:

4-06 ASPHALT TREATED BASE (ATB)
(June 16, 2016 Tacoma GSP)

4-06.1 Description
Asphalt treated base (ATB) consists of a compacted course of base material which has been weatherproofed and stabilized by treatment with an asphalt binder.

The Work shall consist of one or more courses of asphalt treated base placed on the Subgrade in accordance with these Specifications and in conformity with the lines, grades, thicknesses, and typical cross-sections shown in the Plans or as staked.

4-06.2 Materials
Materials shall meet the requirements of the following sections:

Asphalt 9-02.1
Anti-Stripping Additive 9-02.4
Aggregates 9-03.6

The grade of paving asphalt shall be as required in the Contract.

4-06.3 Construction Requirements

4-06.3(1) Asphalt Mixing Plant

Asphalt mixing plants for asphalt treated base shall meet the following requirements:

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

Proportioning
The mixing plant shall be capable of proportioning: the aggregates to meet the Specifications, and the asphalt binder will be introduced at the rate specified in the approved mix design. 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.

Recycled asphalt pavement (RAP) may be used in the production of ATB. If utilized, the amount of RAP shall not exceed 30 percent of the total weight of the ATB. The final gradation and asphalt binder content will conform to the approved Job Mix Formula (JMF). ATB will be evaluated under Commercial Evaluation as shown in section 9-03.8(7). Va limits under 9-03.8(7) are excluded from ATB evaluation criteria.

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 asphalt treated base shall be stockpiled before use in accordance with the requirements of Section 3-02.

The aggregates shall be heated as required by the Engineer.

4-06.3(2)A Mix Design

The mix design requirements for asphalt treated base shall be as described in Section 9-03.6(3). \(N_{design}\) will be 100 gyrations for all ATB design applications. The asphalt binder shall be PG 64-22 unless specifically altered in the project specifications. The proposed mix design will be submitted for review on WSDOT Form 350-042 with included notes applicable to the ATB design evaluation.

4-06.3(3) Vacant

4-06.3(4) Mixing

The asphalt treated 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 base shall conform to the requirements of Section 5-04.3(2).

4-06.3(6) Spreading and Finishing

Unless otherwise directed by the Engineer, the nominal compacted depth of any ATB layer shall not exceed 0.40 feet. On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done by hand.

The internal temperature of the ATB mixture at the time compaction is achieved shall be a minimum of 185°F. Rollers shall only be operated in the static mode when the internal temperature of the mix is less than 175°F.

4-06.3(6)A Subgrade Protection Course

Unless otherwise specified by the Engineer, the Contractor shall place the asphalt treated base as a protection for the prepared Subgrade on all sections of individual Roadways which are to receive asphalt treated base as soon as 10,000 square yards of Subgrade is completed. This requirement shall not be limited to contiguous areas on the project.

The surface of the Subgrade protection layer when constructed on a grading project shall conform to grade and smoothness requirements that apply to the Subgrade upon which it is placed.
4-06.3(7) Density

The asphalt treated base shall be compacted to a density of not less than 80% percent of the maximum theoretical density established for the mix by WSDOT FOP for AASHTO T 209. The density of the base shall be determined by means of tests on cores taken from the Roadway or with the nuclear gauge in accordance with Section 5-04.3(10)B. The frequency of these tests shall be at the discretion of the Engineer, but in no case shall it be less than one control lot for each normal day’s production. The use of equipment which results in damage to the materials or produces substandard workmanship will not be permitted.

4-06.3(8) Anti-Stripping Additive

An anti-stripping additive shall be added to the asphalt binder material in accordance with Section 9-02.4 in the amount designated in a WSDOT mix design/anti-strip evaluation report for a dense graded hot mix asphalt design from the same gravel source within the last 24 months or as evaluated separately by an accredited lab using current WSDOT test methods (AASHTO T324 – Hamburg or WSDOT TM T718 – Modified Lottman). Alternately, the ATB may be evaluated for anti-strip additive using ASTM D3625 (Standard Practice for Effect of Water on Bituminous-Coated Aggregate Using Boiling Water) by an accredited lab. The anti-stripping additive required will be the minimum amount necessary to achieve a passing evaluation.

4-06.4 Measurement

Asphalt treated base including paving asphalt will be measured by the ton.

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 Bid Proposal.

4-06.5 Payment

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

“Asphalt Treated Base, PG __”, per ton.

The unit Contract price per ton for “Asphalt Treated Base, PG __” shall be full payment for all costs incurred to carry out the requirements of Section 4-06 in accordance with the Contract, including coring and testing, and shall include anti-stripping additive.

END OF SECTION
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

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:

<table>
<thead>
<tr>
<th>Property</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>3/4” (19 mm) (+/- 10%)</td>
</tr>
<tr>
<td>Form</td>
<td>Monofilament</td>
</tr>
<tr>
<td>Acid/Alkali Resistance</td>
<td>Inert</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>400,000 psi</td>
</tr>
</tbody>
</table>
Specific Gravity 1.44
Operating Temperatures -300° F to 800° F (-73° C to 427° C)

Polyolefin fibers shall meet the following requirements:
Length 3/4" (19 mm) (+/- 10%)
Form Fillibrated/Serrated
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 antistripping 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 laboratory 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 optimum 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.

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)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:
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
(April 1, 2018 Tacoma GSP)
The first paragraph is revised to read:

The asphalt supplier shall add anti-stripping additive to the liquid asphalt prior to shipment to the asphalt mixing plant. 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(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).

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  
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:

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

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

vi. 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
(April 1, 2018 Tacoma GSP)
The first and second paragraphs of this section are 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)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.

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 the 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:

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.

The following pay items for HMA are revised to read:

“HMA Cl. ___ PG ___”, per ton.

The unit Contract price per ton for “HMA Cl. ___ PG ___” 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.

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.

This section is supplemented with the following:

“Fiber Reinforced HMA Cl. ___ PG ___”, per ton.

The unit Contract price per ton for “Fiber Reinforced HMA Cl. ___ PG ___” shall be full payment for all costs incurred to carry out the requirements of Section 5-04, including coring and testing, and shall include fiber reinforcement, 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.

“Temporary Pavement Patch”, per ton.

The unit Contract price 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. The unit contract price shall apply to Temporary
Pavement Patches made with HMA or Cold Plant Mix.

Temporary pavement patches placed between October 1st and March 31st shall be HMA
Cl. ½” PG 58H-22.

END OF SECTION
5-05 CEMENT CONCRETE PAVEMENT

5-05.1 Description

This section is supplemented with the following:

All concrete pavement restoration shall be performed in accordance with the City of Tacoma’s Right-of-Way Restoration Policy found at: https://www.cityoftacoma.org/government/city_departments/public_works/right-of-way

5-05.3 Construction Requirements

5-05.3(1) Concrete Mix Design for Paving

The sixth paragraph is supplemented with the following:

The submittal for the concrete mix design shall provide the following: the date, the amount of materials (i.e. cement, sand, aggregates, water), the type and amount of each admixture, and the designated 28-day compressive strength specific to the mix design being submitted. The design compressive strength shall be a minimum of 4,000 psi.

5-05.3(4)A Acceptance of Portland Cement Concrete Pavement

This section is supplemented with the following:

Acceptance of concrete will be on a non-statistical acceptance only.

The first, second, third and fourth paragraphs are deleted.

5-05.3(8) Joints

The second paragraph is revised to read:

The Contractor shall submit a concrete panel jointing plan in accordance with the Plans and these Specifications. When a concrete panel jointing plan is included in the Plans, the Contractor may adopt or submit a revised jointing plan in accordance with Standard Plans and the Specifications at the Contractor’s own expense. The Contractor’s jointing plan shall be approved in writing by the Engineer before the start of concrete paving.

When new pavement abuts existing pavement, the locations of the joints in the new pavement shall match with the joints in the existing pavement unless otherwise approved by the Engineer.

The Contractor shall provide an isolation joint around all manholes and valves located within the cement concrete pavement limits shown in the Plans, unless the manhole or valve flange is located below the bottom of the cement concrete. If a transverse or longitudinal joint is within four (4) feet of a manhole or catch basin, the joint shall be skewed to pass through the center of the manhole or catch basin. If a transverse or longitudinal joint is within one (1) foot of a valve, the joint shall be skewed to pass through the center of the valve.
When cement concrete pavement is placed adjacent to existing cement concrete (i.e. existing curb), the Contractor shall apply a bond breaker between the existing and new concrete. In addition, the joint next to the existing curb shall be finished with a ½ inch radius edger.

5-05.3(8)D Isolation Joints

This section is supplemented with the following:

The joint alignment shall be at right angles to the Pavement Structure centerline unless otherwise specified in the Contract.

Isolation joints shall be constructed with pre-molded material, 3/8-inch in thickness and conform to Section 9-04.1(2) Pre-molded Joint Filler for Expansion Joints and as shown on the Plans.

The joint material shall be held accurately in place during the placing and finishing of the concrete by a bulkhead, a holder, metal cap or any other approved method. The joint shall be perpendicular to the paved surface and the holder shall be in place long enough to prevent sagging of the joint material.

A wood filler strip or metal cap shall be placed on the top of the pre-molded joint filler to form the groove, and shall remain in place until after the finishing and the concrete is sufficiently set to resist sloughing in the groove. The joint filler shall be stapled together at the ends to preserve continuity.

Immediately after removal of side forms, the edges of the pavement shall be carefully inspected and wherever the joint filler is not fully exposed, the concrete shall be chipped down until the edge of the filler is fully exposed for the entire depth.

5-05.3(8)E Sealing Through Joints

This section is added with the following:

After the pavement is cured and before carrying any traffic, the space left by the removal of the wood filler strip or the metal cap above the top of the expansion joint filler strip shall be thoroughly cleaned of all loose material. The groove shall be completely free of any projecting concrete from the sides and the groove shall be continuous across the slab to each edge. It shall then be filled level with the pavement surface with joint sealant meeting the requirements of Section 9-04.2 Joint Sealants.

The joint sealant material shall be “black” color and heated and placed in accordance with the manufacturer’s instructions. Burned material will be rejected. The through joint groove shall be dry at the time of pouring the sealing compound.

5-05.3(11) Finishing

The third paragraph is revised to read:

In advance of curing operations, the pavement shall receive an initial texturing followed by final finishing. Initial texturing shall be performed with a burlap drag or broom device, creating striations in the same orientation as the final finish. The concrete roadway
The fifth paragraph is revised to read:

Burlap drags, brooms and tine devices may be installed on self-propelled equipment having external alignment control. When texturing the pavement with burlap, the area of burlap in contact with the pavement shall be maintained constant at all times. Broom and tine devices shall be provided with positive elevation control. Downward pressure on pavement surface shall be maintained at all times during texturing so as to achieve uniform texturing without measurable variations in pavement profile. If self-propelled texturing machines are used, these shall be operated so that travel speed during texturing is maintained constant. Failure of the texturing equipment to perform according to this section shall constitute cause for stopping placement of concrete until the equipment deficiency or malfunction is corrected.

The eighth paragraph is revised to read:

Test Panel:
At the start of concrete pavement construction, the Contractor shall first finish a textured concrete test panel and the Engineer shall give approval of the achieved finish according to this section prior to further concrete pavement construction. If the test panel is rejected by the Engineer, the Contractor shall remove and replace the test panel at no additional cost to the Contracting Agency. The Contractor can designate one of the project panels as a test panel or create a sacrificial test panel on site of at least four feet by eight feet.

Project panels not meeting the characteristics of the test panel shall be removed and replaced at no additional cost to the Contracting Agency.

The ninth through tenth paragraphs are deleted.

5-05.3(14) Cold Weather Work
This section is supplemented with the following:

The following additional requirements for placing concrete shall be in effect from November 1 to April 1:

- 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.

5-05.4 Measurement
This section is revised to read:

Measurement for cement concrete pavement and concrete base pavement shall be by the square yard for the pavement completed and accepted according to Section 5-05 and the Plans, including the area underneath curbs. No deduction will be made for castings in pavement.
5-05.5 Payment

This section is revised to read:

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

“Cement Conc. Pavement, ___-Inch Section”, per square yard.

The unit Contract price per square yard for “Cement Conc. Pavement, ___-Inch Section” shall be full payment for all costs incurred to carry out the requirements of Section 5-05 and the Plans, and shall include furnishing and installing epoxy coated dowel bars and tie bars.

END OF SECTION
6-02  CONCRETE STRUCTURES

6-02.3(6)A2 Cold Weather Protection

This section is revised to read:

This Specification applies when the weather forecast on the day of concrete placement predicts air temperatures below 35°F at any time during the 7 days following placement. The weather forecast is based on predictions from the Western Region Headquarters of the National Weather Service. This forecast can be found at www.wrh.noaa.gov.

The temperature of the concrete shall be maintained above 40°F during the entire curing period or 7 days, whichever is greater. Prior to placing concrete in cold weather, the Contractor shall provide a written procedure for cold weather concreting to the Engineer. The procedure shall detail how the Contractor will adequately cure the concrete and prevent the concrete temperature from falling below 35°F. Extra protection shall be provided for areas especially vulnerable to freezing (such as exposed top surfaces, corners and edges, thin sections, and concrete placed into steel forms). Concrete placement will only be allowed if the Contractor’s cold weather protection plan has been accepted by the Engineer.

The Contractor shall not mix nor place concrete while the air temperature is below 35°F, unless the water or aggregates (or both) are heated to at least 70°F. The aggregate shall not exceed 150°F. If the water is heated to more than 150°F, it shall be mixed with the aggregates before the cement is added. Any equipment and methods shall heat the materials evenly. Concrete placed in shafts and piles is exempt from such preheating requirements.

The Contractor may warm stockpiled aggregates with dry heat or steam, but not by applying flame directly or under sheet metal. If the aggregates are in bins, steam or water coils or other heating methods may be used if aggregate quality is not affected. Live steam heating is not permitted on or through aggregates in bins. If using dry heat, the Contractor shall increase mixing time enough to permit the aggregates to absorb moisture.

Starting immediately after placement, the concrete temperatures shall be maintained at or above 40°F and the relative humidity shall be maintained above 80 percent. These conditions shall be maintained for a minimum of 7 days or for the cure period required by Section 6-02.3(11), whichever is longer. During this time, if the temperature of the concrete falls below 40°F no curing time is awarded for that day. Should the Contractor fail to adequately protect the concrete and the temperature of the concrete falls below 35°F during curing, the Engineer may reject it.

The Contractor is solely responsible for protecting concrete from inclement weather during the entire curing period. Permission given by the Engineer to place concrete during cold weather will in no way ensure acceptance of the Work by the Contracting Agency. Should the concrete placed under such conditions prove unsatisfactory in any way, the Engineer shall still have the right to reject the Work although the plan and the Work were carried out with the Engineer’s permission.

END OF SECTION
7-02.2 Materials
This section is supplemented with the following:

All culvert pipe shall have a smooth interior wall.

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.

7-05.2 Materials
This section is supplemented with the following:

All manholes or other utility structures placed within the sidewalk, bike lane, crosswalk, or other pedestrian path shall have a cover with non-slip coating installed at the time of manufacture. The minimum coefficient of friction for non-slip coatings shall be 0.6.

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:

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.

Where shown in the Plans to adjust utility structure to grade and the new cover will be located within the sidewalk, bike lane, crosswalk, or other pedestrian pathway, the contractor shall furnish a new cover with non-slip coating to be used for the utility adjustment. The slip resistant coating material for these utility covers is intended to withstand rough weather, daily vehicle wear and tear, and have a minimum coefficient of friction of 0.6.

The materials and methods of construction shall conform to the requirements specified in Section 7-05.3 and City of Tacoma Standard Plans No. SU-25 and SU-37. The finished structure shall conform to the requirements of the standard plan for the specific structure.

Where indicated on the plans to use a combination inlet frame and grate for “Adjust Existing Catch Basin, Furnish New Frame and Grate,” it shall be used in place of a vaned grate. All combination inlet frame and grates shall conform to WSDOT Standard Plan B-25.20.01.
When adjusting an existing catch basin the contractor shall clean the structure in accordance with specification 7-07 and shall include all costs in the price for adjustment.

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.

Catch Basin Type 2 ___ in excess of 10 feet in height will be measured per linear foot for each additional foot of height over 10 feet. Measurement will be the distance from the flow line of the outlet pipe to the top of the manhole ring measured to the nearest foot.

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. This includes providing nonslip covers where required.

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 pay item for “Drop Manhole Connection” is revised to read:

“Drop Manhole Connection, ___-Inch Diam.”, per each.

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. This includes providing nonslip covers where required.

“Adjust Existing Valve Chamber to Grade”, per each

The unit Contract price per each for “Adjust Existing Valve Chamber to Grade” shall be full pay for all costs associated with the adjusting the valve chamber to finished grade, including but not limited to, excavating, furnish and place backfill, compacting, surfacing, and restoration.

“Catch Basin Type 2 Additional Height, ___ In. Diam.”, per linear foot.

“Adjust to Grade”, per each

The unit contract price per each for “Adjust to Grade” shall be full pay for all costs associated with the adjusting utility structures such as, but not limited to, water meter boxes and telecommunications vault covers to finished grade, including but not limited to, excavating, furnish and place backfill, compacting, surfacing, and restoration. This includes providing nonslip covers where required. This bid item shall include structures identified in the plans or directed in the field for adjustment that are not covered under other bid items.

For the purpose of providing a common Proposal for all Bidders, the quantity for “Adjust to Grade” has been entered in the Proposal based on known existing structures, where a utility adjustment is not covered by other bid items, that will be affected by the Contract Work. Payment shall be made for the actual quantity measured in the field.

END OF SECTION
7-07  CLEANING EXISTING DRAINAGE STRUCTURES
(March 23, 2010 Tacoma GSP)

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.

All lines shall be cleaned prior to any inspection of an existing drainage line or structure.

7-07.5 Payment
This section is revised to read:

All costs for cleaning existing drainage structures shall be included in other bid items in the Bid Proposal.

END OF SECTION
7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

(******)

7-08.3 Construction Requirements
This section is supplemented with the following:

All material excavated from the trench shall be considered unsuitable for backfill above
the pipe zone and shall be removed and replaced with imported backfill, meeting the
requirements of Section 9-03.12(2).

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.

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 backfill, backfill above pipe zone, and extra excavation area backfill material
shall meet the requirements of Section 9-03.12(2). (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.

All material excavated from the trench shall be considered unsuitable for backfill above the pipe zone and shall be removed and replaced with imported backfill.

Section 7-08.3 is supplemented with the following:

7-08.3(5) Temporary Bypass Pumping

7-08.3(5)A General Requirements

It shall be the Contractor’s responsibility to design, Operate, and install a bypass pumping system to maintain operation of the existing storm and/or sanitary 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 and/or structure designated for replacement. This diversion shall consist of redirecting 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 City, flow shall be returned to the reconstructed storm or sanitary 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 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.

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 or pump station 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 or structure is returned to service.

7-08.3(5)D Bypass Pumping Plan

The Contractor shall submit Bypass Pumping Plans for each location included in the Contract, in accordance with Section 1-05. The Contractor’s plans 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 their 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.

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(1)E.

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

The pay item for “Structure Excavation Class B” is revised to read:

Structure Excavation Class B will be paid per section 2-09

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.

“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, including plugs and submittal of a Pipe Abandonment Plan.

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

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 video inspect all sanitary and storm sewers prior to paving where
paving occurs over sewers, or prior to final acceptance.

The Contractor is to provide the City 72 hours of advanced notice so that a City
representative may be present during the inspection if so elected. The video shall be
submitted for review which may take up to ten (10) working days. If more than ten (10)
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 issues as seen visually with the constructed assets as shown by the
video.

General
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 television inspection
subcontractor shall attend the Pre-Construction Conference to discuss the submittal
process and required formatting of videos and databases, as described in this Section.
**Schedule & Review Requirements**

CCTV inspections shall be performed in accordance with the excavation and paving criteria defined in Section 1-08.4 of these Specifications. Final pavement restoration shall not occur until the Contracting Agency has approved all applicable pipe segments, video files, and databases within the paving limits.

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 inspection video and associated database file for each pipe segment, including all side sewers (if applicable), shall be submitted to the Contracting Agency for review and approval within ten (10) working days of the installation. The Engineer may take up to three working days to review the files. If more than three working days are required for the Engineer's review of the videos, an extension of time will be considered in accordance with Section 1-08.8. No claim will be allowed for damages and no extension of time will be granted resulting from the rejection of a video or database due to not meeting the technical requirements or construction defects identified in the video.

**Inspection and Video Criteria**

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, from structure to structure. A pipe asset is defined as one continuous pipe from the upstream structure to the downstream structure. Footage shall be recorded with the starting and ending points being the center of the manholes and/or catch basins, 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. Inspections shall be performed after the manhole has been channeled and the camera operator shall pan around and record the inside of each manhole and/or catch basin 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 WMV 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 Contracting Agency’s viewing software, GraniteNet. The PACP database must be in MDB format and shall include the Contracting Agency’s SAP ID for pipe segments and structures. No other file formats will be accepted unless approved by the Contracting Agency.

All videos and database files shall be submitted via the Internet web-based project management communications tool, e-Builder software. The Contractor shall review each video and database prior to submitting to confirm formatting is correct and no pipe repairs are needed.

The Contractor shall provide video identifying each pipe segment by manhole, catch basin, and pipe segment SAP ID numbers. 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 Contractor shall clean the main within 24 hours of the CCTV inspection. The lens shall remain clean and clear for the duration of the inspection. Should the lens become soiled, 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 Contracting Agency 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.

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 and/or catch basin 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 must be self-leveling and shall also include a sonde transmitter to locate the side sewer in the event of a defect. All side sewer inspections within a given segment shall be incorporated into the same video and database file as the mainline inspection.

The Contractor shall bear all costs incurred in correcting any deficiencies found during television inspection including the cost of any additional cleaning and 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.

Section 7-17.3 is supplemented with the following:

7-17.3(2)I Jointing of Dissimilar Pipe

Dissimilar pipe shall be joined by use of Strong Back couplings manufactured by Fernco, Inc., or Engineer approved equal.

7-17.4 Measurement

This section is supplemented with the following:

Removal and replacement of unsuitable 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 included to the Bid item.

No specific unit of measurement will apply for television inspection as required in this section. All costs shall be included in the per foot price of pipe installed.

**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.

### 7-17.5 Payment

*The first paragraph is supplemented with the following:*

“PVC Storm Sewer Pipe ___In. Diam.”, per linear foot.

“PVC Sanitary Sewer Pipe, C900 ___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, television inspection, 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. Sewer pipe per linear foot shall not be paid until the Contracting Agency has approved the CCTV inspection video and database, and provided approval of the pipe segment.

*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).

**END OF SECTION**
**7-18 SIDE SEWERS**

(********)

**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.

**7-18.3(2)A Jointing of Dissimilar Pipe**

*This section is supplemented with the following:*

Dissimilar pipe shall be joined by use of Strong Back couplings manufactured by Fernco, Inc., or Engineer approved equal.

**7-18.4 Measurement**

*This section is revised to read:*

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.

7-19.5 Payment
The fourth sentence of the third paragraph is deleted.

The second 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
**7-20 RESIDENTIAL STORM DRAIN UNDER SIDEWALK**

(******)

**7-20.1 Description**

This work consists of furnishing and installing residential storm drains under sidewalk as located and detailed in the plans.

**7-20.2 Materials**

- PVC Drain Pipe, couplings and fittings 9-05.1(5)
- Wire Mesh Reinforcement 9-07.7
- Grout 9-20.3

**7-20.3 Construction Requirements**

A residential drain shall be constructed at each property along the project limits. The Contractor shall locate each residential storm drain either where an existing residential drain pipe exists at the right-of-way line or at the lowest side of the property; however, the location shall be adjusted when in conflict with a driveway or curb ramp.

The Contractor shall construct the residential storm drains under sidewalk as shown in City of Tacoma Standard Plan SU-29. The slope of the drain pipe shall match the cross-slope of the sidewalk, including grade-breaks in the sidewalk. The drain pipe shall be connected to the building gutter pipe at the right-of-way line, if present.

Where a segmental concrete retaining wall, in accordance with section 8-32, is to be constructed the residential storm drain pipe shall be connected to the perforated drain pipe for the wall using the appropriate connector for the pipe sizes and number of pipes being joined together.

Where, at a property, there is no existing residential storm pipe extended to the right-of-way line the Contractor shall cap the residential storm pipe at the right-of-way line as shown in City of Tacoma Standard Plan SU-29.

**7-20.4 Measurement**

Residential storm drains under sidewalks will be measured per linear foot of drain pipe installed along the invert of the pipe.

**7-20.5 Payment**

Payment will be made in accordance with Section 1-04.1 for each of the following listed Bid items that in included in the proposal:

- “Residential Storm Drain Under Sidewalk”, per linear foot.

The unit Contract price per linear foot for “Residential Storm Drain Under Sidewalk” shall be full pay for all labor, materials, and equipment required to construct the drain as specified, as shown on the Plans, and shown in the Standard Plans, including all work to reconnect existing residential storm pipes and connect perforated drain pipe for walls.

END OF SECTION
8-01 EROSION CONTROL AND WATER POLLUTION CONTROL
(******)

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 has been issued a Washington State Department of Ecology NPDES Construction Stormwater General Permit for this project. This Work also consists of administration and compliance with the requirements of this permit for this project. A copy of this permit is included in the Appendix of these Special Provisions.

8-01.3(1) General
The third sentence of the first paragraph is revised to read:

The adaptive management shall use the means and methods identified in this section and the means and methods identified in the Washington State Department of Transportation’s Temporary Erosion and Sediment Control Manual or the City of Tacoma’s Stormwater Management Manual for construction stormwater.

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 City of Tacoma has prepared a SWPPP template that can be used for projects in
the City of Tacoma. The template can be found on Tacoma’s website at:
https://www.cityoftacoma.org/cms/One.aspx?portalId=169&pageId=144265. The
Contractor developing the SWPPP must ensure that all references are appropriate for
the Project.

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.

Dewatering Requirements. The Contractor shall design, construct, and operate a dewatering system in accordance with this Section and the SAD Authorization. The Contractor shall have competent workers available at all times for the continuous and successful operation of the dewatering and monitoring system.
Dewatering Plan. The Contractor shall submit a dewatering plan to the Engineer for review in accordance with Section 1-05.3 prior to the start of construction. Review of the dewatering plan submitted by the Contractor shall not relieve the Contractor from full responsibility for adequate design and performance of the system. The Contractor shall be solely responsible for the proper design, installation, operation and maintenance of the dewatering system. The Contractor shall be liable for any damages caused by system failure.

The dewatering plan shall include the following components:

1. System Components – Describe the method and equipment proposed for dewatering the excavation. The Contractor shall have on hand sufficient pumping equipment and machinery in good working condition for all emergencies, including power outage and flooding.

2. Treatment Method – Describe how dewatering water that is to be discharged to the City’s sanitary sewer system will be treated to meet the applicable discharge limits of the Special Approved Discharge Authorization and Tacoma Municipal Code 12.08. Provide applicable calculations.

3. Point of Discharge – Describe the point of discharge of the dewatering water. Any discharges to private property will require written documentation from the property owner that this point of discharge is permitted. The Contractor shall provide all proposed points of discharge as part of the Special Approved Discharge Authorization Application.

4. Maintenance Plan – Describe how the designed system will be maintained over the course of the project.

5. Monitoring Plan – Describe how discharge will be monitored to ensure compliance with all discharge requirements.

6. Special Approved Discharge (SAD) Authorization Application – The Contractor shall apply for a SAD Authorization as part of the dewatering plan. No discharge of dewatering water to the City’s sewer systems will be permitted without obtaining this authorization. The City Construction Manager will provide the SAD authorization application to the Contractor after award of the contract.

Requirements for Dewatering Water Discharge to the Storm Sewer System.

Dewatering water will not be permitted to be discharged into the storm water system on this project.

Requirements for Dewatering Water Discharge to the Sanitary Sewer System.

Prior to discharge of dewatering water to the City’s sanitary sewer system, sediment control BMPs must be employed. Groundwater discharges to the sanitary sewer system shall have 225 mg/L or less of Total Suspended Solids (TSS). TSS analysis may be completed by the City Lab with a three-day turnaround, or by a third party laboratory at no additional cost to the City.

In addition to the TSS Requirements, the water shall contain no visible oil sheen or chemical odors. If the Contractor encounters any signs of oil within the soil or dewatering water, including any sheen on the water, and/or any chemical odor in the water or soils, the Engineer and Source Control shall be notified immediately and all discharges to the sanitary sewer system shall be stopped immediately.
In the presence of oil sheens and/or chemical odors, the Contractor shall test the
dewatering water prior to discharge for contaminants referenced in the Special Approved
Discharge Authorization and Tacoma Municipal Code 12.08.020. All discharges to the
City’s sanitary sewer system shall not exceed the limits of the Special Approved
Discharge Authorization or TMC 12.08.020, whichever is most stringent.

The Contractor shall control the flow of water into the downstream system to ensure that
the capacity of the City’s sanitary sewer system is not exceeded as a result of the
additional flows caused by the dewatering water. The Contractor shall contact the
Engineer to request pipe capacity information for the Contractor’s proposed discharge
points.

The Contractor shall measure and record in gallons the total quantity of dewatering
water discharged to the sanitary sewer system. This can be done by metering the flow
or calculating batch discharges based on the volume of tanks used. In accordance with
the SAD Authorization, the Contractor shall report the discharge quantities with the
associated test results to Source Control.

8-01.3(2) Temporary Seeding and Mulching

8-01.3(2)B Temporary Seeding

The first paragraph is supplemented with the following:

All seeding areas shall be seeded with the following mix:

<table>
<thead>
<tr>
<th>Type of Seed</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chewings or Annual Bluegrass</td>
<td>40</td>
</tr>
<tr>
<td><em>Festuca rubra var. commutate or Poa anna</em></td>
<td></td>
</tr>
<tr>
<td>Perennial Rye</td>
<td>50</td>
</tr>
<tr>
<td><em>Lolium perenne</em></td>
<td></td>
</tr>
<tr>
<td>Redtop or Colonial Bentgrass</td>
<td>5</td>
</tr>
<tr>
<td><em>Agrostis alba or Agrostis tenuis</em></td>
<td></td>
</tr>
<tr>
<td>White Dutch Clover</td>
<td>5</td>
</tr>
<tr>
<td><em>Trifolium repens</em></td>
<td></td>
</tr>
</tbody>
</table>

The rate of application shall be 120 lbs per acre.

Seeding fertilizer shall be per seed supplier’s recommendations for hydrosed application.

The fifth 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 Temporary Mulching
This section is supplemented with the following:

The Contractor shall reapply mulch as needed to protect exposed soil and seeded areas from erosion.

8-01.3(2)E Tackifiers
This section is supplemented with the following:

The Contractor shall follow the requirements of the City of Tacoma Surface Water Management Manual BMP C120 for using tackifiers with hydro seeding.

8-01.3(7) Stabilized Construction Entrance
The third paragraph is revised to read:

When the contract requires a wheel wash in conjunction with the stabilized entrance, the details for the wheel wash and the method for containing and treating the sediment-laden runoff shall be included as part of the SWPPP and TESC Plan.

8-01.3(8) Street Cleaning
The fourth paragraph is revised to read:

Street washing with water shall not be permitted.

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.

8-01.3(10) Wattles
The fifth and sixth sentences of the first paragraph are revised to read:

On gradually sloped or clay-type soils trenches shall be 3 to 5 inches deep. On loose soils, in high rainfall areas, or on steep slopes, trenches shall be 3 to 5 inches deep, or 1/2 to 2/3 the thickness of the wattle, whichever is greater.

8-01.4 Measurement

8-01.4(2) Item Bids
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 specific unit of measure shall apply to the lump sum item “Erosion Control”.

8-01.5 Payment

This section is supplemented with the following:

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.

8-01.5(2) Item Bids

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.

“Erosion/Water Pollution Control”, per lump sum.

The lump sum contract price for “Erosion/Water Pollution Control” shall be full pay for all cost for labor, equipment, and materials to perform all work associated with erosion control. Work shall include, but shall not be limited to, furnishing, purchase and delivery or required materials, installation and maintenance of temporary erosion and sediment control measures, and all costs incurred by the Contractor in performing the Contract Work defined in Section 8-01, except for unit bid items in Section 8-01 when these are included in the bid proposal. It is the Contractor’s responsibility to maintain, repair, and replace any and all erosion control measures as required to maintain compliance with the NPDES Construction Stormwater General Permit and Tacoma Municipal Code 12.08 for the entire duration of the Project.

“Dewatering Plan”, per lump sum.

The lump sum contract price for “Dewatering Plan” shall be full pay for all costs, including but not limited to, preparing, submitting, revising, and resubmitting revisions for the Dewatering Plan.

“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.

END OF SECTION
8-02 ROADSIDE RESTORATION

8-02.1 Description
This section is supplemented with the following:
This Work shall include roadside maintenance and construction cleanup in accordance with the Specifications.

8-02.2 Materials
This section is supplemented with the following:
Compost shall meet the requirements of Section 9-14.5(8).
Root barriers shall meet the requirements of City of Tacoma Standard Plan LS-01 and the details on the plans.

8-02.3 Construction Requirements
This section is supplemented with the following:
Soil excavated in connection with this Work shall be included in the measurements and payments for “Roadway Excavation _____ Incl. Haul” in accordance with Section 2-03, Roadway Excavation and Embankment.
The Contractor shall haul and dispose of all soil material excavated from the Project site in accordance with Section 2-03.

8-02.3(1) Responsibility During Construction
The third paragraph is revised to read:
The Contractor shall protect existing trees, grass and vegetation in accordance with the Plans and Section 1-07.16(2). The Contractor shall protect existing planting beds, lawn and grass areas as shown per Plans in accordance with City of Tacoma Standard Plan GSI-01a. The Contractor shall protect existing trees in accordance with City of Tacoma Standard Plans LS-08, LS-09, LS-10, and LS-11, unless these are to be removed per Plans and Specifications.

This section is supplemented with the following:
The Contractor shall not dump or stockpile topsoil, compost, mulch, or any other landscape materials directly on roadway surfaces and shall employ the appropriate BMPs for stockpiling at a stockpile site out of the right-of-way. The Contractor shall place landscape materials such as Topsoil, Compost or Mulch immediately upon delivery to the jobsite. The Contractor may request to stockpile these materials in writing by submitting a Roadside Work Plan. Stockpiling in the public right-of-way shall only be permitted as approved in writing by the Engineer.
The Contractor shall notify the Engineer of any conflict between the proposed work and any obstructions, and shall repair damage in accordance with Section 1-07.16, Protection and Restoration of Property.
Prior to starting work, the Contractor shall locate and protect all underground utilities in accordance with Section 1-07.17, Utilities and Similar Facilities.

8-02.3(2)A Roadside Work Plan

Item 1.b. is revised to read:

Means and Methods for vegetation protection in accordance with City of Tacoma Standard Plans GSI-01a, LS-08, LS-09, LS-10, and LS-11; and Section 1-07.16(2).

8-02.3(4) Topsoil

This section is supplemented with the following:

The Contractor shall use Topsoil Type A in accordance with Special Provisions Section 9-14.2 unless otherwise shown on the Plans or as approved by the Engineer.

Scarify or till subgrade in two directions to 6-inch depth. Scarify the entire surface prior to placing Topsoil. Do not scarify within drip line of existing trees to be retained.

8-02.3(4)A Topsoil Type A

This section is revised to read:

Topsoil Type A shall be an imported topsoil and compost mix from a topsoil supplier or certified composting facility in accordance with Section 9-14.5(8). The Contractor shall place, till and fine grade Topsoil Type A in accordance with Section 8-02 and City of Tacoma Standard Plan GSI-01d. Topsoil Type A shall conform to Sections 9-14.2 and 9-14.2(1). The Contractor shall submit a certification by the supplier that the contents of the Topsoil meet the requirements in the Special Provisions.

8-02.3(4)B Topsoil Type B

This section is supplemented with the following:

The Contractor shall stockpile, place, amend with compost, till and fine grade Topsoil Type B in accordance with Section 8-02 and City of Tacoma Standard Plan GSI-01c.

8-02.3(4)C Topsoil Type C

This section is supplemented with the following:

The Contractor shall stockpile, place, amend with compost, till and fine grade Topsoil Type C in accordance with Section 8-02 and City of Tacoma Standard Plan GSI-01c.

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(5)A Seeding Area Preparation

Items 3. and 4. of this section are revised to read:

3. Bring area to a uniform grade and place amended topsoil or amend existing
topsoil in accordance with Standard Plans GSI-01b through GSI-01d. Do
not till soil on any slopes at 3(H):1(V) or steeper. Rake to a smooth even grade
without low areas that trap water. The finished grade of the soil shall be 1/2 inch
below the top of all curbs, junction and valve boxes, walks, driveways and other
structures.

4. Compact to provide a reasonably firm but friable seedbed. On slopes at least 20
feet in width from back of walk to construction limits and flatter than 2(H):1(V),
create longitudinal depressions at least 2-inch deep by means of tractor track
walking; unless otherwise specified or as directed by The Engineer.

8-02.3(5)B Lawn Area Preparation

Item 4. of this section is revised to read:

4. Amend existing topsoil in place or import and place amended topsoil in
accordance with Standard Plans GSI-01b through GSI-01d. Rake to a smooth
even grade without low areas that trap water and compact with a 50-pound roller.
The finished grade of the soil shall be 1/2 inch below the top of all curbs, junction
and valve boxes, walks, driveways and other structures.

8-02.3(5)C Planting Area Preparation

Items 5. and 6. of this section is revised to read:

5. Amend existing topsoil in place or import and place amended topsoil in
accordance with Standard Plans GSI-01b through GSI-01d. Do not till or place
loose topsoil without compaction and stabilization measures on slopes 3H:1V or
steeper.

6. The finished grade of the mulch or woodchips shall be 1/2 inch below the top of
all curbs, junction and valve boxes, walks, driveways and other structures.

8-02.3(6) Mulch and Amendments

This section is supplemented with the following:

Compost amendment shall be included in Topsoil Type A, B, or C in accordance with
Standard Plans GSI-01c and GSI-01d, and compost content is included in the Topsoil
quantity.

Existing Topsoil areas shall be amended in place with Compost in accordance with
Standard Plan GSI-01b and as shown per Plans.

Soil Amendment General Requirements:

1) Soil Amendment areas, as described in this specification, shall include an amended
topsoil layer with a minimum depth of 8 inches
2) Planting beds shall be stabilized with bark or wood chip mulch to the depths specified on the Plans.

3) Sequencing and Scheduling: Do not perform soil preparation work in areas subject to the subsequent work of other sections, unless approved otherwise.

4) Contractor has the option of amending the soils at the “Pre-Approved Rates” as specified in the below Soil Amendment Layer Table, or performing soil amendment at the “Calculated Rates” required to meet the performance criteria specified in the Soil Amendment Layer Table. Contractor shall perform soil characterization testing and have a qualified professional perform the soil amendment calculations as outlined in Section 8-02.3(2)A Roadside Work Plan if choosing to amend soils to meet the “Calculated Rates” performance criteria.

Scarification Layer:

Scarify or till subgrade to depth of 9-inches (as needed to achieve 12-inches of loosened soil after amendment placed). Entire surface should be disturbed by scarification prior to starting soil amendments. Do not scarify within drip line of existing trees to be retained.

Soil Amendment Layer:

<table>
<thead>
<tr>
<th>A. Planting Beds:</th>
<th>B. Seeded Areas:</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. PRE-APPROVED RATE: Place and rototill 3-inches of compost into 5-inches of soil;</td>
<td>i. PRE-APPROVED RATE: Place and rototill 2-inches of compost into 6-inches of soil;</td>
</tr>
<tr>
<td>ii. CALCULATED RATE: Place and rototill calculated amount of compost into depth of soil needed to achieve 8-inches of settled soil at minimum 10% organic content.</td>
<td>ii. CALCULATED RATE: Place and rototill calculated amount of compost into depth of soil needed to achieve 8-inches of settled soil at minimum 5% organic content.</td>
</tr>
</tbody>
</table>

Water or roll to compact soil to 85% of maximum.

Rake to level, and remove surface woody debris and rocks larger than 1-inch diameter.

Rake beds to smooth, and remove surface rocks over 2-inch diameter.

8-02.3(6)A Compost

This section is supplemented with the following:

The Contractor shall submit the amount of cubic yards of Compost incorporated into the project to the Engineer, including mulch, amendment and as topsoil content. The Contractor shall submit the quantity of Compost per type and supplier.

8-02.3(6)B Fertilizers

This section is supplemented with the following:

Fertilizer shall be supplied and applied per landscaping supplier recommendation or BMP C 120 per the City of Tacoma Stormwater Management Manual, Volume 3, Chapter 1, Section 1.7.
8-02.3(8)C Pruning, Staking, Guying, and Wrapping

This section is supplemented with the following:

Under no circumstances shall tree or shrub pruning be done prior to inspection and approval of plants by the Engineer. Pruning cuts shall only be made to remove dead, damaged, diseased, or broken branches, and in no case shall remove the leader of the tree. If approved, all cuts shall be made in accordance with the ANSI A300 pruning standards at the point of connection with the parent stem, outside of the branch collar, 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 (greater than 1.5") wounds or weaken the tree will not be acceptable. All pruning shall produce a clean cut without bruising or tearing the bark.

Evergreens shall not be pruned, except to remove injured branches. The use of pole shears and/or hedge shears for pruning deciduous or 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 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

This section is supplemented with the following:

Where no irrigation system is to be installed, hydroseed lawn shall be installed during the following periods only:

March 1st – June 30th
September 1st - October 25

8-02.3(10)B Lawn Seeding and Sodding

This section is supplemented with the following:

Hydroseeding will shall be the method for lawn installation unless otherwise shown per Plans or as directed by the Engineer. Lawn seeding and sodding shall be in accordance with BMP C 120 per the City of Tacoma Stormwater Management Manual, Volume 3, Chapter 1, Section 1.7. All permanent seeding areas shall be seeded with Low-Growing Turf Seed Mix:

<table>
<thead>
<tr>
<th>Type of Seed</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwarf tall fescue</td>
<td>45</td>
</tr>
<tr>
<td>Dwarf perennial rye</td>
<td>30</td>
</tr>
<tr>
<td>Red fescue</td>
<td>20</td>
</tr>
<tr>
<td>Colonial bentgrass</td>
<td>5</td>
</tr>
</tbody>
</table>
The rate of application shall be per manufacturer’s recommendation.

Seeding fertilizer shall be per manufacturer’s recommendation.

For Sodded Lawns: On sloped areas, the 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)B Bark or Woodchip Mulch
The third paragraph is revised to read:

The Contractor shall place a uniform non-compacted depth of 3-4 inches of Bark or Woodchip Mulch in accordance with the Plans and as directed by the Engineer. Mulch shall not be applied directly to the base of stems and shall be feathered to plant material, leaving trunks, stems, canes, and root collars with gap of 2 inches minimum free of mulch. Bark or Woodchip Mulch shall be placed flush with the top of junction and valve boxes, curbs, sidewalk and pavement edges.

8-02.3(13) Plant Establishment
This section is supplemented with the following:

The Contractor shall maintain the planting areas and all plants planted within the project limits to ensure the resumption and continued growth of the planted material until expiration of the plant warranty period per Special Provisions Section 8-02.3(14).

Maintenance shall include, but not be limited to, labor and materials necessary for removal of foreign, dead, or rejected plant material, maintaining a weed-free condition, watering, and the replacement of all unsatisfactory plant material planted under the contract.

Planting dates for replacement plant material will be approved by the Engineer.

The Contractor shall meet with the Engineer for the purpose of joint inspection of the project once installation has been completed and thereafter on a periodic “as needed” basis as determined by the Engineer, until the expiration of the plant warranty period per Special Provisions Section 8-02.3(14). Thus, plant establishment shall be included in the Contract price per each for the duration of the warranty and the Contract, whichever is the longer duration.

All conditions unsatisfactory to the Engineer shall be corrected by the Contractor within a ten-day period immediately following the inspection. Failure to comply with corrective steps as outlined by the Engineer shall constitute justification of the Contracting Agency to take corrective steps and to deduct all costs thereof from any monies due the Contractor.

The Contractor shall replace all plants stolen or damaged by the acts of others until the physical completion date of the contract.
8-02.3(14) Plant Replacement
This section is supplemented with the following:

The Contractor shall provide the Contracting Agency a one (1) year non pro-rated, full labor and materials warranty for all planted material. The warranty shall cause the Contractor to remove and replace all rejected plant material during the warranty period. The warranty period shall begin at the date of physical completion of the contract and end one calendar year from that date. Thus, plant establishment shall be included in the Contract price per each for the duration of the warranty and the Contract, whichever is the longer duration.

The Contractor shall be responsible for growing or providing enough plants for replacement of all plant material rejected during the warranty period. All rejected plant material shall be replaced at dates approved by the Engineer.

All replacement plants shall be of the same species and quality as the plants they replace. Plants may vary in size reflecting one season of growth should the Contractor elect to hold plant material under nursery conditions for an additional year to serve as replacement plants.

Replacement plants will be subject to the original warranty provision as stated above.

8-02.3(16) Roadside Maintenance Under Construction
This section is supplemented with the following:

Construction Cleanup

Where staining, dust or other material has visibly accumulated on the adjoining buildings and sidewalks as a result of the Contractor’s Work, the Contractor shall clean these off as directed by the Engineer. The Contractor shall remove all siltation, spoils, debris and solid waste resulting from the Contractor’s activities along the project right of way and dispose of it in accordance with the Contract. The cost for any cleanup described in Section 8-02 shall be included in the lump sum Contract price for “Site Restoration”.

Section 8-02.3 is supplemented with the following:

8-02.3(17) Tree Protection

The Contractor shall adhere to the requirements in City of Tacoma Standard Plans LS-08 through LS-11 and the arborist assessment in the Appendix. Tree protection signs can be found in Appendix 5 of the Urban Forest Manual, which is available for download on the City of Tacoma’s website.

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 when included in the proposal.
The third paragraph is revised to read:

Compost will be measured by the cubic yard in the haul conveyance at the point of delivery. Note that the quantity of Compost incorporated into the project must be reported and submitted to the Engineer in all cases, and where included in other bid items.

The fourth and fifth paragraphs are revised to read:

Seeding, fertilizing, cultivation, weed control, and any preparation of lawn or planting areas are included in other bid items such as “PSIPE___” and “Seeded Lawn Installation”.

This section is supplemented with the following:

Irrigation water used to establish vegetation will be considered included in the cost of plants.

No specific unit of measurement shall apply to the lump sum item “Tree Protection”.

No specific unit of measurement shall be applied to the lump sum Bid item “Plant Establishment-1 Year”.

8-02.5 Payment

The pay item for “PSIPE___” is revised to read:

“PSIPE___”, per each.

Payment per each for “PSIPE___” shall be full pay for all materials, labor, tools, equipment and supplies necessary for weed control within planting areas, planting area preparation, root barrier, fine grading, planting, cultivating, watering, and clean-up for the particular items called for in the Plans and Specifications for the duration of the Contract. A one (1) year plant warranty shall be included in the unit contract price. Plant establishment shall be included in the Contract price per each for the duration of the warranty and the Contract, whichever is the longer duration.

This section is supplemented with the following:

“Topsoil Type A”, per cubic yard

The unit Contract price per cubic yard for “Topsoil Type A” shall be full compensation for producing the topsoil mix, including Compost amendment in accordance with Standard Plan GSI-01d, haul and delivery, placing, grading, and compacting the topsoil in accordance with the Plans and Specifications.

“Fine Compost”, per cubic yard.

“Medium Compost”, per cubic yard.

“Coarse Compost”, per cubic yard.
The unit contract price per cubic yard for "__ Compost" shall be full pay for furnishing and spreading the compost onto the existing topsoil.

"Wood Chip Mulch", per cubic yard

The unit contract price per cubic yard for "Wood Chip Mulch" shall be full pay for all labor, materials, tools, and equipment necessary to complete the Work as specified, which includes hauling, spreading the mulch onto the existing soil.

"Tree Protection", lump sum.

The lump sum contract price for “Tree Protection” shall be full pay for all labor, equipment, and materials required to protect existing trees within the general limits of the project or as directed by the Engineer.

"Site Restoration", lump sum.

The lump sum payment for “Site Restoration” shall be full payment for all costs incurred to carry out the requirements of Section 8-02 and any Site Restoration items not specifically included in other bid items, including but not limited to Construction Cleanup, grass sod and seed, watering, planting area preparation, soil amendment, grading, cultivating, and gravel replacement.

"Root Barrier", per linear foot.

The unit contract price per linear foot for “Root Barrier” shall be full pay for all labor, materials, and equipment necessary or incidental to procuring and installing Root Barrier.

END OF SECTION
8-03  IRRIGATION SYSTEM
(*)

8-03.1 Description
This Section is supplemented with the following:
Repair and relocation of existing sprinkler systems that encroach into the construction zone shall be according to these specifications and Section 2-02, Existing Irrigation Systems.

8-03.3(1) General Requirements
This section is supplemented with the following:
All electrical work from the electrical source to the controller junction box must be completed by a licensed electrical contractor.

8-03.3(7)A Irrigation Sleeves
This section is supplemented with the following:
Final position of capped sleeves shall be level with the finished grade or mulch.

8-03.3(9)B Irrigation Heads
The first sentence is revised to read:
Unless otherwise indicated in the Plans, final position of irrigation heads shall be flush and level with or ½ inch below the finished grade in grass or mulch areas as measured from the top of the irrigation head.

8-03.3(9)C Valve, Valve Boxes, Hose Bibs
The second paragraph is revised to read:
Final position of valve boxes and quick coupler valves shall be level with the finished grade or mulch.

8-03.3(9)E Controller
This section is supplemented with the following:
A zone diagram shall be posted in the controller to facilitate the selection of the valves to be operated.

8-03.3(9)G Electrical Wire Installation
This section is supplemented with the following:
All electrical work from the electrical source to the controller junction box must be completed by a licensed electrical contractor.

8-03.10 Flushing and Testing

8-03.3(10)A General Requirements
This section is supplemented with the following:
The Contractor shall advise the Engineer at least 24 hours before pressure tests and flushing are to be conducted.

8-03.3(10)B Mainline or Lateral Flushing
This section is supplemented with the following:

The Contractor shall advise the Engineer at least 24 hours before mainline or lateral flushing are to be conducted.

8-03.3(10)C Mainline or Lateral Hydrostatic Pressure Testing
This section is supplemented with the following:

The Contractor shall advise the Engineer at least 24 hours before mainline or lateral pressure tests are to be conducted.

8-03.3(13) As-Built Plans, M&O Manuals, and Operating Tools

8-03.3(13)C Operating Tools
This third paragraph is revised to read:

Laminated copies of the timing and valve schedule and zoning diagrams shall be placed in the controller boxes and in locations specified by the Engineer.

END OF SECTION
8-04  CURBS, GUTTERS, AND SPILLWAYS

8-04.2 Materials
This section is supplemented with the following:

Concrete Color for pedestrian curb shall be integral and shall be standard Scofield color chart C34 “Dark Grey” or engineer approved equal.

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.

The first sentence in the fourth paragraph is revised to read:

Expansion joints in the Curb or Curb and Gutter shall be spaced at maximum 15-foot intervals; and shall be located at both ends of all curb returns, drainage structures, bridges, and cold joints with existing curbs and gutters.

Section 8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways is supplemented with the following:

All pedestrian curb shall be integrally colored to the shade describe in section 8-04.2. Coloring agents for pedestrian curb shall be added prior to placement.

8-04.3(1)C Integral Cement Concrete Curb

When integral curb is being constructed with the pavement, fresh concrete for the integral curb shall be placed at such time as will enable the top section of the curb to be consolidated, finished, and bonded to the pavement slab while the concrete is plastic.

Where curb is not being placed integral with the pavement slab, reinforcing steel dowels shall be placed in the base section for the curb in accordance with the standard drawing.

Section 8-04.3 Construction Requirements 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.
8-04.5 Payment
This section is supplemented with the following:

“Integral Cement Conc. Traffic Curb”, per linear foot
“Cement Conc. Valley Gutter”, per linear foot.

The pay item “Cement Conc. Pedestrian Curb” is supplemented with the following:

All costs for adding coloring agents to all pedestrian curb shall be included in the unit contract price.

END OF SECTION
8-06  CEMENT CONCRETE DRIVEWAY ENTRANCES

8-06.2 Materials
This section is supplemented with the following:

Finishing Aid
Finishing aid shall be a liquid reactive colloidal silica which is intended to be worked into
the surface of plastic concrete. Evaporation retarders will not be allowed as a substitute.

8-06.3 Construction Requirements
The first paragraph is revised to read:

Cement concrete driveway approaches shall be constructed with air entrained concrete
Class 3000 conforming to the requirements of Section 6-02 or Portland Cement
Concrete Pavement conforming to the requirements of Section 5-05.

This section is supplemented with the following:

The Contractor shall provide a Temporary Driveway Access for a minimum driveway
width of 10 feet for residential driveways, 12 feet for commercial driveways. Use steel
 trench cover plates to provide a traffic access as directed by the Engineer. The edges of
the access shall be sloped with CSTC where abrupt edges create a potential hazard for
cars or pedestrians. Specification sections 1-07.23, and 1-10 shall also apply. The
contractor shall maintain the Temporary Driveway Access in functional order until the
permanent construction of the road and concrete driveway is finished at each respective
location.

All cement concrete placed in accordance with Section 8-06 shall be treated with finishing
aid which is worked into the surface of the plastic concrete during the finishing process.
Finishing aid shall be applied at a rate of no less than 500 square feet per gallon. All work
shall be done in accordance with the manufacturer’s recommendations.

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
cement 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 pay item “Cement Conc. Driveway Entrance Type __” is revised to read:

“Cement Conc. Driveway Entrance”, per square yard.
The unit contract price per square yard for “Cement Conc. Driveway Entrance” shall be full pay for all labor, tools, equipment, and materials required to construct concrete driveways at a single time or in segments, and installing and removing a Temporary Driveway Access shall be included. All costs for finishing aid shall be included in the unit contract price. All types of concrete driveway entrances are included in this bid item.

The Contractor shall include all costs associated with excavating, including haul and disposal, regardless of the depth in the unit contract price for “Cement Conc. Driveway Entrance”.

END OF SECTION
8-12 CHAIN LINK FENCE AND WIRE FENCE

8-12.1 Description
This section is supplemented with the following:

This work shall also include constructing cedar fence at the height specified, consisting of posts, stringers, and cedar fence boards, to the lines and grades shown on the plans.

This work shall also include placing, maintaining, removing temporary security fencing as shown for on the plans.

8-12.2 Materials
The first paragraph is supplemented with the following:

<table>
<thead>
<tr>
<th>Material</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sawed Fence Posts</td>
<td>9-09.2(3)</td>
</tr>
<tr>
<td>Preservative Treatment</td>
<td>9-09.3</td>
</tr>
<tr>
<td>Nails</td>
<td>9-06.22</td>
</tr>
</tbody>
</table>

8-12.3 Construction Requirements

8-12.3(1)C Tension Wire
This section is supplemented with the following:

In lieu of a tension wire supporting the top of the chain link fabric the Contractor shall install a top rail with a minimum diameter of 1 1/4-inch and fasten the chain link fabric to the rail in the same manner used to secure the fabric to posts, with a maximum distance between fasteners of 24-inches.

Top Rail shall be used in accordance with WSDOT plan sheet FS-2.

This new section is added:
8-12.3(1)F Privacy Slats for Chain Link Fence
Where shown on the plans the Contractor shall install privacy slats throughout the length of fence installed. The privacy slats installed shall be of a size intended for use with the chain link fabric height and diamond size. When installed the privacy slats shall provide a minimum 80% visual privacy to the property.

This new section is added:
8-12.3(1)G Temporary Security Fence
Where shown on the plans the Contractor shall set up temporary security fence prior to removal of the existing fence at the property, shall maintain the temporary fence while in place, and shall remove the temporary fence after the new permanent fence is installed.

Temporary security fence shall be of a chain link construction, with a minimum height of 5-ft. All gaps along the bottom of the security fence shall be 2 inches or less to prevent animals from escaping. The security fencing shall include a fabric, or similar material, covering affixed to the fence structure as a visual barrier between the project and the property.
This new section is added:

8-12.3(3) Cedar Fence

8-12.3(3)A Posts

Posts shall be square with nominal dimensions of 4-inch by 4-inch, and treated with preservative for exterior use and ground contact.

Posts shall be a minimum of 2 feet longer than the fence height to be built for embedment. Posts shall be placed vertical and plumb, with a maximum spacing of 8 feet between posts and minimum spacing of 4 feet between posts.

All corner and gate posts shall be set in concrete to the dimensions shown in WSDOT Standard Plan L-20.10-03. All other posts may be set in thoroughly compacted backfill material.

8-12.3(3)B Stringers

Stringers shall be nominally 2-inch by 4-inch, and either be treated with preservative for exterior use or be made of Western Red Cedar. Stringers shall be long enough to completely span the space between posts, and shall be attached to the posts such that the largest dimension is vertical and the stringer is level.

Stringers may be attached to posts with either 4-inch hot dipped galvanized nails, or 4-inch screws coated for exterior use.

4-foot height cedar fences shall be constructed using 2 stringers. 6-foot height cedar fences shall be constructed using 3 stringers.

8-12.3(3)C Pickets

Pickets shall be 5/8-inch by 5 1/2-inch and sufficient height for the height of fence being constructed, and shall be made of Western Red Cedar. Pickets shall be flat toped.

Pickets shall be attached to stringers with 1 1/2-inch hot dipped galvanized nails. A minimum of 2 nails shall be used to attach a picket to each stringer. A space of 1/16th inch to 1/8th inch shall be placed between each picket. Pickets shall be ripped to a reduced width as necessary to completely close the space between posts.

8-12.3(3)D Gates

Gates for cedar fence shall be constructed in a manner as to give a continuous appearance from the outside of the fence. Gates shall be constructed to a quality that prevents sagging and dragging, and attached to support posts with sufficient strength and embedment to support the gate when open. Gate hinges shall be of sufficient strength and number to support the gate, and allow the gate to be opened to the inside of the fence; gates for 6-foot high fences shall have a minimum of 3 hinges, gates for 4-foot high fences shall have a minimum of 2 hinges. Latches for the gates shall be designed to allow use from either side of the gate, and to allow a lock to be placed on the inside of the gate.
Gates exceeding a width of 6 feet shall be chain link in accordance with WSDOT Standard Plan L-30.10-02.

8-12.4 Measurement
The first paragraph is revised to read:

Chain link fence, wire fence, and cedar fence will be measured by the linear foot of completed fence along the ground line, inclusive of gates, but exclusive of openings.

The second and third paragraphs are deleted.

This section is supplemented with the following:

Privacy slats will be measured by the linear foot installed in the fence as measured along the bottom fence line.

Temporary security fence will be measured per each for each property that security fence is required.

8-12.5 Payment
The pay items “End, Gate, Corner, and Pull Post for Chain Link Fence”, “Double 14 Ft. Chain Link Gate”, “Double 20 Ft. Chain Link Gate”, “Single 6 Ft. Chain Link Gate”, “Single Wire Gate 14 Ft. Wide”, and “Double Wire Gate 20 Ft. Wide” are deleted, and included in the unit payment for “Chain Link Fence Type ___” or “Wire Fence Type ___” as is applicable for the type of fence being constructed.

This section is supplemented with the following:

“Chain Link Fence, ___ Foot Height”, per linear foot.

“Cedar Fence, ___ Foot Height”, per linear foot.

The unit contract price per linear foot for “Cedar Fence, ___ Foot Height” shall be full pay for all labor, materials, and equipment to construct the fence called for on the Plans as specified, including but not limited to all posts, stringers, pickets, gates, hinges, latches, and footings.

“Privacy Slats, ___”, per linear foot.

The unit contract price per linear foot for “Privacy Slats, ___” shall be full pay for all labor, materials, and equipment to procure and install the privacy slats of the color called for on the Plans and in the Proposal.

“Temporary Security Fence”, per each.

The unit contract price per each for “Temporary Security Fence” shall be full pay for all labor materials and equipment necessary to procure, set up, maintain, and remove the temporary fence in accordance with the Plans and Specifications.

END OF SECTION
8-13 MONUMENT CASES
(******)

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.

All existing monument cases that are intact shall be removed and sent to the City of Tacoma Field Survey Office.

8-13.2 Materials

Concrete shall be Class 3000 in accordance with the requirements of Section 6-02. Commercial concrete will be allowed.

Bronze markers will be supplied by the Contracting Agency.

8-13.3 Construction Requirements

The Contracting Agency shall obtain a permit for the temporary removal of the Monument from the Washington State Department of Natural Resources in accordance with WAC 332-120. The Contracting Agency will provide a copy of the Permit to the Contractor. The Contractor shall not remove the existing Monument before receiving the permit and approval from the Engineer in writing. The Contractor shall adhere to WAC 332-120, DNR Application for Permit to Remove or Destroy a Survey Monument*, when removing existing survey monuments.

The Contractor shall construct the poured monument in accordance with the City of Tacoma Standard Plan SU-01. The brass marker position shall be staked by the Contracting Agency. The bronze marker shall be engraved with the PLS number of the Professional Land Surveyor staking and verifying the monument location.

Bronze disks will be installed with the text legible from facing magnetic North. Disks to be installed to a positional tolerance of +/- 0.04 feet from center of disk to actual position by the Contractor using four 2-foot offset reference marks established by the Contracting Agency.

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 is supplemented with the following:

This Work shall also consist of installing decorative colored stamped cement concrete sidewalk, scored cement concrete sidewalks, bus pads and wheelchair curb ramps including detectable warning surface mats in locations as shown on Plans, in conformity with lines, grades, thicknesses, and typical cross-sections shown on the Plans.

Stamping of house numbers at private walks and stair cases is also included in the Work described by this section.

This Work consists of installing the detectable directional tiles as shown in the Plans.

8-14.2 Materials
This section is supplemented with the following:

Materials shall meet the requirements of the following sections as applicable unless noted:

<table>
<thead>
<tr>
<th>Material</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>6-02</td>
</tr>
<tr>
<td>Steel Structures</td>
<td>6-03</td>
</tr>
<tr>
<td>Structural Steel and related materials</td>
<td>9-06</td>
</tr>
<tr>
<td>Reinforcing Steel</td>
<td>9-07</td>
</tr>
</tbody>
</table>

Concrete
Concrete shall be Class 3000 unless noted otherwise on the Plans.

Reinforcing Steel
Reinforcing steel shall conform to ASTM A615, Grade 60.

Decorative Colored Stamped Cement Concrete Sidewalk
Decorative Sidewalk Stamp shall be a custom pattern as detailed by the artist. The Contracting Agency has paid all setup fees for production of the stamps in sizes 16-inch by 36-inch, and 12-inch by 12-inch, the Contractor shall pay all additional costs necessary to produce stamps in the size and quantity needed. The Contractor shall procure all stamps necessary from Valley Supply Company or other approved distributor of Brickform custom stamps.

Concrete Color shall be integral and shall be Solomon Colors “5092 Hunter Green” or engineer approved equal.

Detectable Warning Surface
Detectable warning surface material shall be per City of Tacoma standard plans.

Finishing Aid
Finishing aid shall be a liquid reactive colloidal silica which is intended to be worked into the surface of plastic concrete. Evaporation retarders will not be allowed as a substitute.
House Number Stamps

Stamps for house numbers shall be capable of imprinting the house number for that property at a depth of between 3/16-inch to 1/4-inch and a text height of 3-inch. The stamps shall also be capable of placing all the digits of the house number in a single straight line without any skewing of the digits or offsetting of the bottom edge of the digits.

Detectable Directional Tile

Detectable directional Tiles shall be 16 gauge G90 powder coated galvanized steel. Detectable tiles shall be a minimum of six inches wide or as shown on the Plans. The raised directional guidance on the tiles shall be 0.21 inches tall by 0.99” wide by 11” long and spaced at 2.01” apart on the detectable tile.

Detectable directional Tile shall be powder coated to the color shown on the Plans.

8-14.3 Construction Requirements

This section is supplemented with the following:

Decorative Colored Stamped Cement Concrete Sidewalk

Decorative sidewalk shall receive a light broom finish.

Cement Concrete Finishes

The finish requirements include:

- Sidewalk edges tooled with a ½” radius edger
- Light broom finish (perpendicular to the direction of travel orientation) on all sidewalk

When replacing sections of existing sidewalk or when new sidewalk adjoins existing, new concrete shall be finished to match the existing concrete or as directed by the City Engineer.

Longitude slope shall be no less than ¼” for every 10 feet.

Full depth expansion joints shall be constructed with a minimum spacing of 10 feet on center and maximum spacing of 16 feet on center, align with control joints, and as detailed on the Plans. Expansion joints shall be placed between pedestrian ramps, driveways and match curb and gutter expansion joint spacing. The Contractor shall also place expansion joints, and complete all finishing as shown in City of Tacoma Standard Plan SU-04.

Job Conditions

- Hot weather: Comply with the recommended practice of ACI 305R and the requirements specified herein.
- Cold Weather: Comply with the recommended practice of ACI 306R and the requirements specified herein.

All concrete and pavements shall be free of depressions; puddling shall not be allowed to occur.
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/tactile warning mat shall be installed per City of Tacoma Standard Plan No. SU-05G.

This section is supplemented with the following:

Cement Concrete Sidewalks shall receive light broom finish.

All cement concrete placed in accordance with Section 8-14 shall be treated with finishing aid which is worked into the surface of the plastic concrete during the finishing process. Finishing aid shall be applied at a rate of no less than 500 square feet per gallon. All work shall be done in accordance with the manufacturer’s recommendations.

8-14.3(4) Curing
The second sentence is revised to read:

Curing shall be in accordance with Section 5-05.3(13).

8-14.3(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 the time, the forms shall be adjusted and subgrade repaired as determined by the Engineer.

8-14.3(7) Thickened Edge for Sidewalk

Thickened edge shall be constructed in accordance with the standard plan.

8-14.3(8) Detectable Directional Tile

The detectable directional tile shall be located as shown in the Plans. Placement of the detectable directional tile shall be in accordance with the manufacturer’s recommendations for placement on hardened cement concrete surface and asphalt pavement surface.

The base of the detectable directional tile shall be flush with the adjoining surface to the extent possible after installation.

Detectable directional tiles shall be produced by a manufacturer that regularly produces the specified product, or as otherwise approved by the Engineer.

8-14.3(9) House Number Stamp

At each newly constructed staircase and private walk the Contractor shall stamp the house number for that property 6-inches, on center, from the edge of the public sidewalk.
and parallel with the new public sidewalk, as shown in the detail on the plans. Digits for each house number shall be placed in a single straight line, no skewing or offsets in the bottom edges of the stamps, to a depth of no more than 1/4-inch and no less than 3/16-inch.

8-14.5 Measurement
This section is supplemented with the following:

Cement Concrete Sidewalk will be measured by the square yard of installed cement concrete sidewalk with scoring and finished surface(s).

Decorative Colored Stamped Cement Concrete Sidewalk will be measured by the square yard of installed and finished decorative sidewalk band, including stamp, as detailed on the Plans.

Construction of expansion joints and score joints as specified, shall be included in other bid items.

Detectable directional tile will be paid by the linear foot of 6-inch width tile installed as measured along the centerline of the length of the tile. Where tile widths greater than 6-inches are specified payment will be made for each 6-inch width.

House number stamps will be measured per each house number set completely imprinted. House number sets are typically 3 or 4 digits long.

8-14.5 Payment
This section is supplemented with the following:

The unit contract bid price for Cement Conc. Sidewalk shall be full compensation for all finishes, labor, tools, and equipment necessary to satisfactorily complete the work as detailed on the Plans, defined in the Standard Specifications and these Special Provisions.

All additional costs related to the construction of thickened edges, thickened sections for Residential Storm Drains, cement concrete base, scoring and finishes shall be included in the unit contract cost for “Cement Conc. Sidewalk”.

The unit contract bid price above, including all incidental work, shall be full compensation for all labor, materials, tools and equipment necessary to satisfactorily complete the work including different scoring and application of finishing aid as defined in the Standard Specifications and these Special Provisions.

Construction of expansion joints and score joints as shown on the Plans shall be incidental to and included in the unit contract price per square yard for Cement Concrete Sidewalk.

Cement concrete portions of the bike lanes shall be paid for as “Cement Conc. Sidewalk”, except when already included in other pay items such as “Cement Conc. Curb Ramp” and “Cement Conc. Driveway Entrance”.

“Cement Conc. Curb Ramp”, per each.
The unit contract price per each for “Cement Conc. Curb Ramp” shall be full pay for all labor materials and equipment to construct the curb ramp as shown on the plans, including landings, wings, and detectable warning surface.

“Decorative Colored Stamped Cement Conc. Sidewalk”, per square yard.

The unit contract bid price for Decorative Colored Stamped Cement Concrete Sidewalk shall be full compensation for all labor, tools, and equipment necessary to satisfactorily complete the work as detailed on the Plans, defined in the Standard Specifications and these Special Provisions, including procurement of stamps and application of finishing aid.

“Detectable Directional Tile”, per linear foot

The unit contract price per linear foot for “Detectable Directional Tile” shall be full pay for all labor, materials, and equipment to install the detectable direction tiles where shown in the Plans, including, but not limited to procuring the tiles, fasteners, adhesive, and calking, drilling anchor holes, and placing the tile in accordance with the manufacturer’s recommendations where shown on the plans.

“House Number Stamp”, per each.

The unit contract price per each for “House Number Stamp” shall be full pay for all labor, materials, and equipment necessary to place the stamp as described in the Specification and as shown in the Plans including, but not limited to procuring stamps, marking out the location, stamping, and additional finishing.

“Detectable Warning Surface, Green”, per square foot.

The unit contract price per square foot for “Detectable Warning Surface, Green” shall be full pay for all labor, materials, and equipment to procure and place the detectable warning surface meeting the material requirements of city of Tacoma Standard Plan SU-05G.

END OF SECTION
8-18 MAILBOX SUPPORT

8-18.3 Construction Requirements

This section is revised to read:

All existing mailboxes shall be saved or salvaged. Additional mailboxes and supports that are damaged by the Contractor shall be replaced in kind at no additional cost to the Contracting Agency.

All existing mailboxes shall be protected in place, except as shown to be relocated according to the Plans. Upon approval of the Engineer the Contractor may remove and salvage other mailboxes for his own benefit at no additional cost to the Contracting Agency.

The mailboxes to be relocated shall be reinstalled at the same station or relocated as shown on the plans, using materials in-kind to the original installation.

The Contractor shall maintain mailboxes in a functional state in permanent and temporary locations.

8-18.4 Measurement

This section is revised to read:

Mailbox Support will be measured per each by the combined unit of mailbox and mailbox support reinstalled or relocated. Multiple mailboxes on a single support will be considered one unit.

8-18.5 Payment

The pay item “Mailbox Support, Type ___” is revised to read:

“Mailbox Support”, per each.

The unit price for Mailbox Support per each for the combined unit of mailbox and mailbox support shall be full compensation for all labor, materials, and equipment to remove, salvage, place in temporary location, reinstall and restore the mailbox, post, and support in accordance with the Plans and the Special Provisions.

END OF SECTION
8-20  ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, INTELLIGENT TRANSPORTATION SYSTEMS, AND ELECTRICAL
(August 24, 2023 Tacoma GSP)

8-20.1(3) Permitting and Inspections
The third paragraph is revised to read:
All new services require a Tacoma Public Utilities Permit and inspection by Tacoma Power. All work on the load side of the service will be inspected by the Signal and Streetlight Shop Inspector.

8-20.2 Materials
This section is supplemented with the following:
The Contractor shall warranty all electrical and mechanical equipment described in this section for satisfactory in service operation for one year following project acceptance. Warranty shall include troubleshooting, labor, materials and all other costs to bring the equipment to a satisfactory level of service. Normal maintenance is not included in the warranty.

8-20.2(1) Equipment List and Drawings
This section is revised to read:
Within 20 days following execution of the Contract, the Contractor shall submit to the Engineer a completed “Request for Approval of Material” that describes the material proposed for use to fulfill the Plans and Specifications.

The Contractor shall submit Type 2 Working Drawings consisting of supplemental data, sample articles, or both, of the material proposed for use. Supplemental data includes such items as catalog cuts, product Specifications, shop drawings, wiring diagrams, etc.

The Contractor shall submit Type 2 Working Drawings consisting of the following information for each different type of luminaire required on the Contract:

1. Isocandela diagrams showing vertical light distribution, vertical control limits, and lateral light distribution classification.
2. Details showing the lamp socket positions with respect to lamp and refractor for each light distribution type. This requires that the Contracting Agency know what the light pattern available are and the light distribution.

Additional submittals for proposed alternate LED Roadway Luminaires shall be in conformance with section 9-29.10.

The Contractor shall submit for approval Type 3E Working Drawings in accordance with Section 1-05.3 for each type of light standard and each type of signal standard called for on this project.

The Engineer’s acceptance of any submitted documentation shall in no way relieve the Contractor from compliance with the safety and performance requirements as specified herein.
Submittals required shall include but not be limited to the following:

1. A Type 2 Working Drawing consisting of a material staging plan, should the Contractor propose Contracting Agency-owned property for staging areas.
2. A Type 2 Working Drawing consisting of a cable vault installation plan showing the exact proposed installation location by Roadway station, offset and the scheduled sequence for each cable vault installation.
3. A Type 2E Working Drawing consisting of a pit plan, for each boring pit, depicting the protection of traffic and pedestrians, pit dimensions, shoring, bracing, struts, walers, sheet piles, conduit skids, and means of attachment, casing type, and casing size.
4. A Type 2E Working Drawing consisting of a boring plan depicting the boring system and entire support system.

8-20.3 Construction Requirements

8-20.3(1) General

This section is supplemented with the following:

The Contractor shall call 24 hours prior for inspection before covering any underground conduit, prior to installing any detection loops, or placing concrete for foundations. For inspections, notify Traffic Signal/Streetlighting at (253) 591-5287.

Work shall be sequenced such that after the new signal is placed in operation, the Contractor shall remove any equipment not required for the operation of the new signal. The Contractor shall remove the old vehicle and pedestrian signal heads immediately after the new system is operational.

For new or modified signals, the contractor shall provide a Portable Changeable Message Sign in each direction and operate the PCMS or static signs for a minimum of two weeks and a maximum of one month after activating the new or modified signal. This work shall be paid for in accordance with Section 1-10.

The following existing and temporary equipment shall be deconstructed/removed by the Contractor and delivered to the City of Tacoma Signal/Streetlight Shop located at 3401A South Orchard Street. Care shall be exercised in removing and salvaging the equipment. Any equipment damaged during removal, hauling, and stockpiling shall be repaired or replaced by the Contractor at no expense to the City.

- All signal heads and mounting hardware
- Flashing beacons and flasher control panel
- Steel poles, mast arms, and hardware
- Aluminum poles, mast arms, and hardware
- Controller cabinets and all internal hardware and wiring
- Vehicle detection systems, including video, microwave, and infrared systems, and associated hardware
- All Opticom equipment or other preemption and priority equipment.
- LED luminaries, LED retrofit kits, and LED lamps
- Ornamental/Decorative fixtures and poles/posts
- Pedestrian signals, poles, and pushbuttons.
• Signs, brackets, and hardware
• Locking junction box security lids, security bolts, and all other wire theft deterrent security hardware

All other equipment shall be removed of and disposed of by the Contractor, including but not limited to the following:
• Wood poles
• All wiring outside of the controller cabinet
• Loops
• Non-LED cobra-head fixtures

8-20.3(4) Foundations

This section is supplemented with the following:

Breakaway Base Connection brackets for pedestrian pushbutton poles (Type PPB) shall be installed with the flanges parallel to the traveled way, as shown on WSDOT standard plan J-20.15-03.

Anchor bolts for streetlight standards and for strain poles shall extend a minimum of two threads and a maximum of six threads above the top heavy-hex-nut. A minimum of three threads shall remain between bottom of the leveling hex-nut and the top of the foundation.

Foundations shall be excavated using an auger and poured against undisturbed material unless otherwise approved by the Engineer. Vacuum excavation should be used where there is a possibility of conflict with utilities or other facilities.

Forming the foundation with galvanized culvert pipe or similar forming methods will only be allowed when soil conditions or other factors make this method of construction necessary and is approved by the Engineer. Biodegradable forming tubes shall be fully removed from the cured concrete prior to backfilling. When using culvert or tubes, the following backfill requirements will apply. The area between the form and undisturbed material shall be filled with CDF. For lightly loaded installations and only with the approval of the Engineer, Crushed Surfacing Top Course meeting the requirements of Section 9-03.9(3) may be used. Placement shall be in accordance with Section 2-09.3(1)E and shall be backfilled and compacted in the presence of the Engineer.

8-20.3(5) Conduit

8-20.3(5)A General

This section is supplemented with the following:

Unless otherwise specified in the plans and specifications, standard conduit sizes shall be as follows:
• Underground Streetlight Conduit: 2 inch diameter
• Pole Riser Service Installations: 1-1/2 inch diameter
• Traffic Signal Conduit: 3 inch diameter
• Traffic Signal Communication: 3 inch diameter
• All other conduit: 2 inch diameter, unless otherwise specified.
As soon as the mandrel has been pulled through, both ends of the conduit shall be sealed in an approved manner. Location wire, in conformance with 9-29.3(2)A3, green insulated, No. 8 AWG copper minimum and Pull Tape, in conformance with 9-29.1(10), shall be installed in all empty conduits. Minimum three (3) feet of slack of the location wire and pull tape shall be neatly coiled and secured to the conduit in the same manner as is shown in Washington State Department of Transportation Standard Plan J-28.70-04, Details A and B.

8-20.3(5)B Conduit Type

This section is supplemented with the following:

Conduit under driveways and other vehicular access ways shall be Schedule 80 high-density polyethylene (HDPE), Schedule 80 PVC, or rigid metal conduit (RMC) Conduit installed in a joint trench, with power, and that is installed a minimum of 36-inches from finished grade may utilize Schedule 40 PVC in lieu of Schedule 80 PVC. This allowance shall not be construed to permit the use of dissimilar materials in a single run.

Pole riser conduit material types shall be in accordance with applicable City of Tacoma standard plans.

8-20.3(5)D Conduit Placement

This Section is supplemented with the following:

Conduit terminating in pole foundations shall extend to 3 inches below the pole handhole.

Conduit terminating in controller foundations shall terminate 3 inches above the foundation.

8-20.3(5)E1 Open Trenching

Subsection 5 is revised to read:

5. Trenches located within the paved roadway shall be backfilled with 3 inches of sand over the conduit, followed by material meeting the requirements of Section 9-03.12(3). Compaction shall be in conformance with Section 2-09.3(1)E. All street cuts shall be repaired in accordance with the City of Tacoma standard plans.

This section is supplemented with the following new Subsections:

7. Where multiple conduit are installed in the same trench, the trench shall be of sufficient width to accommodate all conduit, with a minimum 3-inch separation between each conduit, and a minimum clearance of 1-inch on the sides of the trench. When conduit is laid horizontal to one another, the conduit shall be laid at the same elevation, parallel with one another. When conduit is laid vertically in the same trench, conduit spacers shall be used to maintain the 3-inch separation. Spacers shall be installed in accordance with the manufacturer’s recommendations for conduit of that size and type. Additional spacers shall be
required where the supported conduit is sagging more than 20% of the nominal
diameter of the conduit.

8. In all conduit trenches, metallic, detectible, utility warning tape shall be placed at
twelve (12) inches below final grade.

8-20.3(6) Junction Boxes, Cable Vaults, and Pull boxes

This section is supplemented with the following:

Unless otherwise specified in the plans, or as otherwise directed by the engineer, all
junction boxes exposed to vehicular traffic shall be Heavy-Duty. Field adjustment of
junction boxes, which cause junction boxes to be installed within an intersection radius
and within four feet of the curb face may be required to be Heavy-Duty. Final placement
and type of all junction boxes within an intersection shall be as directed by the Engineer.

Adjacent junction boxes shall be separated by a minimum of three-inches.

Concrete meeting the requirements of 6-02.3(2)B shall be placed surrounding all
junction boxes except as otherwise provided for below. Concrete shall be flush with the
top of the junction box and the adjacent improvements. Concrete shall be cast in place.
Junction boxes shall be secured with the concrete border (per City of Tacoma Standard
Plan TS-08) as follows:

1. When the junction box is located within a concrete or asphalt section and is
located a minimum of 12-inches from the edge of the section, a concrete border
will not be required.

2. Where junction boxes are located within 12-inches from the edge of the concrete
or asphalt section, the junction box shall secured on all sides with a minimum 12-
inch wide, 6-inch deep concrete section. Concrete shall be finished in the same
manner as the adjacent concrete where applicable.

3. Where junction boxes are located within a planter strip, a landscaped area, or
other non-hardened surface, the junction box shall be bordered on all sides with
a minimum 6-inch wide, 12-inch deep concrete section flush with the top of the
junction box.

When setting a new junction box on an existing streetlight circuit where no equipment
ground is present, a non-conductive junction box and lid shall be utilized.

All junction box lids for illumination systems shall be welded in place using two, 1-1/2
inch long welds on opposite corners of the junction box lid and frame. Welding shall
occur after inspection and testing of the illumination system and confirmation from the
Engineer. An Illumination System may consist of a separate illumination service or
circuit.

8-20.3(7) Messenger Cable, Fittings

The second paragraph of this section is deleted.

This section is supplemented with the following:

Cable ties shall be used to neatly secure the signal cable to the span wire at 10-inch
centers and shall be tightened at top. Excess tie material shall be completely cut off.
The signal control cable shall be below the span wire and shall be straight with no twisting or spiraling.

A maximum 5% sag shall be provided in the span wire when fully loaded with all vehicular signal heads, unless otherwise directed by the Engineer.

8-20.3(8) Wiring

The sixth paragraph is revised to read:

Signal wiring shall be in conformance with the following:

1. All termination for traffic signal control systems shall be in accordance with City of Tacoma Standard Plan TS-15.
2. All signal wiring shall be 14 gauge 5-conductor or 12 gauge 2-conductor stranded copper wire unless otherwise shown in the plans.
3. For 5-section heads, 2-5c-14 gauge conductors shall be utilized.
4. 5c wire shall not be split between high voltage and low voltage. Where a pedestrian head and a pedestrian push-button share a common pole, a separate 2c shall be pulled for the push-button.
5. A single 5c may be split between two pedestrian heads on a common pole with a jumper across the neutral.
6. Opticom and detection wiring shall be per manufacturer’s recommendations.
7. Interconnect fiber cable shall circle the base of the cabinet with 50 feet of coiled cable.

Field wiring of the cabinet shall be done by City of Tacoma Signal Electricians after all wiring has been pulled into the cabinet and properly labeled with a temporary label consisting of white electricians tape with permanent marker. The Contractor shall provide a detailed description/key of all temporary labeling. The cabinet and labeling shall be inspected by the Signal/Streetlight inspector prior to cabinet wiring. The Contractor shall allow five working days for City Electricians to field wire the cabinet after the inspection is complete. Improper or incorrect labeling requiring additional effort by the City may result in additional time required by City forces to wire the cabinet.

The eighth paragraph is revised to read:

Illumination cable in light standards shall be #10 AWG USE or “Pole and Bracket” cable, as specified in Section 9-29.3(2)D of the Standard Specifications.

The ninth paragraph is revised to read:

Fifteen (15) feet of slack cable shall be provided at the controller end of all cables terminating in the controller cabinet. A minimum of three (3) feet of slack cable shall be left at all strain poles and junction boxes. Interconnect fiber optic cable shall have fifty (50) feet of slack cable in the controller cabinet and 20 feet of slack cable in each junction box between terminated signal cabinets.

8-20.3(8)A Splices

The second and third paragraph are deleted.
The fifth paragraph is revised to read:

Splices and taps on underground and overhead circuits shall be made with solderless crimp connectors, installed with an approved tool designed for the purpose, to securely join the wires both mechanically and electrically. Splices and taps will be sealed in accordance with this section.

The seventh paragraph is revised to read:

Aerial illumination splices shall be taped with thermoplastic electrical insulating tape equivalent to the original wire insulation rating and thickness. It shall be well lapped over the original insulation.

: This section is supplemented with the following:

All splices in junction boxes and handholes shall be taped and sealed with an electrical coating. Tape splice insulation shall consist of thermoplastic electrical insulating tape equivalent to the original wire insulation rating and thickness. It shall be well lapped over the original insulation and moisture resistant electrical coating shall be applied and allowed to dry. Two layers of thermoplastic tape will then be applied, followed by a second layer of moisture resistant electrical coating.

8-20.3(9) Bonding, Grounding

The third paragraph shall be supplemented with the following:

Equipment grounding shall be minimum #8 AWG unless otherwise shown in the plans. When the ground is pulled through a conduit, the wire shall be insulated. Color tape marking shall not be acceptable for marking the ground.

8-20.3(10) Service, Transformer, and Intelligent Transportation System (ITS) Cabinets

The second, third, and fifth paragraphs are deleted.

8-20.3(11) Testing

8-20.3(11)B Traffic Signal System Turn-On

The fourth paragraph is revised to read:

Unless approved by the Engineer no change to signal stop and go operation will be allowed between 6:00 a.m. to 9:00 a.m. and 2:00 p.m. to 7:00 p.m. on Tuesday through Thursday, nor will signal operation changes be allowed on Fridays, weekends, holidays, or the day preceding a holiday. Signal operation changes will be allowed on Monday with prior coordination with the City of Tacoma Traffic Signal Electricians.

8-20.3(13) Illumination Systems

8-20.3(13)A Light Standards

The sixth, seventh, and eighth paragraphs (regarding pole identification numbers) are deleted.

This section is supplemented with the following:
Conventional Base installation shall conform to the following:

The light standards shall be assembled and mounted complete on foundations perfectly straight and in good alignment. Proper leveling of the standards shall be accomplished by means of four leveling nuts that are to be employed with the anchor bolts. Standards shall be plumb within 1/50-inch per foot.

Luminaires shall be securely attached to the mast arm in a straight and level position. The luminaires shall be installed at a specified number of degrees from level if directed by the Engineer. After the poles are plumbed, grout shall be neatly placed between the pole base and the concrete. The Contractor shall install a 3/8-inch diameter plastic drain tube in the grout. The nuts and bolts required for this foundation shall be furnished by the Contractor.

All above grade signal and streetlight infrastructure, including streetlight standards, traffic signal poles, pushbutton poles, cabinets, and enclosures, shall not be installed closer than three (3) feet from face of curb to the nearest part of the pole or structure and no closer than five (5) feet from fire hydrants and utility poles.

8-20.3(13)B Vacant

This vacant section is renamed and replaced with the following:

8-20.3(13)B Temporary Lighting

This section is supplemented with the following

The Contractor shall schedule the work to minimize the outage between any existing lights and new lights. The temporary lighting shall be installed and operational before the existing lighting is removed from service. Temporary lighting shall be provided by the Contractor. City Signal/Streetlight Maintenance Crews will hot splice the final connection or connections. The Contractor shall provide 72 hours notice to schedule the City crews for the hot splicing.

8-20.3(13)C Luminaires

This section is supplemented with the following:

All luminaires supplied by the project shall be identified with a green “H-1” label on the bottom of the luminaire. H-1 labels can be obtained at the Signal and Streetlight shop or through the Signal and Streetlight Inspector.

8-20.3(14) Signal Systems

8-20.3(14)A Signal Controllers

This section is revised to read:

The fully wired control cabinet, the controller, the MMU, and detection hardware for the cabinet shall be delivered to the City of Tacoma Traffic Signal Shop for configuration, programming, testing, and certification prior to installation. At the Contractor’s request, the City will off load the equipment. The Contractor shall notify the City 24 hours in advance of the equipment delivery.
A minimum of two weeks shall be required for the City to configure and test the cabinet and controller for each intersection. If multiple cabinets and controllers are delivered, the Contractor shall identify the sequence for configuration and allow one additional week for each additional cabinet and controller delivered.

The Contractor shall be responsible for transporting the controller cabinet from the Signal/Streetlight Shop site to the jobsite, and for installation of the cabinet and all field wiring. Field wiring shall be performed in accordance with 8-20.3(8) and as directed by City of Tacoma Signal and Streetlight personnel in the field.

8-20.3(14)B Signal Heads
This section is supplemented with the following:

For span wire installation, the red indications shall be leveled to within 1 inch for each direction as approved by the City. The height to the bottom of the lowest head shall be 17 feet, plus or minus 3 inches. Height to the bottom of the lowest four-section or five-section head shall be a minimum of 16 feet-3 inches, plus or minus 3 inches.

For span wire installation, the signal stem (drop pipe) shall be 1 to 3 feet long unless otherwise approved by the Engineer.

8-20.3(14)C Induction Loop Vehicle Detectors
Subsections 3, 8, and 9 are deleted.

8-20.3(14)E Signal Standards
This section is supplemented with the following:

Unless otherwise shown in the plans, a terminal cabinet shall be installed on all new traffic signal strain poles and traffic signal mast arm standards. Where modifications to existing signal systems include replacement, addition, or modifications to existing signal head wiring, a terminal cabinet shall be added to the existing strain pole or mast arm standard.

For strain poles and mast arm poles supporting signal indications for one leg of the intersection, an 8” deep, 16” high, and 12” wide terminal cabinet shall be installed. For strain poles and mast arm poles supporting signal indications for two or more legs of the intersection an 8” deep, 24” high, and 18” wide terminal cabinet shall be installed.

Terminal cabinets shall be in conformance with Section 9-29.25.

Section 8-20.3(14) is supplemented with the following new section:

8-20.3(14)F Thermal, Microwave, Fish-Eye, and LED Optical Vehicle Detection

A representative from the City of Tacoma Signal and Streetlight operations shop shall be on site during all work within the signal cabinet. The Contractor shall notify the Engineer two working days in advance of work within the cabinet.

The Contractor shall install and test the detection system in accordance with the manufacturer’s recommendations and these special provisions. Detection units mounting and cabling shall be in accordance with the manufacturer’s recommendations.
The installation shall include all field equipment as well as all equipment required in the controller cabinet.

Detection unit locations as shown on the plans are approximate. Detection units shall be mounted at a sufficient height to prevent occlusion from cross traffic. Detection units shall be field adjusted as directed by the Engineer and equipment manufacturer for maximum coverage. A factory-certified representative of the equipment manufacturer shall inspect and provide a written verification that the installation has been performed in accordance with the manufacturer’s requirements.

The factory-certified representative of the equipment manufacturer shall supervise all testing of the equipment and shall provide written documentation showing acceptance of the testing and verification that the system is a complete, fully functional system.

All equipment shall be warranted against manufacturing defects in materials and workmanship for a period of 3 years from the date of signal turn-on.

8-20.3(17)B “As Built” Plans
This section is supplemented with the following:

These drawings shall show the routing of all underground conduits. The locations of the conduit shall be dimensioned with a precision and accuracy of 1 foot.

8-20.4 Measurement
This section is supplemented with the following:

When a bid item is shown as “lump sum” in the proposal, no specific unit of measurement will apply, but measurement will be for the sum total of all items for a complete system to be furnished and installed in accordance with approved methods, the Plans, and the Special Provisions, and these Specifications. Removal, relocation and salvage of existing traffic signal and illumination equipment and signs where required shall be incidental to the lump sum items and no separate measurement will be made.

Junction Boxes will be measure per each replaced junction box regardless of the type specified use, unless the junction box is included in an illumination system, traffic signal system, intelligent transportation system, or other type of electrical system lump sum Bid item.

8-20.5 Payment
This section is supplemented with the following:

“Illumination System”, lump sum.

The lump sum Contract price for “Illumination System” shall be full pay for the construction of the complete electrical system, modifying existing systems, or both, as described and as show in the Plans, and herein specified, including excavation, backfilling, concrete foundations, conduit, wiring, restoring facilities destroyed or damaged during construction, salvaging existing materials, and for making all required tests. All additional materials and labor, not shown in the Plans or called for herein and
which are required to complete the electrical system, shall be included in the lump sum
Contract price.
(The system may include long lead items, such as: luminaire poles, luminaire bracket
arms, LED luminaires, electrical service enclosures)

“Traffic Signal System, E 64th St & Portland Ave E”, lump sum.

The lump sum Contract price for “Traffic Signal System, E 64th St & Portland Ave E” shall
be full pay for the construction of the complete signal and electrical system, modifying
existing systems, or both, as described and as show in the Plans, and herein specified,
including excavation, backfilling, concrete foundations, conduit, wiring, restoring facilities
destroyed or damaged during construction, salvaging existing materials, and for making
all required tests. All additional materials and labor, not shown in the Plans or called for
herein and which are required to complete the electrical system, shall be included in the
lump sum Contract price.
(The system may include: terminal cabinets, APS pushbuttons, pushbutton extension
brackets, pushbutton and signal posts, vehicular and pedestrian signal heads, signage,
vehicular and bicycle detection and these may be long lead items.)

“Install Junction Box”, per each.

The unit Contract price per each for “Install Junction Box” shall be full pay for all work to
remove the existing junction box, replacing or new placement of the junction box with a
specified type as directed by the Engineer. The costs for this work shall include all
handling, hauling, disposing, furnishing, excavation and placing the junction box and
constructing a concrete border around the junction as needed. Any work to restore
facilities, such as but not limited to: providing conduit, rerouting conduit, pulling wire,
reconnection the system and testing the system as directed by the Engineer shall be
included in this bid time.

“Pedestrian-Activated Crosswalk Beacon, E 64th St & E ‘L’ St”, lump sum.

The lump sum Contract price for the “Pedestrian-Activated Crosswalk Beacon, E 64th St
& E ‘L’ St” shall be full pay for the construction of the complete pedestrian-activated
crosswalk beacon system for the entire intersection as described above and as shown in
the Plans, and herein Specified, including excavation, backfilling, concrete foundation,
poles, equipment, conduit, wiring, restoring facilities destroyed or damaged during
construction, salvaging existing materials, and for making all required test. All additional
materials and labor, not shown in the Plans or called for herein and which are required to
complete the pedestrian-activated crosswalk beacon system, shall be included in the per
each Contract price
8-22  PAVEMENT MARKING

(*----*)

8-22.1 Description
This Section is supplemented with the following:

Chevrons
A “Chevron” shall be provided on speed humps for each approach. For a street width
less than 28 feet, the “Chevron” shall start at the edge of roadway (gutter line). For a
street width greater than 28 feet, the “Chevron” shall start at the center of the roadway.
Refer to details specified within the plans. Chevrons shall be provided along bike lane
buffers at locations specified on the plans or as directed by the Engineer.

Green Durable Product
Green Durable Product shall be provided at locations identified on the plans such as
“Bike Box” and “Bike Transition Lane” locations and as directed by the Engineer. Refer
to details specified within these plans and specifications. The product shall be a
durable, color stable, non-slip surface.

Sharrow Pavement Marking
Sharrow pavement marking shall be provided at locations identified in the plans. Refer
to City of Tacoma Standard Plan CH-11 and/or other details specified within these plans
and specifications. The product shall be a durable, color stable, non-slip surface.

Bicycle Detection Symbol:
Bicycle detection symbols shall be provided at the locations identified in the Plans. Refer
to the Plans for symbol details and design. The product shall be a durable, color stable,
non-slip surface.

8-22.2 Materials
The Section is supplemented with the following:

All legends and arrows including “Plastic Traffic Arrow”, “Plastic Sharrow Symbol”, and
“Plastic Letter” markings shall be Preformed retro-reflective thermoplastic pavement
marking material incorporating a pre-applied bead coating that can be adhered to
asphalt, concrete and Portland Cement Concrete pavements by means of heat fusion.
All “Plastic Chevron”, “Plastic Crosswalk Line”, and “Plastic Stop Line” shall be hot
applied thermoplastic. The applied markings shall be very durable, oil and grease
impervious, and provide immediate and continuing retro-reflectivity meeting the
requirements of Section 9-34.3(2).

“Green Durable Product” materials shall meet the requirements of section 9-34.3(4) for
MMA.

Materials used for curb paint shall be the same as for pavement marking paint per
Section 9-34.2.

8-22.3 Construction Requirements
**8-22.3(3)E Installation**

The 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(3)F Application Thickness**

The Section is supplemented with the following:

**Green Durable Product:** Approximately 4.2 Gallon mixture of Green colored MMA, hardwearing aggregate, and catalyst should cover 70-75 SF at 90 mils thickness.

**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.

**8-22.4 Measurement**

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

Crosswalk lines will be measured by the linear foot of marking installed.
The section is supplemented with the following:

Green Durable Products will be measured by the square foot of marking area installed.

Painted curb will be measured by the linear foot of curb line as “Painted Curb.”

Plastic Sharrow Symbols and Plastic Bicycle Detection Symbol will be measured by each symbol installed.

8-22.5 Payment

The pay item “Plastic Wide Lane Line” is supplemented with the following:

“Plastic Wide Lane Line” shall include shall also include all lines with are 6-inches wide.

This section is supplemented with the following:

“Painted Crosswalk Line”, per linear foot.

“Plastic Crosswalk Line”, per linear foot.

“Painted Curb”, per linear foot.

“Green Durable Product”, per square foot.

“Plastic Sharrow Symbol”, per each.

“Remove Paint Line”, per linear foot.

“Remove Traffic Marking,” per each.

“Plastic Bicycle Detection Symbol”, per each.

END OF SECTION
8-24 ROCK AND GRAVITY BLOCK WALL AND GABION CRIBBING
(*****)

8-24.1 Description
This section is supplemented with the following:
Boulders will be used as landscaping and placed as shown in the plans or directed by the Engineer. This work will consist of all work necessary to supply all materials, construct, and place the boulders as described in these specifications and as shown in the plans.

8-24.2 Materials
This section is supplemented with the following:
The landscape boulders shall be Bandera granite with a salt and pepper color. It shall be free from segregation, seams, cracks, and other defects tending to destroy its resistance to weather. All stone and rock material shall be washed and free from all objectionable coating as determined by the Engineer. The Bandera granite stone shall be pre-selected by the Engineer. The stone shall be the size indicated on the plans.

Add the following new section:

8-24.3(4) Boulders
Boulders shall meet the size requirements for rock for rock wall and be placed as shown on the plans.

8-24.4 Measurement
This section is supplemented with the following:
Boulders will be measured by the unit for each boulder placed.

8-24.5 Payment
This section is supplemented with the following:
“Boulder, ___-Man”, per each.
The unit contract price per each for “Boulder, ___-Man” shall be full pay for all labor, materials, and equipment required to acquire, transport, and place the boulders as shown on the Plans and as described in the Special Provisions.

END OF SECTION
8-30 COORDINATION AND STORAGE OF PUBLIC ART

8-30.1 Description
As a part of the project the Contractor will install public art that has already been
designed and made. This Work shall also consist of coordinating receipt of the art, layout
of certain items, and storage of the art once the art has been received by the Contractor
until the time that the art is installed.

8-30.2 Materials
Materials shall meet the requirements of the following sections:

| Grout     | 9-20.3 |

The two public art elements are:

1. 18" diameter tile medallions that will be installed at specific intersections. A
total of 15 medallions in multiple tile pieces. See the appendix for an image of
a typical tile medallion.
2. Historic granite curb with sand blasted poetry on them. A total of 5 pieces,
each piece varies in size and weight.

8-30.3 Construction
At the Preconstruction meeting the Contractor shall designate a date to receive delivery
of the public art elements, to be agreed upon by the artist; at the date designated the
Contractor shall receive and become fully responsible for the art pieces, including but
not limited to storage and transportation. Tile medallions may be delivered at a different
time than the granite curb if the Contractor requests, with the consent of the artist. After
receipt of the pieces the Contractor shall protect all pieces from damage; any pieces that
are damaged while in possession of the Contractor shall be repaired or replaced to the
satisfaction of the Engineer, and all costs will be borne by the Contractor. All costs for
contractor provided storage and transportation shall be included in other work.

Additionally, prior to permanent installation of the art pieces the Contractor shall
coordinate time to meet the artists on the project site and layout the specific location for
each piece. All costs for this coordination shall be included in the lump sum for this work.

8-30.3(1) Tile Medallions
During construction of the Decorative Colored Stamped Cement Concrete Sidewalk, as
described in Section 8-14 and shown on the Plans, the Contractor shall provide
knockouts, where shown on the Plans, with in the concrete for later installation of the
Tile Medallion.

After the Decorative Colored Stamped Cement Concrete Sidewalk has cured the
minimum time, the Tile Medallion will be placed in the location the knockout was
provided. Grout Type 2 Shall be used for embedment of the medallion.
8-30.3(2) Historic Granite Curb

Where shown on the Plans and as shown by the Engineer, the Contractor shall place each piece of granite curb within the planting areas such that all words sandblasted into the curb are visible to pedestrian traffic.

8-30.4 Measurement

No specific unit of measure will apply to the bid item for public art.

8-30.5 Payment

Payment will be made for each of the following listed Bid items that are included in the Proposal:

“Public Art”, lump sum.

The lump sum contract price for “Public Art” shall be full pay for all labor, materials, and equipment to perform the work as specified, including all coordination, storage, knockouts, grouting, and final installation.

END OF SECTION
8-31  CEMENT CONCRETE STAIRWAY, HAND RAILING AND GUARD RAIL
(******)

8-31.1 Description

This work shall consist of constructing cement concrete stairways, hand railings, and guard rails in accordance with details shown in the Plans, Standard Plans, and these Specifications and in conformity to lines and grades shown in the Plans or as established by the Engineer.

8-31.2 Materials

Materials shall meet the requirements of the following sections:

- Portland Cement 9-01
- Aggregates 9-03
- Premolded Joint Filler 9-04.1
- Concrete Curing Materials and Admixtures 9-23
- Reinforcing Bars 9-07
- Paint 9-08

The concrete shall be air-entrained concrete Class 3000 in accordance with the requirements of Section 6-02.

Steel pipe hand railing shall be fabricated from standard weight steel pipe conforming to ASTM Designation A 120.

Wrought iron hand railing shall be fabricated from material conforming to ASTM A207-63T.

8-31.3 Construction Requirements

8-31.3(1) Excavation

Excavation shall be made to the required depth and to a width that will permit the installation and bracing of the forms. The foundation shall be shaped and compacted to a firm even surface conforming to the section shown in the Standard Plan. All soft and yielding material shall be removed and replaced with acceptable material.

8-31.3(2) Forms

Forms shall be of wood or metal and shall extend for the full depth of the concrete. All forms shall be straight, free from warp, and of sufficient strength to resist the pressure of the concrete without warping. Bracing and staking of forms shall be such that the forms remain in both horizontal and vertical alignment until their removal. After the forms have been set to line and grade, the foundation shall be brought to the required grade and thoroughly wetted approximately 12 hours before placing the concrete.
8-31.3(3) Placing and Finishing of Concrete

Front and side edging of stair treads shall be to a radius of 1/2 inch.

Landings for stairways shall be marked as specified for concrete sidewalks except that transverse and longitudinal markings shall be modified as necessary to result in uniform size of squares in each landing. Where gutters are along the side of stairways, the gutter portion of stairway landings shall be smooth finished without markings to conform with the stairway gutter.

8-31.3(4) 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 the time, the forms shall be adjusted and subgrade repaired as determined by the Engineer.

8-31.3(5) Curing

Cement concrete stairways shall be cured for a minimum of 72 hours in accordance with Section 5-05.3(13).

8-31.3(6) Hand Rail

Hand rails for cement concrete stairways and guard rails shall be constructed at the locations shown on the Plans or as described in the specifications. The hand railing may be placed either completely assembled at the time when concrete is placed, or recesses may be provided in the concrete for grouting in the railing posts after the concrete has been placed, finished and cured.

Hand rail shall be installed, full length as shown in City of Tacoma Standard Plan SU-11, on one side of the stairway when there are 4 or more risers in a single stairway, otherwise hand rail shall not be installed.

Where the grade difference between any step in the stairway and the adjacent finished ground is 30 inches or greater a combination hand rail and guard rail shall be installed, full length on both sides. Combination hand rail and guard rail will be measured and paid as hand rail.

The installed railing shall be in true alignment, proper grade, and all posts plumb.

Welds shall be made by experienced welders and each weld shall be ground and buffed to a smooth surface.

8-30.3(6)A Hand Rail Painting

Wrought iron hand rail shall be painted black in accordance with section 6-07.
Paint shall be as follows:

- Primer shall meet requirements outlined in Section 9.08, “Formula A-6-68- Zinc Dust Zinc Oxide Primer,” of the Standard Specifications.
- Finish coat shall meet requirements outlined in Section 9.08, “Formula D-4-57 - Black Enamel,” of the Standard Specifications.

8-31.4 Measurement

Measurement of cement concrete stairway will be in accordance with City of Tacoma Standard Plan SU-10.

Measurement for hand rail will be by the linear foot as measured along the top surface of the hand grip as defined in City of Tacoma Standard Plan SU-11. No consideration will be made for vertical handgrip at the ends of the railing.

8-31.5 Payment

“Cement Conc. Stairway”, per step.

The unit contract price per linear foot for “Cement Conc. Stairway” shall be full pay for all labor, equipment, and materials required for clearing and grubbing; excavation; subgrade preparation; construction of forms; furnishing and placing reinforcing steel; furnishing and placing of concrete in accordance with the plans and these specifications.

“____Hand Rail,” 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 these specifications.

END OF SECTION
8-32 SEGMENTAL CONCRETE RETAINING WALL
(******)

8-32.1 Description

Work shall consist of furnishing all materials, labor, equipment, and supervision necessary to install a segmental retaining wall system in accordance with these specifications and in with the lines, grades, design and dimensions shown on the plans.

8-32.1(1) Certification

A. Contractor shall submit a notarized Manufacturer's certification, prior to start of work, that the segmental concrete units meet the requirements of section 8-32.2 of these Special Provisions.

B. Contractor shall submit a notarized certification, prior to start of work, that the segmental concrete units have been successfully utilized on a minimum of five (5) similar projects, i.e., height, soil fill types, erection tolerances, etc.

8-32.1(2) Delivery, Storage, and Handling

A. The Contractor shall inspect the materials upon delivery to assure that proper type and grade material has been received.

B. The Contractor shall store and handle materials in accordance with manufacturer's recommendations.

C. The Contractor shall protect the materials from damage. Damaged material shall not be incorporated into the segmental retaining wall.

8-32.2 Material

8-32.2(1) Segmental Concrete Retaining Wall Units

A. Segmental concrete units shall conform to the following architectural requirements:

* Unit height of 7.75-8.0-inches;
* Unit width to height ratio shall be equal to 2.25-2.50, nominal;
* Unit depth > 11-inches;
* Face area per unit = 0.95-1.0 square foot, nominal;
* Face color - Grey;
* Face finish - Straight Sculptured Rock face;
* Bond configuration - running with bonds nominally located at midpoint of vertically adjacent units, in both straight and curved alignments.
B. Segmental concrete cap units shall conform to the following architectural requirements:

* Cap Unit Heights shall be 4 inches
* Face Color - Grey
* Face Finish - Flat Sculptured Rock face

C. Segmental concrete units shall conform to the following constructability requirements:

* vertical setback = 0;
* alignment mechanism -pins, alignment plugs, two per unit minimum; or shear connectors (for built-in mechanical concrete interlocking segmental units)
* curves - minimum concave and convex radius of 4.0 feet.

D. Segmental concrete units shall conform to the following material requirements.


2. Aggregates - Aggregates shall conform to the following specifications, as applicable.

3. Normal Weight Aggregates - ASTM C 33

4. Lightweight Aggregates - ASTM C 331

5. Other Constituents - Air-entraining agents, coloring pigments, integral water repellents, finely ground silica, and other constituents shall be previously established as suitable for use in segmental concrete retaining wall units and shall conform to applicable ASTM Standards or, shall be shown by test or experience to be not detrimental to the durability of the segmental concrete units or any material customarily used in retaining wall construction.

8-32.2(2) Cap Adhesive

Cap adhesive shall meet the requirements of the segmental unit manufacture.

8-32.2(3) Perforated Drain Pipe

Perforated pipe shall be perforated PVC meeting AASHTO M 278, 4-inch to 8-inch diameter.

8-32.2(4) Base Leveling Pad Material

Base material for the leveling pad shall be crushed surfacing top course.
8-32.2(5) Geogrid Reinforcement

Geogrid reinforcement shall be Synteen SF55 or engineered approved equal. The engineer anticipates the need for Geogrid.

The length of geogrid reinforcement, as measured from the point of connection at the wall to the edge of excavation, shall be as follows:

<table>
<thead>
<tr>
<th>Total Wall Height (does not include cap unit)</th>
<th>Length of Geogrid</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 4-ft</td>
<td>Not Required</td>
</tr>
<tr>
<td>Over 4-ft to less than 5-ft</td>
<td>3 ½-ft</td>
</tr>
<tr>
<td>5-ft to less than 6-ft</td>
<td>4-ft</td>
</tr>
<tr>
<td>6-ft to 7-ft</td>
<td>5-ft</td>
</tr>
</tbody>
</table>

The bottom layer of georid shall be placed between the bottom layer of wall block units and second layer. Each successive layer of geogrid shall be spaced no more than 24 inches vertically from the previous layer. The uppermost layer shall be within the top 3 layers of wall block units and have a minimum cover of 16 inches.

Crushed surfacing top course shall be used as backfill where geogrid is placed, except where drainage zone backfill is shown to be placed in the plans.

All other work for geogrid for block wall not covered in these specifications shall done in accordance with the block wall manufacturer's recommendations.

8-32.2(6) Backfill for over-excavation class A

Backfill material shall be suitable excavated native soil, except when the Engineer determines it to be unsuitable it shall be replaced with Gravel Borrow.

8-32.2(7) Drainage Zone Wall Backfill

Backfill in the 12-inch width drainage zone behind blocks and in concrete block cavities shall be "Gravel Backfill for Drywells" according to Section 9-03.12(5). Additional backfill can consist of suitable native material and Gravel Borrow.

8-32.3 Construction Requirements

8-32.3(1) Subgrade Preparation

A. Fill zone area shall be cleared and grubbed, removing top soils, brush, sod, or other organic or deleterious materials.

B. Contractor shall excavate to the lines and grades shown on the construction drawings.

C. Subgrade shall be approved by Project Engineer.

D. Subgrade soils shall be proof rolled or probe rod before construction proceeds. Subgrade materials not meeting Engineers approval shall be
removed and replaced. Replacement material shall meet the criteria of
Section 9-03.14(1) of Standard Specifications.

E. Excavation required for the wall footing shall be paid at unit contract price
for “Structure Excavation Cl. A Incl. Haul”, per cubic yard.

8-32.3(2) Base Leveling Pad

A. Leveling pad material shall be placed to the lines and grades and
thickness as shown on the construction drawings.

B. Base leveling pad material shall be Crushed Surfacing Top Course and
compacted to a minimum of 95% standard or 90% modified Proctor.

C. Leveling pad shall be prepared to insure full contact to the base surface
of the segmental concrete units.

8-32.3(3) Segmental Concrete Unit Installation

A. First course of units shall be placed on the leveling pad, and alignment
and level checked. Pins, plastic clips or molded surfaces of segmental
concrete units shall be used for alignment control.

B. Connecting pins or shear connectors shall be installed and voids in and/or
around block units shall be filled with compacted Gravel Backfill for
Drywells or Crushed Surfacing Top Course.

C. Excessive material shall be swept from top of units before installing next
horizontal row of concrete blocks. Each horizontal block row shall be
completely filled before proceeding to next level.

D. Units shall be laid in straight, convex, or concave manner so adjoining
unit pin holes or shear connectors are 12-inches or less on center. Units
shall be installed so only front face of units shall be visible upon
completion of wall.

E. Maximum stacked vertical height of wall units, prior to wall drain fill and
backfill placement and compaction, shall not exceed the unit depth
dimension.

F. Cap units shall be glued to underlying units with an adhesive
recommended by the segmental unit manufacturer.

8-32.3(4) Structural Geogrid Installation

A. Geogrid material shall be as specified in the plans and specifications, and
oriented with the highest strength axis perpendicular to the wall
alignment.
B. Geogrid reinforcement shall be placed at elevations(s) and to the extent(s) indicated in the contract drawings, and as specified in section 8-32.2(5) of these specifications.

C. Geogrid reinforcement shall be attached firmly between units over the connecting pins or shear connectors and laid horizontally on compacted backfill. Place next course of segmental concrete wall units over geogrid. Geogrid shall be pulled taut, and anchored before backfill placement on geogrid.

D. Geogrid reinforcement shall be continuous throughout their embedment length(s). Geogrid shall not be spliced.

E. Geogrid overlaps shall be in accordance with manufacture’s recommendations.

8-32.3(5) Wall Backfill Placement

A. Wall backfill shall be placed, spread, and compacted so development of slack in any geogrid is minimized.

B. Wall backfill shall be placed and compacted in lifts not to exceed 6-inches where hand compaction is used, or 12-inches where heavy compaction equipment is used.

C. Wall backfill shall be compacted to 95 percent of maximum dry density (MDD) as determined by ASTM-1557. Moisture content of backfill material before and during compaction shall be uniformly distributed throughout each layer and shall be within 2 percentage points of optimum.

D. Only lightweight hand-operated compaction equipment shall be allowed within 2-feet of tail of concrete units.

E. Tracked construction equipment shall not be operated directly upon any geogrid reinforcement or within 3-feet of concrete units. Minimum fill thickness of 6-inches is required before operation of tracked vehicles over any geogrid. Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing fill and damaging geogrid.

F. Rubber-tired equipment may pass over geogrid reinforcement at slow speeds, less than 10 mph. Sudden braking and sharp turning shall be avoided.

G. At the end of each day’s operation, last lift of wall backfill shall be sloped away from wall units to direct surface runoff away from wall face. Surface runoff from adjacent areas shall not be allowed to enter wall construction site.
8-32.3(6) Perforated Drain Pipe Placement

Drainage collection pipes shall be installed to maintain gravity flow of water as shown on the plans. Where private drain lines exist at a property, the drain line shall be connected to the perforated drain pipe. The drainage collection pipe shall tie into a nearby catch basin or curb drain if possible or daylight along a slope at an elevation lower than the lowest point of the pipe within the aggregate drain. The drain pipe shall not shed water across any nearby sidewalk.

8-32.3(7) Cap Block Placement

A. The cap block unit shall be bonded to the SRW units below using cap adhesive described in Section 8-27.2(3).

B. Straight and angled sided caps shall be utilized to eliminate the gap between units.

8-32.3(8) Fence Installation Top of Wall

All fences indicated on plans to be installed on top of the wall shall be installed behind the segmental retaining wall unit as shown on the plans. Embedment shall be a minimum of 24-inches in depth. Embedment depth shall be measured from finished ground behind the wall, not including the cap unit. The post holes or post sleeves shall be filled with class 3000 concrete.

The fence shall be constructed in a manner to minimize gaps between the ground and bottom of fence, however there shall be gaps that will allow a 6-inch sphere to pass through. Gaps may be closed using addition steps in the fence, additional cap blocks, trim boards, or any other method that blends with other improvements.

8-32.3(9) Structure Excavation

Structure Excavation for the wall footing shall be according to Structure Excavation Class A, Section 2-09.3(3).

8-32.3(10) Shoring or Extra Excavation

Shoring or Extra Excavation shall be according to Shoring or Extra Excavation Class A, Section 2-09.3(3).

8-32.3(11) Anti-graffiti Coating

Anti-graffiti coating shall be a water-borne, breathable, zero VOC, silane-based anti-graffiti clear sealer suitable for concrete surfaces. Three (3) coats of anti-graffiti coating shall be applied onto the wall surface.

8-32.4 Measurement

“Shoring or Extra Excavation Cl. A,” per lump sum shall be measured in accordance with Section 2-09.4 of the Standard Specifications.
“Structure Excavation Class A Incl. Haul,” per cubic yard shall be measured in accordance with Section 2-09.4.

Measurement of “Segmental Concrete Retaining Wall”, per square foot, shall be total square footage of wall face area measured from the top of the base leveling pad to the top of the wall.

8-32.5 Payment

Payment will be made in accordance with section 1-04.1, for each of the following bid items that are included in the proposal.

“Segmental Concrete Retaining Wall”, per square foot

The unit contract price for “Segmental Concrete Retaining Wall”, per square foot, shall be full pay for all labor, equipment, and materials required to furnish and install all wall blocks in accordance with contract plans and specifications, including perforated drain pipe and filter fabric, Drainage Zone Wall Backfill, Anti-graffiti Coating, and Base Leveling Pad constructed in place according to the plans and these specifications.

“Shoring or Extra Excavation Cl. A,” per lump sum shall be paid in accordance with Section 2-09.5.

“Structure Excavation Class A Incl. Haul”, per cubic yard shall be paid in accordance with Section 2-09.5.

“Gravel Borrow Incl. Haul”, per ton shall be paid in accordance with Section 2-03.5.

Any Geogrid installation will be included in the unit price per square foot for “Segmental Concrete Retaining Wall.”

END OF SECTION
8-33 CEMENT CONCRETE RETAINING WALL

8-33.1 Description

This Work shall consist of constructing unreinforced cement concrete retaining wall to the lines, grades, and dimensions shown on the plans.

8-33.2 Materials

Materials shall meet the requirements of the following sections:

- Portland Cement 9-01
- Aggregates 9-03
- Concrete Curing Materials and Admixtures 9-23

The concrete shall be air-entrained concrete Class 3000 in accordance with the requirements of Section 6-02.

8-33.3 Construction

The Contractor shall excavate the subgrade to the elevations shown on the plans, and compact the subgrade to a firm and unyielding condition. All organic and vegetative matter shall be cleared and grubbed prior to constructing the retaining wall. Low areas of the subgrade shall be filled and compacted with crushed surfacing top course prior to constructing the wall.

Cement concrete retaining walls shall be jointed in the same manner as cement concrete curb and gutter, per section 8-04.

All exposed surfaces of the wall shall be finished in accordance with the requirements of section 6-02.

The Contractor shall construct the cement concrete retaining wall to dimensions shown on the Plans and in the details. Wall heights shown on the Plans are as measured from the top of subgrade to the top of the wall.

Backfill for the wall shall be native material or, if the Engineer determines the native material to be unsuitable, topsoil type A meeting the requirements of section 8-02.

8-33.3(1) Anti-graffiti Coating

Anti-graffiti coating shall be a water-borne, breathable, zero VOC, silane-based anti-graffiti clear sealer suitable for concrete surfaces. Three (3) coats of anti-graffiti coating shall be applied onto the wall surface.

8-33.4 Measurement

Cement concrete retaining wall be measured by the linear foot along the face of the wall.

Crushed surfacing top course will be measured in accordance with section 4-04.
Topsoil will be measured in accordance with section 8-02.

8-33.4 Payment

Payment will be made for each of the following listed Bid items that are included in the Proposal:

“Cement Conc. Wall”, per linear foot.

The unit contract price per linear foot for “Cement Conc. Wall” shall be full pay for all labor, materials, and equipment necessary to construct the wall as specified, including but not limited to, all excavation, grading, forming, pouring, finishing, curing, and applying anti-graffiti coating, unless payment for an item is provided elsewhere in the Specifications.

END OF SECTION
9-03 AGGREGATES

9-03.1 Aggregates for Portland Cement Concrete

9-03.1(1) General Requirements

(June 16, 2016 Tacoma GSP)

The seventh paragraph is deleted

9-03.6 Vacant

(Jun 16, 2016 Tacoma GSP)

This section, including the title, is revised to read:

9-03.6 Aggregates for Asphalt Treated Base (ATB)

9-03.6(1) General Requirements

Aggregates for 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% max.
- Degradation Factor 15 min.

9-03.6(2) Grading

Aggregates for asphalt treated base shall meet the following requirements for grading:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot;</td>
<td>100</td>
</tr>
<tr>
<td>½&quot;</td>
<td>56-100</td>
</tr>
<tr>
<td>No. 4</td>
<td>32-72</td>
</tr>
<tr>
<td>No. 10</td>
<td>22-57</td>
</tr>
<tr>
<td>No. 40</td>
<td>8-32</td>
</tr>
<tr>
<td>No. 200</td>
<td>2.0-9.0</td>
</tr>
</tbody>
</table>

All percentages are by weight.

9-03.6(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 be capable of meeting the following test values:

- % of Theoretical Maximum Specific Gravity (GMM) (approximate) 93@
- AASHTO T324, WSDOT TM T718 or ASTM D3625 Pass

(Acceptable anti-strip evaluation tests)
The sand equivalent value of the mineral aggregate for asphalt treated base (ATB) shall not be less than 35.

9-03.8 Aggregates for Hot Mix Asphalt
(March 9, 2016 APWA GSP)
Supplement section 9-03.8 with the following:

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.

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>⅜” 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.

9-03.12 Gravel Backfill

9-03.12(3) Gravel Backfill for Pipe Zone Bedding
(Jun 16, 2016 Tacoma GSP)
The grading requirements included in this section are revised to read:

<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>⅜” square</td>
<td>95-100</td>
</tr>
<tr>
<td>U.S. No. 8</td>
<td>0 - 10</td>
</tr>
<tr>
<td>U.S. No. 200</td>
<td>0 - 3</td>
</tr>
</tbody>
</table>

Sand Equivalent 35 Minimum
* All percentages are by weight
9-03.21 Recycled Material

9-03.21(1) General Requirements
(Jun 16, 2016 Tacoma GSP)
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
9-08 PAINTS AND RELATED MATERIALS
(March 23, 2010 Tacoma GSP)
The following section is added:

9-08.20 Painting Surfaces Systems

The surfaces shall be painted in accordance with the type materials and exposures as identified in this section. The Contractor shall provide the Engineer with a paint mil.

9-08.20(1) Steel

A. Exposed/outside exposure (non-galvanized)
   1. Primer Coat: Section 9-08.1(2)C (2.5-mils)
   2. Intermediate Coat: Section 9-08.1(2)G (3.5-mils)
   3. Top Coat: Section 9-08.1(2)H (1.0-mils)

B. Exposed/Interior exposure (non-galvanized)
   1. Primer Coat: Section 9-08.1(2)C (2.5-mils)
   2. Intermediate Coat: Section 9-08.1(2)G (3.5-mils)
   3. Top Coat: Section 9-08.1(2)H (1.0-mils)

C. Unexposed/interior & exterior (non-galvanized)
   1. Primer Coat: Section 9-08.1(2)C (2.5-mils)

D. Exposed/interior & outside exposure (galvanized)
   1. Primer Coat: Section 9-08.1(2)E (2.5-mils)
   2. Top Coat: Section 9-08.1(2)H (1.0-mils)

E. Powder Coating and Galvanize Coating shall be applied where indicated in the contract documents. All other surfaces to be coated per Section 6-07.3.

F. Painting shall be applied in accordance with Section 6-07.3.

9-08.20(2) Concrete

A. Exposed/outside exposure
   1. 1st Cost: Section 9-08.3 (3.0-mils)

B. Exposed/Interior exposure
   1. 1st Cost: Section 9-08.1(3) (2.0-mils)
   2. 2nd Cost: Section 9-08.1(3) (1.0-mils)

C. Surface to be painted where indicated on contract plans

D. Colors to be selected by the Project Engineer

9-08.20(3) Wood

All surfaces to be coated where and in accordance with contract documents as indicated.

END OF SECTION
9-14 EROSION CONTROL AND ROADSIDE PLANTING
(May 15, 2023 Tacoma GSP)

9-14.2 Topsoil

9-14.2(1) Topsoil Type A

This Section is revised to read:

Topsoil Type A shall meet the following requirements:

• The source Topsoil shall be friable and loamy, and can contain loam, sandy loam, silty loam, clay loam, or a sandy clay loam.
• Topsoil Type A shall be organically amended with Compost before delivery to the job site, and the Compost shall conform to Special Provision 9-14.5(8).
• The amended Topsoil shall have minimum 10% organic matter for use in planting beds; typically containing 40% compost.
• The amended Topsoil shall have minimum 5% organic matter for grass seeding and lawn areas; typically containing 25% compost.
• The pH shall be between 6.0 and 8.0.
• The amended Topsoil shall have maximum 25% passing the #200 sieve.
• The amended Topsoil shall not exhibit visible water or dust during handling.

9-14.5(8) Compost

This Section is supplemented with the following:

The Compost supplier shall produce Compost from a certified composting facility. Certified compost facilities are included on a list and an interactive map available on the Washington State Department of Ecology Composting website:


Compost shall meet the definition for "composted material" per WAC 173-350-100 and comply with standards in WAC 173-350-220, except the feedstock may contain bio solids or manure feed stocks. When feedstock material is sourced in a pest quarantine area the owners of the organic waste shall comply with WAC 16-470-124 including processing conditions and heat treatments for pest control; and shall obtain a special permit from the Washington State Department of Agriculture.

City of Tacoma TAGRO Potting Soil Mix, which is derived from the municipal solid waste compost program, can be used as Compost or shall be added as part of the Compost mix for landscaping and roadside restoration, including topsoil amendment and topsoil mix content.

Compost shall meet the following additional criteria:

• No visible water or dust during handling
• 40% minimum to 65% maximum organic content per TMECC
• Carbon to Nitrogen ratio below 25:1, or up to 35:1 for plants native to Puget Sound lowland region, or up to 40% as a coarse compost for surface mulch only.
For use as Topsoil amendment in BMP L613, Post Construction Soil Quality and Depth, Compost shall meet the following additional criteria:

- The Compost must originate from a feedstock that contains compost derived from municipal solid waste compost programs, such as TAGRO. Facilities that produce compost from post-consumer food waste, yard debris, and food scraps can be found on the Department of Ecology WA composting facilities and material types table.

- The compost must originate from a feedstock that has a minimum of 65% recycled plant waste comprised of “yard debris”, “crop residues”, and “bulking agents”. A maximum of 35% post-consumer food waste can be substituted for recycled plant waste. The Compost may have up to 35% bio solids or manure. Percentages are specified by volume. Quoted terms are defined in WAC 173-350-100.

- Stable and mature per TMECC, meaning the Compost tests results show low oxygen use and low CO2 generation, and as capable of supporting plant growth.

- Use a Fine Compost per gradation in Section 9-14.5(8).

- Refer to Standard Plan series GSI-01b through GSI-01d for application.

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
9-29  ILLUMINATION, SIGNALS, ELECTRICAL
(September 28, 2023 Tacoma GSP)

9-29.1(4) is supplemented with the following new section:

9-29.1(4)E Service Entrance Cap Fittings
Service Entrance Cap Fittings for use with PVC shall be PVC clamp-on type. Where
used for signal or flashing beacon conductors, the center of the wire entrance shall be
cut or machined out to a large diameter to accommodate entry of multi-conductors. All
edges shall be smoothed to avoid chaffing.

9-29.1(6) Detectable Underground Warning Tape
This section is supplemented with the following:
For electrical circuits detectable underground warning tape shall be high visibility red,
with continuous legend of “Caution Electric Line Buried Below” or equal. The warning
tape shall be polyethylene with a metallic backing. The polyethylene shall be a minimum
3 inches wide, 4 mils thick.

9-29.2 Junction Boxes, Cable Vaults and Pull Boxes
This section is supplemented with the following:
Unless otherwise specified, all junction boxes containing illumination and signal control
cable shall be Type 1, Standard Duty with Alternate 2 Lid Bolt Down Attachment Tab per
state standard plan J-40.10-04.
Unless otherwise specified, all junction boxes containing interconnect cabling shall be
Type 2, Standard Duty with Alternate 2 Lid Bolt Down Attachment Tab per state
standard plan J-40.10-04.

9-29.2(1)A2 Non-Concrete Junction Boxes
This section is deleted.

9-29.2(4) Cover Markings
The second paragraph of this section is revised to read:
Covers shall be marked or embossed with “LT” for boxes containing illumination circuits.
Covers shall be marked or embossed with “TS” for boxes containing traffic signal
circuits. Covers shall be marked or embossed with “IC” for boxes containing signal
interconnect circuits.

9-29.2(5)C Standard Duty Non-Concrete Junction Boxes
This section is deleted.

9-29.3 Fiber Optic Cable, Electrical Conductors, and Cable
This section is supplemented with the following:
Where not otherwise specified, all wiring shall meet standard of the industry for the
application employed. Wiring shall be consistent with manufacturers’ recommendations
and meet all applicable codes.
Unless otherwise specified, all fiber optic trunk communication lines (lines between intersections) shall be 24 count singlemode fiber optic cable. Fiber Optic cables connecting the Fiber Optic Termination Panel in the signal cabinet to the Fiber Optic Splice Closure in the signal communications junction box shall be 6 count singlemode fiber optic cable.

Section 9-29.3(1) is supplemented with the following new sections:

9-29.3(1)C Sealed Fiber Optic Splice Closures

Fiber optic splice closure shall be a sealed dome closure designed for small count fiber splicing in a butt configuration. Splice closure shall be fully sealed and suitable for aerial and underground environments. Splice closure shall be able to receive up to 5 cables with an outside diameter between 0.30 inches and 0.62 inches and shall be fully kitted with all parts required to enable installation. Splice closure shall support stranded loose tube or ribbon fiber cables in either armored or dielectric configurations. Splice closure shall require only a common can wrench for installation and re-entry. Splice closure shall be a maximum of 18.25 inches long with a maximum diameter of 8.75 inches.

Splice trays shall be of the same manufacturer as the splice closure and designed to operate with the specific splice closure provided. Splice closure shall house between 1 and 4 splice trays with a splice capacity of 12 mechanical fused single splices in each tray for a maximum splice capacity of 48 mechanical fused single splices. One splice tray shall be provided with each splice closure unless otherwise identified in the project documents.

Cable grounding kits shall be of the same manufacturer as the splice closure and designed to operate with the specific splice closure provided. Cable grounding kits shall be installed in accordance with the manufacturer’s recommendations. Splice closure shall be designed and tested to Telcordia® GR-771 requirements Splice closure shall be Rural Utilities Service (RUS) Listed.

9-29.3(1)D Fiber Optic Termination Box

Unless otherwise specified, all fiber optic termination boxes located in signal cabinets shall be Fibertronics FOTB-6-12.

One coupler/adapter shall be provided and installed in the fiber optic termination box. Coupler shall be a female LC duplex to female LC duplex coupler designed for installation in a standard 12.8mm x 9.3mm adaptor port. Coupler color shall be blue, consistent with singlemode OS2 installations. Coupler shall be installed in the last (right most) adaptor port of the termination box and secured with 2 M2x6mm Philips head screws.

Two pre-terminated patch cables shall be provided, one 1-foot (0.3m) in length, and one 6 feet (2m) in length. Patch cables shall be LC duplex singlemode OS2 9/125 fiber patch cables and rated for indoor/outdoor use. Patch cables shall have a yellow colored 3mm diameter jacket, and blue LC duplex connectors, consistent with singlemode OS2 installations.
9-29.3(2)A Single Conductor

9-29.3(2)A1 Single Conductor Current Carrying
This section is supplemented with the following:

Service connections shall be stranded copper size AWG #6 USE unless otherwise shown in the plans. Black conductor insulation shall be used for the service and the neutral conductor shall be white. Color tape marking shall not be acceptable for the neutral conductor.

9-29.3(2)A2 Grounding Electrode Conductor
This section is supplemented with the following:

Grounding electrode conductor shall be minimum #8 AWG unless otherwise shown in the plans. When the ground is pulled through a conduit, the wire shall be insulated. Color tape marking shall not be acceptable for marking the ground conductor.

9-29.3(2)B Multi-Conductor Cable
This section is supplemented with the following:

Two-conductor through 10-conductor unshielded signal control cable, shall have stranded copper conductors, size AWG 14, and shall conform to International Municipal Signal Association (IMSA) signal cable 20-1.

9-29.3(2)F Detector Loop Wire
This section is revised to read:

The loop wire shall be IMSA 51-7, #14 AWG, encased in an orange colored HDPE jacket. Shielded loop lead-in wire shall be #18 stranded tinned-copper, twisted pair, 2 conductor cable with polyethylene insulation, conductors cabled, and shall have aluminum-polyester foil-shield furnished in 100% coverage, stranded tinned-copper drain wire and an overall chrome-vinyl jacket.

9-29.3(2)I Twisted Pair Communication Cable
This section is revised to read:

The cable for interconnect for underground installation shall be IMSA 40-2 #19 AWG 6 twisted pair, shielded, PE outer jacket or IMSA 40-4 #19 AWG 6 twisted pair, figure 8, shielded, PE outer jacket for overhead installation.

9-29.4 Messenger Cable, Fittings
This section is supplemented with the following:

Messenger cable shall be 5/16-inch, seven-wire strand messenger cables conforming to ASTM A 475, extra-high strength grade, 11,200 lbs. min. breaking strength, Class B galvanized.

All guy eye anchor rods shall be double-hub type.

All miscellaneous nuts, bolts, washers and fittings shall be stainless steel or brass unless otherwise noted.
All metal line hardware shall be hot-dipped galvanized in conformance with the requirements of ASTM Designation A-153. All eyebolts shall be thimble eye design cast or welded to form a solid eye.

5-strand, class B galvanized steel, pretwisted guy strand dead ends, high strength cable conforming to ASTM Designation A-475, shall be utilized at all span wire terminations. 1/2" rope wire thimbles shall be required where span wire connects to all poles or bull rings, except where thimble eye bolts are used. Span wire shall normally be installed directly pole to pole, unless otherwise directed or specified.

Strain insulators shall be installed where connecting to wood poles. Where span wire is connected to a steel or concrete pole, insulators shall not be installed. Strain insulators shall be wet process, porcelain, conforming to EEI-NEMA Class 54-2 standards for 12,000-pound ultimate strength and shall be installed 9 feet from the pole.

9-29.6 Light and Signal Standards
This section is supplemented with the following:

All light and signal standards shall be fixed base.

The head of the handhold security bolt shall be flush with the face of plate. The face plate of the handhole shall be flush with pole.

9-29.6(3) Timber Light Standards, Timber Strain Poles, Timber Service Supports
This section is supplemented with the following:

All timber poles shall be Class II unless otherwise specified.

Mast arms for wood poles shall be “tapered elliptical” or “tapered truss” style, of a size sufficient to be used with a luminaire weight of 48 pounds with an EPA of 1.1 square feet. Arms shall have 2-3/8-inch O.D. x 8-inch long slip fitter for mounting luminaire.

9-29.6(5) Foundation Hardware
This section is supplemented with the following:

All pedestrian push button posts (Type PPB) shall be installed utilizing a Breakaway Base Connection system in conformance with WSDOT standard plan J-20.15-03. Bracket shall be sized to accommodate a standard push button post with an outside diameter of 3.5-inches. Anchor bolt receivers shall be installed at 2-3/4-inch by 7-15/16-inch on center.

Section 9-29.6 is supplemented with the following new section:

9-29.6(6) City of Tacoma Universal Pole

Unless otherwise specified, light standards and strain poles shall be in conformance with the following City of Tacoma standard design.
Strength
Each pole and mast arm shall have adequate strength for the designated luminaire with
1.8 safety factor for maximum combined stresses using 90 mph isotach (117 mph gusts)
per AASHTO LRFD Specifications for Structure Supports for Highway Signs,
Luminaires, and Traffic Signals. Design shall be based on total loading of 50 pounds and
EPA of 2.0 square feet.

Standard Bolt Spacing – for Streetlight Poles Only
30 Foot poles -- Baseplate shall accommodate 1 inch anchor bolts. The bolt circle shall
be between 11 inches and 13 inches.
40 Foot Poles -- Baseplate shall accommodate 1 inch anchor bolts. The bolt circle shall
be between 12.5 inches and 14.5 inches.

9-29.6(6)A Steel Strain Poles
Each pole shall be of tapered round or octagonal construction.

CLASS 1 POLE: Design for dead load tensions up to 1500 pounds
CLASS 2 POLE: Design for dead load tensions up to 2600 pounds

Class 1 poles shall have a minimum base diameter of 12-inches for octagonal poles and
12-1/4-inches for round poles. Poles shall have a minimum wall thickness of 0.3125-
inches. Anchor bolts shall be 1-1/2-inch by 60-inches and shall have a spacing of 11-
5/16-inches on center, on the square. It is the responsibility of the pole manufacturer to
maintain proper clearance between the pole shaft and nuts for the anchor bolts.

Class 2 poles shall have a minimum base diameter of 13-1/2-inches for octagonal poles
and 14-inches for round poles. Poles shall have a minimum wall thickness of 0.375-
inches. Anchor bolts shall be 2-inch by 66-inches and shall have a spacing of 12-3/4-
inches on center, on the square. It is the responsibility of the pole manufacturer to
maintain proper clearance between the pole shaft and nuts for the anchor bolts

Poles shall be of single-ply construction. Multiple-ply poles shall not be allowed.

Each pole shall be of tapered round or octagonal construction. Pole taper shall be in the
range of 0.13 to 0.14 in/ft.

A base plate and top casting shall be securely attached to each pole. The attachment of
the base plate to the pole shall be a welded connection sufficient to develop the full
strength of the pole. The base plate shall have four (4) holes which will sufficiently
accommodate the specified anchor bolts for the pole class.

Pole shall be of sufficient strength to allow for the span wire to be installed to sag an
amount equal to 5% of the span length.

The maximum acceptable deflection, at 30 feet above the base, is 5 inches. The
specified deflection shall be at a loading condition of 1,500 pounds horizontal pull at 30
feet above the base for Class 1 Poles. For Class 2 Poles, the loading condition shall be
2,600 pounds horizontal pull at 30 feet above the base.
Structural material shall be zinc-coated by a “hot-dip” process in accordance with ASTM A123 and the final coating shall measure 0.0039 inch or more in thickness as determined by a magnetic thickness gauge. All tapped holes shall be chased after galvanizing. Hardware shall be coated in accordance with ASTM A307.

The finished pole shall be reasonably straight and free from injurious defects. If galvanizing is damaged, the maximum area to be repaired is defined in accordance with ASTM A123 Section 4.6. The maximum area to be repaired in the field shall be determined in advance by the Engineer. Repair areas damaged during construction, handling, transport or installation by one of the approved methods in accordance with ASTM A780 whenever damage exceeds 3/16 inches in width. Minimum thickness for repair shall measure 0.0039 inches.

The company shall furnish the purchaser with template prints showing spacing and size of holes in base for the anchor bolts.

The material shall carry the manufacturer’s standard guarantee against any defect in material or workmanship for a minimum period of one year following the date of installation. The Contractor shall submit mil test reports for all steel used in the manufacturing of strain poles.

The Contractor shall submit a Certificate of Compliance with ASTM Standards and Specifications for galvanizing. The certificate, signed by the galvanizer, shall detail galvanizing process and testing procedure to determine that galvanizing meets minimum thickness specified.

The contractor shall submit welder certification. Welders must be certified to AWS standards.

Each pole shall include the following:

1. One (1) rain-tight pole cap.
2. One (1) 4-inch by 6-1/2-inch handhole at base end to include the handhole cover plate and positioned 90 degrees to the luminaire mast arm (traffic downstream side).
3. Anchor bolts shall be hot dipped galvanized steel with two (2) galvanized nuts and two (2) washers for each bolt. Only 12-inches of threaded end of the bolts must be galvanized. 1-1/2-inch diameter bolts shall have 8-inches of top thread and 2-inch diameter bolts shall have 10-inches of top thread.
4. Anchor bolts shall have threaded bottom ends to receive an anchor plate and nut. The nut shall be tack-welded to the anchor plate. Anchor plates for 1-1/2-inch diameter anchor bolts shall be 4-inch square by 1-inch thick. Anchor plates for 2-inch diameter anchor bolts shall be 6-inch square by 1-inch thick.
5. One (1) adjustable strain clamp to be mountable between 26 to 28 feet above the base. Clamp shall provide facility to attach span wire at four-quarter points.
6. Provisions for mounting a mast arm of specified length. All poles shall be supplied with one luminaire mast arm mounting flange. The centerline of the flange shall be approximately 6 inches below the top of pole. The flanges shall conform with the detail drawing included in the Special Provisions. Poles ordered without luminaire mast arms but with provisions for a later addition of a mast arm shall be provided with a metal cover and gasket to
protect the opening. The cover shall be bolted to the pole using the holes provided for fastening the luminaire mast arm.

7. One (1) two-inch coupling to receive clamp-on type aluminum weatherhead positioned at 27 feet, and no more than 45° from the location of the mast arm, unless otherwise specified.

8. One (1) 1-1/4-inch coupling for wire inlet located directly opposite the mast arm.

9. One (1) grounding lug-hole in lip of handhole for 1/2-NC brass bolt.

9-29.6(6)B Luminaire Mast Arms

Each luminaire mast arm shall have sufficient strength with a 1.8 safety factor to support a 70-pound luminaire on an 18-foot mast arm per the latest AASHTO Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

Material and workmanship shall conform to the best commercial standards of the industry.

The mast arm and its fastening shall be constructed of steel conforming to Section 9-29.6

Each mast arm shall support a ballast-in-head luminaire and shall provide a luminaire mounting height of approximately two (2) feet above the strain pole mounting flange.

The mast arm shall provide a horizontal extension from the center of the pole to the center of the luminaire as shown in the Plans.

The mast arm shall be of tapered construction. The luminaire end of the mast arm shall not exceed 2.375 inches O.D. for a minimum distance of 8 inches. The outside arm diameter at the pole flange shall not exceed 5.88 inches.

The mast arm shall be capable of being fastened to the mast arm mounting flange dimensioned in the detail drawing. All mounting bolt heads shall clear the weld.

9-29.10 Luminaires

The third paragraph is deleted

This section is supplemented with the following:

Unless otherwise shown in the plans all new luminaires shall be Light Emitting Diode (LED) fixtures conforming to these specifications.

Cobra-head style luminaires and other overhead fixtures, such as shoebox style fixtures, shall be provided with utility labels. Ornamental post top fixtures shall not have utility labels. Utility labels for LED fixtures shall be green and show actual total system wattage.

9-29.10(1) Conventional Roadway Luminaires

This section is replaced in its entirety with the following:

All Conventional Roadway Luminaires shall be LED meeting the following requirements:
1. Applicable Standards:
   a. American National Standards Institute (ANSI) C78 and C136
   b. Electrical and Electronics Engineers (IEEE) C62
   c. Illuminating Engineering Society of North America (IESNA or IES)
   d. Underwriters Laboratories (UL)

2. General:
   a. Luminaire shall be UL Listed
   b. Luminaire shall be listed as a Qualified Product on one of the
      following lists:
      i. Energy Star
      ii. Design Lights Consortium
      iii. Lighting Design Lab
   c. LED light source and driver shall be compliant with the requirements
      of the European Union (EU) Restriction of Hazardous Substances
      (RoHS) Directive.
   d. Luminaire shall have an external label per ANSI C136.15.
   e. Luminaire shall have an internal label per ANSI C136.22.

3. Luminaire Performance:
   a. Operating Temperature Range: -4 F to +122 F
   b. Correlated Color Temperature: (CCT)
      i. Residential- 3000K Nominal
      ii. Arterials - 4000K Nominal
   c. Calculated Lumen Maintenance Factor (LMF): 100,000 hours or more
      (L70 at 25°C/77°F) in accordance with IESNA TM-21 and IESNA LM-80
   d. Color Rendering Index (CRI) : >70
   e. Light Distribution per IES Handbook: Best fit to meet design criteria
   f. Minimum Efficacy: 80 Lumens/Watt

4. Power Supply and Driver Performance:
   a. Input Voltage: Auto-sensing 120 to 277 VAC 50/60HZ
   b. Power factor: >0.90
   c. Drive current maximum of 1.0A
   d. Total harmonics distortion at full power at specified voltage: <20%
   e. Surge Suppression Protection 10kV Minimum (IEEE/ANSI C62.41.2)
   f. Replaceable surge module
   g. Interference FCC 47 CFR part 15/18, Class A
   h. Driver life >100,000 hours
   i. Dimming: 0-10V DC

5. Lighting and Dimming Controls:
   a. The luminaire shall be provided with a 7-pin terminal locking type
      photocell control mounting receptacle in accordance with ANSI
      C136.10 and ANSI C136.41.
   b. Photocell receptacle dimming contacts shall be factory connected to
      driver dimming leads (violet and gray) per ANSI C136.41.

6. Luminaire Housing and Door:
   a. The luminaire housing shall be cast or extruded aluminum. All
      hardware shall be stainless steel.
   b. Cast housing components shall have a light gray polyester powder
      coat finish. Extruded components shall be anodized. Finish shall
      meet the requirements of ANSI C57.31, latest revision.
c. The power-door shall be fabricated from either aluminum or a UV resistant polymer.
d. The door shall be easily removable and shall allow for tool-less entry.

7. Slipfitter and Vibration Resistance:
   a. Slipfitter shall be capable of accepting a 1-1/4” through 2” IP pipe tenon (1-5/8” to 2-3/8” OD) with maximum allowable insertion lengths of 7-1/2” and 10” respectively in accordance with Table 2 of ANSI C136.3, latest revision.
   b. The Slipfitter shall have provisions for clamping the luminaire securely to the tenon and for leveling ± 5° with respect to horizontal.
   c. Luminaire shall be certified to ANSI C136.31 3G bridge and overpass vibration standards with 4-bolt configurations.

8. Ingress Protection:
   a. The luminaire components shall have minimum moisture rating as specified in IEC 60529, with the ability to shed water from inside the housing(weep holes), and designed to minimize water collection and icing.
   b. Internal Components: IP66
   c. Enclosure: IP65

9. Terminal and Grounding Block:
   a. Components shall be pre-wired to the terminal board requiring only supply power connections to clearly identified terminals.
   b. The terminal board shall be located so that there is adequate tool-less access to accommodate user wearing electrical gloves to connect the supply leads.

10. Manufacturer Warranty:
    a. 10 Year Minimum including power driver and LED chips.

9-29.10(1)A Luminaire Classifications
The City of Tacoma has established five (5) classes of LED Conventional Roadway with specific design criteria to ensure long-term lighting continuity. Luminaires are divided into classes based on function, typical use and historical High Intensity Discharge (HID) equivalents. Current classes are 100WEQ, 200WEQ, 250WEQ, 400WEQ, and RES-45. Each conventional luminaire installed shall meet the design criteria of one of these five luminaires.

Design assumptions and criteria listed for each luminaire classification may not reflect the actual conditions on the project. The design assumptions and criteria identified are only to be utilized to determine luminaire equivalency, such that another luminaire meeting the same criteria can be used to replace a failed unit without a complete redesign of the entire system.

Equivalence will be determined as follows:
1. The City of Tacoma will use Lighting Analysts AGi32 lighting software program for determination of equivalence using the design assumptions and criteria identified for each class of luminaire.
2. The roadway optimizer will be used to evaluate the performance criteria in all cases, except for the Res-45 class luminaire, where model view will be utilized to calculate the photometrics.
3. Proposed fixtures may not be tilted, rolled, or spun to meet the criteria.
4. All calculations shall be to the 100th. Rounding will not be permitted.
5. A copy of the published IES photometric file and BUG (Backlight, Uplight, and Glare) Rating shall be provided as a part of product submittal.

6. It is recognized that there are an infinite number of design variables and it is not practical to create a published IES photometric file and BUG rating for each combination. In those cases where the wattage is reduced to meet the design criteria, the base IES photometric file for the higher wattage configuration shall be used as follows:
   a. Where no IES photometric file exists for the specific configuration, all information required to allow the City to duplicate the results and assure that the fixture meets the criteria must be provided.
   b. When reducing the system wattage, the BUG rating of the base IES photometric file must be utilized, but may be scaled based on IES LM-79.
   c. For modified fixtures, the City may require that a representative fixture be provided prior to acceptance. The City reserves the right to have an independent NVLAP approved lab perform an IES LM-79 report for verification of the output for the submitted fixture. A 10 percent margin of error will be allowed in the analysis and comparison of the actual test results. Failure to meet the photometrics within the allowance may be cause for rejection.

Full design assumptions and design criteria for each of the five luminaire classes can be found at the end of this section. Excessive glare or light trespass onto private property is not acceptable. Typical usage for luminaire classes:

- 100WEQ Luminaires are typically installed along residential roadways at a height of 25 to 30 feet. 100WEQ Luminaires have a long and narrow light distribution to fit a typical residential road.

- 200WEQ Luminaires are typically installed along local classified arterial roadways and along arterials with lower pedestrian conflicts. 200WEQ Luminaires are typically installed at a height of 30 feet and will have a slightly wider distribution to cover the additional width.

- 250WEQ Luminaires are typically installed along collector to minor classified arterial roadways. 250WEQ Luminaires can be installed at a height of 30 feet or 40 feet depending on pedestrian conflict level, road width, and lighting levels required.

- 400WEQ Luminaires are typically installed along principal classified arterial roadways or areas where a higher pedestrian conflict exists. 400WEQ Luminaires are typically installed at a height of 40 feet, often installed on both sides of the roadway, in a staggered pattern to adequately light the full roadway width.

- RES-45 Luminaires are typically installed at residential street intersections or for cul-de-sacs. For residential intersections, these lights are typically installed on one corner of the intersection at a 45 degree angle to the traveled ways. The light distribution is designed to provide illumination for the intersection, but not create unacceptable light trespass on adjacent properties.

9-29.11 Control Equipment
9-29.11(2) Photoelectric Controls

This section is revised to read:

The photoelectric control shall be the twistlock type and the light sensitive element shall be a solid state photo diode. The control shall be designed to turn on at 2.6 foot-candles (+/- 20%) and turn off at 2.6 foot-candles (+/- 20%). The lighting control shall not drift by more than 1 per cent over a 10-year period.

The output control relay shall be electro-mechanical. The time delay for both turn on and turn off shall be a minimum of one second and maximum of 5 seconds. The output relay shall be rated 1000 watts incandescent or 15 amps inductive load. The contacts shall be normally closed.

The lighting control shall have a built in metal oxide varistor (MOV) rated a minimum of 160 joules for lightning and transient protection. The control shall also have secondary zener diode and transient filter. The relay shall be suitable for operation on 240 volt, 60 hertz electrical circuits.

Dimensions shall conform to ANSI specifications for twistlock photocells.

9-29.12 Electrical Splice Materials

9-29.12(1) Illumination Circuit Splices

This section is revised to read:

Splices and taps shall be made with solderless crimp connectors on underground and overhead circuits to securely join the wires both mechanically and electrically. Splices shall be sealed in accordance with 8-20.3(8).

Thermoplastic Electrical Insulating Tape

Electrical tape shall be made by the same manufacturer and compatible with the electrical coating utilized to form a complete system that both insulates and protects the splice. Electrical tape shall be based on polyvinyl chloride (PVC) and/or its copolymers and have a rubber–based, pressure–sensitive adhesive. The tape shall have a voltage rating of 600V (UL510). The tape shall be 7 mils thick, and be UL Listed and marked per UL Standard 510 as “Flame Retardant, Cold and Weather Resistant.” The tape shall be resistant to abrasion, moisture, alkalies, acids, corrosion, and varying weather conditions, including ultraviolet exposure. The tape must be applicable at temperatures ranging from 0°F through 100°F (−18°C through 38°C) without loss of physical properties. The tape shall have an operating temperature up to 220°F (105°C). The tape shall be classified for use in outdoor environments. The tape shall be compatible with synthetic cable insulations, jackets and splicing compounds. The tape will remain stable and will not telescope more than 0.1 inches when maintained at temperatures below 120°F (50°C).

Moisture Resistant Electrical Coating

Electrical Coating shall be made by the same manufacturer and compatible with the vinyl electrical tape utilized to form a complete system that both insulates and protects the splice. Electrical Coating shall seal and bond the tape and be suitable for direct burial, direct water immersion, and above ground applications. Electrical coating shall be
flexible when dry. Electrical coating shall consist of the solvents Acetone, Methyl Ethyl Ketone and Toluene and shall contain synthetic rubber and resin solids.

9-29.12(2) Traffic Signal Splice Material
This section is revised to read:

Induction loop splices and magnetometer splices shall include an uninsulated barrel-type crimped connector capable of being soldered. The insulating material shall be a heat shrink type meeting requirements of 9-29.

9-29.12(3) Splice Enclosures
This section is deleted.

9-29.12(4) Re-Enterable Splice Enclosure
This section is deleted.

9-29.13 Control Cabinet Assemblies
This section is revised to read:

The Traffic Controller Cabinet Assembly shall be completely wired and tested to Section 5 Terminals and Facilities of the NEMA TS2Specification, unless modified by these specifications.

Cabinets shall be compatible with both Siemens M50 and M60 series controllers.

The following submittals will be required for the review and approval by the City prior to fabrication and wiring:

1. Proposed cabinet layout diagram including shelving/rack locations. In addition, detailed diagrams shall be provided for the left side, right side, and back panels. Drawings shall be clearly labeled and dimensioned.

2. Proposed cabinet wiring diagram shall be submitted for the review and approval by the City. Wiring of cabinets shall not commence prior to City approval of the cabinet wiring plan.

All submittal comments shall be incorporated into a final set of prints and each cabinet shall be furnished to three (3) complete sets of cabinet prints. All cabinet wiring, and layout shall come on (1) E1 size sheet, multiple pages shall not be allowed. Upon request (1) CDROM or USB flash drive with AutoCAD v2018 cabinet drawing for the cabinet wiring.

9-29.13(1) Traffic Control Cabinets
Each Traffic Controller Cabinet shall meet the following general operating requirements:

1. The wired cabinet facility shall use the latest technology applicable meeting the requirements identified by these specifications.

2. The cabinet shall be designed for 16 channel operation using dual load switches. Load switches 1-4 shall be vehicle phases 1-8; load switches 5-6 shall be pedestrian phases 2, 4, 6, 8; load switches 7-8 shall be overlaps A, B, C, & D. All load switches shall be routed through a transfer relay.
3. The cabinet shall be wired for (32) channels of detection and (4) channels of Opticom™ preemption.

4. The use of PC boards shall not be allowed except in detector racks and SDLC interface panels. With the exception of detection racks, the use of plug and play modules shall not be allowed.

5. All cabinet 120VAC wires shall be 18AWG or greater, including controller “A” and MMU “A & B” cables.

6. All welds shall be free from burrs, cracks, blowholes or other irregularities.

7. The cabinet shall be UL listed.

9-29.13(1)A  Cabinet Enclosures

All Cabinet enclosures shall meet the following requirements:

1. Controller cabinets shall be sized in accordance with NEMA P44 Controller Cabinet standards.

2. The cabinet shall meet NEMA 3R rating for enclosures.

3. The cabinet shall be fabricated from 0.125" minimum thickness 5052 H32 ASTM B209 aluminum alloy and be of clean cut design and appearance. The Cabinet shall be supplied with a natural mill finish inside and out, unless otherwise specified.

4. All exterior seams shall be manufactured with a neatly formed continuous weld construction.

5. All external fasteners shall be stainless steel. Interior cabinet welds shall be continuous for all lap and butt welds. Intermittent welds or silicone adhesive shall not be accepted in place of a weld for weather-tight penetrations. Pop rivets shall not be allowed on any external surface.

6. The cabinet shall be designed for mounting on a concrete pad with anchor bolts and typical flanges inside the cabinet. The cabinet base shall have continuously welded interior mounting reinforcement plates with the same anchor bolt-hole pattern as the footprint dimensions.

7. Unless otherwise approved by the Engineer, there shall be a minimum ten (10) inch vertical clearance above the front half portion of the base area to provide a clearance for conduit and cable entering the cabinet.

8. The cabinet shall be double-flanged where it contacts cabinet doors.

9. The top of the cabinet shall be sloped down 1” towards the rear to facilitate water runoff. The roof shall be sloped at a 90° angle at the front of the cabinet. Lesser slope angles are not allowed.

10. The cabinet shall be equipped with “C” channel rails welded to the interior of the cabinet such that panels may be mounted to the interior of the cabinet without drilling through the outer cabinet. The “C” channel rails shall be sufficient in strength to accommodate planned and reasonably anticipated future equipment needs. At a minimum, the cabinet shall have (2) welded on the back wall, and (4) welded on each side wall with (2) pairs on 8-inch centers. The side and back wall C channel rails shall run the entire usable height of the cabinet walls. Adjustable rails are not allowed.

11. The cabinet shall come with lifting ears affixed to the upper exterior of the cabinet. The lifting ears shall utilize only one bolt such that the ears can be reoriented.
9-29.13(2) Wiring
All wiring within the cabinet shall be neat and firm. All cabinet wire shall be amply rated for the function intended and shall include the use of terminal and suitable identification labels.

Connectors and harnesses shall be provided as defined in the latest NEMA TS 2 standard. Connector A & B shall be supplied for the monitor unit. In addition, the cabinet shall be wired with a standard 55-pin NEMA TS 1 Connector A.

Wire for harnesses shall conform to MIL-W-16878E Type B, and shall be rated to 600 volt, 105 degree Celsius. Wire shall be 22 gage, 19 strand. Wires shall be connected to the heads in the form of crimp-pinned connections. Solder lugs shall not be allowed. Connectors shall conform to MIL-C-26482 Series 1. Cables shall be covered with nylon expandable sleeving. Spiral wrap shall not be used. Termination points of the harnesses shall be accessible to the technician without requiring the back panel to be dropped. Unused harness wires shall be tied to the furthest location on the front of the back panel and shall be capped off.

Wires other than harnesses for the monitor and controller shall be THHN, rated at 600 volt, 105 degree Celsius, and shall be a minimum of 22 AWG.

Non insulated connectors shall be utilized for all connections to the Detector Input Terminal Strip.

9-29.13(3) Electrical Design

9-29.13(3)B1 Power Supply Interface Panel
The power supply interface panel shall be mounted on the upper back left wall of the cabinet above the top shelf. The power supply interface panel shall include terminations for all the cabinet power supply inputs and outputs. It shall have a protective plastic cover.

9-29.13(3)B2 SDLC Interface Panel
All SDLC cables shall be terminated on both ends, securely terminated to the SDLC interface panel with screw type connection and professionally routed in the cabinet interior to easily reach the controller, malfunction management unit, BIUs. All SDLC connectors shall be fully populated with 15 pins each. SDLC cables shall be tie wrapped in a neat and orderly way.

9-29.13(3)B3 Video Detection Interface Panel
The video detection interface panel shall be the single point interface for video power and coax cabling. The panel shall have (6) individual 1 amp circuit breakers so that individual cameras can be replaced in the field without disrupting the entire video detection system, a (10) position terminal block with #8/32 screws to provide termination for 120VAC and camera 120AC line and 8-postion copper neutral and ground buss bars with raised slotted & torque style screws. The AC terminal block shall be covered with a Plexiglas cover.

A coax surge arrestor shall be installed for each coax based video detection camera identified in the project plans and specifications. The coax surge arrestor shall meet or exceed the manufacturer’s recommendations for the cameras installed. Surge arrestors

212
are not required to be installed in the cabinet when a coax based detection system is not identified in the plans and specifications.

9-29.13(3)B5 Power Panel

The power panel shall handle all the power distribution and protection for the cabinet and shall be mounted in the bottom right side of the cabinet. All equipment shall be mounted on an appropriately sized silkscreened aluminum panel and include at a minimum the following equipment:

1. A 30-amp main breaker shall be supplied. This breaker shall supply power to the load bay, load switches, controller, MMU, power supply, detector racks, power strip and auxiliary panels. Breaker shall be din rail mounted.
2. A 15-amp auxiliary breaker shall supply power to the fan, cabinet lights and GFI. Breaker shall be din rail mounted.
3. The surge protection device (SPD) shall consist of a modular surge protector for the AC line, another modular surge protector for the AC neutral and ground. There shall also be a radio interference suppressor (RIS). All units shall meet the following requirements.
   a. Devices shall be Open Type 1 UL Listed 1449 4th Edition.
   b. The surge components are all Din-Rail mountable.
   c. If a failure is to occur the components are hot swappable
   d. An indicator flag will show that the component has failed. No more guessing or testing.
   e. The Surge component has a contact closure that can notify you if a failure occurs on the unit.
   f. No bolts or wires to remove to replace the unit.
   g. The unit is Safe Touch. No need for a plastic protective cover.
4. A normally open, solid state relay rated for 50-amp minimum for the load switch power. (No Mercury Contactors shall be allowed.)
5. One see-through Plexiglas cover to protect maintenance personnel from AC line voltages.
6. One (1) 19-position standard solid copper neutral buss bars with raised slotted & torque style screw heads suitable for #14 through #4 cu.
7. Two (2) 19-position, standard solid copper ground buss bars with raised slotted & torque style screw heads suitable for #14 through #4 cu.
8. Line side AC Power Terminal, 3-position, double row. Power Terminal shall be a dead-front type rated at a minimum of 300V, 50 amp and suitable for #6 cu.
9. The neutral buss bar, the ground buss bars, and the line side power terminal shall be installed at the bottom of the power panel. The buss bars shall be installed horizontally and the terminal shall be installed with the same orientation such that the wires coming into the cabinet can be easily connected from the bottom of the cabinet. The power terminal shall be installed to the right of the ground and neutral bus bars.

All circuit breakers shall be Square D, Siemens, GE, Eaton/Cutler Hammer, or Engineer approved equal.
9-29.13(3)B6 Communication Interface Panel
There shall be (2) 12-position, double row, high barrier terminal blocks, with #6/32 slotted brass screws on the left bottom side of the spare panel on the right side wall of the cabinet. The Communication Interface Panel height shall be from the top of the Power Panel to the top of the “C” Channel.

9-29.13(4) Auxiliary Equipment

9-29.13(4)A Traffic Signal Controller
Traffic Signal Controller shall be a Siemens Controller, EPAC M62 with an ATC Communications Module. The CPU operating system shall be Linux. The Contractor shall contact the City of Tacoma Traffic Signal Shop at 253-591-5287 to obtain the current firmware version to be utilized.

Siemens M62 traffic signal controllers operating a Pedestrian Hybrid Beacon (PHB Signal), must be configured by the manufacturer for operation of a pedestrian hybrid beacon. The contractor/vendor shall configure and test the operation of the controller and malfunction management unit prior to delivery to the City of Tacoma Signal Shop.

9-29.14 Vacant
This vacant section is renamed and replaced with the following:

9-29.14 School Zone Beacon Controls
School zone beacons shall be controlled by an AP22 time switch by RTC Manufacturing, Inc.

For new installations of radio controlled systems RTC Parent Part Number TACOMAR2AC, “AC Cabinet SYS w/ R2 Radio SYS” shall be utilized. TACOMAR2AC includes the following components:

- Cabinet: 14x16x10
- Panel AC Cube FL SPC 500320T
- AP22 Time Switch – No Harness
- Converter TSC-R2
- Antenna YAGI 900MHZ 11dBi
- Ant Lead 25’ LMR240 TNC-TNC
- Adapter N Male to TNC Female
- Bracket Ant Radio 20’x40” RIS

For new installations of cellular controlled systems RTC Parent Part Number TACOMAM2MACFB, “AC Flare Cabinet SYS w/M2M SYS” shall be utilized. TACOMAM2MACFB includes the following components:

- Cabinet: 14x16x10
- Panel AC Cube FL SPC 500320T
- AP22 Time Switch – No Harness
- M2M4GA Converter w/Sim Card
- Bracket Modem
- Antenna M2M MT Internal Cab.
- M2M (MT) 4G Adapter Cable
9-29.15 Flashing Beacon Control

This section is renamed and replaced with the following:

9-29.15 Pedestrian-Activated Crosswalk Beacons

Pedestrian-activated crosswalk beacons shall be Rectangular Flashing Beacon (RFB) assemblies as shown in the project plans. Unless otherwise specified by the Engineer, all RFB shall be manufactured by Carmanah Technologies Inc.

The RFB shall be available in both an AC powered configuration and a fully self-contained solar powered configuration. Both the AC powered and solar power options shall be fully compatible. The RFB shall be provided with a 5-year limited warranty. For solar applications, the warranty shall include the battery. The RFB shall be manufactured in the United States of America and shall be Buy American compliant. Each RFB shall include from one to four light bars. The RFB shall conform to all provisions of the MUTCD, Interim Approval IA-21 including flash pattern.

All flashing beacon devices will be activated by an accessible pedestrian push button which includes voice messaging. Push buttons shall wirelessly transmit the activation to other beacons that are part of that pedestrian crossing location. The beacon device interoperability will incorporate inter-beacon radio communication via a spread spectrum radio using ISM 2.4 GHZ with a minimum range of 1,000 feet. The inter-beacon radio will include a minimum of 14 unique addresses for multiple units.

The voice messaging pedestrian push button shall be wired to the flashing beacon per Manufacturer’s recommendation. The pedestrian push buttons shall have an LED indicator with audible tone with Piezo control and shall be ADA compliant. The pedestrian push button with voice message shall have three LED indicators, locate tone, and voice message with the MUTCD IA-21 approved message “Yellow lights are flashing”. The message shall be spoken twice. The push button shall be ADA compliant with directional arrow.

9-29.15(1) Pedestrian Crossing Beacon Assembly

Each pedestrian crossing beacon assembly shall consist of a dual-sided rectangular flashing beacon (RFB) unit mounted between the W11-2 signs and the W16-7P plaques at MUTCD-compliant mounting heights on both sides on a plan specified pole. Separate signs and plaques shall be provided on each side of the pole. Signs shall conform to section 9-28.8 for sheet signs and reflective sheeting shall be Type IV micro prismatic per section 9-28.12. The signs and RFB unit shall be installed on a FB pole as noted in WSDOT Standard Drawing IS-22, utilizing a fixed base foundation. The light bar shall be NEMA 3R rated.

The RFB housing shall be constructed of aluminum and have the approximate dimensions of 24” L x 1.5” D X 4.5” H. The RFB unit will have two horizontally-oriented LED modules each approximately 3” by 7” in size. The modules shall consist of 8 amber LEDs and shall be purpose built by the manufacturer of the RFB including the optics. The light bars shall be current-drive LED strings without active electronics. The LEDs shall be driven by pulse-width modulated fixed current. The RFB unit will have a powder coated green housing and shall have a tell-tale amber LED indicator, approximately 1” by 2”, on each secondary side to inform those without a direct view of the primary LED modules that the unit is in operation.
The RFB unit’s look and function (ie flash rate) will comply with FHWA’s MUTCD - Interim Approval for Optional Use of Pedestrian-Actuated Rectangular Rapid-Flash Beacons at Uncontrolled Marked Crosswalks (IA-21) including all FHWA Official Interpretations pertaining to RFBs. The flash duration shall be adjustable in-the-field from 5 to 60 seconds in one second increments, 60 to 1,200 seconds in 60-second steps, and 3,600 seconds. Default flash duration shall be 20 seconds.

The installation of the signs, RFBs, MUTCD-compliant push button, all control circuitry and communications hardware will be installed or mounted as shown on plans within ADA-compliant reach of level pedestrian landing. Contractor is responsible for coordinating the mounting interface between the pole and pedestrian crossing beacon assembly. The MUTCD-compliant push button will include a 9” by 12” “PUSH BUTTON TO TURN ON WARNING LIGHTS” sign (R10-25) mounted on the same side as the face of the push button, which is mounted parallel to the crossing direction.

9-29.15(2) Pedestrian Crossing Beacon Control Cabinet

The control cabinet shall be constructed from aluminum with a lockable 6 pin green construction core per section 9-29.25 lock and tamper-proof hinged door. No other external control cabinet shall be required. The control cabinet shall be vented to provide air circulation and cooling of the electronic system. The vents shall be screened to prevent ingress by insects and debris.

The overall weight of the control cabinet shall not exceed 90lbs (41 kg) and shall have the approximate dimensions: 24” H x 16” W x 8” D (61cm H x 41cm W x 21 cm D).

Fasteners shall be stainless steel.

9-29.15(3) AC Powered Installations

The cabinet for AC installations shall house the AC/DC power supply, circuit breaker, charge controller, flash controller, on-board user interface, and wireless communications. The RFB shall be pre-wired to the maximum extent possible.

The RRFB shall include a universal AC/DC power supply that accepts conventional AC power input and outputs 15 volts DC. It shall be rated for at least 50 watts. AC wiring input shall terminate on a DIN-rail circuit breaker rated for 4 amps.

9-29.16 Vehicular Signal Heads, Displays, and Housing

9-29.16(2)B Signal Housing

The second paragraph is supplemented with the following:

The door shall open a minimum of 160 degrees.

The third paragraph is supplemented with the following:

The sections shall be held firmly together by corrosion-resistant hardware in such a manner that additional sections may be added easily.

The fourth paragraph is supplemented with the following:
The terminal strip for a standard three-section head shall be a minimum five-position, ten-terminal, barrier-type strip with No. 8 screw-type fasteners. To one side of each terminal shall be attached the white, red, yellow and green signal section leads, leaving the opposite terminal for field wires. Multi-section heads shall be provided with a terminal strip located in the yellow (center) section. Lead shall be No. 18 AWG type with 1/32-inch wall, 105-1/4 centigrade thermoplastic insulation.

**9-29.16(3) Polycarbonate Traffic Signal Heads**

*This section is deleted.*

**9-29.17 Signal Head Mounting Brackets and Fittings**

*This section is revised to read:*

Vehicle and pedestrian signal heads shall be as detailed in the standard plans.

Span wire vehicle signal hanger hardware shall consist of span wire clamp, wire entrance fitting and vehicle head locking device.

A. **Construction**

1. Bronze hangers are required.
2. The minimum size of pins shall be 5/8-inch diameter. Pins shall be stainless steel.
3. The minimum size of the ‘J’ or ‘U’ cable clamps is 1/2-inch diameter. Cable clamp bolts shall be stainless steel. Clamping insert shall be used.
4. The cable saddle shall be at least 9 inches long.
5. All cotter pins shall be brass and washers shall be stainless steel.
6. All hardware shall be of stainless steel, bronze or brass materials.
7. Signal stem shall be locked with a square headed set screw 1/4-inch minimum in diameter.
8. Wire entrance shall be a minimum of 1-1/4-inch diameter and shall have a female threaded base for nipple.
9. The balance adjuster shall not be used.
10. All stems shall be secured to signal head with proper lock fitting.

Vehicle signal heads attached to a mast arm shall use a type M mounting bracket as detailed in the standard plans and in accordance with Section 8-20.3(14)B and Section 9-29.17.

**9-29.18 Vehicle Detector**

*This section is supplemented with the following:*

Unless otherwise specified in the contract plans, the vehicle detection system provided shall be a Gridsmart detection system with the performance plus module.

**9-29.18(3) Gridsmart Detection System**

The Gridsmart system provided shall provide all necessary components required in order to fully install, setup, test, operate and maintain a fully functional detection system, including, but not limited to, the following components:

1. Gridsmart Power over Ethernet Bell Camera(s)
2. GS2 Gridsmart Processor with the Performance Plus Module
3. Mounting Hardware
4. Composite Fiber Connection Cable for power and communications.
5. PoE Media Converters.

Unless otherwise identified in the project plans, one Bell Camera is required for each intersection. Additional cameras may be required and will be identified in the project plans when two or more major arterials intersect, or where sight lines require additional cameras. Changes to the intersection layout, or camera locations may require additional cameras for proper functionality. Field adjustments to the camera location shall not be permitted without approval from the Engineer. The Composite Fiber cable shall connect the Fisheye Sensor and/or other Option sensors using PoE media converters.

All mounting hardware and cabling shall meet the manufacturer’s recommendations, unless otherwise specified herein.

**9-29.19 Pedestrian Push Buttons**

*This section is supplemented with the following:*

Pushbutton systems shall be fully compliant with Accessible Pedestrian System requirements as defined by the American with Disabilities Act. Pushbutton systems shall be two wire systems (four wire systems shall not be permitted).

Unless otherwise specified, the pedestrian push button central control unit shall be Polara shelf mount control unit capable of communication through a SDLC cable (Polara Model iCCU-S).

Push buttons stations shall be Polara - iN2 series with the following options:

1. 9x12 Front Plate Adapter
2. 9x12 Faceplate compliant with MUTCD R10-3b
3. No braille on Face Plate
4. Custom Messages
5. Black Button Cover

Extenders may be required for locations where the APS buttons are not within an acceptable reach. Extenders or adapters may be required to accommodate the size of the faceplates for locations where two pushbuttons are mounted to the same pole.

**9-29.20 Pedestrian Signals**

*This section is supplemented with the following:*

All pedestrian signals housings shall be die-cast aluminum.

**9-29.24 Service Cabinets**

*This section is supplemented with the following:*

Service cabinets shall be pole mounted, exterior NEMA 3R Rated with a bolt on HUB for top entry. Cabinet shall be a maximum 10 inches wide, 14 inches high, and 5 inches deep.
Load Center shall have between 100 and 150 Amps, with capacity for 6 spaces and 12 circuits, or 8 spaces and 16 circuits as required by Code.

Service panels shall be Square D – QO Series

9-29.24(2) Electrical Circuit Breakers and Contactors

The first paragraph is supplemented with the following:

Mercury relays shall not be accepted. Contactors shall be one of the following brands:

1. Square D
2. Siemens
3. Eaton/Cutler Hammer
4. Engineer Approved Equal

The second paragraph is deleted.

The third sentence of the third paragraph is deleted.

The third paragraph is supplemented with the following:

All service panel breakers shall be one of the following brands/series

1. Square D – QO Series
2. Siemens – Type BL
3. Eaton/Cutler Hammer – Quick Lag Type BA
4. Engineer approved Equal

All surface mount breakers shall be one of the following Brands/Series:

1. Square D (Type QOU)
2. Siemens
3. Eaton/Cutler Hammer
4. General Electric
5. Engineer approved Equal

9-29.25 Amplifier, Transformer, and Terminal Cabinets

This section is supplemented with the following:

Terminal compartments may be incorporated into the signal standard as an alternative to providing a separate terminal cabinet attached to the pole. Terminal compartment should offer similar physical and electrical capacity as specified. Contractor shall provide submittals in accordance with the contract documents and obtain approval from the engineer for the alternate design prior to proceeding. Signal standards and terminal compartments shall meet all other structural, mechanical, electrical, and finish requirements as specified, and be suitable for the intended purpose.
# Standard Luminaire Design Criteria

## 100WEQ Luminaire – Residential

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Design Assumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Width:</td>
<td>32 feet</td>
</tr>
<tr>
<td>Luminaire Height:</td>
<td>30 feet</td>
</tr>
<tr>
<td>Mast Arm Length:</td>
<td>8 feet</td>
</tr>
<tr>
<td>Setback from FC:</td>
<td>3 feet</td>
</tr>
<tr>
<td>Luminaire Spacing:</td>
<td>165 feet</td>
</tr>
<tr>
<td>Luminaire LLF (Total):</td>
<td>0.9</td>
</tr>
<tr>
<td>Luminaire Pattern:</td>
<td>One Row Near Side</td>
</tr>
<tr>
<td>Road Model:</td>
<td>IES RP8 – 2 Lanes in Direction of Travel</td>
</tr>
<tr>
<td>Road Type:</td>
<td>Local</td>
</tr>
<tr>
<td>Ped Conflict</td>
<td>Low/Residential</td>
</tr>
<tr>
<td>Road Surface</td>
<td>R3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Design Attribute</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Average Illuminance</td>
<td>0.35 fc</td>
</tr>
<tr>
<td>Maximum Illuminance Uniformity (Ave/Min)</td>
<td>6:1</td>
</tr>
<tr>
<td>Minimum Average Luminance</td>
<td>0.3 cd/m²</td>
</tr>
<tr>
<td>Maximum Luminance Uniformity (Ave/Min)</td>
<td>6:1</td>
</tr>
<tr>
<td>Maximum Luminance Uniformity (Max/Min)</td>
<td>10:1</td>
</tr>
<tr>
<td>Maximum Veiling Luminance Ratio (Lvmax/Lavg)</td>
<td>0.4:1</td>
</tr>
<tr>
<td>IES Distribution</td>
<td>Type II or Best Fit</td>
</tr>
<tr>
<td>Color Temperature</td>
<td>3000K</td>
</tr>
<tr>
<td>Maximum Fixture BUG Rating</td>
<td>B1-U0-G1</td>
</tr>
</tbody>
</table>

Design Criteria Based on Roadway Lighting Design Guide, AASHTO Publication GL-6, 2018
# Standard Luminaire Design Criteria

## 200WEQ Luminaire – Arterial

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Design Assumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Width:</td>
<td>40 feet</td>
</tr>
<tr>
<td>Luminaire Height:</td>
<td>30 feet</td>
</tr>
<tr>
<td>Mast Arm Length:</td>
<td>8 feet</td>
</tr>
<tr>
<td>Setback from FC:</td>
<td>3 feet</td>
</tr>
<tr>
<td>Luminaire Spacing:</td>
<td>150 feet</td>
</tr>
<tr>
<td>Luminaire LLF (Total):</td>
<td>0.9</td>
</tr>
<tr>
<td>Luminaire Pattern:</td>
<td>One Row Near Side</td>
</tr>
<tr>
<td>Road Model:</td>
<td>IES RP8 – 2 Lanes in Direction of Travel</td>
</tr>
<tr>
<td>Road Type:</td>
<td>Collector</td>
</tr>
<tr>
<td>Ped Conflict</td>
<td>Medium/Intermediate</td>
</tr>
<tr>
<td>Road Surface</td>
<td>R3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Design Attribute</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Average Illuminance</td>
<td>0.75 fc</td>
</tr>
<tr>
<td>Maximum Illuminance Uniformity (Ave/Min)</td>
<td>4:1</td>
</tr>
<tr>
<td>Minimum Average Luminance</td>
<td>0.6 cd/m²</td>
</tr>
<tr>
<td>Maximum Luminance Uniformity (Ave/Min)</td>
<td>3.5:1</td>
</tr>
<tr>
<td>Maximum Luminance Uniformity (Max/Min)</td>
<td>6:1</td>
</tr>
<tr>
<td>Maximum Veiling Luminance Ratio (Lmax/Lavg)</td>
<td>0.4:1</td>
</tr>
<tr>
<td>IES Distribution</td>
<td>Type II or Best Fit</td>
</tr>
<tr>
<td>Color Temperature</td>
<td>3700K to 4300K</td>
</tr>
<tr>
<td>Maximum Fixture BUG Rating</td>
<td>B2-U0-G2</td>
</tr>
</tbody>
</table>

Design Criteria Based on Roadway Lighting Design Guide, AASHTO Publication GL-6, 2018
Standard Luminaire Design Criteria
250WEQ Luminaire – Arterial

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Design Assumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Width:</td>
<td>40 feet</td>
</tr>
<tr>
<td>Luminaire Height:</td>
<td>40 feet</td>
</tr>
<tr>
<td>Mast Arm Length:</td>
<td>8 feet</td>
</tr>
<tr>
<td>Setback from FC:</td>
<td>3 feet</td>
</tr>
<tr>
<td>Luminaire Spacing:</td>
<td>150 feet</td>
</tr>
<tr>
<td>Luminaire LLF (Total):</td>
<td>0.9</td>
</tr>
<tr>
<td>Luminaire Pattern:</td>
<td>One Row Near Side</td>
</tr>
<tr>
<td>Road Model:</td>
<td>IES RP8 – 2 Lanes in Direction of Travel</td>
</tr>
<tr>
<td>Road Type:</td>
<td>Collector</td>
</tr>
<tr>
<td>Ped Conflict:</td>
<td>Medium/Intermediate</td>
</tr>
<tr>
<td>Road Surface:</td>
<td>R3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Design Attribute</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Average Illuminance</td>
<td>0.75 fc</td>
</tr>
<tr>
<td>Maximum Illuminance Uniformity (Ave/Min)</td>
<td>4:1</td>
</tr>
<tr>
<td>Minimum Average Luminance</td>
<td>0.6 cd/m²</td>
</tr>
<tr>
<td>Maximum Luminance Uniformity (Ave/Min)</td>
<td>3.5:1</td>
</tr>
<tr>
<td>Maximum Luminance Uniformity (Max/Min)</td>
<td>6:1</td>
</tr>
<tr>
<td>Maximum Veiling Luminance Ratio (Lvmax/Lavg)</td>
<td>0.4:1</td>
</tr>
<tr>
<td>IES Distribution</td>
<td>Type II or Best Fit</td>
</tr>
<tr>
<td>Color Temperature</td>
<td>3700K to 4300K</td>
</tr>
<tr>
<td>Maximum Fixture BUG Rating</td>
<td>B2-U0-G2</td>
</tr>
</tbody>
</table>

Design Criteria Based on Roadway Lighting Design Guide, AASHTO Publication GL-6, 2018
**Standard Luminaire Design Criteria**

**400WEQ Luminaire – Arterial**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Design Assumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Width:</td>
<td>56 feet</td>
</tr>
<tr>
<td>Luminaire Height:</td>
<td>40 feet</td>
</tr>
<tr>
<td>Mast Arm Length:</td>
<td>8 feet</td>
</tr>
<tr>
<td>Setback from FC:</td>
<td>3 feet</td>
</tr>
<tr>
<td>Luminaire Spacing:</td>
<td>300 feet/side - 150 feet staggered</td>
</tr>
<tr>
<td>Luminaire LLF (Total):</td>
<td>0.9</td>
</tr>
<tr>
<td>Luminaire Pattern:</td>
<td>Two Rows - Staggered</td>
</tr>
<tr>
<td>Road Model:</td>
<td>IES RP8 – 4 Lanes in Direction of Travel</td>
</tr>
<tr>
<td>Road Type:</td>
<td>Major Arterial/Other Principal Arterials</td>
</tr>
<tr>
<td>Ped Conflict:</td>
<td>Medium/Intermediate</td>
</tr>
<tr>
<td>Road Surface:</td>
<td>R3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Design Attribute</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Average Illuminance</td>
<td>1.15 fc</td>
</tr>
<tr>
<td>Maximum Illuminance Uniformity (Ave/Min)</td>
<td>3:1</td>
</tr>
<tr>
<td>Minimum Average Luminance</td>
<td>0.9 cd/m²</td>
</tr>
<tr>
<td>Maximum Luminance Uniformity (Ave/Min)</td>
<td>3:1</td>
</tr>
<tr>
<td>Maximum Luminance Uniformity (Max/Min)</td>
<td>5:1</td>
</tr>
<tr>
<td>Maximum Veiling Luminance Ratio (Lvmax/Lavg)</td>
<td>0.3:1</td>
</tr>
<tr>
<td>IES Distribution</td>
<td>Type III or Best Fit</td>
</tr>
<tr>
<td>Color Temperature</td>
<td>3700K to 4300K</td>
</tr>
<tr>
<td>Maximum Fixture BUG Rating</td>
<td>B3-U0-G3</td>
</tr>
</tbody>
</table>

Design Criteria Based on Roadway Lighting Design Guide, AASHTO Publication GL-6, 2018
# Standard Luminaire Design Criteria

## Res-45 Luminaire - Residential

Residential Intersection at 45° Angle

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Design Assumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road/Luminaire Layout:</td>
<td>See Below</td>
</tr>
<tr>
<td>Luminaire Height:</td>
<td>30 feet</td>
</tr>
<tr>
<td>Mast Arm Length:</td>
<td>8 feet at 45° Angle</td>
</tr>
<tr>
<td>Setback from FC:</td>
<td>3 feet, 15 feet</td>
</tr>
<tr>
<td>Luminaire LLF (Total):</td>
<td>0.9</td>
</tr>
<tr>
<td>Road Type:</td>
<td>Local</td>
</tr>
<tr>
<td>Ped Conflict</td>
<td>Low/Residential</td>
</tr>
<tr>
<td>Road Surface</td>
<td>R3</td>
</tr>
</tbody>
</table>

## Design Attribute

<table>
<thead>
<tr>
<th>Design Attribute</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Average Illuminance</td>
<td>0.35 fc</td>
</tr>
<tr>
<td>Maximum Illuminance Uniformity (Ave/Min)</td>
<td>6:1</td>
</tr>
<tr>
<td>IES Distribution</td>
<td>Type IV, V, or Best Fit</td>
</tr>
<tr>
<td>Color Temperature</td>
<td>3000K</td>
</tr>
<tr>
<td>Maximum Fixture BUG Rating</td>
<td>B3-U0-G1</td>
</tr>
</tbody>
</table>

Fixture should be best fit for illuminating the focus area while allowing minimal light trespass onto private property as described below:

Light trespass onto private property above 0.2 fc is acceptable only in shaded areas.

Light trespass onto private property beyond shaded area shall not exceed 0.2 fc.
9-33 CONSTRUCTION GEOSYNTHETIC

9-33.2 Geosynthetic Properties

9-33.2(1) Geotextile Properties

In table 3 the portion for Geotextile for Soil Stabilization, is revised to read:

Geotextile for Soil Stabilization shall be Marafi RS380i produced by TenCate, or approved equal based on the requirements of the following property table:

<table>
<thead>
<tr>
<th>Geotextile Property</th>
<th>ASTM Test Method</th>
<th>Geotextile Property Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOS</td>
<td>D4751</td>
<td>No. 40 max.</td>
</tr>
<tr>
<td>Water Permittivity</td>
<td>D4491</td>
<td>0.90 sec(^{-1}) min.</td>
</tr>
<tr>
<td>Tensile Strength @ 2% Strain (MD)</td>
<td>D4595</td>
<td>600 lbs/ft</td>
</tr>
<tr>
<td>Tensile Strength @ 2% Strain (CD)</td>
<td>D4595</td>
<td>1020 lbs/ft</td>
</tr>
<tr>
<td>Tensile Strength @ 5% Strain (MD)</td>
<td>D4595</td>
<td>1800 lbs/ft</td>
</tr>
<tr>
<td>Tensile Strength @ 5% Strain (CD)</td>
<td>D4595</td>
<td>2250 lbs/ft</td>
</tr>
<tr>
<td>Seam Breaking Strength</td>
<td>D4884</td>
<td>2700 lbs/ft</td>
</tr>
<tr>
<td>Ultraviolet (UV) Radiation Stability</td>
<td>D4355</td>
<td>90% strength retained min., after 500 hours in xenon arc device</td>
</tr>
<tr>
<td>Fabrication Type</td>
<td></td>
<td>Woven</td>
</tr>
</tbody>
</table>

\(^1\) Minimum average roll value.

END OF SECTION

END OF SPECIAL PROVISION
CONSTRUCTING WATER MAINS
in accordance with approved plans for
WATER MAIN REPLACEMENT PROJECT NO. MRP 2021-16
E. 64TH ST. PHASE 2

Troy Saghaﬁ, P.E.
Tacoma Water
Tacoma Public Utilities
MRP 2021-16
**Table of Contents**

INTRODUCTION ........................................................................................................... 4
DESCRIPTION OF WORK ............................................................................................. 4
1-05 CONTROL OF WORK .......................................................................................... 5
  1-05.5 Submittals ...................................................................................................... 5
  1-05.11 Final Inspection .......................................................................................... 6
  1-05.13(1) Emergency Contact List ....................................................................... 6
2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS ........................................ 7
  2-02.3 Construction Requirements ....................................................................... 7
    2-02.3(3) Removal of Pavement, Sidewalks, Curbs, and Gutters ....................... 7
  2-02.4 Measurement .............................................................................................. 7
  2-02.5 Payment ...................................................................................................... 8
2-13 CONTROL AND MANAGEMENT OF CONTAMINATED MATERIALS ............. 8
  2-13.1 Construction Requirements ..................................................................... 8
    2-13.1(1) General ................................................................................................. 8
5-04 HOT MIX ASPHALT ............................................................................................ 9
  5-04.3 Construction Requirements .................................................................... 9
  5-04.4 Measurement ............................................................................................ 10
  5-04.5 Payment .................................................................................................. 10
7-04 STORM SEWERS ............................................................................................ 11
  7-04.3 Construction Requirements .................................................................. 11
  7-04.4 Measurement .......................................................................................... 11
  7-04.5 Payment .................................................................................................. 11
7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS ............................. 12
  7-05.3(2) Remove Existing Supply Main Manholes .............................................. 12
    Adjust Existing Supply Main Manholes .......................................................... 12
7-09 WATER MAINS ............................................................................................... 13
  7-09.1 Description ................................................................................................. 13
    7-09.1(1) C Gravel Backfill for Pipe Zone Bedding .......................................... 14
    7-09.1(1) D Pipe Zone Backfill ....................................................................... 14
  7-09.2 Aggregate Materials ................................................................................. 14
  7-09.3 Construction Requirements ................................................................... 15
8-01.3(8) Street Cleaning ................................................................. 32
8-01.4 Measurement ........................................................................ 32
8-01.5 Payment ................................................................................ 32
9-03 AGGREGATES ........................................................................... 33
9-03.21 Recycled Material .................................................................. 33
9-30 WATER DISTRIBUTION MATERIALS ....................................... 33
  9-30.1(1) Ductile Iron Pipe .............................................................. 33
  9-30.1(3) Rubber Gaskets ............................................................... 34
  9-30.2 Fittings .................................................................................. 34
    9-30.2(6) Restrained Joints ............................................................. 35
    9-30.2(7) Bolted, Sleeve Type Couplings for Plain End Pipe .......... 35
    9-30.3(1) Gate Valves (3 inches to 16 inches) .............................. 35
    9-30.3(3) Butterfly Valves .............................................................. 36
    9.30.3(4) Valve Boxes ................................................................. 36
    9-30.3(8) Tapping Sleeve and Valve Assembly ............................ 37
  9-30.5 Hydrants ............................................................................... 37
    9-30.5(2) Hydrant Dimensions ..................................................... 38
    9-30.5(3) Hydrant Extensions ....................................................... 39
  9-30.6 Water Service Connections .................................................. 39
INTRODUCTION
April 1, 2016

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

Pipe and pipe appurtenances shall be installed according to "A Guide for the Installation of Ductile Iron Pipe" published by the Ductile Iron Pipe Research Association, except as modified by these specifications or the Engineer.

For further information relating to these Specifications please contact:


Also visit the City of Tacoma, Department of Finance, Purchasing Division’s website: www.TacomaPurchasing.org

DESCRIPTION OF WORK
(******)

The work to be performed under these Specifications consists of furnishing all labor, tools and materials for constructing approximately 1710 lineal feet of 16-inch, 6-inch and 4-inch water mains together with all necessary valves, specials, etc., all in accordance with these specifications and approved plans. The work is located in:

E 64th Street, McKinley Ave to East Portland Ave


This project is in conjunction with City of Tacoma Department of Public Works. 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 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
1-05 CONTROL OF WORK

1-05.5 Submittals
This section is added with the following:

Submittals must be approved by Tacoma Water and may be forwarded directly to Craig West, Tacoma Water Engineering Construction Coordinator, electronically at cwest@cityoftacoma.org.

Before any material is shipped or installed, the Contractor shall furnish to the Engineer full details, shop drawings, dimensions, catalog cuts, schematic (elementary) diagrams, 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 (Table 1). 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.

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-07</td>
<td>SPCC Plan</td>
</tr>
<tr>
<td>1-08</td>
<td>Progress Schedule</td>
</tr>
<tr>
<td>1-10</td>
<td>Traffic Control Plan</td>
</tr>
<tr>
<td>5-04</td>
<td>Hot Mix Asphalt</td>
</tr>
<tr>
<td>5-05</td>
<td>Cement Concrete Pavement</td>
</tr>
<tr>
<td>7-04</td>
<td>Storm Repair</td>
</tr>
<tr>
<td>7-09</td>
<td>Pipe Submittals</td>
</tr>
<tr>
<td>7-09</td>
<td>Ductile Iron Fitting Submittals</td>
</tr>
<tr>
<td>7-09</td>
<td>Trench Compaction</td>
</tr>
<tr>
<td>7-09</td>
<td>Temporary Blow-Offs</td>
</tr>
<tr>
<td>7-09</td>
<td>Permanent Blow-Offs</td>
</tr>
</tbody>
</table>

Revised 2-15-2023 TH 5 MRP 2021-16
<table>
<thead>
<tr>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-09</td>
<td>Transition Couplings</td>
</tr>
<tr>
<td>7-09</td>
<td>Asbestos Cement Pipe Removal and Disposal Plan</td>
</tr>
<tr>
<td>7-12</td>
<td>Butterfly Valves</td>
</tr>
<tr>
<td>7-12</td>
<td>Gate Valves</td>
</tr>
<tr>
<td>7-14</td>
<td>Fire Hydrants</td>
</tr>
<tr>
<td>7-17</td>
<td>Sanitary Repair</td>
</tr>
<tr>
<td>7-18</td>
<td>Side Sewer Repair</td>
</tr>
<tr>
<td>8-01</td>
<td>Street Sweeping</td>
</tr>
<tr>
<td>8-01</td>
<td>Storm Water Pollution Prevention Plan (SWPPP)</td>
</tr>
<tr>
<td>8-01</td>
<td>Dewatering Plan</td>
</tr>
<tr>
<td>8-01</td>
<td>Catch Basin Inserts</td>
</tr>
<tr>
<td>8-12</td>
<td>Chain Link Fencing</td>
</tr>
<tr>
<td>8-22</td>
<td>Traffic Lane Marking</td>
</tr>
<tr>
<td>9-03</td>
<td>Crushed Surfacing Top Course</td>
</tr>
<tr>
<td>9-03</td>
<td>Sand Bedding</td>
</tr>
<tr>
<td>9-30.2(6)</td>
<td>M.J. Restraining Gland</td>
</tr>
</tbody>
</table>

**Table 1**

**1-05.11 Final Inspection**

*This section is supplemented with the following:*

The Tacoma Water Construction Inspector will process a final inspection document (punch list) of outstanding items and forward to contractor. Final payment will not be processed until all items from punch list are complete to the satisfaction of the engineer and/or inspector.

**1-05.13(1) Emergency Contact List**

*This section is supplemented with the following:*

**Agencies and telephone numbers:**

**Tacoma Water Emergency** 253-502-8344
- Troy Saghafi Tacoma Water Project Engineer 253-502-8746
- Geff Yotter Tacoma Water Construction Operations Manager 253-502-8742
- Phill Ringrose Tacoma Water Construction Manager 253.591.5502
- Craig West Tacoma Water Construction Inspector Supervisor 253-405-8821
- Todd Honey Tacoma Water Utilities Serv. Spec. 253-502-8295
- Tacoma Water Distribution LID/Engineering fax 253-502-8694
- Chris Storey Public Works Project Engineer 253-573-2484
- Utilities Underground Location Center 800-424-5555
- Washington State Dept. of Labor and Industries 253-596-3895
- James Southern Tacoma Water Safety Office 253-606-2684
- Pierce Transit 253-581-8021
- Puget Sound Energy-Gas 888-225-5773
- Century Link Communications 800-573-1311
- Tacoma Traffic Engineering 253-591-5500
- Tacoma Fire Dept. (non-emergency) 253-591-5733
- Tacoma Police Dept. (non-emergency) 253-591-5950
- LESA Communications Center (opt. #1) 253-798-4721
- Tacoma Public Schools Transportation Office 253-571-1893
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 pipelines shall be delivered by the Contractor to the Water Storeroom at South 35th and Union Avenue (Tacoma, WA) at no additional cost. Otherwise, disposal is incidental to the contract.

Salvage methods shall be used which will save all material intact and undamaged.

The bid item for “Removal and disposal of abandoned C.I. pipe, all sizes” will consist of removal, labor, haul, and cleanup necessary to remove the C.I. water mains abandoned as part of this contract as directed by Tacoma Water Construction Inspector or Tacoma Water Engineer.

2-02.3(3) Removal of Pavement, Sidewalks, Curbs, and Gutters

This section is replaced in its entirety with the following:

Removal and disposal of existing pavement, sidewalks, curbs, and gutters 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.

2-02.4 Measurement

This section is replaced in its entirety with the following:

No measurement for removal and reclaiming salvaged material shall be made and shall be considered incidental to the contract.

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.
Removal and disposal of abandoned pipe, all sizes: Measurement for Removal and disposal of abandoned pipe, all sizes will be by the linear foot measured along the pipe removed.

2-02.5 Payment

This section is replaced in its entirety with the following:

“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 water 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.

“Removal and disposal of abandoned pipe, all sizes”, per linear foot.

The unit contract price per linear foot of “Removal and disposal of abandoned pipe, all sizes”: shall be full pay for all work to complete the removal, haul, dispose, and cleanup, of the C.I. water main abandoned as part of this contract.

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 item.

END OF SECTION

5-04 HOT MIX ASPHALT

5-04.3 Construction Requirements
This section is supplemented with the following:

Prior to the first Hot Mix Asphalt (HMA) placement on the project, a pre-paving meeting will be held by the Construction Inspector, Contractor and Paving Contractor representative. This meeting will establish the lines of communication and provide common knowledge of how the contractor will proceed and what the inspection staff will be expecting. An example of the pre-paving agenda is shown at the back of these Special Provisions.

Two (2) inches of HMA shall be placed and maintained as temporary surfacing in open cut areas of streets, driveways and sidewalks as directed by the Inspector. Temporary HMA paving shall be done so that 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 bid item “HMA Cl. _____ PG_____, per ton” shall include all costs for labor, and materials to install HMA wedge curbing removed as part of this project.

The Contractor shall restore all drainage ditches, culverts and embankments disturbed by his/her operations. The cost and expense for such restorative work is incidental to the Contract. The permanent street repair will be made to the satisfaction of the local jurisdiction and to its standards as shown in the plans.

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:

Copies of the weigh tickets shall be given to the Tacoma Water Construction Inspector daily.

Temporary HMA Cl_____ PG_____, ___-inch minimum depth will be measured by the surface square yardage.

“HMA Cl. _____ PG ____pavement for permanent trench patch”, will be measured per ton.

5-04.5 Payment
This section is replaced in its entirety with the following:

“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 Tacoma Water 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 to read:

Storm, Sanitary, and Side Sewer Restoration will be measured per each.

7-04.5 Payment
This section is revised to read:

“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
7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS

7-05.3(2) Remove Existing Supply Main Manholes

This section is revised to read:

Where it is required that an existing manhole (Valve Chamber) be removed, the structure shall be broken down, removed, and hauled. The voided area occupied by the structure shall be backfilled with crushed surface top coarse specified in section 9-03.9(3) and compacted in maximum 6” lifts to 95% of maximum density. The ring and cover shall be salvaged and all other surplus material disposed of.

Adjust Existing Supply Main Manholes

This section is supplemented with the following:

Supply water main chambers located on project limits shall be adjusted per following specifications (See sheet 10-Existing Chamber Detail):

- Grind the asphalt around chamber openings (manhole access and gate box)
- Protect the chamber top and existing gate boxes with steel plates
- Existing frame and cover shall be replaced with 24” in diameter Kam-Lok manhole frame and cover and bring to final elevation of asphalt
- Grade adjusting rings shall be precast concrete per ASTM C478-18
- If one or more grade adjusting rings are required than each section shall be sealed with a double amount of flexible butyl sealant – ConSeal CS-101, or equal. The mastic sealant shall be placed on the chamber and between each riser. Areas that mastic is placed on shall be clean and free of debris prior to placement
- All precast concrete risers and frame and covers shall be installed in strict conformance with the manufacturer's written instruction
- Risers and frame and covers shall be installed plumb
- Castings for manhole frames and covers shall be non-rocking and shall conform to the requirements stated on the drawings 576-B1, 24” Kam-Lok Manhole Frame and Cover
- Chamber adjustment backfill to be per WSDOT Standard Specification 9-03.9(3)

Supply Main Vent Pipe Adjustment:

- Raise vent pipe at chamber with existing vent pipe such that the vent pipe extends 2-feet above the finished grade of the surrounding area
- Remove existing elbows and nipples and cap and install new elbows, nipples, and cap in accordance with requirements on the drawing 663-A, Standard Breather Pipe for Chambers

Valve Boxes:

All valves will have standard ductile iron water valve box set to grade. If valves are not set in a paved area, a 3-foot by 3-foot by 4-inch concrete pad will be set around each valve box at finished grade. In areas where the valve box falls in the road shoulder, the ditch and shoulder will be graded before placing asphalt or concrete pad. Valve box lids will be ductile iron and marked ‘WATER’. Ladders shall be extended to the elevation of the new frame and
cover. Work to extend ladders to new elevation will be performed by Tacoma Water personnel. Ladders and Valve stem extensions shall be extended from the operating nut of each valve to within the gate box cast in the lid of the chamber or placed in the asphalt.

7-05. 4 Measurement
This section is revised in its entirety with the following:

“Excavate, Remove and dispose of existing Valve Chamber” will be measured per each.

“Adjust Existing Supply Main Manhole” will be measured per each.

“Supply Main Vent Pipe Adjustment” will be measured per each.

7-05.5 Payment
This section is revised in its entirety with the following:

“Excavate, Remove and Dispose of existing Valve Chamber”, per each.

“Excavate, Remove and Dispose of Existing Valve Chamber, piping, conduits and other appurtenances”, per each, includes any work and materials required to remove the existing Valve Chamber, shall be included in the bid item. This is a per each bid item that includes all costs but is not limited to labor, and equipment, etc. to remove, haul and dispose the existing Valve Chamber.

“Adjust Existing Supply Main Manhole” per each.

“Adjust Existing Supply Main Manhole”, per each, includes any work and materials required to adjust the existing Supply Main Manhole, shall be included in the bid item. This is a per each bid item that includes all costs but is not limited to labor, and equipment, etc. to adjust the existing Valve Chamber.

“Supply Main Vent Pipe Adjustment” per each.

“Adjust Existing Vent pipe”, per each, includes any work and materials required to adjust the existing Vent pipe, shall be included in the bid item. This is a per each bid item that includes all costs but is not limited to labor, and equipment, etc. to adjust the existing Valve Chamber.

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 Plans, these Standard Specifications, the Special Provisions and the Standard Plans, at the location shown on the Plans for Tacoma Water.

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:

Gravel Backfill for Pipe Zone Bedding only applies to PVC pipe, bedding shall be 6-inches above and 6-inches below the crown and invert of the pipe, respectively as shown on the Tacoma Water Plans.

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:

Trench Backfill 9-03.9(3), Top Course

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).

All Push on Joint and Mechanical Joint rubber gaskets shall be styrene-butadiene rubber (SBR). All gaskets must conform to ANSI/AWWA C111-72 or revision thereof.
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) B 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 42 inches over the top of pipe unless otherwise specified on the 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 via the 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.

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 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 so required shall be classified as 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 ductile iron pipe, aggregates for “Pipe Zone Bedding” shall conform to the requirements for “Trench Backfill”.

7-09.3(10) Backfilling Trenches

This section is supplemented by the following

No recycled material shall be used for trench backfill. Unless otherwise specified, Tacoma Water will require full depth 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 supplemented by the following

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 Right of Way Permit), 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 100 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 test, 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 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, to the standards of the AWWA, the Installation Guide for Ductile Iron Pipe from DIPRA or the Handbook of PVC Pipe design and Construction from the PVC Pipe Association, 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 ¼" from the end.

When cutting PVC pipe, the cut end shall be beveled and marked to manufactures specifications.

**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(19)A Connections to Existing Mains**

*The 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

*The 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

*This section is supplemented with the following:*

Concrete thrust blocking shall conform to Standard Drawing 17-56-1. Concrete used for thrust blocking on mains eight inch and smaller shall meet the requirements of 6-02.3(4)B Jobsite Mixing, with a compressive strength at 28 days of a minimum 3,000 psi. Temporary thrust blocking may be revised or altered as approved by the Tacoma Water Construction Inspector.

7-09.3(23) Hydrostatic Pressure Test

*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 his/her own 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 his/her own 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 his/her own 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 fps 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 p.p.m. 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

This section is revised to read:

The Tacoma Water Construction Inspector will determine the location of sample stations and coordinate with Tacoma Water crews for installation. Corporation stops with copper pipe stubs will be supplied and 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 in the bid proposal or on the 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 to Tacoma Water customers.

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 bid item for removal and replacement of unsuitable material will be measured by the cubic yard and shall only cover the materials as removed as part of the trench excavation. Replacement of unsuitable materials shall be paid per the Trench backfill specification.

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.
Trench Excavation and Disposal: Measurement of extra trench excavation and disposal of unsuitable material will be by cubic yard based upon on the tonnage of trench backfill placed and accepted by the Engineer and calculated as follows:

\[
\text{Trench Excavation (CY)} = \frac{(\text{Trench Backfill} \times \text{Ton}) \times 0.87}{1.35 \text{Ton/CY}}
\]

*Note: Trench Backfill shall be the total of ticketed sand, CSTC, Topsoil Type A, and quarry spalls.*

“____-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.

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 Trench Excavation and Disposal, Crushed Surfacing Top Course (CSTC) for Trench Backfill, 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”.

Push-On Joint ANSI/AWWA, C900, DR14 to furnish, lay, and test (various sizes): Measurement for water mains will be by the linear foot measured along the pipe less fittings, valves and couplings.

Removal and disposal of abandoned CI pipe, all sizes: Measurement for Removal and disposal of abandoned CI pipe, all sizes will be by the linear foot measured along the CI pipe removed.

Mechanical Joint Fittings and couplings (various sizes and combinations): Measurement for fittings and couplings shall be per each.

Permanent Blow –Off Assemblies: Measurement for this item will be per each.

Temporary Blow-Off Assemblies, installed and removed: Measurement for this item will be per each.

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 Anchors, in place: Measurement for this item will be per each.

Temporary Thrust Anchors, in place, 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 trench backfill and restoration: 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) and 2-03(14)D. 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.

Force Account: The item shall conform to Section 1-09.6 of the Standard Specifications.

7-09.5 Payment
This section is revised to read:

“Extra Trench Excavation and Disposal”, per cubic yard.

The unit contract price for “Extra Trench Excavation and Disposal” shall be full pay for all labor, equipment and materials required for excavating and disposal of unsuitable materials. Trench and disposal requirements will be in accordance with WSDOT Standard Specifications as modified in these Special Provisions.

“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, ______ Joint ANSI/AWWA. C151 Special Thickness Class No. 52”, per linear foot.

The unit contract price per linear foot for each size of “____-inch Ductile Iron Pipe, ______Joint ANSI/AWWA. C151 Special Thickness Class No. 52” shall be full pay for all work 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 Trench Excavation and Disposal, Crushed Surfacing Top Coarse (CSTC) for trench backfill, compaction of trench backfill, pressure testing, flushing, disinfecting the pipeline and cleanup.

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, ______ Joint ANSI/AWWA. C151 Special Thickness Class No. 52”.

“Removal and disposal of abandoned CI pipe, all sizes”, per linear foot.

The unit contract price per linear foot of “Removal and disposal of abandoned CI pipe, all sizes”: shall be full pay for all work to complete the removal, haul, disposal, material, and cleanup necessary to properly remove and dispose of CI pipe abandoned as part of this contract.

“____-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) in place” 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.

“____-inch Ductile Iron (fitting), M.J. ____ installed”, per each.

The unit contract price for “____-inch Ductile Iron (fitting), M.J. ____ in place” shall be full pay for all labor, equipment and materials required for furnishing and installing these items including gaskets and gland/bolts kits.

“____-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.

“____-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, in place” shall be full pay for all labor, equipment and materials required for furnishing, and installing these items including gaskets gland/bolts kits.

“____-inch _________ Tapping Sleeve, installed”, per each.

The unit contract price for “____-inch _________ Tapping Sleeve” shall be full pay for all labor, equipment and materials required for furnishing, and installing these items including gaskets gland/bolts kits.

“____-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.

“____-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.

“_____ -inch Blow-Off Assembly, installed”, per each.

The unit contract price bid per each for “_____ -inch Blow-Off Assembly, in place” 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 drawing 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, in place” 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, in place” 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, in place” shall be full pay for all labor, equipment and materials required for furnishing and installing the specified item.

“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.

“Crushed Surfacing Top Course for Trench Backfill” per ton.

The unit contract price for “Crushed Surfacing Top Course for Trench Backfill”, shall be full pay for all labor, equipment and materials required for furnishing and installing the specified item including delivery, spreading, compacting and rolling.

“Sand for Pipe Bedding”, per ton.

The unit contract price for “Sand for Pipe Bedding” shall be full payment for all labor, equipment, tools, and materials required to load, haul, place the sand, and compaction.

“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 sections 7-09.3(11), and 2-03(14)D. Testing will be performed by a licensed testing company with trained personnel in the presence of the Tacoma Water Construction Inspector, and shall be measured per each passed test.

“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. Progress payment will be made based on the percentage completion of the total work encompassed within the lump sum item.

**END OF SECTION**

**7-12 VALVES FOR WATER MAINS**

**7-12.4 Measurement**

*These sections are supplemented with the following:*

Measurement for _____-inch Tapping Gate Valve, M.J., ANSI/AWWA, C509/515, with C.I. Valve Box, will be per each.

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.
7-12.5 Payment
These sections are supplemented with the following:

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

“_____ -inch Gate Valve, M.J., ANSI/AWWA, C509/C515, with C.I. Valve Box”, per each.

The unit bid price for “_____ -inch Gate Valve, M.J., ANSI/AWWA, C509/C515, with C.I. Valve Box, in place, per each” 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.

“_____ -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.

“_____ -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.

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(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 paragraph is supplemented with the following:*

Measurement of “6-inch Hydrant, M.J., _____-ft bury, with ____-inch __________ Threads & ____-inch Quick Connect Coupling”, will be made per each.

7-14.5 Payment  
*This paragraph 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. Restraining glands, lateral pipe, tee, and valve will be paid under separate bid items.
7-15 SERVICE CONNECTIONS
This section is supplemented with the following:

There are 36 water service transfers throughout the project. New mains will be tested and sampled in sections so Tacoma Water can commence with service transfers. Following the successful completion of sampling, the Contractor shall anticipate down time waiting for Tacoma Water crews to complete service transfers. The Contractor shall anticipate one working day 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 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.

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 Contractor shall notify the Tacoma Water 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.

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), sub-section 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 EROSION CONTROL AND WATER POLLUTION CONTROL

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. The ESC Lead shall have, for the life of the contract, a current Certificate of Training in Construction Site Erosion and Sediment Control from a course approved by WSDOT's Statewide Erosion Control Coordinator.

The ESC Lead shall implement the Temporary Erosion and Sediment Control (TESC) plan. Implementation shall include, but not limited to:

1. Installing and maintaining all temporary erosion and sediment control Best Management Practices (BMPs) included in the TESC plan to assure continued performance of their intended function. Damaged or inadequate TESC BMPs shall be corrected immediately.

2. Inspecting all on-site erosion and sediment control BMPs at least once every five working days and each working day there is a runoff event. A TESC Inspection Report shall be prepared for each inspection and shall be included in the TESC file. A copy of each TESC Inspection Report shall be submitted to the Engineer no later than the end of the next working following the inspection. The report shall include, but not limited to:
   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 TESC plan inadequacies.

3. Updating and maintaining a TESC file on site includes, but not limited to:
   a. TESC Inspection Reports
   b. Temporary Erosion and Sediment Control (TESC) plan narrative.
   c. National Pollutant Discharge Elimination System construction permit (Notice of Intent)
   d. Other applicable permits.

Upon request, the file shall be provided to the Engineer for review.

8-01.3(1)C Ground Water

This section including title is revised to read:

8-01.3(1)C Water Management

1. Ground Water
   When ground water is encountered in an excavation, it shall be treated and discharged as follows:
   A. When the ground water conforms to Water Quality Standards for Surface Waters of the State of Washington (Chapter 173-201A WAC), it may bypass detention and treatment facilities and be routed directly
to its normal discharge point at a rate and method that will not cause erosion.

B. When the turbidity of the ground water is similar to the turbidity of the site runoff, the ground water may be treated using the same detention and treatment facilities being used to treat the site runoff and then discharged at a rate that will not cause erosion.

C. When the turbidity is greater than the turbidity of the site runoff, the ground water be treated separately until the turbidity is similar to or better than the site runoff, then may be combined and treated as in B, above.

2. Process Water
All water generated on site from construction or washing activities that is more turbid than site runoff shall be treated separately until turbidity is the same or less than the site runoff, and then may be combined and treated as in 1B, above. Water may be infiltrated upon approval of the Engineer.

3. Offsite Water
The Contractor shall, prior to disruption of the normal watercourse, intercept the offsite storm water and pipe it either through or around the project site. This water shall not be combined with onsite storm water and shall be discharged at its pre-construction outfall point in such a manner that there is no increase below the site.

The method for performing this work shall be provided by the Contractor for the Engineer’s review.

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.

Street washing with water shall not be permitted.

8-01.4 Measurement
The sixth sentence is replaced with the following:

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.

8-01.5 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 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:
  - McWane Cast Iron Pipe Company
  - Pacific States Cast Iron Pipe Company
  - U.S. Pipe and Foundry Company
- Fastite Joint:
  - American Cast Iron Pipe Company
- Mechanical Joint:
  - McWane Cast Iron Pipe Company
  - American Cast Iron Pipe Company
  - Pacific States Cast Iron Pipe Company
  - U.S. Pipe and Foundry Company

Nonrestrained 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 plans and specifications 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 C153 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.
9-30.2(6) Restained 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
- Tyler Union “TUFGrip 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.

Couplings will be proper to type of pipe (e.g. D.I to C.I.)

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:

a. Shall have the body and bonnet coated with a fusion bonded epoxy coating meeting all the application and performance requirements of AWWA C-550.

b. All gate valve ends shall be as shown on the project drawing 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/AWWA C111, A21.11.

c. All gate valves, 16-inch and larger, shall be horizontal stem, equipped with machine cut cast steel gears, extended type grease case, and bypass, all in accordance with AWWA Standard C509/515.

d. All bonnet and packing nuts and bolts shall be stainless steel.

9.30.3(3) Butterfly Valves
This section is revised with the following:

All butterfly valves shall conform to ANSI/WWWA C504 for Rubber Seated Butterfly Valves, Class 150B. All nuts and bolts shall be stainless steel.

All butterfly valves shall be manufactured by:

- Henry Pratt "Groundhog"
- M&H/Clow “4500"
- Mueller “Lineseseal III"
- Or approved equal

9.30.3(4) Valve Boxes
This section is revised to read:

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 129 S
- 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 replaced with the following table:

<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>Pattern of thread</td>
<td>60° V thread</td>
</tr>
<tr>
<td>Description</td>
<td>Measurement</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>-----------------</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&quot; cut off top)</td>
<td>5.09-inch</td>
</tr>
<tr>
<td>Dia. at root of thread (with .02&quot; 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 section is revised to read:*

No hydrant barrel extensions are approved on new installations

**9-30.6 Water Service Connections**  
*This section does not apply to the contract.*

END OF SECTION
APPENDIX A

CITY OF TACOMA

and

WSDOT STANDARD PLANS

*** Note Standard plans and websites provided below are for contractor convenience. Additional standard plans may be required to construct the project. ***

COT Standard Plans Website: https://www.cityoftacoma.org/government/city_departments/public_works/engineering/standard_plans_and_g_i_s_typical_details

WSDOT Standard Plans Website: https://wsdot.wa.gov/engineering-standards/all-manuals-and-standards/standard-plans
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 3/8" vertical lip at driveway entrance.

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 5/8" crushed surfacing top course.

CITY OF TACOMA
CEMENT CONCRETE CURB AND GUTTER
STANDARD PLAN NO. SU-03
NOTE:

Flush with gutter pan at curb ramp entrance or 3/4" vertical lip at driveway entrance.

**TYPE "C" MOUNTABLE INTEGRAL CEMENT CONCRETE CURB**

1/2" R

8"

CURB

CEMENT CONCRETE PAVEMENT

VAR.

**TYPE "D" MOUNTABLE INTEGRAL CEMENT CONCRETE CURB**

1/2" R

6"

VAR.

1" MIN. OR AS DIRECTED BY ENGINEER

CEMENT CONCRETE PAVEMENT

CURB

**HMA WEDGE CURB DOWNHILL SIDE OF FULL STREET WARP**

18"

6"

CURB

ASPHALT CONCRETE PAVEMENT VAR. DEPTH

**HMA WEDGE CURB STANDARD**

12"

CURB

ASPHALT CONCRETE PAVEMENT VAR. DEPTH

6"

CURB

CEMENT CONCRETE OR ASPHALT CONCRETE SIDEWALK, PATH, CURB RAMP, OR LANDING.

6" PEDESTRIAN CURB PREFERRED (4" MIN.)

1/2" R

6"

6"

3/4" PREMOLDED JOINT FILLER OR CEMENT CONCRETE HARD SURFACE

CEMENT CONCRETE PEDESTRIAN CURB

CEMENT CONCRETE TRAFFIC CURB

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 3/4" 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.

---

**REVIEWED BY**

DCS
PUBLIC WORKS
NA
TACOMA POWER

ENVIRONMENTAL SERVICES
NA
TACOMA WATER

**APPROVED FOR PUBLICATION**

CITY OF TACOMA CITY ENGINEER
CEMENT CONCRETE CURB AND GUTTER AND ASPHALT WEDGE CURB

**STANDARD PLAN NO.**
SU-03A
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 3/8" premolded joint filler.
7. All joints shall be cleaned and edged. External edges shall be 3/8" radius. Internal joints shall be 1/2" 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 3/8" 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.
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.

TOP SURFACE SHALL BE BROOMED IN THE SAME DIRECTION AS THE EXPANSION JOINT

4" SHINER AROUND 15' PANEL 3/8 EXPANSION JOINT

3/8" EXPANSION JOINT TO MATCH CURB JOINTS NOT TO EXCEED 15'

2" X 1/4" DEEP WESTERN GROOVER CONTRACTION JOINT (TYP.)

4" SHINER AROUND 15' PANEL 3/8 EXPANSION JOINT

TO TOP SURFACE SHALL BE BROOMED IN THE SAME DIRECTION AS THE EXPANSION JOINT

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 planes 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 railing. 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
TURNING SPACE

3/8" EXPANSION JOINT (TYP.)
RAMP
SIDWALK

FOR SIDEWALK WIDTHS, SEE
STANDARD PLAN SU-04 AND
CONTRACT PLANS, OR
MATCH EXISTING (TYP.)
CURB AND GUTTER
FACE OF CURB, TAPER CURBING

PLAN VIEW

PEDESTRIAN CURB PERMITTED
ADJACENT TO LANDSCAPING. IF
RETURN CURB IS NEEDED AT OTHER
LOCATIONS, RAILING MAY BE REQUIRED
TO PREVENT CROSS TRAVEL

FLARE - A FLARE IS PREFERRED
OVER A RETURN CURB.
DETECTABLE WARNING SURFACE,
SEE STANDARD PLANS SU-5G
TURNING SPACE Flush WITH GUTTER

GRADE BREAKS SHALL BE
PERPENDICULAR TO THE
DIRECTION OF TRAVEL (TYP.)

ISOMETRIC VIEWS

PEDESTRIAN CURB
PERMITTED
ADJACENT TO
LANDSCAPING AND
WHERE THERE IS
NO EVIDENCE OF
PEDESTRIAN
TRAFFIC.

SECTION DETAIL A-A

CEMENT CONCRETE
PEDESTRIAN CURB, SEE NOTE 4
5'-0" MIN.
SEE CONTRACT PLANS
OR MATCH
NEAREST JOINT

VARIANCE
2.0% MAX.

4" (TYP.)
TURNING SPACE
CURB & GUTTER,
SEE NOTE 4
18" THICKENED EDGE,
SEE NOTE 5

SECTION DETAIL B-B

CEMENT CONCRETE
RETURN CURB, SEE NOTE 4

15'-0" MAX., SEE NOTE 7
GRADE BREAK
8.3% MAX.
2.0% MAX.

CITY OF TACOMA
PARALLEL CURB RAMP
TYPE 'B'

STANDARD PLAN NO. SU-05E
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

<table>
<thead>
<tr>
<th>MIN.</th>
<th>MAX.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 1.60&quot;</td>
<td>2.40&quot;</td>
</tr>
<tr>
<td>B 0.65&quot;</td>
<td>-</td>
</tr>
<tr>
<td>C 0.45&quot;</td>
<td>0.90&quot;</td>
</tr>
<tr>
<td>D 0.90&quot;</td>
<td>1.40&quot;</td>
</tr>
<tr>
<td>E 0.20&quot;</td>
<td>0.20&quot;</td>
</tr>
</tbody>
</table>

PLACE AT BACK OF CURB LINE, UNLESS OTHERWISE NOTED

MATCH TO WIDTH OF CURB RAMP, TURNING SPACE, PASS-THROUGH OR WALKWAY

MATCH TO WIDTH OF CURB RAMP, TURNING SPACE, PASS-THROUGH OR WALKWAY

DIRECTION OF TRAVEL

CURB RAMP, TURNING SPACE
PASS-THROUGH OR WALKWAY

2'-0" MIN. ALL APPLICATIONS

CURB AND GUTTER

RAMP OR TURNING SPACE
FLUSH WITH GUTTER

SOME DETECTABLE WARNING PRODUCTS REQUIRE A CONCRETE BORDER FOR PROPER INSTALLATION. THIS CONCRETE BORDER SHALL NOT EXCEED 2 INCHES.
**DETECTABLE WARNING PLACEMENT CRITERIA FOR SINGLE DIRECTIONAL CURB RAMP**

**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.

**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.

---

**PERPENDICULAR CURB RAMP**

*(SEE SU-05A AND SU-05B)*

**PARALLEL CURB RAMP**

*(SEE SU-05C, SU-05D, AND SU-05E)*

**PEDESTRIAN RAILROAD CROSSING**

**DETECTABLE WARNING SURFACE (TYP.)**

**WIDTH OF PASS-THROUGH (TYP.)**

**ISLAND PASS-THROUGH**

**MEDIAN PASS-THROUGH**

---

**REVIEWED BY**

PUBLIC WORKS

ENVIRONMENTAL SERVICES

TACOMA POWER

TACOMA WATER

**APPROVED FOR PUBLICATION**

**CITY OF TACOMA**

**DETECTABLE WARNING SURFACE PLACEMENT GUIDELINES**

**STANDARD PLAN NO.** SU-05H
1. The clearance between the face of curb and any obstruction, except mail boxes, shall be a minimum of 1'-6" and shall be in accordance with applicable standards. The front of a mail box shall be 6" to 8" from the face of curb.
2. Sidewalk cafes, artwork, poles, mailboxes, vault lids, ramps, etc., may not reduce the width of the sidewalk to less than 5' for residential streets and 7' for arterial streets and commercial areas, excluding the curb width.
3. All obstructions shall meet requirements for cane detection. See City of Tacoma Design Manual Chapter 8.
4. The following criteria shall only be used in rare circumstance when an obstruction cannot be relocated and does not allow the minimum required sidewalk width:
   a) If the sidewalk is new or replaced and cannot meet the minimum clearance requirements due to an existing obstruction, then a maximum extent feasible (MEF) justification shall be included in the Plans. Rationale supporting the MEF 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. The MEF shall be submitted and approved by the City of Tacoma Traffic Engineering Division and ADA Coordinator prior to requesting project bids or permit approval.
   b) When placing a new obstruction in an existing sidewalk and the minimum clearance requirements cannot be met, a MEF shall be submitted and approved by the City of Tacoma Traffic Engineering Division and ADA Coordinator prior to requesting project bids or permit approval.
5. See Tacoma's Design Manual Chapter 8, Pedestrian Facilities, for additional information on Pedestrian Access Routes (PARs).
6. Sidewalk taper around obstructions shall be 5:1. If a 5:1 taper cannot be achieved, then an MEF justification shall be included on the Plans for review and approval by City Staff. Sidewalk shall comply with SU-04.
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 3' or greater. See Standard Plan SU-07A.

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 3' wide. See Standard Plan SU-07B.

1.c. Cement Concrete Alley Entrance Type 3 (Entrances) or Accesses Type 3 (Accesses) shall be used at alleys where the planting strip is 3' wide or greater. See Standard Plan SU-07C.

1.d. New proposed planter widths shall be 5' min, with Type 1 Driveway Entrance or Type 3 Alley Entrance

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 Section 5-03.

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 panels are required when a new driveway entrance or access matches into a sidewalk with a cross slope greater than 2%. Transition panels shall be a minimum of 5' in length.

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 2-06.3(3) Subgrade for Permeable Pavements. A soils report is required and modeling may be necessary per SWMM BMP L633.


13. A 2" Ø 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

14. A detectable warning surface shall be placed at any Entrance or Access if, and only if, any of the following are true/expected:

• The Average Daily Traffic of the alley/driveway is greater than 700 or is reasonably expected to exceed 700 vehicles per typical day upon future development, such as alleys in regional growth centers and mixed-use centers where zoning supports significant growth.

• It is located in a high pedestrian use area such as, a designated pedestrian street in a mixed-use center, or a school walking route.

• A safety concern is documented by the City Traffic Engineer.

15. The detectable warning pattern, if needed, shall be placed the full width of the sidewalk in accordance with City of Tacoma Standard Plan SU-05A.

16. 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.
STANDARD CONCRETE SECTION DETAIL A-A

FOR SIDEWALK WIDTHS, SEE STANDARD PLAN SU-04 AND CONTRACT PLANS, OR MATCH EXISTING, (TYP.)

TRANSITION PANEL, 5' MIN. SEE NOTE 8 ON SU-07

3/8" FULL DEPTH EXPANSION JOINT (TYP.) ISOLATION JOINT FOR PERVIOUS CONCRETE (TYP.)

2"Ø PIPE, SEE NOTES 12 AND 13 ON SU-07

A DETECTABLE WARNING SURFACE SHALL BE PLACED AT ANY ENTRANCE/ACCESS IF, AND ONLY IF, ANY OF THE CONDITIONS IN NOTE 14 OF SU-07 ARE TRUE/EXPECTED

NOTE: DESIGNED SECTION REQUIRED FOR PERMEABLE SURFACING. SEE NOTES 10 AND 11 ON SU-07.

STANDARD CONCRETE SECTION DETAIL A-A

3/4" LIP WITH 3/4" R

3/8" EXPANSION JOINT

12% MAX GRADE BREAK VARIABLE

6" (MIN) RESIDENTIAL

8" (MIN) COMMERCIAL

6' MIN

EX. SIDEWALK, TYP.

#4 GRADE 60 REBAR EACH SIDE. 6" ON CENTER. 3" CLEARANCE EACH CONCRETE FACE

CRUSHED SURFACING

COMPACTED SUBGRADE

CRUSHED SURFACING TOP COURSE, 2" DEPTH

ROADWAY PAVEMENT DISTURBED DURING CONSTRUCTION OF DRIVEWAY SHALL BE RESTORED IN ACCORDANCE WITH STANDARD PLANS SU-14 OR SU-15.

FOR DRIVeway ENTRANCE AND ACCESS NOTES, SEE STANDARD PLAN SU-07

NOTE 8 ON SU-07

MATCH SIDEWALK ELEVATION IF POSSIBLE

A DETECTABLE WARNING SURFACE SHALL BE PLACED AT ANY ENTRANCE/ACCESS IF, AND ONLY IF, ANY OF THE CONDITIONS IN NOTE 14 OF SU-07 ARE TRUE/EXPECTED

FOR SIDEWALK WIDTHS, SEE STANDARD PLAN SU-04 AND CONTRACT PLANS, OR MATCH EXISTING, (TYP.)

TRANSITION PANEL, 5' MIN. SEE NOTE 8 ON SU-07

3/8" FULL DEPTH EXPANSION JOINT (TYP.) ISOLATION JOINT FOR PERVIOUS CONCRETE (TYP.)

2"Ø PIPE, SEE NOTES 12 AND 13 ON SU-07

A DETECTABLE WARNING SURFACE SHALL BE PLACED AT ANY ENTRANCE/ACCESS IF, AND ONLY IF, ANY OF THE CONDITIONS IN NOTE 14 OF SU-07 ARE TRUE/EXPECTED
STANDARD CONCRETE SECTION DETAIL A-A

DRIVEWAY WIDTH: NON SINGLE FAMILY RESIDENCE / DUPLEX / TRIPLEX
24' MIN. TO 30' MAX.

DRIVEWAY WIDTH: SINGLE FAMILY RESIDENCE / DUPLEX / TRIPLEX
14' MIN. TO 28' MAX.

ALLEY WIDTH
2'

EX. SIDEWALK, TYP.

TRANSITION PANEL, 5' MIN.
SEE NOTE 8 ON SU-07

A DETECTABLE WARNING SURFACE SHALL BE PLACED AT ANY ENTRANCE/ACCESS IF, AND ONLY IF, ANY OF THE CONDITIONS IN NOTE 14 OF SU-07 ARE TRUE/EXPECTED

NOTE: DESIGNED SECTION REQUIRED FOR PERMEABLE SURFACING. SEE NOTES 10 AND 11 ON SU-07.

STANDARD PLAN NO. SU-07B

APPROVED FOR PUBLICATION
05/08/2023

CITY OF TACOMA CEMENT CONCRETE ALLEY ENTRANCE AND ACCESS TYPE 2

REVIEWS

TACOMA WATER

TACOMA PUBLIC WORKS

TACOMA POWER

ENVIRONMENTAL SERVICES

DESIGNER

DOCUMENT CONTROL

CITY ENGINEER

ENVIRONMENTAL SERVICES

CITY OF TACOMA

For Driveway Entrance and Access Notes, see Standard Plan SU-07.
FOR ALLEY ENTRANCE AND ACCESS NOTES, SEE STANDARD PLAN SU-07

FOR SIDEWALK WIDTHS, SEE STANDARD PLAN SU-04 AND CONTRACT PLANS, OR MATCH EXISTING, (TYP.)

2"Ø PIPE, SEE NOTES 12 AND 13 ON SU-07

#4 GRADE 60 REBAR EACH SIDE, 6" ON CENTER, 3" CLEARANCE EACH CONCRETE FACE

STANDARD CONCRETE SECTION DETAIL B-B

ROADWAY PAVEMENT DISTURBED DURING CONSTRUCTION OF ACCESS SHALL BE RESTORED IN ACCORDANCE WITH STANDARD PLANS SU-14 OR SU-15

BREAK POINT 15' MAX 5' MIN

ALLEY PAVING WIDTH 8.3% (MAX)

1/2" DEEP CONTRACTION JOINT

CRUSHED SURFACING TOP COURSE, 2" DEPTH

FRAME ON SLOPE

SUITABLE COMPACTED SUBGRADE

CRUSHED SURFACING

STANDARD CONCRETE SECTION DETAIL A-A

NOTE: DESIGNED SECTION REQUIRED FOR PERMEABLE SURFACING. SEE NOTES 10 AND 11 ON SU-07.

1/2" LIP WITH 1/4" R.

3/4" EXPANSION JOINT

12% MAX GRADE BREAK VARIABLE

1 - 2% (MAX)

CITY OF TACOMA CEMENT CONCRETE ALLEY ENTRANCE AND ACCESS TYPE 3

APPROVED FOR PUBLICATION

REVIEWED BY:
PUBLIC WORKS
ENVIRONMENTAL SERVICES
TACOMA POWER
TACOMA WATER

CITY ENGINEER

DATE
05/08/2023

STANDARD PLAN NO. SU-07C
1. Stairways, handrails & guards shall comply with the most current version of the International Building Code (IBC) and associated amendments, except as allowed by the Tacoma Municipal Code Title 2 Chapter 2 Section 2.01.060.

2. For stairway guard and handrail details, refer to Standard Plan No. SU-11.

3. The minimum thickness of the stairway shall be 6" as measured along the shortest line perpendicular to the slope of the stairs or the total required for coverage of steel reinforcement, whichever is greater. The stairway needs to be provided with the minimum steel, based on temperature & shrinkage as set forth in the ACI code. Clearances to the concrete surfaces from the reinforcement is spelled out in ACI 318-05 Section 7.7 as follows:
   3.a. Concrete cast against and permanently exposed to earth: 3" clearance for reinforcing
   3.b. Concrete exposed to earth or weather (formed):
        #6 through #18 Bars: 2" clearance for reinforcing
        #5 bar, W31 or D31 wire, and smaller: 1.5" clearance for reinforcing
   3.c. Concrete not exposed to weather or in contact with the ground:
        Slabs, walls, joists:
         #14 & #18 bars: 1.5" clearance for reinforcing
         #11 bar and smaller: 0.75" clearance for reinforcing

4. Concrete shall be a minimum compressive strength of 3,000 psi.

5. According to ACI 318-05 7.12.2.2 - Shrinkage and temperature reinforcement shall be spaced not farther apart than five times the slab thickness, nor farther apart than 18".

6. Slab reinforcing according to ACI 318-05 Section 7.12.2.1 shall provide the following ratios of reinforcement areas to gross concrete area, but not less than 0.0014:
   6.a. Slabs where Grade 40 or 50 deformed bars are used - 0.0020
   6.b. Slabs where Grade 60 deformed bars or welded wire reinforcement are used - 0.0018
   6.c. Slabs where reinforcement with yield stress exceeding 60,000 psi measured at a yield strain of 0.35 percent is used 0.0018 X 60,000/ty

7. Stair treads and risers shall be of uniform size and shape.

8. Where the stairway has a straight run, the depth of the landing need not exceed 48 inches. (IBC 1011.6). Landings are required at the top and bottom of stairways.

9. Where the bottom or top riser adjoins a sloping public way, walkway or driveway having an established grade and serving as a landing, the bottom or top riser is permitted to be reduced along the slope to less than 4 inches (102 mm) in height, with the variation in height of the bottom or top riser not to exceed one unit vertical in 12 units horizontal (8% slope) of stairway width.
HANDRAIL/GUARD COMBINATION:
Guards are used for fall protection. Handrails are for grasping by the hand for guidance and support.

Where the drop off from the side of the stair or walking surface is 30” or more, a guard is required in addition to the handrail. Intermediate pattern or bars shall be provided within the guard to prevent a 4” diameter sphere from passing through, except where the guard has a lower bar that forms a triangle with the stair riser and the tread, here the sphere diameter can be increased to less than 6”.

Handrails shall have an outside diameter of 1 1/4” to 2”. If not circular, it shall have a perimeter dimension of 4” to 6 1/4” with a maximum cross-section dimension of 2 1/4”.

HANDRAIL:
Stairways shall have handrails on each side (IBC 1011.11), except as allowed by the Tacoma Municipal Code Title 2 Chapter 2 Section 2.01.060

Handrails shall return to a wall, guard, or the walking surface, or shall be continuous to the handrail of an adjacent flight of stairs or ramp run.

Where handrails are not continuous between flights, the handrails for the top extension at stairs shall extend horizontally, not less than 12 inches, beyond the top riser, and the handrails for the bottom extension at stairs shall extend for a horizontal distance equal to one tread depth beyond the bottom tread nosing.

NOTES
Guards and handrails shall be designed to carry a 50 lb/linear foot uniform load applied to the top bar of the guard or handrail in any and all directions. Guards and handrails shall also be designed to carry a 200 lb point load at any location along the top bar in any and all directions, but not simultaneously with the uniform load.

The guard posts and top rail can be constructed of 2” X 2” X 0.125” structural square tube, and a post spacing of 60” maximum. Or it can be constructed of 1.5” nominal diameter steel pipe with a 0.145” wall thickness (Sch 40) with a 42” maximum post spacing, or 1.5” nominal diameter steel pipe with a 0.20” wall thickness (Sch 80) with a 48” maximum post spacing. In all cases a steel yield strength of fy=50,000 psi shall be required.
NOTES:

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-14D 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).
   - Residential 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 grinding 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(5)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 on a case by case basis.

9. Transverse construction joints terminate at the edge of the 2'-cut back.

10. For municipal capital improvement projects, cement concrete base pavement shall be in accordance with WSDOT Standard Specification 5-05 for cement concrete paving. For non-municipal capital improvement projects, concrete shall be a minimum compressive strength of 4,000 PSI.

11. Dowel in accordance with WSDOT Standard Plan A-60.10-00 for arterials, industrial areas, and/or roads with bus traffic. For residential streets the dowel bars may be reduced to 1-inch in diameter. In lieu of dowels, full panel replacement is acceptable.
NOTES:
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-14E 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 hot-mix asphalt or cold-mix asphalt. Temporary patches between October 1st and March 31st shall be made with hot-mix asphalt 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 grinding 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(5)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 on a case by case basis.

9. Transverse construction joints terminate at the edge of the 2" cut back.

10. For municipal capital improvement projects, cement concrete base pavement shall be in accordance with WSDOT Standard Specification 5-05 for cement concrete pavement. For non-municipal capital improvement projects, concrete shall be a minimum compressive strength of 4,000 PSI.

---

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

TYPICAL PAVEMENT RESTORATION FOR ASPHALT OVER RIGID BASE BRICK OR STONE BLOCK PAVEMENT

STANDARD PLAN NO. SU-14B
NOTES:

1. All pavement restoration work shall also meet the requirements of the City of Tacoma's Right of Way Restoration 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).
   Residential 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 grinding 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(5)C for asphalt concrete surfaces.

6. Permanent Panel Replacement:
   Arterials, industrial areas and/or roads with bus traffic: 100% panel replacement is required for all affected panels. Monolithic curbs will be poured at time of panel replacement.
   Residential and Alleys: Panels cut greater than 1/3 the panel length, width, or total area, including the 2-foot cut back, will require 100% panel replacement. Panels cut less than 1/3 the panel length, width, or total area, including the 2-foot cut back will require 50% panel replacement. Three-piece panels are not acceptable and will require 100% panel replacement.

7. For municipal capital improvement projects, cement concrete base pavement shall be in accordance with WSDOT Standard Specification 5-05 for cement concrete pavement. For non-municipal capital improvement projects, concrete shall be a minimum compressive strength of 4,000 PSI.

8. Dowel in accordance with WSDOT Standard Plan A-60.10-00 for arterials, industrial areas, and/or roads with bus traffic. In residential streets the dowel bars may be reduced to 1-inch in diameter. In lieu of dowels, full panel replacement is acceptable.
1. This Standard Plan shall only apply to streets that are exempt from the City of Tacoma's Restoration Policy. See Standard Plan SU-14A for any streets not 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).
   Residential areas: 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 grinding 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(5)C for asphalt concrete surfaces.

6. Final compaction of HMA shall be 91% of maximum density. 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. If remaining pavement adjacent to the patch is less than 3' wide, remove and replace to match existing pavement.

8. 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.

9. For municipal capital improvement projects, cement concrete base pavement shall be in accordance with WSDOT Standard Specification 5-05 for cement concrete pavement. For non-municipal capital improvement projects, concrete shall be a minimum compressive strength of 4,000 PSI.

10. Dowel in accordance with WSDOT Standard Plan A-60.10-00 for arterials, industrial areas, and/or roads with bus traffic. For residential streets, the dowel bars may be reduced to 1-inch in diameter. In lieu of dowels, full panel replacement is acceptable.
1. This Standard Plan shall only apply to streets that are exempt from the City of Tacoma’s Restoration Policy. See Standard Plan SU-14B for any streets not 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 hot-mix asphalt or cold-mix asphalt.
   Temporary patches between October 1st and March 31st shall be made with hot-mix asphalt 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 grinding 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 5-06.3(8)B for cement concrete surfaces and 5-04.3(5)C for asphalt concrete surfaces.

6. Final compaction of HMA shall be 91% of maximum density.
   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. For municipal capital improvement projects, cement concrete base pavement shall be in accordance with WSDOT Standard Specification 5-05 for cement concrete pavement. For non-municipal capital improvement projects, concrete shall be a minimum compressive strength of 4,000 PSI.
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 grinding 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(5)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>TABLE 1</th>
<th>PAVEMENT REPLACEMENT DEPTH IN CUT BACK ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MIN.</td>
</tr>
<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>

![Diagram of pavement restoration](image)

**CUT BACK ZONE**

**CONSTRUCTION JOINT, SEE NOTES 8 & 9**

**EXISTING ASPHALT OR OIL MAT PAVEMENT**

**CRUSHED SURFACING TOP COURSE (CSTC), MATCH EXISTING THICKNESS, 8" MIN**

**HMA PAVEMENT CL. 1/2" PG 64-22, SEE TABLE 1**

**2" MIN. CUT BACK OVER UNDISTURBED SOIL**

---

**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**
1. This Standard Plan shall only apply to streets that are exempt from the City of Tacoma's Restoration Policy. See Standard Plan SU-15A for any streets not 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).
   Residential areas 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 grinding 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(5)C for asphalt concrete surfaces.

6. Final compaction of HMA shall be 91% of maximum density.
   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. HMA pavement shall not be placed over CDF until approved by the City.

9. If remaining pavement adjacent to the patch is less than 3' wide, remove and replace with asphalt concrete pavement to match existing (minimum 2").

### Table 1

<table>
<thead>
<tr>
<th>Pavement Type</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</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>
<td>6&quot;</td>
</tr>
<tr>
<td>Residential Areas and Alleys</td>
<td>Match Existing +1&quot;, or 3&quot;, whichever is greater</td>
<td>4&quot;</td>
</tr>
</tbody>
</table>

**Figure**:
- **Cut Back Zone**
- **Sawcut**
- **HMA Pavement**
- **Crushed Surfacing**
- **Top Course (CSTC)**
- **Existing Asphalt or Oil Mat Pavement**
- **12" Min. Cut Back Over Undisturbed Soil**

---

**Approved for Publication**: 

City of Tacoma Department of Public Works

City Engineer: [Signature] Date: 7/17/09

Typical Pavement Restoration for Asphalt Concrete/Oil Mat Pavement

Standard Plan No.: SU-15B
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.

MANHOLE DIMENSION TABLE

<table>
<thead>
<tr>
<th>INSIDE DIAMETER</th>
<th>MINIMUM WALL THICKNESS</th>
<th>MINIMUM BASE THICKNESS</th>
<th>MAXIMUM HOLE SIZE</th>
<th>MINIMUM DISTANCE BETWEEN HOLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>48&quot;</td>
<td>4&quot;</td>
<td>6&quot;</td>
<td>36&quot;</td>
<td>6&quot;</td>
</tr>
<tr>
<td>54&quot;</td>
<td>4 1/2&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>
</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
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.

MANHOLE DIMENSION TABLE

<table>
<thead>
<tr>
<th>INSIDE DIAMETER</th>
<th>MINIMUM WALL THICKNESS</th>
<th>MINIMUM BASE THICKNESS</th>
<th>MAXIMUM HOLE SIZE</th>
<th>MINIMUM DISTANCE BETWEEN HOLES</th>
</tr>
</thead>
<tbody>
<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>108&quot;</td>
<td>10&quot;</td>
<td>12&quot;</td>
<td>96&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>120&quot;</td>
<td>11&quot;</td>
<td>12&quot;</td>
<td>108&quot;</td>
<td>12&quot;</td>
</tr>
</tbody>
</table>
NOTES:
1. For details showing grade ring 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. Manholes shall have the access hole centered over the channel on the upstream side of the manhole.
6. Base reinforcing steel shall be per manufacturer's recommendation.

**MANHOLE DIMENSION TABLE**

<table>
<thead>
<tr>
<th>INSIDE DIAMETER</th>
<th>MINIMUM WALL THICKNESS</th>
<th>MINIMUM BASE THICKNESS</th>
<th>MAXIMUM HOLE SIZE</th>
<th>MINIMUM DISTANCE BETWEEN HOLES</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 1/2&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>48&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>84&quot;</td>
<td>8&quot;</td>
<td>12&quot;</td>
<td>48&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>96&quot;</td>
<td>8&quot;</td>
<td>12&quot;</td>
<td>48&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>108&quot;</td>
<td>10&quot;</td>
<td>12&quot;</td>
<td>48&quot;</td>
<td>12&quot;</td>
</tr>
<tr>
<td>120&quot;</td>
<td>11&quot;</td>
<td>12&quot;</td>
<td>48&quot;</td>
<td>12&quot;</td>
</tr>
</tbody>
</table>

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

CITY ENGINEER
DATE

MANHOLE TYPE 3
5' MAXIMUM HEIGHT

STANDARD PLAN NO. SU-19
NOTES:

1. Existing pipe shall be supported at all times.
2. No weight of the precast unit shall bear on the existing pipe.
3. Concrete for cast-in-place base shall be Class 4000.
4. Cast-in-place base shall be poured to encase the precast unit.
5. Precast manhole section shall be installed in accordance with the Standard Plan for the specified manhole size and type.
6. Additional manhole sections shall not be installed until concrete base has set for 12 hours.
7. The existing main shall be left in place and the top portion of the main shall be removed. The bottom portion shall be tied in as the channel of the new manhole.
8. Grout all openings to ensure water tight structure.
96" FLAT SLAB TOP

20" x 24", 24" DIA, 48" DIA OR 54" DIA HOLE

#6 BARS AT 7" SPACING

2" (TYP)

12"

1" MIN

2 1/2" MAX

RECTANGULAR ADJUSTMENT SECTION

ONE #3 BAR HOOP FOR 6"
TWO #3 BAR HOOP FOR 12"

PREFABRICATED LADDER

20" x 24", 24" DIA, 48" DIA OR 54" DIA HOLE

#5 BARS AT 6" SPACING

8"

2" (TYP)

1" MIN

2 1/2" MAX

72" FLAT SLAB TOP

CIRCULAR ADJUSTMENT SECTION

24"

ONE #3 BAR HOOP

4" 5"

34"

12" (TYP)

6"

12"

9 1/2" MIN

STEP

20" x 24" OR 24" DIA HOLE

#4 BARS AT 6" SPACING

8"

2" (TYP)

1" MIN

2 1/2" MAX

CONCENTRIC CONE SECTION

48" MIN

48"

48" MIN

HANDBOLD

48", 54" OR 60" FLAT SLAB TOP

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.

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

Jaein Perrey
CITY ENGINEER

MISCELLANEOUS DETAILS
FOR MANHOLES AND
CATCH BASINS

STANDARD PLAN NO. SU-21

12-1 Jun 2009
DATE
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.
When no curb and gutter or sidewalk exist, locate cleanout in future planting strip.
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.
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 3/4 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.
## Compaction Testing Requirements

<table>
<thead>
<tr>
<th>Depth</th>
<th>Testing Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface (below HMA)</td>
<td>N/A</td>
</tr>
<tr>
<td>1 to 4 feet (or Min 18 in. above pipe)</td>
<td>1 every 12 inches</td>
</tr>
<tr>
<td>&gt; 4 feet to bottom of trench</td>
<td>No specific requirement - May be required by COT inspector for verification of compaction</td>
</tr>
<tr>
<td></td>
<td>1 test every 150 linear feet of trench or minimum 2 per trench</td>
</tr>
<tr>
<td></td>
<td>1 test for 150 square feet for isolated patches</td>
</tr>
</tbody>
</table>

**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. For new pervious concrete sidewalk, place joint directly over centerline of pipe. When placing pipe under existing pervious sidewalk, restoration with impervious concrete will be allowed.
2. No mesh reinforcement to be used for pervious sidewalks.
3. Storm pipe shall be per the City Stormwater Management Manual Volume 3 for pipes within the right-of-way.
NOTES

1. For new pervious concrete sidewalk, place joint directly over centerline of pipe. When placing pipe under existing pervious sidewalk, restoration with impervious concrete will be allowed.
2. No mesh reinforcement shall be used in pervious sidewalks.
3. Storm pipe material shall be ductile iron per the City Stormwater Management Manual Volume 3, for pipes within the Right-of-Way.

WSDOT Standard Specification 9-07.7
6 x 6 W4.0 x W4.0 (4 GAGE)
4 x 4 W2.9 x W2.9 (6 GAGE)

INVERT OF STORM PIPE SHALL BE AT OR ABOVE GUTTER LINE. BEVEL END OF PIPE TO MATCH WEDGE CURB.
NOTES:
1. The intent of this design is to facilitate the compaction of hot mix asphalt pavement adjacent to a drainage structure.
2. The centerline of the drainage structure may differ from the centerline of the frame and grate.
NOTES:
1. Location on mains per plan sheet.
2. Review design with the City for utilities greater than 36 inches in diameter.
3. For service lines, install trench dams at approximate back of walk where utility services are installed beyond the permeable ballast section.
4. Ductile iron pipe shall be encased in a polyethylene sleeve, meeting the requirements of American Waterworks Association (AWWA).
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

DATE: 4/11

CITY OF TACOMA
SIGN POST INSTALLATION
STANDARD PLAN NO. SU-34
NOTES:
Class 3000 cement concrete shall be placed, 1 1/8" min, below the finished pavement surface.

24-hours after placing the cement collar, HMA Class 3/4" PG 64-22 shall be placed in accordance with Standard Plan SU-15.

If the valve chamber being adjusted belongs to Tacoma Water, the Contractor shall contact Tacoma Water, Operations, at 253-502-6742 for final inspection.
ASSEMBLED HEAD DETAIL
NOTE: A FIVE POSITION TERMINAL BLOCK SHALL BE MOUNTED INSIDE AT THE BACK OF THE YELLOW SECTION HOUSING.

MULTIPLE HEAD BRACKET DETAIL
(SHALL INCLUDE LOWER TIE BRACE)

NOTE:
ALL METAL THREADS AND BRACKETS SHALL BE PAINTED WITH A HIGH QUALITY RUST PREVENTATIVE PAINT. A COAT OF GALVANIZED BONDING PRIMER SHALL BE APPLIED AND THOROUGHLY DRY BEFORE APPLYING FINISH COAT OF PAINT. ANY PAINTED HARDWARE DAMAGED DURING ASSEMBLY OR SHIPPING SHALL BE PAINTED AGAIN.

LEGEND
1. 1/2" STAINLESS STEEL NUT WITH LOCK WASHERS (STAINLESS STEEL OR BRONZE).
2. 9" CABLE SADDLE (BRONZE). PAINTED GREEN, TO FIT 1/4" TO 1/2" SPAN WIRE.
3. SPAN WIRE.
4. 1/2" "J" CABLE CLAMPS (STAINLESS STEEL).
5. BRONZE BALANCE ADJUSTER DIRECTIONAL LOCK, PAINTED GREEN, WITH STAINLESS STEEL BOLTS AND WASHERS.
6. 5/8" PINS (STAINLESS STEEL) WITH BRASS OR STAINLESS STEEL COTTER PIN. INSTALL BRASS OR STAINLESS STEEL WASHERS ON EACH SIDE OF COTTER PIN.
7. BRONZE ENTRANCE FITTING, PAINTED GREEN.
8. 1-1/2" INSULATED CHASE NIPPLE.
9. 1-1/2" GALVANIZED DROP PIPE PAINTED SILVER. SEE NOTE BELOW. BOTTOM THREADS TO ACCOMODATE FULL NUT AND LOCKING WIRE.
10. 1-1/2" MALLEABLE LOCK NUT—JAM TIGHT BEFORE INSTALLING HEAD.
11. (NON—CORROSION) SERRATED LOCKING WASHER.
13. SIGNAL HEAD WITH AUTOCALUKING IN LOCKING HOLES AT TOP OF THE VEHICLE HEAD.
14. 1-1/2" DIAMETER FLAT CORK GASKET. (NEOPRENE OK)
15. 1-1/2" NON—CORROSION SLIP RING.
16. 1-1/2" MALLEABLE NUT.
17. SAFETY LOCKING WIRE, #14TW OR EQUAL.
18. NUT (NO GASKET).
19. PINNACLE (NO WASHER) BOTTOM OF LOWEST SECTION.
20. 1-1/2" GALVANIZED 90° ELBOW, PAINTED GREEN.
21. STAINLESS STEEL SET SCREW WITH HEX HEAD.
22. 1-1/2" GALVANIZED NIPPLE, PAINTED GREEN.
23. TWO—WAY HOUSING WITH BOTTOM COVER, PAINTED GREEN.
NOTE:
CLEARANCE REQUIREMENTS BETWEEN THE TOP OF WEATHERHEAD, OR ANY PART OF THE COMMUNICATION RISER ASSEMBLY, SHALL BE AS FOLLOWS:
SECONDARY—MINIMUM 40 INCHES TO LOWEST PART OF SECONDARY OR NEUTRAL.
PRIMARY—MINIMUM OF 10 FEET 2 INCHES.
STREETLIGHT MAST ARM—MINIMUM OF 20 INCHES.
DRIP LOOP TO STREETLIGHT—MINIMUM OF 12 INCHES.
NOTES:
1. Junction boxes shall be concrete and in conformance with WSDOT's Type 1 and 2 Locking Lid Standard Duty Junction Box. Box and lid will be load rated for traffic and shall have a nonskid surface. The lid shall be marked "TS", "LT", or other designation as called for on the proposal.
2. All junction boxes containing interconnect cable will be Type 2 or larger.
3. Boxes shall be set on a base of 6 inch crushed surfacing top course for drainage.
4. Metal lids will be grounded. Ground conductor shall be a minimum 24 inches long.
5. Care shall be taken to place junction boxes outside of areas heavily used by pedestrians, especially near crosswalks and corners.
6. Junction boxes shall not be placed in curb ramps or areas subject to vehicular traffic.
7. Adjacent junction boxes will be separated by a minimum of 3 inches.
8. Install pulling bells or bushings on conduit ends.

CONCRETE BORDER APPLICATION AND DIMENSION:
1. For junction boxes bordered by less than 12 inches wide of concrete or asphalt section, a concrete border is required.
2. Junction boxes located in asphalt will be secured on all sides with a minimum 12 inch wide by 6 inch deep concrete section.
3. Junction boxes located in concrete will be secured on all sides with a minimum 12 inch wide concrete section. The depth of the concrete shall meet the depth of the adjacent concrete. The concrete will be finished in the same manner as the adjacent concrete, where applicable.
4. Junction boxes located in a planter strip, landscaped area, or other non-hardened surface will be secured on all sides with a minimum 6 inch wide by 12 inch deep concrete section flush with the top of the junction box.
NOTES:

1. Conduit shall have minimum 18" radius bends.

2. Conduits shall extend 1" above top of base, install pulling bells on conduit ends.

3. Conduits to be installed per engineer's instructions.

4. 15 feet of slack cable shall be provided at the controller end of all cables terminating in the controller cabinet.

5. Cabinet anchors shall be expansion anchors (5/8" x 4-1/2").

6. 4" thick concrete apron shall extend 12" around rear and sides and 36" in front. Install expansion joint between foundation and apron.

City of Tacoma
Department of Public Works

Approved for Publication

Foundation & Apron for "M" and "P" Controller Cabinets
Standard Plan No. TS-10
MATERIAL: CAST ALUMINUM ALLOY

STANDARD PAINT FINISHES: DARK OLIVE GREEN

DIMENSIONS: 11–1/4" H MAXIMUM x 5–1/2" W MAXIMUM x 2–3/4 D MAXIMUM

WEIGHT: TOTAL WEIGHT SHALL NOT EXCEED 7–1/2 LBS.

CONSTRUCTION: THE CLAMSHELL CONSISTS OF A TWO PART MOUNTING ASSEMBLY. THE HINGE PINS ON THE POLE MOUNTED HALF SHALL BE STAINLESS STEEL AND FIT INTO THE EARS ON THE SIGNAL MOUNTED HALF.

MOUNTING: THE POLE HALF OF THE ASSEMBLY SHALL BE DESIGNED TO FIT THE CURVATURE OF POLES 4" IN DIAMETER AND LARGER.

THE CLAMSHELL SHALL BE MECHANICALLY DESIGNED TO ALLOW FOR VARIOUS TYPES OF MOUNTING SUCH AS BANDING, THRU–BOLT OR LAG SCREW MOUNTING. THE BOLT HOLES SHALL BE ELONGATED HORIZONTALLY TO ALLOW FOR ROTATION ON THE POLE.

THE SIGNAL HALF OF THE ASSEMBLY SHALL BE SECURED TO THE POLE HALF THROUGH USE OF A FLATHEAD SOCKET BOLT AND TIGHTENED USING A 3/16" ALLEN WRENCH.

THE POLE HALF SHALL BE MOUNTED TO THE STRAIN POLE USING BOLTS EXCEPT AS DIRECTED BY THE ENGINEER.

THE BOTTOM OF THE PEDESTRIAN SIGNAL HEAD SHALL BE 8' ABOVE THE FINISHED SIDEWALK GRADE.

WIRING: THE FIELD WIRING SHALL BE TERMINATED ON A HORIZONTALLY MOUNTED 3 POSITION TERMINAL BLOCK LOCATED IN THE UPPER HALF OF THE SIGNAL HALF.

A NEOPRENE GASKET WILL PROVIDE A RAIN–TIGHT SEAL

MISCELLANEOUS: DRILL AND TAP HOLE IN STEEL POLE FOR 3/4" INSULATED CHASE Nipple FOR WIRING.
NOTE:
THIS STANDARD DEPICTS A VEHICLE HEAD PLACEMENT AS IT RELATES TO THE LANE LINES ON THE APPROACH TO THE GIVEN HEADS.

SIGNAL HEADS MUST BE LEVELED TO SPEC FROM A POINT 80 FEET FROM THE STOP BAR.

OVERHEAD SIGNS SHALL BE PLACED 2 FEET FROM VEHICLE HEAD.
PEDESTRAIN SIGNAL WIRING
RED   N/S - DW
GREEN N/S - WK
ORANGE E/W - DW
BLACK E/W - WK
WHITE NEUTRAL

PEDESTRAIN PUSH BUTTON WIRING
RED   N/S
GREEN SPARE
ORANGE SPARE
*BLACK E/W
WHITE COMM BETWEEN PUSH BUTTONS

*BLACK USED WHEN ONLY ONE PUSH BUTTON IS USED FOR CROSSING EITHER STREET.
DESIGN BASED ON INSTALLATION IN MINIMUM 3000 PSF SOIL WITH SINGLE LUMINAIRE ON 10 FOOT ARM. INSTALLATIONS NOT MEETING THESE PARAMETERS ARE SUBJECT TO ENGINEERING REVIEW.

NOTES:
1. FOUNDATIONS SHALL BE INSTALLED IN 24" AUGERED HOLE IN UNDISTURBED MATERIAL. WHERE PRE-CAST BASES ARE USED, THE INSTALLATION SHALL BE REVIEWED AND APPROVED BY THE ENGINEER. ENTIRE HOLE SHALL BE BACKFILLED WITH CDF OR OTHER COMPACTIBLE MATERIAL APPROVED BY THE ENGINEER.
2. CALL FOR UTILITY LOCATION BEFORE DIGGING (1-800-424-5555)
3. ALL STEEL TO HAVE 3" MINIMUM CONCRETE COVER. HOOPS SHALL HAVE 1 3/5" HOOKS. ANCHOR BOLTS MAY BE SECURED TO HOOPS.
4. BOND CAGE TO GROUND LUG.
STREETLIGHTING TAP
FOR USE IN BASE OF STANDARDS

TAPPING INSTRUCTIONS

1. MAKE SPLICE AS SHOWN IN FIGURE A
2. APPLY TAPE AS SHOWN IN FIGURE A
   APPLY TAPE AND "SCOTHKOTE" MOISTURE
   RESISTANT ELECTRICAL COATING OVER
   ENTIRE SPLICE AREA.
3. ATTACH CABLE TIE A MINIMUM OF 2" FROM
   THE PRESSURE CONNECTOR AS SHOWN IN FIGURE B.
4. APPLY SECOND COAT OF VARNISH.

COPPER BODY
CRIMP

NO. 6 CU OR
NO. 8 CU AS
REQUIRED TYPE
USE/RHW STRANDED

NO. 10 USE/RHW
CU WIRE STRANDED

TO LUMINAIRE

FIGURE A

TAPE
VINYL PLASTIC
ELECTRIC
(SCOTCH 33+
OR EQUAL)
THICKNESS
EQUAL TO
ORIGINAL WIRE
INSULATION

1-1/2"
MINIMUM
2"

CABLE TIE

TO LUMINAIRE

FIGURE B

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

STREETLIGHT SPLICE FOR
HANDHOLES

STANDARD PLAN NO. SL-05

CITY ENGINEER  DATE 2/4/03
WOOD POLES:
2" NUMBERS
NAIL ON ALUMINUM NUMBERS

METAL/CONCRETE/FIBERGLASS POLES
3" NUMBERS
(C OR D SERIES)

APPLY ADDRESS NUMBERS
TO THE STREET SIDE OF
THE POLE

COLORS:

CONCRETE POLES:
BACKGROUND: LIGHT BEIGE
FOREGROUND: DARK BROWN

UNPAINTED ALUMINUM
OR GALVANIZED POLES:
BACKGROUND: NONE
FOREGROUND: BLACK

IF THERE ARE EXISTING
NUMBERS ON POLE
PAINT OVER OR REMOVE OLD NUMBERS
MAXIMUM TENSION = 100 POUNDS
TYPICAL
MAXIMUM SPAN LENGTHS

<table>
<thead>
<tr>
<th>SAG</th>
<th>1/0</th>
<th>#2</th>
<th>#4</th>
<th>#5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 FEET</td>
<td>65</td>
<td>85</td>
<td>105</td>
<td>125</td>
</tr>
<tr>
<td>5 FEET</td>
<td>95</td>
<td>120</td>
<td>150</td>
<td>180</td>
</tr>
<tr>
<td>7.5 FEET</td>
<td>115</td>
<td>150</td>
<td>180</td>
<td>220</td>
</tr>
</tbody>
</table>

WOOD POLE

GALVANIZED BOLT WITH SQUARE WASHER & SQUARE NUT.
TRIM THRU BOLT TO 1" MAX. BEYOND NUT & FILE SMOOTH.

WEDGE CLAMP
CONDUCTORS
50 AMP OR AS SPECIFIED
BACK-FED MAIN BREAKER

RETAINING CLIP

MINIMUM 10,000A AC

WHEN SERVING FROM
TRANSFORMERS LARGER
THAN 50 KVA AN EVALUATION
OF INTERRUPT CAPACITY OF
THE SERVICE EQUIPMENT IS
REQUIRED.

PANEL LAYOUT
N.T.S.

<table>
<thead>
<tr>
<th>SIZE OF BRANCH CIRCUIT CONDUCTOR</th>
<th>MAXIMUM BREAKER SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>#8 AWG COPPER</td>
<td>30AMP</td>
</tr>
<tr>
<td>#6 AWG COPPER</td>
<td>40AMP</td>
</tr>
</tbody>
</table>

* SIZE BASED ON ENSURING BREAKER WILL TRIP ON FAULTS AT END OF LONG CIRCUITS.

PROCEDURE:
1. OBTAIN ELECTRICAL PERMIT FROM TACOMA POWER FOR EACH ELECTRICAL SERVICE.
2. COMPLETE SERVICE PANEL INSTALLATION EXCEPT FOR ENTERING TRANSFORMER VAULT OR PAD. FOR SSB INSTALLATIONS, INSTALL CONDUIT AND WIRE INTO SSB.
3. PREFERRED PRACTICE IS TO OBTAIN SERVICE FROM SSB. CONTACT TACOMA POWER BEFORE SERVICING STREETLIGHTS FROM TRANSFORMER.
4. ARRANGE FOR ELECTRICAL INSPECTION AND CUT-IN BY TACOMA POWER (502–8277).
5. AFTER TACOMA POWER ACCEPTANCE OF SERVICE PANEL CONTACT THE UNDERGROUND RESIDENTIAL DISTRIBUTION (URD) OFFICE (502–8233) TO ARRANGE FOR CONDUIT AND CONDUCTOR ENTERANCE INTO TRANSFORMERS.

6. PRIMARY GROUND ROD MAY BE LOCATED OUTSIDE OF SERVICE ENCLOSURE IN GROUND ROD BOX.
7. DO NOT PENETRATE OUTER WALL OF ENCLOSURE WHEN MOUNTING EQUIPMENT HARDWARE.

APPROVED FOR PUBLICATION
CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

STREETLIGHT
SERVICE DETAIL
UNDERGROUND TYPE A
STANDARD PLAN NO. SL-08

CITY ENGINEER
DATE
50 AMP OR AS SPECIFIED
BACK-FED MAIN BREAKER

RETAILING CUP

WHEN SERVING FROM
TRANSFORMERS LARGER
THAN 50 KVA AN EVALUATION
OF INTERRUPT CAPACITY OF
THE SERVICE EQUIPMENT IS
REQUIRED.

PANEL LAYOUT N.T.S.

<table>
<thead>
<tr>
<th>SIZE OF BRANCH CIRCUIT CONDUCTOR</th>
<th>MAXIMUM BREAKER SIZE *</th>
</tr>
</thead>
<tbody>
<tr>
<td>#8 AWG COPPER</td>
<td>30AMP</td>
</tr>
<tr>
<td>#6 AWG COPPER</td>
<td>40AMP</td>
</tr>
</tbody>
</table>

* SIZE BASED ON ENSURING BREAKER WILL TRIP ON FAULTS AT END OF LONG CIRCUITS.

PROCEDURE:

1. OBTAIN ELECTRICAL PERMIT FROM TACOMA POWER FOR EACH ELECTRICAL SERVICE.

2. COMPLETE SERVICE PANEL INSTALLATION EXCEPT FOR ENTERING TRANSFORMER VAULT OR PAD. FOR SSB INSTALLATIONS, INSTALL CONDUIT AND WIRE INTO SSB.

3. PREFERRED PRACTICE IS TO OBTAIN SERVICE FROM SSB. CONTACT TACOMA POWER BEFORE SERVICING STREETLIGHTS FROM TRANSFORMER.

4. ARRANGE FOR ELECTRICAL INSPECTION AND CUT-IN BY TP (502-8277).

5. AFTER TP ACCEPTANCE OF SERVICE PANEL CONTACT THE UNDERGROUND RESIDENTIAL DISTRIBUTION (URD) OFFICE (502-8232) TO ARRANGE FOR CONDUIT AND CONDUCTOR ENTERANCE INTO TRANSFORMERS.

6. DO NOT PENE TRATE OUTER WALL OF ENCLOSURE WHEN MOUNTING EQUIPMENT HARDWARE.

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

CITY ENGINEER

STREETLIGHT SERVICE DETAIL
UNDERGROUND TYPE B
STANDARD PLAN NO.  SL-09
**CONDUIT GROUNDING**

- **J-BOX**
  - Bond to box cover (if metallic) with sufficient wire to move lid 24 inches.

- **GROUNDING BUSHING**
  - SPLICE WITH IRREVERSIBLE COMPRESSION CONNECTOR

- **PULLING BELL**

- **#8 AWG COPPER**
  - Attached to outside of PVC conduit
  - Direct burial bronze ground clamp (NAED No. 01009)

- **RMC/IMC**

- **PVC**

- **RMC/IMC**

**GROUND ROD INSTALLATION**

- **GROUND ROD BOX**
  - Minimum 8” I.D.
  - Two heavy duty ground rod clamps (min. 1” contact surface)

- **GROUND WIRE**
  - Sized per NEC (no 6 MIn.)

- **COPPER CLAD STEEL GROUND ROD**
  - Min. 5/8” x 8’

- **PVC**
  - 40 1-1/4” Max.

**NOTES:**

1. All streetlight conduits shall include an equipment grounding conductor.
2. Metallic conduit shall be bonded at both ends to the equipment grounding conductor.
3. Equipment grounding conductors shall be stranded insulated copper.

---

**CITY OF TACOMA**
**DEPARTMENT OF PUBLIC WORKS**

**APPROVED FOR PUBLICATION**

**CITY ENGINEER**
**DATE 2/4/03**

**STREETLIGHT**
**GROUNDING DETAIL**
**STANDARD PLAN NO. SL-10**
NOTES:
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.

MULCH TREE PIT MIN 5'-0" LENGTH AND FULL PLANTING STRIP WIDTH BETWEEN CURB AND SIDEWALK, FOR PLANTING STRIPS LESS THAN 6'-0" WIDE; OR PROVIDE 5'-0" DIA MULCH RING, FOR PLANTING STRIPS WIDER THAN 6'-0".

STAKES TO BE ERECTED PARALLEL TO CURB EDGE AND EQUAL DISTANCE FROM TRUNK.

SIDEWALK RING AROUND TRUNK OF TREE TO REMAIN FREE OF MULCH.

ROOT MASS EDGE NOT TO BE PENETRATED BY STAKES.

"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.

STREET TREE PLANTING

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

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 Zeikova 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:
Street corner (extension of outside face of curb) 25'-0"
Stop or yield sign 25'-0"
Utility pole 15'-0"
Other traffic control sign 5'-0"

Centerline of tree to edge of:
Driveway 5'-0"
Face of curb 2'-0"
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, curb & manhole 5'-0"
Storm/sanitary service connections & mains 5'-0"

MINIMUM TREE CLEARANCES (AT MATURITY):

Lowest branch to surface of:
Streets 14'-0"
Sidewalks 8'-0"

SLOPE SIDES OF PLANTING
PIT EXCAVATION AS TO
NOT UNDERMINE CURB OR
SIDEWALK

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

STREET TREE CLEARANCE

STANDARD PLAN NO. LS-02
TREE SIZE:
Trees are categorized as small, medium or large based on the canopy factor, which takes into account the trees' mature height, crown spread, and growth rate. The following formula will be used to determine the canopy factor:

\[(\text{Mature Height in Feet}) \times (\text{Mature Width in Feet}) \times (\text{Growth Rate}) \times (0.01) = \text{Canopy Factor}\]

The growth rate number is 1 for slow-growing trees, 2 for moderately growing trees, and 3 for fast-growing trees.

Tree size categories are as follows:
A. LARGE TREES = Canopy factor greater than 90
B. MEDIUM TREES = Canopy factor from 40-90
C. SMALL TREES = Canopy factor less than 40

### SMALL TREES
24 SQUARE FEET MIN
UNPAVED PLANTING AREA

### MEDIUM TREES
40 SQUARE FEET MIN
UNPAVED PLANTING AREA

### LARGE TREES
60 SQUARE FEET MIN
UNPAVED PLANTING AREA

---

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

CITY ENGINEER

DATE

STANDARD PLAN NO. LS-03

TREE WELL DIMENSION
TYPICAL GROUND COVER PLANTED AT NURSERY LEVEL FINISH GRADE
MIN 2" (SETTLED) ARBORIST WOOD CHIP MULCH, DEPTH TAPERED UNDER GROUND COVER AMENDED SOIL, SEE STD PLAN NO. LS-12 SOIL AMENDMENT AND DEPTH SCARIFIED SUBGRADE

SPECIFIED SPACING SEE LANDSCAPE PLAN

ELEVATION

SPECIFIED SPACING SEE LANDSCAPE PLAN

SPECIFIED SPACING SEE LANDSCAPE PLAN

PLAN

PLANT SPACING (INCHES) | PLANTS NEEDED TO FILL 100 SF
--- | ---
6 | 460
8 | 260
10 | 167
12 | 115
18 | 51
24 | 29
30 | 19
36 | 13
48 | 7

TYPICAL PLANT QUANTITY NEEDED TO FILL 100 SF

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

GROUND COVER PLANTING

STANDARD PLAN NO. LS-06
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 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"

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 maybe required
   -Minimize trench width to the extent possible
   -Maintain 2/3 or more of ZONE C in an undisturbed condition

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

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

TREE PROTECTION DURING CONSTRUCTION

STANDARD PLAN NO. LS-08
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 project's 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

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

CITY ENGINEER

DATE

TREE PROTECTION DURING CONSTRUCTION

STANDARD PLAN NO. LS-09
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.
TYPICAL TREE GUARD RAIL

EXISTING TREE & VEGETATION

1½" Ø PVC (TYP) VARIES 4'-0" MIN EACH SIDE

EXISTING TREE PIT

FACE OF CURB

TYPICAL PANEL

ELBOW CONNECTIONS (TYP)

TIES (TYP)

VARIES 4'-0" MIN

VARIES 4'-0" MIN

VARIES 4'-0" MIN

NYLON ZIP TIES 12" MIN @ 1'-6" SPACING TIE CONNECTIONS (TYP)

ORANGE MESH FENCING

CITY OF TACOMA
DEPARTMENT OF PUBLIC WORKS

APPROVED FOR PUBLICATION

CITY ENGINEER

DATE

REUSABLE TREE PROTECTION
FENCING FOR PAVED AREAS

STANDARD PLAN NO. LS-11
OPTION 1: Leave native vegetation and soil undisturbed, and protect from compaction during construction. Identify areas of the site that will not be stripped, logged, graded or driven on, and fence off those areas to prevent impacts during construction. If neither soils nor vegetation are disturbed, these areas do not require amendment.

See SWMM BMP L613 for additional information.
OPTION 2: Amend existing site topsoil, or subsoil, either at preapproved rate or at calculated rate based on tests of the soil and amendments. All soil areas disturbed or compacted during construction, and not covered by buildings or pavement, shall be amended with compost as described below.

Scarring: Scarify or till subgrade to 8 inches depth (or to depth needed to achieve a total depth of 12 inches of uncompacted soil after calculated amount of amendment is added). Entire surface should be disturbed by scarification. Do not scarify within drip line of existing trees to be retained or where scarification would damage tree roots or as determined by the engineer.

A. Planting Beds

1. PREAPPROVED RATE: Place 3 inches of composted material and rototill into 5 inches of existing site soils (a total amended depth of about 9.5 inches, for a settled depth of 8 inches).

2. CALCULATED RATE: Place calculated amount of composted material or approved organic material and rototill into depth of soil needed to achieve 8 inches of settled soil at 10% organic content.

Rake beds to smooth and remove surface rocks larger than 2 inches diameter. Mulch planting beds with 3" - 4" of organic mulch or stockpiled duff.

B. Turf (Lawn) Areas

1. PREAPPROVED RATE: Place 1.75 inches of composted material and rototill into 6.25 inches of existing site soils (a total amended depth of about 9.5 inches, for a settled depth of 8 inches).

2. CALCULATED RATE: Place calculated amount of composted material or approved organic material and rototill into depth of soil needed to achieve 8 inches of settled soil at 5% organic content.

Water or roll to compact to 95% of maximum dry density. Rake to level and remove surface rocks larger than 1 inch diameter.

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 the tree protection zone. See Std. Plan LS-08 and LS-09.

See SWMM BMP L613 for additional information.
OPTION 3: Stockpile existing topsoil during grading. Stockpile and cover soil with weed barrier material that sheds moisture yet allows air transmission, in approved location, prior to grading. Replace stockpiled topsoil prior to planting. Stockpiled topsoil shall be tested and amended if needed to meet the organic matter or depth requirements either at preapproved rate or calculated rate. All soil areas disturbed or compacted during construction, and not covered by buildings or pavement, shall be amended with compost as described below.

Scarcification: If placed topsoil plus compost or other organic material will amount to less than 12 inches, scarify or till subgrade to depth needed to achieve 12 inches of loosened soil after topsoil and amendment are placed. Entire surface should be disturbed by scarification. Do not scarify within drip line of existing trees to be retained.

A. Planting Beds

1. PREAPPROVED RATE: Place 3 inches of composted material and rototill into 5 inches of replaced soil (a total amended depth of about 8.5 inches, for a settled depth of 8 inches).

2. CALCULATED RATE: Place calculated amount of composted material or approved organic material and rototill into depth of replaced soil needed to achieve 8 inches of settled soil at 10% organic content.

Rake beds to smooth and remove surface rocks larger than 2 inches diameter. Mulch planting beds with 3” - 4” of organic mulch or stockpiled duff.

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 the tree protection zone. See Std. Plans LS-08 and LS-09.

See SWMM BMP L613 for more information.

B. Turf (Lawn) Areas

1. PREAPPROVED RATE: Place 1.75 inches of composted material and rototill into 6.25 inches of replaced soil (a total amended depth of about 9.5 inches, for a settled depth of 8 inches).

2. CALCULATED RATE: Place calculated amount of composted material or approved organic material and rototill into depth of replaced soil needed to achieve 8 inches of settled soil at 5% organic content.

Water or roll to compact to 85% of maximum dry density. Rake to level and remove surface rocks larger than 1 inch diameter.
### 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 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 duff.</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 of 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.
NOTES:

1. The contractor will provide necessary control points required during preliminary spotting for striping, stop lines, legends, crosswalks, traffic arrows, and signs. Each instance of the double-bar crosswalk marking shall align with lane lines/mid-lane, which ensures avoidance with wheel paths. Crosswalk bars shall be parallel to the lanes' direction of travel and positioned along the ramp-to-ramp orientation.

2. Partial length crosswalk bars are not allowed. A single bar, as opposed to the double bar pattern may be used when space is limited adjacent to gutter, curb or intersecting crosswalk.

3. Typical stop line width is 16”.

4. Stop line placement may require adjustment to account for signal detection equipment.

5. Unless otherwise specified, all markings shall be Type A (liquid hot applied/extruded) thermoplastic per WSDOT Standard Specifications.
NOTES:
1. The contractor will provide necessary control points for striping, stop lines, legends, crosswalks, traffic arrows, and signs. City inspection is required before striping and any associated sign installation begins.
2. Striping material is to be specified by the project. Type 1Y/W RPMs are omitted from plastic striping.
3. RPMS shall not be placed over longitudinal or transverse joints of the pavement surface.
NOTE:
1. The contractor will provide necessary control points for striping, stop lines, legends, crosswalks, traffic arrows, and signs. The City inspection is required before striping and any associated sign installation begins.
2. Striping material is to be specified by the project.

DOTTED EXTENSION LINE (4" - 8")

BIKE LANE LINE (6") APPROACHING INTERSECTION/CROSSWALK

BIKE LANE LINE (6") AT MIDBLOCK BUS STOP LOCATION

RIGHT-TURN DECELERATION LANE
INTERSECTION TURN PATH GUIDANCE
DRIVEWAY

STYLIZED EXAMPLE APPLICATIONS OF DOTTED EXTENSION LINE
(SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR APPLICATION DETAILS)
NOTES
1. Contractor will provide necessary control points to assist in preliminary spotting for striping, stop line, legends, crosswalks, traffic arrows, and any associated signs.
2. If storage length is 100 feet or greater, then a second arrow, (without "only"), to be placed at 22 feet from stop line to near edge of the arrow.
3. Use of RPMs as shown correspond with paint striping. If striping consists of thermoplastic (or similar) then type 1Y/W-RPMs are omitted. Also see CH-03A
4. See Standard Plan CH-10 for details/requirements regarding arrow and word markings.
NOTES

1. Contractor will provide necessary control points to assist in preliminary spotting for stripe, stop line, legends, crosswalks, traffic arrows and associated signs.

2. Typical letter width is 16". Typical letter spacing is 6". Letter stroke is 4".

3. Refer to WSDOT M24.40-02 for more specific traffic arrow dimensions.

4. Arrows shown may be mirrored about their centerline as applicable to design.

5. Unless otherwise specified, all markings shall be Type A (liquid hot applied/extruded) thermoplastic per WSDOT Standard Specifications.
NOTES
1. Contractor will provide necessary control points to assist in preliminary spotting for pavement markings and associated signs.
2. When included in contract documents, Sharrows should be placed immediately after an intersection and spaced typically at intervals not greater than 250 feet thereafter.
3. When conditions support bicyclists occupying the full travel lane, the preferred placement of the Sharrow is within the center of the travel lane to minimize wheelpath wear.

TYPICAL SHARROW SYMBOL PLACEMENT
WITH PARKING LANE

FACE OF CURB OR EDGE OF PAVEMENT

TYPICAL SHARROW SYMBOL PLACEMENT
WITHOUT PARKING LANE

FACE OF CURB OR EDGE OF PAVEMENT

1. Grid is 6"x6" squares.
2. All rounded corners have a 1" radius.

TYPICAL SHARROW SYMBOL DETAIL
### PIPE ALLOWANCES

<table>
<thead>
<tr>
<th>PIPE MATERIAL</th>
<th>MAXIMUM INSIDE DIAMETER (INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>REINFORCED OR Plain Concrete</td>
<td>12&quot;</td>
</tr>
<tr>
<td>All Metal Pipe</td>
<td>15&quot;</td>
</tr>
<tr>
<td>CPSP STD. SPEC. SECT. 9-05.20</td>
<td>12&quot;</td>
</tr>
<tr>
<td>Solid Wall PVC (STD. SPEC. SECT. 9-05.12(1))</td>
<td>15&quot;</td>
</tr>
<tr>
<td>Profile Wall PVC (STD. SPEC. SECT. 9-05.12(2))</td>
<td>15&quot;</td>
</tr>
</tbody>
</table>

**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.

5. Pipe allowances will vary depending on the pipe material used. Contact the Region Hydraulics Engineer for assistance.

<table>
<thead>
<tr>
<th>CATCH BASIN DIAMETER</th>
<th>WELD WALL THICKNESS</th>
<th>MINIMUM BASE THICKNESS</th>
<th>MAXIMUM KNOCKOUT SIZE</th>
<th>MINIMUM DISTANCE BETWEEN KNOCKOUTS</th>
<th>WELD WALL PIPING</th>
<th>MINIMUM WALL PIPING</th>
</tr>
</thead>
<tbody>
<tr>
<td>48&quot;</td>
<td>4&quot;</td>
<td>6&quot;</td>
<td>30&quot;</td>
<td>6&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>54&quot;</td>
<td>4.5&quot;</td>
<td>8&quot;</td>
<td>42&quot;</td>
<td>8&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60&quot;</td>
<td>5&quot;</td>
<td>8&quot;</td>
<td>48&quot;</td>
<td>9&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>72&quot;</td>
<td>6&quot;</td>
<td>8&quot;</td>
<td>50&quot;</td>
<td>12&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>96&quot;</td>
<td>8&quot;</td>
<td>12&quot;</td>
<td>72&quot;</td>
<td>12&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>120&quot;</td>
<td>10&quot;</td>
<td>12&quot;</td>
<td>96&quot;</td>
<td>12&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>144&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>120&quot;</td>
<td>12&quot;</td>
<td></td>
<td></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>48&quot;</td>
<td>Concreted</td>
</tr>
<tr>
<td>54&quot;</td>
<td>All Metal</td>
</tr>
<tr>
<td>60&quot;</td>
<td>Corrugated Polyethylene Storm Drain Pipes</td>
</tr>
<tr>
<td>72&quot;</td>
<td>(See Standard Specification Section 9-05.20)</td>
</tr>
<tr>
<td>96&quot;</td>
<td>(See Standard Specification Section 9-05.20)</td>
</tr>
<tr>
<td>120&quot;</td>
<td>(See Standard Specification Section 9-05.20)</td>
</tr>
<tr>
<td>144&quot;</td>
<td>(See Standard Specification Section 9-05.20)</td>
</tr>
</tbody>
</table>

Approved for Publication
Mark A. Himes
Department of Transportation
State Design Engineer
Aug 23, 2023
CATCH BASIN TYPE 2
STANDARD PLAN B-10.20.03
SHEET 1 OF 1 SHEET
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 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 attaching 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) x 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 slot. 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. 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.

COMBINATION INLET

STANDARD PLAN B-25.20-02

SHEET 1 OF 1 SHEET
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" (16 mm) x 11 NC x 2" (50 mm) 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 9-05.15(2) for additional requirements.

3. For frame details, see Standard Plan B-30.10.

BOLT-DOWN DETAILS
SEE NOTE 1

RECTANGULAR VANED GRATE

STANDARD PLAN B-30.30-03

ISOMETRIC
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 align vertically 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 9-05.15(2) for additional requirements.

3. For frame details, see Standard Plan B-30.10.
**NOTES**

1. Install the ends of the silt fence to point slightly upslope to prevent sediment from flowing around the ends of the fence.
2. Perform maintenance in accordance with Standard Specifications 8-01.3(9)A and 8-01.3(16).
3. Splices shall never be placed in low spots or sump locations. If splices are located in low or sump areas, the fence may need to be reinstalled unless the Project Engineer approves the installation.
4. Install silt fencing parallel to mapped contour lines.

---

**TYPICAL INSTALLATION DETAIL**

(Steel posts shown)

**NOTE**

During excavation, minimize disturbing the ground around trench as much as is feasible, and smooth surface following excavation to avoid concentrating flows. Compaction must be adequate to prevent undercutting flows.

**SILT FENCE**

**STANDARD PLAN 1-30.15-02**

Sheet 1 of 1 Sheet

Approved for publication

Pasco Bakotich III 3/22/13

State Design Engineer

Washington State Department of Transportation
1. Wattles shall be in accordance with Standard Specification, Section 5-14.5(6). Install Wattles along contours. Installation shall be in accordance with Standard Specification, Section 8-21.3(10).

2. Securely knot each end of Wattle. Overtape adjacent Wattle ends 1/2" (12 mm) behind one another and securely tie together.

3. Compact excavated soil and trenches to prevent undercutting. Additional staking may be necessary to prevent undercutting.

4. Install Wattle perpendicular to flow along contours.

5. Wattles shall be inspected regularly, and immediately after a rainfall produces runoff, to ensure they remain thoroughly entrenched and in contact with the soil.

6. Perform maintenance in accordance with Standard Specification, Section 5-03.2(15).

7. Refer to Standard Specification, Section 8-01.3(16) for removal.

WATTLE SPACING TABLE

<table>
<thead>
<tr>
<th>TEMPORARY</th>
<th>PERMANENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>8&quot; - 10&quot; OR 10&quot; - 12&quot; DIAM.</td>
<td>10&quot; - 12&quot; DIAM.</td>
</tr>
<tr>
<td>SLOPE</td>
<td>MAX. SPACING</td>
</tr>
<tr>
<td>1H : 1V</td>
<td>6&quot; - 8&quot;</td>
</tr>
<tr>
<td>2H : 1V</td>
<td>10&quot; - 12&quot;</td>
</tr>
<tr>
<td>3H : 1V</td>
<td>15&quot; - 20&quot;</td>
</tr>
<tr>
<td>4H : 1V</td>
<td>20&quot; - 30&quot;</td>
</tr>
</tbody>
</table>

STATE OF WASHINGTON
Landscape Architecture

WATTLE INSTALLATION ON SLOPE
STANDARD PLAN I-30.30-02

APPROVED FOR PUBLICATION
NOTES

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

Hartwig, Jali
Jun 4 2019 8:05 AM
NOTES

1. Size the Below Inlet Grate Device (BIGD) for the storm water structure it will service.
2. The BIGD shall have a built-in high-flow relief system (overflow bypass).
3. The retrieval system must allow removal of the BIGD without spilling the collected material.
4. Perform maintenance in accordance with Standard Specification 6-01.2(15).

STORM DRAIN INLET PROTECTION
STANDARD PLAN I-40.20-00

Diagram: Below Inlet Grate Device (BIGD) with drainage grate, overflow bypass, and retrieval system.
NOTES

1. ALL CONCRETE POST BASES SHALL BE 10" (IN) MINIMUM DIAMETER.

2. TENSION WIRE SHALL BE PLACED WITHIN THE LIMITS OF THE FIRST FULL FABRIC WEAVE.

3. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

4. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

5. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

6. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

7. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

8. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

9. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

10. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

11. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

12. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

13. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

14. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

15. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

16. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

17. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

18. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

19. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

20. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

21. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

22. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

23. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

24. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

25. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

26. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

27. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

28. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

29. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

30. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

31. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

32. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

33. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

34. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

35. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

36. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

37. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

38. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

39. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

40. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

41. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

42. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

43. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

44. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

45. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTIALLY FENCE TYPE.

46. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

47. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

48. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

49. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.

50. DETAILS ARE ILLUSTRATIVE AND SHALL NOT LIMIT HARDWARE DESIGN OR POST SELECTION OF ANY PARTICULAR FENCE TYPE.
APPENDIX B

ARBORIST REPORT
City of Tacoma Public Works  
Chris Storey, Project Manager  
Engineering Division - Capital Projects  
747 Market Street, Room 544  
Tacoma, Washington 98402

RE: City of Tacoma East 64th Street Phase II – McKinley to Portland Avenues

Mr. Storey:

Upon your request, the following information presents my findings associated with the City’s East 64th Street Phase II project. I have been asked to address the following tasks:  
- Documentation of invasive species to be removed from within the project area (McKinley to Portland Avenues).
- Documentation that invasive species are not part of the new plantings.
- Review of the project plans to document if the specified street trees and plants will survive once the irrigation is stopped after a one-year establishment period.
**Invasive Species Found within the Project Area**

The following invasive plants have been identified within the project area. Please reference the attached copies of the demolition plans for the locations. Photos of some species have been included as well.

**Cherry Laurel:** *Prunus laurocerasus.* Found on the Pierce Co. Noxious Weed Control Board – WA State Noxious Weed List.

**Clematis:** *Clematis vitalba.* Found as Class C Weed on the WA State Noxious Weed List.


**European Mountain Ash:** *Sorbus aucuparia.* Found on the Pierce Co. Noxious Weed Control Board – WA State Noxious Weed List.

**European Hawthorn:** *Crataegus monogyna.* Found on the 2020 WA State Noxious Weed List as a Class ‘C’ weed.

**Hawkweed/Oxtongue:** *Pieris hieracioides.* Found as a Class B Weed by the Pierce County Noxious Weed Control Board.

**Himalayan Blackberry:** *Rubus armeniacus.* Found on the 2020 WA State Noxious Weed List as a Class ‘C’ weed and Pierce Co. Noxious Weed Control Board – WA State Noxious Weed List.

**Japanese Knotweed:** *Polygonum cuspidatum.* Found on the WA State Noxious Weed List, Weed Class B.

**Perennial Pea Vine:** *Lathyrus latifolius.* Found as monitor under the Weed Class on the WA State Noxious Weed List.

**Periwinkle/Vinca:** *Vinca minor & major.* Found on the 2020 WA State Noxious Weed List and Pierce Co. Noxious Weed Control Board – WA State Noxious Weed List.

**Scotch Broom:** *Cytisus scoparius.* Found as a Class B Weed on the WA State Noxious Weed List.

**Tansy Ragwort:** *Jacobaea vulgaris.* Found under the Weed Class on the WA State Noxious Weed List.

**Wild Carrot/Queen Anne’s Lace:** *Daucus carota.* Found as Class C Weed on the WA State Noxious Weed List.
Locations of Invasive Species
Review of New Plantings

I have reviewed the provided landscape plans which include a list of street trees and plants to be included with the project and have determined that none of them are considered invasive species by Washington State, Pierce County or the US government.

The majority of the listed trees and plants are considered drought tolerant. However, Japanese white and black pines and silver lindens are only moderately drought tolerant. They should be able to survive once the one year of irrigation is terminated but considering our region’s typically very dry summers, this may cause stress, particularly to the trees. If at all possible, I would recommend the usage of water bags on the trees between the months of June and September for years 2 & 3.

Respectfully Submitted

Kevin M. McFarland, SUF
Consulting Urban Forester/ISA Certified Arborist & Tree Risk Assessment Qualified
September 5, 2023

Chris Storey
City of Tacoma
747 Market St
Tacoma, WA  98402

RE:  Coverage under the Construction Stormwater General Permit

<table>
<thead>
<tr>
<th>Permit number:</th>
<th>WAR312810</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Name:</td>
<td>East 64th Phase II</td>
</tr>
<tr>
<td>Location:</td>
<td>East 64th Street between McKinley Avenue and Portland Avenue Tacoma, WA County: Pierce</td>
</tr>
<tr>
<td>Disturbed Acres:</td>
<td>5</td>
</tr>
</tbody>
</table>

Dear Chris Storey:

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 September 5, 2023.

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 webpage¹. 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 October and your first DMR must be submitted by November 15, 2023.

You must submit your DMRs electronically using Ecology’s secure online system, WQWebDMR. To sign up for WQWebDMR go to Ecology’s WQWebPortal guidance webpage². If you have

---

¹ http://www.ecology.wa.gov/eCoverage-packet
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. You can also visit Water Quality Permit Fees Webpage for more information.

**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) 791-5017.

**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
Permit and Technical Services Section
Water Quality Program

---

4 https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-quality-permits/Fees
5 www.ecology.wa.gov/constructionstormwaterpermit
PART III

CITY OF TACOMA

EQUITY IN CONTRACTING PROGRAM
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.

EQUITY IN CONTRACTING REQUIREMENTS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12%</td>
<td>2%</td>
<td>16%</td>
</tr>
</tbody>
</table>

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

[www.omwbe.diversitycompliance.com](http://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/EIC: PWK-G0042-01
Date of Record: 01/03/2023
Project Spec#: PW23-0036F
Project Title: E 64th Phase II – McKinley to Portland

*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.
CITY OF TACOMA EQUITY IN CONTRACTING (EIC) PROGRAM

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 policy, the City of Tacoma is utilizing a cloud-based software system:

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.
The system is monitored/audited by EIC staff to ensure contract compliance, proactively identify potential issues, and track contract progress.

*EIC STAFF Contact Information*

For questions regarding Certifications, EIC Compliance and B2GNow support, contact EIC Staff:

- Call EIC Office at (253) 591-5630 or (253) 591-5826
- Email EIC Office at EICOffice@cityoftacoma.org
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](http://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: __________________________________________

<table>
<thead>
<tr>
<th>Spec. No.</th>
<th>Base Bid * $</th>
<th>Complete business names and phone numbers are required to verify your usage of Certified Businesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Name and Certification Number(s)</td>
<td>MBE, WBE, or SBE (Write all that apply)</td>
<td>NAICS code(s)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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).

CCD/EIC/BID DOCS revised March 4, 2022
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 EICOffice@cityoftacoma.org for additional information.
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.
“Tacoma Public Utilities Service Area” means any ZIP code in which Tacoma Public Utilities maintains infrastructure or provides retail services.

“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.

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, or “pregnancy outcomes” under TMC 1.29.040, 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.

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.

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:

(Updated 01/2023)
1.07.070 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

CITY OF TACOMA

LOCAL EMPLOYMENT AND APPRENTICESHIP TRAINING PROGRAM (LEAP) REGULATIONS FOR PUBLIC WORKS CONTRACTS
Local Employment and Apprenticeship Training Program
Requirements

Local Employee Requirement and Apprentice Requirement

This project has LEAP Requirements of 15% Local Employee Utilization and an additional 15% Apprentice Utilization.

- Please add attached LEAP Bid documents to your spec
- Please note in your spec that when the project is added to the Labor & Industries’ Awarding Agency Portal site, the “Tacoma, City of” label should be chosen.
- Please send the Notice to Proceed and Notice of Completion to leap@cityoftacoma.org
- Send PreBid and PreCon agendas to LEAP with time to review
- Invite LEAP to the project PreBid, PreCon, and Progress Meetings.
- If the contract is the result of a Cooperative Agreement or an Interlocal – Piggyback Public Agency Agreement, contact LEAP directly before drafting the contract.

For questions or concerns related to LEAP and LCP Tracker, email LEAP Staff at leap@cityoftacoma.org.
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. Based on the dollar amounts of projects, it requires Prime Contractors performing qualifying public works projects or service contracts ensure that a percentage of the total labor hours worked on the project are performed by LEAP-Qualified local employees and/or LEAP-Qualified apprentices approved by the Washington State Apprenticeship Council (SAC), 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 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.

*NOTE – for projects bid on or after October 10, 2023, compliance with workforce requirements and payrolls will be strictly enforced.

LEAP PROGRAM REQUIREMENTS:
1. LOCAL EMPLOYMENT Requirement: 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 Requirement: The Contractor is required to ensure that an additional 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(s). Subcontractor labor hours may be utilized towards achievement of the LEAP Requirements. Owner/Operator hours may be used for the Local Employment Requirement.

4. FAILURE TO MEET LEAP UTILIZATION REQUIREMENT: Contractors shall be assessed an amount for each hour that is not achieved. The amount per hour shall be based on the percent of the requirement that is met. All rounding shall be done down to the nearest whole percent. The amount per hour that shall be assessed is as follows:

- 100% achievement $0.00 penalty
- 99% to 90% achievement $2.00 penalty
- 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**: upon request, 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 LEAP Utilization Requirements with at least one piece of verifying documentation. The LEAP Office staff will respond regarding whether or not the employee is LEAP-Qualified.

2. **WEEKLY CERTIFIED PAYROLL**: In LCP Tracker: 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.

3. **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.
LEAP

Documents and Submittal Schedule

In the attached packet, you will find the LEAP documentation and 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, upon request, for each employee who may be a LEAP-qualified employee
- **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.
- **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 leap@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 nor 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>
<thead>
<tr>
<th>Percent of Goal Met</th>
<th>Assessment per unmet hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>$0.00</td>
</tr>
<tr>
<td>90% - 99%</td>
<td>$2.00</td>
</tr>
<tr>
<td>75% to 89%</td>
<td>$3.50</td>
</tr>
<tr>
<td>50% to 74%</td>
<td>$5.00</td>
</tr>
<tr>
<td>1% to 49%</td>
<td>$7.50</td>
</tr>
<tr>
<td>0%</td>
<td>$10.00</td>
</tr>
</tbody>
</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. 26998 § 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.
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)
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:**

- **Provide information to the LEAP Office (see LEAP contact information below).** Provide the name and email address of the person(s) who will oversee LEAP utilization and payrolls.
- **LEAP Employee Verification.** Proof of residency may be requested for employees who may be LEAP-Qualified and may be able to help meet the LEAP Requirements.
- **All certified payrolls.** Prime contractor is responsible for ensuring their, and their subcontractors’, payrolls are submitted via LCP Tracker. By submitting payrolls in LCP Tracker before the Labor & Industry’s website, you can reduce data entry.

The City of Tacoma’s LEAP office enforces varying workforce utilization requirements on City projects based on certain monetary thresholds and project locations.

**Local Employment Utilization Requirement** - the Prime Contractor performing a qualifying public work or improvement must ensure that 15 percent of the total labor hours worked on the project are performed by journey or apprentice level craft workers who are residents of the City of Tacoma or Economically Distressed Zip Codes.

**Apprenticeship Utilization Requirement** – the Prime Contractor performing a qualifying public work or improvement must ensure that 15 percent of the total labor hours worked on the project are performed by apprentices who are residents of the Tacoma Public Utilities Service Area.

*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 subject to the:**

1. **15% Local Employment Utilization Requirement**
2. **15% Apprentice Utilization Requirement**

LEAP staff can assist contractors in identifying 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) 591-5590. The LEAP Office is located in the Tacoma Municipal Building, 747 Market Street, Room 900, Tacoma, WA 98402. [www.cityoftacoma.org/leap](http://www.cityoftacoma.org/leap)
LEAP EMPLOYEE VERIFICATION FORM
Submit upon request from LEAP Office

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: _________________________
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.

........................................................................................................................................

_____ 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: ___________________________________________________________________________
Appendix C: Economically Distressed ZIP Codes Map

Map is for reference only.

© City of Tacoma, All Rights Reserved
Community & Economic Development Department
GIS Analysis & Data Service
4/26/2017
LOCAL EMPLOYEE REQUIREMENT ONLY

City of Tacoma
(Journeyman AND Apprentice)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>98402</td>
<td>98421</td>
</tr>
<tr>
<td>98403</td>
<td>98422</td>
</tr>
<tr>
<td>98404 (some)</td>
<td>98424</td>
</tr>
<tr>
<td>98405</td>
<td>98444</td>
</tr>
<tr>
<td>98406</td>
<td>98445</td>
</tr>
<tr>
<td>98407</td>
<td>98465 (some)</td>
</tr>
<tr>
<td>98408</td>
<td>98466 (some)</td>
</tr>
<tr>
<td>98409</td>
<td>98467 (some)</td>
</tr>
<tr>
<td>98418</td>
<td></td>
</tr>
</tbody>
</table>

Check addresses here:

https://tacoma.maps.arcgis.com/apps/webappviewer/index.html?id=38107f6b096a4b8280c0d9b8a05bc7eb
LOCAL EMPLOYEE REQUIREMENT ONLY

Economically Distressed Areas
(Journeyman AND Apprentice)

<table>
<thead>
<tr>
<th>Zip Code</th>
<th>200% Pov</th>
<th>Unemployed</th>
<th>25+ College</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>98002</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Auburn</td>
</tr>
<tr>
<td>98304</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Ashford/Rainier</td>
</tr>
<tr>
<td>98323</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Carbonado</td>
</tr>
<tr>
<td>98328</td>
<td>Y</td>
<td></td>
<td>Y</td>
<td>Eatonville</td>
</tr>
<tr>
<td>98330</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Elbe</td>
</tr>
<tr>
<td>98336</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Glenoma</td>
</tr>
<tr>
<td>98349</td>
<td>Y</td>
<td></td>
<td></td>
<td>Lakebay</td>
</tr>
<tr>
<td>98355</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Mineral</td>
</tr>
<tr>
<td>98356</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Morton</td>
</tr>
<tr>
<td>98377</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Randle</td>
</tr>
<tr>
<td>98385</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>South Prairie</td>
</tr>
<tr>
<td>98402</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Downtown</td>
</tr>
<tr>
<td>98403</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Stadium/St. Helens</td>
</tr>
<tr>
<td>98404</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Eastside</td>
</tr>
<tr>
<td>98405</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Hilltop/Central</td>
</tr>
<tr>
<td>98408</td>
<td>Y</td>
<td></td>
<td>Y</td>
<td>South End</td>
</tr>
<tr>
<td>98409</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>South Tacoma</td>
</tr>
<tr>
<td>98418</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Lincoln/South End</td>
</tr>
<tr>
<td>98421</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Port</td>
</tr>
<tr>
<td>98439</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>McChord AFB</td>
</tr>
<tr>
<td>98444</td>
<td>Y</td>
<td></td>
<td></td>
<td>Parkland</td>
</tr>
<tr>
<td>98445</td>
<td>Y</td>
<td></td>
<td>Y</td>
<td>Midland</td>
</tr>
<tr>
<td>98499</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Lakewood</td>
</tr>
<tr>
<td>98520</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Aberdeen</td>
</tr>
<tr>
<td>98528</td>
<td>Y</td>
<td></td>
<td>Y</td>
<td>Belfair</td>
</tr>
<tr>
<td>98533</td>
<td>Y</td>
<td></td>
<td>Y</td>
<td>Cinebar</td>
</tr>
<tr>
<td>98546</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Grapeview</td>
</tr>
<tr>
<td>98548</td>
<td>Y</td>
<td></td>
<td>Y</td>
<td>Hoodsport</td>
</tr>
<tr>
<td>98563</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Montesano</td>
</tr>
<tr>
<td>98564</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Mossyrock</td>
</tr>
<tr>
<td>98575</td>
<td>Y</td>
<td></td>
<td>Y</td>
<td>Quinault</td>
</tr>
<tr>
<td>98580</td>
<td>Y</td>
<td></td>
<td>Y</td>
<td>Roy</td>
</tr>
<tr>
<td>98582</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Salkum</td>
</tr>
<tr>
<td>98584</td>
<td>Y</td>
<td></td>
<td>Y</td>
<td>Shelton</td>
</tr>
<tr>
<td>98591</td>
<td>Y</td>
<td></td>
<td>Y</td>
<td>Toledo</td>
</tr>
<tr>
<td>98592</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Union</td>
</tr>
<tr>
<td>98925</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>Easton</td>
</tr>
<tr>
<td>Zip Code</td>
<td>City</td>
<td>Utilization Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
<td>------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98001</td>
<td>Auburn</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98002</td>
<td>Auburn</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98003</td>
<td>Federal Way</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98010</td>
<td>Black Diamond</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98022</td>
<td>Enumclaw</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98023</td>
<td>Federal Way</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98030</td>
<td>Kent</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98032</td>
<td>Kent</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98038</td>
<td>Maple Valley</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98042</td>
<td>Kent</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98045</td>
<td>North Bend</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98051</td>
<td>Ravensdale</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98070</td>
<td>Vashon</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98092</td>
<td>Auburn</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98198</td>
<td>Seattle</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98304</td>
<td>Ashford</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98321</td>
<td>Buckley</td>
<td>0.27%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98323</td>
<td>Carbonado</td>
<td>0.05%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98327</td>
<td>DuPont</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98328</td>
<td>Eatonville</td>
<td>2.92%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98329</td>
<td>Gig Harbor</td>
<td>0.24%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98330</td>
<td>Elbe</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98332</td>
<td>Gig Harbor</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98333</td>
<td>Fox Island</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98335</td>
<td>Gig Harbor</td>
<td>0.05%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98336</td>
<td>Glenoma</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98338</td>
<td>Graham</td>
<td>0.79%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98349</td>
<td>Lakebay</td>
<td>0.06%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98354</td>
<td>Milton</td>
<td>0.01%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98355</td>
<td>Mineral</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98356</td>
<td>Morton</td>
<td>0.17%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98360</td>
<td>Orting</td>
<td>0.54%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98371</td>
<td>Puyallup</td>
<td>0.12%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98372</td>
<td>Puyallup</td>
<td>1.33%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98373</td>
<td>Puyallup</td>
<td>1.42%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98374</td>
<td>Puyallup</td>
<td>0.15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98375</td>
<td>Puyallup</td>
<td>0.29%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98377</td>
<td>Randle</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98385</td>
<td>South Prairie</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98387</td>
<td>Spanaway</td>
<td>0.68%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98388</td>
<td>Spanaway</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98390</td>
<td>Sumner</td>
<td>0.12%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98391</td>
<td>Bonney</td>
<td>1.83%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98402</td>
<td>Tacoma</td>
<td>0.46%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98403</td>
<td>Tacoma</td>
<td>3.31%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98404</td>
<td>Tacoma</td>
<td>10.15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98405</td>
<td>Tacoma</td>
<td>4.97%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98406</td>
<td>Tacoma</td>
<td>3.51%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98407</td>
<td>Tacoma</td>
<td>4.38%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98408</td>
<td>Tacoma</td>
<td>12.58%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98409</td>
<td>Tacoma</td>
<td>8.88%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98416</td>
<td>UPS</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98418</td>
<td>Tacoma</td>
<td>1.98%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98421</td>
<td>Tacoma</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98422</td>
<td>Tacoma</td>
<td>0.67%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98424</td>
<td>Tacoma</td>
<td>0.98%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98430</td>
<td>Camp Murray</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98433</td>
<td>Tacoma</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98438</td>
<td>McChord</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98439</td>
<td>Lakewood</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98443</td>
<td>Tacoma</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98444</td>
<td>Tacoma</td>
<td>7.20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98445</td>
<td>Tacoma</td>
<td>2.09%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98446</td>
<td>Tacoma</td>
<td>0.17%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98447</td>
<td>PLU</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98465</td>
<td>Tacoma</td>
<td>0.44%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98466</td>
<td>Tacoma</td>
<td>0.06%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98467</td>
<td>University Place</td>
<td>0.09%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98498</td>
<td>Lakewood</td>
<td>0.05%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98499</td>
<td>Lakewood</td>
<td>0.26%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98520</td>
<td>Aberdeen</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98524</td>
<td>Allyn</td>
<td>0.97%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98528</td>
<td>Belfair</td>
<td>0.31%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98533</td>
<td>Cinebar</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98546</td>
<td>Grapeview</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98548</td>
<td>Hoodsport</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98555</td>
<td>Lilliwaup</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98563</td>
<td>Montesano</td>
<td>0.21%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98564</td>
<td>Mossyrock</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98575</td>
<td>Quinault</td>
<td>0.20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98580</td>
<td>Roy</td>
<td>2.02%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98582</td>
<td>Salkum</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98584</td>
<td>Shelton</td>
<td>10.31%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98585</td>
<td>Silver Creek</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98591</td>
<td>Toledo</td>
<td>1.93%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98592</td>
<td>Union</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98597</td>
<td>Yelm</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>98925</td>
<td>Easton</td>
<td>0.00%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PART V

STATE PREVAILING WAGE RATES

AND

GENERAL REQUIREMENTS
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.
This Insurance Requirements shall serve as an attachment and/or exhibit form to the Contract. The Agency entering a Contract with City of Tacoma, whether designated as a Supplier, Contractor, Vendor, Proposer, Bidder, Respondent, Seller, Merchant, Service Provider, or otherwise referred to as “Contractor”.

1. GENERAL REQUIREMENTS

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

1.1. Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the City of Tacoma.

1.2. Contractor shall keep in force during the entire term of the Contract, at no expense to the City of Tacoma, the insurance coverage and limits of liability listed below and for Thirty (30) calendar days after completion of all work required by the Contract, unless otherwise provided herein.

1.3. Liability insurance policies, except for Professional Liability and Workers’ Compensation, shall:

1.3.1. Name the City of Tacoma and its officers, elected officials, employees, and agents as additional insured
1.3.2. Be considered primary and non-contributory for all claims with any insurance or self-insurance or limits of liability maintained by the City of Tacoma
1.3.3. Contain a “Waiver of Subrogation” clause in favor of City of Tacoma
1.3.4. Include a “Separation of Insureds” clause that applies coverage separately to each insured and additional insured
1.3.5. Name the “City of Tacoma” on certificates of insurance and endorsements and not a specific person or department
1.3.6. Be 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
1.3.7. Be satisfied by a single primary limit or by a combination of a primary policy and a separate excess umbrella

1.4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements below. Verification of coverage shall include:

1.4.1. An ACORD certificate or equivalent
1.4.2. Copies of requested endorsements

1.5. Contractor shall provide to City of Tacoma Procurement & Payable Division, prior to the execution of the Contract, Certificate(s) of Insurance and endorsements from the insurer certifying the coverage of all insurance required herein. Contract or Permit number and the City of Tacoma Department must be shown on the Certificate of Insurance.
1.6. A renewal Certificate of Insurance shall be provided electronically prior to coverage expiration via email sent annually to coi@cityoftacoma.org.

1.7. Contractor shall send a notice of cancellation or non-renewal of this required insurance within Thirty (30) calendar days to coi@cityoftacoma.org.

1.8. “Claims-Made” coverages, except for pollution coverage, shall be maintained for a minimum of three years following the expiration or earlier termination of the Contract. Pollution coverage shall be maintained for six years following the expiration of the Contract. The retroactive date shall be prior to or coincident with the effective date of the Contract.

1.9. Each insurance policy must be written by companies licensed or authorized (or issued as surplus line by Washington surplus line broker) in the State of Washington pursuant to RCW 48 with an (A-) VII or higher in the A.M. Best key rating guide.

1.10. Contractor shall not allow any insurance to be cancelled, voided, suspended, or reduced in coverage/limits, or lapse during any term of this Contract. Otherwise, it shall constitute a material breach of the Contract.

1.11. 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.

1.12. 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 changes.

1.13. All costs for insurance are included in the initial Contract and no additional payment will be made by City of Tacoma to Contractor.

1.14. 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).

1.15. Failure by City of Tacoma to identify a deficiency in the insurance documentation or to verify coverage or compliance by Contractor with these insurance requirements shall not be construed as a waiver of Contractor’s obligation to maintain such insurance.

1.16. If Contractor is a government agency or self-insured for any of the above insurance requirements, Contractor shall be liable for any self-insured retention or deductible portion of any claim for which insurance is required. A certification of self-insurance shall be attached and incorporated by reference and shall constitute compliance with this Section.
2. SUBCONTRACTORS

It is Contractor's responsibility to ensure that each subcontractor obtain and maintain adequate liability insurance coverage that applies to the service provided. Contractor shall provide evidence of such insurance upon City of Tacoma's request. Failure of any subcontractor to comply with insurance requirements does not limit Contractor’s liability or responsibility.

3. 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.

3.1 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. This policy shall be written on ISO form CG 00 01 04 13 or its equivalent and shall include product liability especially when a Contract is solely for purchasing supplies. It includes Products and Completed Operations for three years following the completion of work related to performing construction services. It shall be endorsed to include: A per project aggregate policy limit (using ISO form CG 25 03 05 09 or equivalent endorsement).

3.2 Commercial (Business) Automobile Liability Insurance

Contractor shall maintain Commercial Automobile Liability policy with limits not less than One Million Dollars ($1,000,000) each accident for bodily injury and property damage and bodily injury and property damage coverage for owned (if any), non-owned, hired, or leased vehicles. Commercial Automobile Liability Insurance shall be written using ISO form CA 00 01 or equivalent. Contractor must also maintain MCS 90 and CA 99 48 endorsements or equivalent if "Pollutants" are to be transported unless in-transit Pollution coverage is covered under required Contractor’s Pollution Liability Insurance.

3.3 Workers' Compensation

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. Contractor must comply with their domicile State Industrial Insurance laws if it is outside the State of Washington.

3.4 Employers' Liability Insurance

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

3.5 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.
3.6 Other Insurance
Other insurance may be deemed appropriate to cover risks and exposures related to the scope of work or changes to the scope of work required by City of Tacoma. The costs of such necessary and appropriate Insurance coverage shall be borne by Contractor.