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[Note to Engineer: The Table of Contents must be manually updated to reflect changes made to the Special Provisions prior to printing. To update the Table of Contents, do a right click with the mouse on the Table of Contents, select 'Update Field', and select 'Update Entire Table'.]

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INTRODUCTION

(April 16, 2016 Tacoma GSP) *(Use on Non-Fed Projects)*

The following special provisions shall be used in conjunction with the "2016 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:

(*****)

Use if your project has SBE Goals.

A pre-bid conference will be held in **Location**, Tacoma, Washington, **Zip Code** at **time** on **date** to answer questions regarding the Small Business Enterprise (SBE) Program requirements included in the Contract. Prospective bidders are urged to attend.

Use if your project has SBE Goals and LEAP training hours.

A pre-bid conference will be held in **Location**, Tacoma, Washington, **Zip Code** at **time** on **date** to answer questions regarding the Small Business Enterprise (SBE) Program and Local Employment and Apprenticeship Training Program (LEAP) requirements included in the contract. Prospective bidders are urged to attend.

Use if your project is funded with Federal funds and has DBE goals – Need FHWA approval for using this intro on Fed Aid Projects.

1 A pre-bid conference will be held in **Location**, Tacoma, Washington, **Zip Code** at **time** on
2 **date** to answer questions regarding the Disadvantaged Business Enterprise (DBE)
3 requirements included in the contract. Prospective bidders are urged to attend.

4
5 **DESCRIPTION OF WORK**
6 **(*****)**

7
8 This Contract shall generally consist of **description of work**

9
10 **INTRODUCTION TO THE SPECIAL PROVISIONS**
11 **(August 14, 2013 APWA GSP) (Use on Federal Aid Projects)**

12
13 The work on this project shall be accomplished in accordance with the *Standard*
14 *Specifications for Road, Bridge and Municipal Construction*, 20**\$\$1\$\$** edition, as issued
15 by the Washington State Department of Transportation (WSDOT) and the American
16 Public Works Association (APWA), Washington State Chapter (hereafter "Standard
17 Specifications"). The Standard Specifications, as modified or supplemented by the
18 Amendments to the Standard Specifications and these Special Provisions, all of which are
19 made a part of the Contract Documents, shall govern all of the Work.

20
21 These Special Provisions are made up of both General Special Provisions (GSPs) from
22 various sources, which may have project-specific fill-ins; and project-specific Special
23 Provisions. Each Provision either supplements, modifies, or replaces the comparable
24 Standard Specification, or is a new Provision. The deletion, amendment, alteration, or
25 addition to any subsection or portion of the Standard Specifications is meant to pertain
26 only to that particular portion of the section, and in no way should it be interpreted that
27 the balance of the section does not apply.

28
29 The project-specific Special Provisions are not labeled as such. The GSPs are labeled
30 under the headers of each GSP, with the effective date of the GSP and its source. For
31 example:

32
33 **(March 8, 2013 APWA GSP)**
34 **(April 1, 2013 WSDOT GSP)**
35 **(May 1, 2013 **\$\$2\$\$** GSP)**

36
37 Also incorporated into the Contract Documents by reference are:

- 38 • *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently
39 adopted edition, with Washington State modifications, if any
40 • *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT/APWA,
41 current edition
42 • **\$\$3\$\$**
43 • **\$\$4\$\$**

44
45 Contractor shall obtain copies of these publications, at Contractor's own expense.
46

DESCRIPTION OF WORK
(March 13, 1995 WSDOT GSP)

This Contract provides for the improvement of *** \$\$1\$\$ *** and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

END OF SECTION

1-01 DEFINITIONS AND TERMS (USE ON FEDERAL AND NON-FEDERAL PROJECTS)

**1-01.3 Definitions (May be used on Federal and Non-Federal Projects, if used also use 1-08.9)
(January 4, 2016 APWA GSP)**

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

Dates

Bid Opening Date

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

Award Date

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

Contract Execution Date

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

Notice to Proceed Date

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

Substantial Completion Date

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

Physical Completion Date

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

Completion Date

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

Final Acceptance Date

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

Supplement this Section with the following:

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

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

4
5 All references to “State Materials Laboratory” shall be revised to read “Contracting
6 Agency designated location”.

7
8 All references to “final contract voucher certification” shall be interpreted to mean the
9 Contracting Agency form(s) by which final payment is authorized, and final completion
10 and acceptance granted.

11
12 **Additive**

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

16
17 **Alternate**

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

21
22 **Business Day**

23 A business day is any day from Monday through Friday except holidays as listed in
24 Section 1-08.5.

25
26 **Contract Bond**

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

30
31 **Contract Documents**

32 See definition for “Contract”.

33
34 **Contract Time**

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

37
38 **Notice of Award**

39 The written notice from the Contracting Agency to the successful Bidder signifying the
40 Contracting Agency’s acceptance of the Bid Proposal.

41
42 **Notice to Proceed**

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

1 **Traffic**

2 Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and
3 equestrian traffic.

4
5 *This section is supplemented with the following:*
6 **(July 28, 2016 Tacoma GSP)**

7
8 All references to the acronym D/M/WBE” shall be revised to read “DBE/SBE”. (Use on
9 Non-Federal Projects only)

10
11 All references in the Standard Specifications to the term “Proposal Bond” shall be revised
12 to read “Bid Bond.”

13
14 **Base Bid**

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

18
19 **Calendar Day**

20 The time period of 24 hours measured from midnight to the next midnight, including
21 weekends and holidays.

22
23 **Change Order**

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

28
29 **Day**

30 Unless otherwise specified, a calendar day.

31
32 **Deductive**

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

36
37 **Grand Total Price**

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

40
41 **Standard Specifications**

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

44
45
46 **END OF SECTION**
47

REFERENCE ONLY

1
2 **1-02 BID PROCEDURES AND CONDITIONS**

3
4 **1-02.1 Prequalification of Bidders**

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

6
7 **1-02.1 Qualifications of Bidder** (Use on Non-Federal and Federal Projects)
8 (January 24, 2011 APWA GSP)
9

10 Before award of a public works contract, a bidder must meet at least the minimum
11 qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified
12 to be awarded a public works project.
13

14
15 *Note to Engineer: New Bidder Responsibility Criteria effective for all projects bidding*
16 *after July 23, 2017 will require a sworn affidavit from the bidder who is awarded the*
17 *project. Purchasing has the MSRC affidavit for use on their website. If you have federal*
18 *funds you need approval from Local Programs prior to advertisement as this or another*
19 *form is not yet approved. APWA GSPs for sections 1-02.1(1), 1-02.5, 1-02.9, and 1-*
20 *02.14 have been added into this document, but have not been approved by the*
21 *Standards Committee yet. City GSPs in these sections will need revisions as well and if*
22 *you choose to use a City GSP the dates need to be changed to (*****) and modifications*
23 *need to be made to comply with the new law.*
24

25 *Add the following new section:*

26 **1-02.1(1) Supplemental Qualifications Criteria** (Use on Non Federal Projects Only. If
27 used, also need to utilize APWA specifications 1-02.13, 1-02.14 option C (need ok from
28 purchasing to use and this is an APWA specification located at
29 http://www.wsdot.wa.gov/partners/apwa/Division_1_Page.htm, and 1-05.13)
30 (March 25, 2009 Tacoma GSP)
31

32 In addition, the Contracting Agency has established Contracting Agency-specific and/or
33 project-specific supplemental criteria, in accordance with RCW 39.04.350(2), for
34 determining Bidder responsibility, including the basis for evaluation and the deadline for
35 appealing a determination that a Bidder is not responsible. These criteria are contained in
36 the **\$\$\$**.
37

38 *Add the following new section:*

39
40 **1-02.1(1) Supplemental Qualifications Criteria** (Use on Non Federal Projects
41 **Only requires pre-approval on FHWA funded projects, through WSDOT/Local**
42 **Programs)**
43 (July 31, 2017 APWA GSP; requires pre-approval on FHWA funded projects,
44 through WSDOT/Local Programs)
45

46 In addition, the Contracting Agency has established Contracting Agency-specific
47 and/or project-specific supplemental criteria, in accordance with RCW 39.04.350(3),
48 for determining Bidder responsibility, including the basis for evaluation and the

1 deadline for appealing a determination that a Bidder is not responsible. These criteria
2 are contained in Section 1-02.14 Option C of these Special Provisions.

3
4 **1-02.2 Plans and Specifications**

5 **(June 27, 2011 APWA GSP)**

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

7
8 Information as to where Bid Documents can be obtained or reviewed can be found in the
9 Call for Bids (Advertisement for Bids) for the work.

10
11 After award of the contract, plans and specifications will be issued to the Contractor at no
12 cost as detailed below:

13

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17")	6	Furnished automatically upon award.
Contract Provisions	6	Furnished automatically upon award.
Large plans (e.g., 22" x 34")	2	Furnished only upon request.

14
15 Additional plans and Contract Provisions may be obtained by the Contractor from the
16 source stated in the Call for Bids, at the Contractor's own expense.

17
18 **1-02.4(1) General**

19 **(August 15, 2016 APWA GSP Option B) (Use on Non-Federal and Federal Projects)**

20
21 *The first sentence of the last paragraph is revised to read:*

22
23 Any prospective Bidder desiring an explanation or interpretation of the Bid Documents,
24 shall request the explanation or interpretation in writing by close of business **6** business
25 days preceding the bid opening to allow a written reply to reach all prospective Bidders
26 before the submission of their Bids.

27
28 **1-02.4(2) Subsurface Information (Use on Non-Federal and Federal Projects when**
29 **boring logs and Geotechnical Conditions are provided to bidders)**

30 **(March 8, 2013 APWA GSP)**

31 *The second sentence in the first paragraph is revised to read:*

32
33 The Summary of Geotechnical Conditions and the boring logs, if and when included as
34 an appendix to the Special Provisions, shall be considered as part of the Contract.

1 **1-02.5 Proposal Forms (Use on Non-Federal and Federal Projects)**
2 *(July 31, 2017 APWA GSP)*

3
4 Delete this section and replace it with the following:

5
6 The Proposal Form will identify the project and its location and describe the work. It
7 will also list estimated quantities, units of measurement, the items of work, and the
8 materials to be furnished at the unit bid prices. The bidder shall complete spaces on
9 the proposal form that call for, but are not limited to, unit prices; extensions;
10 summations; the total bid amount; signatures; date; and, where applicable, retail
11 sales taxes and acknowledgment of addenda; the bidder's name, address, telephone
12 number, and signature; the bidder's UDBE/DBE/M/WBE commitment, if applicable; a
13 State of Washington Contractor's Registration Number; and a Business License
14 Number, if applicable. Bids shall be completed by typing or shall be printed in ink by
15 hand, preferably in black ink. The required certifications are included as part of the
16 Proposal Form.

17
18 The Contracting Agency reserves the right to arrange the proposal forms with
19 alternates and additives, if such be to the advantage of the Contracting Agency. The
20 bidder shall bid on all alternates and additives set forth in the Proposal Form unless
21 otherwise specified.

22
23 **1-02.6 Preparation of Proposal (Must use if you have a minimum bid price or if you**
24 **have a UDBE requirement)**

25 *The second paragraph is supplemented with the following:*
26 *(June 20, 2017 APWA GSP)*

27
28 Supplement the second paragraph with the following:

- 29 4. If a minimum bid amount has been established for any item, the unit or lump
30 sum price must equal or exceed the minimum amount stated.
- 31 5. Any correction to a bid made by interlineation, alteration, or erasure, shall be
32 initialed by the signer of the bid.

33
34 Delete the fourth paragraph and replace it with the following:

35
36 The Bidder shall submit with the Bid a completed Underutilized Disadvantaged
37 Business Enterprise (UDBE) Utilization Certification, when required by the Special
38 Provisions. For each and every UDBE firm listed on the Bidder's completed
39 Underutilized Disadvantaged Business Enterprise Utilization Certification, the Bidder
40 shall submit written confirmation from that UDBE firm that the UDBE is in agreement
41 with the UDBE participation commitment that the Bidder has made in the Bidder's
42 completed Underutilized Disadvantaged Business Enterprise Utilization Certification.
43 WSDOT Form 422-031U (Underutilized Disadvantaged Business Enterprise Written
44 Confirmation Document) is to be used for this purpose. Bidder must submit good
45 faith effort documentation with the Underutilized Disadvantaged Business Enterprise
46 Utilization Certification only in the event the bidder's efforts to solicit sufficient UDBE
47 participation have been unsuccessful. Directions for delivery of the Underutilized
48 Disadvantaged Business Enterprise Written Confirmation Documents
49 and Underutilized Disadvantaged Business Enterprise Good Faith Effort
50 documentation are included in Sections 1-02.9

Delete the last paragraph, and replace it with the following:

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: (Use on projects with SBE goals)
(October 18, 2013 Tacoma GSP)

The bidder shall submit the following completed forms:

City of Tacoma – SBE Utilization Form

City of Tacoma – Prime Contractor Pre-Work Form

The fourth paragraph is revised to read: (Use on Federal Projects Only)
(August 1, 2007 Tacoma GSP)

The bidder shall submit a completed “Disadvantaged, Minority, or Women’s Business Enterprise Certification” if it applies, and a completed “City of Tacoma – Prime Contractor Pre-Work Form”.

(Must use on transportation projects, must also include 1-03.1(1)) and 1-06.6)

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
(April 1, 2012 Tacoma GSP)

Delete this section and replace it with the following:

A deposit of at least 5 percent of the total Bid shall accompany each Bid. This deposit may be cash, certified check, cashier’s check, or a proposal bond (Surety bond). Any

proposal bond shall be on a form acceptable to the Contracting Agency and shall be signed by the Bidder and the Surety. A proposal bond shall not be conditioned in any way to modify the minimum 5 percent required. The Surety shall: (1) be registered with the Washington State Insurance Commissioner, and (2) appear on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner.

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

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

1-02.9 Delivery of Proposal

(July 31, 2017 APWA GSP, Option A) (Must use option A or B (WSDOT website) when FHWA funded and a DBE goal is assigned. Use on non-FHWA funded projects if you are not providing an envelope for the bid proposal, but require bid documents be submitted in a sealed envelope – if allowing fax or email bids use option B. Add “Certification of Compliance with Wage Payment Statutes” form from Purchasing Website)

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.

If the project has FHWA funding and requires UDBE Written Confirmation Document(s) or Good Faith Effort (GFE) Documentation, then to be considered responsive, the Bidder shall submit Written Confirmation Documentation from each UDBE firm listed on the Bidder's completed UDBE Utilization Certification, form 272-056U, as required by Section 1-02.6. The UDBE Written Confirmation Document(s) and/or GFE (if any) shall be received either with the Bid Proposal or as a Supplement to the Bid. The document(s) shall be received **no later than 24 hours** (not including Saturdays, Sundays and Holidays) after the time for delivery of the Bid Proposal.

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

1 Proposal must be submitted with the Bid Proposal itself, at the time stated in the Call
2 for Bids.

3
4 The Contracting Agency will not open or consider any Bid Proposal that is received
5 after the time specified in the Call for Bids for receipt of Bid Proposals, or received in
6 a location other than that specified in the Call for Bids. The Contracting Agency will
7 not open or consider any "Supplemental Information" (UDBE confirmations, GFE
8 documentation, or Certification of Compliance with Wage Payment Statutes) that is
9 received after the time specified above, or received in a location other than that
10 specified in the Call for Bids.

11 **1-02.9 Delivery of Proposal**

12 *(July 31, 2017 APWA GSP Option B)* (use if allowing fax or email bids use option B
13 instead of Option A. Add "Certification of Compliance with Wage Payment Statutes" form
14 from Purchasing Website)
15

16
17 Delete this section and replace it with the following:

18
19 Each Proposal shall be submitted in a sealed envelope, with the Project Name and
20 Project Number as stated in the Call for Bids clearly marked on the outside of the
21 envelope, or as otherwise required in the Bid Documents, to ensure proper handling
22 and delivery.
23

24 If the project has FHWA funding and requires UDBE Written Confirmation
25 Document(s) or Good Faith Effort (GFE) Documentation, then to be considered
26 responsive, the Bidder shall submit Written Confirmation Documentation from each
27 UDBE firm listed on the Bidder's completed UDBE Utilization Certification, form 272-
28 056U, as required by Section 1-02.6. The UDBE Written Confirmation Document(s)
29 and/or GFE (if any) shall be received either with the Bid Proposal or as a
30 Supplement to the Bid. The documents shall be received no later than 24 hours (not
31 including Saturdays, Sundays and Holidays) after the time for delivery of the Bid
32 Proposal.
33

34 The Bidder shall submit to the Contracting Agency a signed "Certification of
35 Compliance with Wage Payment Statutes" document where the Bidder under penalty
36 of perjury verifies that the Bidder is in compliance with responsible bidder criteria in
37 RCW 39.04.350 subsection (1) (g), as required per Section 1-02.14. The
38 "Certification of Compliance with Wage Payment Statutes" document shall be
39 received either with the Bid Proposal or as a Supplement to the Bid. The document
40 shall be received **no later than 24 hours** (not including Saturdays, Sundays and
41 Holidays) after the time for delivery of the Bid Proposal.
42

43 If submitted after the Bid Proposal is due, the document(s) shall be submitted as
44 follows:
45

- 46 1. In a sealed envelope labeled the same as for the Proposal, with
47 "Supplemental Information" added, or
- 48 2. By facsimile to the following FAX number: **\$\$\$1\$\$**, or
- 49 3. By e-mail to the following e-mail address: **\$\$\$2\$\$**
50

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

3
4 The Contracting Agency will not open or consider any Bid Proposal that is received
5 after the time specified in the Call for Bids for receipt of Bid Proposals, or received in
6 a location other than that specified in the Call for Bids. The Contracting Agency will
7 not open or consider any "Supplemental Information" (UDBE confirmations, GFE
8 documentation, or Certification of Compliance with Wage Payment Statutes) that is
9 received after the time specified above, or received in a location other than that
10 specified in the Call for Bids.

11 **1-02.9 Delivery of Proposal**

12 *(July 31, 2017 APWA GSP Option C) (use if requiring fax or email bid. Add "Certification*
13 *of Compliance with Wage Payment Statutes" form from Purchasing Website)*

14
15
16
17 Delete this section and replace it with the following:

18
19 Each Proposal shall be submitted in a sealed envelope, with the Project Name and
20 Project Number as stated in the Call for Bids clearly marked on the outside of the
21 envelope, or as otherwise required in the Bid Documents, to ensure proper handling
22 and delivery.

23
24 If the project has FHWA funding and requires UDBE Written Confirmation
25 Document(s) or Good Faith Effort (GFE) Documentation, then to be considered
26 responsive, the Bidder shall submit Written Confirmation Documentation from each
27 UDBE firm listed on the Bidder's completed UDBE Utilization Certification, form 272-
28 056U, as required by Section 1-02.6. The UDBE Written Confirmation Document(s)
29 and/or GFE (if any) shall be received either with the Bid Proposal or as a
30 Supplement to the Bid. The documents shall be received **no later than 24 hours**
31 (not including Saturdays, Sundays and Holidays) after the time for delivery of the Bid
32 Proposal.

33
34 The Bidder shall submit to the Contracting Agency a signed "Certification of
35 Compliance with Wage Payment Statutes" document where the Bidder under penalty
36 of perjury verifies that the Bidder is in compliance with responsible bidder criteria in
37 RCW 39.04.350 subsection (1) (g), as required per Section 1-02.14. The
38 "Certification of Compliance with Wage Payment Statutes" document shall be
39 received either with the Bid Proposal or as a Supplement to the Bid. The document
40 shall be received **no later than 24 hours** (not including Saturdays, Sundays and
41 Holidays) after the time for delivery of the Bid Proposal.

42
43 If submitted after the Bid Proposal is due, the document(s) shall be submitted as
44 follows:

- 45
46 1. By facsimile to the following FAX number: **\$\$\$1\$\$**, or
47 2. By e-mail to the following e-mail address: **\$\$\$2\$\$**

48
49 All other information required to be submitted with the Bid Proposal must be
50 submitted with the Bid Proposal itself, at the time stated in the Call for Bids.

1 The Contracting Agency will not open or consider any Bid Proposal that is received
2 after the time specified in the Call for Bids for receipt of Bid Proposals, or received in
3 a location other than that specified in the Call for Bids. The Contracting Agency will
4 not open or consider any "Supplemental Information" (UDBE confirmations, GFE
5 documentation, or Certification of Compliance with Wage Payment Statutes) that is
6 received after the time specified above, or received in a location other than that
7 specified above.
8
9

10 **1-02.10 Withdrawing, Revising, or Supplementing Proposal (Use on Non Fed-Aid**
11 **Projects Only)**
12 **(March 16, 2016 Tacoma GSP)**

13 Delete this section and replace it with the following:

14
15 After submitting a Bid Proposal to the Contracting Agency, the Bidder may withdraw,
16 revise, or supplement it if:

- 17 1. The Bidder submits a written request signed by an authorized person, and
- 18 2. The Contracting Agency receives the request before the time set for receipt of
- 19 Proposals.
- 20 3. The revised or supplemented Bid Proposal (if any) is received by the
- 21 Contracting Agency before the time set for receipt of Bid Proposals.
- 22

23 The original Bid Proposal may be supplemented, or revised and resubmitted as the
24 official Bid Proposal if the Contracting Agency receives it before the time set for receipt
25 of Proposals.
26

27 **1-02.10 Withdrawing, Revising, or Supplementing Proposal (Use on Fed-Aid**
28 **Projects Only)**
29 **(July 23, 2015 APWA GSP)**

30
31 *Delete this section, and replace it with the following:*

32
33 After submitting a physical Bid Proposal to the Contracting Agency, the Bidder may
34 withdraw, revise, or supplement it if:

- 35 1. The Bidder submits a written request signed by an authorized person and
- 36 physically delivers it to the place designated for receipt of Bid Proposals, and
- 37 2. The Contracting Agency receives the request before the time set for receipt of Bid
- 38 Proposals, and
- 39 3. The revised or supplemented Bid Proposal (if any) is received by the Contracting
- 40 Agency before the time set for receipt of Bid Proposals.
- 41

42
43 If the Bidder's request to withdraw, revise, or supplement its Bid Proposal is received
44 before the time set for receipt of Bid Proposals, the Contracting Agency will return the
45 unopened Proposal package to the Bidder. The Bidder must then submit the revised or
46 supplemented package in its entirety. If the Bidder does not submit a revised or
47 supplemented package, then its bid shall be considered withdrawn.
48

1 Late revised or supplemented Bid Proposals or late withdrawal requests will be date
2 recorded by the Contracting Agency and returned unopened. Mailed, emailed, or faxed
3 requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.
4

5 **1-02.13 Irregular Proposals (Use only on projects with no SBE)**
6 **(January 4, 2016 APWA GSP)**
7

8 *Delete this section and replace it with the following:*
9

- 10 1. A proposal will be considered irregular and will be rejected if:
11 a. The Bidder is not prequalified when so required;
12 b. The authorized proposal form furnished by the Contracting Agency is not
13 used or is altered;
14 c. The completed proposal form contains any unauthorized additions, deletions,
15 alternate Bids, or conditions;
16 d. The Bidder adds provisions reserving the right to reject or accept the award,
17 or enter into the Contract;
18 e. A price per unit cannot be determined from the Bid Proposal;
19 f. The Proposal form is not properly executed;
20 g. The Bidder fails to submit or properly complete a Subcontractor list, if
21 applicable, as required in Section 1-02.6;
22 h. The Bidder fails to submit or properly complete a Disadvantaged Business
23 Enterprise Certification, if applicable, as required in Section 1-02.6;
24 i. The Bidder fails to submit written confirmation from each DBE firm listed on
25 the Bidder's completed DBE Utilization Certification that they are in
26 agreement with the bidders DBE participation commitment, if applicable, as
27 required in Section 1-02.6, or if the written confirmation that is submitted fails
28 to meet the requirements of the Special Provisions;
29 j. The Bidder fails to submit DBE Good Faith Effort documentation, if
30 applicable, as required in Section 1-02.6, or if the documentation that is
31 submitted fails to demonstrate that a Good Faith Effort to meet the Condition
32 of Award was made;
33 k. The Bid Proposal does not constitute a definite and unqualified offer to meet
34 the material terms of the Bid invitation; or
35 l. More than one proposal is submitted for the same project from a Bidder
36 under the same or different names.
37
- 38 2. A Proposal may be considered irregular and may be rejected if:
39 a. The Proposal does not include a unit price for every Bid item;
40 b. Any of the unit prices are excessively unbalanced (either above or below the
41 amount of a reasonable Bid) to the potential detriment of the Contracting
42 Agency;
43 c. Receipt of Addenda is not acknowledged;
44 d. A member of a joint venture or partnership and the joint venture or
45 partnership submit Proposals for the same project (in such an instance, both
46 Bids may be rejected); or
47 e. If Proposal form entries are not made in ink.
48

49 **1-02.13 Irregular Proposals (Use only on projects with SBE)**
50 **(October 18, 2013 Tacoma GSP)**

Revise item 1 to read:

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

1-02.14 Disqualification of Bidders

(July 31, 2017 APWA GSP, Option A) (Use on projects with Fed Aid and no supplemental Criteria. If supplemental criteria is utilized use Option B or C and have approval from Construction and Purchasing)

Delete this section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended.

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1). To assess bidder responsibility, the Contracting Agency reserves the right to request documentation as needed from the Bidder and third parties concerning the Bidder's compliance with the mandatory bidder responsibility criteria.

The Bidder shall submit to the Contracting Agency a signed "Certification of Compliance with Wage Payment Statutes", document where the Bidder under penalty of perjury verifies that the Bidder is in compliance with responsible bidder criteria in RCW 39.04.350 subsection (1)(g). A form appropriate for "Certification of Compliance with Wage Payment Statutes" will be provided by the Contracting Agency in the Bid Documents. The form provided in the Bid Documents shall be submitted with the Bid as stated in Section 1-02.9.

1 If the Contracting Agency determines the Bidder does not meet the mandatory bidder
2 responsibility criteria in RCW 39.04.350(1) and is therefore not a responsible Bidder,
3 the Contracting Agency shall notify the Bidder in writing, with the reasons for its
4 determination. If the Bidder disagrees with this determination, it may appeal the
5 determination within two (2) business days of the Contracting Agency's
6 determination by presenting its appeal and any additional information to the
7 Contracting Agency. The Contracting Agency will consider the appeal and any
8 additional information before issuing its final determination. If the final
9 determination affirms that the Bidder is not responsible, the Contracting Agency will
10 not execute a contract with any other Bidder until at least two business days after the
11 Bidder determined to be not responsible has received the Contracting Agency's final
12 determination.

13
14 **1-02.14 Disqualification of Bidders** (Use only on projects with SBE – until Standards
15 Committee is able to revise this specification it needs to be changed to a (****) and it
16 needs language added for the "Certification of Compliance with Wage Payment
17 Statutes")
18 **(October 18, 2013 Tacoma GSP)**
19

20 A Bidder will be deemed not responsible if:

- 21 1. the Bidder does not meet the mandatory bidder responsibility criteria in RCW
22 39.04.350(1), as amended; or
- 23 2. evidence of collusion exists with any other Bidder or potential Bidder.
24 Participants in collusion will be restricted from submitting further bids; or
- 25 3. the Bidder, in the opinion of the Contracting Agency, is not qualified for the
26 work or to the full extent of the bid, or to the extent that the bid exceeds the
27 authorized prequalification amount as may have been determined by a
28 prequalification of the Bidder; or
- 29 4. an unsatisfactory performance record exists based on past or current
30 Contracting Agency work or for work done for others, as judged from the
31 standpoint of conduct of the work; workmanship; or progress; affirmative
32 action; equal employment opportunity practices; termination for cause; or
33 Disadvantaged Business Enterprise, Minority Business Enterprise, or
34 Women's Business Enterprise utilization; or
- 35 5. there is uncompleted work (Contracting Agency or otherwise) which in the
36 opinion of the Contracting Agency might hinder or prevent the prompt
37 completion of the work bid upon; or
- 38 6. the Bidder failed to settle bills for labor or materials on past or current
39 contracts, unless there are extenuating circumstances acceptable to the
40 Contracting Agency; or
- 41 7. the Bidder has failed to complete a written public contract or has been
42 convicted of a crime arising from a previous public contract, unless there are
43 extenuating circumstances acceptable to the Contracting Agency; or
- 44 8. the Bidder is unable, financially or otherwise, to perform the work, in the
45 opinion of the Contracting Agency; or
- 46 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 **\$\$\$**; or
11. The bidder fails to meet the SBE 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,

- 1 6. Obtain, and furnish a copy of, a business license to do business in the city or
- 2 county where the work is located.
- 3 7. Any other information or action taken that is deemed necessary to ensure that
- 4 the bidder is the lowest responsible bidder.
- 5
- 6

7 **END OF SECTION**

8

1
2 **1-03 AWARD AND EXECUTION OF CONTRACT**

3
4 **1-03.1 Consideration of Bids**
5 **(January 23, 2006 APWA GSP)**

6 *Revise the first paragraph to read:*

7
8 After opening and reading proposals, the Contracting Agency will check them for
9 correctness of extensions of the prices per unit and the total price. If a discrepancy exists
10 between the price per unit and the extended amount of any bid item, the price per unit
11 will control. If a minimum bid amount has been established for any item and the bidder's
12 unit or lump sum price is less than the minimum specified amount, the Contracting
13 Agency will unilaterally revise the unit or lump sum price, to the minimum specified
14 amount and recalculate the extension. The total of extensions, corrected where
15 necessary, including sales taxes where applicable and such additives and/or alternates as
16 selected by the Contracting Agency, will be used by the Contracting Agency for award
17 purposes and to fix the Awarded Contract Price amount and the amount of the contract
18 bond.

19
20 **1-03.1(1) Identical Bid Totals** (Must use on transportation projects only, must also use
21 APWA GSP's 1-02.6(1) and 1-06.6 this includes roadway, pervious roadways, active
22 transportation (trail, sidewalks, bike lanes, etc.) projects)
23 **(January 4, 2016 APWA GSP)**

24 *Revise this section to read:*

25
26 After opening Bids, if two or more lowest responsive Bid totals are exactly equal, then
27 the tie-breaker will be the Bidder with an equal lowest bid, that proposed to use the
28 highest percentage of recycled materials in the Project, per the form submitted with the
29 Bid Proposal. If those percentages are also exactly equal, then the tie-breaker will be
30 determined by drawing as follows: Two or more slips of paper will be marked as follows:
31 one marked "Winner" and the other(s) marked "unsuccessful". The slips will be folded to
32 make the marking unseen. The slips will be placed inside a box. One authorized
33 representative of each Bidder shall draw a slip from the box. Bidders shall draw in
34 alphabetic order by the name of the firm as registered with the Washington State
35 Department of Licensing. The slips shall be unfolded and the firm with the slip marked
36 "Winner" will be determined to be the successful Bidder and eligible for Award of the
37 Contract. Only those Bidders who submitted a Bid total that is exactly equal to the lowest
38 responsive Bid, and with a proposed recycled materials percentage that is exactly equal to
39 the highest proposed recycled materials amount, are eligible to draw.

40
41 **1-03.2 Award of Contract** (Use on Non-Federal projects only)
42 **(March 27, 2003 Tacoma GSP)**

43
44 All references to 45 calendar days shall be revised to read 60 calendar days.

45
46 **1-03.3 Execution of Contract**
47 **(October 1, 2005 APWA GSP)**

48 *Revise this section to read:*

1
2 Copies of the Contract Provisions, including the unsigned Form of Contract, will be
3 available for signature by the successful bidder on the first business day following award.
4 The number of copies to be executed by the Contractor will be determined by the
5 Contracting Agency.
6

7 Within 10 calendar days after the award date, the successful bidder shall return the signed
8 Contracting Agency-prepared contract, an insurance certification as required by Section
9 1-07.18, and a satisfactory bond as required by law and Section 1-03.4. Before execution
10 of the contract by the Contracting Agency, the successful bidder shall provide any pre-
11 award information the Contracting Agency may require under Section 1-02.15.
12

13 Until the Contracting Agency executes a contract, no proposal shall bind the Contracting
14 Agency nor shall any work begin within the project limits or within Contracting Agency-
15 furnished sites. The Contractor shall bear all risks for any work begun outside such areas
16 and for any materials ordered before the contract is executed by the Contracting Agency.
17

18 If the bidder experiences circumstances beyond their control that prevents return of the
19 contract documents within the calendar days after the award date stated above, the
20 Contracting Agency may grant up to a maximum of 10 additional calendar days for return
21 of the documents, provided the Contracting Agency deems the circumstances warrant it.
22

23 **1-03.4 Contract Bond (Use for All Projects)**
24 **(July 23, 2015 APWA GSP)**

25 *Delete the first paragraph and replace it with the following:*
26

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

- 31 1. Be on Contracting Agency-furnished form(s);
- 32 2. Be signed by an approved surety (or sureties) that:
 - 33 a. Is registered with the Washington State Insurance Commissioner, and
 - 34 b. Appears on the current Authorized Insurance List in the State of Washington
 - 35 published by the Office of the Insurance Commissioner,
- 36 3. Guarantee that the Contractor will perform and comply with all obligations, duties,
37 and conditions under the Contract, including but not limited to the duty and
38 obligation to indemnify, defend, and protect the Contracting Agency against all
39 losses and claims related directly or indirectly from any failure:
 - 40 a. Of the Contractor (or any of the employees, subcontractors, or lower tier
 - 41 subcontractors of the Contractor) to faithfully perform and comply with all
 - 42 contract obligations, conditions, and duties, or
 - 43 b. Of the Contractor (or the subcontractors or lower tier subcontractors of the
 - 44 Contractor) to pay all laborers, mechanics, subcontractors, lower tier
 - 45 subcontractors, material person, or any other person who provides supplies
 - 46 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).

Add the following new sub-section:

1-03.4(1) Retainage in Lieu of Contract Bond (For use on Non Fed-Aid Projects below \$35,000 when you want to allow the contractor to hold extra retainage in lieu of contract bond)
(October 10, 2008 APWA GSP)

For contracts of \$35,000 or less, the Contractor may, at the Contractor's option, authorize the Contracting Agency to retain fifty percent (50%) of the contract amount in lieu of furnishing a performance and/or payment bond. If the Contractor elects this option, the retainage shall be held for a period of thirty (30) days after the date of final acceptance, or until receipt of all necessary releases from the Departments of Revenue and of Labor and Industries and settlement of any liens filed under RCW 60.28, whichever is later. The Contractor must advise the Contracting Agency in writing of the Contractor's election to authorize retainage in lieu of a bond, at the time of execution of the Contract.

In choosing this option, the Contractor agrees that if the Contractor, its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract, and shall faithfully perform all the provisions of such contract and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of the Contract that may hereafter be made, at the time and in the manner therein specified, and shall pay all laborers, mechanics, subcontractors, and material suppliers, and all persons who shall supply such person or persons, or subcontractors, with provisions and supplies for the carrying on of such work, on his or her part, and shall indemnify and save harmless the Contracting Agency, its officers and agents from any claim for such payment, then the funds retained in lieu of a performance bond shall be released at the time provided above; otherwise, the funds shall be retained until the Contractor fulfills the said obligations.

1-03.5 Failure to Execute Contract (Use on Non-Federal projects only)
(October 18, 2013 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 Small Business Enterprise (SBE) information if required in the contract, or failure or refusal to sign the Contract, or failure to register as a

1 contractor in the state of Washington shall result in forfeiture of the bid bond or deposit
2 of this Bidder
3

4
5 **END OF SECTION**
6

REFERENCE ONLY

1
2 **1-04 SCOPE OF THE WORK**
3

4 **1-04.2 Coordination of Contract Documents, Plans, Special Provisions,**
5 **Specifications, and Addenda**
6 **(March 13, 2012 APWA GSP)**

7 *Revise the second paragraph to read:*
8

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

- 11 1. Addenda,
- 12 2. Proposal Form,
- 13 3. Special Provisions,
- 14 4. Contract Plans,
- 15 5. Amendments to the Standard Specifications,
- 16 6. Standard Specifications,
- 17 7. Contracting Agency's Standard Plans or Details (if any), and
- 18 8. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.
19

20 **1-04.6 Variation in Estimated Quantities (Use on Non Federal Projects Only)**
21 **(May 25, 2006 APWA GSP)**

22 *This section is supplemented with the following:*

23 [Note to Engineer: Insert Unit Bid Items where quantities are assumed and not calculated
24 based off of quantity take off's from the plans. This section may be deleted if not
25 needed.]
26

27 The quantities for **\$\$\$**, **\$\$\$**, and **\$\$\$** have been entered into the Proposal only to
28 provide a common proposal for bidders. Actual quantities will be determined in the field
29 as the work progresses, and will be paid at the original bid price, regardless of final
30 quantity. These bid items shall not be subject to the provisions of 1-04.6 of the Standard
31 Specifications.
32

33
34 **END OF SECTION**
35
36

[Note to Engineer: There are two versions of Section 1-05 below. Use the first one for projects that are NOT using e-Builder. Use the second one for projects that ARE using e-Builder. Delete the version that is not applicable.]

1-05 CONTROL OF WORK (USE ON PROJECTS NOT USING EBUILDER)

**1-05.3 Working Drawings (Use on Non-Federal Projects Only)
(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:

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

5
6 Each submittal shall have a unique number assigned to it, and the transmittals shall be
7 sequentially numbered. The numbering of resubmittals shall meet the requirements of
8 Section 1-05.3(4). On each page, indicate the page number, and total number of pages in
9 each submittal.

10
11 Each submittal shall indicate the intended use of the item in the work. When catalog
12 pages are submitted, applicable items shall be clearly identified. The current revision,
13 issue number, and data shall be indicated on all drawings and other descriptive data.

14
15 Each submittal should be transmitted with the "Submittal Transmittal Form" found at the
16 end of this section. Upon request, an electronic copy of the Submittal Transmittal Form
17 will be made available to the Contractor.

18
19 In lieu of utilizing the Submittal Transmittal Form, the Contractor may display the
20 following information on each submittal, in a clear space on the front of the submittal:

- 21
22 • Project Name:
23 • Project Specification Number: PW##-####F ES##-####F
24 • Project No. #####
25 • Submittal Date
26 • Description of Submittal
27 • Sequential, unique submittal number.
28 • Related Specification Section and/or plan sheet
29 • The following statement: "This document has been detail-checked for accuracy of
30 content and for compliance with the Contract documents. The information
31 contained herein has been fully coordinated with all involved Subcontractors."
32 • Printed or typed name and signature of Contractor.

33
34 When submitting product data, the Contractor shall modify drawings to delete any
35 information not applicable to the project and add information that is applicable to the
36 project. The Contractor shall mark copies of printed material to clearly identify the
37 pertinent materials, products or models.

38
39 Samples submitted shall be of sufficient size and quantity to clearly illustrate functional
40 characteristics of product or material and full range of colors available. Field samples
41 and mock-ups, where required, shall be erected at the project site where directed by the
42 Engineer.

43
44 The Contractor shall notify the Engineer, in writing at time of submission, of deviations
45 in submittals from requirements of the Contract documents.

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

3 4 **1-05.3(3) Engineer's Review of Submittals**

5
6 The Engineer's review of drawings and data submitted by the Contractor will cover only
7 general conformity with the Contract drawings and specifications. The Engineer's
8 review of submittals shall not relieve the Contractor from responsibility for errors,
9 omissions, deviations, or responsibility for compliance with the Contract documents.
10 Review of a separate item does not constitute review of an assembly in which the item
11 functions.

12
13 When the submittal or resubmittal is marked "REVIEWED", or "REVIEWED WITH
14 COMMENTS", no additional copies need to be furnished. The Contractor shall comply
15 with any comments on the return submittal.

16 17 **1-05.3(4) Resubmittals**

18
19 When a submittal is marked "AMEND AND RESUBMIT" or "REJECTED, SEE
20 REMARKS," the Contractor shall make the corrections as noted and instructed by the
21 Engineer and resubmit four (4) copies. The Contractor shall not install material or
22 equipment that has received a review status of "AMEND AND RESUBMIT" or
23 REJECTED, SEE REMARKS".

24
25 When corrected copies are resubmitted, the Contractor shall in writing direct specific
26 attention to all revisions and shall list separately any revision made other than those
27 called for by the Engineer on previous submittals. Resubmittals shall bear the number of
28 the original submittal followed by a letter (A, B, etc.) to indicate the sequence of the
29 resubmittal.

30
31 The Contractor shall revise returned submittals as required and resubmit until final
32 review is obtained.

33
34 The Contractor shall verify that all exceptions previously noted by the Engineer have
35 been accounted for.

36 37 **1-05.3(5) Submittal Requirements by Section**

38
39 The following is a summary of submittal requirements. This summary is not inclusive of
40 all submittal requirements. The Contractor shall review each individual section in the
41 applicable provisions or specifications, as noted below, for specific requirements.
42

Section	Description
1-05.3(6)	Project Red Line Drawings
1-06.1	Proposed Material Sources
1-06.1(2)	Request for Approval of Material
1-06.3	Manufacturer's Certificate of Compliance
1-07.15	Temporary Water Pollution/Erosion Control Plan
1-07.15(1)	Spill Prevention, Control and Countermeasures (SPCC) Plan
1-07.16(1)	Property Owner Notification
1-08.3(2)	Progress Schedule
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1-09.9	Schedule Of Values
1-10.2	Traffic Control Plan
	<i>Add and Delete to meet projects needs</i>
2-07.3(1)	Hydrant Permit
2-09.3(4)	Engineered Shoring Design for Depths Over 20 Feet
4-04	Crushed Surfacing Top Course
4-04	Crushed Surfacing Base Course
5-04	Asphalt Mix Design Certification
5-05	Concrete Mix Design
7-05	Manholes
7-05	Castings
7-05	Kor-N-Seal Connector
7-08.3(1)A	Dewatering Plan
7-08.3(1)A	Special Approved Discharge (SAD) Permit for Sanitary
7-08.3(1)C	Pipe Bedding
7-08.3(3)	Trench Backfill
7-08.3(5)	Temporary ##### Sewer Bypass Plan
7-08.3(6)	Pipe Abandonment Plan
7-08.3(6)	CDF Mix Design
7-17	Pipe materials
7-18	Inserta-Tees
8-01.3(1)A	Stormwater Pollution Prevention Plan (SWPPP)

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.

1 The Contractor shall maintain drawings in good condition; protect from deterioration and
2 keep in a clean, dry, and secure location. The Project Red Line Drawings shall not be
3 used for construction purposes.

4
5 The Contractor shall provide to the City, access to Project Red Line Drawings at all times
6 during normal working hours.

7
8 Red line drawings shall be updated on a continuous basis. The Contractor shall bring the
9 up-to-date drawings to a monthly "red line review" meeting where the Engineer will
10 verify the maintenance of the Project Red Line Drawings as part of the condition
11 precedent to approving the monthly progress payment disbursement process. Monthly
12 progress payments to the Contractor may not be processed, if red line information for the
13 involved work to date has not been accurately recorded on the Project Red Line
14 Drawings.

15
16 At the completion of the construction work, prior to pre-final payment, all Project Red
17 Line Drawings shall be submitted to the Engineer.

18
19 A. Project Red Line Drawings:

20
21 Do not permanently conceal any work until required information has been recorded.
22 Mark drawings to show the actual installation where the installation varies from the
23 work as originally shown on the Contract drawings or indicated in the Contract
24 Specifications. Give particular attention to information on concealed elements that
25 would be difficult to measure and record at a later date.

- 26
27 1. Changes and information shall be clearly drawn, described and shown
28 technically correct.
29
30 2. Mark drawings with red erasable pencil.
31
32 3. Record data as soon as possible after obtaining it.
33
34 4. Mark any new information.
35
36 5. Keep accurate measurements of horizontal and vertical locations of
37 underground services and utilities.
38
39 6. Mark any changes made where installation varies from that shown
40 originally, such as, in materials, equipments, locations, alignments,
41 elevations, and any other dimensions of the work.
42
43 7. For any work not demolished, abated, or salvaged, cross out and
44 appropriately annotate "Not Complete".
45

1 8. Indicate revisions to drawings with a “cloud” drawn around the
2 revision and note date the revision(s) was made.

3
4 9. Note Request For Change (RFC), Request For Information (RFI), and
5 similar identification, where applicable.

6
7 B. Format:

8
9 Identify and date each print; include the designation “PROJECT RED LINE
10 DRAWINGS” in a prominent location.

11
12 1. Prints: Organize Red Line Drawings into manageable sets. Include
13 identification on cover sheets.

14
15 2. Identify cover sheets as follows:

- 16 • Specification No.
- 17 • Project Name
- 18 • Date
- 19 • “PROJECT RED LINE DRAWINGS”
- 20 • Name of Engineer
- 21 • Name of Contractor

22
23
24 3. Electronic Copies: Scan full-size (dimension size: 22x34) Project Red
25 Line Drawings and submit, on a CD-R, in pdf format.

26
27 The lump sum Contract price for “Project Red Line Drawings” shall be full pay for all
28 costs associated with, including but not limited to, documenting, revising, updating,
29 maintaining, and submitting red line drawings at the completion of construction work.

30
31 [Note to Engineer: For a lump sum price amount for “Project Red Line Drawings” use a
32 \$\$ amount based upon the size of your project (using a max of \$1,000.00) for your
33 engineers estimate.]

34
35 **1-05.4 Conformity With and Deviations from Plans and Stakes**

36 *Add the following two new sub-sections:*

37
38 **1-05.4(1) Roadway and Utility Surveys**
39 **(October 1, 2005 APWA GSP)**

40
41 The Engineer shall furnish to the Contractor one time only all principal lines, grades, and
42 measurements the Engineer deems necessary for completion of the work. These shall
43 generally consist of one initial set of:

- 44 1. Slope stakes for establishing grading;
- 45 2. Curb grade stakes;
- 46 3. Centerline finish grade stakes for pavement sections wider than 25 feet; and

- 1 4. Offset points to establish line and grade for underground utilities such as water,
2 sewers, and storm drains.
3

4 On alley construction projects with minor grade changes, the Engineer shall provide only
5 offset hubs on one side of the alley to establish the alignment and grade.
6

7 **1-05.4(2) Bridge and Structure Surveys**
8 **(October 1, 2005 APWA GSP)**
9

10 For all structural work such as bridges and retaining walls, the Contractor shall retain as a
11 part of Contractor's organization an experienced team of surveyors.
12

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

- 15 1. Centerline or offsets to centerline of the structure.
16 2. Stations of abutments and pier centerlines.
17 3. A sufficient number of bench marks for levels to enable the Contractor to set
18 grades at reasonably short distances.
19 4. Monuments and control points as shown in the Plans.
20

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

25 Stationing	+.01 foot
26 Alignment	+.01 foot (between successive points)
27 Superstructure Elevations	+.01 foot (from plan elevations)
28 Substructure Elevations	+.05 foot (from plan elevations)

29

30 During the progress of the work, the Contractor shall make available to the Engineer all
31 field books including survey information, footing elevations, cross sections and
32 quantities.
33

34 The Contractor shall be fully responsible for the close coordination of field locations and
35 measurements with appropriate dimensions of structural members being fabricated.
36

37 **1-05.7 Removal of Defective and Unauthorized Work**
38 **(October 1, 2005 APWA GSP)**

39 *Supplement this section with the following:*
40

41 If the Contractor fails to remedy defective or unauthorized work within the time specified
42 in a written notice from the Engineer, or fails to perform any part of the work required by
43 the Contract Documents, the Engineer may correct and remedy such work as may be
44 identified in the written notice, with Contracting Agency forces or by such other means
45 as the Contracting Agency may deem necessary.
46

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

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

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

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

25 **1-05.11 Final Inspection**

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

28 **1-05.11 Final Inspections and Operational Testing** 29 **(October 1, 2005 APWA GSP)**

31 **1-05.11(1) Substantial Completion Date**

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

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

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

6
7 The above process shall be repeated until the Engineer establishes the Substantial
8 Completion Date and the Contractor considers the work physically complete and ready
9 for final inspection.

10 11 **1-05.11(2) Final Inspection and Physical Completion Date**

12
13 When the Contractor considers the work physically complete and ready for final
14 inspection, the Contractor by written notice, shall request the Engineer to schedule a final
15 inspection. The Engineer will set a date for final inspection. The Engineer and the
16 Contractor will then make a final inspection and the Engineer will notify the Contractor
17 in writing of all particulars in which the final inspection reveals the work incomplete or
18 unacceptable. The Contractor shall immediately take such corrective measures as are
19 necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously,
20 diligently, and without interruption until physical completion of the listed deficiencies.
21 This process will continue until the Engineer is satisfied the listed deficiencies have been
22 corrected.

23
24 If action to correct the listed deficiencies is not initiated within 7 days after receipt of the
25 written notice listing the deficiencies, the Engineer may, upon written notice to the
26 Contractor, take whatever steps are necessary to correct those deficiencies pursuant to
27 Section 1-05.7.

28 The Contractor will not be allowed an extension of Contract time because of a delay in
29 the performance of the work attributable to the exercise of the Engineer's right hereunder.

30
31 Upon correction of all deficiencies, the Engineer will notify the Contractor and the
32 Contracting Agency, in writing, of the date upon which the work was considered
33 physically complete. That date shall constitute the Physical Completion Date of the
34 Contract, but shall not imply acceptance of the work or that all the obligations of the
35 Contractor under the contract have been fulfilled.

36 37 **1-05.11(3) Operational Testing**

38
39 It is the intent of the Contracting Agency to have at the Physical Completion Date a
40 complete and operable system. Therefore when the work involves the installation of
41 machinery or other mechanical equipment; street lighting, electrical distribution or signal
42 systems; irrigation systems; buildings; or other similar work it may be desirable for the
43 Engineer to have the Contractor operate and test the work for a period of time after final
44 inspection but prior to the physical completion date. Whenever items of work are listed in
45 the Contract Provisions for operational testing they shall be fully tested under operating
46 conditions for the time period specified to ensure their acceptability prior to the Physical
47 Completion Date. During and following the test period, the Contractor shall correct any

1 items of workmanship, materials, or equipment which prove faulty, or that are not in first
2 class operating condition. Equipment, electrical controls, meters, or other devices and
3 equipment to be tested during this period shall be tested under the observation of the
4 Engineer, so that the Engineer may determine their suitability for the purpose for which
5 they were installed. The Physical Completion Date cannot be established until testing and
6 corrections have been completed to the satisfaction of the Engineer.

7
8 The costs for power, gas, labor, material, supplies, and everything else needed to
9 successfully complete operational testing, shall be included in the unit Contract prices
10 related to the system being tested, unless specifically set forth otherwise in the proposal.

11
12 Operational and test periods, when required by the Engineer, shall not affect a
13 manufacturer's guaranties or warranties furnished under the terms of the Contract.

14
15 Add the following new section:

16
17 **1-05.12(1) One-Year Guarantee Period** (May not be used on FHWA funded projects,
18 use only when you want to include a one-year guarantee)
19 **(March 8, 2013 APWA GSP)**

20
21 The Contractor shall return to the project and repair or replace all defects in workmanship
22 and material discovered within one year after Final Acceptance of the Work. The
23 Contractor shall start work to remedy any such defects within 7 calendar days of
24 receiving Contracting Agency's written notice of a defect, and shall complete such work
25 within the time stated in the Contracting Agency's notice. In case of an emergency,
26 where damage may result from delay or where loss of services may result, such
27 corrections may be made by the Contracting Agency's own forces or another Contractor,
28 in which case the cost of corrections shall be paid by the Contractor. In the event the
29 Contractor does not accomplish corrections within the time specified, the work will be
30 otherwise accomplished and the cost of same shall be paid by the Contractor.

31
32 When corrections of defects are made, the Contractor shall then be responsible for
33 correcting all defects in workmanship and materials in the corrected work for one year
34 after acceptance of the corrections by Contracting Agency.

35
36 This guarantee is supplemental to and does not limit or affect the requirements that the
37 Contractor's work comply with the requirements of the Contract or any other legal rights
38 or remedies of the Contracting Agency.

39
40 **1-05.13 Superintendents, Labor and Equipment of Contractor**
41 **(August 14, 2013 APWA GSP)**

42
43 *Delete the sixth and seventh paragraphs of this section.*

44
45 **1-05.15 Method of Serving Notices**
46 **(March 25, 2009 APWA GSP)**

47 *Revise the second paragraph to read:*

1
2 All correspondence from the Contractor shall be directed to the Project Engineer. All
3 correspondence from the Contractor constituting any notification, notice of protest, notice
4 of dispute, or other correspondence constituting notification required to be furnished
5 under the Contract, must be in paper format, hand delivered or sent via mail delivery
6 service to the Project Engineer's office. Electronic copies such as e-mails or
7 electronically delivered copies of correspondence will not constitute such notice and will
8 not comply with the requirements of the Contract.
9

10 *Add the following new section:*
11

12 **1-05.16 Water and Power**
13 **(October 1, 2005 APWA GSP)**
14

15 The Contractor shall make necessary arrangements, and shall bear the costs for power
16 and water necessary for the performance of the work, unless the Contract includes power
17 and water as a pay item.
18
19
20

SUBMITTAL TRANSMITTAL FORM

(Use on Non-Federal Projects Only)

Project Name

Project Number

Specification No. PW##-####F ES##-####F

ATTN: Construction Division

Date: _____

Submittal Number _____

Specification Number _____

Bid Item No. _____

Submittal Description _____

We are sending you:

Copies	Date	Page	Description

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: _____

1
2

Signature

REFERENCE ONLY

1
2
3

END OF SECTION

REFERENCE ONLY

1 **1-05 CONTROL OF WORK (USE ON PROJECTS USING EBUILDER)**

2
3 **1-05.3 Plans and Working Drawings (Use on Non-Federal Projects Only)**
4 **(January 6, 2015 Tacoma GSP)**

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

6
7 **1-05.3 Submittals**

8
9 The Contractor shall not install materials or equipment, which requires submittals, until
10 reviewed by the Contracting Agency. Late submissions by the Contractor shall not be
11 cause for time extension.

12
13 **Submittals shall be made per Bid Item, rather than per material. The Contractor**
14 **shall be responsible for ensuring that each submittal includes cut sheets and/or**
15 **other information for all pertinent materials necessary to complete the work for**
16 **each Bid Item. It is understood that producing submittals for each Bid Item may**
17 **require multiple submittals of common materials that are associated with more than**
18 **one Bid Item. The Contractor shall also be responsible for producing submittals**
19 **that may only be associated with a Specification Section, not a particular Bid Item.**

20
21 The Contractor shall submit electronic copies of each submittal required by the Contract
22 Documents through the Contracting Agency's web based project management software,
23 e-Builder® (see Section 1-05.19), unless otherwise required in these Special Provisions.
24 This includes, but is not limited to:

- 25 • Shop Drawings/Plans
- 26 • Product Data
- 27 • Samples
- 28 • Reports
- 29 • Material Submittals (Ref. 1-06)
- 30 • Progress Schedules (Ref. 1-08.3)
- 31 • Guarantees/Warranties (Ref. 1-05.10)

32
33 Physical samples shall be delivered with a hardcopy transmittal of the e-Builder®
34 submittal.

35
36 The Engineer will return reviewed submittals through the e-Builder® web based project
37 management software for the Contractor's use.

38
39 **1-05.3(1) Submittal Schedule**

40
41 In conformance with section 1-08.3, the progress schedule shall be submitted and
42 reviewed prior to commencing any work. No delay claim shall be entertained for
43 Contractor's failure to comply.

44
45 No claim will be allowed for damages or extension of time resulting from rejection of a
46 submittal or the requirement of resubmittals as outlined by this section.

The Engineer's review will be completed as quickly as possible, but may require up to ten (10) working days from the date the submittals or resubmittals are received until they are sent to the Contractor. If more than ten (10) working days are required for the Engineer's review of any individual submittal or resubmittal, an extension of time will be considered in accordance with Section 1-08.8.

1-05.3(2) Submittal Procedures

Contractor submittals shall be in accordance with the following:

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

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

Each submittal shall indicate the following:

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

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

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

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

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

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

1 The Engineer's review of drawings and data submitted by the Contractor will cover only
2 general conformity with the Contract drawings and specifications. The Engineer's
3 review of submittals shall not relieve the Contractor from responsibility for errors,
4 omissions, deviations, or responsibility for compliance with the Contract documents.

5
6 Review of a separate item does not constitute review of an assembly in which the item
7 functions.

8
9 When the submittal or resubmittal is marked "REVIEWED" no further correspondence is
10 required. When the submittal is marked "REVIEWED WITH COMMENTS" the
11 Contractor shall comply with any comments on the return submittal.

12 13 **1-05.3(4) Resubmittals**

14
15 When a submittal is marked "REVISE AND RESUBMIT" or "REJECTED," the
16 Contractor shall make the corrections as noted and instructed by the Engineer and
17 resubmit via e-Builder®. The Contractor shall not install material or equipment that has
18 received a review status of "REVISE AND RESUBMIT" or REJECTED".

19
20 When corrected copies are resubmitted, the Contractor shall in writing direct specific
21 attention to all revisions and shall list separately any revision made other than those
22 called for by the Engineer on previous submittals. e-Builder® will assign the resubmittal
23 number of the original submittal followed by a revision number (1, 2, etc.) to indicate the
24 sequence of the resubmittal.

25
26 Each submittal shall have a unique number assigned to it (via e-Builder®).

27
28 The Contractor shall revise returned submittals as required and resubmit until final
29 review is obtained. Any associated progress delay due to the Contractor's need to revise
30 and resubmit is the Contractor's sole responsibility.

31
32 The Contractor shall verify that all exceptions previously noted by the Engineer have
33 been accounted for.

34 35 **1-05.3(5) Submittal Requirements by Section**

36
37 The following is a general summary of submittal requirements. This summary is not
38 inclusive of all submittal requirements and does not relieve the Contractor of their
39 responsibility to provide submittals as noted in subsequent sections of the specifications.
40 The Contractor shall review each bid item and individual section in the applicable
41 provisions or specifications, as noted below, for specific requirements.
42

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7-08.3(6)	CDF Mix Design
7-17	Pipe materials
7-18	Inserta-Tees
8-01.3(1)A	Stormwater Pollution Prevention Plan (SWPPP)

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.

1
2 The Contractor shall provide to the City, access to Project Red Line Drawings at all times
3 during normal working hours.
4

5 Red line drawings shall be updated on a continuous basis. The Contractor shall bring the
6 up-to-date drawings to a monthly "red line review" meeting where the Engineer will
7 verify the maintenance of the Project Red Line Drawings as part of the condition
8 precedent to approving the monthly progress payment disbursement process. Monthly
9 progress payments to the Contractor may not be processed, if red line information for the
10 involved work to date has not been accurately recorded on the Project Red Line
11 Drawings.
12

13 At the completion of the construction work, prior to pre-final payment, all Project Red
14 Line Drawings shall be submitted to the Engineer.
15

16 A. Project Red Line Drawings:
17

18 Do not permanently conceal any work until required information has been recorded.
19 Mark drawings to show the actual installation where the installation varies from the
20 work as originally shown on the Contract drawings or indicated in the Contract
21 specifications. Give particular attention to information on concealed elements that
22 would be difficult to measure and record at a later date.
23

- 24 1. Changes and information shall be clearly drawn, described and shown
25 technically correct.
- 26 2. Mark drawings with red erasable pencil.
- 27 3. Record data as soon as possible after obtaining it.
- 28 4. Mark any new information.
- 29 5. Keep accurate measurements of horizontal and vertical locations of
30 underground services and utilities.
- 31 6. Mark any changes made where installation varies from that shown originally,
32 such as, in materials, equipments, locations, alignments, elevations, and any
33 other dimensions of the work.
- 34 7. For any work not demolished, abated, or salvaged, cross out and appropriately
35 annotate "Not Complete".
- 36 8. Indicate revisions to drawings with a "cloud" drawn around the revision and
37 note date the revision(s) was made.
- 38 9. Note Request For Change (RFC), Request For Information (RFI), and similar
39 identification, where applicable.
40

41 B. Format:
42

43 Identify and date each print; include the designation "PROJECT RED LINE
44 DRAWINGS" in a prominent location.
45

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
3. Electronic Copies: Scan full-size (dimension size: 22x34) Project Red Line Drawings and submit, on a CD-R, in pdf format.

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.

[Note to Engineer: For a lump sum price amount for "Project Red Line Drawings" use a \$\$ amount based upon the size of your project (using a max of \$1,000.00) for your engineers estimate.]

1-05.3(8) Clarifications

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

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

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

1-05.4 Conformity With and Deviations from Plans and Stakes

Add the following two new sub-sections:

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

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

1. Slope stakes for establishing grading;
2. Curb grade stakes;

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

On alley construction projects with minor grade changes, the Engineer shall provide only offset hubs on one side of the alley to establish the alignment and grade.

1-05.4(2) Bridge and Structure Surveys (October 1, 2005 APWA GSP)

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	+.01 foot
Alignment	+.01 foot (between successive points)
Superstructure Elevations	+.01 foot (from plan elevations)
Substructure Elevations	+.05 foot (from plan elevations)

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

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

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

Supplement this section with the following:

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

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

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

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

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

25 **1-05.11 Final Inspection**

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

28 **1-05.11 Final Inspections and Operational Testing** 29 **(October 1, 2005 APWA GSP)**

31 **1-05.11(1) Substantial Completion Date**

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

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

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

6
7 The above process shall be repeated until the Engineer establishes the Substantial
8 Completion Date and the Contractor considers the work physically complete and ready
9 for final inspection.

10 11 **1-05.11(2) Final Inspection and Physical Completion Date**

12
13 When the Contractor considers the work physically complete and ready for final
14 inspection, the Contractor by written notice, shall request the Engineer to schedule a final
15 inspection. The Engineer will set a date for final inspection. The Engineer and the
16 Contractor will then make a final inspection and the Engineer will notify the Contractor
17 in writing of all particulars in which the final inspection reveals the work incomplete or
18 unacceptable. The Contractor shall immediately take such corrective measures as are
19 necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously,
20 diligently, and without interruption until physical completion of the listed deficiencies.
21 This process will continue until the Engineer is satisfied the listed deficiencies have been
22 corrected.

23
24 If action to correct the listed deficiencies is not initiated within 7 days after receipt of the
25 written notice listing the deficiencies, the Engineer may, upon written notice to the
26 Contractor, take whatever steps are necessary to correct those deficiencies pursuant to
27 Section 1-05.7.

28 The Contractor will not be allowed an extension of contract time because of a delay in the
29 performance of the work attributable to the exercise of the Engineer's right hereunder.

30
31 Upon correction of all deficiencies, the Engineer will notify the Contractor and the
32 Contracting Agency, in writing, of the date upon which the work was considered
33 physically complete. That date shall constitute the Physical Completion Date of the
34 Contract, but shall not imply acceptance of the work or that all the obligations of the
35 Contractor under the contract have been fulfilled.

36 37 **1-05.11(3) Operational Testing**

38
39 It is the intent of the Contracting Agency to have at the Physical Completion Date a
40 complete and operable system. Therefore when the work involves the installation of
41 machinery or other mechanical equipment; street lighting, electrical distribution or signal
42 systems; irrigation systems; buildings; or other similar work it may be desirable for the
43 Engineer to have the Contractor operate and test the work for a period of time after final
44 inspection but prior to the physical completion date. Whenever items of work are listed in
45 the Contract Provisions for operational testing they shall be fully tested under operating
46 conditions for the time period specified to ensure their acceptability prior to the Physical
47 Completion Date. During and following the test period, the Contractor shall correct any

1 items of workmanship, materials, or equipment which prove faulty, or that are not in first
2 class operating condition. Equipment, electrical controls, meters, or other devices and
3 equipment to be tested during this period shall be tested under the observation of the
4 Engineer, so that the Engineer may determine their suitability for the purpose for which
5 they were installed. The Physical Completion Date cannot be established until testing and
6 corrections have been completed to the satisfaction of the Engineer.

7
8 The costs for power, gas, labor, material, supplies, and everything else needed to
9 successfully complete operational testing, shall be included in the unit Contract prices
10 related to the system being tested, unless specifically set forth otherwise in the proposal.

11
12 Operational and test periods, when required by the Engineer, shall not affect a
13 manufacturer's guaranties or warranties furnished under the terms of the Contract.

14
15 *Add the following new section:*

16
17 **1-05.12(1) One-Year Guarantee Period** (Use on non-FHWA projects only, if you want
18 to include a one-year guarantee)
19 **(March 8, 2013 APWA GSP)**

20
21 The Contractor shall return to the project and repair or replace all defects in workmanship
22 and material discovered within one year after Final Acceptance of the Work. The
23 Contractor shall start work to remedy any such defects within 7 calendar days of
24 receiving Contracting Agency's written notice of a defect, and shall complete such work
25 within the time stated in the Contracting Agency's notice. In case of an emergency,
26 where damage may result from delay or where loss of services may result, such
27 corrections may be made by the Contracting Agency's own forces or another Contractor,
28 in which case the cost of corrections shall be paid by the Contractor. In the event the
29 Contractor does not accomplish corrections within the time specified, the work will be
30 otherwise accomplished and the cost of same shall be paid by the Contractor.

31
32 When corrections of defects are made, the Contractor shall then be responsible for
33 correcting all defects in workmanship and materials in the corrected work for one year
34 after acceptance of the corrections by Contracting Agency.

35
36 This guarantee is supplemental to and does not limit or affect the requirements that the
37 Contractor's work comply with the requirements of the Contract or any other legal rights
38 or remedies of the Contracting Agency.

39
40 **1-05.13 Superintendents, Labor and Equipment of Contractor**
41 **(August 14, 2013 APWA GSP)**

42
43 *Delete the sixth and seventh paragraphs of this section.*

44
45 **1-05.15 Method of Serving Notices**
46 **(March 25, 2009 APWA GSP)**

47 *Revise the second paragraph to read:*

1
2 All correspondence from the Contractor shall be directed to the Project Engineer. All
3 correspondence from the Contractor constituting any notification, notice of protest, notice
4 of dispute, or other correspondence constituting notification required to be furnished
5 under the Contract, must be in paper format, hand delivered or sent via mail delivery
6 service to the Project Engineer's office. Electronic copies such as e-mails or
7 electronically delivered copies of correspondence will not constitute such notice and will
8 not comply with the requirements of the Contract.

9
10 *Add the following new section:*

11
12 **1-05.16 Water and Power**
13 **(October 1, 2005 APWA GSP)**

14
15 The Contractor shall make necessary arrangements, and shall bear the costs for power
16 and water necessary for the performance of the work, unless the Contract includes power
17 and water as a pay item.

18
19 *Add the following new section:*

20
21 **1-05.19 Project Management Communications**
22 **(January 6, 2015)**

23
24 **1-05.19(1) Summary**

25
26 The Contractor shall use the Internet web based project management communications
27 tool, e-Builder® ASP software, and protocols included in that software during this
28 project. The use of project management communications as herein described does not
29 replace or change any contractual responsibilities of the participants.

30
31 User registration, electronic and computer equipment, and internet connections are the
32 responsibility of each project participant.

33
34 Nothing in this specification or the subsequent communications supersedes the parties'
35 obligations and rights for copyright or document ownership as established by the
36 Contract Documents. The use of CAD files, processes or design information distributed
37 in this system is intended only for the project specified herein.

38
39 **1-05.19(2) Training & Support**

40
41 A group training session scheduled by the Contracting Agency will be provided for the
42 Contractor at a City of Tacoma training facility. The training session duration is
43 generally 4 hours. e-Builder® users are required to attend the scheduled training sessions
44 that they are assigned to. Requests for specific scheduled classes will be on a first come
45 first served basis by availability.

46
47 A draft agenda of the training session can be found at the following website:

1 [https://app.e-builder.net/public/PublicFolderFiles.aspx?noSplitter=1&FolderID={](https://app.e-builder.net/public/PublicFolderFiles.aspx?noSplitter=1&FolderID={5a487422-2ae2-4090-8373-4a5c6f47d390})
2 [5a487422-2ae2-4090-8373-4a5c6f47d390}](https://app.e-builder.net/public/PublicFolderFiles.aspx?noSplitter=1&FolderID={5a487422-2ae2-4090-8373-4a5c6f47d390}).
3

4 Companies may also obtain group training from e-Builder® at their own expense, please
5 contact e-Builder® for availability and cost. e-Builder® will provide on-going support
6 through on-line help files.
7

8 **1-05.19(3) Project Archive** 9

10 The archive shall be available to each team member at a nominal cost. The archive set
11 will contain only documents that the firm has security access to during construction. All
12 legal rights in any discovery process are retained. Archive material shall be ordered from
13 e-Builder®.
14

15 **1-05.19(4) Authorized Users** 16

17 Access to the web site will be by individuals who are licensed users.
18

- 19 1. The City will provide the Contractor with up to two (2) licensed user accounts for
20 the duration of the project. The sharing of user accounts is prohibited.
- 21 2. Additional licensed user accounts may be purchased from e-Builder®.
- 22 3. Authorized users will be contacted via e-mail with a temporary user password.
23 The user shall update the required information at their first log-in.
- 24 4. Individuals shall be responsible for the proper use of their passwords and access
25 to data as agents of the company in which they are employed.
- 26 5. Only entities with a direct Contract with the Contracting Agency will be allowed
27 to be an authorized user.
28

29 **1-05.19(5) Communications** 30

31 The use of fax, email and courier communication for this project is discouraged in favor
32 of using e-Builder® to send messages. Communication functions are as follows:
33

- 34 1. Document Integrity and Revisions:
 - 35 a. Documents, comments, drawings and other data posted to the system
36 remain a permanent component of the project. The originator, time and
37 date are recorded for each document submitted to the system. Submitting a
38 new document or record with a unique ID, originator, and time stamp is
39 the method used to make modifications or corrections.
 - 40 b. The system identifies revised or superseded documents and their
41 predecessors.
 - 42 c. Server or Client side software enhancements during the life of the project
43 will not alter or restrict the content of data published by the system.
44 System upgrades will not affect access to older documents or software.
- 45 2. Document Security: The system provides a method for communication of
46 documents. Documents allow security group assignment to respect the
47 contractual parties' communication with the exception that the Contracting

Agency Administrative Users have access to everything. **DO NOT POST PRIVATE OR CONFIDENTIAL ITEMS IN THE DATABASE.**

3. Document Integration: Documents of various types are able to be logically related to one another. For example, requests for information (RFIs), inspector's daily field reports (IDRs), supplemental sketches and photographs can be referenced as related records.
4. Reporting: The system is capable of generating reports for work in progress, and logs for each document type. Summary reports generated by the system are available for team members and are subject to each user's security settings.
5. Notifications and Distribution: Document distribution to project members may be accomplished both within the e-Builder® system and via email depending on user settings. Project document distribution to parties outside of the project communication system may be accomplished by secure email of outgoing documents and attachments, readable by a standard email client.
6. Except for paper documents which require original signatures and large format documents (greater than 11 x 17 inches), all other documents shall be submitted by transmission in electronic form to the e-Builder® web site by licensed users.
 - a. Large format documents may be transmitted by hardcopy and electronically via e-Builder® as otherwise agreed, or as otherwise noted in the specifications.
 - b. Document Types that shall be transmitted via e-Builder® include, but are not limited to:
 - i. Request for Information (RFI)
 - ii. Change Order (CO)
 - iii. Submittals
 - iv. Transmittals, including record of documents and materials delivered in hard copy
 - v. Meeting Minutes
 - vi. Application for Payments
 - vii. Review Comments
 - viii. Inspector's Daily Field Reports (IDR)
 - ix. Construction Photographs
 - x. Drawings
 - xi. Supplemental Sketches
 - xii. Schedules
 - xiii. Specifications

1-05.19(6) Record Keeping

1. The Contracting Agency and their representatives and the Contractor shall respond to electronic documents received from e-Builder®, and consider them as if received in paper document form.
2. The Contracting Agency and their representatives and the Contractor reserves the right to reply or respond through e-Builder® to documents actually received in paper document form.
3. The following are examples of paper documents which will require an original signature:

- a. Contract
- b. Change Orders
- c. Application & Certificates for Payment
- d. Force Account and Protested Force Account forms

1-05.19(7) Minimum Equipment Requirements

In addition to other requirements specified in this Section, the Contractor shall be responsible for providing suitable computers, necessary software and internet access to utilize the e-builder® program. Furthermore, Microsoft Word, Microsoft Excel and Adobe Acrobat Reader (compatible with current versions) are required. Contact e-Builder® for any additional equipment requirements and support at the following website: <http://www.e-builder.net/services/support>.

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

END OF SECTION

1-06 CONTROL OF MATERIAL

**1-06.1 Approval of Materials Prior To Use (Use on Non-Federal Projects Only)
(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) (Use on Non-Federal Projects Only)

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) (Use on Non-Federal Projects Only)

This section is deleted in its entirety:

**1-06.6 Recycled Materials (Must use on transportation projects, must also include 1-02.6(1) and 1-03.1(1))
(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

1 material and aggregates from concrete returned to the supplier). The Contractor's report
2 shall be provided on DOT form 350-075 Recycled Materials Reporting.
3

4
5

END OF SECTION

REFERENCE ONLY

1
2 **1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC**

3
4 **1-07.1 Laws to be Observed**
5 **(October 1, 2005 APWA GSP)**

6 *Supplement this section with the following:*

7
8 In cases of conflict between different safety regulations, the more stringent regulation
9 shall apply.

10
11 The Washington State Department of Labor and Industries shall be the sole and
12 paramount administrative agency responsible for the administration of the provisions of
13 the Washington Industrial Safety and Health Act of 1973 (WISHA).

14
15 The Contractor shall maintain at the project site office, or other well known place at the
16 project site, all articles necessary for providing first aid to the injured. The Contractor
17 shall establish, publish, and make known to all employees, procedures for ensuring
18 immediate removal to a hospital, or doctor's care, persons, including employees, who
19 may have been injured on the project site. Employees should not be permitted to work on
20 the project site before the Contractor has established and made known procedures for
21 removal of injured persons to a hospital or a doctor's care.

22
23 The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of
24 the Contractor's plant, appliances, and methods, and for any damage or injury resulting
25 from their failure, or improper maintenance, use, or operation. The Contractor shall be
26 solely and completely responsible for the conditions of the project site, including safety
27 for all persons and property in the performance of the work. This requirement shall apply
28 continuously, and not be limited to normal working hours. The required or implied duty
29 of the Engineer to conduct construction review of the Contractor's performance does not,
30 and shall not, be intended to include review and adequacy of the Contractor's safety
31 measures in, on, or near the project site.

32
33 **1-07.2 State Taxes** (Use only on non-Federal Projects when using 2014 Standard
34 Specifications)

35 **(January 6, 2015 TACOMA GSP)**

36 *Supplement this section with the following:*

37
38 Washington State Department of Revenue Rules 170 and 171 shall apply as shown in the
39 Proposal and per Section 1-07.2 of the WSDOT State Amendments to the Standard
40 Specifications.

41
42 **1-07.2 State Taxes** (Use only on non-Federal Projects when using 2016 Standard
43 Specifications)

44 **(January 6, 2015 TACOMA GSP)**

45 *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 State Taxes (Use only on Federal Projects)

Delete this section, including its sub-sections, in its entirety and replace it with the following:

**1-07.2 State Tax
(June 27, 2011 APWA GSP)**

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Contracting Agency will pay the retained percentage (or release the Contract Bond if a FHWA-funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.051). The Contracting Agency may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

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

1 Washington; water mains and their appurtenances; sanitary sewers and sewage disposal
2 systems unless such sewers and disposal systems are within, and a part of, a street or road
3 drainage system; telephone, telegraph, electrical power distribution lines, or other
4 conduits or lines in or above streets or roads, unless such power lines become a part of a
5 street or road lighting system; and installing or attaching of any article of tangible
6 personal property in or to real property, whether or not such personal property becomes a
7 part of the realty by virtue of installation.

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

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

20 **1-07.2(3) Services**

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

26 **1-07.9 Wages**

28 **1-07.9(5) Required Documents** (Use only on Non-Federal Projects) 29 **(March 1, 2004 Tacoma GSP)**

30 *The first sentence of the third paragraph is revised to read:*

32 Weekly certified payrolls shall be submitted for the Contractor and all lower tier
33 subcontractors or agents.

35 *This section is supplemented with the following:*

37 Where fringe benefits are paid in cash, certified payrolls shall include the fringe benefit
38 dollar amount paid to each employee for each employee classification.

40 Where fringe benefits are paid into approved plans, funds, or programs, the amount of the
41 fringe benefits shall be identified in the "Benefit Distribution" section of the Certified
42 Payroll Affirmation form.

44 **1-07.11 Requirements for Nondiscrimination** (Option A)

45 (Only on Federal Projects use WSDOT GSP 1-07.11.OPT2.GR! and 1-07.11.OPT6.GR!
46 when WSDOT Local Programs has given you a determination of "No COA DBE goals")

1 **1-07.11 Requirements for Nondiscrimination (Option B)**

2 (Insert WSDOT GSP 1-07.11.OPT3.GR1 when WSDOT Local Programs has given you
3 a UDBE condition of Award (COA) goal for your project)

6 **1-07.11 Requirements for Nondiscrimination (Use on State funded Connecting
7 Washington, Bike/Ped, and Safe Routes to School projects \$500,000 and over that are
8 issued through WSDOT Local Programs Office)
9 (July 18, 2016 APWA GSP, Option C)**

11 *Supplement this section with the following:*

13 **Voluntary Minority, Small, Veteran and Women's Business Enterprise
14 (MSVWBE) Participation**

16 **General Statement**

17 Voluntary goals for minority, small, veteran and women business enterprises
18 are included in this Contract. The Contractor is encouraged to utilize
19 MSVWBEs in accordance with these Specifications, RCW 39.19 and Executive
20 Order 13-01 (issued by the Governor of Washington on May 10, 2013).

22 No preference will be included in the evaluation of the Contractor's Proposal or
23 Bid; no minimum level of MSVWBE participation is required as a condition of
24 award or completion of the Contract; and a Proposal or Bid will not be rejected
25 or considered non-responsive on that basis.

27 The goals are voluntary and outreach efforts to provide MSVWBEs maximum
28 practicable opportunities are encouraged.

30 **Non-Discrimination**

31 Contractors shall not create barriers to open and fair opportunities for all
32 businesses, including MSVWBEs, to participate in the Work on this Contract.
33 This includes the opportunity to compete for subcontracts as sources of supplies,
34 equipment, construction or services.

36 The Contractor shall make Voluntary MSVWBE Participation a part of all
37 subcontracts and agreements entered into as a result of this Contract.

39 **Voluntary MSVWBE Participation Goals**

40 Goals for voluntary MSVWBE participation have been established as a
41 percentage of Contractor's total Bid amount.

43 The Contracting Agency has established the following voluntary goals:

45	Minority	10%
46	Small	5%
47	Veteran	5%
48	Women	6%

1 Amounts paid to an MSVWBE will be credited to every voluntary goal in which
2 they are eligible. In other words participation may be credited for participation
3 in more than one category. If the Contractor is a MSVWBE their Work will be
4 credited to the voluntary goals in which they are eligible.
5

6 **Definitions**

7 **Minority Business Enterprise (MBE)** – A minority owned business
8 meeting the requirements of RCW 39.19 and WAC 326-20 and certified by
9 the Washington State Office of Minority & Women's Business Enterprises.
10

11 **Small Business** – A business meeting the Washington State requirements
12 for a "Small business", "Minibusiness" or "Microbusiness as defined in
13 RCW 39.26.010 and included on the WSDOT Office of Equal Opportunity
14 list of Small Businesses at
15 <http://www.wsdot.wa.gov/equalopportunity/bddirectory.htm>
16

17 **Veteran Business** – A veteran owned business meeting the requirements
18 of RCW 43.60A.010 and included on the WSDOT Office of Equal
19 Opportunity list of Veteran Businesses at
20 <http://www.wsdot.wa.gov/equalopportunity/bddirectory.htm>
21

22 **Women Business Enterprise (WBE)** – A women owned business
23 meeting the requirements of RCW 39.19 and WAC 326-20 and certified by
24 the Washington State Office of Minority & Women's Business Enterprises.
25

26 **MSVWBE Inclusion Plan**

27 A MSVWBE Inclusion Plan shall be submitted to the Engineer prior to the start
28 of Work on the project. The plan is submitted for the Contracting Agency's
29 information. Approval of the plan is not required; an incomplete plan will be
30 returned for correction and resubmittal. The plan shall include the information
31 identified in the guidelines at
32 <http://www.wsdot.wa.gov/EqualOpportunity/MSVWBE.htm>.
33

34 **MSVWBE Reporting**

35 An end of project Report of Amounts Paid to MSVWBEs shall be submitted to
36 the Engineer after Physical Completion of the Contract. The end of project
37 report is due 20 calendar days after the physical completion of the project has
38 been issued.
39

40 The end of project report shall include payments to all eligible businesses
41 regardless of their listing on the MSVWBE Inclusion Plan. If the Contractor is a
42 MSVWBE the amounts paid by the Contracting Agency for Work performed by
43 the Contractor shall also be reported.
44

45 **MSVWBE Payment**

46 All costs for implementation of the requirements for Voluntary MSVWBE
47 Participation shall be included in the associated items of Contract Work.
48
49

1-07.15 Temporary Water Pollution/Erosion Control (Use only on Non-Federal Projects)
(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 (Use on Non-Federal Projects only)
(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 term "hazardous materials," as used in this Specification, is 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

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

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

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

- 16 1. Placing materials or equipment in staging or storage areas.
- 18 2. Refueling, washing, or maintaining equipment.
- 20 3. Stockpiling contaminated materials.

22 **SPCC Plan Element Requirements**

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

- 25 1. Responsible Personnel
26 Identify the name(s), title(s), and contact information, including a 24/7 emergency
27 contact number, for the personnel responsible for implementing and updating the
28 plan, including all spill responders.
- 30 2. Spill Reporting
31 List the names and telephone numbers of the Federal, State, and local agencies the
32 Contractor shall notify in the event of a spill. The City of Tacoma contact will be
33 the Wastewater Treatment Plant Operations number at 253.591.5595 and the City
34 Source Control Spill Response number at 253.502.2222.
- 36 3. Project and Site Information
37 Describe the following items:
 - 38 A. The project Work.
 - 39 B. The site location and boundaries.
 - 40 C. The drainage pathways from the site, including both stormwater and sanitary
41 conveyance pathways.
 - 42 D. Nearby waterways and sensitive areas and their distances from the site.
- 44 4. Potential Spill Sources
45 Describe each of the following for all potentially hazardous materials brought or
46 generated on-site (including materials used for equipment operation, refueling,
47 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 (Use on Federal and Non-Federal Projects)

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/mailling, 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/mailling.

The newsletter/mailling 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 (Use on Federal and Non-Federal Projects) (March 7, 2017 Tacoma GSP)

The first paragraph is supplemented with the following:

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

1 their work with such adjustment, relocation, or replacement of utility work. This may
2 require the Contractor to phase their work in a manner that will allow for the utility work.

3
4 The Contractor shall coordinate their work with all utilities and other organizations,
5 which have to adjust or revise their facilities within the project area. These may include,
6 but are not limited to:

- 7
- 8 • City of Tacoma Light Division, Contact: Kevin Kelley, phone: (253) 502-8229
- 9 • City of Tacoma Water Division, Contact: Kimberly Baard, phone: (253) 396-3317
- 10 • City of Tacoma Traffic Division, Signal/Streetlight Shop, phone: (253) 591-5287
- 11 • CLICK! Network, Contact: Ken Mathes, phone: (253) 502-8851
- 12 • Puget Sound Energy, Contact: Mike Klapperich, Electric, phone: (253) 313-3790
- 13 OR Cheryl Paras, Gas, phone: (253) 476-6300
- 14 • CenturyLink, Contact: Eric Charity, phone: (206) 733-8871
- 15 • Comcast, Contact: Todd Gallant, phone: (253) 878-4955
- 16 • AT&T Broadband Information Services, Contact: Dan McGeough, phone: (425)
- 17 896-9830
- 18 • Level 3 Communications, Level3NetworkRelocations@Level3.com
- 19 • One-Number Locator Service "One Call System" telephone **1-800-424-5555**
- 20

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

28
29 Garbage, recycling, and yard waste pick up within the project limits is on **(insert day, info**
30 **on web)**

31 32 **1-07.18 Public Liability and Property Damage Insurance**

33 [Note to Engineer: For non-Fed Aid Projects use the Insurance Form on Purchasing
34 Website and assure the applicable insurances and limits are included in Specifications.
35 The Standards Committee will be working on making the limits match the new Risk
36 Management Word Document over the next few months (6/2017) - Use 1-07.18 for
37 standard insurance requirements and coverage. If you need higher CG or Auto limits,
38 also use GSP 1-07.18(5)F. If you need specialty coverages, see other 1-07.18 GSPs.
39 Consult the City's Risk Manager to determine which GSPs to use.]

40 *Delete this section in its entirety, and replace it with the following:*

41
42 **1-07.18 Insurance** (Use on Non-Federal Projects only – Do not use on Small Works
43 Roster Projects)

44
45 **(August 15, 2011 Tacoma GSP)**

1
2 **1-07.18(1) General Requirements**
3

- 4 A. The Contractor shall obtain the insurance described in this section from
5 insurers approved by the State Insurance Commissioner pursuant to RCW
6 Title 48. The insurance must be provided by an insurer with a rating of A-:
7 VII or higher in the A.M. Best's Key Rating Guide, which is licensed to do
8 business in the state of Washington (or issued as a surplus line by a
9 Washington Surplus lines broker). The Contracting Agency reserves the right
10 to approve or reject the insurance provided, based on the insurer (including
11 financial condition), terms and coverage, the Certificate of Insurance, and/or
12 endorsements.
13
- 14 B. The Contractor shall keep this insurance in force during the term of the
15 contract and for thirty (30) days after the Physical Completion date, unless
16 otherwise indicated (see C. below).
17
- 18 C. If any insurance policy is written on a claims made form, its retroactive date,
19 and that of all subsequent renewals, shall be no later than the effective date of
20 this Contract. The policy shall state that coverage is claims made, and state
21 the retroactive date. Claims-made form coverage shall be maintained by the
22 Contractor for a minimum of 36 months following the Final Completion or
23 earlier termination of this contract, and the Contractor shall annually provide
24 the Contracting Agency with proof of renewal. If renewal of the claims made
25 form of coverage becomes unavailable, or economically prohibitive, the
26 Contractor shall purchase an extended reporting period ("tail") or execute
27 another form of guarantee acceptable to the Contracting Agency to assure
28 financial responsibility for liability for services performed.
29
- 30 D. The insurance policies shall contain a "cross liability" provision.
31
- 32 E. The Contractor's and all subcontractors' insurance coverage shall be primary
33 and non-contributory insurance as respects the Contracting Agency's
34 insurance, self-insurance, or insurance pool coverage.
35
- 36 F. The Contractor shall provide the Contracting Agency and all Additional
37 Insureds with written notice of any policy cancellation or material change to
38 the policy, within two business days of their receipt of such notice.
39
- 40 G. Upon request, the Contractor shall forward to the Contracting Agency a full
41 and certified copy of the insurance policy(s).
42
- 43 H. The Contractor shall not begin work under the contract until the required
44 insurance has been obtained and approved by the Contracting Agency.
45

1 I. Failure on the part of the Contractor to maintain the insurance as required
2 shall constitute a material breach of contract, upon which the Contracting
3 Agency may, after giving five business days notice to the Contractor to
4 correct the breach, immediately terminate the contract or, at its discretion,
5 procure or renew such insurance and pay any and all premiums in connection
6 therewith, with any sums so expended to be repaid to the Contracting Agency
7 on demand, or at the sole discretion of the Contracting Agency, offset against
8 funds due the Contractor from the Contracting Agency.

9
10 J. All costs for insurance shall be incidental to and included in the unit or lump
11 sum prices of the contract and no additional payment will be made.

12 13 **1-07.18(2) Additional Insured**

14
15 All insurance policies, with the exception of Professional Liability and Workers
16 Compensation, shall name the following listed entities as additional insured(s):

- 17 • the Contracting Agency and its officers, elected officials, employees, agents,
18 and volunteers
- 19 • **\$\$\$1\$**
- 20 • **\$\$\$2\$**
- 21 • **\$\$\$3\$**

22 The above-listed entities shall be additional insured(s) for the full available limits of
23 liability maintained by the Contractor, whether primary, excess, contingent or otherwise,
24 irrespective of whether such limits maintained by the Contractor are greater than those
25 required by this Contract, and irrespective of whether the Certificate of Insurance
26 provided by the Contractor pursuant to 1-07.18(3) describes limits lower than those
27 maintained by the Contractor.

28 29 **1-07.18(3) Subcontractors**

30
31 Contractor shall ensure that each subcontractor of every tier obtains and maintains at a
32 minimum the insurance coverages listed in 1-07.18(5)A and 1-07.18(5)B. Upon request
33 of the Contracting Agency, the Contractor shall provide evidence of such insurance.

34 35 **1-07.18(4) Evidence of Insurance**

36
37 The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and
38 endorsements for each policy of insurance meeting the requirements set forth herein
39 when the Contractor delivers the signed Contract for the work. The certificate and
40 endorsements must conform to the following requirements:

- 41 1. An ACORD certificate or a form determined by the Contracting Agency to be
42 equivalent.
- 43 2. Copies of all endorsements naming Contracting Agency and all other entities
44 listed in 1-07.18(2) as Additional Insured(s), showing the policy number. The
45 Contractor may submit a copy of any blanket additional insured clause from
46 its policies instead of a separate endorsement. A statement of additional

- insured status on an ACORD Certificate of Insurance shall not satisfy this requirement.
3. Any other amendatory endorsements to show the coverage required herein.

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Providing coverage in these stated minimum limits shall not be construed to relieve the Contractor from liability in excess of such limits. All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor.

1-07.18(5)A Commercial General Liability

A policy of Commercial General Liability Insurance, including:

- Per project aggregate
- Premises/Operations Liability
- Products/Completed Operations – for a period of one year following final acceptance of the work.
- Personal/Advertising Injury
- Contractual Liability
- Independent Contractors Liability
- Stop Gap / Employers' Liability
- Explosion, Collapse, or Underground Property Damage (XCU)
- Blasting (only required when the Contractor's work under this Contract includes exposures to which this specified coverage responds)

Such policy must provide the following minimum limits:

- | | |
|-------------|---|
| \$1,000,000 | Each Occurrence |
| \$2,000,000 | General Aggregate |
| \$1,000,000 | Products & Completed Operations Aggregate |
| \$1,000,000 | Personal & Advertising Injury, each offence |

Stop Gap / Employers' Liability

- | | |
|-------------|-------------------------|
| \$1,000,000 | Each Accident |
| \$1,000,000 | Disease - Policy Limit |
| \$1,000,000 | Disease - Each Employee |

1-07.18(5)B Automobile Liability

Automobile Liability for owned, non-owned, hired, and leased vehicles, with an MCS 90 endorsement and a CA 9948 endorsement attached if "pollutants" are to be transported. Such policy(ies) must provide the following minimum limit:

\$1,000,000	combined single limit
-------------	-----------------------

1 **1-07.18(5)C Workers' Compensation**

2
3 The Contractor shall comply with Workers' Compensation coverage as required by the
4 Industrial Insurance laws of the state of Washington.

5
6 **1-07.18 Public Liability and Property Damage Insurance (Use on Federal Projects**
7 **only)**

8 *Delete this section in its entirety, and replace it with the following:*

9
10 **1-07.18 Insurance**
11 **(January 4, 2016 APWA GSP)**

12
13 **1-07.18(1) General Requirements**

- 14
15 A. The Contractor shall procure and maintain the insurance described in all subsections
16 of section 1-07.18 of these Special Provisions, from insurers with a current A. M.
17 Best rating of not less than A-: VII and licensed to do business in the State of
18 Washington. The Contracting Agency reserves the right to approve or reject the
19 insurance provided, based on the insurer's financial condition.
20
21 B. The Contractor shall keep this insurance in force without interruption from the
22 commencement of the Contractor's Work through the term of the Contract and for
23 thirty (30) days after the Physical Completion date, unless otherwise indicated below.
24
25 C. If any insurance policy is written on a claims made form, its retroactive date, and that
26 of all subsequent renewals, shall be no later than the effective date of this
27 Contract. The policy shall state that coverage is claims made, and state the
28 retroactive date. Claims-made form coverage shall be maintained by the Contractor
29 for a minimum of 36 months following the Completion Date or earlier termination of
30 this Contract, and the Contractor shall annually provide the Contracting Agency with
31 proof of renewal. If renewal of the claims made form of coverage becomes
32 unavailable, or economically prohibitive, the Contractor shall purchase an extended
33 reporting period ("tail") or execute another form of guarantee acceptable to the
34 Contracting Agency to assure financial responsibility for liability for services
35 performed.
36
37 D. The Contractor's Automobile Liability, Commercial General Liability and Excess or
38 Umbrella Liability insurance policies shall be primary and non-contributory insurance
39 as respects the Contracting Agency's insurance, self-insurance, or self-insured pool
40 coverage. Any insurance, self-insurance, or self-insured pool coverage maintained
41 by the Contracting Agency shall be excess of the Contractor's insurance and shall
42 not contribute with it.
43
44 E. The Contractor shall provide the Contracting Agency and all additional insureds with
45 written notice of any policy cancellation, within two business days of their receipt of
46 such notice.
47
48 G. The Contractor shall not begin work under the Contract until the required insurance
49 has been obtained and approved by the Contracting Agency
50

1 H. Failure on the part of the Contractor to maintain the insurance as required shall
2 constitute a material breach of contract, upon which the Contracting Agency may,
3 after giving five business days' notice to the Contractor to correct the breach,
4 immediately terminate the Contract or, at its discretion, procure or renew such
5 insurance and pay any and all premiums in connection therewith, with any sums so
6 expended to be repaid to the Contracting Agency on demand, or at the sole
7 discretion of the Contracting Agency, offset against funds due the Contractor from
8 the Contracting Agency.
9

10 I. All costs for insurance shall be incidental to and included in the unit or lump sum
11 prices of the Contract and no additional payment will be made.
12

13 **1-07.18(2) Additional Insured**

14
15 All insurance policies, with the exception of Workers Compensation, and of Professional
16 Liability and Builder's Risk (if required by this Contract) shall name the following listed
17 entities as additional insured(s) using the forms or endorsements required herein:

- 18 ■ the Contracting Agency and its officers, elected officials, employees, agents, and
19 volunteers
- 20 ■ **\$\$\$1\$\$**
- 21 ■ **\$\$\$2\$\$**
- 22 ■ **\$\$\$3\$\$**

23 The above-listed entities shall be additional insured(s) for the full available limits of
24 liability maintained by the Contractor, irrespective of whether such limits maintained by
25 the Contractor are greater than those required by this Contract, and irrespective of
26 whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4)
27 describes limits lower than those maintained by the Contractor.
28

29 For Commercial General Liability insurance coverage, the required additional insured
30 endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing
31 operations and CG 20 37 10 01 for completed operations.
32

33 **1-07.18(3) Subcontractors**

34
35 The Contractor shall cause each Subcontractor of every tier to provide insurance
36 coverage that complies with all applicable requirements of the Contractor-provided
37 insurance as set forth herein, except the Contractor shall have sole responsibility for
38 determining the limits of coverage required to be obtained by Subcontractors.
39

40 The Contractor shall ensure that all Subcontractors of every tier add all entities listed in
41 1-07.18(2) as additional insureds, and provide proof of such on the policies as required
42 by that section as detailed in 1-07.18(2) using an endorsement as least as broad as ISO
43 CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.
44

45 Upon request by the Contracting Agency, the Contractor shall forward to the Contracting
46 Agency evidence of insurance and copies of the additional insured endorsements of
47 each Subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.
48

1-07.18(4) Verification of Coverage

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand such verification of coverage with these insurance requirements or failure of Contracting Agency to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1-07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.
3. Any other amendatory endorsements to show the coverage required herein.
4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency a full and certified copy of the insurance policy(s). If Builders Risk insurance is required on this Project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the work.

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Contractor's maintenance of insurance, its scope of coverage, and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Contracting Agency's recourse to any remedy available at law or in equity.

All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor. In the event an additional insured incurs a liability subject to any policy's deductibles or self-insured retention, said deductibles or self-insured retention shall be the responsibility of the Contractor.

1-07.18(5)A Commercial General Liability

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract. There shall be no exclusion for liability arising from explosion, collapse or underground property damage.

1
2 The Commercial General Liability insurance shall be endorsed to provide a per project
3 general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.
4

5 Contractor shall maintain Commercial General Liability Insurance arising out of the
6 Contractor's completed operations for at least three years following Substantial
7 Completion of the Work.
8

9 Such policy must provide the following minimum limits:

10	\$1,000,000	Each Occurrence
11	\$2,000,000	General Aggregate
12	\$2,000,000	Products & Completed Operations Aggregate
13	\$1,000,000	Personal & Advertising Injury each offence
14	\$1,000,000	Stop Gap / Employers' Liability each accident

15
16 **1-07.18(5)B Automobile Liability**

17
18 Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall
19 be written on a coverage form at least as broad as ISO form CA 00 01. If the work
20 involves the transport of pollutants, the automobile liability policy shall include MCS 90
21 and CA 99 48 endorsements.
22

23 Such policy must provide the following minimum limit:

24	\$1,000,000	Combined single limit each accident
----	-------------	-------------------------------------

25
26 **1-07.18(5)C Workers' Compensation**

27
28 The Contractor shall comply with Workers' Compensation coverage as required by the
29 Industrial Insurance laws of the state of Washington.
30

31 [Note to Engineer: Consult the City's Risk Manager to determine if this insurance is
32 needed. This GSP may be used on Federal Projects.]
33

34 **1-07.18(5)D Excess or Umbrella Liability**
35 **(January 4, 2016 APWA GSP)**

36
37 The Contractor shall provide Excess or Umbrella Liability insurance with limits of not
38 less than **\$51\$** million each occurrence and annual aggregate. This excess or umbrella
39 liability coverage shall be excess over and as least as broad in coverage as the
40 Contractor's Commercial General and Auto Liability insurance
41

42 All entities listed under 1-07.18(2) of these Special Provisions shall be named as
43 additional insureds on the Contractor's Excess or Umbrella Liability insurance policy.
44

45 This requirement may be satisfied instead through the Contractor's primary Commercial
46 General and Automobile Liability coverages, or any combination thereof that achieves
47 the overall required limits of insurance.
48

1 **1-07.18(5)E LHWCA Insurance**
2 **(January 4, 2016 APWA GSP)**

3 [Note to Engineer: Use this GSP if Contractor and/or subcontractors will be working on,
4 over, or adjacent to, or contributing to commerce on, "Navigable Waters of the United
5 States. Consult the City's Risk Manager to determine if this insurance is needed. This
6 GSP may be used on Federal Projects.]

7
8 If this Contract involves work on or adjacent to Navigable Waters of the United States,
9 the Contractor shall procure and maintain insurance coverage in compliance with the
10 statutory requirements of the U.S. Longshore and Harbor Workers' Compensation Act
11 (LHWCA).

12
13 Such policy must provide the following minimum limits:

14 \$1,000,000	Bodily Injury by Accident – each accident
15 \$1,000,000	Bodily Injury by Disease – each employee
16 \$1,000,000	Bodily Injury by Disease – policy limits

17
18 **1-07.18(5)F Protection & Indemnity Insurance Including Jones Act**
19 **(January 4, 2016 APWA GSP)**

20 [Note to Engineer: Use this GSP if it is anticipated watercraft will be used in this project.
21 Consult the City's Risk Manager to determine if this insurance is needed. This GSP may
22 be used on Federal Projects.]

23
24 If this Contract involves marine activities, or work from a boat, vessel, or floating
25 platform, the Contractor shall procure and maintain Protection and Indemnity (P&I)
26 coverage including collision liability, injury to crew (Merchant Marine Act of 1920 -
27 Jones Act) and passengers, removal of wreck and liability for seepage, pollution,
28 containment and cleanup using form SP-23 or SP 38 or a form as least as broad.

29
30 All entities listed under 1-07.18(2) of these Special Provisions shall be named as
31 additional insureds on the Contractor's Protection and Indemnity insurance policy.

32
33 Such policy must provide the following minimum limits:

34 \$1,000,000	Bodily Injury by Accident – each accident or occurrence
35 \$1,000,000	Bodily Injury by Disease – each employee
36 \$1,000,000	Bodily Injury by Disease – policy limits

37
38 **1-07.18(5)G Hull and Machinery**
39 **(January 4, 2016 APWA GSP)**

40 [Note to Engineer: Use this GSP if it is anticipated watercraft will be used in this project.
41 Consult the City's Risk Manager to determine if this insurance is needed. This GSP may
42 be used on Federal Projects.]

43
44 If this Contract involves use of a boat, vessel, or floating platform, the Contractor shall
45 procure and maintain coverage at Market Value of vessel on American Institute Hull
46 Clauses, 6/2/77 form.

1 **1-07.18(5)H Marine Pollution**
2 **(January 4, 2016 APWA GSP)**

3 [Note to Engineer: Use this GSP if work in or on water, and there may be the possibility
4 of a pollution event. Consult the City's Risk Manager to determine if this insurance is
5 needed. This GSP may be used on Federal Projects.]

6
7 The Contractor shall procure and maintain Pollution Liability (OPA, CERCLA) insurance
8 to satisfy U.S. Coast Guard requirements as respects the Federal Oil Pollution Act of
9 1990 and the Comprehensive Environmental Response, Compensation and Liability Act
10 of 1980 as amended.

11
12 Such policy must provide the following minimum limits, or statutory limits of liability as
13 applicable, whichever is higher:

14 \$1,000,000 per Occurrence

15
16 **1-07.18(5)I Builder's Risk**
17 **(January 4, 2016 APWA GSP)**

18 [Note to Engineer: Use this GSP to provide builder's risk coverage for protection from
19 loss or damage to a structure or other related property in the course of construction, if
20 your Agency is not going to provide that coverage. Consult the City's Risk Manager to
21 determine if this insurance is needed. This GSP may be used on Federal Projects.]

22
23 Contractor shall purchase and maintain Builder's Risk insurance covering interests of the
24 Contracting Agency, the Contractor, and Subcontractors of every tier, as Named
25 Insureds, in the Work. An Installation Floater instead of Builders Risk is acceptable for
26 renovation projects. Builder's Risk insurance shall be on a special form policy, and shall
27 insure against the perils of fire and extended coverage and physical loss or damage, theft,
28 vandalism, malicious mischief and collapse; and flood and earthquake when shown
29 below. The Builder's Risk insurance shall include coverage for temporary buildings,
30 debris removal, and damage to materials in transit or stored off-site. Such insurance shall
31 cover resulting "soft costs" including but not limited to design costs, licensing fees,
32 architect's and engineer's fees, and costs due to delay in completion.

33
34 Builder's Risk insurance shall be written in the amount of the completed value of the
35 project, with no coinsurance provisions. Such policy must provide coverage and
36 deductibles that comply with the following:

37
38 **Coverage:**

39 Total Cost of Project to be Insured: **\$\$1\$\$**

40 Soft Costs: **\$\$2\$\$**

41 Flood: **\$\$3\$\$**

42 Earthquake: **\$\$4\$\$**

43
44 **Deductibles not to exceed:**

45 Flood: 2% of the Value at Time of Loss, subject to a \$250,000 Minimum

46 Earthquake: 5% of the Value at Time of Loss, subject to a \$250,000 Minimum

47 Earth Movement: 5% of the Value at Time of Loss, subject to a \$250,000
48 Minimum

1 All Other Perils: \$50,000

2 Soft Costs: \$50,000, with no more than 7-day waiting period

3
4 The Builders Risk insurance covering the work shall have maximum deductibles as listed
5 above for each occurrence. The deductible(s) shall be the responsibility of the
6 Contractor.

7
8 The Contractor shall provide the Contracting Agency with a full and certified copy of the
9 insurance policy when the Contractor delivers the signed Contract for the work. Failure
10 of Contracting Agency to demand such verification of coverage with these insurance
11 requirements or failure of Contracting Agency to identify a deficiency from the insurance
12 documentation provided shall not be construed as a waiver of Contractor's obligation to
13 maintain such insurance.

14
15 The Builders Risk insurance shall be maintained until final acceptance of the Work by the
16 Contracting Agency.

17
18 The Contractor and the Contracting Agency waive all rights against each other and any of
19 their Subcontractors of every tier, agents, and employees, officers, and officials, for
20 damages caused by fire or other perils to the extent covered by Builder's Risk insurance
21 or other property insurance applicable to the work. The policies shall provide such
22 waivers by endorsement.

23
24 **1-07.18(5)J Pollution Liability**
25 **(January 4, 2016 APWA GSP)**

26 [Note to Engineer: Use this GSP to coverage for environmental hazards arising from
27 remediation projects, construction at contaminated properties, or adjacent to properties
28 known to be contaminated, hauling for hazardous materials away from a project site, or
29 where known environmental conditions may exist. Consult the City's Risk Manager to
30 determine if this insurance is needed. This GSP may be used on Federal Projects.]

31 The Contractor shall provide a Contractors Pollution Liability policy, providing coverage
32 for claims involving bodily injury, property damage (including loss of use of tangible
33 property that has not been physically injured), cleanup costs, remediation, disposal or
34 other handling of pollutants, including costs and expenses incurred in the investigation,
35 defense, or settlement of claims, arising out of any one or more of the following:

- 36 1. Contractor's operations related to this project.
37 2. Remediation, abatement, repair, maintenance or other work with lead-based
38 paint or materials containing asbestos.
39 3. Transportation of hazardous materials away from any site related to this
40 project.

41
42 All entities listed under 1-07.18(2) of these Special Provisions shall be named by
43 endorsement as additional insureds on the Contractors Pollution Liability insurance
44 policy.

45
46 Such Pollution Liability policy shall provide the following minimum limits:

47 **\$\$\$** each loss and annual aggregate

1
2 **1-07.18(5)K Professional Liability**
3 **(January 4, 2016 APWA GSP)**

4 [Note to Engineer: Use this GSP to provide additional coverage depending on risk
5 analysis, and if design services are part of the Contractor's work. Consult the City's Risk
6 Manager to determine if this insurance is needed. This GSP may be used on Federal
7 Projects.]
8

9 The Contractor and/or its Subcontractor(s) and/or its design consultant providing
10 construction management, value engineering, or any other design-related non-
11 construction professional services shall provide evidence of Professional Liability
12 insurance covering professional errors and omissions.
13

14 Such policy shall provide the following minimum limits:

15 \$1,000,000 per claim and annual aggregate
16

17 If the scope of such design-related professional services includes work related to
18 pollution conditions, the Professional Liability insurance shall include coverage for
19 Environmental Professional Liability.
20

21 If insurance is on a claims made form, its retroactive date, and that of all subsequent
22 renewals, shall be no later than the effective date of this Contract.
23

24 **1-07.23 Public Convenience and Safety**
25

26 **1-07.23(1) Construction Under Traffic (Use on all Projects)**
27 **(May 2, 2017 APWA GSP)**
28

29 *Revise the third sentence of the second paragraph to read:*
30

31 Accessibility to existing or temporary pedestrian push buttons shall not be impaired; if
32 approved by the Contracting Agency activating pedestrian recall timing or other
33 accommodation may be allowed during construction.
34

35 **1-07.23(1) Construction under Traffic (Use only on Non-Federal Projects)**
36 **(March 1, 2004 Tacoma GSP)**
37

38 *This section is supplemented with the following:*
39

40 The following special traffic requirements shall be adhered to during all phases of
41 construction:
42

43 [Note to Engineer: The following highlighted section should be prepared on a project-
44 by-project basis in consultation with the Traffic Section.]
45

46 **StreetName** shall remain fully open to vehicular and pedestrian traffic at all times.
47

48 **EXCEPTION: Determined by the Traffic Section**

1 To minimize the disruption to access to adjacent properties, and to Pierce Transit
2 operations, the lane closure area shall be limited to that area of active work and necessary
3 for appropriate lane closure tapers. The Contractor shall stage work to maintain access to
4 and egress from all properties at all times.

5
6 A safe pedestrian access shall be provided at all times through the project area. All lane
7 closures shall be coordinated with the adjacent businesses, other contractors working
8 within the project vicinity, local transit agencies and the City.

9
10 Where, in the opinion of the Engineer, parking is a hazard to through traffic or to the
11 construction work, parking may be restricted either entirely or during the time when it
12 creates a hazard. Signs for restricting parking shall be approved by the City and placed
13 by the Contractor. The Contractor shall be responsible for and shall maintain all such
14 signs. The replacement of signs restricting parking shall be as approved by the Engineer.

15
16 The Contractor shall notify all property owners and tenants of detours, street and alley
17 closures, or other restrictions that may interfere with their access. Notification shall be at
18 least twenty-four (24) hours in advance for residential property, and at least forty-eight
19 (48) hours in advance for commercial property.

20
21 Emergency traffic, such as police, fire, and disaster units, shall be provided access at all
22 times. In addition, the Contractor shall coordinate Contractor activities with all disposal
23 firms and transit bus service that may be operating in the project area.

24
25 If street closures or lane restrictions, not provided for in the Specifications, are allowed
26 subsequent to award of the contract, an equitable adjustment of the Contract amount shall
27 be negotiated.

28
29 It is the intent of the Contract to effectively prevent the deposition of debris on streets in
30 areas of public traffic or where such debris may be transported into a drainage system.
31 When construction operations are such that debris from the work is deposited on the
32 streets, the Contractor shall, at a minimum, remove on a daily basis any deposits or debris
33 which may accumulate on the roadway surface. Should daily removal be insufficient to
34 keep the streets clean, the Contractor shall perform removal operations on a more
35 frequent basis. If the Engineer determines that a more frequent cleaning is impractical or
36 if the Contractor fails to keep the streets free from deposits and debris resulting from the
37 work, the Contractor shall, upon order of the Engineer, provide facilities for and remove
38 all deposits from the tires or between wheels before trucks or other equipment will be
39 allowed to travel over paved streets. Should the Contractor fail or refuse to clean the
40 streets in question, or the trucks or equipment in question, the Engineer may order the
41 work suspended at the Contractor's risk until compliance with Contractor's obligations is
42 assured, or the Engineer may order the streets in question cleaned by others and such
43 costs incurred by the City in achieving compliance with these contract requirements,
44 including cleaning of the streets, shall be deducted from moneys due or to become due
45 the Contractor on monthly estimate. The Contractor shall have no claim for delay or

1 additional costs should the Engineer choose to suspend the Contractor's work until
2 compliance is achieved.

3
4 *The fifth paragraph of this section is supplemented with the following: (USE ON MAJOR*
5 *ARTERIAL PROJECTS OR MAJOR SEWER PROJECTS THAT WILL REQUIRE*
6 *MAJOR ROADWAY REPAIRS)*

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

11
12 The unit Contract price for "Crushed Surfacing Base Course," at per ton, as listed in the
13 Proposal shall be full pay for all labor, equipment, and materials required to furnish,
14 place, compact, and grade the material necessary to maintain an all weather functional
15 roadway.

16
17 The Proposal quantity for "Crushed Surfacing Base Course" is intended to provide for the
18 additional material necessary to maintain an all-weather, functional roadway as described
19 above and is an estimate only.

20
21 *The sixth paragraph of this section is supplemented with the following:*

22
23 Trenches backfilled with CDF shall be protected from traffic with steel plates. The plates
24 shall remain in place for 24-hours after placement of the CDF or until CDF is compacted
25 or hardened to prevent rutting by construction equipment or traffic.

26
27 **1-07.23(2) Construction and Maintenance of Detours (Consult with Traffic Section)**
28 **(March 1, 2004 Tacoma GSP)**

29 *[Note to Engineer: The use of the WSDOT 1-10 Amendment is recommended if utilizing*
30 *the proposal item "Pedestrian Traffic Control, per Lump Sum" in the project proposal.]*

31 *This section is supplemented with the following:*

32
33 Detour signing during any allowed road closures shall be in accordance with Detour
34 Plans, when included in the Contract Documents. When plans are not included in the
35 Contract Documents, the Contractor shall submit plans for detours in accordance with the
36 "Manual on Uniform Traffic Control Devices (MUTCD)". In addition, where the
37 Contractor believes an alternate plan will safely and adequately maintain vehicular and
38 pedestrian traffic, the Contractor may submit alternate plans to those for traffic control
39 and detours required by MUTCD or contract documents. Such alternate plans must
40 comply with the MUTCD and shall be in writing and submitted to the Engineer at least
41 fifteen (15) days in advance of their intended use. In general, detouring of arterial traffic
42 must be accomplished on streets designated as City Arterials. Detouring of arterial traffic
43 on non-arterial streets will not be allowed. The acceptance of any alternate plan shall be
44 entirely at the discretion of the Engineer and the Contractor shall have no claim by reason
45 of a plan being rejected or modified, nor shall there be any additional payment by reason
46 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.

A minimum of three (3) working days prior to any street closure, the Contractor shall notify all entities below:

Tacoma Fire Dept.	(253-591-5733)
Tacoma Police Dept.	(253-591-5950)
LESA Communications Center	(253-798-4721 - Opt.#1)
Tacoma Public Schools Transportation Office	(253-571-1853)
Pierce Transit	(253-581-8109)
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 (For Use on Federal-Aid Projects)
(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.

1-07.24 Rights of Way

(*** or Tacoma GSP? Needs to be determined, possibly delete) – (Use on Non-Federal Projects only)**

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

1 right of way, the Contractor will be entitled to an extension of time. The Contractor
2 agrees that such delay shall not be a breach of contract.
3

4 Each property owner shall be given 48 hours notice prior to entry by the Contractor. This
5 includes entry onto easements and private property where private improvements must be
6 adjusted.
7

8 The Contractor shall be responsible for providing, without expense or liability to the
9 Contracting Agency, any additional land and access thereto that the Contractor may
10 desire for temporary construction facilities, storage of materials, or other Contractor
11 needs. However, before using any private property, whether adjoining the work or not,
12 the Contractor shall file with the Engineer a written permission of the private property
13 owner, and, upon vacating the premises, a written release from the property owner of
14 each property disturbed or otherwise interfered with by reasons of construction pursued
15 under this contract. The statement shall be signed by the private property owner, or
16 proper authority acting for the owner of the private property affected, stating that
17 permission has been granted to use the property and all necessary permits have been
18 obtained or, in the case of a release, that the restoration of the property has been
19 satisfactorily accomplished. The statement shall include the parcel number, address, and
20 date of signature. Written releases must be filed with the Engineer before the Completion
21 Date will be established.
22

23
24 **END OF SECTION**
25
26

1
2 **1-08 PROSECUTION AND PROGRESS**

3
4 *Add the following new section:*

5 **1-08.0 Preliminary Matters**
6 **(May 25, 2006 APWA GSP)**

7
8 **1-08.0(1) Preconstruction Conference**
9 **(October 10, 2008 APWA GSP)**

10
11 Prior to the Contractor beginning the work, a preconstruction conference will be held
12 between the Contractor, the Engineer and such other interested parties as may be invited.
13 The purpose of the preconstruction conference will be:

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

22
23 The Contractor shall prepare and submit at the preconstruction conference the following:

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

27
28 *Add the following new section: (Use on Non-Federal Projects only)*

29 **1-08.0(2) Hours of Work**
30 **(March 3, 2008 Tacoma GSP)**

31
32 Except in the case of emergency or unless otherwise approved by the Contracting
33 Agency, the normal straight time working hours for the contract shall be any consecutive
34 8-hour period between 7:00 a.m. and 6:00 p.m. of a working day with a maximum 1-hour
35 lunch break and a 5-day work week. The normal straight time 8-hour working period for
36 the contract shall be established at the preconstruction conference or prior to the
37 Contractor commencing the work.

38
39 If a Contractor desires to perform work on holidays, Saturdays, Sundays, or before 7:00
40 a.m. or after 6:00 p.m. on any day, the Contractor shall apply in writing to the Engineer
41 for permission to work such times. Permission to work longer than an 8-hour period
42 between 7:00 a.m. and 6:00 p.m. is not required. Such requests shall be submitted to the
43 Engineer no later than noon on the working day prior to the day for which the Contractor
44 is requesting permission to work.

45
46 Permission to work between the hours of 9:00 p.m. and 7:00 a.m. during weekdays and
47 between the hours of 9:00 p.m. and 9:00 a.m. on weekends or holidays may also be

1 subject to noise control requirements. Approval to continue work during these hours may
2 be revoked at any time the Contractor exceeds the Contracting Agency's noise control
3 regulations or complaints are received from the public or adjoining property owners
4 regarding the noise from the Contractor's operations. The Contractor shall have no claim
5 for damages or delays should such permission be revoked for these reasons.

6
7 Permission to work Saturdays, Sundays, holidays or other than the agreed upon normal
8 straight time working hours Monday through Friday may be given subject to certain other
9 conditions set forth by the Contracting Agency or Engineer. These conditions may
10 include but are not limited to: requiring the Engineer or such assistants as the Engineer
11 may deem necessary to be present during the work; requiring the Contractor to reimburse
12 the Contracting Agency for the costs in excess of straight-time costs for Contracting
13 Agency employees who worked during such times, on non Federal aid projects;
14 considering the work performed on Saturdays and holidays as working days with regards
15 to the contract time; and considering multiple work shifts as multiple working days with
16 respect to contract time even though the multiple shifts occur in a single 24-hour period.
17 Assistants may include, but are not limited to, survey crews; personnel from the
18 Contracting Agency's material testing lab; inspectors; and other Contracting Agency
19 employees when in the opinion of the Engineer, such work necessitates their presence.

20
21 *Add the following new section:*

22 **1-08.0(2) Hours of Work (Use on Federal Projects only)**
23 **(December 8, 2014 APWA GSP)**
24

25 Except in the case of emergency or unless otherwise approved by the Engineer, the
26 normal working hours for the Contract shall be any consecutive 8-hour period between
27 7:00 a.m. and 6:00 p.m. Monday through Friday, exclusive of a lunch break. If the
28 Contractor desires different than the normal working hours stated above, the request must
29 be submitted in writing prior to the preconstruction conference, subject to the provisions
30 below. The working hours for the Contract shall be established at or prior to the
31 preconstruction conference.

32
33 All working hours and days are also subject to local permit and ordinance conditions
34 (such as noise ordinances).

35
36 If the Contractor wishes to deviate from the established working hours, the Contractor
37 shall submit a written request to the Engineer for consideration. This request shall state
38 what hours are being requested, and why. Requests shall be submitted for review no later
39 than **\$\$\$** prior to the day(s) the Contractor is requesting to change the hours.

40
41 If the Contracting Agency approves such a deviation, such approval may be subject to
42 certain other conditions, which will be detailed in writing. For example:

- 43 1. On non-Federal aid projects, requiring the Contractor to reimburse the
44 Contracting Agency for the costs in excess of straight-time costs for Contracting
45 Agency representatives who worked during such times. (The Engineer may
46 require designated representatives to be present during the work. Representatives
47 who may be deemed necessary by the Engineer include, but are not limited to:

- survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees or third party consultants when, in the opinion of the Engineer, such work necessitates their presence.)
2. Considering the work performed on Saturdays, Sundays, and holidays as working days with regard to the contract time.
 3. 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.
 4. If a 4-10 work schedule is requested and approved the non working day for the week will be charged as a working day.
 5. If Davis Bacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll

Add the following new section: *(Use on Non-Federal Projects only)*

1-08.0(3) Reimbursement for Overtime Work of Contracting Agency Employees (September 29, 2009 Tacoma GSP)

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

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

1-08.1 Subcontracting - D/M/WBE Reporting *(Use on Non-Federal Projects only)* (September 29, 2009 Tacoma GSP)

The eighth paragraph is revised to read:

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

1-08.1 Subcontracting *(Use on Federal Projects)*

(Must use WSDOT Amendments (June 1, 2017 or later) on FHWA funded projects. Verify amendment is included)

[Note to Engineer:

The City's Special Provision 1-08.3 Progress Schedule is no longer in use and is replaced with the State's 1-08.3 Standard Specification.

Comment [SD1]: Standards Committee needs to look at this specification as the amendment to the State Spec Book covers this

1-08.1 Subcontracting

The eighth and ninth paragraphs are revised to read:

On all projects, the Contractor shall certify to the actual amounts paid to all firms that were used as Subcontractors, lower tier subcontractors, manufacturers, regular dealers, or service providers on the Contract. This includes all Disadvantaged, Minority, Small, Veteran or Women's Business Enterprise firms. This Certification shall be submitted to the Engineer on a monthly basis each month between Execution of the Contract and Physical Completion of the Contract using the application available at: <https://wsdot.diversitycompliance.com>. A monthly report shall be submitted for every month between Execution of the Contract and Physical Completion regardless of whether payments were made or work occurred.

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

1-08.1(1) Prompt Payment, Subcontract Completion and Return of Retainage Withheld

In item number 5 of the first paragraph, "WSDOT" is revised to read "Contracting Agency".

The last sentence in item number 11 of the first paragraph is revised to read:

The Contractor may also require any documentation from the Subcontractor that is required by the subcontract or by the Contract between the Contractor and Contracting Agency or by law such as affidavits of wages paid, and material acceptance certifications to the extent that they relate to the Subcontractor's Work.

Item number 12 of the first paragraph is revised to read:

Per State Specification 1-08.3, determine whether a Type A or Type B progress schedule will be appropriate for the project. If a Type B Progress Schedule is appropriate, make sure the bid item "Type B Progress Schedule" remains in the Proposal as a bid item. If a Type A Progress Schedule is appropriate, delete the bid item for "Type B Progress Schedule" from the Proposal. Type A Progress Schedules do not have a separate pay item and are incidental to the contract.

Type A project schedules may be used for most typical roadway and sewer projects. Type B project schedules should be used when projects require complex and critical timing and scheduling of various trades of work and subcontractors. An example of this would be a building structure with mechanical, electrical, HVAC, plumbing, etc.

If unsure whether to use a Type A or Type B Progress Schedule, consult with Construction Managers.]

1-08.3(2)B Type B Progress Schedule (Use on Federal Projects only when using a type B Progress Schedule, there is an option A also for a Type A Progress Schedule) (March 13, 2012 APWA GSP)

Revise the first paragraph to read:

The Contractor shall submit a preliminary Type B Progress Schedule at or prior to the preconstruction conference. The preliminary Type B Progress Schedule shall comply with all of these requirements and the requirements of Section 1-08.3(1), except that it may be limited to only those activities occurring within the first 60-working days of the project.

Revise the first sentence of the second paragraph to read:

The Contractor shall submit **\$\$\$** copies of a Type B Progress Schedule depicting the entire project no later than 21-calendar days after the preconstruction conference.

1-08.4 Prosecution of Work (Use on all projects)

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 (Use on Federal Aid Projects – Use option B when you want to delay the charge of working days for material order lead time)
(September 12, 2016 APWA GSP, Option A)**

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. Monthly Reports of Amounts Credited as DBE 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

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. Quarterly Reports of Amounts Credited as DBE 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

**1-08.5 Time for Completion (Use on Non-Federal Projects)
(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

1 working day then the fifth day of that week will be charged as a working day whether or
2 not the Contractor works on that day.

3
4 *Revise the sixth paragraph to read:*

5
6 The Engineer will give the Contractor written notice of the completion date of the
7 contract after all the Contractor's obligations under the contract have been performed by
8 the Contractor. The following events must occur before the Completion Date can be
9 established:

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

23
24 *This section is supplemented with the following: (Use on Federal and Non-Federal*
25 *Projects)*
26 **(March 1, 2004 Tacoma GSP)**

27
28 [Note to Engineer: The number of working days should be calculated to accommodate
29 for all Contractor work and City identified work (such as submittal reviews, water service
30 crossovers, etc.)]

31
32 This project shall be physically completed within ### working days.

33
34 **1-08.9 Liquidated Damages (Use on Federal and Non-Federal Projects)**
35 **(August 14, 2013 APWA GSP)**

36 *Revise the fourth paragraph to read:*

37
38 When the Contract Work has progressed to Substantial Completion as defined in the
39 Contract, the Engineer may determine that the work is Substantially Complete. The
40 Engineer will notify the Contractor in writing of the Substantial Completion Date. For
41 overruns in Contract time occurring after the date so established, the formula for
42 liquidated damages shown above will not apply. For overruns in Contract time occurring
43 after the Substantial Completion Date, liquidated damages shall be assessed on the basis
44 of direct engineering and related costs assignable to the project until the actual Physical
45 Completion Date of all the Contract Work. The Contractor shall complete the remaining
46 Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall
47 furnish a written schedule for completing the physical Work on the Contract.

1
2
3
4

END OF SECTION

REFERENCE ONLY

1-09 MEASUREMENT AND PAYMENT (Use on Federal and Non-Federal Projects)

1-09.2(1) General Requirements for Weighing Equipment
(July 23, 2015 APWA GSP, Option 1) (Not for use on Public Works Projects)

Revise the third paragraph to read:

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

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

Revise item 4 of the fifth paragraph to read:

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

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

Supplement this Section with the following:

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

(January 13, 2011 Tacoma GSP) (Use only on Non-Federal Projects)

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

1 available at the City's Construction Management Office. Copies requested by the
2 contractor will be charged at the current applicable rate.

3
4 **1-09.9 Payments (May be used on Federal or non-Federal Projects)**
5 **(March 13, 2012 APWA GSP)**

6
7 *Delete the first four paragraphs and replace them with the following:*

8
9 The basis of payment will be the actual quantities of Work performed according to the
10 Contract and as specified for payment.

11
12 The Contractor shall submit a breakdown of the cost of lump sum bid items at the
13 Preconstruction Conference, to enable the Project Engineer to determine the Work
14 performed on a monthly basis. A breakdown is not required for lump sum items that
15 include a basis for incremental payments as part of the respective Specification. Absent a
16 lump sum breakdown, the Project Engineer will make a determination based on
17 information available. The Project Engineer's determination of the cost of work shall be
18 final.

19
20 Progress payments for completed work and material on hand will be based upon progress
21 estimates prepared by the Engineer. A progress estimate cutoff date will be established at
22 the preconstruction conference.

23
24 The initial progress estimate will be made not later than 30 days after the Contractor
25 commences the work, and successive progress estimates will be made every month
26 thereafter until the Completion Date. Progress estimates made during progress of the
27 work are tentative, and made only for the purpose of determining progress payments.
28 The progress estimates are subject to change at any time prior to the calculation of the
29 final payment.

30
31 The value of the progress estimate will be the sum of the following:

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

41
42 Progress payments will be made in accordance with the progress estimate less:

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

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

This section is supplemented with the following:
(January 6, 2015 Tacoma GSP)

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

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

1-09.9(1) Retainage
(May 10, 2006 Tacoma GSP)

The fourth paragraph is supplemented with the following:

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

1-09.13(3)A Administration of Arbitration
(October 1, 2005 APWA GSP)

Revise the third paragraph to read:

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

END OF SECTION

1-10 TEMPORARY TRAFFIC CONTROL (Use on Non-Federal Projects. When using on Federal Projects, must send to Local Programs for Approval and only send the GSPs that are applicable to your project.)

1-10.1(2) Description

(January 11, 2006 Tacoma GSP)

This section is supplemented by 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.

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.

1-10.2(1) General

Use most current WSDOT GSP which will list most current address and phone number information for approved TCS Training

Section 1-10.3 is supplemented with the following:

1-10.3(2)F Signalized Intersections
(January 11, 2006 Tacoma GSP)

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.

All off-duty officers shall be commissioned within the State of Washington.

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.

[Note to Engineer: The use of portable changeable message signs may sometimes be helpful and/or required on non-arterial streets or when on arterials for less than 7 days. Please consult traffic to determine if they will be needed. If necessary, modify the section below to accommodate your situation.]

**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

[Note to Engineer: Use the following only when the proposal includes the bid item for "Uniform Police Officer for Traffic Control".]

**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 incidental to unit contract prices.

"Uniformed Police Officer for Traffic Control" will be measured by the hour. Portions of an hour will be rounded up to a whole hour.

**1-10.5(2) Item Bids with Lump Sum for Incidentals
(January 11, 2006 Tacoma GSP)**

This section is supplemented with the following:

"Uniformed Police Officer for Traffic Control", per hour

The unit contract price, when applied to the number of units measured for this item in accordance with Section 1-10.4(2), shall be full compensation for all cost incurred by the Contractor in performing the work in accordance with Section 1-10.3(2)F.

[Note to Engineer: Engineer is now required to develop traffic control specs and plans for review by Traffic Division. Engineers should use the Traffic Manual on the Project Development web site for guidance.]

END OF SECTION

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

2-01.1 Description

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

[choose one]

[1]

The Contractor shall clear, grub, and cleanup those areas contained within the “Clearing & Grubbing” limits indicated on the Plans.

[2]

The Contractor shall clear, grub, and cleanup those areas within [describe the area].

[Note to Engineers: When using option one, the clearing and grubbing limits must be clearly defined on the plans.]

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:

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

- 1 8. Protect, by fencing if necessary, all trees or native growth from any damage
2 caused by construction operations.
3

4 **2-01.3(2) Grubbing**

5 *Item e is revised to read:*
6

7 Upon which embankments will be placed, except stumps may be close-cut or trimmed as
8 allowed in Section 2-01.3(1) item 4.
9

10
11 **END OF SECTION**
12

1
2 **2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS**
3 **(December 9, 2005 Tacoma GSP)**

4
5 **2-02.3(3) Removal of Pavement, Sidewalks, and Curbs**

6 *This section is deleted.*

7
8 *Section 2-02.3 is supplemented with the following:*

9
10 **2-02.3(4) Removal of Piezometers**

11
12 *[Note to Engineer: Piezometers are installed in geotechnical borings to provide access to*
13 *monitor groundwater levels during design of trenching projects. This information is used*
14 *to determine groundwater dewatering requirements. Piezometers are considered “wells”*
15 *by the Department of Ecology and must be abandoned in accordance with WAC 173-*
16 *160-460. Use the following specification when piezometers have been installed as part of*
17 *your geotechnical investigations.]*

18
19 The Contractor shall abandon all borings with piezometers installed as part of the
20 geotechnical investigations for this project. The locations of the piezometers are listed in
21 the Geotechnical Data Report and shown on the Plans.

22
23 The borings with piezometers shall be abandoned in accordance with Department of
24 Ecology requirements and Washington Administrative Code 173-160-460.

25
26 **2-02.4 Measurement**

27 *This section is supplemented with the following:*

28
29 Borings with piezometers to be abandoned will be measured per each.

30
31 **2-02.5 Payment**

32 *This section is supplemented with the following:*

33
34 “Abandon Piezometer”, at per each.

35
36 The unit contract price for “Abandon Piezometer” shall be full payment for all labor,
37 equipment, materials, and permitting necessary to abandon the piezometers in accordance
38 with these Special Provisions.

39
40
41 **END OF SECTION**
42
43

**2-03 ROADWAY EXCAVATION AND EMBANKMENT
(March 17, 2016 Tacoma GSP)**

2-03.1 Description

The last sentence of the first paragraph is deleted.

2-03.3 Construction Requirements

[Note to Engineer: Check GovME under Building & Land Use (BLUS)/Superfund Sites/Tacoma Smelter Plume to determine if the project is located in an area of potential arsenic and lead contamination. If in an area designated as 20.1 ppm or greater, soil testing is required. Include the following paragraph if arsenic or lead contamination is present. For additional information about the Asarco Smelter go to <https://fortress.wa.gov/ecy/smeltersearch>]

This section is supplemented with the following:

Material excavated in areas labeled on the Plans as contaminated shall be hauled to LRI Landfill, located at 30919 Meridian Street East, Graham, WA or an approved licensed solid waste disposal facility.

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.

2-03.5 Payment

The pay item "Gravel Borrow, Incl. Haul" is revised to read:

"Gravel Borrow, Incl. Haul", per cubic yard.

The unit Contract price per cubic yard for "Gravel Borrow, Incl. Haul" shall be full pay for all material, labor, and equipment to furnish, place, and compact the material.

This section is supplemented with the following:

"Roadway Excavation of Contaminated Material, Incl. Haul", per cubic yard.

The unit Contract price per cubic yard for "Roadway Excavation of Contaminated Material, Incl. Haul" shall be full compensation for all costs incurred for excavating, loading, placing, disposal and haul to LRI or other approved facility.

END OF SECTION

[Note to Engineer:

1
2 Pay items need to include haul. (i.e. – Roadway Excavation, Incl. Haul or Unsuitable
3 Foundation Excavation, Incl. Haul)
4
5 When using the pay item for unsuitable foundation excavation you must use the pay item
6 “Gravel Borrow, Incl. Haul” for replacement of material removed under unsuitable
7 foundation excavation.]
8

1
2 **2-07 WATERING**
3 **(August 3, 2009 Tacoma GSP)**
4

5 **2-07.3 Construction Requirements**

6 *The last sentence of the first paragraph is revised to read:*
7

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

10
11 *Section 2-07.3 is supplemented with the following:*
12

13 **2-07.3(1) Water Supplied from Hydrants**
14

15 There is no guarantee that all fire hydrants will be available for use for cleaning, lining,
16 or any other construction activities associated with this project. Prior to construction
17 activities, it shall be the Contractor's responsibility to verify which hydrants will be
18 available by contacting Tacoma Water. The Contractor shall use only those hydrants
19 designated by Tacoma Water.
20

21 Water supplied from hydrants governed by Tacoma Water shall be used in strict
22 compliance with the "Operating Procedures for the use of Water Division Hydrants"
23 available at the Tacoma Water Permit Counter.
24

25 The Contractor shall obtain a Hydrant Permit prior to start of work by contacting the
26 Water Permit Counter at (253) 502-8247, 2nd floor, Tacoma Public Utilities,
27 Administrative Building, 3628 South 35th Street, Tacoma, WA 98409. A copy of the
28 approved Hydrant Permit shall be submitted to the Engineer.
29

30 Contractor personnel shall be in possession of a valid Tacoma Public Utilities Hydrant
31 Certification Card prior to obtaining a permit. If necessary, contractor personnel shall
32 undergo training to receive the required certification. Contact the Water Permit Counter
33 to set up training as necessary.
34

35
36 **END OF SECTION**
37

1
2 **2-09 STRUCTURE EXCAVATION**
3 **(March 17, 2016 Tacoma GSP)**
4

5 **2-09.4 Measurement**

6 *This section is supplemented with the following:*
7

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

11
12 *The fourth paragraph is revised to read:*
13

14 There will be no specific unit of measure for the excavation required for manholes, catch
15 basins, grate inlets, and drop inlets.
16

17 **2-09.5 Payment**

18 *The pay item for "Structure Excavation Class B", is revised to read:*
19

20 "Structure Excavation Class B", per cubic yard.
21

22 The unit Contract price for "Structure Excavation Class B" shall be full payment for all
23 excavation, **removal of water**; storing, protecting and re-handling of suitable backfill
24 material; backfilling of the trench, compaction of backfill, and all other work necessary
25 for the construction of the sewer trench.
26

27 [Note to Engineer: If you are using a separate bid item for dewatering in Section 8-01,
28 then delete "removal of water" from the structure excavation item. If you are not using a
29 separate bid item for dewatering, leave "removal of water" in structure excavation.]
30

31 **END OF SECTION**
32
33

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

2-13.1 Description

This Work shall consist of the removal and disposal of vegetation identified on the Plans.

2-13.2 Definition of Vegetation

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

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

"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.

2-13.3 Construction Requirements

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

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

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

2-13.4 Measurement

Trees shall be classified by the measured circumference at a point four and one-half (4-½) 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 circumference at the highest point of the stump above the average ground level or a point four and one-half (4-1/2) feet above the average ground level, which ever is less.

Trees and stumps will be classified as follows:

Less than 12 inches

Class 0

1	12 inches up to but not including 36 inches	Class I
2	36 inches up to but not including 72 inches	Class II
3	72 inches up to but not including 127 inches	Class III
4	127 inches or more (Tree height greater than 30 feet)	Class IV
5	127 inches or more (Tree height of 30 feet or less)	Class V

7 Trees, stumps, and stump grinding will be measured per each for each class.

9 Shrubs will be measured per each.

11 Brush will be measured per square yard.

13 **2-13.5 Payment**

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

17 “Remove Tree, Class __”, per each

19 “Remove Stump, Class __”, per each

21 “Stump Grinding, Class __”, per each

23 “Remove Shrub”, per each

25 “Remove Brush”, per square yard

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

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

33 **END OF SECTION**

1
2 **2-14 PAVEMENT REMOVAL**
3 **(March 17, 2003 Tacoma GSP)**
4

5 **2-14.1 Description**
6

7 The Work described in this section includes the removal and disposal of pavement
8 surfaces identified on the Plans or as marked in the field.
9

10 **2-14.2 Pavement Classification**
11

12 Removal of pavement will be according to type and class based on composition and
13 thickness, as defined below:
14

- | | | |
|----|-----------------|--|
| 15 | Type I | Pavement removal where all or portions of the existing pavement is |
| 16 | | being removed in conjunction with street construction or any other |
| 17 | | removal not described below for Type II or Type III. |
| 18 | | |
| 19 | Type II | Pavement removal required for the placing of utilities at greater and |
| 20 | | varying depths, such as sewers. |
| 21 | | |
| 22 | Type III | Pavement removal required for narrow and shallow utility cuts in order |
| 23 | | to install light cables, conduits and similar shallow utilities. |
| 24 | | |
| 25 | Class A2 | Class A2 pavement removal shall apply to the removal of asphalt |
| 26 | | concrete, bituminous road surfacing, multiple lift bituminous surface |
| 27 | | treatments or any combination of these components having an average |
| 28 | | thickness of two inches or less. |
| 29 | | |
| 30 | Class A4 | Class A4 pavement removal shall apply to the removal of asphalt |
| 31 | | concrete, bituminous road surfacing, multiple lift bituminous surface |
| 32 | | treatments or any combination of these components having an average |
| 33 | | thickness between two inches and four inches. |
| 34 | | |
| 35 | Class A8 | Class A8 pavement removal shall apply to the removal of asphalt |
| 36 | | concrete, bituminous road surfacing, multiple lift bituminous surface |
| 37 | | treatments or any combination of these components having an average |
| 38 | | thickness between four inches and eight inches. |
| 39 | | |
| 40 | Class C6 | Class C6 pavement removal shall apply to all non-reinforced cement |
| 41 | | concrete pavements or slabs having an average thickness of six inches |
| 42 | | or less. After the curbs and pavement have been constructed, the |
| 43 | | Contractor may be required to remove additional sidewalk necessary |
| 44 | | to provide proper connections and grades, as determined by the |
| 45 | | Engineer. |
| 46 | | |

1 **Class C12** Class C12 pavement removal shall apply to all non-reinforced cement
2 concrete pavements or slabs having an average thickness of between 6
3 inches and 12 inches.

4
5 **Class CA** Class CA pavement removal shall apply to all pavements that have a
6 wearing surface of asphalt concrete upon a cement concrete pavement
7 or, cement concrete base, and for which the total combined thickness
8 of the pavement averages between six inches and twelve inches.

9
10 **Class H** Class H pavement removal shall apply to early type pavement of a
11 cement concrete base with a brick or cobblestone surface and
12 potentially an additional layer of asphalt concrete pavement for which
13 the total combined thickness of the pavement averages between ten
14 inches and twenty inches.

15 16 **2-14.3 Construction Requirements**

17
18 All final meetlines shall be sawcut.

19
20 Where monolithic cement concrete pavement and curb are being removed, the curb
21 removal shall be considered as pavement removal, and the measurement for payment will
22 be to the back of the curb.

23
24 The removal of existing street improvements shall be conducted in such a manner as not
25 to damage utilities and any portion of the improvement that is to remain in place. Any
26 deviation in this matter will obligate the Contractor, at no expense to the Contracting
27 Agency, to repair, replace, or otherwise make proper restoration to the satisfaction of the
28 Engineer.

29
30 In the event a pavement averages more than the maximum thickness specified for its
31 class, an additional payment will be made to cover the extra thickness removed by a
32 proportional conversion into additional square yards.

33 34 **2-14.4 Measurement**

35
36 Pavement removal will be measured per square yard.

37
38 Type I pavement removal will be measured in its original position through the use of
39 survey techniques.

40 41 **2-14.5 Payment**

42
43 Payment will be made in accordance with Section 1-04.1.

44
45 “Remove Existing Pavement, Type ____Class____”, per square yard
46

1 All costs associated with saw cutting meet lines shall be included in the unit Contract
2 price for pavement removal.
3

4
5 **END OF SECTION**
6

7 [Note to Engineer:

8 When using Type II & III pavement removal, the plans need to show the pavement
9 removal and replacement limits.

10 Reference Standard Plan SU 14 & 15 for additional pavement removal requirements for
11 pavement patches.]
12

1
2 **2-15 CURB AND CURB AND GUTTER REMOVAL**
3 **(March 17, 2003 Tacoma GSP)**
4

5 **2-15.1 Description**
6

7 The Work described in this section includes the complete removal and disposal of curbs
8 and curb and gutter identified on the Plans or as marked in the field.
9

10 **2-15.2 Curb Classification**
11

12 Removal of curb and/or curb and gutter will be based on composition, as defined below:
13

14 **Integral Curb** - Integral curb shall consist of curb that is constructed monolithic with the
15 adjacent cement concrete pavement.
16

17 **Curb** - Curb may consist of cement concrete curb, granite curb, or any other combination
18 of rigid material that extends below the pavement surface elevation.
19

20 **Extruded/Precast Curb** - Extruded or precast curb may consist of asphalt or concrete
21 extruded or precast curb that is installed on a pavement surface.
22

23 **Curb and Gutter** - Curb and gutter may be cement concrete, or a cement concrete curb
24 with a brick gutter on a cement concrete base, or other combination of rigid material.
25

26 **2-15.3 Construction Requirements**
27

28 Integral curb removal shall consist of the removal of the curb and the integral base
29 section under the curb. The removal shall be accomplished by sawcutting along the face
30 of the curb.
31

32 The removal of the curb and/or curb and gutter shall be conducted in such a manner as
33 not to damage utilities and any portion of the improvement that is to remain in place.
34 Any deviation in this matter will obligate the Contractor, at no expense to the Contracting
35 Agency, to repair, replace, or otherwise make proper restoration to the satisfaction of the
36 Engineer.
37

38 **2-15.4 Measurement**
39

40 Curb and curb and gutter removal will be measured per linear foot.
41

42 **2-15.5 Payment**
43

44 Payment will be made in accordance with Section 1-04.1.
45

46 "Remove Integral Curb", per linear foot
47

1 "Remove Curb", per linear foot

2

3 "Remove Extruded/Precast Curb", per linear foot

4

5 "Remove Curb and Gutter", per linear foot

6

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

9

10

11

END OF SECTION

12

13

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

2-16.1 Description

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

2-16.2 Vacant

2-16.3 Construction Requirements

Where the structures are removed, the excavation shall be backfilled with native material if deemed suitable by the Engineer or imported backfill material.

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

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

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

2-16.4 Measurement

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

2-16.5 Payment

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

“Remove Catch Basin”, per each

“Remove Manhole”, per each

“Remove Curb Inlet”, per each

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

END OF SECTION

REFERENCE ONLY

1
2 **2-17 CONTROL AND MANAGEMENT OF CONTAMINATED MATERIALS IN**
3 **TACOMA SMELTER PLUME**
4 **(June 3, 2014 Tacoma GSP)**
5

6 **2-17.1 Description**
7

8 **2-17.1(1) General**
9

10 [NOTE TO ENGINEER: All projects involving disturbance of soils that are located
11 within the Department of Ecology Tacoma Smelter Plume Area designated as potentially
12 having contamination of 20 ppm or greater of arsenic should be tested during the design
13 of the project. This specification is intended for use for all projects where testing has
14 occurred during the design phase and arsenic levels have been found to be 20 ppm or
15 greater, or lead is found at 250 ppm or greater. Sampling and testing requirements and a
16 map of the plume area can be found in the City's Tacoma Smelter Plume Soil
17 Management Plan located on the Project Development Website.]
18

19 Contaminated soils with concentrations of arsenic (As) and lead (Pb) exceeding the levels
20 listed in the Washington State Models Toxics Control Act (MTCA) cleanup regulations
21 (Chapter 173-340 WAC) have been encountered on the project site. The Contractor shall
22 operate within and meet all applicable laws and regulations associated with working with
23 regulated materials encountered during excavation activities. The Contractor is notified
24 of the existence of cleanup standards for site soils developed according to the MTCA.
25

26 The Contractor is advised to review the applicable Washington Administrative Codes
27 (WAC), Washington Department of Ecology (DOE), Washington State Department of
28 Health (DOH), MTCA and Asarco Reports.
29

30 Websites for further information:

31
32 WAC: <http://apps.leg.wa.gov/wac/> (Title 173-303 & 173-340)
33

34 DOH: <http://www.doh.wa.gov/>
35

36 DOE: <http://www.ecy.wa.gov/>
37

38 MTCA: <http://www.ecy.wa.gov/pubs/9406.pdf>
39

40 Public Health Seattle and King County:

41 <http://www.kingcounty.gov/healthservices/health/ehs/toxic/ArsenicLead.aspx>
42

43 Pierce County Health Department:

44 <http://www.tpchd.org/index.php>
45

46 Environmental Protection Agency, Asarco Smelter Cleanup:

47 <http://www.epa.gov/region10>

Agency for Toxics Substances and Disease Registry, Facts on Arsenic:
<http://www.atsdr.cdc.gov/tfacts2.html>

Centers for Disease Control, Facts on Lead:
<http://www.cdc.gov/nceh/lead/publications/1997/factlead.htm>

Department of Health, Drinking Water:
<http://www.doh.wa.gov/ehp/dw>

2-17.1(2) Site Description

2-17.1(2)A Historical Land Use

The Tacoma smelter opened in 1890 as a lead smelter. Asarco purchased it in 1905 and converted it to copper smelting in 1912. The smelter operated for nearly 100 years, closing in 1986. The smelter specialized in processing ores with high arsenic concentrations.

The smelter used a 562 foot smokestack. The chemicals in the smoke from the stack were carried out by the wind, and settled to the ground over a 1,000 square mile area. Much of the soil in King and Pierce Counties has been contaminated with arsenic and lead. Arsenic is a human carcinogen, and lead can cause development disabilities. The Department of Ecology and state and local health departments are concerned about potential health risks to people exposed to the contamination.

2-17.1(2)B Soil Descriptions and Soil Quality

Subsurface conditions at the site were explored in **Month Year** by drilling **###** borings along the project alignment. Details regarding the subsurface exploration, geotechnical laboratory testing, and summary logs of the explorations are included in Appendix **###** of these Specifications.

The Contracting Agency tested the soils collected from the geotechnical borings in the project for arsenic and lead. A summary of the chemical analytical results for the soils is located in Appendix **###** of these Specifications.

2-17.1(3) Soil Management

[NOTE TO ENGINEER: Because hauling contaminated material to LRI is significantly more costly than normal soil disposal, the limits of contaminated soil should be shown on the plans and the handling of materials per this specification should be limited to only the locations and depths of areas testing higher than the required cleanup levels.]

The contaminated material limits and depths are shown on the Plans. The Contractor shall load this contaminated material directly into trucks and dispose of it as contaminated material at LRI Landfill, located at 30919 Meridian Street East, Graham,

1 WA or a licensed solid waste disposal facility. A Waste Disposal Authorization (WDA)
2 for LRI will be supplied to the Contractor at the beginning of the Construction Activities.
3 The Contractor shall follow all provisions of the WDA.

4
5 The remaining excavated material outside of these limits is not considered contaminated.
6 This material may be used for backfill in this project if suitable in accordance with these
7 Specifications.

8 9 **2-17.1(4) Submittals**

10
11 This paragraph lists submittals required for this project area. Other submittals will be as
12 required.

- 13 1. **Health and Safety Plan** – Section 2-17.2(2).
- 14 2. **Resume of Site Health and Safety Officer** – Section 2-17.2(3).
- 15 3. **Manifest Package and Supporting Analytical Data** – Section 2-17.3(2)D
- 16 4. **Soil Management Plan** – Section 2-17.2(5)
- 17 5. **Contractor and/or Subcontractor Environmental Qualifications**

18 19 **2-17.2 Health and Safety**

20
21 The Contractor shall be responsible for the health and safety conditions at the job site
22 related to the regulated substances. This includes the health and safety of workers and
23 public during work and non-working hours. The Contractor shall inform all workers and
24 visitors of the potential for exposure to regulated materials. The Contractor shall follow
25 regulatory procedures to prevent the release of contamination.

26
27 Contaminated material excavated during the project is considered solid waste. The
28 Contractor's Health and Safety Plan shall specify training requirements for the site,
29 including 24, 48, or 80 hour training OSHA training as referenced in WAC 296 843
30 20010, if applicable. The Contractor shall be responsible for all training costs.

31 32 **2-17.2(1) Health and Safety Laws and Regulations**

33
34 For all work conducted within the limits of this project site, the Contractor shall ensure
35 compliance with all applicable health and safety provisions for hazardous waste
36 operations, including requirements of the Federal Occupation Safety and Health Act of
37 1970 (OSHA) and all amendments, including 29 CFR Part 1910, WAC 296-843, as well
38 as any other applicable regulations. Failure to be thoroughly familiar with applicable
39 health and safety provisions shall not relieve the Contractor of the responsibility to fully
40 comply with all laws and regulations.

41 42 **2-17.2(2) Site Health and Safety Plan**

43
44 The Site Health and Safety Plan shall be prepared in accordance with WAC 173-340-810.
45 The Contractor shall develop a written Site Health and Safety Plan to be used for the
46 duration of the project. The plan shall incorporate all required city, county, state, and
47 federal health and safety provisions. The plan shall be submitted to the City within ten

(10) working days after execution of the contract. The Contractor is advised that the City will review the Site Health and Safety Plan, but the Contractor is solely responsible for ensuring that the Site Health and Safety Plan is implemented in accordance with the regulatory requirements. At least one copy of the plan shall be maintained at the work site. A properly qualified individual shall be assigned to serve as the Site Health and Safety Officer, authorized to supervise and enforce compliance with the plan. The Health and Safety Officer shall be responsible for monitoring the work area for health hazards including sampling of the air, soil, and water as required to ensure worker safety.

All provisions of the Site Health and Safety Plan shall apply to the Contractor, Subcontractors, and all other visitors to the site. Approved Subcontractors may elect to develop a site-specific plan, but this shall not relieve the Contractor of the requirements and responsibilities described herein. The terms and provisions of a Subcontractor's site-specific plan shall meet or exceed the Contractor's plan and shall be submitted to the City or its agents prior to the Subcontractor commencing work.

The Site Health and Safety Plan shall comply with all applicable regulations and shall include, but not be limited to:

1. A list of chemical hazards and physical hazards, allowable OSHA exposure levels, threshold limit values, and all other regulatory exposure levels.
2. If 24, 48, or 80 hour training is required by the Site Health and Safety Plan, then the Contractor shall provide a list of all persons, by work category/type, who will be trained. Photocopies of the employee's training certificates shall be submitted to the Contracting Agency.
3. Engineering controls, work practices, personnel and equipment decontamination procedures, and types of personal protective equipment to be used.
4. A list of safety and monitoring equipment to be kept at the job site and its storage location. A record of monitoring equipment calibration shall be maintained.
5. A list of required health and safety information to be documented.
6. An emergency evacuation plan for immediate removal to the nearest hospital or doctor's care for any person who may be injured on the job site. It shall include evacuation routes to medical treatment and emergency telephone numbers for hospitals, ambulances, police and fire departments, poison control, and the City of Tacoma.

In the event the Health and Safety Plan is determined by a regulatory agency to be inadequate to protect the employees and the public, then the Plan shall be modified by the Contractor at the Contractor's sole expense.

2-17.2(3) Site Health and Safety Officer

1 The Contractor shall appoint a Site Health and Safety Officer for the project. The Health
2 and Safety Officer must meet the requirements contained in 29 CFR Part 1910 and
3 Chapter 296-62 WAC and who is qualified by experience and training in hazardous waste
4 operations in accordance with other applicable laws, regulations, and requirements of this
5 Section. The Site Health and Safety Officer shall be qualified and authorized to monitor,
6 supervise, and enforce safety compliance with the Site Health and Safety Plan. A resume
7 of the Site Health and Safety Officer's qualifications shall be submitted to the City for
8 review within five (5) working days of receiving the Notice to Proceed. The Site Health
9 and Safety Officer shall be on site at all times when work operations involve excavation
10 and trenching or at other times when the potential for encountering hazardous substances
11 exists as identified as contaminated soil in the Plans and Section 2-17.

12
13 The Contractor shall be solely responsible for identification and monitoring of air (gases),
14 soil, dust, and groundwater with chemical constituents that could pose health and safety
15 concerns to site personnel. The Contractor shall provide for the protection of safety and
16 health of all workers and other authorized persons, including the City and its agents at the
17 jobsite from exposure to potentially hazardous substances.

18
19 The Contractor shall be solely responsible for ensuring that all necessary monitoring
20 equipment, protective clothing, and other supplies and equipment up to the appropriate
21 level of protection as defined by WISHA, OSHA, and other applicable guidelines are
22 available to implement the plan. No work shall take place in areas where hazardous
23 substances may potentially be present unless the Site Health and Safety Officer is present
24 and monitoring site conditions.

25
26 The Contractor, through the Site Health and Safety Officer, shall not permit any
27 employee, in the performance of the Contract, to work under conditions which are
28 hazardous to the employee. Should violations of the safety and health requirements be
29 called to the Site Health and Safety Officer's attention by the City, its agent, or any
30 authorized representative of a regulator agency, then the Contractor shall immediately
31 correct the identified conditions.

32 33 **2-17.2(4) Contractor Safety Equipment**

34
35 The Contractor shall maintain, at the job site, first-aid and safety equipment applicable to
36 the work as prescribed by the governing safety authorities. All required safety equipment
37 shall be kept in fully operational condition for the duration of the contract.

38
39 All personnel shall be trained in the use of the appropriate safety equipment that would
40 be utilized during the course of their work. The Site Health and Safety Officer shall
41 ascertain that the safety equipment is being used when appropriate and/or required.

42 43 **2-17.2(5) Soil Management Plan**

44
45 The Contractor shall submit a detailed plan for management of all excavated soils. The
46 plan shall include excavation, loading, and transporting procedures, dust control
47 procedures, and disposal of contaminated soils.

1
2 **2-17.3 Construction Requirements**
3

4 Construction activities at the site will generate excess soils and possible groundwater
5 associated with the installation of underground utilities. The Contractor shall fully
6 develop and implement a program in accordance with the Health and Safety Plan to
7 ensure worker health and safety and to minimize disruption to construction due to site
8 contamination.
9

10 **2-17.3(1) Notification**
11

12 The Contractor shall notify the Contracting Agency, in writing, at least ten (10) working
13 days prior to the date that excavation operations are to begin and identify the limits of
14 that excavation. Excavation and sampling shall not take place without a designated
15 representative from the Contracting Agency on site.
16

17 **2-17.3(2) Transportation**
18

19 **2-17.3(2)A General**
20

21 The Contractor shall provide all equipment, personnel, and materials necessary to load
22 and transport waste materials, including contaminated soils and debris, for off-site
23 treatment and/or disposal in accordance with federal, state, and local regulations.
24

25 **2-17.3(2)B Control of Waste Material**
26

27 Vehicles used by the Contractor to transport waste materials shall be properly designed,
28 equipped, and maintained to prevent the loss of materials during transport. The following
29 requirements shall be met for all vehicles transporting waste materials from the site:
30

- 31 1. No soil from the site shall adhere to the outside of the surface of the vehicle
32 (including tires and undercarriage).
33
- 34 2. No liquids shall be leaking or dripping from the vehicles.
35
- 36 3. Any and all waste materials shall be covered with tarpaulin or otherwise
37 completely enclosed to prevent loss of materials from the vehicle during
38 transport.
39

40 If leaking or dripping from transport vehicles occurs, the Contracting Agency may direct
41 the Contractor to use liners or other means to prevent dripping and leaking. The
42 Contractor shall implement such measures, as directed by the Contracting Agency, at the
43 Contractor's sole expense.
44

45 **2-17.3(2)C Street Sweeping**
46

47 The Contractor shall sweep those streets within the project when truck traffic carries soil
48 from the site into the street. Street sweeping shall be conducted in such a way as to not

1 generate visible dust. Material collected from street sweeping shall be disposed of in a
2 legal manner at an off-site location and be included in the street cleaning bid item.

3 4 **2-17.3(2)D Transportation and Shipping Requirements**

5
6 The Contractor shall be responsible for obtaining permits and authorizations necessary to
7 use the selected haul routes. The Contractor shall use United States DOT regulations, 49
8 CFR 172.101 to identify proper shipping names for each hazardous material (including
9 Dangerous Waste) to be shipped off site. Proper shipping names shall be submitted to the
10 Contracting Agency in the form of draft shipping documents for review and comment.

11
12 The Contractor shall ensure that each shipment of material sent off site is accompanied
13 by the appropriate shipping documents. The Contractor shall prepare a bill of lading for
14 each shipment of regulated material which does not require a hazardous waste manifest.
15 The bill of lading shall satisfy the requirements of United States DOT regulations, 49
16 CFR 172 Subpart C and any applicable state or local law or regulation, and shall be
17 submitted to the Contracting Agency for review. The Contractor shall be responsible for
18 completing the shipping documents and obtaining the signatures of the Contracting
19 Agency as needed.

20 21 **2-17.3(3) Off-site Treatment and Disposal**

22
23 The Contractor shall provide documentation of legal disposition including trip tickets and
24 Certificates of Disposal.

25 26 **2-17.4 Measurement**

27
28 No specific measurement shall apply to the lump sum item of Site Health and Safety
29 Plan, Site Health and Safety Officer, and Soil Management Plan.

30 31 **2-17.5 Payment**

32
33 Payment will be made in accordance with Section 1-04.1 for each of the following Bid
34 Items that are included in the Proposal:

35
36 "Site Health and Safety Plan", per lump sum.

37
38 "Site Health and Safety Officer", per lump sum.

39
40 "Soil Management Plan", per lump sum.

41
42 Health and safety training, safety equipment and practices, dust control, efficiency losses
43 to other Contract items caused by handling contaminated materials, and other Work
44 required to comply with this specification not specifically identified in a Bid item shall be
45 considered incidental to the work to comply with this Section and all costs therefore shall
46 be included in the Contract prices for the payment items involved and included in the
47 Proposal.

1
2
3
4
5

END OF SECTION

REFERENCE ONLY

1
2 **3-04 ACCEPTANCE OF AGGREGATE**
3 **(April 1, 2012 Tacoma GSP)**
4

5 **3-04.1 Description**

6 *The first and third paragraphs are deleted.*

7
8 *The fourth paragraph is revised to read:*
9

10 Nonstatistical evaluation will be used for the acceptance of aggregate materials.
11

12 **3-04.3(1) General**

13 *The first sentence is revised to read:*
14

15 For the purpose of acceptance sampling and testing, all test results obtained for a material
16 type will be evaluated collectively.
17

18 **3-04.3(4) Testing Results**

19 *This section is replaced with the following:*
20

21 The results of all acceptance testing will be provided by the City's Project Engineer
22 within 3 working day of testing.
23

24 **3-04.3(6) Statistical Evaluation**

25 *This section is deleted:*
26
27
28

29 **END OF SECTION**
30
31

1
2 **4-04 BALLAST AND CRUSHED SURFACING**
3 **(March 17, 2003 Tacoma GSP)**
4

5 **4-04.5 Payment**

6 *This section is supplemented with the following:*
7

8 All costs for labor, equipment, and materials required to furnish, place, and compact the
9 crushed surfacing top course for all asphalt concrete approaches and non-paved
10 approaches shall be included in the unit Contract price for "Crushed Surfacing Top
11 Course", per ton.
12

13
14 **END OF SECTION**
15

16 [Note to Engineer:
17

18 Use on projects that will require the placement of CSTC for paved and non-paved
19 approaches.]

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

1 The mixer shall be capable of producing a uniform mixture of uniformly coated
2 aggregates meeting the requirements of these Specifications.

3 4 5 **4-06.3(2) Preparation of Aggregates**

6
7 Aggregates for asphalt treated base shall be stockpiled before use in accordance with the
8 requirements of Section 3-02.

9
10 The aggregates shall be heated as required by the Engineer.

11 12 **4-06.3(2)A Mix Design**

13
14 The mix design requirements for asphalt treated base shall be as described in Section 9-
15 03.6(3). Ndesign will be 100 gyrations for all ATB design applications. The asphalt
16 binder shall be PG 64-22 unless specifically altered in the project specifications. The
17 proposed mix design will be submitted for review on WSDOT Form 350-042 with
18 included notes applicable to the ATB design evaluation.

19 20 **4-06.3(3) Vacant**

21 22 **4-06.3(4) Mixing**

23
24 The asphalt treated base shall be mixed in accordance with the requirements of Section 5-
25 04.3(8).

26 27 **4-06.3(5) Hauling Equipment**

28
29 Hauling equipment for asphalt treated base shall conform to the requirements of Section
30 5-04.3(2).

31 32 **4-06.3(6) Spreading and Finishing**

33
34 Asphalt treated base shall be spread with a spreading machine equipped with a stationary,
35 vibratory, or oscillating screed or cut-off device, subject to the approval of the Engineer.
36 Approval of the equipment shall be based on a job demonstration that the finished
37 product will meet all requirements of the Specifications. Automatic controls will not be
38 required. Unless otherwise directed by the Engineer, the nominal compacted depth of
39 any ATB layer shall not exceed 0.40 feet. On areas where irregularities or unavoidable
40 obstacles make the use of mechanical spreading and finishing equipment impractical, the
41 paving may be done with other equipment or by hand.

42
43 The internal temperature of the ATB mixture at the time compaction is achieved shall be
44 a minimum of 185°F. Rollers shall only be operated in the static mode when the internal
45 temperature of the mix is less than 175°F.

1 **4-06.3(6)A Subgrade Protection Course**

2
3 Unless otherwise specified by the Engineer, the Contractor shall place the asphalt treated
4 base as a protection for the prepared Subgrade on all sections of individual Roadways
5 which are to receive asphalt treated base as soon as 10,000 square yards of Subgrade is
6 completed. This requirement shall not be limited to contiguous areas on the project.

7
8 The surface of the Subgrade protection layer when constructed on a grading project shall
9 conform to grade and smoothness requirements that apply to the Subgrade upon which it
10 is placed.

11
12 **4-06.3(6)B Finish Course**

13
14 The final surface course of the asphalt treated base, excluding Shoulders, shall not
15 deviate at any point more than $\frac{3}{8}$ inch from the bottom of a 10-foot straightedge laid in
16 any direction on the surface on either side of the Roadway crown. Failure to meet this
17 requirement shall necessitate sufficient surface correction to achieve the required
18 tolerance, as approved by the Engineer, at no expense to the Contracting Agency.

19
20 When portland cement concrete pavement is placed on an asphalt base, the surface
21 tolerance of the asphalt base shall be such that no elevation lies more than 0.05 feet
22 below nor 0.00 feet above the plan grade minus the specified plan depth of portland
23 cement concrete pavement. Prior to placing the portland cement concrete pavement, any
24 such irregularities shall be brought to the required tolerance by grinding or other means
25 approved by the Engineer, at no expense to the Contracting Agency.

26
27 **4-06.3(7) Density**

28
29 The asphalt treated base shall be compacted to a density of not less than 80% percent of
30 the maximum theoretical density established for the mix by WSDOT FOP for AASHTO
31 T 209. The density of the base shall be determined by means of tests on cores taken from
32 the Roadway or with the nuclear gauge in accordance with Section 5-04.3(10)B. The
33 frequency of these tests shall be at the discretion of the Engineer, but in no case shall it be
34 less than one control lot for each normal day's production. The use of equipment which
35 results in damage to the materials or produces substandard workmanship will not be
36 permitted.

37
38 **4-06.3(8) Anti-Stripping Additive**

39
40 An anti-stripping additive shall be added to the asphalt binder material in accordance
41 with Section 9-02.4 in the amount designated in a WSDOT mix design/anti-strip
42 evaluation report for a dense graded hot mix asphalt design from the same gravel source
43 within the last 24 months or as evaluated separately by an accredited lab using current
44 WSDOT test methods (AASHTO T324 – Hamburg or WSDOT TM T718 – Modified
45 Lottman). Alternately, the ATB may be evaluated for anti-strip additive using ASTM
46 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

1
2 **5-02 BITUMINOUS SURFACE TREATMENT**
3 **(March 3, 2008 Tacoma GSP)**
4

5 **5-02.3(1) Equipment**
6

7 *The third sentence of the third paragraph is revised to read:*
8

9 Each roller shall not weigh less than 8-tons and shall be capable of providing constant
10 contact pressure.
11

12
13 **END OF SECTION**
14
15

1
2 **5-04 HOT MIX ASPHALT**

3 [Note to Engineer: Do not apply the WSDOT Amendment for 5-04 to this special
4 provision (delete it).]
5

6 [Note to Engineer: There are two versions of 5-04 included below. Choose the first one
7 listed if you are using Porous Asphalt on your project; choose the second one for regular
8 HMA. Delete the non-applicable one.]
9

10 *The title of this section is revised to read:*
11

12 **5-04 POROUS ASPHALT AND HOT MIX ASPHALT**

13
14 **5-04.3 Construction Requirements**
15 **(March 9, 2016 APWA GSP)**
16

17 *Supplement this section with the following:*
18

19 **Porous Asphalt (PHMA/PWMA) Acceptance Infiltration Test**

20 Contractor shall conduct infiltration tests on the finished PHMA/PWMA per ASTM
21 C1701 at locations chosen by the Engineer. Newly-placed PHMA/PHWA shall have a
22 minimum infiltration rate of 100 inches/hour. Infiltration tests shall be completed every
23 150 linear feet of roadway and conducted in accordance with ASTM C1701.
24

25 If the measured infiltration rate is less than 100 inches/hour, the Contractor shall conduct
26 an additional four infiltration tests in line with the paver direction of travel. Two tests
27 upstream and two tests downstream of the initial test locations shall be taken at distances
28 of 20 feet and 40 feet. Results of the additional tests will be averaged. The Contractor
29 shall conduct additional testing upstream and downstream to identify area to be removed.
30 If the average infiltration rate is less than required remove and replace the failing section
31 at the direction of the Engineer and at no cost to the Contracting Agency.
32

33 **5-04.3(1) Hot Asphalt Mixing Plant**
34 **(March 9, 2016 APWA GSP)**
35

36 *Supplement this section with the following:*
37

38 Plants used for preparation of PHMA shall conform to the following requirements:
39

40 **Fiber Supply System**

41 When fiber stabilizing additives are determined necessary to achieve drain down criteria
42 per APWA GSP 5-04.3(7)A of these Specifications, a separate feed system that meets the
43 following shall be required:
44

- 45 1. Accurately proportions by weight the required quantity into the mixture in such a
46 manner that uniform distribution will be obtained.

2. The fibers shall be uniformly distributed prior to the injection of the asphalt binder into the mixture. When a continuous or drier-drum type plant is used, the fiber shall be added to the aggregate and uniformly dispersed prior to the injection of asphalt binder.

Surge and Storage Systems

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

5-04.3(3) Hot Mix Asphalt Pavers (June 16, 2016 Tacoma GSP)

The second paragraph is deleted.

5-04.3(3)A Material Transfer Device/Vehicle (June 16, 2016 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:

\$\$\$

[Note to Engineer: fill in "none" normally; consult with PW Engineering on when a MTD/V may be used, typically large HMA paving projects on Arterials or heavy haul roads.]

5-04.3(5)E Pavement Repair (June 16, 2016 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 www.govME.org.

Pavement repair consists of asphalt concrete sawcut, removing asphalt concrete pavement, 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 sub-grade in

1 accordance with Section 2-06 and the Plans, regardless of the method used for
2 excavation.

3
4 Estimated plan quantities for pavement repair are approximate and are provided for
5 bidding purposes only. The actual dimensions to be used will be verified by the Engineer
6 at the time of construction. Contrary to Section 1-04.6, no changes to the unit prices bid
7 for the various items will be permitted due to any increase or decrease in the amount of
8 pavement repair.

9
10 [Note to Engineer: When using the preceding paragraph, list all pavement repair items in
11 City of Tacoma Special Provision 1-04.6. This may not be used on FHWA funded
12 projects, in which case the preceding paragraph needs to be deleted.]

13
14 Payment for pavement repair shall be by the unit Bid prices according to the Contract for
15 all materials, labor, and equipment required to complete the pavement repair. Items not
16 included in the Proposal shall be paid for according to Section 1-04.1(2).

17 18 **5-04.3(7)A Mix Design**

19 20 **5-04.3(7)A1 General**

21 **(June 16, 2016 Tacoma GSP)**

22 *This section is supplemented with the following:*

23
24 The Contractor shall determine anti-strip requirements for HMA and provide laboratory
25 test data for anti-stripping.

26
27 The Contractor shall provide a mix design based upon 3 million ESAL's.

28 29 **5-04.3(7)A2 Statistical or Nonstatistical Evaluation**

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

31 32 **5-04.3(7)A2 Nonstatistical Evaluation**

33 **(January 16, 2014 APWA GSP)**

34
35 Mix designs for HMA accepted by Nonstatistical evaluation shall:

- 36 • Be submitted to the Project Engineer on WSDOT Form 350-042
- 37 • Have the aggregate structure and asphalt binder content determined in
38 accordance with WSDOT Standard Operating Procedure 732 and meet the
39 requirements of Sections 9-03.8(2) and 9-03.8(6).
- 40 • Have anti-strip requirements, if any, for the proposed mix design determined
41 in accordance with WSDOT Test Method T 718 or based on historic anti-strip
42 and aggregate source compatibility from WSDOT lab testing. Anti-strip
43 evaluation of HMA mix designs utilized that include RAP will be completed
44 without the inclusion of the RAP.

45
46 At or prior to the preconstruction meeting, the Contractor shall provide one of the
47 following mix design verification certifications for Contracting Agency review:

- The proposed mix design indicated on a WSDOT mix design/anti-strip report that is within one year of the approval date
- The proposed HMA mix design submittal (Form 350-042) with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.
- The proposed mix design by a qualified City or County laboratory mix design report that is within one year of the approval date.

The mix design will 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 Material Reference Laboratory (AMRL) program.

At the discretion of the Engineer, agencies may accept mix designs verified beyond the one year verification period with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

Add this new sub-section (equals March 9, 2016 APWA GSP 5-04.3(7)A):

5-04.3(7)A4 Mix Design for PHMA
(March 9, 2016 APWA GSP)

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

The asphalt binder for PHMA/PWMA shall be PG 70-22ER polymer modified or higher grade. Binder content shall be between 6.0% and 7.0% by total weight of the mix, and will be the highest percentage that passes both the drain down and void requirements tests at $N_{\text{design}} = 75$ gyrations. The binder content tolerance shall be $\pm 0.3\%$ during production/placement of the PHMA/PWMA. The Contractor shall adjust the aggregate to meet the maximum drain down test requirements within the ranges provided below.

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

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

The Contractor shall determine anti-strip requirements for PHMA/PWMA and provide data for anti-stripping. The asphaltic mix shall be tested for its resistance to stripping by

1 water in accordance with ASTM D-3625. If the estimated coating area is not above 95
2 percent, anti-stripping agents shall be added to the asphalt. Contractor shall be
3 responsible for conducting the anti-stripping evaluation and providing a report to the
4 Engineer.

5
6 Alternately, anti-strip evaluation of an existing dense graded hot mix asphalt of the same
7 maximum nominal aggregate class and from the same aggregate materials source may be
8 used to set the anti-stripping requirements for PHMA/PWMA. The anti-strip requirement
9 for the PHMA/PWMA shall be equivalent to the anti-stripping requirement for the HMA.

10 11 **5-04.3(8)A Acceptance Sampling and Testing – HMA Mixture**

12 13 **5-04.3(8)A1 General**

14 **(January 16, 2014 APWA GSP)**

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

16
17 Acceptance of HMA shall be as defined under nonstatistical or commercial evaluation.

18
19 Nonstatistical evaluation will be used for all HMA not designated as Commercial HMA
20 in the contract documents.

21
22 The mix design will be the initial JMF for the class of HMA. The Contractor may request
23 a change in the JMF. Any adjustments to the JMF will require the approval of the Project
24 Engineer and must be made in accordance with Section 9-03.8(7).

25
26 Commercial evaluation may be used for Commercial HMA and for other classes of HMA
27 in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails,
28 gores, prelevel, and pavement repair. Other nonstructural applications of HMA accepted
29 by commercial evaluation shall be as approved by the Project Engineer. Sampling and
30 testing of HMA accepted by commercial evaluation will be at the option of the Project
31 Engineer. Commercial HMA can be accepted by a contractor certificate of compliance
32 letter stating the material meets the HMA requirements defined in the contract.

33
34 **(March 9, 2016 APWA GSP)**

35 *Supplement this section with the following:*

36
37 Commercial evaluation will be the basis for acceptance of PHMA/ PWMA.

38 39 **5-04.3(8)A4 Definition of Sampling Lot and Sublot**

40 **(January 16, 2014 APWA GSP)**

41 *Section 5-04.3(8)A4 is supplemented with the following:*

42
43 For HMA in a structural application, sampling and testing for total project quantities less
44 than 400 tons is at the discretion of the engineer. For HMA used in a structural
45 application and with a total project quantity less than 800 tons but more than 400 tons, a
46 minimum of one acceptance test shall be performed:

- i. If test results are found to be within specification requirements, additional testing will be at the engineer's discretion.
- ii. If test results are found not to be within specification requirements, additional testing as needed to determine a CPF shall be performed.

5-04.3(8)A5 Test Results
(January 16, 2014 APWA GSP)

The first paragraph of this section is deleted.

5-04.3(8)A6 Test Methods
(June 16, 2016 Tacoma GSP)

This section is revised to read:

Testing of HMA for compliance of Va will be at the option of the Contracting Agency, and will be by WSDOT Standard Operating Procedure (SOP) 731. Testing for compliance of asphalt binder content will be by FOP for AASHTO T 308. Testing for compliance of gradation will be by FOP for WAQTC T 27/T 11, WSDOT Materials Manual.

(March 9, 2016 APWA GSP)

Supplement this section with the following:

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

5-04.3(9) Spreading and Finishing
(March 9, 2016 APWA GSP)

Supplement this section with the following:

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

5-04.3(10) Compaction

5-04.3(10)A General
(March 9, 2016 APWA GSP)

Supplement this section with the following:

Pneumatic tire rollers shall not be used for compaction of PHMA/PWMA.

The Contractor shall develop a roller pattern that will initially consolidate the pavement structure as well as target 15% to 18% final air voids (82% to 85% of maximum theoretical (Rice) density). The Contractor shall monitor compaction during placement of PHMA/PWMA with a pavement density gauge.

5-04.3(10)B1 General
(June 16, 2016 Tacoma GSP)

1 *The fourth sentence of the first paragraph is revised to read:*

2
3 The specified level of density attained will be determined by the non-statistical evaluation
4 of nuclear density tests taken on the day the mix is placed (after completion of the finish
5 rolling).

6
7 *The sixth paragraph and subsequent table are deleted.*

8
9 *This section is supplemented with the following:*

10
11 Compaction tests will be performed at a minimum of 5 various locations, as determined
12 by the Engineer, for each 400 tons placed. The locations will be determined by the
13 stratified random sampling procedure conforming to WSDOT Test Method T 716. For
14 an area in progress with a CPF less than 0.75, a new compaction sequence will begin at
15 the Contractor's request after the Project Engineer is satisfied that material conforming to
16 the Specifications can be produced. The Compaction Test Procedures will be provided to
17 the Contractor by the Contracting Agency at the Pre-Construction Conference or a Pre-
18 Paving Meeting, prior to the placement of HMA material on site.

19
20 Cores may be used as an alternate to the nuclear density gauge tests. When cores are
21 taken by the Engineer at the request of the Contractor, the request shall be made by noon
22 of the first working day following placement of the mix. The Engineer shall be
23 reimbursed for the coring expenses.

24
25 At the start of paving, if requested by the Contractor, a compaction test section shall be
26 constructed as directed by the Engineer to determine the compactibility of the mix design.
27 Compactibility shall be based on the ability of the mix to attain the specified minimum
28 density (91 percent of the maximum density determined by WSDOT FOP for AASHTO
29 T 729). Following determination of compactibility, the Contractor is responsible for the
30 control of the compaction effort. If the Contractor does not request a test section, the mix
31 will be considered compactible.

32
33 HMA for preleveling shall be compacted to the satisfaction of the Engineer.

34
35 **5-04.3(10)B2 Cyclic Density**
36 **(June 16, 2016 Tacoma GSP)**

37 *This section is deleted.*

38
39 **5-04.3(10)B4 Test Results**
40 **(June 16, 2016 Tacoma GSP)**

41 *The first paragraph is revised to read:*

42
43 The Engineer will inform the Contractor of field compaction test results as work is being
44 performed. Formal Test Report(s) will be provided to the Contractor within 3 Working
45 Days.

1 **5-04.3(17) Paving Under Traffic**
2 **(June 16, 2016 Tacoma GSP)**

3 *The second paragraph is supplemented with the following:*

4
5 No traffic shall be allowed on any newly placed pavement without the approval of the
6 Engineer.

7
8 **5-04.3(20) Anti Stripping Additive**
9 **(June 16, 2016 Tacoma GSP)**

10 *This section is revised to read as follows:*

11
12 The asphalt supplier shall add anti-stripping additive to the liquid asphalt prior to
13 shipment to the asphalt mixing plant. The Contractor shall submit the anti-stripping
14 additive type and amount as designated in the WSDOT mix design/anti-strip evaluation
15 report. The contractor shall submit the anti-stripping additive amount and the
16 manufacturer's certification, together with the HMA mix design submittal in accordance
17 with Section 5-04.3(7)A. Paving shall not begin before the anti-stripping additive
18 submittal is approved by the Engineer.

19
20 **5-04.4 Measurement**
21 **(June 16, 2016 Tacoma GSP)**

22 *The first paragraph is revised to read:*

23
24 HMA Cl. ___ PG ___, PHMA, PWMA, HMA for ___ Cl. ___ PG ___, and Commercial
25 HMA will be measured by the ton in accordance with Section 1-09.2, with no deduction
26 being made for the weight of asphalt binder, blending sand, mineral filler, anti-stripping
27 additive, or any other component of the mixture; and the measurement shall include
28 asphalt wedge curbs, and thickened edges in accordance with the Plans or as directed by
29 the Engineer. If the Contractor elects to remove and replace mix as allowed in Section 5-
30 04.3(11), the material removed will not be measured.

31
32 *The second paragraph is revised to read:*

33
34 No specific unit of measure will apply to roadway cores, which shall be included in the
35 measurements for the HMA items that are included in the Proposal.

36
37 *This section is supplemented with the following:*

38
39 HMA for Approach Cl. ___ PG __ shall be measured per square yard of finished driveway
40 and approach.

41
42 No specific unit of measure will apply to Anti-Stripping Additive, which shall be
43 included in the measurements for the HMA items that are included in the Proposal.

44
45 **5-04.5 Payment**
46 **(June 16, 2016 Tacoma GSP)**

47 *Pay items for "Job Mix Compliance Price Adjustment" and "Compaction Price*
48 *Adjustment" are deleted.*

1
2 *The following pay items for HMA are revised to read:*

3
4 “HMA Cl. ___ PG ___”, per ton.

5 “HMA for ___ Cl. ___ PG ___”, per ton.

6
7 The unit Contract price per ton for “HMA Cl. ___ PG ___”, and “HMA for ___ Cl. ___ PG
8 ___” shall be full payment for all costs incurred to carry out the requirements of Section 5-
9 04, including coring and testing, and shall include anti-stripping additive, asphalt wedge
10 curbs, thickened edges, curb drains, and connection to existing drains in accordance with
11 the Contract. Any costs that are already included in other Bid items in the Proposal shall
12 not be included in the unit Contract prices per ton for these HMA Bid items.

13
14 *The pay item “HMA for Approach Cl. ___ PG ___” is revised to read:*

15
16 “HMA for Approach Cl. ___ PG 64-22”, per square yard.

17
18 The unit Contract price per square yard for “HMA for Approach Cl. ___ PG 64-22” shall be
19 full payment for all costs incurred to carry out the requirements of Section 5-04,
20 including anti-stripping additive; and shall include asphalt wedge curbs, thickened edges,
21 curb drains, and connection to existing drains in accordance with the Contract. Any costs
22 that are already included in other Bid items in the Proposal shall not be included in the
23 unit Contract price per square yard for this HMA Bid item. The Contractor shall also
24 include all costs associated with excavating for driveways and approach, including haul
25 and disposal in the unit Contract price per square yard for “HMA for Approach Cl. ___ PG
26 64-22”, regardless of the depth.

27
28 *This section is supplemented with the following:*

29
30 “HMA Cl. ___ PG ___ for Pavement Patch”, per ton.

31
32 The unit Contract price for pavement patch shall be full pay for all labor, equipment, and
33 materials required to complete the patching of the street, including joints, where required,
34 and removal of temporary base.

35
36 “Cold Plant Mix for Temporary Pavement Patch”, per ton.

37
38 The unit Contract price for “Cold Plant Mix for Temporary Pavement Patch” shall be full
39 pay for all labor, equipment, and materials required to furnish and install; maintain; and
40 remove and dispose of the temporary patch.

41
42 Temporary pavement patches placed between October 1st and March 31st shall be HMA
43 Cl. ½” PG 64-22.

44
45 **(March 9, 2016 APWA GSP)**

46
47 “PHMA CL. 1/2” In. PG 70-22ER”, per ton.

1
2 The unit Contract price per ton for "PHMA CL. 1/2 In. PG 70-22ER" shall be full
3 compensation for all costs, including anti-stripping additive and tack coat, incurred to
4 carry out requirements of Section 5-04 except for those costs included in other items
5 which are included in this Subsection and which are included in the Proposal.
6

7 **5-04.5(1) Quality Assurance Price Adjustments**
8 **(June 16, 2016 Tacoma GSP)**

9 *This section is deleted.*
10
11

12 **END OF SECTION**
13

14 [Note to Engineer: The City's standard HMA mix is Class 1/2" PG 64-22. All projects
15 should use this mix, unless the project is subject to an unusually high level of axle loads,
16 such as roads in the Port. Please note that PG 64-28 is not available west of the
17 Cascades. To add strength, you can use a 3" or thicker layer of HMA Cl. 1" overlain by a
18 2" layer of HMA Cl. 1/2". For added durability the binder may also be changed to PG70-
19 22 (it is also more brittle, so utilize only when appropriate), and a higher cost estimate
20 should be accounted for. Also note that binders \geq PG70 costs approximately \$50.00 per
21 ton of binder more than PG64.]
22
23

1 **5-04 HOT MIX ASPHALT**

2 [Note to Engineer: Do not apply the 2016 WSDOT Amendment for section 5-04 when
3 using this special provision (it needs to be deleted).]
4

5 [Note to Engineer: choose this Special Provision for conventional HMA Section 5-04 if
6 you will NOT have Porous Asphalt on your project and delete Porous HMA Section 5-04
7 above.]
8

9 **5-04.3 Construction Requirements**

10
11 **5-04.3(3) Hot Mix Asphalt Pavers**
12 **(June 16, 2016 Tacoma GSP)**

13 *The second paragraph is deleted.*
14

15 **5-04.3(3)A Material Transfer Device/Vehicle**
16 **(June 16, 2016 Tacoma GSP)**

17 *The first paragraph is revised to read:*
18

19 A Material Transfer Device/Vehicle (MTD/V) shall not be used unless specific paving
20 areas are specified below. A MTD/V shall only be used according to this special
21 provision for the following paving areas:
22

23 **\$\$\$**

24 [Note to Engineer: fill in "none" normally; consult with PW Engineering on when a
25 MTD/V may be used, typically large HMA paving projects on Arterials or heavy haul
26 roads.]
27

28 **5-04.3(5)E Pavement Repair**
29 **(June 16, 2016 Tacoma GSP)**

30 *This section is revised to read:*
31

32 Pavement repair shall be in accordance with the City of Tacoma Right-of-Way
33 Restoration Policy found at www.govME.org.
34

35 Pavement repair consists of asphalt concrete sawcut, removing asphalt concrete
36 pavement, crushed surfacing and subgrade, and installing Construction Geotextile for
37 Separation, placing crushed surfacing top course over the Construction Geotextile, and
38 HMA in accordance with the Contract or as directed by the Engineer.
39

40 Pavement repair excavation may also be performed by the use of a milling machine of a
41 type that has operated successfully on work comparable with that to be done under the
42 Contract and shall be approved by the Engineer prior to use. If a milling machine is used
43 for excavation, the excavation shall be as directed by the Engineer.
44

45 In all types of excavation, after the removal of the asphalt, the base material will be
46 evaluated by the Engineer to determine if it is suitable. If the base is determined not to be
47 suitable, the Contractor shall remove the base material and restore the sub-grade in

1 accordance with Section 2-06 and the Plans, regardless of the method used for
2 excavation.

3
4 Estimated plan quantities for pavement repair are approximate and are provided for
5 bidding purposes only. The actual dimensions to be used will be verified by the Engineer
6 at the time of construction. Contrary to Section 1-04.6, no changes to the unit prices bid
7 for the various items will be permitted due to any increase or decrease in the amount of
8 pavement repair.

9
10 [Note to Engineer: When using the preceding paragraph, list all pavement repair items in
11 City of Tacoma Special Provision 1-04.6. This may not be used on FHWA funded
12 projects, in which case the preceding paragraph needs to be deleted.]

13
14 Payment for pavement repair shall be by the unit Bid prices according to the Contract for
15 all materials, labor, and equipment required to complete the pavement repair. Items not
16 included in the Proposal shall be paid for according to Section 1-04.1(2).

17 18 **5-04.3(7)A Mix Design**

19 20 **5-04.3(7)A1 General**

21 **(June 16, 2016 Tacoma GSP)**

22 *This section is supplemented with the following:*

23
24 The Contractor shall determine anti-strip requirements for HMA and provide laboratory
25 test data for anti-stripping.

26
27 The Contractor shall provide a mix design based upon 3 million ESAL's.

28 29 **5-04.3(7)A2 Statistical or Nonstatistical Evaluation**

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

31 32 **5-04.3(7)A2 Nonstatistical Evaluation**

33 **(January 16, 2014 APWA GSP)**

34
35 Mix designs for HMA accepted by Nonstatistical Evaluation shall;

- 36 • Be submitted to the Project Engineer on WSDOT Form 350-042
- 37 • Have the aggregate structure and asphalt binder content determined in
- 38 accordance with WSDOT Standard Operating Procedure 732 and meet the
- 39 requirements of Sections 9-03.8(2) and 9-03.8(6).
- 40 • Have anti-strip requirements, if any, for the proposed mix design determined
- 41 in accordance with WSDOT Test Method T 718 or based on historic anti-strip
- 42 and aggregate source compatibility from WSDOT lab testing. Anti-strip
- 43 evaluation of HMA mix designs utilized that include RAP will be completed
- 44 without the inclusion of the RAP.

45
46 At or prior to the preconstruction meeting, the Contractor shall provide one of the
47 following mix design verification certifications for Contracting Agency review;

- The proposed mix design indicated on a WSDOT mix design/anti-strip report that is within one year of the approval date
- The proposed HMA mix design submittal (Form 350-042) with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.
- The proposed mix design by a qualified City or County laboratory mix design report that is within one year of the approval date.

The mix design will 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 Material Reference Laboratory (AMRL) program.

At the discretion of the Engineer, agencies may accept mix designs verified beyond the one year verification period with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

5-04.3(8)A Acceptance Sampling and Testing – HMA Mixture

5-04.3(8)A1 General (January 16, 2014 APWA GSP)

Delete this section and replace it with the following:

Acceptance of HMA shall be as defined under nonstatistical or commercial evaluation.

Nonstatistical evaluation will be used for all HMA not designated as Commercial HMA in the Contract documents.

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).

Commercial evaluation may be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Project Engineer. Commercial HMA can be accepted by a Contractor certificate of compliance letter stating the material meets the HMA requirements defined in the Contract.

5-04.3(8)A4 Definition of Sampling Lot and Sublot (January 16, 2014 APWA GSP)

Section 5-04.3(8)A4 is supplemented with the following:

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

- i. If test results are found to be within specification requirements, additional testing will be at the engineer's discretion.
- ii. If test results are found not to be within specification requirements, additional testing as needed to determine a CPF shall be performed.

**5-04.3(8)A5 Test Results
(January 16, 2014 APWA GSP)**

The first paragraph of this section is deleted.

**5-04.3(8)A6 Test Methods
(June 16, 2016 Tacoma GSP)**

This section is revised to read:

Testing of HMA for compliance of Va will be at the option of the Contracting Agency, and will be by WSDOT Standard Operating Procedure (SOP) 731. Testing for compliance of asphalt binder content will be by FOP for AASHTO T 308. Testing for compliance of gradation will be by FOP for WAQTC T 27/T 11, WSDOT Materials Manual.

5-04.3(10) Compaction

**5-04.3(10)B1 General
(June 16, 2016 Tacoma GSP)**

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

The specified level of density attained will be determined by the non-statistical evaluation of nuclear density tests taken on the day the mix is placed (after completion of the finish rolling).

The sixth paragraph and subsequent table are deleted.

This section is supplemented with the following:

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.

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

5
6 At the start of paving, if requested by the Contractor, a compaction test section shall be
7 constructed as directed by the Engineer to determine the compactibility of the mix design.
8 Compactibility shall be based on the ability of the mix to attain the specified minimum
9 density (91 percent of the maximum density determined by WSDOT FOP for AASHTO
10 T 729). Following determination of compactibility, the Contractor is responsible for the
11 control of the compaction effort. If the Contractor does not request a test section, the mix
12 will be considered compactible.

13
14 HMA for preleveling shall be compacted to the satisfaction of the Engineer.

15
16 **5-04.3(10)B2 Cyclic Density**
17 **(June 16, 2016 Tacoma GSP)**

18 *This section is deleted.*

19
20 **5-04.3(10)B4 Test Results**
21 **(June 16, 2016 Tacoma GSP)**

22 *The first paragraph is revised to read:*

23
24 The Engineer will inform the Contractor of field compaction test results as work is being
25 performed. Formal Test Report(s) will be provided to the Contractor within 3 Working
26 Days.

27
28 **5-04.3(17) Paving Under Traffic**
29 **(June 16, 2016 Tacoma GSP)**

30 *The second paragraph is supplemented with the following:*

31
32 No traffic shall be allowed on any newly placed pavement without the approval of the
33 Engineer.

34
35 **5-04.3(20) Anti Stripping Additive**
36 **(June 16, 2016 Tacoma GSP)**

37 *This section is revised to read as follows:*

38
39 The asphalt supplier shall add anti-stripping additive to the liquid asphalt prior to
40 shipment to the asphalt mixing plant. The Contractor shall submit the anti-stripping
41 additive type and amount as designated in the WSDOT mix design/anti-strip evaluation
42 report. The Contractor shall submit the anti-stripping additive amount and the
43 manufacturer's certification, together with the HMA mix design submittal in accordance
44 with Section 5-04.3(7)A. Paving shall not begin before the anti-stripping additive
45 submittal is approved by the Engineer.

46
47 **5-04.4 Measurement**
48 **(June 16, 2016 Tacoma GSP)**

1 *The first paragraph is revised to read:*

2
3 HMA Cl. ___ PG ___, HMA for ___ Cl. ___ PG ___, and Commercial HMA will be
4 measured by the ton in accordance with Section 1-09.2, with no deduction being made for
5 the weight of asphalt binder, blending sand, mineral filler, anti-stripping additive, or any
6 other component of the mixture; and the measurement shall include asphalt wedge curbs
7 and thickened edges in accordance with the Plans or as directed by the Engineer. If the
8 Contractor elects to remove and replace mix as allowed in Section 5-04.3(11), the
9 material removed will not be measured.

10
11 *The second paragraph is revised to read:*

12
13 No specific unit of measure will apply to roadway cores, which shall be included in the
14 measurements for the HMA items that are included in the Proposal.

15
16 *This section is supplemented with the following:*

17
18 HMA for Approach Cl. ___ PG ___ shall be measured per square yard of finished driveway
19 and approach.

20
21 No specific unit of measure will apply to anti-stripping additive, which shall be included
22 in the measurements for the HMA items that are included in the Proposal.

23
24 **5-04.5 Payment**

25 **(June 16, 2016 Tacoma GSP)**

26 *Pay items for "Job Mix Compliance Price Adjustment" and "Compaction Price*
27 *Adjustment" are deleted.*

28
29 *The following pay items for HMA are revised to read:*

30
31 "HMA Cl. ___ PG ___", per ton.

32 "HMA for ___ Cl. ___ PG ___", per ton.

33
34 The unit Contract price per ton for "HMA Cl. ___ PG ___" and "HMA for ___ Cl. ___ PG
35 ___" shall be full payment for all costs incurred to carry out the requirements of Section 5-
36 04, including coring and testing, and shall include anti-stripping additive, asphalt wedge
37 curbs, thickened edges, curb drains, and connection to existing drains in accordance with
38 the Contract. Any costs that are already included in other Bid items in the Proposal shall
39 not be included in the unit Contract prices per ton for these HMA Bid items.

40
41 *The pay item "HMA for Approach Cl. ___PG___" is revised to read:*

42
43 "HMA for Approach Cl. ___PG 64-22", per square yard.

44
45 The unit Contract price per square yard for "HMA for Approach Cl. ___PG 64-22" shall be
46 full payment for all costs incurred to carry out the requirements of Section 5-04,
47 including anti-stripping additive; and shall include asphalt wedge curbs, thickened edges,

1 curb drains, and connection to existing drains in accordance with the Contract. Any costs
2 that are already included in other Bid items in the Proposal shall not be included in the
3 unit Contract price per square yard for this HMA Bid item. The Contractor shall also
4 include all costs associated with excavating for driveways and approach, including haul
5 and disposal in the unit Contract price per square yard for "HMA for Approach Cl. ___ PG
6 64-22", regardless of the depth.

7
8 *This section is supplemented with the following:*

9
10 "HMA Cl. ___ PG ___ for Pavement Patch", per ton.

11
12 The unit Contract price for pavement patch shall be full pay for all labor, equipment, and
13 materials required to complete the patching of the street, including joints, where required,
14 and removal of temporary base.

15
16 "Cold Plant Mix for Temporary Pavement Patch", per ton.

17
18 The unit Contract price for "Cold Plant Mix for Temporary Pavement Patch" shall be full
19 pay for all labor, equipment, and materials required to furnish and install; maintain; and
20 remove and dispose of the temporary patch.

21
22 Temporary pavement patches placed between October 1st and March 31st shall be HMA
23 Cl. ½" PG 64-22.

24
25 **5-04.5(1) Quality Assurance Price Adjustments**

26 *This section is deleted.*

27
28 **END OF SECTION**

29
30 [Note to Engineer: The City's standard HMA mix is Class ½" PG 64-22. All projects
31 should use this mix, unless the project is subject to an unusually high level of axle loads,
32 such as roads in the Port. Please note that PG 64-28 is not available west of the
33 Cascades. To add strength, you can use a 3" or thicker layer of HMA Cl. 1" overlain by a
34 2" layer of HMA Cl. ½". For added durability the binder may also be changed to PG70-
35 22 (it is also more brittle, so utilize only when appropriate), and a higher cost estimate
36 should be accounted for. Also note that binders ≥ PG70 costs approximately \$50.00 per
37 ton of binder more than PG64.]
38

**5-05 CEMENT CONCRETE PAVEMENT
(June 16, 2016 Tacoma GSP)**

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 www.govME.org.

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 psi.

[Note to Engineer: Use a minimum of 4,000 psi compressive strength for concrete pavement]

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.

5-05.3(11) Finishing

The third paragraph is revised to read:

1 In advance of curing operations, the pavement shall receive an initial texturing followed
2 by final finishing. Initial texturing shall be performed with a burlap drag or broom device,
3 creating striations in the same orientation as the final finish. The concrete roadway
4 surface shall be finished with a *** transverse tining / longitudinal tining / heavy broom
5 finish ***. Where integral concrete curbs are constructed, the roadway surface finish
6 shall end 12 inches from the flowline.

7
8 [Note to Engineer: Select one of the options listed above for finishing (or specify a
9 combination of finishes). Transverse tining is the normal concrete finish.]

10
11 *The fourth paragraph is revised to read:*

12
13 Burlap drags, brooms and tine devices may be installed on self-propelled equipment
14 having external alignment control. When texturing the pavement with burlap, the area of
15 burlap in contact with the pavement shall be maintained constant at all times. Broom and
16 tine devices shall be provided with positive elevation control. Downward pressure on
17 pavement surface shall be maintained at all times during texturing so as to achieve
18 uniform texturing without measurable variations in pavement profile. If self-propelled
19 texturing machines are used, these shall be operated so that travel speed during texturing
20 is maintained constant. Failure of the texturing equipment to perform according to this
21 section shall constitute cause for stopping placement of concrete until the equipment
22 deficiency or malfunction is corrected.

23
24 *The seventh paragraph is revised to read:*

25
26 **Test Panel:**

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

33
34 Project panels not meeting the characteristics of the test panel shall be removed and
35 replaced at no additional cost to the Contracting Agency.

36
37 *The eighth through tenth paragraphs are deleted.*

38
39 **5-05.3(14) Cold Weather Work**

40 *This section is supplemented with the following:*

41
42 The following additional requirements for placing concrete shall be in effect from
43 November 1 to April 1:

- 44 • Engineer shall be notified at least 24 hours prior to placement of concrete.
- 45 • All concrete placement shall be completed no later than 2:00 p.m. each day.
- 46 • Where forms have been placed and the subgrade has been subjected to frost,
47 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.

Cement Concrete Pavement for Pavement Patches will be measured by the square yard

Epoxy-Coated Tie Bars with Drill Hole that are drilled into existing cement concrete pavement will be measured per each tie bar installed according to the Plans and Section 5-05.

Dowel Bar Retrofit shall be measured per each retrofitted dowel bar installed into an existing concrete pavement edge according to the Plans and Section 5-05.

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 except as specified for “Dowel Bar Retrofit” and “Epoxy-Coated Tie Bar with Drill Hole” in this section.

Tie bars that are drilled into existing cement concrete pavement that is not constructed under the Contract will be paid for under the item “Epoxy-Coated Tie Bar with Drill Hole” when included in the Proposal.

Dowel bars that are retrofitted into an existing concrete pavement that is not constructed under the Contract will be paid for under the Bid item “Dowel Bar Retrofit” when included in the Proposal.

“Epoxy-Coated Tie Bar with Drill Hole”, per each.

The unit Contract price per each for “Epoxy-Coated Tie Bar with Drill Hole” shall be full payment for all equipment, tools, materials, and labor to drill holes, furnish and install tie-bars, epoxy-bonding agent, grout according to Section 5-05 and the Plans.

1 “Dowel Bar Retrofit”, per each.

2
3 The unit Contract price per each for “Dowel Bar Retrofit” shall be full payment for all
4 equipment, tools, materials, and labor to drill holes, furnish dowel bars, furnish and
5 install parting compound, and to construct the dowel bar retrofits according to Section 5-
6 05 and the Plans.

7
8 “Cement Conc. Base Pavement, ____-Inch Section”, per square yard.

9
10 The unit Contract price per square yard for “Cement Conc. Base Pavement, ____-Inch
11 Section” shall be full payment for all costs incurred to carry out the requirements of
12 Section 5-05 and the Plans, and shall include all costs associated with the furnishing and
13 installing of all necessary dowel bars and tie bars except as specified for “Dowel Bar
14 Retrofit” and “Epoxy-Coated Tie Bar with Drill Hole” in this section.

15
16 “Cement Conc. Pavement for Pavement Patch, ____-Inch Section”, per square yard.

17
18 The unit Contract price for “Cement Conc. Pavement for Pavement Patch, ____-Inch
19 Section” shall be full payment for all costs incurred to carry out the requirements of
20 Section 5-05 and the Plans, and shall include all costs associated with the furnishing and
21 installing of all necessary dowel bars and tie bars except as specified for “Dowel Bar
22 Retrofit” and “Epoxy-Coated Tie Bar with Drill Hole” in this section.

23
24
25 **END OF SECTION**
26

1 **6-02 CONCRETE STRUCTURES**
2 **(February 16, 2011 Tacoma GSP)**

3
4 **6-02.3(2)B Commercial Concrete**

5 *This section is supplemented with the following:*

6
7 Where concrete Class 3000 is specified for driveways, the Contractor may use
8 commercial concrete.

9
10 **6-02.3(4) Ready-Mix Concrete**

11 *The first paragraph is revised to read.*

12
13 All concrete shall be batched in a prequalified manual, semi-automatic, or automatic
14 plant as described in Section 6-02.3(4)A.

15
16
17 **END OF SECTION**
18

1
2 **7-02 CULVERTS**
3 **(April 1, 2012 Tacoma GSP)**
4

5 **7-02.2 Materials**

6 *This section is supplemented with the following:*
7

8 All culvert pipe shall have a smooth interior wall.
9

10
11 **END OF SECTION**
12
13

7-04 STORM SEWERS
(March 17, 2003 Tacoma GSP)

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
(March 23, 2010 Tacoma GSP)

7-05.1 Description

This section is supplemented with the following:

All references to sanitary sewers shall be construed to also mean storm sewers.

7-05.3 Construction Requirements

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

A flexible pipe-to-manhole connector shall be used in all connections of rigid and thermoplastic pipes to **new** precast concrete manholes to provide a watertight joint between the pipe and the manhole, unless otherwise directed by the Engineer. The connector shall be "Kor-N-Seal" with "Wedge Korband" (Type I or II as required for pipe diameter), manufactured by NPC, Inc., Milford, New Hampshire, or Engineer approved equal. The connectors shall be installed in accordance with the manufacturer's recommendations.

7-05.3(1) Adjusting Manholes and Catch Basins to Grade

This section is revised to read:

7-05.3(1) Adjusting Utility Structures to Grade

Where shown in the Plans or where directed by the Engineer, utility structures shall be adjusted to grade as staked or as otherwise designated by the Engineer.

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

7-05.3(3) Connections to Existing Manholes

The first sentence is revised to read:

The Contractor shall inspect the existing manholes in the field to verify invert elevations and the scope of work necessary to make the connection(s) prior to construction.

7-05.4 Measurement

The sixth paragraph is revised to read:

Connections to existing structures will be measured per each.

This section is supplemented with the following:

Reconnecting existing sewer pipes to new manhole structures will be measured per each.

Manholes with Cast-in-Place Base will be measured per each.

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.

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,

1 furnishing and installing the new frame and cover, compacting, surfacing, and
2 restoration.

3
4 “Adjust Existing Valve Chamber to Grade”, per each

5
6 The unit Contract price per each for “Adjust Existing Valve Chamber to Grade” shall be
7 full pay for all costs associated with the adjusting the valve chamber to finished grade,
8 including but not limited to, excavating, furnish and place backfill, compacting,
9 surfacing, and restoration.

10
11 “Manhole ____-In. Diam. Type ____, with Cast-in-Place Base”, per each.

12
13 The unit Contract price per each for “Manhole ____-In. Diam. Type ____, with Cast-in-
14 Place Base” shall be full pay for all labor, equipment and materials required to furnish,
15 excavate for, furnish and place backfill, compact, and install to finished grade the new
16 manhole with a cast-in-place base, including, but not limited to, insuring proper support
17 of existing main, channeling, connection of new pipe, covers, frames, ladders, steps, and
18 handholds, as applicable per Standard Plans

19
20 “Catch Basin Type 2 Additional Height, ____ In. Diam.”, per linear foot.

21
22
23 **END OF SECTION**
24

1
2 **7-07 CLEANING EXISTING DRAINAGE STRUCTURES**
3 **(March 23, 2010 Tacoma GSP)**
4

5 **7-07.3 Construction Requirements**

6 *Item three of paragraph two is revised to read:*
7

- 8 3. If sediment and water from structures does not meet the conditions described in 1
9 or 2 above, the Contractor shall collect and dispose of all water used and all debris
10 generated in cleaning operations. No cleaning water or debris shall be flushed
11 downstream beyond the limits of the work.
12

13
14 **END OF SECTION**
15
16

7-08 GENERAL PIPE INSTALLATION REQUIREMENTS
(November 16, 2016 Tacoma GSP)

7-08.3 Construction Requirements

[Note to Engineer: Check GovME under Building & Land Use (BLUS)/Superfund Sites/Tacoma Smelter Plume to determine if the project is located in an area of potential arsenic and lead contamination. If in an area designated as 20.1 ppm or greater, soil testing is required. Include the following paragraph if arsenic or lead contamination is present. For additional information about the Asarco Smelter go to <https://fortress.wa.gov/ecy/smeltersearch>]

This section is supplemented with the following:

Material excavated in areas labeled on the Plans as contaminated shall be hauled to LRI Landfill, located at 30919 Meridian Street East, Graham, WA or an approved licensed solid waste disposal facility per Section 2-17 and 7-17 of these Specifications.

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). Recycled concrete shall not be used

for pipe zone bedding, pipe zone backfill, backfill above pipe zone, and extra excavation area backfill.

The fourth paragraph is revised to read:

Backfill above the pipe zone shall be accomplished in such a manner that the pipe will not be shifted out of position nor damaged by impact or overloading. If pipe is being placed in a new embankment, backfill above the pipe zone shall be placed in accordance with Section 2-03.3(14)C. If pipe is being placed under existing paved areas, or roadways, backfill above the pipe zone shall be placed in horizontal layers no more than 12-inches thick and compacted to 95-percent maximum density. If pipe is being placed in non-traffic areas, backfill above the pipe zone shall be placed in horizontal layers no more than 12-inches thick and compacted to 85-percent maximum density. All compaction shall be in accordance with the Compaction Control Test of Section 2-03.3(14)D. Material excavated from the trench shall be used for backfill above the pipe zone, except that organic material, frozen lumps, wood, rocks, or pavement chunks larger than 6-inches in maximum dimension shall not be used. Material determined by the Engineer to be unsuitable for backfill at the time of excavation shall be removed and replaced with imported backfill material meeting the requirements of Section 9-03.12(2). Material determined to be suitable for backfill at the time of excavation shall be stockpiled and used for backfill material. If the stockpiled material becomes unsuitable, the Contractor shall furnish suitable material in an amount equal to that, which became unsuitable, at no expense to the Contracting Agency.

Section 7-08.3 is supplemented with the following:

7-08.3(5) Temporary Bypass Pumping

It shall be the Contractor's responsibility 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 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. This can be accomplished via a combination of pumping and/or gravity flow. 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.

Bypass pumping shall be scheduled for continuous operation with back-up equipment available at all times for periods of maintenance and refueling or failure of the primary bypass pump(s) or diversion system. If the Contractor's operation requires bypass pumping at night, he/she must provide monitoring personnel at all times to ensure the system remains functional.

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 storm water to private

1 property, city streets, sidewalks, sanitary sewer, or any location other than an approved
2 storm sewer is prohibited. The discharge of sewage to private property, city streets,
3 sidewalks, storm sewer, or any location other than an approved sanitary sewer is
4 prohibited. The Contractor shall be liable for all cleanup, damages, and resultant fines
5 should the Contractor's operation cause any backups, overflows, or property damage.

7 The Contractor's bypass operation shall be sized to handle, at a minimum, the full pipe
8 capacity in each subject line removed from service. If flow conditions are greater than
9 full pipe, the Contractor may elect to wait for flow conditions to subside prior to
10 removing the subject line from service. Working days may be adjusted per Specification
11 1-08.5. Once the Contractor removes a section of line from service he/she is responsible
12 to bypass any and all flow in the system during construction, even in the event the system
13 surcharges and exceeds the full pipe capacity, until the line is returned to service.

15 The City's estimates of gravity flows in the existing sewers assuming full pipe are as
16 follows:

18 A. ###-Inch Diameter Storm Sewer: ### gpm (### cfs)

20 B. ###-Inch Diameter Sanitary Sewer: ### gpm (### cfs)

22 The Contractor shall submit a Bypass Pumping Plan in accordance with Section 1-05.
23 The Contractor's plan for bypass pumping shall be reviewed by the City before the
24 Contractor will be allowed to commence bypass pumping. The review of the bypassing
25 system and equipment by the Engineer shall in no way relieve the Contractor of his
26 responsibility and public liability.

28 The Contractor shall use hard pipe to bypass sewers 12-inches in diameter or greater.
29 The Contractor shall not block any driveways or intersections, but shall bury the pipe to
30 allow continuous access through intersections and driveways.

32 The Contractor may use lay-flat hose to bypass storm and sanitary sewers that are less
33 than 12 inches in diameter. The Contractor shall ensure that sewage spills do not occur
34 with the use of lay flat hoses. If sewage spills occur, the Contractor will be required to
35 use hard pipe for all sanitary sewers.

37 **7-08.3(6) Abandon Existing Pipe**

39 [Note to Engineer: This specification is intended for large diameter and shallow sewer
40 pipes that should be abandoned by filling with CDF to avoid collapse and surface settling
41 in the future. If your project will abandon pipes, please contact Kari Prussen, Science &
42 Engineering Division, 502-2183 to determine if abandoned sewer pipes need to be filled
43 with CDF or whether just abandoning in place, without CDF, will be acceptable.]

45 If construction of the new sewer pipe does not result in the removal of the existing pipe
46 due to differing alignments, then the existing pipe shall be abandoned in place as shown
47 in the Plans. The Contractor shall plug all pipe branches, stubs, or other open ends of the

1 pipe to be abandoned and fill with CDF. The Contractor shall submit a Pipe
2 Abandonment Plan in accordance with Section 1-05.3 describing the proposed methods
3 for filling the pipes with CDF, specifically addressing how the pipes will be filled in a
4 manner that will prevent air pockets from being left in the abandoned pipe. The CDF
5 mix design shall meet the requirements of Section 2-09.3(1)E.

6
7 If the pipes to be abandoned are removed and disposed of during construction of the new
8 sewers, all costs for the removal and disposal shall be included in the unit contract price
9 for "Structure Excavation, Class B," at per cubic yard.

12 **7-08.4 Measurement**

13 *This section is supplemented with the following:*

14
15
16 No specific measurement shall apply to the lump sum item "Temporary ____ Sewer
17 Bypass".

18
19 No specific measurement shall apply to the lump sum item "Temporary ____ Sewer
20 Bypass Plan".

21
22 Abandonment of existing sewer pipes will be measured by the cubic yard of CDF
23 necessary to fill the existing pipes.

24 **7-08.5 Payment**

25 *The pay item for "Structure Excavation Class B" is revised to read:*

26
27
28 "Structure Excavation Class B", per cubic yard.

29
30 The unit Contract price for "Structure Excavation Class B" shall be full payment for all
31 excavation, **removal of water**; storing, protecting and re-handling of suitable backfill
32 material; backfilling of the trench, compaction of backfill, and all other work necessary
33 for the construction of the sewer trench.

34
35 [Note to Engineer: If you are using a separate bid item for dewatering in Section 8-01,
36 then delete "removal of water" from the structure excavation item. If you are not using a
37 separate bid item for dewatering, leave "removal of water" in structure excavation.]

38
39 *This section is supplemented with the following:*

40
41 "Temporary ____ Sewer Bypass", per lump sum.

42
43 The lump sum Contract prices for "Temporary ____ Sewer Bypass" shall be full payment
44 for labor, equipment, and materials, including but not limited to, personnel, fuel,
45 monitoring, power, pumps, piping, barricades, emergency stand-by equipment, trenching,
46 surface restoration costs, and all other work necessary to maintain uninterrupted storm
47 and sanitary sewer services by bypassing the applicable sewer system flows.

1
2 “Temporary ____ Sewer Bypass Plan”, per lump sum
3

4 The lump sum Contract price for “Temporary ____ Sewer Bypass Plan” shall be full pay
5 for all costs, including but not limited to, preparing, submitting, revising, and
6 resubmitting revisions for the Temporary Bypass Plan.
7

8 “CDF for Pipe Abandonment”, per cubic yard.
9

10 The unit Contract price for “CDF for Pipe Abandonment” shall be full payment for all
11 labor, materials, and equipment necessary to abandon the sewer pipes.
12

13
14 **END OF SECTION**
15

7-17 SANITARY SEWERS
(March 4, 2014 Tacoma GSP)

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 Construction Requirements

[Note to Engineer: Check GovME under Building & Land Use (BLUS)/Superfund Sites/Tacoma Smelter Plume to determine if the project is located in an area of potential arsenic and lead contamination. If in an area designated as 20.1 ppm or greater, soil testing is required. Include the following paragraph if arsenic or lead contamination is present. For additional information about the Asarco Smelter go to <https://fortress.wa.gov/ecy/smeltersearch>]

This section is supplemented with the following:

Material excavated in areas labeled on the Plans as contaminated shall be hauled to LRI Landfill, located at 30919 Meridian Street East, Graham, WA or an approved licensed solid waste disposal facility per Section 2-17 of these Specifications.

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

The first sentence is revised to read:

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

1 **7-17.4 Measurement**

2 *This section is supplemented with the following:*

3
4 Removal and replacement of unsuitable, contaminated and non-contaminated, backfill
5 material will be determined by the cubic yard in place, based on a neat line measurement
6 per this Section and Section 2-09. Any removal and replacement of unsuitable material
7 outside neat line measurement shall be incidental to the Bid item.

8
9 **Horizontal Limits:** The horizontal limits shall be as defined in Section 2-09.4.

10
11 **Longitudinal Limits:** The longitudinal limits shall be as defined in Section 2-09.4.

12
13 **Lower Limits:** The lower limits shall be the top of the pipe zone as shown on Standard
14 Plan No. SU-16.

15
16 **Upper Limits:** The upper limits shall be the subgrade elevation of the proposed roadway
17 section or pavement patch section.

18
19 All costs associated with the disposal of material located above the upper limits shall be
20 included in the unit contract price for other items of work, unless a proposal item is
21 included for this specific item of work.

22
23 Pipe zone limits are as defined in Standard Plan SU-16.

24
25 **7-17.5 Payment**

26 *The first paragraph is supplemented with the following:*

27
28 “PVC Storm Sewer Pipe ____ In. Diam.”, per linear foot.

29
30 *The second paragraph is revised to read:*

31
32 The unit Contract price per linear foot for sewer pipe of the kind and size specified shall
33 be full pay for the furnishing, hauling, and assembling in place the complete installation,
34 including but not limited to, disposal of material excavated within the pipe zone,
35 furnishing and installing pipe bedding and backfill material within the pipe zone, and all
36 wyes, tees, special fitting, joint materials, and other appurtenances necessary for the
37 completion of the installation to the required line and grade, unless proposal items are
38 included for these specific items of work.

39
40 *The pay item “Removal and Replacement of Unsuitable Material” is revised to read:*

41
42 “Removal and Replacement of Unsuitable Material”, per cubic yard.

43
44 The unit Contract price per cubic yard for “Removal and Replacement of Unsuitable
45 Material” shall be full pay for all work required to haul and dispose of the unsuitable
46 material as specified in Section 7-08.3(1)A and the furnishing of suitable backfill
47 material as specified in Section 7-08.3(3).

1
2 For the purpose of providing a common proposal for bidders, the proposal quantity for
3 “Removal and Replacement of Unsuitable Material” is based on removal and
4 replacement of all backfill material.

5
6 [Note to Engineer: Include the following paragraph if there is arsenic or lead
7 contamination in the pipe trench.]
8

9 *This section is supplemented with the following:*

10
11 “Removal and Replacement of Unsuitable Contaminated Material, Incl. Haul”, per cubic
12 yard.

13
14 The unit Contract price per cubic yard for “Removal and Replacement of Unsuitable
15 Contaminated Material, Incl. Haul” shall be full pay for all work required to haul to LRI
16 or other approved facility, disposal of the unsuitable material as specified in Section 7-
17 08.3(1)A, including disposal fees, and the furnishing of suitable backfill material as
18 specified in Section 7-08.3(3).

19
20 [Note to Engineer: Include the following paragraph if there is arsenic or lead
21 contamination that extends into the pipe zone area.]
22

23 “Pipe Zone Contaminated Material Haul and Disposal”, per cubic yard.

24
25 The unit Contract price per cubic yard for “Pipe Zone Contaminated Material Haul and
26 Disposal” shall be full pay for all work required to haul and dispose of the pipe zone
27 material as defined on Standard Plan SU-16, including disposal fees.
28

29
30 **END OF SECTION**
31

7-18 SIDE SEWERS
(March 4, 2014 Tacoma GSP)

7-18.1 Description

This section is supplemented with the following:

The Contractor shall remove and replace existing side sewers as defined on the Plans and reconnect the existing side sewer. The location of the side sewer at the main is estimated based on a TV inspection of the main and may vary in either direction. The actual location at the point of reconnection is unknown.

7-18.3(1) General

This section is supplemented with the following:

The Contractor shall use solid wall PVC pipe meeting the requirements of Section 9-05.12(1) for all side sewers located 10 feet or more from a water service. If the side sewer is located within 10 feet of a water service, the Contractor shall use solid wall PVC pressure pipe meeting the requirements of Section 9-30.1(5)A. If the side sewer crosses above a water main, the side sewer shall be encased per the Department of Ecology Criteria for Sewage Works Design (Orange Book) Section C1-9.1.4A. Any encasement of side sewers shall be paid for under force account per Section 1-09.6.

7-18.4 Measurement

This section is supplemented with the following:

Measurement for payment shall be by the linear foot of pipe installed, and shall be along the pipe invert, through tees, wyes and other fittings, from the centerline of the main to the centerline of the cleanout.

7-18.5 Payment

The second paragraph is revised to read:

The unit Contract price per linear foot for sewer pipe of the various kind and size specified shall be full pay for furnishing, hauling and assembling in place the completed installation including all wyes, tees, special fittings, joint materials, bedding material, and end pipe marker, and any other items necessary for the completion of the installation, unless Proposal items are included for these specific items of Work.

END OF SECTION

1
2 **7-19 SEWER CLEANOUTS**
3 **(May 13, 2009 Tacoma GSP)**
4

5 **7-19.3 Construction Requirements**

6 *The third sentence of the first paragraph is deleted.*
7

8 *The fourth sentence of the third paragraph is deleted.*
9

10 **7-19.5 Payment**

11 *The third paragraph is revised to read:*
12

13 The unit Contract price for "Sewer Cleanout" shall be full pay for furnishing and placing
14 the wye, pipe, pipe bends, pipe plug, castings, and collar as specified herein and as shown
15 on Standard Plan SU-24.
16

17
18 **END OF SECTION**
19
20

1
2 **8-01 EROSION CONTROL AND WATER POLLUTION CONTROL**
3 **(March 17, 2016 Tacoma GSP)**
4

5 **8-01.1 Description**

6 *This section is supplemented with the following:*
7

8 The City of Tacoma Stormwater Management Manual is available on the City's website
9 at www.cityoftacoma.org/stormwatermanual.
10

11 [Note to Engineer: Where projects exceed one acre of disturbed area (for the entire
12 project), the Engineer is responsible for applying for and receiving a Washington State
13 Department of Ecology NPDES Construction Stormwater General Permit PRIOR to
14 advertising for bids. Apply and pay permit fees for the permit per the instructions and
15 forms on Ecology's website at www.ecy.wa.gov/programs/wq/stormwater/construction.
16 The Engineer should allow adequate time in the design process to obtain this permit (it
17 requires a 30 day advertisement period prior to issuance). Add the following paragraph
18 to the spec if this permit is required:]
19

20 The City of Tacoma has been issued a Washington State Department of Ecology NPDES
21 Construction Stormwater General Permit for this project. This Work also consists of
22 administration and compliance with the requirements of this permit for this project. A
23 copy of this permit is included in Appendix **XXX** of these Special Provisions.
24

25 **8-01.3(1) General**
26

27 [Note to Engineer: When a NPDES Construction Stormwater General Permit has been
28 issued for the project, add the following section:]
29

30 *This section is supplemented with the following:*
31

32 The Contractor shall perform all work in compliance with the NPDES Construction
33 Stormwater General Permit issued for this project.
34

35 The permit shall be transferred to the Contractor prior to issuance of a Notice to Proceed
36 and terminated upon completion of the project per the following:
37

- 38 1. The City will provide the Contractor with a Transfer of Coverage form prior
39 to issuing a Notice to Proceed.
- 40 2. The Contractor shall sign and return the Transfer of Coverage form to the
41 City.
- 42 3. The City will process the transfer and pay any associated transfer fees to the
43 Washington State Department of Ecology.
- 44 4. Once the transfer is complete and a Notice to Proceed has been issued, the
45 Contractor is responsible for performing all work in compliance with the
46 permit and the plans and specifications.
- 47 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:

[Note to Engineer: The engineer shall choose either Option A. or Option B. depending upon who will be the party responsible for developing the SWPPP. Option A. shall be used when the engineer is developing the SWPPP. Option B. shall be used when the contractor is preparing the SWPPP. It is the engineer's responsibility to determine which Option to use or to determine if a written SWPPP will be required (see the SWMM to determine) for the proposed project.]

Option A.

The Contractor shall adopt or modify a Temporary Erosion and Sediment Control (TESC) Plan and Stormwater Pollution Prevention Plan (SWPPP) Report. The Contractor shall include an implementation schedule for the TESC Plan and SWPPP and incorporate this implementation schedule into the Contractor's progress report. The SWPPP and implementation schedule shall be submitted in accordance with 1-05.3 and 1-08.3

[Note to Engineer: When preparing the TESC Plan and SWPPP Report, the engineer shall use the City of Tacoma Stormwater Management Manual (SWMM), Volume 2 as guidance. Where the SWMM and WSDOT Standard Specifications do not agree, the engineer shall use the SWMM guidance as the first choice.]

TESC Plans and SWPPP Reports that are modified by the Contractor shall be reviewed and approved by the Project Engineer before implementation. The Contractor shall allow 5 working days for the Project Engineer to review any original or revised TESC Plans or SWPPP reports. Failure to approve all or part of any such Plan shall not make the Contracting Agency liable to the Contractor for any Work delays.

Option B.

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.

1 The Contracting Agency has prepared the Construction Stormwater Pollution Prevention
2 Plan Checklist to aid the Contractor in development of the SWPPP. This checklist
3 provides the Contractor with a tool to determine if all the major items are included in the
4 Construction SWPPP and on the TESC Plans and can be found in Volume 2, Chapter 2 of
5 the SWMM. Contractors are encouraged to complete and submit this checklist with the
6 Construction SWPPP.

7
8 The Department of Ecology has prepared a SWPPP template that can be used for projects
9 in the City of Tacoma. The template can be found on Ecology's website
10 at: <http://www.ecy.wa.gov/programs/wq/stormwater/construction/resourcesguidance.html>
11 . The Contractor developing the SWPPP must ensure that all references are appropriate
12 for the City of Tacoma.

13
14 [Note the Engineer: The following two paragraphs apply to both Option A and Option B
15 above.]

16
17 The SWPPP is considered a "living" document that shall be revised to account for
18 additional erosion control/pollution prevention BMPs as they become necessary and are
19 implemented in the field during project construction. A copy of the most current SWPPP
20 and TESC Plan shall remain on-site at all times and an additional copy shall be forwarded
21 to the Engineer. At the Contractor's preference, revisions to the SWPPP and TESC Plan
22 may be forwarded to the Engineer rather than submitting a complete document.
23 Revisions to the SWPPP and TESC Plan may be kept on-site in a file along with the
24 original SWPPP document.

25
26 The Contractor shall provide Stormwater Pollution Prevention Plan inspection reports or
27 forms per 8-01.3(1) B to the Project Engineer no later than the end of the next working
28 day following the inspection.

29 30 31 **8-01.3(1)B Erosion and Sediment Control (ESC) Lead**

32 *This section is revised to read:*

33
34 The Contractor shall identify the ESC Lead at the Preconstruction Meeting and the
35 contact information for the ESC Lead shall be added to the Stormwater Pollution
36 Prevention Plan (SWPPP) Report and the Temporary Erosion and Sediment Control
37 (TESC) Plan Sheet. The ESC Lead shall maintain, for the life of the contract, a current
38 Certified Erosion and Sediment Control Lead (CESCL) certificate or maintain a current
39 Certified Professional in Erosion and Sediment Control (CPESC) certificate from a
40 course approved by the Washington State Department of Ecology. The CESCL or
41 CPESC shall be listed on the Emergency Contact List required under Section 1-05.13(1).

42
43 The CESCL or CPESC shall direct implementation of the measures identified in the
44 SWPPP and as shown on the TESC plan. Implementation shall include, but is not limited
45 to the following:

- 46 1. Installing and maintaining all temporary erosion and sediment control Best
47 Management Practices (BMPs) included in the SWPPP and as shown on the

- 1 TESC plan. Damaged or inadequate BMPs shall be corrected as needed to
2 assure continued performance of their intended function in accordance with
3 BMP specifications and Permit requirements.
- 4 2. Performing monitoring as required by the NPDES Construction Stormwater
5 General Permit.
- 6 3. Inspecting all on-site erosion and sediment control BMPs at least once every
7 calendar week and within 24 hours of any discharge from the site. A SWPPP
8 Inspection report or form shall be prepared for each inspection and shall be
9 included in the SWPPP file. A copy of each SWPPP Inspection report or
10 form shall be submitted to the Engineer no later than the end of the next
11 working day following the inspection. The report or form shall include, but
12 not be limited to the following:
- 13 a. When, where, and how BMPs were installed, maintained, modified,
14 and removed.
 - 15 b. Observations of BMP effectiveness and proper placement.
 - 16 c. Recommendations for improving future BMP performance with
17 upgraded or replacement BMPs when inspections reveal SWPPP
18 inadequacies.
 - 19 d. Approximate amount of precipitation since last inspection and when
20 last inspection was performed.
- 21 4. Updating and maintaining a SWPPP file on site that includes, but is not
22 limited to the following:
- 23 a. SWPPP Inspection Reports or Forms.
 - 24 b. SWPPP narrative.
 - 25 c. National Pollutant Discharge Elimination System Construction
26 Stormwater General Permit (Notice of Intent).
 - 27 d. All documentation and correspondence related to the NPDES
28 Construction Stormwater General Permit.
 - 29 e. Other applicable permits.

30 Upon request, the file shall be provided to the Engineer for review.

31 **8-01.3(1)C Water Management**

32 *This section is revised to read:*

33 [Note to Engineer: Dewatering Design Requirements - Do not include the following red
34 text instructions in the specification:

35 Section 8-01.3(1C) Water Management should not be used unless the project will require
36 discharge into the sanitary sewer system. If minimal trench dewatering is anticipated that
37 can be managed with a trash pump and infiltrated back into the trench, do not use this
38 dewatering spec as the handling of water in this manner is paid for under 2-09, Structure
39 Excavation. The bid items "Dewatering Plan" and "Dewatering" should not be included
40 in the proposal if this section is deleted.

41 If significant dewatering is anticipated that warrants using specific dewatering bid items,
42 follow the instructions below:
43
44
45
46

1 In order to provide more adequate and timely information to Source Control who review
2 and issue Special Approved Discharge Authorizations, the following steps shall be
3 followed by the project engineer for all projects which may require dewatering.
4

5 In general, trenching projects will not be able to meet the stringent requirements for
6 discharging groundwater to the stormwater system. The Engineer shall anticipate that all
7 discharges will need to go to the sanitary sewer for these types of projects.
8

9 1. Perform a site assessment

10 Using state and local resources, check for areas that may have potential or
11 known contaminants or known underground storage tanks.
12

13 2. Obtain geotechnical information and soil or groundwater testing results.

14 Hire a geotechnical engineer or other appropriate professional to take soil samples
15 along the project area (recommended spacing approximately every 500 feet along
16 the project limits) and to perform soil and groundwater sample testing based upon
17 whether site assessment found potential for contaminants. The geotechnical
18 engineer or other appropriate professional will provide a soils report describing
19 the soil and groundwater characteristics and any necessary sampling results.
20 Additional requirements may be necessary depending upon the results. The
21 project engineer may request the geotechnical engineer to install piezometers in
22 some or all of the borings to provide access to taking multiple groundwater level
23 readings over time.
24

25 3. Provide a copy of the geotechnical data report to Source Control

26 Source Control will review the geotechnical and testing information to determine
27 what discharge requirements may be necessary prior to any dewatering being
28 discharged to the sanitary sewer system.
29

30 4. Revise the dewatering specification, if necessary

31 If any contaminants are found, or any special requirements are determined by
32 Source Control, revise the following dewatering specification to fit the project.
33 Provide a copy of the revised specification to Source Control for review prior to
34 advertising the project.
35

36 5. Upon award of the contract, the project engineer shall notify Source Control
37 of the contractor's name and contact information. Source Control will issue
38 the SAD Authorization to the contractor at preconstruction meeting for
39 signature.
40

41 6. Any application and discharge fees shall be charged directly to the project not
42 the contractor. Provide the charge number to Source Control.
43

44 7. The dewatering plan must also be submitted to Source Control for review as
45 part of the SAD Authorization.
46

1 End of Note to Engineer]

2
3 **General.** The Contractor is responsible for keeping excavations free from standing water
4 during construction and disposing of the water in a manner that will not cause pollution,
5 injury to public or private property, or cause a nuisance to the public. Groundwater
6 flowing toward, into, or within excavations shall be controlled to prevent sloughing of
7 excavation walls, boils, uplift, and heave in the excavation, and to eliminate interference
8 with orderly progress of construction. The control of groundwater shall be such that
9 softening of the bottom of excavations, or formation of “quick” conditions or “boils”
10 during excavation, shall not occur. The Contractor is responsible for all foundation
11 material required due to lack of dewatering efforts.

12
13 Recent soil boring logs with approximate groundwater elevations are included in the
14 Plans and/or in Appendix ### of these Special Provisions.

15
16 **Dewatering Requirements.** The Contractor shall design, construct, and operate a
17 dewatering system in accordance with this Section and the SAD Authorization. The
18 Contractor shall have competent workers available at all times for the continuous and
19 successful operation of the dewatering and monitoring system.

20
21 [Note to Engineer: If project is located within South Tacoma Groundwater Protection
22 District, there may be restrictions on infiltrating groundwater back into the ground.
23 Project engineer shall contact Tacoma Pierce County Health Department to see if this is
24 an option for the project.]

25
26 **Dewatering Plan.** The Contractor shall submit a dewatering plan to the Engineer for
27 review in accordance with Section 1-05.3 prior to the start of construction. Review of the
28 dewatering plan submitted by the Contractor shall not relieve the Contractor from full
29 responsibility for adequate design and performance of the system. The Contractor shall
30 be solely responsible for the proper design, installation, operation and maintenance of the
31 dewatering system. The Contractor shall be liable for any damages caused by system
32 failure.

33
34 The dewatering plan shall include the following components:

- 35
36 1. System Components – Describe the method and equipment proposed for
37 dewatering the excavation. The Contractor shall have on hand sufficient
38 pumping equipment and machinery in good working condition for all
39 emergencies, including power outage and flooding
40 2. Treatment Method – Describe how dewatering water that is to be
41 discharged to the City’s sanitary sewer system will be treated to meet the
42 applicable discharge limits of the Special Approved Discharge
43 Authorization and Tacoma Municipal Code 12.08. Provide applicable
44 calculations.
45 3. Point of Discharge – Describe the point of discharge of the dewatering
46 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.

[Note to Engineer: After award of the contract, it is the Project Engineer’s responsibility to request the authorization application from Source Control and forward the application to the Construction Manager for distribution to the Contractor.]

Requirements for Dewatering Water Discharge to the Storm Sewer System.

Dewatering water will not be permitted to be discharged into the stormwater 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.

[Note to Engineer:

The following note applies to Sections 8-01.3(2) through 8-01.3(16)

The Project Engineer shall review the most recent version of the City of Tacoma Stormwater Management Manual (SWMM) when developing the TESC Plan, Stormwater Pollution Prevention Plan Report and bid document. The Project Engineer shall review each BMP contained within the SWMM and Standard Specification to ensure the appropriate language is included for the bid document. The BMPs referenced in SWMM may contain all or parts of the information contained in the Standard Specification. Often the SWMM provides several options for managing stormwater within in a single BMP. Best Management Practices in the SWMM are not a substitute for a specification.]

8-01.3(2) Seeding, Fertilizing, and Mulching

8-01.3(2)A1 Seeding

The first paragraph is supplemented with the following:

The depth of cultivation shall be ### inches.

[Note to Engineer: Areas to be cultivated need to be identified on the Plans or specified in the Special Provisions.]

8-01.3(2)B Seeding and Fertilizing

The first paragraph is supplemented with the following:

All seeding areas shall be seeded with the following mix:

Type of Seed	% by Weight

The rate of application shall be ### lbs. per acre.

Seeding fertilizer shall be _____

The fourth paragraph is supplemented with the following:

Seed shall be distributed uniformly over the designated area. Half of the seed shall be sown with the sower moving in one direction, and the remainder with the sower moving at right angles to the first sowing.

8-01.3(2)D Mulching

The first paragraph is supplemented with the following:

[Type of Mulch] shall be applied at a rate of ### lbs. per acre.

8-01.3(2)E Tackifiers

This section is supplemented with the following:

[Type of Soil Binder or Tacking Agent] shall be applied at a rate of ### lbs. per acre.

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 second sentence 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.

1
2 **8-01.3(10) Wattles**

3 *The fifth and sixth sentences are revised to read:*

4
5 On gradually sloped or clay-type soils trenches shall be 3 to 5 inches deep. On loose
6 soils, in high rainfall areas, or on steep slopes, trenches shall be 3 to 5 inches deep, or 1/2
7 to 2/3 the thickness of the wattle.

8
9 **8-01.4 Measurement**

10 *The third paragraph is revised to read:*

11 Check dams will be measured by the linear foot along the ground line of the completed
12 check dam. No additional measurement will be made for check dams that are required to
13 be rehabilitated or replaced due to wear.

14
15 *This section is supplemented with the following:*

16
17 No specific unit of measurement shall apply to the lump sum item “Stormwater Pollution
18 Prevention Plan (SWPPP)”.

19
20 No specific unit of measurement shall apply to the lump sum item “Dewatering Plan”.

21
22 *[Note to Engineer: When a NPDES Construction Stormwater General Permit has been*
23 *issued for the project, add the following sentence:]*

24
25 No specific unit of measurement shall apply to the lump sum item “NPDES Construction
26 Stormwater General Permit”.

27
28 *Add the following new sections:*

29
30 **8-01.4(1) Lump Sum Bid for Project (No Unit Items)**

31
32 When the bid Proposal contains the item “Erosion/Water Pollution Control”, there will be
33 no measurement of unit items for Work defined by Section 8-01.4 except as described in
34 Section 8-01.4(2). Also, except as described in Section 8-01.4(2), all of Sections 8-01.4
35 and 8-01.5 are deleted.

36
37 **8-01.4(2) Reinstating Unit Items with Lump Sum Erosion/Water Pollution Control**

38
39 The Contract Provisions may establish the project as lump sum, in accordance with
40 section 8-01.4(1) and also include one or more of the items included above in section 8-
41 01.4. When that occurs, the corresponding measurement provision in Section 8-01.4 is
42 not deleted and the Work under that item will be measured as specified.

43
44 The bid proposal contains the item “Erosion/Water Pollution Control,” lump sum and the
45 additional erosion control items listed below. The provisions of Section 8-01.4(1),
46 Section 8-01.4(2), and Section 8-01.5(2) shall apply.

1
2 “ESC Lead,” per Day

3
4 “Inlet Protection,” per each

5
6 No specific unit of measurement shall apply to the lump sum item “Stormwater Pollution
7 Prevention Plan (SWPPP)”.

8
9 No specific unit of measurement shall apply to the lump sum item “NPDES Construction
10 Stormwater General Permit”.

11
12 **8-01.5 Payment**

13 [Note to Engineer: Erosion control items are included for both payment by force account
14 and payment by lump sum options. It is the Engineer’s responsibility to determine if
15 payment by force account or payment by lump sum is most appropriate for a given
16 project.]

17
18
19 *The pay item “Erosion/Water Pollution Control”, by force account as provided in*
20 *Section 1-09.6 is revised to read:*

21
22 Installation, maintenance, and removal of erosion and water pollution control devices
23 including removal and disposal of sediment, stabilization and rehabilitation of soil
24 disturbed by these activities and any additional Work deemed necessary by the Engineer
25 to control erosion and water pollution will be paid by force account in accordance with
26 Section 1-09.6. Directing implementation by ESC Lead of the measures identified in the
27 SWPPP, shown on the TESC plan, and all other work as included in Section 8-01.3(1)B
28 shall be paid by force account as provided in Section 1-09.6.

29
30
31 *This section is supplemented with the following:*

32
33 Where removal of erosion control BMPs is directed by the Engineer according to 8-
34 01.3(16) or according to these specification and the plans, removal shall be included in
35 the lump sum or unit cost for these respective BMPs.

36
37 “Erosion Control”, per lump sum. The lump sum contract price for “Erosion Control”
38 shall be full pay for all cost for labor, equipment, and materials to perform all work
39 associated with erosion control. Work shall include, but shall not be limited to,
40 furnishing, purchase and delivery or required materials, installation and maintenance of
41 temporary erosion and sediment control measures, and all costs incurred by the
42 Contractor in performing the Contract Work defined in Section 8-01, except for unit bid
43 items in Section 8-01 when these are included in the bid proposal. It is the Contractor’s
44 responsibility to maintain, repair, and replace any and all erosion control measures as
45 required to maintain compliance with the NPDES Construction Stormwater General
46 Permit and Tacoma Municipal Code 12.08 for the entire duration of the Project.
47

1 “Stormwater Pollution Prevention Plan (SWPPP)”, per lump sum. The lump sum
2 contract price for “Stormwater Pollution Prevention Plan (SWPPP)” shall be full pay for
3 all costs, including but not limited to, preparing, submitting, revising, and resubmitting
4 revisions for the Stormwater Pollution Prevention Plan.

5
6 “Dewatering Plan”, per lump sum. The lump sum contract price for “Dewatering Plan”
7 shall be full pay for all costs, including but not limited to, preparing, submitting, revising,
8 and resubmitting revisions for the Dewatering Plan.

9
10 [Note to Engineer: When a NPDES Construction Stormwater General Permit has been
11 issued for the project, add the following item:]

12
13 “NPDES Construction Stormwater General Permit”, per lump sum. The lump sum
14 contract price for “NPDES Construction Stormwater General Permit” shall be full pay for
15 all costs, including but not limited to, transfer of coverage, sampling, monitoring,
16 reporting, coordinating, inspecting, materials and labor, and all fees and any other
17 expenses necessary to fully comply with the requirements of the Permit up to and
18 including termination of the Permit and completion of the Work. The lump sum price
19 shall also include all costs necessary to supply the City of Tacoma with all information as
20 necessary to ensure compliance with the permit.

21
22 “Temporary Erosion and Sediment Control BMP Maintenance”, Force Account or Lump
23 Sum. Any maintenance necessary due to stormwater events shall be paid by force
24 account. Any other maintenance needed shall be considered for the contractor’s benefit
25 and be paid by lump sum.

26
27 *Add the following new sections:*

28
29 **8-01.5(1) Lump Sum Bid for Project (No Unit Items)**

30
31 “Erosion/Water Pollution Control”, per lump sum

32
33 The lump sum contract price for “Erosion/Water Pollution Control” shall be full
34 compensation for all costs incurred by the Contractor in performing the Contract Work
35 defined in Section 8-01, except for costs compensated by Bid Proposal items inserted
36 through Contract Provisions as described in Section 8-01.5(2)

37
38 Where removal of erosion control BMPs is directed by the engineer according to 8-
39 01.3(16) or according to these specifications and the plans, removal shall be included in
40 the lump sum or unit cost for these respective BMPs.

41
42 **8-01.5(2) Reinstating Unit Items with Lump Sum Erosion/Water Pollution Control**

43
44 The Contract Provisions may establish the project as lump sum, in accordance with
45 section 8-01.4(1) and also reinstate the measurement of one or more of the items
46 described in section 8-01.4. When that occurs, the corresponding payment provision in
47 Section 8-01.5 is not deleted and the Work under that item will be paid as specified.

1
2 This section is supplemented with the following:
3

4 [Note to Engineer: Add the specific items not paid by lump sum below. Below are
5 examples, delete those not specific to the project and add additional items as needed.]
6

7 “ESC Lead,” per Day
8

9 “Inlet Protection,” per each
10

11 “Stormwater Pollution Prevention Plan (SWPPP)”, per lump sum
12

13 The lump sum contract price for “Stormwater Pollution Prevention Plan (SWPPP)” shall
14 be full pay for all costs, including but not limited to, preparing, submitting, revising, and
15 resubmitting revisions for the Stormwater Pollution Prevention Plan.
16

17 “NPDES Construction Stormwater General Permit”, per lump sum

18 The lump sum contract price for “NPDES Construction Stormwater General Permit”
19 shall be full pay for all costs, including but not limited to, sampling, monitoring,
20 reporting, coordinating, inspecting, fees and any other expenses, materials and labor
21 necessary to fully comply with the requirements of the permit and terminate it upon
22 completion of the project.
23

24 **END OF SECTION**
25

8-02 ROADSIDE RESTORATION
(March 31, 2014 Tacoma GSP)

8-02.3 Construction Requirements

8-02.3(5) 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(6) Soil Amendments

This section is supplemented with the following:

Recycled/compost material in accordance with Section 9-14.4(8) shall be blended with the specified topsoil at a ratio of 1/1 by volume.

Note to Engineer: All major projects using topsoil need to be blended with recycled/compost material at a 1/1 ratio by volume.

8-02.3(9) Pruning, Staking, Guying and Wrapping

This section is supplemented with the following:

Crossed or rubbing branches shall be removed providing the natural shape of the tree is preserved. Under no circumstances shall pruning be done prior to inspection and approval of plants by the Engineer. All cuts shall be made flush with the parent stem leaving no stubs. Pruning cuts shall be made in a manner to favor the earliest possible covering of the wound by callus growth. Cuts that produce large wounds and weaken the tree will not be acceptable.

Top growth removal to compensate for root loss shall not exceed one-third (1/3) of the top growth unless otherwise specified or directed by the Engineer. Cuts created 3/4 inch in diameter shall be treated with an approved tree wound dressing. All pruning shall produce a clean cut without bruising or tearing the bark and shall be in living wood where the wood can properly heal over.

Evergreens shall not be pruned, except to remove injured branches. The use of pole shears and/or hedge shears for pruning deciduous and evergreen trees will not be permitted. All trimmings and other debris left over from the planting operations shall be collected and disposed of off the site.

1 All evergreen trees and deciduous trees over 15 feet in height shall be guyed with three
2 wires or cables.

3
4 All deciduous and evergreen trees shall be staked the same day of planting.

5
6 **8-02.3(10) Fertilizers**

7 *This section is supplemented with the following:*

8
9 Fertilizer shall be supplied and applied in the form and rates indicated below:

10

Type of Fertilizer	Application Rate

11
12 **Note to Engineer:** Consult a landscape architect for fertilizer requirements.

13
14 **8-02.3(11) Bark or Wood Chip Mulch**

15 *The third sentence of the first paragraph is revised to read:*

16
17 Mulch shall be feathered to plant material trunks, stems, canes, or root collars, and level
18 with the top of junction and valve boxes, curbs and pavement edges.

19
20 *This section is supplemented with the following:*

21
22 Bark or wood chip mulch in accordance with Section 9-14.4(3) shall be applied to a depth
23 of ### inches at the location indicated on the Plans or as directed by the Engineer.

24
25 **8-02.3(13) Plant Establishment**

26 *This section is revised to read:*

27
28 The Contractor shall maintain the planting areas and all plants planted within the project
29 limits to ensure the resumption and continued growth of the planted material until
30 physical completion of the contract.

31
32 Maintenance shall include, but not be limited to, labor and materials necessary for
33 removal of foreign, dead, or rejected plant material, maintaining a weed-free condition,
34 and the replacement of all unsatisfactory plant material planted under the contract.

35
36 Planting dates for replacement plant material will be approved by the Engineer.

37
38 The Contractor shall meet with the Engineer for the purpose of joint inspection of the
39 project once installation has been completed and thereafter on a periodic "as needed"
40 basis as determined by the Engineer, until the physical completion date of the contract.

41
42 All conditions unsatisfactory to the Engineer shall be corrected by the Contractor within a
43 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 revised to read:

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.

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) Lawn Installation

8-02.3(16)A Lawn Installation

The second paragraph is revised to read:

All seeding areas shall be seeded with the following mix:

Type of Seed	% by Weight

The rate of application shall be ### lbs per acre.

Note to Engineer: Consult landscape architect for seed mix and application rates.

The third paragraph is supplemented with the following:

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

March 1st – June 30th

September 1st - October 25

The fifth paragraph is supplemented with the following:

Topsoil shall be tilled to a depth of ### inches.

The sixth paragraph is supplemented with the following:

On sloped areas, the sod strips shall be laid perpendicular to the flow of water.

8-02.3(16)B 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.

8-02.4 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.

The seventh paragraph is revised to read:

Compost will be measured by the cubic yard in the haul conveyance at the point of delivery.

This section is supplemented with the following:

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

8-02.5 Payment

The pay item for "Plant Selection" is revised to read

"Plant Selection ____", per each.

Payment for "Plant Selection ____" shall be full pay for all materials, labor, tools, equipment and supplies necessary for weed control within planting areas, planting area preparation, fine grading, planting, cultivating, and clean-up for the particular items called for in the Plans until the physical completion date of the contract. A one (1) year plant warranty shall be included in the unit contract price.

The seventh, eighth, and ninth paragraph pertaining to partial payment are deleted.

The pay unit of square yards will be used in lieu of acres.

The following pay items are revised to read:

1 “Topsoil Type___”, per cubic yard

2
3 The unit contract price per cubic yard for “Topsoil Type ___” shall be full pay for
4 providing the source of material for Topsoil Type A and C, for pre-excavation weed
5 control, excavating, loading, hauling, intermediate windrowing, stockpiling, weed control
6 on stockpiles or windrows, and removal, placing, spreading, processing, cultivating, and
7 compacting topsoil Type A, Type B, and Type C.

8
9 “Fine Compost”, per cubic yard

10
11 “Medium Compost”, per cubic yard

12
13 “Coarse Compost”, per cubic yard

14
15 The unit contract price per cubic yard for “___ Compost” shall be full pay for furnishing
16 and spreading the compost onto the existing soil.

17
18 “Soil Amendment”, per cubic yard

19
20 The unit contract price per cubic yard for “Soil Amendment” shall be full pay for
21 furnishing and incorporating the soil amendment into the existing soil.

22
23 “Bark or Wood Chip Mulch”, per cubic yard

24
25 The unit contract price per cubic yard for “Bark or Wood Chip Mulch” shall be full pay
26 for furnishing and spreading the compost onto the existing soil.

27
28
29 **END OF SECTION**
30

1
2 **8-03 IRRIGATION SYSTEM**
3 **(March 1, 2004 Tacoma GSP)**
4

5 **8-03.3 Construction Requirements**

6 *The fourth paragraph is supplemented with the following:*
7

8 All electrical work from the electrical source to the controller junction box must be
9 completed by a licensed electrical contractor
10

11 **8-03.3(5) Installation**

12 *The first sentence of the second paragraph is revised to read:*
13

14 Final position of turf heads shall be level or ½ inch below finished grade measured from
15 the top of the sprinkler.
16

17 *The fourth paragraph is revised to read:*
18

19 Final position of valve boxes, capped sleeves, and quick coupler valves shall be level
20 with the finished grade or mulch.
21

22 *This section is supplemented with the following:*
23

24 The Contractor shall advise the Engineer at least 24 hours before pressure tests are to be
25 conducted.
26

27 A zone diagram shall be posted in the controller to facilitate the selection of the valves to
28 be operated.
29

30
31 **END OF SECTION**
32
33

1
2 **8-04 CURBS, GUTTERS, AND SPILLWAYS**
3 **(March 1, 2004 Tacoma GSP)**
4

5 **8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways**

6 *The first paragraph is revised to read:*
7

8 Cement concrete curb, curb and gutters, gutters, and spillways shall be constructed with
9 air entrained concrete Class 3000 conforming to the requirements of Section 6-02.

10
11 *Section 8-04.3 Construction Requirements is supplemented with the following:*
12

13 **8-04.3(1)B Integral Cement Concrete Curb**
14

15 When integral curb is being constructed with the pavement, fresh concrete for the integral
16 curb shall be placed at such time as will enable the top section of the curb to be
17 consolidated, finished, and bonded to the pavement slab while the concrete is plastic.
18

19 Where curb is not being placed integral with the pavement slab, reinforcing steel dowels
20 shall be placed in the base section for the curb in accordance with the standard drawing.
21

22 **8-04.3(6) Cold Weather Work**
23

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

- 26 • The Engineer shall be notified at least 24 hours prior to placement of concrete.
- 27 • All concrete placement shall be completed no later than 2:00 p.m. each day.
- 28 • Where forms have been placed and the subgrade has been subjected to frost, no
29 concrete shall be placed until the ground is completely thawed. At that time, the
30 forms shall be adjusted and subgrade repaired as determined by the Engineer.
31

32 **8-04.5 Payment**

33 *This section is supplemented with the following:*
34

35 "Integral Cement Conc. Traffic Curb", per linear foot
36 "Extruded Curb Type _____", per linear foot.
37
38

39 **END OF SECTION**
40

41 [Note to Engineer: See WSDOT Standard Plan F-2b for extruded curb types.]
42
43

1
2 **8-06 CEMENT CONCRETE DRIVEWAY ENTRANCES**
3 **(March 3, 2008 Tacoma GSP)**
4

5 **8-06.3 Construction Requirements**

6 *The first paragraph is revised to read:*
7

8 Cement concrete driveway approaches shall be constructed with air entrained concrete
9 Class 3000 conforming to the requirements of Section 6-02 or Portland Cement Concrete
10 Pavement conforming to the requirements of Section 5-05.
11

12 *This section is supplemented with the following sub-section:*
13

14 **8-06.3(1) Cold Weather Work**
15

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

- 18 • The Engineer shall be notified at least 24 hours prior to placement of concrete.
- 19 • All concrete placement shall be completed no later than 2:00 p.m. each day.
- 20 • Where forms have been placed and the subgrade has been subjected to frost, no
21 concrete shall be placed until the ground is completely thawed. At that time, the
22 forms shall be adjusted and subgrade repaired as determined by the Engineer.
23

24 **8-06.5 Payment**

25 *The third paragraph is revised to read:*
26

27 Excavation required for the construction of the driveway entrance shall be paid for under
28 the unit contract price for "Roadway Excavation, Incl. Haul" when included in the
29 proposal. Otherwise, the Contractor shall include all costs associated with excavating,
30 including haul and disposal, regardless of the depth in the unit contract price for "Cement
31 Conc. Driveway Entrance Type__".
32

33
34 **END OF SECTION**
35
36

1
2 **8-13 MONUMENT CASES**
3 **(March 17, 2003 Tacoma GSP)**
4

5 *This section is revised to read:*
6

7 **8-13 Monuments**
8

9 **8-13.1 Description**
10

11 This work shall consist of constructing monuments in accordance with the Standard Plan
12 and these Specifications, in conformity with the lines and locations shown in the Plans or
13 as staked by the Engineer.
14

15 **8-13.2 Materials**
16

17 Concrete shall be Class 3000 in accordance with the requirements of Section 6-02.
18 'Ready Mix' bag concrete shall not be used.
19

20 Bronze markers will be supplied by the Contracting Agency on City funded projects.
21

22 **8-13.3 Construction Requirements**
23

24 The Contractor shall construct the poured monument in accordance with the City of
25 Tacoma Standard Plan SU-01.
26

27 **8-13.4 Measurement**
28

29 Measurement of the poured monument will be per each.
30

31 **8-13.5 Payment**
32

33 Payment will be made in accordance with Section 1-04.1.
34

35 "Poured Monument", per each.
36

37 The unit contract price per each for "Poured Monument" shall be full pay for all labor,
38 equipment, and materials required to furnish and install the monument, including the
39 removal of existing monuments and necessary pavement removal to accommodate the
40 installation in accordance with the standard plan and specifications.
41

42
43 **END OF SECTION**
44
45

8-14 CEMENT CONCRETE SIDEWALKS
(March 23, 2010 Tacoma GSP)

8-14.3 Construction Requirements

8-14.3(3) Placing and Finishing Concrete

The fourth paragraph is revised to read:

Curb ramps shall be of the type specified in the Plans. The detectable warning pattern shall have the truncated dome shape shown in the Standard Plans.

8-14.3(4) Curing

The second sentence is revised to read:

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

Section 8-14 is supplemented with the following:

8-14.3(20) Cold Weather Work

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

- The Engineer shall be notified at least 24 hours prior to placement of concrete.
- All concrete placement shall be completed no later than 2:00 p.m. each day.
- Where forms have been placed and the subgrade has been subjected to frost, no concrete shall be placed until the ground is completely thawed. At that time, the forms shall be adjusted and subgrade repaired as determined by the Engineer.

8-14.3(21) Thickened Edge for Sidewalk

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

8-14.5 Payment

The pay item "Cement Conc. Sidewalk" is supplemented with the following:

All additional costs related to the construction of thickened edges shall be included in the unit contract cost for "Cement Conc. Sidewalk".

The sixth paragraph is revised to read:

Excavation required for the construction of the sidewalk shall be paid for under the unit contract price for "Roadway Excavation, Incl. Haul" when included in the proposal. Otherwise, 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. Sidewalk" and/or "Cement Conc. Curb Ramp Type ____".

1
2
3

END OF SECTION

REFERENCE ONLY

**8-20 ILLUMINATION, TRAFFIC SIGNAL SYSTEMS, AND ELECTRICAL
(March 31, 2016 Tacoma GSP)**

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 signals, the contractor shall provide a Portable Message Change Sign in each direction and operate the PMCS for one week before, and one week after activating the new signal. This work shall be paid for in accordance with Section 1-10.

Uniformed police officers shall be provided by the Contractor to direct traffic at any time the signal is not in normal operation. 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(1)A Temporary Lighting (use when Contractor provided temporary lighting)

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(1)A Temporary Lighting (use when City provided temporary lighting)

The Contractor shall schedule the work to minimize the outage between any existing lights and new lights. The Contractor shall allow ample time for City forces to provide and install the temporary lighting before the existing lighting is removed from service. All materials and equipment provided by the City for the temporary lighting shall be owned by the City.

[Note to Engineer: Pick one of the two specifications above when temporary lighting is required. When the contractor is required to provide temporary lighting include a bid item in the contract.]

8-20.3(4) Foundations

This section is supplemented with the following:

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:

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, shall be installed in all empty conduits. At least three (3) feet of the location wire 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-28.70-01, 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 handhole.

Conduit terminating in controller foundations shall terminate 1 inch above the foundation.

8-20.3(5)E1 Open Trenching

Subsection 5 is revised to read:

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

6
7 *This section is supplemented with the following new Subsections:*
8

- 9 7. Where multiple conduit are installed in the same trench, the trench shall be
10 of sufficient width to accommodate all conduit, with a minimum 3-inch
11 separation between each conduit, and a minimum clearance of 1-inch on
12 the sides of the trench. When conduit is laid horizontal to one another, the
13 conduit shall be laid at the same elevation, parallel with one another.
14 When conduit is laid vertically in the same trench, conduit spacers shall be
15 used to maintain the 3-inch separation. Spacers shall be installed in
16 accordance with the manufacturer's recommendations for conduit of that
17 size and type. Additional spacers shall be required where the supported
18 conduit is sagging more than 20% of the nominal diameter of the conduit.
19 8. In all conduit trenches, metallic, detectable, utility warning tape shall be
20 placed at twelve (12) inches below final grade.
21

22 **8-20.3(6) Junction Boxes, Cable Vaults, and Pull boxes**

23 *This section is supplemented with the following:*
24

25 Unless otherwise specified in the Plans, or as otherwise directed by the Engineer, all
26 junction boxes exposed to vehicular traffic shall be Heavy-Duty. Field adjustment of
27 junction boxes causing junction boxes to be installed within an intersection radius and
28 within four feet of the curb face may require Heavy-Duty junction boxes. Final
29 placement and type of all junction boxes within an intersection shall be as directed by the
30 Engineer.
31

32 Adjacent junction boxes shall be separated by a minimum of three-inches.
33

34 Concrete meeting the requirements of 6-02.3(2)B shall be placed surrounding all junction
35 boxes except as otherwise provided for below. Concrete shall be flush with the top of the
36 junction box and the adjacent improvements. Concrete shall be cast in place. Junction
37 boxes shall be secured with the concrete border as follows:
38

- 39 1. When the junction box is located within a concrete or asphalt section and
40 is located a minimum of 12-inches from the edge of the section, a concrete
41 border will not be required.
42 2. Where junction boxes are located within 12-inches from the edge of the
43 concrete or asphalt section, the junction box shall be secured on all sides with
44 a minimum 12-inch wide, 6-inch deep concrete section. Concrete shall be
45 finished in the same manner as the adjacent concrete where applicable.
46 3. Where junction boxes are located within a planter strip, a landscaped area,
47 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.

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 minimum 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 third paragraph is revised to read:

All splices in underground illumination circuits, induction loop circuits, and magnetometer circuits shall be installed at junction boxes. The only splice allowed in an induction loop circuit shall be the shielded cable to loop wire splice. The only splice allowed in a magnetometer circuit shall be the probe lead-in cable to the magnetometer cable splice.

Induction loop splices and magnetometer splices shall be heat shrink type with moisture blocking material, sized for the conductors. Magnetometer and induction loop splices shall be soldered. The end of the sheathing shall be sealed with a heat shrink insulator.

[Note to Engineers: For the Fourth Paragraph, on FHWA Funded Projects, use the following:]

The fourth 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 5-conductor or 2-conductor 14 gauge stranded copper wire unless otherwise shown in the plans.
3. For 5-section and bimodal 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 in 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.

1 All wiring entering the cabinet shall be gathered across the conduits to the right front of
2 the cabinet and neatly tied and circle the base of the cabinet counterclockwise as further
3 described below:
4

- 5 1. Copper communication cables shall circle the base of the cabinet,
6 counterclockwise from front right, one full circle, and around to the back of
7 the right panel. Cables shall follow up the back of the right panel and
8 terminate on TS14. Cable outer jacket sheathing shall be removed from a
9 point two (2) inches below TS14. Cables shall be uniform in length, with
10 sufficient slack to reach any terminal on the TS14. Individual wire slack shall
11 be neatly looped back and tied. A bolt/flanged nut alligator jaw shield bond
12 connector shall be utilized.
- 13 2. Power service conductors shall circle the base of the cabinet,
14 counterclockwise from front right, one full circle, and back around to the front
15 right of the base.
- 16 3. Detection cables shall circle the base of the cabinet, counterclockwise from
17 front right, to the back of the left panel. Cables shall follow up the back of the
18 left panel and terminate as directed in the field.
- 19 4. Signal vehicle and pedestrian head shall circle the base of the cabinet,
20 counterclockwise from front right, to back left. Cable outer jacket sheathing
21 shall be removed from the point that the conductor reaches the back left of the
22 cabinet to the ends of the conductors. All vehicle and pedestrian conductors
23 in the cabinets shall be uniform in length, with sufficient slack to reach any
24 terminal on the load bay. Individual wire slack shall be neatly looped back
25 and tied.
- 26 5. Push button conductors shall circle the base of the cabinet, counterclockwise
27 from front right, to front left. Cable outer jacket sheathing shall be removed
28 from the point that the conductor reaches the front left of the cabinet to the
29 ends of the conductors. All push button conductors in the cabinets shall be
30 uniform in length, with sufficient slack to reach any terminal on the TS3
31 terminal strip. Individual wire slack shall be neatly looped back and tied.

32
33 [Note to Engineers: For the Fourth Paragraph, on Non-FHWA Funded Projects, use the
34 following:]
35

36 *The fourth paragraph is revised to read:*
37

38 Signal wiring shall be in conformance with the following:
39

- 40 1. All termination for traffic signal control systems shall be in accordance with
41 City of Tacoma Standard Plan TS-15.
- 42 2. All signal wiring shall be 5-conductor or 2-conductor 14 gauge stranded
43 copper wire unless otherwise shown in the plans.
- 44 3. For 5-section and bimodal heads, 2-5c-14 gauge conductors shall be utilized.
- 45 4. 5c wire shall not be split between high voltage and low voltage. Where a
46 pedestrian head and a pedestrian push button share a common pole, a separate
47 2c shall be pulled in for the push button.

- 1 5. A single 5c may be split between two pedestrian heads on a common pole
2 with a jumper across the neutral.
3 6. Opticom and detection wiring shall be per manufacturer's recommendations.
4

5 Field wiring of the cabinet shall be done by City of Tacoma Signal Electricians after all
6 wiring has been pulled into the cabinet and properly labeled with a temporary label
7 consisting of white electricians tape with permanent marker. The Contractor shall
8 provide a detailed description/key of all temporary labeling. The cabinet and labeling
9 shall be inspected by the Signal/Streetlight inspector prior to cabinet wiring. The
10 Contractor shall allow five working days for City Electricians to field wire the cabinet
11 after the inspection is complete. Improper or incorrect labeling requiring additional effort
12 by the City may result in additional time required by City forces to wire the cabinet.
13

14 *The fifth paragraph is revised to read:*
15

16 Splices and taps on underground and overhead circuits shall be made with solderless
17 crimp connectors, installed with an approved tool designed for the purpose, to securely
18 join the wires both mechanically and electrically. Splices and taps will be sealed in
19 accordance with this section.
20

21 *The seventh paragraph is revised to read:*
22

23 Aerial illumination splices shall be taped with thermoplastic electrical insulating tape
24 equivalent to the original wire insulation rating and thickness. It shall be well lapped
25 over the original insulation.
26

27 *The eighth paragraph is revised to read:*
28

29 All splices in junction boxes and handholes shall be taped and sealed with an electrical
30 coating. Tape splice insulation shall consist of thermoplastic electrical insulating tape
31 equivalent to the original wire insulation rating and thickness. It shall be well lapped
32 over the original insulation and moisture resistant electrical coating shall be applied and
33 allowed to dry. Two layers of thermoplastic tape will then be applied, followed by a
34 second layer of moisture resistant electrical coating.
35

36 *The ninth paragraph is revised to read:*
37

38 Illumination cable in light standards shall be #10 AWG USE or "Pole and Bracket" cable,
39 as specified in Section 9-29.3(2)D of the Standard Specifications.
40

41 *The tenth paragraph is revised to read:*
42

43 Fifteen (15) feet of slack cable shall be provided at the controller end of all cables
44 terminating in the controller cabinet. A minimum of three (3) feet of slack cable shall be
45 left at all strain poles and junction boxes.

1 **8-20.3(10) Service, Transformer, and Intelligent Transportation System (ITS)**
2 **Cabinets**

3 *The second, third, and fifth paragraphs are deleted.*
4

5 **8-20.3(13) Illumination Systems**
6

7 **8-20.3(13)A Light Standards**

8 *The sixth, seventh, and eighth paragraphs are deleted.*
9

10 *This section is supplemented with the following:*
11

12 Conventional Base installation shall conform to the following:
13

14 The light standards shall be assembled and mounted complete on foundations perfectly
15 straight and in good alignment. Proper leveling of the standards shall be accomplished
16 by means of four leveling nuts that are to be employed with the anchor bolts. Standards
17 shall be plumb within 1/50-inch per foot.
18

19 Luminaires shall be securely attached to the mast arm in a straight and level position.
20 The luminaires shall be installed at a specified number of degrees from level if directed
21 by the Engineer. After the poles are plumbed, grout shall be neatly placed between the
22 pole base and the concrete. The Contractor shall form a 1/2-inch diameter weep hole in
23 the grout. The nuts and bolts required for this foundation shall be furnished by the
24 Contractor.
25

26 All above grade signal and streetlight infrastructure, including streetlight standards,
27 traffic signal poles, push-button poles, cabinets, and enclosures, shall not be installed
28 closer than three (3) feet from face of curb to the nearest part of the pole or structure and
29 no closer than five (5) feet from fire hydrants and utility poles.
30

31 **8-20.3(14) Signal Systems**
32

33 **8-20.3(14)A Signal Controllers**

34 *This section is revised to read:*
35

36 The fully wired control cabinet, the controller, the MMU, and detection hardware for the
37 cabinet shall be delivered to the City of Tacoma Traffic Signal Shop for configuration,
38 programming, testing, and certification prior to installation. At the Contractor's request,
39 the City will off load the equipment. The Contractor shall notify the City 24 hours in
40 advance of the equipment delivery.
41

42 A minimum of two weeks shall be required for the City to configure and test the cabinet
43 and controller for each intersection. If multiple cabinets and controllers are delivered, the
44 Contractor shall identify the sequence for configuration and allow one additional week
45 for each additional cabinet and controller delivered.
46

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

5
6 **8-20.3(14)B Signal Heads**

7 *This section is supplemented with the following:*

8
9 For span wire installation, the red indications shall be leveled to within 1 inch for each
10 direction as approved by the City. The height to the bottom of the lowest head shall be
11 17 feet, plus or minus 3 inches. Height to the bottom of the lowest four-section or five-
12 section head shall be a minimum of 16 feet-3 inches, plus or minus 3 inches.

13
14 For span wire installation, the signal stem (drop pipe) shall be 1 to 3 feet long unless
15 otherwise approved by the Engineer.

16
17 **8-20.3(14)C Induction Loop Vehicle Detectors**

18 *Subsections 2, 4, 9, and 10 are deleted.*

19
20 *Section 8-20.3(14) is supplemented with the following new section:*

21 **8-20.3(14)F Thermal, Microwave, and LED Optical Vehicle Detection**

22
23 A representative from the City of Tacoma Signal and Streetlight operations shop shall be
24 on site during all work within the signal cabinet. The Contractor shall notify the
25 Engineer two working days in advance of work within the cabinet.

26
27 The Contractor shall install and test the detection system in accordance with the
28 manufacturer's recommendations and these special provisions. Detection units shall be
29 mounted and all cabling shall be in accordance with the manufacture's recommendations.
30 The installation shall include all field equipment as well as all equipment required in the
31 controller cabinet.

32
33 Detection unit locations as shown on the plans are approximate. Detection units shall be
34 mounted at a sufficient height to prevent occlusion from cross traffic. Detection units
35 shall be field adjusted as directed by the Engineer and equipment manufacturer for
36 maximum coverage. A factory-certified representative of the equipment manufacturer
37 shall inspect and provide a written verification that the installation has been performed in
38 accordance with the manufacturers requirements.

39
40 The factory-certified representative of the equipment manufacturer shall supervise all
41 testing of the equipment and shall provide written documentation showing acceptance of
42 the testing and verification that the system is a complete, fully functional system.

43
44 All equipment shall be warranted against manufacturing defects in materials and
45 workmanship for a period of 3 years from the date of signal turn-on.

1 **8-20.3(17)B “As Built” Plans**

2 *This section is supplemented with the following:*

3
4 These drawings shall show the routing of all underground conduits. The locations of the
5 conduit shall be dimensioned with a precision and accuracy of 1 foot.

6
7 **8-20.4 Measurement**

8 *This section is revised to read:*

9 [Note to Engineers: Measurement and Payment sections are to be prepared by Traffic
10 Engineering.]

11
12 **8-20.5 Payment**

13 *This section is supplemented with the following:*

14
15 [Note to Engineers: Measurement and Payment sections are to be prepared by Traffic
16 Engineering.]

17
18 **END OF SECTION**

19
20
21 **8-22 PAVEMENT MARKING** [NOTE TO ENGINEER: MAY REMOVE GREEN
22 DURABLE PRODUCT, CHEVRON, AND/OR SHARROW MARKING REFERENCES
23 WHEN NOT APPLICABLE]
24 (January 19, 2017 Tacoma GSP)

25
26 **8-22.1 Description**

27 *The last sentence of the second paragraph is revised to read:*

28
29 Traffic letters used in word messages shall be 6-feet high with the exception of the “R” in
30 the railroad crossing symbol which shall be as shown on the standard plans.

31
32 *This section is supplemented with the following:*

33
34 **Chevrons**

35 A preformed thermoplastic “Chevron” shall be provided on speed humps for each
36 approach. For a street width less than 28 feet, the “Chevron” shall start at the edge of
37 roadway (gutter line). For a street width greater than 28 feet, the “Chevron” shall start at
38 the center of the roadway. Refer to details specified within the plans. Chevrons shall be
39 provided along bike lane buffers at locations specified on the plans or as directed by the
40 Engineer.

41
42 **Green Durable Product**

43 Green Durable Product shall be provided at locations identified on the plans such as
44 “Bike Box” and “Bike Transition Lane” locations and as directed by the Engineer. Refer
45 to details specified within these plans and specifications. The product shall be a durable,
46 color stable, non-slip surface.

47
48 **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.

8-22.2 Materials

The Section is supplemented with the following:

All “Plastic Chevron”, “Plastic Arrow”, “Plastic Sharrow Symbol”, “Plastic Letter” markings and all “Plastic Crosswalk Line” and “Plastic Stop Line” lines, shall be a 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. 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.

1
2 **New Surfaces:** Preformed marking materials specified for newly paved asphalt road
3 surfaces shall be capable of being applied as the original permanent marking on the day
4 the surface is paved.

5
6 **Fusion:** The preformed marking materials shall be fusible to the pavement by means of a
7 propane torch recommended by the manufacturer.

8
9 **Technical Services:** The supplier shall provide technical services as may be required.

10
11 **8-22.3(3)F Application Thickness**

12 *The Section is supplemented with the following:*

13
14 **Green Durable Product:** Approximately 4.2 Gallon mixture of Green colored MMA,
15 hardwearing aggregate, and catalyst should cover 70-75 SF at 90 mils thickness.

16
17 **8-22.3(4) Tolerances for Lines**

18 *The allowable tolerance for "Length of Line" is revised to read:*

19
20 **Length of Line:** The longitudinal accumulative error within a 32-foot length of skip
21 stripe shall not exceed plus or minus 1 inch.

22
23 **8-22.4 Measurement**

24 *The last sentence of the sixth paragraph is revised to read:*

25
26 Crosswalk lines will be measured by the linear foot of marking installed.

27
28 *The section is supplemented with the following:*

29
30 Green Durable Products will be measured by the square foot of marking area installed.

31
32 Painted curb will be measured by the linear foot of curb line as "Painted Curb."

33
34 Plastic Sharrow Symbols will be measured by each typical sharrow symbol installed.

35
36 **8-22.5 Payment**

37 *This section is supplemented with the following:*

38
39 "Painted Crosswalk Line", per linear foot.

40
41 "Plastic Crosswalk Line", per linear foot.

42
43 "Painted Curb" per linear foot.

44
45 "Green Durable Product", per square foot.

46
47 "Plastic Sharrow Symbol", per each.

- 1
- 2 "Remove Paint Line" per linear foot.
- 3
- 4 "Remove Traffic Marking," per each.
- 5

6 **END OF SECTION**

7

REFERENCE ONLY

1
2 **8-30 CEMENT CONCRETE STAIRWAY AND HAND RAILING**
3 **(March 17, 2003 Tacoma GSP)**
4

5 **8-30.1 Description**
6

7 This work shall consist of constructing cement concrete stairways, and hand railings in
8 accordance with details shown in the Standard Plans and these Specifications and in
9 conformity to lines and grades shown in the Plans or as established by the Engineer.
10

11 **8-30.2 Materials**
12

13 Materials shall meet the requirements of the following sections:
14

15	Portland Cement	9-01
16	Aggregates	9-03
17	Premolded Joint Filler	9-04.1
18	Concrete Curing Materials and Admixtures	9-23
19	Reinforcing Bars	9-07
20	Paint	9-08

21

22 The concrete shall be air-entrained concrete Class 3000 in accordance with the
23 requirements of Section 6-02.
24

25 Steel pipe hand railing shall be fabricated from standard weight steel pipe conforming to
26 ASTM Designation A 120.
27

28 Wrought iron hand railing shall be fabricated from material conforming to ASTM A207-
29 63T.
30

31 **8-30.3 Construction Requirements**
32

33 **8-30.3(1) Excavation**
34

35 Excavation shall be made to the required depth and to a width that will permit the
36 installation and bracing of the forms. The foundation shall be shaped and compacted to a
37 firm even surface conforming to the section shown in the Standard Plan. All soft and
38 yielding material shall be removed and replaced with acceptable material.
39

40 **8-30.3(2) Forms**
41

42 Forms shall be of wood or metal and shall extend for the full depth of the concrete. All
43 forms shall be straight, free from warp, and of sufficient strength to resist the pressure of
44 the concrete without warping. Bracing and staking of forms shall be such that the forms
45 remain in both horizontal and vertical alignment until their removal. After the forms
46 have been set to line and grade, the foundation shall be brought to the required grade and
47 thoroughly wetted approximately 12 hours before placing the concrete.

1
2
3 **8-30.3(3) Placing and Finishing of Concrete**
4

5 Front and side edging of stair treads shall be to a radius of 1/2 inch.
6

7 Landings for stairways shall be marked as specified for concrete sidewalks except that
8 transverse and longitudinal markings shall be modified as necessary to result in uniform
9 size of squares in each landing. Where gutters are along the side of stairways, the gutter
10 portion of stairway landings shall be smooth finished without markings to conform with
11 the stairway gutter.
12

13 **8-30.3(4) Cold Weather Work**
14

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

- 17 • The Engineer shall be notified at least 24 hours prior to placement of concrete.
- 18 • All concrete placement shall be completed no later than 2:00 p.m. each day.
- 19 • Where forms have been placed and the subgrade has been subjected to frost, no
20 concrete shall be placed until the ground is completely thawed. At that time, the
21 forms shall be adjusted and subgrade repaired as determined by the Engineer.
22

23 **8-30.3(5) Curing**
24

25 Cement concrete stairways shall be cured for a minimum of 72 hours in accordance with
26 Section 5-05.3(13).
27

28 **8-30.3(6) Hand Rail**
29

30 Hand rails for cement concrete stairways shall be constructed at the locations shown on
31 the Plans. The railing may be placed either completely assembled at the time when
32 stairway concrete is placed, or recesses may be provided in the concrete for grouting in
33 the railing posts after the concrete has been placed, finished and cured.
34

35 The installed railing shall be in true alignment, proper grade, and all posts plumb.
36

37 Welds shall be made by experienced welders and each weld shall be ground and buffed to
38 a smooth surface.
39

40 **8-30.3(6)A Hand Rail Painting**
41

42 Painting shall meet the requirements of Section 6-07 of the Standard Specifications.
43

44 Paint shall be as follows:

- 45 • Primer shall meet requirements outlined in Section 9.08, "Formula A-6-68- Zinc
46 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.

8-30.4 Measurement

Measurement of cement concrete stairway and hand rail will be in accordance with City of Tacoma Standard Plan SU-10.

8-30.5 Payment

"Cement Conc. Stairway", per linear foot.

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 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 plan and specification.

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:

Sieve Size	Percent Passing
2"	100
1/2"	56-100
No. 4	32-72
No. 10	22-57
No. 40	8-32
No. 200	2.0-9.0

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@
100 gyrations

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:

Sieve Size	Percent Passing*
¾" square	100
½" square	900 - 100
⅜" square	55 - 90
U.S. No. 4	10 - 40
U.S. No. 8	0 - 20
U.S. No. 40	0 - 13
U.S. No. 200	0 - 5

* 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:

Sieve Size	Percent Passing*
------------	------------------

¾" square	100
⅜" square	95-100
U.S. No. 8	0 - 10
U.S. No. 200	0 - 3

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

1
2 **9-07 REINFORCING STEEL**
3 **(March 23, 2010 Tacoma GSP)**

4
5 **9-07.5(2) Corrosion Resistant Dowel Bars (For Cement Concrete Pavement)**
6 *This section is supplemented with the following:*

7
8 Dowel bars for all streets shall be corrosion resistant.
9

10
11 **END OF SECTION**
12
13

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 Coat: Section 9-08.3 (3.0-mils)
- B. Exposed/Interior exposure
 - 1. 1st Coat: Section 9-08.1(3) (2.0-mils)
 - 2. 2nd Coat: 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.

1
2
3

END OF SECTION

REFERENCE ONLY

1
2 **9-28 SIGNING MATERIALS AND FABRICATION**
3 **(April 1, 2012 Tacoma GSP)**
4

5 **9-28.1 General**

6 *The second sentence of the first paragraph is hereby revised to read:*
7

8 Permanent signs which measure 36 inches or less on a side and are mounted to be on a
9 single post shall be constructed of single 0.080 inch aluminum panels.

10
11 *The third sentence of the first paragraph is hereby revised to read:*
12

13 Sign overlay panels shall be .050-inch aluminum.
14

15 **9-28.9 Fiberglass Reinforced Plastic Signs**

16 *This section is deleted in its entirety.*
17
18

19 **END OF SECTION**
20
21

1 **9-29 ILLUMINATION, SIGNALS, ELECTRICAL**
2 **(March 31, 2016 Tacoma GSP)**

3
4 *[NOTE TO ENGINEERS: Currently a PIF is required on all FHWA funded projects for*
5 *the following items:*

- 6 • *Signal controller*
- 7 • *Preemption detectors and phase selectors*
- 8 • *Signal cabinet lock*
- 9 • *Ethernet over copper switch]*

10
11 **9-29.1(6) Detectable Underground Warning Tape**

12 *This section is supplemented with the following:*

13
14 For electrical circuits detectable underground warning tape shall be high visibility red,
15 with continuous legend of "Caution Electric Line Buried Below" or equal. The warning
16 tape shall be polyethylene with a metallic backing. The polyethylene shall be a minimum
17 3 inches wide, 4 mils thick.

18
19 **9-29.2 Junction Boxes, Cable Vaults and Pull Boxes**

20
21 Unless otherwise specified, all junction boxes containing illumination and signal control
22 cable shall be Type 1, Standard Duty with alternate 2 locking lid per state standard plan
23 J-40.10-02.

24
25 Unless otherwise specified, all junction boxes containing interconnect cabling shall be
26 Type 2, Standard Duty with alternate 2 locking lid per state standard plan J-40.10-02.

27
28 **9-29.2(4) Cover Markings**

29 *The second paragraph of this section is revised to read:*

30
31 Covers shall be marked or embossed with "LT" for boxes containing illumination
32 circuits. Covers shall be marked or embossed with "TS" for boxes containing traffic
33 signal circuits

34
35
36 **9-29.3 Fiber Optic Cable, Electrical Conductors, and Cable**

37 *This section is supplemented with the following:*

38
39 Where not otherwise specified, all wiring shall meet standard of the industry for the
40 application employed. Wiring shall be consistent with manufacturers' recommendations
41 and meet all applicable codes.

42
43 **9-29.3(2)A Single Conductor**

44
45 **9-29.3(2)A1 Single Conductor Current Carrying**

46 *This section is supplementing 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.

9-29.3(2)A3 Equipment Grounding and Bonding Conductors

This section is 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.

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.

Weatherheads shall be clamp-on type PVC. 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.

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 inches O.D. x 8-inch long slip fitter for mounting luminaire.

Section 9-29.6 is supplemented with the following new section:

1
2 **9-29.6(6) City of Tacoma Universal Pole**
3

4 Unless otherwise specified, light standards and strain poles shall be in conformance with
5 the following City of Tacoma standard design.
6

7 **Strength**

8 Each pole and mast arm shall have adequate strength for the designated luminaire with
9 1.8 safety factor for maximum combined stresses using 90 mph isotach (117 mph gusts)
10 per AASHTO specifications for structure supports for highway luminaires. Design shall
11 be based on total loading of 50 pounds and EPA of 2.0 square feet.
12

13 **Standard Bolt Spacing**

14 30 Foot poles -- Baseplate shall accommodate 1 inch anchor bolts. The bolt circle shall
15 be between 11 inches and 13 inches.

16 40 Foot Poles -- Baseplate shall accommodate 1 inch anchor bolts. The bolt circle shall
17 be between 12.5 inches and 14.5 inches.
18

19 **9-29.6(6)A Steel Strain Poles**
20

21 Each pole shall be of tapered round or octagonal construction.
22

23 CLASS 1 POLE: Design for dead load tensions up to 1500 pounds

24 CLASS 2 POLE: Design for dead load tensions up to 2600 pounds
25

26 Class 1 poles shall have a minimum base diameter of 12-inches for octagonal poles and
27 12-1/4-inches for round poles. Poles shall have a minimum wall thickness of 0.3125-
28 inches. Anchor bolts shall be 1-1/2-inch by 60-inches and shall have a spacing of 11-
29 5/16-inches on center, on the square. It is the responsibility of the pole manufacturer to
30 maintain proper clearance between the pole shaft and nuts for the anchor bolts.
31

32 Class 2 poles shall have a minimum base diameter of 13-1/2-inches for octagonal poles
33 and 14-inches for round poles. Poles shall have a minimum wall thickness of 0.375-
34 inches. Anchor bolts shall be 2-inch by 66-inches and shall have a spacing of 12-3/4-
35 inches on center, on the square. It is the responsibility of the pole manufacturer to
36 maintain proper clearance between the pole shaft and nuts for the anchor bolts
37

38 Poles shall be of single-ply construction. Multiple-ply poles shall not be allowed.
39

40 Each pole shall be of tapered round or octagonal construction. Pole taper shall be in the
41 range of 0.13 to 0.14 in/ft.
42

43 A base plate and top casting shall be securely attached to each pole. The attachment of
44 the base plate to the pole shall be a welded connection sufficient to develop the full
45 strength of the pole. The base plate shall have four (4) holes which will sufficiently
46 accommodate the specified anchor bolts for the pole class.
47

1 Pole shall be of sufficient strength to allow for the span wire to be installed to sag an
2 amount equal to 5% of the span length.

3
4 The maximum acceptable deflection, at 30 feet above the base, is 5 inches. The specified
5 deflection shall be at a loading condition of 1,500 pounds horizontal pull at 30 feet above
6 the base for Class 1 Poles. For Class 2 Poles, the loading condition shall be 2,600 pounds
7 horizontal pull at 30 feet above the base.

8
9 Structural material shall be zinc-coated by a "hot-dip" process in accordance with ASTM
10 A123 and the final coating shall measure 0.0039 inch or more in thickness as determined
11 by a magnetic thickness gauge. All tapped holes shall be chased after galvanizing.
12 Hardware shall be coated in accordance with ASTM A307.

13
14 The finished pole shall be reasonably straight and free from injurious defects. If
15 galvanizing is damaged, the maximum area to be repaired is defined in accordance with
16 ASTM A123 Section 4.6. The maximum area to be repaired in the field shall be
17 determined in advance by the Engineer. Repair areas damaged during construction,
18 handling, transport or installation by one of the approved methods in accordance with
19 ASTM A780 whenever damage exceeds 3/16 inches in width. Minimum thickness for
20 repair shall measure 0.0039 inches.

21
22 The company shall furnish the purchaser with template prints showing spacing and size
23 of holes in base for the anchor rods.

24
25 The material shall carry the manufacturer's standard guarantee against any defect in
26 material or workmanship for a minimum period of one year following the date of
27 installation. The Contractor shall submit mil test reports for all steel used in the
28 manufacturing of strain poles and pedestals.

29
30 The Contractor shall submit a Certificate of Compliance with ASTM Standards and
31 Specifications for galvanizing. The certificate, signed by the galvanizer, shall detail
32 galvanizing process and testing procedure to determine that galvanizing meets minimum
33 thickness specified.

34
35 The contractor shall submit welder certification. Welders must be certified to AWS
36 standards.

37
38 Each pole shall include the following:

- 39 1. One (1) rain-tight pole cap.
- 40 2. One (1) 4-inch by 6-1/2-inch handhole at base end with cover plate opposite
41 to mast arm.
- 42 3. Anchor bolts shall be hot dipped galvanized steel with two (2) galvanized nuts
43 and two (2) washers for each bolt. Only 12-inches of threaded end of the bolts
44 must be galvanized. 1-1/2-inch diameter bolts shall have 8-inches of top
45 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 mast arm mounting flange. The centerline of the flange shall be approximately 6 inches below the top of 38-foot poles and 24 inches below the top of 30-foot poles. The flanges shall conform with the detail drawing included in the Special Provisions. Poles ordered without 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 being provided. The cover shall be bolted to the pole using the holes provided for fastening the 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 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.

1 **9-29.10 Luminaires**

2 *This section is supplemented with the following:*

3
4 Unless otherwise shown in the Plans all new luminaires shall be Light Emitting Diode
5 (LED) fixtures conforming to these Specifications.

6
7 Luminaires shall be provided with utility labels. Utility labels shall show actual total
8 system wattage for LED luminaires.

9
10 All LED Luminaires shall conform to the following minimum criteria:

- 11 • UL Listed
- 12 • A Qualified Product on one of the following fixture lists:
 - 13 ○ Energy Star
 - 14 ○ Design Lights Consortium
 - 15 ○ Lighting Design Lab
- 16 • Warranty: 10 Year Minimum including power driver and LED chips.
- 17 • Input Voltage: 120-277V
- 18 • Color Rendering Index (CRI): 70 Minimum
- 19 • Correlated Color Temperature (CCT): 4000-5300K
- 20 • Calculated Lumen Maintenance Factor (LMF): 100,000 hours or more (L70
- 21 at 25°C/77°F) in accordance with IESNA TM-21-11 and IESNA LM-80-08
- 22 • Surge suppression protection: 10kV (IEEE/ANSI C62.41.2)

23
24 **9-29.10(1) Conventional Roadway Luminaires**

25 *This section is supplemented with the following:*

26
27 **Photometrics**

28 Unless otherwise specified, the light distribution shall be IES Type III, medium, cutoff.

29
30 Photometric Performance:

31 Flat lens luminaires shall have a total downward utilization greater than 65%.

32 Drop lens luminaires shall have a total downward utilization greater than 70%.

33
34 Photometric performance shall be verified with photometric report from an independent
35 testing laboratory. Report should be submitted with the Bid when requested. Failure to
36 supply report within ten (10) working days of bid opening may be cause, at the
37 Contracting Agency's discretion, for the Bid to be considered non-responsive.

38
39 **Ballasts**

40 Ballasts shall be suitable for operation on 240 volt circuits unless otherwise stated.

41
42 150 watt luminaires shall be 55 volt design.

43
44 Each luminaire shall have fuses and fuseholders for each power conductor above ground
45 potential. Fuses shall be 10.3mm x 38.1 mm (13/32" x 1.5"). Fuses shall be slow blow
46 type (carry 110%, open at 135% within 1 hour, carry 200% for minimum of 10 seconds).
47 Luminaires 250 Watts and below shall have 5 amp fuses. Luminaires above 250 watts
48 shall have 10 amp fuses

Luminaires shall have receptacle for ANSI standard twistlock photoelectric controls. For 240 volt luminaires the photocell shall be wired for 240 volts.

This section is supplemented with the following new section:

9-29.10(1)A LED Roadway Luminaires

Each luminaire shall have LED compatible fuses (in conformance with the manufacturer's recommendations) and fuseholders for each power conductor above ground potential. Fuses shall be located in the fixture head. Fuses shall be 10.3mm x 38.1 mm (13/32" x 1.5"). Fuses shall be slow blow type (carry 110%, open at 135% within 1 hour, carry 200% for minimum of 10 seconds). Luminaires 250 Watts and below shall have 5 amp fuses. Luminaires above 250 watts shall have 10 amp fuses.

LED Roadway Luminaire housings shall be grey/silver and fabricated of aluminum. The power-door shall be fabricated from either aluminum or a UV resistant polymer. Power-door access shall be tool-less.

LED Roadway Luminaires shall be equipped with a 7-pin NEMA Photocell Receptacle.

Where specific luminaires are called out in the project documents, as the basis of the lighting design, the specified luminaires may be provided in accordance with the requirements of Sections 8-20 and 9-29. An alternate product may be provided for the LED Roadway Luminaire provided that the luminaire meets all the conditions of this section and meets the following conditions:

- LED Roadway Luminaires shall be one of the following products:
 - Beta/Cree – XSP Series or LEDway Series
 - Leotek – Green Cobra Series
 - GE – Evolve Series
 - American Electric Lighting/Holophane – Autobahn Series
- The total system wattage shall not exceed the total system wattage specified.
- A full electrical and photometric design shall be provided for review by the City. Submittals shall be Type 3E and stamped and signed by a licensed Professional Engineer. The alternate product selected shall meet or exceed the designed product. Contact the City of Tacoma Traffic Engineering Section for a list of design assumptions and criteria utilized in the lighting design.
- BUG Ratings for LED Roadway Luminaires shall be in conformance with Chapter 5 – Section 3.1 (Table 5-1) of the City of Tacoma Design Right of Way Design Manual

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.

1 **9-29.12(2) Traffic Signal Splice Material**

2 *This section is revised to read:*

3
4 Induction loop splices and magnetometer splices shall include an uninsulated barrel-type
5 crimped connector capable of being soldered. The insulating material shall be a heat
6 shrink type meeting requirements of 9-29.12(1)A.

7
8 **9-29.13 Control Cabinet Assemblies**

9 *This section is revised to read:*

10
11 Cabinet shall be wired for a Siemens M60 Controller TS 2, Type 1.

12
13 **9-29.13(1) Traffic Control Cabinets**

14 Each Traffic Controller Cabinet shall meet the following requirements:

- 15
16 1. The Controller Cabinet shall be a NEMA P44 Controller Cabinet. The cabinet
17 shall be constructed of 0.125" minimum thickness 5052 H32 ASTM B209
18 aluminum alloy and be of clean cut design and appearance. The cabinet shall
19 be unfinished, inside and outside. The cabinet shall be provided with a UL
20 sticker, and shall meet NEMA 3R rating for enclosures.
- 21
22 2. The cabinet shall have aluminum interior metal side mounted panels for
23 mounting auxiliary equipment without drilling through the outer cabinet.
24 Panels shall be mounted on "C" channel rails sufficient in strength to
25 accommodate planned and future equipment needs.
- 26
27 3. The cabinet shall have two (2) aluminum shelves with a 3/4" lip on the front
28 edge of the shelf.
- 29
30 4. A hinged door shall be provided permitting complete access to the cabinet and
31 the equipment to be contained therein. When closed, the door shall fit closely
32 to the gasket material making the cabinet weather-resistant and dust tight. The
33 door shall be provided with a standard traffic signal Corbin lock with a #2
34 key. The door hinge pins shall be stainless steel and all other exposed
35 hardware shall be non-corrosive. In addition to the main cabinet door, there
36 shall be an auxiliary police door fitted with a standard police lock. The panel
37 behind this door shall contain switches as detailed under auxiliary equipment.
- 38
39 5. Interior cabinet welds shall be continuous for all lap and butt welds.
40 Intermittent welds or silicone adhesive shall not be accepted in place of a weld
41 for weathertight penetrations.
- 42
43 6. The cabinet shall be designed for mounting on a concrete pad with anchor
44 bolts and typical flanges inside the cabinet. There shall be a minimum ten (10)
45 inch vertical clearance above the front half portion of the base area to provide
46 a clearance for conduit and cable entering the cabinet.
- 47

1 **9-29.13(2) Submittals**

2 The following submittals will be required for the review and approval by the Contracting
3 Agency prior to fabrication and wiring:

- 4
- 5 1. Proposed cabinet layout diagram including shelving/rack locations. In
6 addition, detailed diagrams shall be provided for the left side, right side, and
7 back panels. Drawings shall be clearly labeled and dimensioned.
 - 8 2. Proposed cabinet wiring diagram shall be submitted for the review and
9 approval by the Contracting Agency. Wiring of cabinets shall not commence
10 prior to Contracting Agency approval of the cabinet wiring plan.
- 11

12 **9-29.13(3) Wiring**

13 All wiring within the cabinet shall be neat and firm. All cabinet wire shall be amply rated
14 for the function intended and shall include the use of terminal and suitable identification
15 labels.

16
17 Connectors and harnesses shall be provided as defined in the latest NEMA TS 1
18 standard. Connector A & B shall be supplied for the monitor unit. Connector A, B, C
19 & D shall be supplied for the controller unit. Wire for harnesses shall conform to MIL-
20 W-16878E Type B, and shall be rated to 600 volt, 105 degree Celsius. Wire shall be
21 22 gage, 19 strand. Wires shall be connected to the heads in the form of crimp-
22 pinned connections. Solder lugs shall not be allowed. Connectors shall conform to
23 MIL-C-26482 Series 1. Cables shall be covered with nylon expandable sleeving.
24 Spiral wrap shall not be used. Termination points of the harnesses shall be
25 accessible to the technician without requiring the backpanel to be dropped. Unused
26 harness wires shall be tied to the furthest location on the front of the backpanel and
27 shall be capped off.

28
29 Wires other than harnesses for the monitor and controller shall be THHN, rated at
30 600 volt, 105 degree Celsius, and shall be a minimum of 22 AWG.

31
32 Non insulated connectors shall be utilized for all connection to the TS2 Terminal Strip.

33
34
35 **9-29.13(4) Auxiliary Equipment**

36
37 **9-29.13(4)A Traffic Signal Controller**

38
39 Traffic Signal Controller shall be a Siemens M60 ATC Controller. The Contractor shall
40 contact the City of Tacoma Traffic Signal Shop at 253-491-5287 to obtain the current
41 firmware version to be utilized. The Contractor shall include an M50 sub-assembly data
42 key module and a 5MB flash data key.

43 **9-29.13(4)B Malfunction Management Unit (MMU)**

44
45 The cabinet shall come with a (MMU) that meets all the requirements of NEMA TS2-
46 2003 while remaining downward compatible with NEMA TS1. The MMU shall be from
47 one of the following manufacturers:

- 48
- Eberle Design, Inc. model MMU-16LEip

- Peek Double Diamond
- Reno MMU-1600G with Ethernet Port.

Contractor shall provide a compatible TS2 program card.

9-29.13(4)C Vent fan

A thermostat controlled vent fan assembly with screened vents with replaceable filters for cabinet ventilation. The fan shall have a rating of 100 CFM and the thermostat setting to allow variable turn-on between 90 degrees and 140 degrees Fahrenheit. The fan motor shall use ball-bearings. This unit shall be fitted with an electrical noise suppressor.

9-29.13(4)D Load Switches

Modular solid state relay load switching assemblies, in accordance with the latest NEMA TS 1 Standards, shall be used for opening and closing signal light circuits and shall be jack-mounted external to the controller unit. Indicator lights shall be connected to input circuits. Load switches shall be rated at twenty-five (25) amps per circuit. Each cabinet shall contain twelve (12) load switches.

9-29.13(4)E NEMA Flasher

The flasher shall be solid state, two circuit with a minimum current rating of twenty five (25) amps per circuit.

9-29.13(4)E Loop Detector Card Rack

A fully wired 16 position card rack shall be installed. Rack shall be secured to the detector shelf in such a manner as to afford easy access for maintenance. The rack shall accommodate 4.5 inch high, 6.875 inch long, 1.12 inch wide two channel, two output per channel detector modules. Connectors shall be 44 contacts (22 each side) spaced on 0.156" centers. Provide (2) bus interface units (BIU). These shall meet all the requirements of NEMA TS-2 1988 standards. In addition, all BIUs shall provide separate front panel indicator LED's for DC power status and SDLC Port 1 transmit and receive status. The (BIU)'s shall be Eberle Design, Inc. model BIU-700, Econolite model BIU-64, Reno A&E model BIU/2, or Engineer approved equal.

9-29.13(4)E Detector Power Supply

Auxiliary power supply for detectors power shall meet minimum TS 2-2003 standards

9-29.13(4)E Ethernet over Copper Switch

Ethernet over Copper Switch shall be Actelis ML 684D with two SFP-LC ports, unless otherwise specified. A standard 110 VAC power adapter, a DSL-Octal Cable 2xRJ45, and a minimum 6' Ethernet patch cable shall be provided with each.

9-29.13(4)E Preemption/Priority Equipment

Preemption/priority phase selector equipment shall include an Opticom Model 760 Card Rack and an Opticom Model 764 Multimode Phase Selector.

9-29.13(5) Electrical Design

9-29.13 (5)A Side Panels

Left and Right Side Panels shall be 12"x47" in one continuous piece of smooth finish aluminum no smaller than 16 gauge and no larger than 12 gauge. The side panels are to be mounted 13" from rear and 2" from bottom of cabinet.

The left side panel shall contain the following:

1. TS2 - Loop Field Wire Terminals, 64-position, double row, high barrier block with #6/32 slotted brass screws.
2. TS3 - Ped and Pre-Empt Terminals, 24-position, double row, high barrier block with #6/32 slotted brass screws.
3. TS4 - Special Function Terminals, 30-Position, double row, high barrier block with #6/32 slotted brass screws. Wired to a 37 pin "D" connector w/clips.
4. TS9 - Isolated Neutral Buss, 24 Position, solid copper bar with #10/32 slotted brass screws.
5. TS18 - SDLC Termination, 10-position, double row, high barrier block with #6/32 slotted brass screws.
6. GB1 - Ground buss, 10-position, standard copper grounding buss bar suitable for #14 through #4 cu.

The right side panel shall contain the following:

7. TS11 - Isolated Neutral Buss, 24-position, solid copper bar with #10/32 slotted brass screws.
8. TS14 - Communication Terminals, 12-position, double row, high barrier block with #6/32 slotted brass screws.
9. TS15 - Detector Power Terminals, 8-position, double row, high barrier block with #6/32 slotted brass screws.
10. TS20 - Line Side AC Terminal, 2-position, double row, deadfront block suitable for #6 cu.
11. GB2 - Ground buss, 20-position, standard copper grounding buss bar suitable for #14 through #4 cu.

9-29.13(5)B Back Panel

The Back panel shall include the following:

1. A flash panel control assembly using NEMA flashing relays to provide flashing sequence for a minimum of ten (10) circuits. All spare circuits shall be wired and terminated on a terminal strip and shown on the wiring diagram. The intersection shall be capable of being placed on flashing operation by the

- 1 conflict monitor, remote input, internal controller time clock and door switch.
2 Conflict flash shall be all-red. Remote and internal controller time clock flash
3 shall be in accordance with MUTCD flash.
- 4 2. Load switch sockets 1, 4, 5, and 8 wired to flasher circuit #1. Load switch
5 sockets 2, 3, 6, and 7 wired to flasher circuit #2.
 - 6 3. Install 2200 ohm, 10 watt load resistors on the green and yellow outputs of
7 load switch sockets 1, 3, 5, 7, and 13. The resistors should be mounted to
8 afford good air circulation.
 - 9 4. Screw-type terminal strips for all NEMA controller input and output
10 functions.
 - 11 5. A minimum of thirteen sockets for NEMA load switches.
 - 12 6. Load switch sockets 1 through 8 shall be for vehicle phases, 9 through 12 for
13 pedestrian phases, and 13 wired and terminated on the back panel.
 - 14 7. All terminals to be labeled front and rear of back panel.
 - 15 8. All wire to enter lower edge to facilitate folding down back panel.
 - 16 9. Hinging of back panel not to interfere with operation of signal while in
17 service.
 - 18 10. Bottom of back panel to be 7" above bottom of cabinet.

19 20 **9-29.13(5)C Power Panel**

21
22 The power panel shall be located in the lower right of the cabinet.

23
24 The power panel shall contain a 30 AMP circuit breaker, transient and over voltage
25 protection lightning arrestors, 60 AMP line filter, solid state contactor rated for 50-amp
26 minimum to supply loadbay power. An auxiliary 15 AMP circuit breaker shall be
27 provided to supply GFI, fan and cabinet light.

28
29 Line side power terminal shall be a deadfront type rated at a minimum of 300V, 50 amp
30 suitable for #6 cu.

31
32 Power panel shall include a two-stage, electrically isolated transient voltage suppressor
33 capable of dissipating a high energy surge of 20KA (8x20 microsecond pulses) while
34 clamping the output voltage to 340 volts or less. Isolation shall be provided between the
35 neutral and ground connections.

36
37 Circuit breakers shall be Seimens, Square D, GE, Eaton/Cutler Hammer, or Engineer
38 approved equal.

39 40 **9-29.13(5)D Convenience Outlets**

41
42 A 120 VAC GFI type outlet with screw terminals shall be provided and mounted as part
43 of the Auxiliary panel. A second non-GFI outlet, on a separate circuit will be mounted at
44 the upper left corner of the right side panel.

45 46 **9-29.13(2)E Cabinet Illumination**

Two LED light strips shall be provided for cabinet illumination. One shall be mounted to the top front of the cabinet interior, and shall be rated at a minimum of 475 lumens. A second LED light to illuminate the load bay area shall be mounted under the lower shelf and be rated at a minimum of 240 lumens. A door switch shall be wired so as to allow the lights to operate only when the door is open.

9-29.13(5)F Police Panel

The police panel shall contain the following switches:

1. Main Power Switch: This shall completely shut down power to the cabinet. The switch shall be rated at 50 Amps
2. Auto/Flash Switch: This shall put the intersection into flashing operation when placed in the "Flash" position. It shall also apply Stop Time to the Controller when placed in the "Flash" position.

9-29.13(5)G Auxiliary Panel

The auxiliary panel, mounted on the inside of the door, shall contain the following switches:

1. Three-position detector switches (auto/off/test) to lock in all three positions.
2. Manual switches (auto/test) to test pre-empt 5, & 6.
3. Switch to select coordination or free operation.
4. Switch for cabinet light.
5. Stop time switch (on-off-auto).
6. Controller power switch (on-off).
7. Auto-flash switch.
8. Switch to select Interconnect or Timebase Operation.

9-29.15 Flashing Beacon Control

This section is revised to read:

9-29.15 Pedestrian Activated Crosswalk Beacons

Crosswalk beacons shall be with two flashing beacons, unless otherwise specified, independently aimable, with wireless control of the other beacons at the pedestrian crossing. Unit shall be one integral assembly which includes the two beacons, control circuitry and inter-beacon radio communications hardware and software. Indicator heads shall be green unless otherwise specified. All circuitry and batteries shall be contained within the indicator heads. A separate post mounted controller box shall not be acceptable.

Beacons shall have 8 inch amber faces and meet MUTCD and ITE specifications for the intended application. Flashing modes shall include MUTCD specification ½ second on, ½ second off and high visibility strobe pattern. Variations shall include synchronized or

wig-wag (alternating). Flashing duration shall be variable from 5 seconds to 60 seconds. Beacons shall have inputs for activation by pedestrian pushbuttons and wirelessly transmitting the activation to the other beacons at the pedestrian crossing.

Beacon shall incorporate inter-beacon radio communication via spread spectrum radio using ISM 902-928 Mhz. Unit shall include minimum of 8 unique addresses for multiple units in close proximity. Communication shall have a minimum range of 300 feet.

Units shall have separate solar panels and batteries for each individual beacon. Solar panels shall be minimum 4 watt per beacon. Batteries shall be commercially available minimum 25 AH. Fully charged units shall have capacity for one month of continuous operation based on 300 20-second LED flash cycles per day.

Mounting shall be compatible with the specified pole. Contractor shall be responsible for coordinating the mounting interface between the pole and crosswalk beacon assembly.

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, balance adjuster, wire entrance fitting and vehicle head locking device.

1
2 A. Construction

- 3 1. Bronze hangers are required.
4 2. The minimum size of pins shall be 5/8-inch diameter. Pins shall be stainless
5 steel.
6 3. The minimum size of the 'J' or 'U' cable clamps is 1/2-inch diameter. Cable
7 clamp bolts shall be stainless steel. Clamping insert shall be used.
8 4. The cable saddle shall be at least 9 inches long.
9 5. All cotter pins shall be brass and washers shall be stainless steel.
10 6. All hardware shall be of stainless steel, bronze or brass materials.
11 7. Signal stem shall be locked with a square headed set screw 1/4-inch
12 minimum in diameter.
13 8. Wire entrance shall be a minimum of 1-1/4-inch diameter and shall have a
14 female threaded base for nipple.
15 9. The balance adjuster directional lock shall be of the clamping type with 1/2-
16 inch through bolt for locking. No set screw or lock nut acceptable.
17 10. All stems shall be secured to signal head with proper lock fitting.

18
19 Vehicle signal heads attached to a mast arm shall use a type M mounting bracket as
20 detailed in the standard plans and in accordance with Section 8-20.3(14)B and Section 9-
21 29.17.

22
23 **9-29.18 Vehicle Detector**

24 *This section is supplemented with the following:*
25

26 **9-29.18(3) Thermal Detection System**

27 The system provided shall provide all necessary components required in order to fully
28 install, setup, test, operate and maintain a fully functional detection system, including, but
29 not limited to, the following components:

- 30 1. Thermal imaging video cameras, including camera enclosure, lens, lens
31 adjustment modules, filters, sunshields and connector kits where applicable.
32 2. Camera mount assemblies, including extensions as required.
33 3. Camera mount utility box with connectors.
34 4. Video Image Processors
35 5. Input/output expansion modules
36 6. 9.5" to 10" LCD video monitor, including cable
37 7. Camera control keypad or otherwise applicable programming devices or
38 software. One device is required for each cabinet.
39 8. Surge suppressors (in cabinet)
40 9. Data and power cables
41 10. Video System Communication Module
42 11. All other equipment necessary for a fully operational detection system.

43
44 The Video System Communication Module and the Input/Output Expansion Module
45 shall be the same manufacturer as the Video Image Processor. All other equipment shall
46 be fully compatible with the thermal cameras, and Video Image Processors and shall be
47 in accordance with the manufacturers recommendations.

1
2 **9-29.18(3)A Thermal Detection Cameras**
3

4 The cameras shall use thermal imaging technology and meet the following requirements:

- 5 1. Interface with Video Image Processor (VIP) in the controller cabinet
- 6 2. Array Format: 320x240 NTSC
- 7 3. Detector Type: Long-Life, Uncooled VOx Microbolometer
- 8 4. Effective Resolution: 76,800
- 9 5. Pixel Pitch: 25µm
- 10 6. Focal Length (Field of View): 9mm(489mm l d o), 13mm(34° × 26°) or
- 11 19mm(24° × 18°)
- 12 7. Spectral Range: 7.5 to 13.5 µm
- 13 8. Focus Range: Athermalized; focus-free
- 14 9. Outputs: BNC and connector-free video cable terminal strip
- 15 10. Video Output: NTSC or PAL
- 16 11. Input Voltage: 90-240 VAC Single Phase
- 17 12. Mounting Provisions: Two ¼-20 threaded holes, 1" spacing along centerline
- 18 front to back
- 19 13. IP66 rated
- 20 14. Operating Temperature Range: -50°C to 75°C
- 21 15. Meets or exceeds NEMA TS 2-2003 requirements for operating voltage,
- 22 operating frequency, ambient temperature, humidity, vibration & shock.
- 23 16. 10 year detector warranty, 2 year parts and labor
- 24

25 **9-29.18(3)B Video Image Processor**
26

27 The Video Image Processor (VIP) shall be modular by design and fit directly into
28 NEMA TS1 & TS2 type racks. The VIP shall be interchangeable between a shelf
29 or rack mount installation without replacing or modifying existing VIP units.
30

31 The Video Image Processor shall meet the following requirements:

- 32 1. The VIP shall provide a "Thermal On/Off" setting so the system can be
- 33 optimized to work with the image from a thermal camera.
- 34 2. The system shall control from 1 to 6 VIP boards allowing for 1 to 12
- 35 image sensors.
- 36 3. The system shall be designed to operate reliably in the adverse
- 37 environment of roadside cabinets and shall meet or exceed all NEMA
- 38 TS1 and TS2 environmental specifications.
- 39 4. Ambient operating temperature shall be from -34 to +74 degrees
- 40 Centigrade at 0 to 95% relative humidity non-condensing.
- 41 5. The system shall be powered by 12-40 VDC and draw less than 2
- 42 amperes.
- 43 6. The system shall utilize cabinet 24 VDC for rack mount installations or
- 44 external 24 VDC for stand-alone shelf installations.
- 45 7. Surge ratings shall be set forth in the NEMA TS1 and TS2
- 46 specifications.

- 1 8. Serial communications shall be through an RS232 serial port. This port
2 can be used for communications into a modem or laptop to
3 upload/download detector configurations, count data and software
4 upgrades. RS485 on the rear edge connector shall facilitate
5 communications to other VIP boards.
- 6 9. Each VIP board shall have 4 opto-isolated open collector outputs.
7 Twenty (20) additional outputs shall be available via the expansion
8 port. The VIP/3Ds shall have 20 presence detection zones and 4 data
9 detection zones per camera. Data zones shall collect and store vehicle
10 counts, volume, speed, gap time, headway, occupancy, and
11 classification. Data shall be time-stamped (6713 intervals) and stored
12 onboard (non-volatile memory) in intervals from 1-60 minutes.
- 13 10. Data alarms are generated for: queue, inverse direction, speed drop,
14 no video, and errors.
- 15 11. Must be able to provide single or double loop emulation.
- 16 12. Presence hold time must have parameters that range from 10 to 600
17 seconds.
- 18 13. Each VIP board shall allow for 20 digital inputs via the I/O Expansion
19 port.
- 20 14. Each VIP board shall have error detection. Outputs will be turned
21 "ON" if the video signal is bad or the VIP board is not functioning
22 properly. A user defined quality level will automatically put selected
23 outputs to recall in cases of severe degraded visibility (i.e., fog,
24 blizzard, etc.). Normal detection resumes when visibility improves
25 above the user defined quality level.
- 26 15. Operator selectable recall shall be available via the VIP front panel.
27 Holding the recall switch on for 5 seconds shall activate this function.
- 28 16. A video select button on the VIP front panel will switch between
29 camera images.
- 30 17. The VIP board shall have 2 video inputs (RS-170 NTSC or CCIR
31 composite video) and one video out.
- 32 18. The VIP board shall have a reset button on the front panel to reset
33 video detectors to "learn" the roadway image. During "relearn",
34 selectable recall can be enabled or disabled for immediate operation.
35 Learning time of video detectors shall be less than 6 minutes.
- 36 19. External surge suppression, independent of the VIP board shall
37 separate the VIP from the image sensor.
- 38 20. The VIP module shall have an onboard database capable of time stamping and
39 storing 500 events. The Event Log Database can be viewed or downloaded to
40 a selected spread sheet. Erasure of the Event Log Database shall not alter
41 programmed configurations. As a minimum, the VIP shall log and time stamp
42 the following events:
43 a. Firmware upgrade.
44 b. Loss of video signal.

- c. Resumption of video signal.
 - d. Configuration change.
 - e. Bad video quality.
 - f. Loss of power to VIP module.
 - g. Resumption of power to VIP module.
 - h. Speed alarm.
 - i. Inverse direction.
 - j. Recall activated.
21. The VIP module shall perform the following functions:
- a. Real Time Detection
 - b. Each VIP board shall be capable of processing the video signal of one or two cameras. The video signal shall be analyzed in real time (30 times per second for NTSC video format and 25 frames per second for pal video format).
 - c. The system shall be expandable up to 12 cameras that may be connected to different VIP units and programmed independently.
 - d. The system shall be capable of displaying detectors on the video image with associated outputs. Outputs/Inputs status will be indicated on the screen. Parameters will also include the ability to view raw video without any verbiage and/or detectors for surveillance purposes.
 - e. Each VIP board will detect within the view of the connected camera the presence of vehicles in user defined zones. Detectors available shall be presence, count, delay, extension, or pulse mode for either arrival or departure of vehicles. Delay and extension shall be defined between 0.1 – 99.9 seconds and pulse mode between 0 – 200ms in 33ms increments if NTSC is used. Each VIP board shall also detect and collect within the view of the connected camera traffic data of passing vehicles in user-defined zones.
 - f. Collected traffic data by direction shall include:
 - Volume (absolute numbers) per length class and per lane.
 - Average speed (km/h or mph) per length class and per lane.
 - Average gap time (1/10 sec) per length class and per lane.
 - Average headway (m or feet) per lane.
 - Occupancy (%) per lane
 - Concentration (vehicles/km or mile) per lane.
 - Average length (m or feet) per lane.
 - Confidence level (0-10) per lane.
 - g. The VIP board shall be programmed without the use of a supervisor computer. A standard CCTV monitor and keypad plugged into the VIP serial port will facilitate detector programming.

- h. The VIP board shall store up to 4 detector configurations. It shall be possible to switch between detector configurations manually, automatically by time of day or remote input.
- i. Via the serial port, detector configurations can be uploaded to a laptop and stored on disk.
- j. Detectors may be linked to 24 outputs and 20 inputs using Boolean Logic features: AND, OR, NOT. It will be possible to generate conditional outputs based upon inputs from a controller.
- k. It shall be possible to make a detector directional sensitive. Options will include an omni-directional detector or a detector that only senses movement: from right to left, left to right, up to down or down to up as you look at the monitor.
- l. All detectors and parameters can be changed without interrupting detection. For example: when one detector is modified all existing detectors continue to operate, including the one that is being modified. When the new position is confirmed, the new detector will enter a learning phase. Once the new detector is in function it will take over the job of the old one. In this way, the detector is always fully operational with no interruption on any detector, even during modification. Learning phases for new detectors shall not exceed 6 minutes.
- m. Four data detection zones per camera on a two camera VIP board may be used for collection of vehicle count, speed, classification, occupancy, density, headway, and gap time.
- n. Eight data detection zones may be used on a single camera VIP board.
- o. These detectors will detect and store traffic data at user-defined intervals of 1, 2, 3, 5, 6, 10, 15, 30 & 60 minutes. It shall be possible for each VIP board to store up to 6713 intervals of data in non-volatile memory.
- p. Associated software may be used with a PC to download data and export to a spreadsheet. Software will also be used to upload and download detector configurations, traffic data, technical events, send software versions upgrades and do remote setup of detectors.
- q. The VIP board shall have an internal clock with daylight saving time system, which can be enabled or disabled.
- r. The VIP board shall provide overlaid tool tips for each individual menu- and submenu-items.
- s. The VIP board shall have an optional password implementation. Different user-levels shall be available each having different rights.
- t. A minimum of 10 users can be defined for each user-level.
- u. The VIP board shall be able to delay or extend a detector zone output in combination with an input from the controller.

- v. The VIP board shall detect wrong-way drivers and shall provide an alarm/event via communication board and/or output.
- w. The VIP board shall provide an alarm and/or output when the user selected queue detection threshold of occupancy is exceeded for more than a user selected time threshold.
- x. The VIP board shall distinguish five classes of detected vehicles based upon user selectable vehicle length thresholds.
- y. The VIP shall be able to emulate loop emulation with user selectable loop dimensions.

9-29.18(3)B Video System Communication Board

The Communication board shall be of the same manufacturer as the Video Image Processor.

The Communication board shall be modular by design and housed in either a self-contained stand-alone unit or fit directly into NEMA TS1 & TS2 type racks.

The Video System Communication Board shall meet the following requirements:

1. The Communication board shall control from 1 to 6 VIP boards allowing for 1 to 12 image sensors.
2. The system shall be designed to operate reliably in the adverse environment of roadside cabinets and shall meet or exceed all NEMA TS1 and TS2 environmental specifications.
3. Ambient operating temperature shall be from -34 to +74 degrees Centigrade at 0 to 95% relative humidity non-condensing.
4. The system shall be powered by 12-40 VDC and draw less than 2 amperes.
5. Serial and Ethernet (TCP/IP) communications shall be through respectively an RS232 serial port (F DB9 connector) and Ethernet port (RJ-45 connection). These ports can be used for communications to a laptop or modem to upload/download detector configurations, traffic data, technical events, send software upgrades and do remote setup of detectors. RS485 on the rear edge connector shall facilitate communications to VIP boards.
6. Surge ratings shall be set forth in the NEMA TS1 and TS2 specifications.

9-29.18(4) LED Optical 3D Detection System

The Optical 3D Detection System shall be an auto ranging device that detects all types of vehicles, including motorcycles and bicycles within the detection zones by measuring the time-of-flight of non-visible light emitted by LED's (light emitting diodes) in the sensor and reflected by objects (vehicles) in programmed detection zones. The detected zone actuation shall be communicated to a traffic signal controller through the controller interface card. The sensor shall operate and provide accurate presence and pulse detection at a range of up to 200 feet from the sensor. The Optical 3D Detection System

shall consist of a single enclosure that contains the integrated sensor and shall include the LED light pulse emitter, sensor receiver, detection processor, image sensor and the integrated image sensor pan and tilt platform. The controller interface cards shall be a four channel configuration. Communication and power between the sensor and the controller interface card shall be provided via a single Ethernet CAT 5 cable. A 48 volt power supply that powers up to four sensors shall be provided. Software to configure the sensor and the controller interface card shall be included with each sensor.

System Operations

Configuration of each sensor and controller interface card shall be with a standard PC operating on the Windows XP, Windows Vista or Windows 7 operating system. The software shall be included with each sensor and be user friendly and intuitive and require no specialized training. The sensor shall be capable of being programmed to detect the presence of vehicles (car, truck, bus, motorcycle, and bicycle) in up to sixteen zones of detection. A detection zone location and size shall be user definable. The configuration of the detection zone shall be completed by tracing the virtual detection zones on the image provided by the on-board image sensor. The sensor shall detect vehicles in real time as they travel through each detection zone. The sensor shall operate accurately in all types of weather conditions without significant performance loss. The sensor shall be able to detect the presence of any type of vehicle that enters the zone including bicycles without adjusting the sensitivity of the detection zone. The sensors pan and tilt orientation shall be accessible and adjustable plus or minus 7 degrees in the sensor configuration mode. The sensor image shall provide an overlay of the sensor's active grid 16 field-of-view range outputs, user defined detection zones and the on-board image sensor display output. Software to allow remote viewing and system management shall be included with each sensor. Two or more controller interface cards shall be capable of being connected together via Ethernet cable to assign outputs to controller as required without re-wiring the controller. The controller interface cards shall be DIP switch programmable to allow for one card to serve as a DHCP server in locations equipped with multiple sensors and controller interface cards. The controller interface card shall have a RJ45 port for communications with an external computer for configuration, diagnostic and remote management applications. The sensor and the controller interface card shall be capable of accepting software and firmware upgrade via a RJ45 port. The confirmation of detection shall be provided by a signal sent from the sensor to the controller interface card through a CAT 5 cable. An LED indicating that the call is sent to the controller shall be included on the controller interface card. One LED shall be provided for each channel of detection.

Sensor

The sensor shall be a single enclosure and conform to the IP67 standard. The sensor shall be one piece and water tight and shall mount easily to standard mast arms, poles, etc. with standard traffic signal mounting hardware. The sensor shall operate at temperatures from -29°F to +140°F (-34°C to 60°C). The sensor shall operate with 48 Volt DC using industry-standard Power over Ethernet (PoE) technology. The sensor shall be equipped with an onboard motorized pan and tilt platform to finalize the aim of the sensor, the

adjustment shall provide plus or minus 7 degrees in each direction. The integrated motorized pan and tilt platform shall be adjustable from the traffic signal cabinet through software supplied with the sensor. The sensor shall be equipped with an onboard image sensor to facilitate the detection zone set-up as well as the final alignment of the sensor by providing a visual feedback to the operator. The sensor shall be IP addressable and shall be capable of transmitting the sensor operation and images via Ethernet connection to the Traffic Operations Center.

Controller Interface Card

The controller interface card shall be available in a two channel configuration, four channel configuration half width and a four channel configuration. The controller interface card shall operate in standard 170, 2070, TS-1 and TS-2 detector racks. The controller interface card shall be equipped with a detection delay and extend feature. The controller interface card shall be equipped with an LED that indicates that the sensor has detected a vehicle presence and the call is being sent to the controller. The controller interface cards shall be equipped with three RJ-45 connections that provide connections to the sensor, LAN in and LAN out. The controller interface cards shall be IP addressable and provide the access to the sensor via the RJ45 port. The controller interface cards shall be equipped with DIP switches that allow the operator to configure the cards to be a DHCP server and allow the daisy chaining of cards in the same cabinet for Ethernet communication.

48V Power Supply

The 48 volt power supply shall be a stand-alone unit that provides power to the sensor(s) through a port in the controller interface card. The 48 volt power supply shall be available in two configurations. Configuration one shall provide power to a single sensor, configuration two shall provide power from two to four sensors.

Detector Rack Power Supply

The detector rack power supply shall be 24 volt DC and supply power to the detector rack and connected controller interface cards. The detector rack power supply shall be standard 170, 2070, TS-1 and TS-2 configuration.

9-29.19 Pedestrian Push Buttons

This section is supplemented with the following:

Pushbuttons shall be steel with a directional vibro-tactile arrow. Push buttons shall be fully voice messaging APS compliant and fully programmable/customizable by the end user. Pushbuttons shall be provided to the City for programming/messaging 2 weeks prior to installation.

The sign shall be in conformance with MUTCD R10-3b.

The unit shall be black. The assembly shall include the cabinet control unit if applicable to the brand selected. A 4" pole adapter shall be included for locations where two pushbuttons are mounted to the same 4" pole.

If additional conduit pathways are required between the pushbutton and the pedestrian head, due to the contractor's selection of pedestrian push button manufacturers, the Contractor shall submit a revised design with the submittal of the push button material. The design shall be stamped and signed by a licensed professional engineer. Required additional pathways shall be provided at no additional cost to the City.

9-29.20 Pedestrian Signals

This section is supplemented with the following:

All pedestrian signals housings shall be die-cast aluminum.

The Vacant Section 9-29.22 is replaced with the following:

9-29.22 Preemption Hardware

Preemption Hardware shall be Opticom TM Model 721 unless otherwise specified.

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 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

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:

1 All service panel breakers shall be one of the following brands/series

- 2 1. Square D – QO Series
- 3 2. Siemens – Type BL
- 4 3. Eaton/Cutler Hammer – Quick Lag Type BA
- 5 4. Engineer approved Equal

6
7 All surface mount breakers shall be one of the following Brands/Series:

- 8 1. Square D (Type QOU)
- 9 2. Siemens
- 10 3. Eaton/Cutler Hammer
- 11 4. General Electric
- 12 5. Engineer approved Equal

13
14 **END OF SECTION**

15
16
17 **END OF SPECIAL PROVISIONS**

APPENDIX A
CITY OF TACOMA
AND
WSDOT STANDARD PLANS

PART #

**CITY OF TACOMA
SMALL BUSINESS ENTERPRISE
PROGRAM**

[Note to Engineer: Print this section on blue paper.]

PART #
LOCAL EMPLOYMENT
AND
APPRENTICESHIP
TRAINING PROGRAM (LEAP)
REGULATIONS
FOR
PUBLIC WORKS CONTRACTS

[Note to Engineer: Print this section on green paper.]

PART #

FEDERAL WAGE RATES

PART #

**STATE PREVAILING
WAGE RATES**

REFERENCE ONLY