PART IV

SPECIAL PROVISIONS

SPECIAL PROVISIONS
For
City of Stanwood
Viking Way Phase 2

April 2024

INTRODUCTION TO THE SPECIAL PROVISIONS

(January 4, 2024 APWA GSP, Option B)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2024 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). The Standard Specifications, as modified or supplemented by these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

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 effective date of the GSP and its source. For example:

(March 8, 2013 APWA GSP)
(April 1, 2013 (for WSDOT GSPs, only use date)
(COS GSP) Agency Special Provision

Also incorporated into the Contract Documents by reference are:

- *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently adopted edition, with Washington State modifications, if any
- *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT Manual M21-01, current edition
- *City of Stanwood Street and Utility Standards*, City of Stanwood Public Works Department, current edition
- *City of Stanwood Municipal Code (Current Web Edition)*
- "*Local Agency Guidelines*" published by WSDOT
- *Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way*, published August 8, 2023, effective September 7, 2023

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

Division 1
General Requirements

DESCRIPTION OF WORK
(March 13, 1995)

This Contract provides for the improvement of *** roadways within Stanwood's Downtown Center by constructing the new street for Viking Way from west of 90th Avenue NW to 92nd Avenue NW by clearing and grubbing, removals, preloading, settlement monitoring, fencing, excavations and embankments, surfacing and hot mix asphalt pavement, drainage, landscaping, curbing, sidewalks and curb ramps, illumination, signing, channelization, retaining wall and handrail, erosion/water pollution control, traffic control, *** and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications.

1-01 Definition and Terms

1-01.3 Definitions
(January 19, 2022 APWA GSP)

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

Dates

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

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

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

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

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

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

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

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

Supplement this Section with the following:

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

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

All references to "State Materials Laboratory" shall be revised to read "Contracting Agency designated location".

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

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

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

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

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

Contract Documents
See definition for "Contract".

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

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

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

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

1-02 BID PROCEDURES AND CONDITIONS

1-02.1 Prequalification of Bidders

Delete this section and replace it with the following:

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

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

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

Delete this section and replace it with the following:

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

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

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

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

1-02.4 Examination of Plans, Specifications and Site of Work

1-02.4(1) General
(December 30, 2022 APWA GSP Option A)

The first sentence of the ninth paragraph, beginning with "Prospective Bidder desiring…", is revised to read:

Prospective Bidders desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing soon enough to allow a written reply to reach all prospective Bidders before the submission of their Bids.

Section 1-02.4(1) is supplemented with the following:

(September 3, 2019)
The Reference Information for this project is available for review by the bidder at the following location:

*** Appendix D of this Project Manual ***

The Reference Information includes the following:

*** Geotechnical Engineering Report, Boring Logs ***

1-02.5 Proposal Forms
(July 31, 2017 APWA GSP)

Delete this section and replace it with the following:

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

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

1-02.6 Preparation of Proposal
Section 1-02.6 is supplemented with the following:

(November 20, 2023)

The Bidder shall submit with the Bid the following:

1) Disadvantaged Business Enterprise Utilization Certification (WSDOT Form 272-056)
2) DBE Written Confirmation Form (WSDOT Form 422-031) - For each and every DBE firm listed on the Bidder's completed Disadvantaged Business Enterprise Utilization Certification, the Bidder shall submit written confirmation from that DBE firm that the

DBE is in agreement with the DBE participation commitment that the Bidder has made in the Bidder's completed Disadvantaged Business Enterprise Utilization Certification.

3) Good Faith Effort Documentation - Bidder must submit good faith effort documentation with the Disadvantaged Business Enterprise Utilization Certification ONLY In The Event the bidder's efforts to solicit sufficient DBE participation have been unsuccessful.

4) DBE Item Breakdown (WSDOT Form 272-054) The Bidder shall submit a DBE Item Breakdown form defining the scope of work to be performed by each DBE listed on the DBE Utilization Certification.

Directions for delivery of the Disadvantaged Business Enterprise, Written Confirmation Documents, and Disadvantaged Business Enterprise Good Faith Effort documentation are included in Sections 1-02.9 and 1-02.10.

(January 4, 2024 APWA GSP 1-02.6, Option B)

Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.

5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid.

Delete the last two paragraphs, and replace them with the following:

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

The Bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner.

A bid by a corporation shall be executed in the corporate name, by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign).

A bid by a partnership shall be executed in the partnership name, and signed by a partner. A copy of the partnership agreement shall be submitted with the Bid Form if any DBE 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 DBE requirements are to be satisfied through such an agreement.

1-02.7 Bid Deposit

(March 8, 2013 APWA GSP)

Supplement this section with the following:

Bid bonds shall contain the following:

1. Contracting Agency-assigned number for the project;

2. Name of the project;
3. The Contracting Agency named as obligee;
4. The amount of the bid bond stated either as a dollar figure or as a percentage which represents five percent of the maximum bid amount that could be awarded;
5. Signature of the bidder's officer empowered to sign official statements. The signature of the person authorized to submit the bid should agree with the signature on the bond, and the title of the person must accompany the said signature;
6. The signature of the surety's officer empowered to sign the bond and the power of attorney.

If so stated in the Contract Provisions, bidder must use the bond form included in the Contract Provisions.

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

1-02.9 Delivery of Proposal
(January 4, 2024 APWA GSP, Option A)

Delete this section and replace it with the following:

DBE DOCUMENT SUBMITTAL REQUIREMENTS

General

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

To be considered responsive on a FHWA-funded project, the Bidder may be required to submit the following items, as required by Section 1-02.6:

- DBE Utilization Certification (WSDOT 272-056)
- DBE Written Confirmation Document (WSDOT 422-031) from each DBE firm listed on the Bidder's completed DBE Utilization Certification
- Good Faith Effort (GFE) Documentation (if applicable)
- DBE Bid Item Breakdown (WSDOT 272-054)

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

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

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DBE Utilization Certification (WSDOT Form 272-056)
The DBE Utilization Certification shall be received at the same location and no later than the time required for delivery of the Proposal. The Contracting Agency will not open or consider any Proposal when the DBE Utilization Certification is received after the time specified for receipt of Proposals or received in a location other than that specified for receipt of Proposals. The DBE Utilization Certification may be submitted in the same envelope as the Bid deposit.

DBE Written Confirmation (WSDOT Form 422-031) and/or GFE Documentation, (if applicable)
The DBE Written Confirmation Documents and/or GFE Documents are not required to be submitted with the Proposal. The DBE 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 documents shall be received no later than 48 hours (not including Saturdays, Sundays and Holidays) after the time for delivery of the Proposal. To be considered responsive, Bidders shall submit Written Confirmation Documentation from each DBE firm listed on the Bidder's completed DBE Utilization Certification and/or the GFE as required by Section 1-02.6.

DBE Bid Item Breakdown (WSDOT form 272-0-54)
The DBE Bid Item Breakdown shall be received either with the Bid Proposal or as a Supplement to the Bid. The documents shall be received no later than 48 hours (not including Saturdays, Sundays and Holidays) after the time for delivery of the Proposal. The successful Bidder shall submit a completed DBE Bid Item Breakdown, however, minor errors and corrections to DBE Bid Item Breakdown will be returned for correction for a period up to five calendar days after bid opening (not including Saturdays, Sundays and Holidays) DBE Bid Item Breakdown that are still incorrect after the correction period will be determined to be non-responsive.

The DBE Bid Item Breakdown will not be included as part of the executed Contract.

1-02.10 Withdrawing, Revising, or Supplementing Proposal

(July 23, 2015 APWA GSP)

Delete this section, and replace it with the following:

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

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

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

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

1-02.13 Irregular Proposals

(January 4, 2024 APWA GSP)

Delete this section and replace it with the following:

1. A Proposal will be considered irregular and will be rejected if:
   a. The Bidder is not prequalified when so required;
   b. The Bidder adds provisions reserving the right to reject or accept the Award, or enter into the Contract;
   c. A price per unit cannot be determined from the Bid Proposal;
   d. The Proposal form is not properly executed;
   e. The Bidder fails to submit or properly complete a subcontractor list (WSDOT Form 271-015), if applicable, as required in Section 1-02.6;
   f. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification (WSDOT Form 272-056), if applicable, as required in Section 1-02.6;
   g. The Bidder fails to submit Written Confirmations (WSDOT Form 422-031) from each DBE firm listed on the Bidder's completed DBE Utilization Certification that they are in agreement with the bidder's DBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;
   h. The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award in accordance with Section 1-07.11;
   i. The Bidder fails to submit a DBE Bid Item Breakdown (WSDOT Form 272-054), if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
   j. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation.

2. A Proposal may be considered irregular and may be rejected if:
   a. The Proposal does not include a unit price for every Bid item;
   b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Contracting Agency;
   c. The authorized Proposal Form furnished by the Contracting Agency is not used or is altered;
   d. The completed Proposal form contains unauthorized additions, deletions, alternate Bids, or conditions;
   e. Receipt of Addenda is not acknowledged;
   f. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
   g. If Proposal form entries are not made in ink.

1-02.14 Disqualification of Bidders

(May 17, 2018 APWA GSP, Option B)

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; or does not meet Supplemental Criteria 1-7 listed in this Section.

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1), and Supplemental Criteria 1-2. Evidence that the Bidder meets Supplemental Criteria 3-7 shall be provided by the Bidder as stated later in this Section.

1. **Delinquent State Taxes**

   A Criterion: The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.

   B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder does not owe delinquent taxes to the Washington State Department of Revenue, or if delinquent taxes are owed to the Washington State Department of Revenue, the Bidder must submit a written payment plan approved by the Department of Revenue, to the Contracting Agency by the deadline listed below.

2. **Federal Debarment**

   A Criterion: The Bidder shall not currently be debarred or suspended by the Federal government.

   B. Documentation: The Bidder shall not be listed as having an "active exclusion" on the U.S. government's "System for Award Management" database (www.sam.gov).

3. **Subcontractor Responsibility**

   A Criterion: The Bidder's standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established procedure which it utilizes to validate the responsibility of each of its subcontractors. The Bidder's subcontract form shall also include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also "responsible" subcontractors as defined by RCW 39.06.020.

   B. Documentation: The Bidder, if and when required as detailed below, shall submit a copy of its standard subcontract form for review by the Contracting

Agency, and a written description of its procedure for validating the responsibility of subcontractors with which it contracts.

4. **Claims Against Retainage and Bonds**

A Criterion: The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects in the three years prior to the bid submittal date, that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

B. Documentation: The Bidder, if and when required as detailed below, shall submit a list of the public works projects completed in the three years prior to the bid submittal date that have had claims against retainage and bonds and include for each project the following information:

- Name of project
- The owner and contact information for the owner;
- A list of claims filed against the retainage and/or payment bond for any of the projects listed;
- A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

5. **Public Bidding Crime**

A Criterion: The Bidder and/or its owners shall not have been convicted of a crime involving bidding on a public works contract in the five years prior to the bid submittal date.

B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder and/or its owners have not been convicted of a crime involving bidding on a public works contract.

6. **Termination for Cause / Termination for Default**

A Criterion: The Bidder shall not have had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency.

B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any public works contract terminated for cause or terminated for default by a government agency in the five years prior to the bid submittal date; or if Bidder was terminated, describe the circumstances. .

7. **Lawsuits**

A Criterion: The Bidder shall not have lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless there are extenuating circumstances and such circumstances are deemed acceptable to the Contracting Agency

B. Documentation: The Bidder, if and when required as detailed below, shall sign a statement (on a form to be provided by the Contracting Agency) that the Bidder has not had any lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, or shall submit a list of all lawsuits with judgments entered against the Bidder in the five years prior to the bid submittal date, along with a written explanation of the circumstances surrounding each such lawsuit. The Contracting Agency shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet of terms of construction related contracts

As evidence that the Bidder meets the Supplemental Criteria stated above, the apparent low Bidder must submit to the Contracting Agency by 12:00 P.M. (noon) of the second business day following the bid submittal deadline, a written statement verifying that the Bidder meets the supplemental criteria together with supporting documentation (sufficient in the sole judgment of the Contracting Agency) demonstrating compliance with the Supplemental Criteria. The Contracting Agency reserves the right to request further documentation as needed from the low Bidder and documentation from other Bidders as well to assess Bidder responsibility and compliance with all bidder responsibility criteria. The Contracting Agency also reserves the right to obtain information from third-parties and independent sources of information concerning a Bidder's compliance with the mandatory and supplemental criteria, and to use that information in their evaluation. The Contracting Agency may consider mitigating factors in determining whether the Bidder complies with the requirements of the supplemental criteria.

The basis for evaluation of Bidder compliance with these mandatory and supplemental criteria shall include any documents or facts obtained by Contracting Agency (whether from the Bidder or third parties) including but not limited to: (i) financial, historical, or operational data from the Bidder; (ii) information obtained directly by the Contracting Agency from others 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 two (2) business days of the Contracting Agency's determination by presenting its appeal and any additional information to the Contracting Agency. The Contracting Agency will consider the appeal and any additional information 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 Contracting Agency's final determination.

Request to Change Supplemental Bidder Responsibility Criteria Prior To Bid: Bidders with concerns about the relevancy or restrictiveness of the Supplemental Bidder Responsibility Criteria may make or submit requests to the Contracting Agency to modify the criteria. Such requests shall be in writing, describe the nature of the concerns, and propose specific modifications to the criteria. Bidders shall submit such requests to the Contracting Agency no later than five (5) business days prior to the bid submittal deadline and address the request to the Project Engineer or such other person designated by the Contracting Agency in the Bid Documents.

1-02.15 Pre Award Information

(December 30, 2022 APWA GSP)

Revise this section to read:

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

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

1-03 Award and Execution of Contract

1-03.1 Consideration of Bids

(December 30, 2022 APWA GSP)

Revise the first paragraph to read:

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

1-03.3 Execution of Contract

(January 4, 2024 APWA GSP Option A)

This section is supplemented with the following:

Within 5 calendar days of the Award date (not including Saturdays, Sundays and Holidays), the successful Bidder shall provide DBE Trucking Credit Form(s) (WSDOT Form 272-058) when trucking appears on the DBE Utilization Certificate (WSDOT Form 272-056). The DBE Trucking Credit Form shall document how the DBE Trucking firm will be able to perform the scope of work subcontracted to them.

Trucking forms will be returned for correction. Trucking Credit Form(s) will not be included as part of the executed Contract.

DBE Trucking Credit Forms shall be submitted in one of the following ways:

1) By E-mail *** Alan Lytton – alan.lytton@ci.stanwood.wa.us and CRP@wsdot.wa.gov *** or

2) By Mail to: *** 10220 270th Street NW, Stanwood, WA 98292 ***

3) By *** N/A ***

1-03.4 Contract Bond

(July 23, 2015 APWA GSP)

Delete the first paragraph and replace it with the following:

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

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

authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

1-03.7 Judicial Review

(December 30, 2022 APWA GSP)

Revise this section to read:

All decisions made by the Contracting Agency regarding the Award and execution of the Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted under Washington Law. Such review, if any, shall be timely filed in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction.

1-04 Scope of the Work

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda

(December 30, 2022 APWA GSP)

Revise the second paragraph to read:

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

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

1-04.4 Changes

(January 19, 2022 APWA GSP)

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

1-04.4(1) Minor Changes

(May 30, 2019 APWA GSP)

Delete the first paragraph and replace it with the following:

Payments or credits for changes amounting to $25,000 or less may be made under the Bid item "Minor Change". At the discretion of the Contracting Agency, this procedure for Minor Changes may be used in lieu of the more formal procedure as outlined in Section 1-04.4, Changes. All "Minor Change" work will be within the scope of the Contract Work and will not change Contract Time.

1-04.11 Final Cleanup

(COS GSP)

Section 1-04.11 is deleted in its entirety and replaced with the following:

From time to time or as may be ordered by the Engineer, the Contractor shall cleanup and remove debris, refuse, and discarded materials of any kind resulting from the Work. Failure to do so may result in cleanup done by the Owner and the costs deducted from the Contractor's progress estimate.

The Contractor shall perform final cleanup as provided in this Section. The Engineer will not establish the Physical Completion Date until this is done. All public and private property the Contractor occupied to do the Work, including but not limited to the Street Right of Way, material sites, borrow and waste sites, and construction staging area shall be left neat and presentable. Immediately after completion of the Work, the Contractor shall cleanup and remove all refuse and unused materials of any kind resulting from the Work. Failure to do the final cleanup may result in the final cleanup being done by the Owner and the costs deducted from the Contractor's final progress estimate.

The Contractor shall:

1. Remove all rubbish, surplus materials, discarded materials, falsework, piling, camp buildings, temporary structures, equipment, and debris;
2. Remove from the Project, all unneeded, oversized rock left from grading, surfacing, or paving unless the Contract specifies otherwise, or the Engineer approves otherwise;
3. On all concrete and asphalt pavement work, flush the pavement clean and remove the wash water and debris;
4. Sweep and flush structure decks and remove wash water and debris;
5. Clean out from all open culverts and drains, inlets, catch basins, manholes and water main valve chambers, within the limits of the Project Site, all dirt and debris of any kind that is the result of the Contractor's operations;
6. Level and fine grade all excavated material not used for backfill where the Contract requires;
7. Fine grade all slopes;
8. Upon completion of grading and cleanup operations at any privately-owned site for which a written agreement between the Contractor and property owner is required, the Contractor shall obtain and furnish to the Engineer a written release from all damages, duly executed by the property owner, stating that the restoration of the property has been satisfactorily accomplished.

All costs associated with cleanup shall be incidental to the Work and shall be included in the various Bid items in the Bid and shall be at no additional cost to the Owner.

1-05 Control of Work

1-05.4 Conformity With And Deviations From Plans And Stakes

Section 1-05.4 is supplemented with the following:

(January 13, 2021)

Contractor Surveying - Roadway

The Contracting Agency has provided primary survey control in the Plans.

The Contractor shall be responsible for setting, maintaining, and resetting all alignment stakes, slope stakes, and grades necessary for the construction of the roadbed, drainage, surfacing, paving, channelization and pavement marking, illumination and signals, guardrails and barriers, and signing. Except for the survey control data to be furnished by the Contracting Agency, calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor's responsibility.

The Contractor shall inform the Engineer when monuments are discovered that were not identified in the Plans and construction activity may disturb or damage the monuments. All monuments noted on the plans "DO NOT DISTURB" shall be protected throughout the length of the project or be replaced at the Contractors expense.

Detailed survey records shall be maintained, including a description of the work performed on each shift, the methods utilized, and the control points used. The record shall be adequate to allow the survey to be reproduced. A copy of each day's record shall be provided to the Engineer within three working days after the end of the shift.

The meaning of words and terms used in this provision shall be as listed in "Definitions of Surveying and Associated Terms" current edition, published by the American Congress on Surveying and Mapping and the American Society of Civil Engineers.

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

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

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

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

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

5. Establish the horizontal and vertical location of all drainage features, placing offset stakes to all drainage structures and to pipes at a horizontal interval not greater than 25 feet.

6. Establish roadbed and surfacing elevations by placing stakes at the top of subgrade and at the top of each course of surfacing. Subgrade and surfacing stakes shall be set at horizontal intervals not greater than 50 feet in tangent sections, 25 feet in curve sections with a radius less than 300 feet, and at 10-

foot intervals in intersection radii with a radius less than 10 feet. Transversely, stakes shall be placed at all locations where the roadway slope changes and at additional points such that the transverse spacing of stakes is not more than 12 feet. If GPS Machine Controls are used to provide grade control, then roadbed and surfacing stakes may be omitted at the discretion of the Contractor.

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

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

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

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

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

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

	Vertical	Horizontal
Slope stakes	±0.10 feet	±0.10 feet
Subgrade grade stakes set 0.04 feet below grade	±0.01 feet	±0.5 feet (parallel to alignment) ±0.1 feet (normal to alignment)
Stationing on roadway	N/A	±0.1 feet
Alignment on roadway	N/A	±0.04 feet
Surfacing grade stakes	±0.01 feet	±0.5 feet (parallel to alignment) ±0.1 feet (normal to alignment)
Roadway paving pins for surfacing or paving	±0.01 feet	±0.2 feet (parallel to alignment) ±0.1 feet (normal to alignment)

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

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

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

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

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

Payment

Payment will be made for the following bid item when included in the proposal:

"Roadway Surveying", lump sum.

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

(March 9, 2023)

Contractor Surveying – ADA Features

ADA Feature Staking Requirements

The Contractor shall be responsible for setting, maintaining, and resetting all alignment stakes, and grades necessary for the construction of the ADA features. Calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor's responsibility. The Contractor shall build the ADA features within the specifications in the Standard Plans and contract documents.

ADA Feature Contract Compliance

The Contractor shall be responsible for completing measurements to verify all ADA features comply with the Contract in the presence of the Engineer.

ADA Feature As-Built Measurements

The Contractor shall be responsible for providing the latitude and longitude of each ADA feature as indicated on the ADA Inspection Form(s) (WSDOT Form 224-020).

The completed ADA Inspection Form(s) (WSDOT Form 224-020) shall be submitted as a Type 3 Working Drawing and transmitted to the Engineer within 30 calendar days of completing the ADA feature. After acceptance, the Contracting Agency will submit the final form(s) to the WSDOT ADA Steward.

Payment

Payment will be made for the following bid item that is included in the Proposal:

"ADA Features Surveying", lump sum.

The lump sum Contract price for "ADA Features Surveying" shall be full pay for all the Work as specified.

In the instance where an ADA feature does not meet accessibility requirements, all work to replace non-compliant work and then to measure, record the as-built measurements, and transmit the electronic forms to the Engineer shall be completed at no additional cost to the Contracting Agency.

Contractor Surveying – Preloading

Settlement Monitoring

The Contractor shall engage a professional surveyor licensed in the State of Washington to perform during-construction settlement plate surveys. The Contractor shall survey the top of each base plate and the adjacent ground surface at the time interval specified herein or as approved by the Engineer in the event of damage/disturbance to the installation or to rectify erroneous survey information. No extra cost shall be allowed for such additional survey Work resulting from damages to the settlement plates or survey errors. The Contractor shall be responsible for providing safe access to the top of the preload embankment to avoid damaging erosion control measures.

The Contractor shall notify the Engineer when settlement plate installation is scheduled to begin. The Contractor shall coordinate with their professional surveyor to assure the surveyor has access during the installation process and for all recording periods. The testing procedure frequency used by the surveyor shall be as follows:

1. Immediately after the initial installation of a settlement plate. The elevation of the base plate shall be surveyed through the use of a survey rod or metallic survey tape lowered to the base plate through the attached pipe section. This elevation, as well as the elevation of the adjacent ground surface, shall be recorded within two (2) hours following the completion of the installation.
2. At the conclusion of a workday when any embankment construction has occurred during that workday. The elevation of the base plate and ground at all settlement plate locations, within twenty-five (25) feet of an area filled during that workday, shall be recorded within twenty-four (24) hours after the conclusion of that workday and before any following embankment construction is restarted.
3. On a weekly basis for all settlement plate locations for the first month following completion of the preload embankment, bi-weekly for the next three (3) months, and monthly thereafter until the Engineer determines that settlements are substantially complete.

The elevation of each settlement plate base plate shall be determined by the surveyor to the nearest 0.01 foot. Adjacent fill elevation shall be determined to the

nearest 0.1 foot. Elevation measurements shall be made relative to a temporary benchmark. The temporary benchmark shall be established on stable ground, not subject to embankment preload settlement; and be located at least 200 feet away from the embankment; and be in a condition such that it is available to the Engineer for follow-up survey after the embankment placement is complete.

Survey data, in the form of tabulated elevations for each of the settlement plate location, shall be available for review by the Engineer and Contracting Agency within forty-eight (48) hours of when the settlement plate was surveyed.

Re-establish Original Ground

Once the Engineer determines that settlements are substantially complete, the Contractor shall survey the existing ground throughout the preloading area and provide the Engineer with the survey, in AutoCAD 2020 or xml format. This survey will be used to confirm roadway excavation and embankment quantities as specified in Special Provision Section 2-03.

Payment

Payment will be made for the following bid item that is included in the Proposal:

"Preload Surveying", lump sum.

The unit Contract price per lump sum for "Preload Surveying" shall be full pay for all the Work as specified.

1-05.7 Removal of Defective and Unauthorized Work

(October 1, 2005 APWA GSP)

Supplement this section with the following:

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

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

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

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

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

1-05.9 Equipment

(COS GSP)

The following new paragraph is inserted between the second and third paragraphs:

Use of equipment with metal tracks will not be permitted on concrete or asphalt surfaces unless otherwise authorized by the Engineer.

1-05.11 Final Inspection

Delete this section and replace it with the following:

1-05.11 Final Inspections and Operational Testing

(October 1, 2005 APWA GSP)

1-05.11(1) Substantial Completion Date

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

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

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

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

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

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

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

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

1-05.11(3) Operational Testing

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

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

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

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

Delete the sixth and seventh paragraphs of this section.

1-05.14 Cooperation With Other Contractors

Section 1-05.14 is supplemented with the following:

(March 13, 1995)

Other Contracts Or Other Work

It is anticipated that the following work adjacent to or within the limits of this project will be performed by others during the course of this project and will require coordination of the work:

***

271st Street NW Near Term Improvements: 88th Avenue NW to 84th Avenue NW
City of Stanwood
Alan Lytton
(360) 502-1326
Alan.Lytton@ci.stanwood.wa.us
***

1-05.15 Method of Serving Notices

(January 4, 2024 APWA GSP)

Revise the second paragraph to read:

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

Add the following new section:

1-05.16 Water and Power

(October 1, 2005 APWA GSP)

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

Add the following new section:

1-05.18 Record Drawings

(March 8, 2013 APWA GSP)

The Contractor shall maintain one set of full size plans for Record Drawings, updated with clear and accurate red-lined field revisions on a daily basis, and within 2 business days after receipt of information that a change in Work has occurred. The Contractor shall not conceal any work until the required information is recorded.

This Record Drawing set shall be used for this purpose alone, shall be kept separate from other Plan sheets, and shall be clearly marked as Record Drawings. These Record Drawings shall be kept on site at the Contractor's field office, and shall be available for review by the Contracting Agency at all times. The Contractor shall bring the Record Drawings to each progress meeting for review.

The preparation and upkeep of the Record Drawings is to be the assigned responsibility of a single, experienced, and qualified individual. The quality of the Record Drawings, in terms of accuracy, clarity, and completeness, is to be adequate to allow the Contracting Agency to modify the computer-aided drafting (CAD) Contract Drawings to produce a complete set of Record Drawings for the Contracting Agency without further investigative effort by the Contracting Agency.

The Record Drawing markups shall document all changes in the Work, both concealed and visible. Items that must be shown on the markups include but are not limited to:

- Actual dimensions, arrangement, and materials used when different than shown in the Plans.
- Changes made by Change Order or Field Order.
- Changes made by the Contractor.
- Accurate locations of storm sewer, sanitary sewer, water mains and other water appurtenances, structures, conduits, light standards, vaults, width of roadways, sidewalks, landscaping areas, building footprints, channelization and pavement markings, etc. Include pipe invert elevations, top of castings (manholes, inlets, etc.).

If the Contract calls for the Contracting Agency to do all surveying and staking, the Contracting Agency will provide the elevations at the tolerances the Contracting Agency requires for the Record Drawings.

When the Contract calls for the Contractor to do the surveying/staking, the applicable tolerance limits include, but are not limited to the following:

	Vertical	Horizontal
As-built sanitary & storm invert and grate elevations	± 0.01 foot	± 0.01 foot
As-built monumentation	± 0.001 foot	± 0.001 foot
As-built waterlines, inverts, valves, hydrants	± 0.10 foot	± 0.10 foot
As-built ponds/swales/water features	± 0.10 foot	± 0.10 foot
As-built buildings (fin. Floor elev.)	± 0.01 foot	± 0.10 foot
As-built gas lines, power, TV, Tel, Com	± 0.10 foot	± 0.10 foot
As-built signs, signals, etc.	N/A	± 0.10 foot

Making Entries on the Record Drawings:

- Use erasable colored pencil (not ink) for all markings on the Record Drawings, conforming to the following color code:
- Additions - Red
- Deletions - Green
- Comments - Blue

- Dimensions- Graphite
- Provide the applicable reference for all entries, such as the change order number, the request for information (RFI) number, or the approved shop drawing number.
- Date all entries.
- Clearly identify all items in the entry with notes similar to those in the Contract Drawings (such as pipe symbols, centerline elevations, materials, pipe joint abbreviations, etc.).

The Contractor shall certify on the Record Drawings that said drawings are an accurate depiction of built conditions, and in conformance with the requirements detailed above. The Contractor shall submit final Record Drawings to the Contracting Agency. Contracting Agency acceptance of the Record Drawings is one of the requirements for achieving Physical Completion.

Payment will be made for the following bid item:

Record Drawings (Minimum Bid $5,000)	Lump Sum

Payment for this item will be made on a prorated monthly basis for work completed in accordance with this section up to 75% of the lump sum bid. The final 25% of the lump sum item will be paid upon submittal and approval of the completed Record Drawings set prepared in conformance with these Special Provisions.

A minimum bid amount has been entered in the Bid Proposal for this item. The Contractor must bid at least that amount.

1-06 Control of Material

Section 1-06 is supplemented with the following:

Build America/Buy America

(December 20, 2023)

General Requirements

In accordance with Buy America Preferences for Infrastructure Projects requirements contained in 2 CFR 184 and Division G, Title IX - Build America, Buy America Act (BABA), of Public Law 117-58 (Infrastructure Investment and Jobs Act), the following materials must be American-made:

1. All steel and iron used in the project are produced in the United States. This means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

2. All manufactured products used in the project are produced in the United States. This means the manufactured product was manufactured in the United States, and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation.

3. All construction materials are manufactured in the United States. This means that all manufacturing processes for the construction material occurred in the United States.

An article, material, or supply will be classified in one of three categories: 1) Steel and Iron, 2) Manufactured Product or 3) Construction Material. Only a single category will apply to an item and be subject to the requirements of the BABA requirements of that category. Some contract items are composed of multiple parts that may fall into different categories. Individual components will be categorized as a construction material, manufactured product, or steel and iron based on their composition when they arrive at the staging area or work site. When steel or iron are a component of a manufactured product or construction material, the steel and iron components will be subject to "Steel and Iron Requirements" of this Specification.

Definitions

1. Construction material: Defined as any article, material, or supply brought to the construction site for incorporation into the final product. Construction materials include an article, material, or supply that is or consists primarily of:

   a. Non-ferrous metals including all manufacturing processes, from initial smelting or melting through final shaping, coating, and assembly;

   b. Plastic and polymer-based products including all manufacturing processes, from initial combination of constituent plastic or polymer-based inputs, or, where applicable, constituent composite materials, until the item is in its final form);

   c. Glass including all manufacturing processes, from initial batching and melting of raw materials through annealing, cooling, and cutting);

   d. Fiber optic cable (includes drop cable) including all manufacturing processes, 50 from initial ribboning (if applicable), through buffering, fiber stranding and jacketing, (fiber optic cable also includes the standards for glass and optical fiber);

   e. Optical fiber including all manufacturing processes, from the initial preform fabrication stage, though the completion of the draw;

   f. Lumber including all manufacturing processes, from initial debarking through treatment and planing;

   g. Drywall including all manufacturing processes, from initial blending of mined or synthetic gypsum plaster and additives through cutting and drying of sandwiched panels; or

   h. Engineered wood including all manufacturing processes from the initial combination of constituent materials until the wood product is in its final form.

   Construction Materials do not include items of primarily iron or steel; manufactured products; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives.

If a Construction Material is not manufactured in the United States it shall be considered a Foreign Construction Material.

2. Manufactured Product: A Manufactured product includes any item produced as a result of the manufacturing process. Items that consist of two or more of the listed construction materials that have been combined together through a manufacturing process, and items that include at least one of the listed materials combined with a material that is not listed through a manufacturing process, should be treated as manufactured products, rather than as construction materials.

3. Manufactured in the United States: A construction material will be considered as manufactured in the United States if all manufacturing processes have occurred in the United States.

4. Structural Steel: Defined as all structural steel products included in the project.

5. United States: To further define the coverage, a domestic product is a manufactured steel construction material that was produced in one of the 50 states, the District of Columbia, Puerto Rico, or in the territories and possessions of the United States.

Steel and Iron Requirements

Major quantities of steel and iron construction materials that are permanently incorporated into the project shall consist of American-made materials only. BABA requirements do not apply to temporary steel or iron items, e.g., temporary sheet piling, temporary bridges, steel scaffolding and falsework.

Minor amounts of foreign steel and iron may be utilized in this project provided the cost of the foreign material used does not exceed one-tenth of one percent of the total contract cost or $2,500.00, whichever is greater.

American-made material is defined as material having all manufacturing processes occurring domestically.

If domestically produced steel billets or iron ingots are exported outside of the area of coverage, as defined above, for any manufacturing process then the resulting product does not conform to the BABA requirements. Additionally, products manufactured domestically from foreign source steel billets or iron ingots do not conform to the BABA requirements because the initial melting and mixing of alloys to create the material occurred in a foreign country.

Manufacturing begins with the initial melting and mixing and continues through the coating stage. Any process which modifies the chemical content, the physical size or shape, or the final finish is considered a manufacturing process. The processes include rolling, extruding, machining, bending, grinding, drilling, welding, and coating. The action of applying a coating to steel or iron is deemed a manufacturing process. Coating includes epoxy coating, galvanizing, aluminizing, painting, and any other coating that protects or enhances the value of steel or iron. Any process from the original reduction from ore to the finished product constitutes a manufacturing process for iron.

Due to a nationwide waiver, BABA requirements do not apply to raw materials (iron ore and alloys), scrap (recycled steel or iron), and pig iron ore processed, pelletized, and reduced iron ore.

The following are considered to be steel manufacturing processes:

1. Production of steel by any of the following processes:
    a. Open hearth furnace.
    b. Basic oxygen.
    c. Electric furnace.
    d. Direct reduction.
2. Rolling, heat treating, and any other similar processing.
3. Fabrication of the products:
    a. Spinning wire into cable or strand.
    b. Corrugating and rolling into culverts.
    c. Shop fabrication.

A certification of materials origin will be required for all items comprised of, or containing, steel or iron construction materials prior to such items being incorporated into the permanent work. The Contractor will not receive payment until the certification is received by the Engineer. The certification shall be on WSDOT Form 350-109 provided by the Engineer, or such other form the Contractor chooses, provided it contains the same information as WSDOT Form 350-109.

Manufactured Products

Due to a nationwide waiver, BABA requirements do not apply to manufactured products. Manufactured products that contain steel and iron, regardless of a nationwide waiver, will follow "Steel and Iron Requirements" of this Specification.

Construction Material Requirements

A Contractor provided certification of materials origin will be required before each progress estimate or payment. The Contractor will not receive payment until the certification is received by the Engineer. The Contractor shall certify that all construction materials installed during the current progress estimate period meets the Build America, Buy America Act. The certification shall be on WSDOT Form 350-110 provided by the Engineer, or such other form the Contractor chooses, provided it contains the same information as WSDOT Form 350-110.

Waiver for De Minimis Costs

Minor amounts of Foreign Construction Materials may be utilized in this project, provided that the total cost of the Foreign Construction Materials does not exceed $1,000,000 and does not exceed 5 percent of the total applicable material costs calculated as follows:

$$\frac{Total\ cost\ of\ Foreign\ Construction\ Materials}{Total\ applicable\ material\ costs} < 0.05$$

The total applicable material costs shall be the sum of the costs all Construction Materials, all Steel and Iron, and all Manufactured Products. Total applicable material costs does not include the cost of cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives.

Steel and iron materials shall follow the "Steel and Iron Requirements" of this Specification.

(******)
Section 1-06 is supplement with the following:

The following proprietary drainage structure and illumination system equipment specified for use on this Project contains foreign steel in the amount of $220.00 and less than $50, respectively, and these amounts will be applied against the 1/10 or 1% of the contract total allowed for foreign steel under Division G, Title IX – Build America, Buy America Act (BABA), of Public Law 117-58 (Infrastructure Investment and Jobs Act):

- Modular Wetland 4 Ft. x 6 Ft.
- Assembly parts including, but not limited to, bolts, nuts, and washers for the following Lumec light fixtures:
  - DMS50-SHA-110W64LED4K-R-LE3-BKTX-SMB
  - DMS60-SHA-80W48LED4K-R-LE4-UNIV-BKTX
  - DMS60-SHA-35W32LED4K-R-LE4-UNIV-BKTX

1-06.1 Approval of Materials Prior to Use
(COS GSP)

Section 1-06.1 is supplemented with the following:

Approval of a Material source shall not mean acceptance of the Material. The Material shall meet the requirements of the Contract.

1-06.6 Recycled Materials
(January 4, 2016 APWA GSP)

Delete this section, including its subsections, and replace it with the following:

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

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier). The Contractor's report shall be provided on DOT form 350-075 Recycled Materials Reporting.

1-07 Legal Relations and Responsibilities to the Public

1-07.1 Laws to be Observed

(October 1, 2005 APWA GSP)

Supplement this section with the following:

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

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

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

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

(COS GSP)

Section 1-07.1 is supplemented with the following:

The Contractor shall at all times eliminate noise to the maximum practicable extent. Air compressing plants shall be equipped with silencers, and the exhaust of all gasoline motors or other power equipment shall be provided with mufflers. Special care shall be used to avoid noise or other nuisances, and the Contractor shall strictly observe all federal, state, and local regulations concerning noise.

1-07.1(2) Health and Safety

Section 1-07.1(2) is supplemented with the following:

(April 3, 2006)
Confined Space

Confined spaces are known to exist at the following locations:

***

- Catch Basin Type 2 Locations detailed in the Contract Plans
- Modular Wetland No. 1 at Approx. Station 17+50 RT

***

The Contractor shall be fully responsible for the safety and health of all on-site workers and compliant with Washington Administrative Code (WAC 296-809).

The Contractor shall prepare and implement a confined space program for each of the confined spaces identified above. The Contractors Confined Space program shall be sent to the Contracting Agency at least 30 days prior to the Contractor beginning work in or adjacent to the confined space. No work shall be performed in or adjacent to the confined space until the plan is submitted to the Engineer as required. The Contractor shall communicate with the Engineer to ensure a coordinated effort for providing and maintaining a safe worksite for both the Contracting Agency's and Contractor's workers when working in or near a confined space.

All costs to prepare and implement the confined space program shall be included in the bid prices for the various items associated with the confined space work.

(COS GSP)

This project, the Contractor and its subcontractors, shall, at all times, be governed by Chapter XIII of Title 29, Code of Federal Regulations, Part 1518 - Safety and Health Regulations for Construction (35 CFR 75), as amended to date.

To implement the program, and to provide safe and healthful working conditions for all persons, the construction superintendent or his/her designated safety officer shall conduct general project safety meetings at the site at least once each month during the course of construction.

The prime contractor and all subcontractors shall immediately report all accidents, injuries, and health hazards to the Manager, in writing. This shall not obviate any mandatory reporting under the provisions of the Occupational Safety and Health Act of 1970. This program shall become a part of the contract documents and the contract between the Owner and the Contractor, and all subcontractors, as though fully written therein.

Where the location of the work is in proximity to overhead wires and power lines, the Contractor shall coordinate all work with the utility and shall provide for such measures as may be necessary for the protection of the workers.

1-07.2 State Taxes

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

1-07.2 State Sales 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 Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

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

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

1-07.2(3) Services

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

1-07.5 Environmental Regulations

Section 1-07.5 is supplemented with the following:

(September 20, 2010)
Environmental Commitments
The following Provisions summarize the requirements, in addition to those required elsewhere in the Contract, imposed upon the Contracting Agency by the various documents referenced in the Special Provision **Permits and Licenses**. Throughout the work, the Contractor shall comply with the following requirements:

(August 3, 2009)
Payment
All costs to comply with this special provision for the environmental commitments and requirements are incidental to the contract and are the responsibility of the Contractor. The Contractor shall include all related costs in the associated bid prices of the contract.

1-07.5(5) U.S. Army Corps of Engineers
Section 1-07.5(5) is supplemented with the following:

(August 4, 2014)
The Contractor shall submit a written notification to the Engineer no later than 10 calendar days prior to beginning any ground disturbing activities *** extending into native soil for tribal monitoring and trench excavations more than five (5) feet below existing grade west of Station 18+50. ***. The Contractor shall not commence any such ground disturbing activities until the monitor is present.

1-07.6 Permits and Licenses
Section 1-07.6 is supplemented with the following:

(******)
The Contracting Agency has obtained the below-listed permit(s) for this project. A copy of the permit(s) is attached as an appendix for informational purposes. Copies of these permits, are required to be onsite at all times.

Contact with the permitting agencies, concerning the below-listed permit(s), shall be made through the Engineer. The Contractor shall be responsible for obtaining Ecology's approval for any Work requiring additional approvals (e.g. Request for Chemical Treatment Form). The Contractor shall obtain additional permits as necessary. All costs to obtain and comply with additional permits shall be included in the applicable Bid items for the Work involved. The Contractor shall, at their expense, arrange to have all permits issued by the City of Stanwood extended, if in the course of the Contract the permits expire.

Permit or Approval	Permit #	Issuing Agency	Issued	Expires
Right of Way Permit	22-0101	City of Stanwood	11/17/2022	11/17/2024
SEPA	22-0101	City of Stanwood	11/17/2022	11/17/2024
NEPA		WSDOT Local Programs	10/20/2022	10/20/2025

(COS GSP)
Business License

The Contractor and subcontractors must obtain, at their own expense, a City of Stanwood business license. The Contractor may apply for a city business license at https://stanwoodwa.org/488/Business-Licensing.

1-07.7 Load Limits

Section 1-07.7 is supplemented with the following:

(March 13, 1995)

If the sources of materials provided by the Contractor necessitates hauling over roads other than State Highways, the Contractor shall, at the Contractor's expense, make all arrangements for the use of the haul routes.

1-07.9 Wages

1-07.9(1) General

Section 1-07.9(1) is supplemented with the following:

(January 10, 2024)

The Federal wage rates incorporated in this contract have been established by the Secretary of Labor under United States Department of Labor General Decision No. WA20240001.

The State rates incorporated in this contract are applicable to all construction activities associated with this contract.

1-07.9(5)A Required Documents

(December 30, 2022 APWA GSP)

This section is revised to read as follows:

All Statements of Intent to Pay Prevailing Wages, Affidavits of Wages Paid and Certified Payrolls, including a signed Statement of Compliance for Federal-aid projects, shall be submitted to the Engineer and to the State L&I online Prevailing Wage Intent & Affidavit (PWIA) system.

1-07.11 Requirements for Nondiscrimination

Section 1-07.11 is supplemented with the following:

(October 3, 2022)

Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)

1. The Contractor's attention is called to the Equal Opportunity Clause and the Standard Federal Equal Employment Opportunity Construction Contract Specifications set forth herein.

2. The goals and timetables for minority and female participation set by the Office of Federal Contract Compliance Programs, expressed in percentage terms for the Contractor's aggregate work force in each construction craft and in each trade on all construction work in the covered area, are as follows:

Women - Statewide

Timetable	Goal
Until further notice	6.9%

Minorities - by Standard Metropolitan Statistical Area (SMSA)

Spokane, WA:
SMSA Counties:
Spokane, WA 2.8
WA Spokane.
Non-SMSA Counties 3.0
WA Adams; WA Asotin; WA Columbia; WA Ferry; WA Garfield; WA Lincoln, WA Pend Oreille; WA Stevens; WA Whitman.

Richland, WA
SMSA Counties:
Richland Kennewick, WA 5.4
WA Benton; WA Franklin.
Non-SMSA Counties 3.6
WA Walla Walla.

Yakima, WA:
SMSA Counties:
Yakima, WA 9.7
WA Yakima.
Non-SMSA Counties 7.2
WA Chelan; WA Douglas; WA Grant; WA Kittitas; WA Okanogan.

Seattle, WA:
SMSA Counties:
Seattle Everett, WA 7.2
WA King; WA Snohomish.
Tacoma, WA 6.2
WA Pierce.
Non-SMSA Counties 6.1
WA Clallam; WA Grays Harbor; WA Island; WA Jefferson; WA Kitsap; WA Lewis; WA Mason; WA Pacific; WA San Juan; WA Skagit; WA Thurston; WA Whatcom.

Portland, OR:
SMSA Counties:
Portland, OR-WA 4.5
WA Clark.
Non-SMSA Counties 3.8
WA Cowlitz; WA Klickitat; WA Skamania; WA Wahkiakum.

These goals are applicable to each nonexempt Contractor's total on-site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, or federally assisted project, contract, or subcontract until further notice. Compliance with these goals and time tables is enforced by the Office of Federal Contract compliance Programs.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, in each construction craft and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goal shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 or more that are Federally funded, at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed. The notification shall be sent to:

    U.S. Department of Labor
    Office of Federal Contract Compliance Programs Pacific Region
    Attn: Regional Director
    San Francisco Federal Building
    90 – 7th Street, Suite 18-300
    San Francisco, CA 94103(415) 625-7800 Phone
    (415) 625-7799 Fax

4. As used in this Notice, and in the contract resulting from this solicitation, the Covered Area is as designated herein.

<u>Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)</u>

1. As used in these specifications:

    a. Covered Area means the geographical area described in the solicitation from which this contract resulted;

    b. Director means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

c. Employer Identification Number means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U. S. Treasury Department Form 941;

d. Minority includes:

(1) Black, a person having origins in any of the Black Racial Groups of Africa.

(2) Hispanic, a fluent Spanish speaking, Spanish surnamed person of Mexican, Puerto Rican, Cuban, Central American, South American, or other Spanish origin.

(3) Asian or Pacific Islander, a person having origins in any of the original peoples of the Pacific rim or the Pacific Islands, the Hawaiian Islands and Samoa.

(4) American Indian or Alaskan Native, a person having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or subcontractor's failure to take good faith effort to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of this Special Provision. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its action. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

    a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

    b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

    c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

    d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunity and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the U.S. Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these

employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through 7p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of the obligations under 7a through 7p of this Special Provision provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensure that the concrete benefits of the program are reflected in the Contractor's minority and female work-force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrate the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspensions, terminations and cancellations of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of this Special Provision, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep records. Records shall at least include, for each employee, their name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, the Contractors will not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

16. Additional assistance for Federal Construction Contractors on contracts administered by Washington State Department of Transportation or by Local Agencies may be found at:

    Washington State Dept. of Transportation
    Office of Equal Opportunity
    PO Box 47314
    310 Maple Park Ave. SE
    Olympia WA
    98504-7314
    Ph: 360-705-7090
    Fax: 360-705-6801
    http://www.wsdot.wa.gov/equalopportunity/default.htm

(October 1, 2020 APWA GSP, Option B)

Supplement this section with the following:

Disadvantaged Business Enterprise Participation

The Disadvantaged Business Enterprise (DBE) requirements of 49 CFR Part 26 and USDOT's official interpretations (i.e., Questions & Answers) apply to this Contract. Demonstrating compliance with these Specifications is a Condition of Award (COA) of this Contract. Failure to comply with the requirements of this Specification may result in your Bid being found to be nonresponsive resulting in rejection or other sanctions as provided by Contract.

DBE Abbreviations and Definitions

Broker – A business firm that provides a bona fide service, such as professional, technical, consultant or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, or supplies required for the performance of the Contract; or, persons/companies who arrange or expedite transactions.

Certified Business Description – Specific descriptions of work the DBE is certified to perform, as identified in the Certified Firm Directory, under the Vendor Information page.

Certified Firm Directory – A database of all Minority, Women, and Disadvantaged Business Enterprises currently certified by Washington State. The on-line Directory is available to Bidders for their use in identifying and soliciting interest from DBE firms. The database is located under the Firm Certification section of the Diversity Management and Compliance System web page at: https://omwbe.diversitycompliance.com.

Commercially Useful Function (CUF) – 49 CFR 26.55(c)(1) defines commercially useful function as: "*A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, you must evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.*"

Disadvantaged Business Enterprise (DBE) – A business firm certified by the Washington State Office of Minority and Women's Business Enterprises, as meeting the criteria outlined in 49 CFR 26 regarding DBE certification.

Force Account Work – Work measured and paid in accordance with Section 1-09.6.

Good Faith Efforts – Efforts to achieve the DBE COA Goal or other requirements of this part which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement.

Manufacturer (DBE) – A DBE firm that operates or maintains a factory or establishment that produces on the premises the materials, supplies, articles, or equipment required under the Contract. A DBE Manufacturer shall produce finished goods or products from raw or unfinished material or purchase and substantially alters goods and materials to make them suitable for construction use before reselling them.

Reasonable Fee (DBE) – For purposes of Brokers or service providers a reasonable fee shall not exceed 5% of the total cost of the goods or services brokered.

Regular Dealer (DBE) – A DBE firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of a Contract are bought, kept in stock, and regularly sold to the public in the usual course of business. To be a Regular Dealer, the DBE firm must be an established regular business that engages in as its principal business and in its own name the purchase and sale of the products in question. A Regular Dealer in such items as steel, cement, gravel, stone, and petroleum products need not own, operate or maintain a place of business if it both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by long-term formal lease agreements and not on an ad-hoc basis. Brokers, packagers, manufacturers' representatives, or other persons who arrange or expedite transactions shall not be regarded as Regular Dealers within the meaning of this definition.

DBE Commitment – The scope of work and dollar amount the Bidder indicates they will be subcontracting to be applied towards the DBE Condition of Award Goal as shown on the DBE Utilization Certification Form for each DBE Subcontractor. This DBE Commitment amount will be incorporated into the Contract and shall be considered a Contract requirement. The Contractor shall utilize the COA DBEs to perform the work and supply the materials for which they are committed. Any changes to the DBE Commitment require the Engineer's prior written approval.

DBE Condition of Award (COA) Goal – An assigned numerical amount specified as a percentage of the Contract. Initially, this is the minimum amount that the Bidder must commit to by submission of the Utilization Certification Form and/or by Good Faith Effort (GFE).

DBE COA Goal

The Contracting Agency has established a DBE COA Goal for this Contract in the amount of: *** 17% ***

Crediting DBE Participation

Subcontractors proposed as COA must be certified prior to the due date for bids on the Contract. All non-COA DBE Subcontractors shall be certified before the subcontract on which they are participating is executed.

DBE participation is only credited upon payment to the DBE.

The following are some definitions of what may be counted as DBE participation.

DBE Prime Contractor
Only take credit for that portion of the total dollar value of the Contract equal to the distinct, clearly defined portion of the Work that the DBE Prime Contractor performs with its own forces and is certified to perform.

DBE Subcontractor
Only take credit for that portion of the total dollar value of the subcontract that is equal to the distinct, clearly defined portion of the Work that the DBE performs with its own forces and is certified to perform. The value of work performed by the DBE includes the cost of supplies and materials purchased by the DBE and equipment leased by the DBE, for its work on the contract. Supplies, materials or equipment obtained by a DBE that are not utilized or incorporated in the contract work by the DBE will not be eligible for DBE credit.

The supplies, materials, and equipment purchased or leased from the Contractor or its affiliate, including any Contractor's resources available to DBE subcontractors at no cost, shall not be credited.

DBE credit will not be given in instances where the equipment lease includes the operator. The DBE is expected to operate the equipment used in the performance of its work under the contract with its own forces. Situations where equipment is leased and used by the DBE, but payment is deducted from the Contractor's payment to the DBE is not allowed.

When the subcontractor is part of a DBE Commitment, the following apply:

1. If a DBE subcontracts a portion of the Work of its contract to another firm, the value of the subcontracted Work may be counted toward the DBE COA Goal only if the Lower-Tier Subcontractor is also a DBE.

2. Work subcontracted to a Lower-Tier Subcontractor that is a DBE, may be counted toward the DBE COA Goal.

3. Work subcontracted to a non-DBE does not count towards the DBE COA Goal.

DBE Subcontract and Lower Tier Subcontract Documents
There must be a subcontract agreement that complies with 49 CFR Part 26 and fully describes the distinct elements of Work committed to be performed by the DBE.

DBE Service Provider
The value of fees or commissions charged by a DBE firm behaving in a manner of a Broker, or another service provider for providing a bona fide service, such as professional, technical, consultant, managerial services, or for providing bonds or insurance specifically required for the performance of the contract will only be credited as DBE participation, if the fee/commission is determined by the Contracting Agency to be reasonable and the firm has performed a CUF.

Force Account Work
When the Bidder elects to utilize force account Work to meet the DBE COA Goal, as demonstrated by listing this force account Work on the DBE Utilization

Certification Form, for the purposes of meeting the DBE COA Goal, only 50% of the Proposal amount shall be credited toward the Bidder's Commitment to meet the DBE COA Goal.

One hundred percent of the actual amounts paid to the DBE for the force account Work shall be credited towards the DBE COA Goal or DBE participation.

Temporary Traffic Control

If the DBE firm only provides "Flagging", the DBE firm must provide a Traffic Control Supervisor (TCS) and flagger, which are under the direct control of the DBE. The DBE firm shall also provide all flagging equipment for it's employees (e.g. paddles, hard hats, and vests).

If the DBE firm provides "Traffic Control Services", the DBE firm must provide a TCS, flaggers, and traffic control items (e.g., cones, barrels, signs, etc.) and be in total control of all items in implementing the traffic control for the project.

Trucking

DBE trucking firm participation may only be credited as DBE participation for the value of the hauling services, not for the materials being hauled unless the trucking firm is also certified as a supplier of those materials. In situations where the DBE's work is priced per ton, the value of the hauling service must be calculated separately from the value of the materials in order to determine DBE credit for hauling

The DBE trucking firm must own and operate at least one licensed, insured and operational truck on the contract. The truck must be of the type that is necessary to perform the hauling duties required under the contract. The DBE receives credit for the value of the transportation services it provides on the Contract using trucks it owns or leases, licenses, insures, and operates with drivers it employs.

The DBE may lease additional trucks from another DBE firm. The DBE who leases additional trucks from another DBE firm receives credit for the value of the transportation services the lessee DBE provides on the Contract.

The trucking Work subcontracted to any non-DBE trucking firm will not receive credit for Work done on the project.

The DBE may lease trucks from a truck leasing company (recognized truck rental center), but can only receive credit towards DBE participation if the DBE uses its own employees as drivers.

DBE Manufacturer and DBE Regular Dealer

One hundred percent (100%) of the cost of the manufactured product obtained from a DBE manufacturer may count towards the DBE COA Goal.

Sixty percent (60%) of the cost of materials or supplies purchased from a DBE Regular Dealer may be credited towards the DBE Goal. If the role of the DBE Regular Dealer is determined to be that of a Broker, then DBE credit shall be limited to the fee or commission it receives for its services. Regular Dealer status and the amount of credit is determined on a Contract-by-Contract basis.

DBE firms proposed to be used as a Regular Dealer must be approved before being listed as a COA/used on a project. The WSDOT Approved Regular Dealer list published on WSDOT's Office of Equal Opportunity (OEO) web site must include the specific project for which approval is being requested. For purposes of the DBE COA Goal participation, the Regular Dealer must submit the Regular Dealer Status Request form a minimum of five calendar days prior to bid opening.

Purchase of materials or supplies from a DBE which is neither a manufacturer nor a regular dealer, (i.e. Broker) only the fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on the job site, may count towards the DBE COA Goal provided the fees are not excessive as compared with fees customarily allowed for similar services. Documentation will be required to support the fee/commission charged by the DBE. The cost of the materials and supplies themselves cannot be counted toward the DBE COA Goal.

Note: Requests to be listed as a Regular Dealer will only be processed if the requesting firm is a material supplier certified by the Office of Minority and Women's Business Enterprises in a NAICS code that falls within the 42XXXX NAICS Wholesale code section.

Disadvantaged Business Enterprise Utilization

To be eligible for award of the Contract, the Bidder shall properly complete and submit a Disadvantaged Business Enterprise (DBE) Utilization Certification with the Bidder's sealed Bid Proposal, as specified in Section 1-02.9 Delivery of Proposal. The Bidder's DBE Utilization Certification must clearly demonstrate how the Bidder intends to meet the DBE COA Goal. A DBE Utilization Certification (WSDOT Form 272-056) is included in the Proposal package for this purpose as well as instructions on how to properly fill out the form.

The Bidder is advised that the items listed below when listed in the Utilization Certification must have their amounts reduced to the percentages shown and those reduced amounts will be the amount applied towards meeting the DBE COA Goal.

- Force account at 50%
- Regular dealer at 60%

In the event of arithmetic errors in completing the DBE Utilization Certification, the amount listed to be applied towards the DBE COA Goal for each DBE shall govern and the DBE total amount shall be adjusted accordingly.

Note: The Contracting Agency shall consider as non-responsive and shall reject any Bid Proposal submitted that does not contain a DBE Utilization Certification Form that accurately demonstrates how the Bidder intends to meet the DBE COA Goal.

Disadvantaged Business Enterprise Written Confirmation Document(s)

The Bidder shall submit an Disadvantaged Business Enterprise (DBE) Written Confirmation Document (completed and signed by the DBE) for each DBE firm listed

in the Bidder's completed DBE Utilization Certification submitted with the Bid. Failure to do so will result in the associated participation being disallowed, which may cause the Bid to be determined to be nonresponsive resulting in Bid rejection.

The Confirmation Documents provide confirmation from the DBEs that they are participating in the Contract as provided in the Bidder's Commitment. The Confirmation Documents must be consistent with the Utilization Certification.

A DBE Written Confirmation Document (WSDOT Form 422-031) is included in the Proposal package for this purpose.

The form(s) shall be received as specified in the special provisions for Section 1-02.9 Delivery of Proposal.

It is prohibited for the Bidder to require a DBE to submit a Written Confirmation Document with any part of the form left blank. Should the Contracting Agency determine that an incomplete Written Confirmation Document was signed by a DBE, the validity of the document comes into question. The associated DBE participation may not receive credit.

Selection of Successful Bidder/Good Faith Efforts (GFE)

The successful Bidder shall be selected on the basis of having submitted the lowest responsive Bid, which demonstrates a good faith effort to achieve the DBE COA Goal. The Contracting Agency, at any time during the selection process, may request a breakdown of the bid items and amounts that are counted towards the overall contract goal for any of the DBEs listed on the DBE Utilization Certification.

Achieving the DBE COA Goal may be accomplished in one of two ways:

1. By meeting the DBE COA Goal
   Submission of the DBE Utilization Certification, supporting DBE Written Confirmation Document(s) showing the Bidder has obtained enough DBE participation to meet or exceed the DBE COA Goal, the DBE Bid Item Breakdown and the DBE Trucking Credit Form, if applicable.

2. By documentation that the Bidder made adequate GFE to meet the DBE COA Goal
   The Bidder may demonstrate a GFE in whole or part through GFE documentation ONLY IN THE EVENT a Bidder's efforts to solicit sufficient DBE participation have been unsuccessful. The Bidder must supply GFE documentation in addition to the DBE Utilization Certification, supporting DBE Written Confirmation Document(s), the DBE Bid Item Breakdown form and the DBE Trucking Credit Form, if applicable.

Note: In the case where a Bidder is awarded the contract based on demonstrating adequate GFE, the advertised DBE COA Goal will not be reduced. The Bidder shall demonstrate a GFE during the life of the Contract to attain the advertised DBE COA Goal.

GFE documentation, the DBE Bid Item Breakdown form, and the DBE Trucking Credit Form, if applicable, shall be submitted as specified in Section 1-02.9.

The Contracting Agency will review the GFE documentation and will determine if the Bidder made an adequate good faith effort.

Good Faith Effort (GFE) Documentation
GFE is evaluated when:

1. Determining award of a Contract that has COA goal,

2. When a COA DBE is terminated and substitution is required, and

3. Prior to Physical Completion when determining whether the Contractor has satisfied its DBE commitments.

49 CFR Part 26, Appendix A is intended as general guidance and does not, in itself, demonstrate adequate good faith efforts. The following is a list of types of actions, which would be considered as part of the Bidder's GFE to achieve DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

1. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the Work of the Contract. The Bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The Bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

2. Selecting portions of the Work to be performed by DBEs in order to increase the likelihood that the DBE COA Goal will be achieved. This includes, where appropriate, breaking out contract Work items into economically feasible units to facilitate DBE participation, even when the Bidder might otherwise prefer to perform these Work items with its own forces.

3. Providing interested DBEs with adequate information about the Plans, Specifications, and requirements of the Contract in a timely manner to assist them in responding to a solicitation.

    a. Negotiating in good faith with interested DBEs. It is the Bidder's responsibility to make a portion of the Work available to DBE subcontractors and suppliers and to select those portions of the Work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the Plans and Specifications for the Work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the Work.

    b. A Bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as the DBE COA Goal into consideration. However, the fact that there

may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a Bidder's failure to meet the DBE COA Goal, as long as such costs are reasonable. Also, the ability or desire of a Bidder to perform the Work of a Contract with its own organization does not relieve the Bidder of the responsibility to make Good Faith Efforts. Bidders are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

4. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The Bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the Bidder's efforts to meet the DBE COA Goal.

5. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Bidder.

6. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

7. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

8. Documentation of GFE must include copies of each DBE and non-DBE subcontractor quotes submitted to the Bidder when a non-DBE subcontractor is selected over a DBE for Work on the Contract. (ref. updated DBE regulations – 26.53(b)(2)(vi) & App. A)

Administrative Reconsideration of GFE Documentation

A Bidder has the right to request reconsideration if the GFE documentation submitted with their Bid was determined to be inadequate.

- The Bidder must request within 48 hours of notification of being nonresponsive or forfeit the right to reconsideration.

- The reconsideration decision on the adequacy of the Bidder's GFE documentation shall be made by an official who did not take part in the original determination.

- Only original GFE documentation submitted as a supplement to the Bid shall be considered. The Bidder shall not introduce new documentation at the reconsideration hearing.

- The Bidder shall have the opportunity to meet in person with the official for the purpose of setting forth the Bidder's position as to why the GFE documentation demonstrates a sufficient effort.

- The reconsideration official shall provide the Bidder with a written decision on reconsideration within five working days of the hearing explaining the basis for their finding.

DBE Bid Item Breakdown

The Bidder shall submit a DBE Bid Item Breakdown Form (WSDOT Form 272-054) as specified in the Special Provisions for Section 1-02.9, Delivery of Proposal.

DBE Trucking Credit Form

The Bidder shall submit a DBE Trucking Credit Form (WSDOT Form 272-058), as specified in the Special Provisions for Section 1-02.9, Delivery of Proposal.

Note: The DBE Trucking Credit Form is only required for a DBE Firm listed on the DBE Utilization Certification as a subcontractor for "Trucking" or "Hauling" and are performing a part of a bid item. For example, if the item of Work is Structure Excavation including Haul, and another firm is doing the excavation and the DBE Trucking firm is doing the haul, the form is required. For a DBE subcontractor that is responsible for an entire item of work that may require some use of trucks, the form is not required.

Procedures between Award and Execution

After Award and prior to Execution, the Contractor shall provide the additional information described below. Failure to comply shall result in the forfeiture of the Bidder's Proposal bond or deposit.

1. A list of all firms who submitted a bid or quote in attempt to participate in this project whether they were successful or not. Include the business name and mailing address.

Note: The firms identified by the Contractor may be contacted by the Contracting Agency to solicit general information as follows: age of the firm and average of its gross annual receipts over the past three years.

Procedures after Execution

Commercially Useful Function (CUF)

The Contractor may only take credit for the payments made for Work performed by a DBE that is determined to be performing a CUF. Payment must be commensurate with the work actually performed by the DBE. This applies to all DBEs performing Work on a project, whether or not the DBEs are COA, if the Contractor wants to receive credit for their participation. The Engineer will conduct CUF reviews to ascertain whether DBEs are performing a CUF. A DBE performs a CUF when it is carrying out its responsibilities of its contract by actually performing, managing, and supervising the Work involved. The DBE must be responsible for negotiating price; determining quality and quantity; ordering the material, installing (where applicable); and paying for the material itself. If a DBE does not perform "all" of these functions on a furnish-and-install contract, it has not performed a CUF and the cost of materials cannot be counted toward DBE COA Goal. Leasing of equipment from a leasing company is allowed. However, leasing/purchasing equipment from the Contractor is not allowed. Lease agreements shall be provided prior to the Subcontractor

beginning Work. Any use of the Contractor's equipment by a DBE may not be credited as countable participation.

The DBE does not perform a CUF if its role is limited to that of an extra participant in a transaction, contract, or project through which the funds are passed in order to obtain the appearance of DBE participation.

In order for a DBE traffic control company to be considered to be performing a CUF, the DBE must be in control of its work inclusive of supervision. The DBE shall employ a Traffic Control Supervisor who is directly involved in the management and supervision of the traffic control employees and services.

The following are some of the factors that the Engineer will use in determining whether a DBE trucking company is performing a CUF:

- The DBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on the contract. The owner demonstrates business related knowledge, shows up on site and is determined to be actively running the business.

- The DBE itself shall own and operate at least one fully licensed, insured, and operational truck used on the Contract. The drivers of the trucks owned and leased by the DBE must be exclusively employed by the DBE and reflected on the DBE's payroll.

- Lease agreements for trucks shall indicate that the DBE has exclusive use of and control over the truck(s). This does not preclude the leased truck from working for others provided it is with the consent of the DBE and the lease provides the DBE absolute priority for use of the leased truck.

- Leased trucks shall display the name and identification number of the DBE.

UDBE/DBE/FSBE Truck Unit Listing Log

In addition to the subcontracting requirements of Section 1-08.1, each DBE trucking firm shall submit supplemental information consisting of a completed Primary UDBE/DBE/FSBE Truck Unit Listing Log (WSDOT Form 350-077), copy of vehicle registrations, and all Rental/Lease agreements (if applicable). The supplemental information shall be submitted to the Engineer prior to any trucking services being performed for DBE credit. Incomplete or incorrect supplemental information will be returned for correction. The corrected Primary UDBE/DBE/FSBE Truck Unit Listing Log and any Updated Primary UDBE/DBE/FSBE Truck Unit Listing Logs shall be submitted and accepted by the Engineer no later than ten calendar days of utilizing applicable trucks. Failure to submit or update the DBE Truck Unit Listing Log may result in trucks not being credited as DBE participation.

Each DBE trucking firm shall complete a Daily UDBE/DBE/FSBE Trucking Unit Listing Log for each day that the DBE performs trucking services for DBE credit. The Daily UDBE/DBE/FSBE Trucking Unit Listing Log forms shall be submitted to the Engineer by Friday of the week after the work was performed.

Joint Checking

A joint check is a check between a Subcontractor and the Contractor to the supplier of materials/supplies. The check is issued by the Contractor as payer to the Subcontractor and the material supplier jointly for items to be incorporated into the project. The DBE must release the check to the supplier, while the Contractor acts solely as the guarantor.

A joint check agreement must be approved by the Engineer and requested by the DBE involved using the DBE Joint Check Request Form (form # 272-053) prior to its use. The form must accompany the DBE Joint Check Agreement between the parties involved, including the conditions of the arrangement and expected use of the joint checks.

The approval to use joint checks and the use will be closely monitored by the Engineer. To receive DBE credit for performing a CUF with respect to obtaining materials and supplies, a DBE must "be responsible for negotiating price, determining quality and quantity, ordering the material, installing and paying for the material itself." The Contractor shall submit DBE Joint Check Request Form to the Engineer and be in receipt of written approval prior to using a joint check.

Material costs paid by the Contractor directly to the material supplier are not allowed. If proper procedures are not followed or the Engineer determines that the arrangement results in lack of independence for the DBE involved, no DBE credit will be given for the DBE's participation as it relates to the material cost.

Prompt Payment

Prompt payment to all subcontractors shall be in accordance with Section 1-08.1. Prompt payment requirements apply to progress payments as well as return of retainage.

Subcontracts

Prior to a DBE performing Work on the Contract, an executed subcontract between the DBE and the Contractor shall be submitted to the Engineer. The executed subcontracts shall be submitted by email to the following email address

*** NWRegionOEO@wsdot.wa.gov ***

The prime contractor shall notify the Engineer in writing within five calendar days of subcontract submittal.

Reporting

The Contractor and all subcontractors/suppliers/service providers that utilize DBEs to perform work on the project, shall maintain appropriate records that will enable the Engineer to verify DBE participation throughout the life of the project.

Refer to Section 1-08.1 for additional reporting requirements associated with this contract.

Changes in COA Work Committed to DBE

The Contractor shall utilize the COA DBEs to perform the work and supply the materials for which each is committed unless prior written approval by the Engineer is received by the Contractor. The Contractor shall not be entitled to any payment for work or material completed by the Contractor or subcontractors that was committed to be completed by the COA DBEs in the DBE Utilization Certification form.

Owner Initiated Changes

In instances where the Engineer makes changes that result in changes to Work that was committed to a COA DBE the Contractor may be directed to substitute for the Work.

Contractor Initiated Changes

The Contractor cannot change the scope or reduce the amount of work committed to a COA DBE without good cause. Reducing DBE Commitment is viewed as partial DBE termination, and therefore subject to the termination procedures below.

Original Quantity Underruns

In the event that Work committed to a DBE firm as part of the COA underruns the original planned quantities the Contractor may be required to substitute other remaining Work to another DBE.

Contractor Proposed DBE Substitutions

Requests to substitute a COA DBE must be for good cause (see DBE termination process below), and requires prior written approval of the Engineer. After receiving a termination with good cause approval, the Contractor may only replace a DBE with another certified DBE. When any changes between Contract Award and Execution result in a substitution of COA DBE, the substitute DBE shall have been certified prior to the bid opening on the Contract.

DBE Termination

Termination of a COA DBE (or an approved substitute DBE) is only allowed in whole or in part for good cause and with prior written approval of the Engineer. If the Contractor terminates a COA DBE without the prior written approval of the Engineer, the Contractor shall not be entitled to payment for work or material committed to, but not performed/supplied by the COA DBE. In addition, sanctions may apply as described elsewhere in this specification.

Prior to requesting approval to terminate a COA DBE, the Contractor shall give notice in writing to the DBE with a copy to the Engineer of its intent to request to terminate DBE Work and the reasons for doing so. The DBE shall have five (5) days to respond to the Contractor's notice. The DBE's response shall either support the termination or advise the Engineer and the Contractor of the reasons it objects to the termination of its subcontract.

If the request for termination is approved, the Contractor is required to substitute with another DBE to perform at least the same amount of work as the DBE that was terminated (or provide documentation of GFE). A plan to replace the COA DBE Commitment amount shall be submitted to the Engineer within 2 days of

the approval of termination. The plan to replace the Commitment shall provide the same detail as that required in the DBE Utilization Certification.

The Contractor must have good cause to terminate a COA DBE.

Good cause typically includes situations where the DBE Subcontractor is unable or unwilling to perform the work of its subcontract. Good cause may exist if:

- The DBE fails or refuses to execute a written contract.
- The DBE fails or refuses to perform the Work of its subcontract in a way consistent with normal industry standards.
- The DBE fails or refuses to meet the Contractor's reasonable nondiscriminatory bond requirements.
- The DBE becomes bankrupt, insolvent, or exhibits credit unworthiness.
- The DBE is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to federal law or applicable State law.
- The DBE is ineligible to receive DBE credit for the type of work involved.
- The DBE voluntarily withdraws from the project and provides written notice of its withdrawal.
- The DBE's work is deemed unsatisfactory by the Engineer and not in compliance with the Contract.
- The DBE's owner dies or becomes disabled with the result that the DBE is unable to complete its Work on the Contract.

Good cause does not exist if:

- The Contractor seeks to terminate a COA DBE so that the Contractor can self-perform the Work.
- The Contractor seeks to terminate a COA DBE so the Contractor can substitute another DBE contractor or non-DBE contractor after Contract Award.
- The failure or refusal of the COA DBE to perform its Work on the subcontract results from the bad faith or discriminatory action of the Contractor (e.g., the failure of the Contractor to make timely payments or the unnecessary placing of obstacles in the path of the DBE's Work).

Decertification

When a DBE is "decertified" from the DBE program during the course of the Contract, the participation of that DBE shall continue to count as DBE participation as long as the subcontract with the DBE was executed prior to the

decertification notice. The Contractor is obligated to substitute when a DBE does not have an executed subcontract agreement at the time of decertification.

Consequences of Non-Compliance

Breach of Contract

Each contract with a Contractor (and each subcontract the Contractor signs with a Subcontractor) must include the following assurance clause:

The Contractor, subrecipient, or Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

(1) Withholding monthly progress payments;

(2) Assessing sanctions;

(3) Liquidated damages; and/or

(4) Disqualifying the Contractor from future bidding as non-responsible.

Notice

If the Contractor or any Subcontractor, Consultant, Regular Dealer, or service provider is deemed to be in non-compliance, the Contractor will be informed in writing, by certified mail by the Engineer that sanctions will be imposed for failure to meet the DBE COA Commitment and/or submit documentation of good faith efforts. The notice will state the specific sanctions to be imposed which may include impacting a Contractor or other entity's ability to participate in future contracts.

Sanctions

If it is determined that the Contractor's failure to meet all or part of the DBE COA Commitment is due to the Contractor's inadequate good faith efforts throughout the life of the Contract, including failure to submit timely, required Good Faith Efforts information and documentation, the Contractor may be required to pay DBE penalty equal to the amount of the unmet Commitment, in addition to the sanctions outlined in Section 1-07.11(5).

Payment

Compensation for all costs involved with complying with the conditions of this Specification and any other associated DBE requirements is included in payment for the associated Contract items of Work, except otherwise provided in the Specifications.

1-07.12 Federal Agency Inspection

Section 1-07.12 is supplemented with the following:

(October 3, 2023)

Required Federal Aid Provisions

The Required Contract Provisions Federal Aid Construction Contracts (FHWA 1273) Revised October 23, 2023 and the amendments thereto supersede any conflicting provisions of the Standard Specifications and are made a part of this Contract; provided, however, that if any of the provisions of FHWA 1273, as amended, are less restrictive than Washington State Law, then the Washington State Law shall prevail.

The provisions of FHWA 1273, as amended, included in this Contract require that the Contractor insert the FHWA 1273 and amendments thereto in each subcontract, together with the wage rates which are part of the FHWA 1273, as amended. Also, a clause shall be included in each subcontract requiring the subcontractors to insert the FHWA 1273 and amendments thereto in any lower tier subcontracts, together with the wage rates. The Contractor shall also ensure that this section, REQUIRED FEDERAL AID PROVISIONS, is inserted in each subcontract for subcontractors and lower tier subcontractors. For this purpose, upon request to the Engineer, the Contractor will be provided with extra copies of the FHWA 1273, the amendments thereto, the applicable wage rates, and this Special Provision.

1-07.16 Protection and Restoration of Property

1-07.16(1) Public/Private Property

1-07.16(1)C Private Property

Section 1-07.16(1)C is supplemented with the following:

(*October 3, 2022*)

The Contractor is not to use adjoining property without first obtaining written permission from adjacent property owner(s), and notifying the Engineer, in writing, when such permission has been granted prior to occupying or using adjoining property.

1-07.16(4) Archaeological and Historical Objects

Section 1-07.16(4) is supplemented with the following:

(December 6, 2004)

The project area potentially contains archaeological or historical objects that may have significance from a historical or scientific standpoint. To protect these objects from damage or destruction, the Contracting Agency, at its discretion and expense, may monitor the Contractor's operations, conduct various site testing and perform recovery and removal of such objects when necessary.

The Contractor may be required to conduct its operations in a manner that will accommodate such activities, including the reserving of portions of the work area for site testing, exploratory operations and recovery and removal of such objects as directed by the Engineer. If such activities are performed by consultants retained by the Contracting Agency, the Contractor shall provide them adequate access to the project site.

Added work necessary to uncover, fence, dewater, or otherwise protect or assist in such testing, exploratory operations and salvaging of the objects as ordered by the Engineer shall be paid by force account as provided in Section 1-09.6. If the discovery and salvaging activities require the Engineer to suspend the Contractor's

work, any adjustment in time will be determined by the Engineer pursuant to Section 1-08.8.

To provide a common basis for all bidders, the Contracting Agency has entered an amount for the item "Archaeological and Historical Salvage" in the Proposal to become a part of the total bid by the Contractor.

1-07.17 Utilities and Similar Facilities

Section 1-07.17 is supplemented with the following:

(October 3, 2022)

Locations and dimensions shown in the Plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification.

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, relocation, replacement, or construction will be done during the prosecution of the work for this project. It is anticipated that utility adjustment, relocation, replacement, or construction within the project limits will be completed as follows:

***

Prior to the beginning of construction, Cascade Natural Gas will relocate their existing gas main as shown in the Plans. The approximate location of the new gas main after relocation is shown. The Contractor shall verify the gas main location prior to the beginning of any work.

***

The Contractor shall attend a mandatory utility preconstruction meeting with the Engineer, all affected subcontractors, and all utility owners and their Contractors prior to beginning onsite work.

The following addresses and telephone numbers of utility companies or their Contractors that will be adjusting, relocating, replacing or constructing utilities within the project limits are supplied for the Contractor's use:

***

Utility	***Agency/ Company***	***Address***	***Contact***	***Phone***
Water/ Sanitary Sewer/ Storm Sewer	City of Stanwood	10220 270th Street NW Stanwood, WA 98292	Kevin Hushagen	(360) 629-9782
Natural Gas	Cascade Natural Gas	1520 South 2nd Street Mt. Vernon, WA 98273	Addam Sad	(360) 336-3866

Telephone	Ziply	595 Pease Road Burlington, WA 98233	Wayne Wendell	(360) 757-3406
Power	Snohomish County PUD No. 1	9124 270th Street NW Stanwood, WA 98292	David Stunz	(360) 629-5713

In the event of a gas emergency, call 911.

The Contractor shall coordinate the Work with these utilities and shall notify the Engineer in advance of any conflicts affecting the Work schedule. The utility companies shall witness or perform all shutdowns, connections or disconnections.

Wherever in the course of the construction operation it becomes necessary to cause an outage of utilities, it shall be the Contractor's responsibility to notify the affected users not less than twenty-four (24) hours in advance of the creation of such outage. The Contractor shall make reasonable effort to minimize the duration of outages.

The Contractor shall be responsible for any breakage of utilities or services resulting from its operations and shall hold the Contracting Agency and its agents harmless from any claims resulting from disruption of, or damage to, same.

***

(******)

Potholing

Locations of possible conflicts at utility crossings can be seen on the Plans. Based on the actual location of utility markings, it may be necessary to uncover existing utilities and determine the exact locations.

After completing field marking of the existing utilities, the Contractor shall determine if an existing utility may be in conflict with the planned improvements. Should a conflict seem likely, the Contractor shall notify the Engineer. If the Engineer concurs that a conflict is likely, the Contractor will be directed to expose the location of the subject utility (pothole). When potholing is required by the Engineer, the Contractor shall expose the location of the existing utility and record the size of pipe and horizontal and vertical location on the Contractor's Record Drawings. Upon receipt of this information, the Engineer will determine if a conflict exists. The Engineer will notify the Contractor within seven full working days as to what design modifications, if any, are required to resolve the conflict.

Measurement

Potholing will be measured per each pothole required by the Engineer.

Payment

Payment shall be made for the following Bid item when included in the Proposal:

"Potholing", per each.

The unit Contract price for "Potholing" shall be full compensation for all labor, tools, equipment, and materials necessary to expose the locations of existing utilities, record size and vertical and horizontal locations, backfill, and compact excavated areas per City of Stanwood Standard Details. For the purpose of establishing a common basis for evaluating bids, an arbitrary quantity has been shown on the bid form and does not necessarily represent the quantity, if any, of "Potholing" that may be necessary for project

work. Therefore, the "significant change" provisions of Section 1-04.6 do not apply. Actual quantities will be determined in the field as work progresses.

1-07.18 Public Liability and Property Damage Insurance

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

1-07.18 Public Liability and Property Damage Insurance

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

1-07.18 Insurance

(January 4, 2024 APWA GSP)

1-07.18(1) General Requirements

A. The Contractor shall procure and maintain the insurance described in all subsections of section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of not less than A-: VII and licensed to do business in the State of Washington. The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer's financial condition.

B. The Contractor shall keep this insurance in force without interruption from the commencement of the Contractor's Work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated below.

C. If any insurance policy is written on a claims-made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy shall state that coverage is claims made and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Completion Date or earlier termination of this Contract, and the Contractor shall annually provide the Contracting Agency with proof of renewal. If renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period ("tail") or execute another form of guarantee acceptable to the Contracting Agency to assure financial responsibility for liability for services performed.

D. The Contractor's Automobile Liability, Commercial General Liability and Excess or Umbrella Liability insurance policies shall be primary and non-contributory insurance as respects the Contracting Agency's insurance, self-insurance, or self-insured pool coverage. Any insurance, self-insurance, or self-insured pool coverage maintained by the Contracting Agency shall be excess of the Contractor's insurance and shall not contribute with it.

E. The Contractor shall provide the Contracting Agency and all additional insureds with written notice of any policy cancellation, within two business days of their receipt of such notice.

F. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Contracting Agency

G. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days' notice to the Contractor to correct the breach, immediately

terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.

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

I. Under no circumstances shall a wrap up policy be obtained, for either initiating or maintaining coverage, to satisfy insurance requirements for any policy required under this Section. A "wrap up policy" is defined as an insurance agreement or arrangement under which all the parties working on a specified or designated project are insured under one policy for liability arising out of that specified or designated project.

1-07.18(2) Additional Insured

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

- the Contracting Agency and its officers, elected officials, employees, agents, and volunteers

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

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

1-07.18(3) Subcontractors

The Contractor shall cause each subcontractor of every tier to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by subcontractors.

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

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

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.

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

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

Such policy must provide the following minimum limits:

$2,000,000	Each Occurrence
$3,000,000	General Aggregate
$3,000,000	Products & Completed Operations Aggregate
$2,000,000	Personal & Advertising Injury each offence
$2,000,000	Stop Gap / Employers' Liability each accident

1-07.18(5)B Automobile Liability

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

Such policy must provide the following minimum limit:

$1,000,000 Combined single limit each accident

1-07.18(5)C Workers' Compensation

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

1-07.23 Public Convenience and Safety

(COS GSP)

Section 1-07.23 is supplemented with the following:

No road or street shall be closed to the public except as permitted in these plans and specifications or with the approval of the Engineer. Fire hydrants on or adjacent to the work shall be kept accessible to fire-fighting equipment at all times. Provision shall be made by the Contractor to ensure the proper functioning of all gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses, and storm sewer facilities throughout the project. Temporary interruption of service will be allowed only with the permission of the Engineer.

The Stanwood Police Department and North County Regional Fire Authority shall be notified at least four (4) hours in advance of any lane or roadway closures that may affect the functions of either the Police Department or Fire Department, including access to fire hydrants.

All work shall be carried on with due regard for the safety of the public. No driveway, whether public, commercial, or private, may be closed without prior approval of the Owner, project supervisor, or Engineer unless written authority has been given by the affected property owner. The Contractor shall be responsible for notifying the affected property owners 24 hours in advance of scheduled interruptions to access.

1-07.23(1) Construction Under Traffic

Section 1-07.23(1) is supplemented with the following:

(February 6, 2023)

Lane, ramp, shoulder, and roadway closures are subject to the following restrictions:

***

- Maintain two way traffic on 92nd Ave NW at all times
- Provide trucks access to loading docks at back of Petco and Grocery Outlet at all times.
- Vehicular business access must be provided at all times.
- Maintain access to Port Susan as detailed on Drawing No. TC1.
- Signs must be provided during lane closures to direct customers to alternate routes to businesses.

- All lane closures and traffic phasing must be included in the three-week look ahead schedule.

***

If the Engineer determines the permitted closure hours adversely affect traffic, the Engineer may adjust the hours accordingly. The Engineer will notify the Contractor in writing of any change in the closure hours. Exceptions to these restrictions are listed below and when applicable take precedence over closures listed above. The Engineer may also consider on a case-by-case basis additional exceptions following a written request by the Contractor.

Lane, ramp, shoulder, and roadway closures are not allowed on any of the following:

1. A holiday,

2. A holiday weekend; holidays that occur on Friday, Saturday, Sunday or Monday are considered a holiday weekend. A holiday weekend includes Saturday, Sunday, and the holiday.

3. After *** 3:00 p.m. *** on the day prior to a holiday or holiday weekend, and

4. Before *** 10:00 a.m. *** on the day after the holiday or holiday weekend.

5. The two-hour period prior to and the two-hour period after the following special events:

   *** N/A ***

   It shall be the Contractor's responsibility to obtain the dates and times of all events.

Traffic Delays

When Automated Flagger Assistance Devices (AFADs) or flaggers are used to control traffic, traffic shall not be stopped for more than *** 20 *** minutes at any time. All traffic congestion shall be allowed to clear before traffic is delayed again.

If the delay becomes greater than *** 10 *** minutes, the Contractor shall immediately begin to take action to cease the operations that are causing the delays. If the *** 10 *** minute delay limit has been exceeded, as determined by the Engineer, the Contractor shall provide to the Engineer, a written proposal to revise his work operations to meet the *** 10 *** minute limit. This proposal shall be accepted by the Engineer prior to resuming any work requiring traffic control.

There shall be no delay to medical, fire, or other emergency vehicles. The Contractor shall alert all flaggers and personnel of this requirement.

General Restrictions

Construction vehicles using a closed traffic lane shall travel only in the normal direction of traffic flow unless expressly allowed in an accepted traffic control plan. Construction vehicles shall be equipped with flashing or rotating amber lights.

No two consecutive on-ramps, off-ramps, or intersections shall be closed at the same time and only one ramp at an interchange shall be closed, unless specifically shown in the Plans.

Roads or ramps that are designated as part of a detour shall not be closed or restricted during the implementation of that detour, unless specifically shown in the Plans.

Controlled Access

No special access or egress shall be allowed by the Contractor other than normal legal movements or as shown in the Plans.

Contractor's vehicles of 10,000 GVW or greater shall not exit or enter a lane open to public traffic except as follows:

Egress and ingress shall only occur during the hours of allowable lane closures, and:

1. For exiting an open lane of traffic, by decelerating in a lane that is closed during the allowable hours for lane closures.

2. For entering an open lane of traffic, by accelerating in a closed lane during the allowable hours for lane closures.

Traffic control vehicles are excluded from the gross vehicle weight requirement. If placing construction signs will restrict traveled lanes, then the work will be permitted during the hours of allowable lane closures.

Advance Notification

The Contractor shall notify the Engineer in writing of any traffic impacts related to lane closure, shoulder closure, sidewalk closure, or any combination for the week by 12:00 p.m. (noon) Wednesday the week prior to the stated impacts.

The Contractor shall notify the Engineer in writing ten working days in advance of any traffic impacts related to full roadway closure, ramp closure, or both.

The Contractor shall notify the Engineer in writing of any changes to the stated traffic impacts a minimum of 48 hours prior to the traffic impacts.

(October 3, 2022)

If July 4 occurs on a Tuesday, the prior Monday and Friday are considered to be part of a holiday weekend. If July 4 occurs on a Thursday, the following Friday and Monday are considered to be part of a holiday weekend.

1-07.24 Rights of Way

(July 23, 2015 APWA GSP)

Delete this section and replace it with the following:

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

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

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

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

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

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

1-08 Prosecution and Progress

Add the following new section:

1-08.0 Preliminary Matters

(May 25, 2006 APWA GSP)

Add the following new section:

1-08.0(1) Preconstruction Conference

(October 10, 2008 APWA GSP)

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

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

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

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

Add the following new section:

1-08.0(2) Hours of Work
(December 8, 2014 APWA GSP)

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

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

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than five (5) business days prior to the day(s) the Contractor is requesting to change the hours.

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

1. On non-Federal aid projects, requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency representatives who worked during such times. (The Engineer may require designated representatives to be present during the work. Representatives 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

1-08.1 Subcontracting
(December 30, 2022 APWA GSP, Option A)

Section 1-08.1 is supplemented with the following:

Prior to any subcontractor or lower tier subcontractor beginning work, the Contractor shall submit to the Engineer a certification (WSDOT Form 420-004) that a written agreement between the Contractor and the subcontractor or between the subcontractor and any lower tier subcontractor has been executed. This certification shall also guarantee that these subcontract agreements include all the documents required by the Special Provision Federal Agency Inspection.

A subcontractor or lower tier subcontractor will not be permitted to perform any work under the contract until the following documents have been completed and submitted to the Engineer:

1. Request to Sublet Work (WSDOT Form 421-012), and

2. Contractor and Subcontractor or Lower Tier Subcontractor Certification for Federal-aid Projects (WSDOT Form 420-004).

The Contractor shall submit to the Engineer a completed Monthly Retainage Report (WSDOT Form 272-065) within 15 calendar days after receipt of every monthly progress payment until every subcontractor and lower tier subcontractor's retainage has been released.

The Contractor's records pertaining to the requirements of this Special Provision shall be open to inspection or audit by representatives of the Contracting Agency during the life of the contract and for a period of not less than three years after the date of acceptance of the contract. The Contractor shall retain these records for that period. The Contractor shall also guarantee that these records of all subcontractors and lower tier subcontractors shall be available and open to similar inspection or audit for the same time period.

Payments to Subcontractors and Lower-Tier Subcontractors

1-08.1(7)C Subcontractor Retainage
The first sentence in the last paragraph of Section 1-08.1(7)C is revised to read:

(February 13, 2024)

If the Contractor fails to comply with the requirements of this Section and the first-tier subcontractor's retainage or retainage bond is wrongfully withheld, the Contractor will be subject to the actions described in Section 1-08.1(10).

1-08.3 Progress Schedule

1-08.3(2) Progress Schedule Types

1-08.3(2)B Type B Progress Schedule

(January 4, 2024 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(2), 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 *** 5 *** copies of a Type B Progress Schedule depicting the entire project no later than 21-calendar days after the preconstruction conference.

Section 1-08.3(2)B is supplemented with the following:

(November 20, 2023)
In addition to information required in Items 1 through 13, the Progress Schedule shall include the following milestones and/or activities:

*** Stage 1 completion (beginning of preloading) ***

1-08.4 Prosecution of Work

Delete this section and replace it with the following:

1-08.4 Notice to Proceed and Prosecution of Work

Notice to Proceed will be given separately for each Stage of Work as detailed in the Plans.

Notice to Proceed will be given for Stage 1 of the project 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 detailed in Stage 1 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 for Stage 1. 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, unless otherwise approved by the Engineer.

Notice to Proceed for Stage 2 shall be given after analysis by the Engineer of settlement data indicates that sufficient settlement has occurred. It is anticipated that required duration of preloading will be approximately 9 months. No working days shall be charged in between stages.

When shown in the Plans, the first order of work for Stage 2 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

The third paragraph of Section 1-08.5 is revised to read:

(March 13, 1995)
This project shall be physically completed within *** 73 *** working days.

(December 30, 2022 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 all partial or whole days the Engineer declares as unworkable The statement will be identified as a Written Determination by the Engineer. If the Contractor does not agree with the Written Determination of working days, the Contractor shall pursue the protest procedures in accordance with Section 1-04.5. By failing to follow the procedures of Section 1-04.5, 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. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred back to the Contracting Agency in accordance with Section 8-01.3(16).
    g. Property owner releases per Section 1-07.24

1-08.6 Suspension of Work

Section 1-08.6 is supplemented with the following:

(February 6, 2023)

Contract time may be suspended for procurement of critical materials (Procurement Suspension). In order to receive a Procurement Suspension, the Contractor shall within 21 calendar days after execution by the Contracting Agency, place purchase orders for all materials deemed critical by the Contracting Agency for physical completion of the contract. The Contractor shall provide copies of purchase orders for the critical materials. Such purchase orders shall disclose the purchase order date and estimated delivery dates for such critical material.

The Contractor shall show procurement of the materials listed below as activities in the Progress Schedule. If the approved Progress Schedule indicates that the materials procurement are critical activities, and if the Contractor has provided documentation that purchase orders are placed for the critical materials within the prescribed 21 calendar days, then contract time will be suspended upon physical completion of all critical work except that work dependent upon the below listed critical materials:

***

All materials associated with the following Bid Items:

- Illumination System
- Type D Service Cabinet Modification

***

Charging of contract time will resume upon delivery of the critical materials to the Contractor or *** 120 *** calendar days after execution by the Contracting Agency, whichever occurs first.

1-08.9 Liquidated Damages

(March 3, 2021 APWA GSP, Option A)

Replace Section 1-08.9 with the following:

Time is of the essence of the Contract. Delays inconvenience the traveling public, obstruct traffic, interfere with and delay commerce, and increase risk to Highway users. Delays also cost tax payers undue sums of money, adding time needed for administration, engineering, inspection, and supervision.

Accordingly, the Contractor agrees:

1. To pay liquidated damages in the amount of *** $1,650.00 *** for each working day beyond the number of working days established for Physical Completion, and

2. To authorize the Engineer to deduct these liquidated damages from any money due or coming due to the Contractor.

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

Liquidated damages will not be assessed for any days for which an extension of time is granted. No deduction or payment of liquidated damages will, in any degree, release the Contractor from further obligations and liabilities to complete the entire Contract.

1-09 Measurement and Payment

1-09.2(1) General Requirements for Weighing Equipment

(January 4, 2024 APWA GSP, Option B)

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 422-027A, 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.

1-09.2(5) Measurement

(December 30, 2022 APWA GSP)

Revise the first paragraph to read:

Scale Verification Checks – At the Engineer's discretion, the Engineer may perform verification checks on the accuracy of each batch, hopper, or platform scale used in weighing contract items of Work.

1-09.6 Force Account

(December 30, 2022 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 the Engineer.

1-09.9 Payments

(December 30, 2022 APWA GSP)

Section 1-09.9 is revised to read:

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

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

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

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

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

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor's lump sum breakdown for that item, or absent such a breakdown, based on the Engineer's determination.

3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

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

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

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

Failure to perform obligations under the Contract by the Contractor may be decreed by the Contracting Agency to be adequate reason for withholding any payments until compliance is achieved.

Upon completion of all Work and after final inspection (Section 1-05.11), the amount due the Contractor under the Contract will be paid based upon the final estimate made by the Engineer and presentation of a Final Contract Voucher Certification to be signed by the Contractor. The Contractor's signature on such voucher shall be deemed a release of all claims of the Contractor unless a Certified Claim is filed in accordance with the requirements of Section 1-09.11 and is expressly excepted from the Contractor's certification on the Final Contract Voucher Certification. The date the Contracting Agency signs the Final Contract Voucher Certification constitutes the final acceptance date (Section 1-05.12).

If the Contractor fails, refuses, or is unable to sign and return the Final Contract Voucher Certification or any other documentation required for completion and final acceptance of the Contract, the Contracting Agency reserves the right to establish a Completion Date (for the purpose of meeting the requirements of RCW 60.28) and unilaterally accept the Contract. Unilateral final acceptance will occur only after the Contractor has been provided the opportunity, by written request from the Engineer, to voluntarily submit such documents. If voluntary compliance is not achieved, formal notification of the impending establishment of a Completion Date and unilateral final acceptance will be provided by email with delivery confirmation from the Contracting Agency to the Contractor, which will provide 30 calendar days for the Contractor to submit the necessary documents. The 30 calendar day period will begin on the date the email with delivery confirmation is received by the Contractor. The date the Contracting Agency unilaterally signs the Final Contract Voucher Certification shall constitute the Completion Date and the final acceptance date (Section 1-05.12). The reservation by the Contracting Agency to unilaterally accept the Contract will apply to Contracts that are Physically Completed in accordance with Section 1-08.5, or for Contracts that are terminated in accordance with Section 1-08.10. Unilateral final acceptance of the Contract by the Contracting Agency does not in any way relieve the Contractor of their responsibility to comply with all Federal, State, tribal, or local laws, ordinances, and regulations that affect the Work under the Contract.

Payment to the Contractor of partial estimates, final estimates, and retained percentages shall be subject to controlling laws.

1-09.9(1) Retainage

Section 1-09.9(1) content and title is deleted and replaced with the following:

(June 27, 2011)
Vacant

1-09.11 Disputes and Claims

1-09.11(3) Time Limitation and Jurisdiction

(December 30, 2022 APWA GSP)

Revise this section to read:

For the convenience of the parties to the Contract it is mutually agreed by the parties that all claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the Contract by the Contracting Agency; and it is further agreed that all such claims or causes of action shall be brought only in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction. The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to all such claims or causes of action. It is further mutually agreed by the parties that when claims or causes of action which the Contractor asserts against the Contracting Agency arising from the Contract are filed with the Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency to have timely access to all records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-09.13 Claims Resolution

1-09.13(3) Arbitration

1-09.13(3)A Arbitration General

(January 19, 2022 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 is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. 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.

1-09.13(4) Venue for Litigation

(December 30, 2022 APWA GSP)

Revise this section to read:

Litigation shall be brought in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. It is mutually agreed by the parties that when litigation occurs, the Contractor shall permit the Contracting Agency to have timely access to all records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-10 Temporary Traffic Control

1-10.2 Traffic Control Management

Section 1-10.2 is supplemented with the following

(November 2, 2022)
Work Zone Safety Contingency

Enhancements to improve the effectiveness of the accepted traffic control plans to increase the safety of the work zones shall be discussed on a weekly basis between the Contractor and the Contracting Agency. Enhancements shall be mutually agreed upon by the Contractor and Engineer prior to performing any Work to implement the enhancement.

Enhancements do not include the use of Uniformed Police Officers or WSP, address changes to the allowed work hour restrictions, or changes to the staging plans in the Contract (if applicable). If allowed by the Engineer, these items will be addressed in accordance with Section 1-04.4.

The Contractor shall be solely responsible for submitting any traffic control plan revision to implement the enhancement in accordance with Section 1-10.2(2).

1-10.2(1) General

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

(*October 3, 2022*)
The Traffic Control Supervisor shall be certified by one of the following:

The Northwest Laborers-Employers Training Trust
27055 Ohio Ave.
Kingston, WA 98346
(360) 297-3035
https://www.nwlett.edu

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

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

https://atssa.com/training

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

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

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

1-10.4 Measurement

1-10.4(3) Reinstating Unit Items With Lump Sum Traffic Control

Section 1-10.4(3) is supplemented with the following:

(November 2, 2022)

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

"Work Zone Safety Contingency", by force account.

***

"Pedestrian Traffic Control", per lump sum.
"Traffic Control Supervisor", per lump sum.
"Other Traffic Control Labor", per hour.

***

1-10.5 Payment

1-10.5(2) Item Bids with Lump Sum for Incidentals

Section 1-10.5(2) is supplemented with the following:

(November 2, 2022)

"Work Zone Safety Contingency", by force account.

All costs as authorized by the Engineer will be paid for by force account as specified in Section 1-09.6.

For purpose of providing a common proposal for all bidders, the Contracting Agency has entered an amount for the item "Work Zone Safety Contingency" in the Proposal to become a part of the Contractor's total bid.

The Engineer may choose to use existing bid items for the implementation of the agreed upon enhancement.

END OF DIVISION 1

Division 2
Earthwork

2-01 Clearing, Grubbing, and Roadside Cleanup

2-01.3(1) Clearing

Item number 5 of Section 2-01.3(1) is revised to read:

5. Trim all trees overhanging the proposed sidewalk to 8' above the finished sidewalk grade or as directed by the Engineer, neatly cutting all limbs close to the tree trunk.

2-01.3(1)A Root Protection

Section 2-01.3(1)A is added as follows:

Roots on living trees, shrubs, or hedges that are to be retained may be encountered during the work. Notify the Owner of the roots systems when discovered. Hand dig where machine excavation many irreparably damage the vegetation.

Where, in the Owner's opinion, hand digging is impractical, or root system must be cut, address roots encountered as follows:

Roots shall be severed by cutting down and away from the trunk. The purpose is to minimize movement and disturbance of the remaining root system between the trunk and point of cutting. The Owner shall determine whether, due to the additional root cutting, any additional pruning or mechanical bracing or cable is necessary. If deemed necessary, the pruning/bracing shall be done by the City prior to root cutting.

Within two hours of exposure, all roots ¼- inch in diameter and larger are to be addressed using a sharp knife, covered, and kept moist using water and burlap bags staked in place.

Roots are to be cut clean on a 45-degree angle leaving no split of torn exterior root surfacing.

Roots are to be continually maintained in moistened conditions and protected from the wind until they are fully covered by final backfill.

Vegetation undergoing top pruning and root severing shall be fed using standard horticulture practices.

The Engineer will determine if the work to avoid, cut, treat, or otherwise accommodate the existing vegetation is payable by Force Account. Force Account will only be considered for locations of impacted vegetation that are not noted on the plans.

2-01.4 Measurement

Section 2-01.4 is supplemented with the following:

No specific unit of measure will apply to the lump sum item for Root Protection.

2-01.5 Payment

Section 2-01.5 is supplemented with the following:

"Root Protection", per lump sum.

The unit Contract price per lump sum for "Root Protection" shall be full pay for all Work described in this section on all trees noted on the plans adjacent to the project work.

2-02 Removal of Structures and Obstructions

2-02.3 Construction Requirements

Section 2-02.3 is supplemented with the following:

(September 7, 2021)

Removal of Obstructions

The following miscellaneous Obstructions shall be removed and disposed of:

***

Stage 1 – Preloading

Station/Location	Item	Approximate Quantity
16+93 to 18+53 (LT & RT)	Chain Link Fence	339 LF
18+48 (LT)	Empty Underground Vault	1 EA

Stage 2 – Roadway Construction

Station/Location	Item	Approximate Quantity
18+61 (LT & RT)	Modular Block Wall	65 LF
103+67 to 105+17 (RT)	Chain Link Fence	150 LF
16+93 to 18+53 (LT & RT)	Chain Link Fence	160 LF
18+62 (LT & RT)	Chain Link Fence	70 LF
16+94 to 17+50 (RT)	Chain Link Fence	60 LF
103+47 to 103+67 (RT)	Double Chain Link Gate	1 EA

***

2-02.3(4) Sawcutting

Section 2-02.3(4) is added as follows:

The Contractor shall be responsible for ensuring that special precautions are undertaken so that no concrete or concrete by-products, or products and by-products used in the sawcut of asphalt or concrete, are discharged into any storm drain or surface water system.

In accordance with the Department of Ecology guidelines, wastewater from Portland cement concrete, masonry, and asphalt concrete cutting operations shall not be discharged to storm drainage systems or surface waters. Cutting operations increase the pH of wastewater, therefore, filtering prior to discharge is **NOT** acceptable.

To thoroughly clean sawcuts where necessary, the Contractor shall use high pressure water (high pressure water is considered greater than 1400 psi).

All wastewater shall be collected using a wet-dry vacuum or pumped into drums for disposal. Disposal of the waste liquid may be to soil or other porous surfaces away from storm drains and surface water, only if the Contractor collects and disposes of remaining sediment after water has filtered into soil or evaporated. Impervious surfaces contaminated with sediment and grit from cutting operations shall be cleaned by sweepers to prevent contaminants from entering the storm drainage system or surface waters when it rains.

2-02.4 Measurement

Section 2-02.4 is supplemented with the following:

Sawcutting existing pavement will be measured by the linear foot. Measurement will occur once, regardless of the number of passes required to sawcut to the depth required to accomplish the removal.

2-02.5 Payment

Section 2-02.5 is supplemented with the following:

"Sawcutting Existing Pavement", per linear foot.
The unit Contract price per linear foot for "Sawcutting Existing Pavement" shall be full pay for all labor, material, tools, and equipment necessary to satisfactorily complete the Work as defined in the Contract Plans and these Special Provisions. No measurement will be made for sawcutting when sawcutting is paid for as part of the unit price of other pay items or for additional cuts within the removal limits not shown in the Site Preparation Plans.

2-03 Roadway Excavation and Embankment

2-03.3 Construction Requirements

Section 2-03.3 is supplemented with the following:

Due to poor soil conditions, exposed soil must be kept to a minimum. Underground utility installation shall be followed by temporary pavement patch to provide a driving surface. Contractor or general public wheel loads shall not be applied to any exposed soil until geotextile, geogrid, and ballast are placed at a minimum.

2-03.3(14) Embankment Construction

2-02.3(14)C Compacting Earth Embankments

Section 2-02.3(14)C is supplement with the following:

The preload fill material from Stage 1 to be left in place as earth embankment for roadway subgrade shall be compacted to 95 percent of the maximum density as determined by the compaction control tests described in Section 2-03.3(14)D.

2-03.3(20) Fill Placement and Preload Construction

Section 2-03.3(20) is added as follows:

2-03.3(20)A General

Summary

This Section describes general requirements for fill placement and preload construction including: clearing, fill placement, compaction, grading, processing,

stockpiling, removal, disposal of unsuitable materials, aggregates, and settlement monitoring.

Preload material is to be provided, transported, and placed by the Contractor.

The Contractor shall stake the settlement plate locations prior to placing any material. These locations shall be staked by a licensed surveyor at the locations shown in the Plans or as directed by the Engineer. See Special Provision "Contractor Surveying – Preloading".

The Contractor will then monitor the elevations of the settlement plates as the fill material is placed and compacted. The elevations of the base plate of the settlement plate as determined from surveying the settlement plate stem will be used to establish the limits of both the Base Fill and the Preload Material.

Related Sections: The Work of the following Sections is related to the work of this Section. Other Sections, not referenced below, may also be related to the proper performance of this Work. It is the Contractor's responsibility to perform all Work required by the Contract documents:

1. Section 2-01 Clearing, Grubbing, and Roadside Cleanup of the Standard Specifications
2. Section 8-01 Erosion Control and Water Pollution Control of the Standard Specifications and these Special Provisions

Quality Assurance

Referenced Standards: This section incorporates by reference the latest revision of the following documents. It is part of this section as specified and modified. In case of conflict between the requirements of this section and that of the listed documents, the requirements of this section shall prevail:

1. ASTM C136-96a: Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
2. ASTM D75-97: Standard Practice for Sampling Aggregates.
3. ASTM D422-63 (1998): Standard Test Method for Particle-Size Analysis of Soils.
4. ASTM D698-00a: Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)).
5. ASTM D1557-00: Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3(2,700 kN-m/m3)).
6. ASTM D2167-94: Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
7. ASTM D2216-98: Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass.
8. ASTM D2434-68 (2000): Standard Test Method for Permeability of Granular Soils (Constant Head).
9. ASTM D2487-00: Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).
10. ASTM D2922-96e1: Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

11. ASTM D3017-96e1: Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
12. ASTM D4318-00: Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
13. ASTM D4718-87 (1994)e2: Standard Practice for Correction of Unit Weight and Water Content for Soil Containing Oversize Particle.
14. Washington Department of Transportation (WSDOT): Standard Specifications (for Road, Bridge and Municipal Construction) 2023, English Units, M 41-10.
15. ASTM C117-95: Standard Test Method for Materials Finer than 75-um (No.200) Sieve in Mineral Aggregates by Washing.

The Contractor shall make all tests necessary to locate acceptable sources of imported materials, as outlined in the Fill and Preload Material portion of this Section. All material samples shall be furnished by the Contractor at the Contractor's sole expense. Samples shall be representative and shall be clearly marked to show the source of the material and the intended use on the project. Sampling of the material source shall be completed by the Contractor in accordance with ASTM D 75. The Contractor shall notify the Engineer or representative at least 48 hours prior to sampling. The Engineer or representative may, at the Engineer's or representative's option, observe the sampling procedures. No imported materials shall be delivered to the site until the proposed source and the written results of the material tests have been reviewed by the Engineer or representative.

The Contractor shall at all times control the delivery of materials such that no excess or extra imported materials beyond those required for the project are delivered to the site. It is the Contractor's responsibility to determine and provide the quantities required to perform the work.

Submittals

The Contractor shall submit the following items for approval by the Engineer a minimum of 21 calendar days prior to commencing preloading Work:

1. Proposed source(s) and proposed method(s) of sampling source(s) for acceptance, including colored photographs of the proposed soils to be used.
2. Proposed soil processing, placement, compaction, and moisture control equipment.
3. Proposed installation locations of settlement monitoring plates.
4. Proposed work schedule.
5. Proposed method of protecting work, to include temporary erosion control measures.
6. Proposed excavation, stockpiling, re-grading, removal and staging plan describing handling and transport of on-site and off-site materials, including refuse haul.

The Contractor shall submit the following items for approval by the Engineer a minimum of 10 calendar days prior to commencing preloading Work:

1. Submit name of imported materials suppliers.
2. Submit quantity of imported material.

3. Submit certification the material conforms to the Specification requirements along with copies of the test results, including gradation curves, from a qualified commercial testing laboratory.

Sequencing and Scheduling

Work shall start and be completed between August 1 and September 15, or as approved by the Engineer.

The Contractor shall notify the Engineer a minimum of 72 hours prior to commencement of preloading earthwork.

Regulatory Requirements

The Contractor shall obtain and comply with the appropriate local, state, and federal permits and licenses required for transporting affected soil to the selected disposal site.

The Contractor is responsible for completing manifests, bills of lading, or similar documentation for all wastes transported from the site.

2-03.3(20)B Materials

General

The Engineer or representative, prior to use or delivery to the site, must approve all materials and material sources.

Excavated material that the Engineer or representative determines to be unsuitable shall be stockpiled by the Contractor in a manner and location acceptable to the Engineer or representative to be disposed of at a later date.

Fill and Preload Material

Fill to raise site grade and for preloading shall consist of granular material, either naturally occurring or processed, and shall be crushed surfacing base course in accordance with Section 9-03.9(3).

Wet Weather Handling and Placement of Fill

Wherever possible, the Contractor shall immediately place and compact fill materials delivered to the site. The Contractor shall cover and protect all stockpiles of on-site and imported soil from being exposed to rain. The Contractor is required to control the moisture content on all fill material such that it can be placed and compacted as specified herein.

Isolated or extended periods of wet weather may force the Contractor to suspend placement and compaction of fill. It will be the Contractor's responsibility to complete the specified Work in the specified schedule.

2-03.3(20)C Execution

General

Equipment utilized by the Contractor shall meet the following requirements:

1. All materials, equipment and tools used in the performance of this Work are subject to the approval of the Engineer or representative before Work is started.
2. Provide compaction equipment appropriate for the material types to obtain the densities specified.
3. Operate and maintain compaction equipment in accordance with the manufacturer's instructions and recommendations. If inadequate densities are obtained, the Contractor shall provide larger and/or different type equipment at no additional cost to the Owner.
4. Provide equipment for mixing and drying out material, such as blades, discs, or other approved equipment, as necessary

The Contractor shall verify the following conditions:

1. Verify all lines, limits, and grades prior to beginning construction activities.
2. Verify that the survey control system is installed and properly protected from construction operations prior to earthwork.
3. Verify that all settlement plates have been installed and their elevations documented prior to any fill placement.

Protection

All roads, grading, structures, utilities, fences, and other improvements not specifically designated to be cleared, removed, stripped or altered as a part of the preloading Work (Stage 1) shall be protected from damage throughout the construction and settlement periods. Any damage caused by the Contractor, its employees, agents, or any lower tiered subcontractors shall be immediately repaired to the original condition and to the satisfaction of the Engineer or representative at the Contractor's cost. Completed Work shall be protected from wetting, drying and freezing by providing temporary drainage features as necessary.

All settlement plates shall be protected from damage.

Existing Utilities:

1. Known existing utilities are indicated in the Plans. Hand excavate all excavations within 6 inches of areas where existing utilities are indicated, unless directed otherwise by the Engineer or representative.
2. Verify the actual locations of all existing utilities within the excavation area through the use of a qualified utility location services firm and by hand excavation.
3. Record the utility locations on the record drawings.
4. After the actual locations and routing of the existing utilities have been found to be accurately determined through this hand excavation, and after approval from the Engineer or representative, excavation may begin using machinery in a manner acceptable to the Engineer or representative.
5. After excavation by machinery has begun, the Contractor is fully responsible for all utilities.
6. Any existing utility indicated in the Plans that is damaged, shall be immediately repaired in a manner acceptable to the Engineer or representative and at no additional cost to the Owner.
7. If excavation or other work will be within ten feet of any existing electrical utility either above or below ground, Lockout/Tagout is required. Provide 24-

hour prior notice to the Engineer or representative of planned excavations of this type. Coordinate with the City and the applicable utility companies to arrange for and perform this Lockout/Tagout.

8. Notify the Engineer or representative immediately if any existing utilities, which were not indicated in the Plans, are encountered during excavation.
9. Obtain approval from the Engineer or representative before backfilling existing utilities. Utility warning tape shall be placed 12 inches above existing utilities as directed by the Engineer.
10. Damaged settlement plates shall be re-established at the sole expense of the Contractor.
11. Damage to roadways from truck traffic shall be repaired by the Contractor at no additional cost to the Owner.

2-03.3(20)D Preparation

The Contractor shall prepare the site in accordance with Sections 2-01 of the Standard Specifications. After clearing, no object shall extend more than 6 inches above subgrade.

2-03.3(20)E Placing and Spreading Fill Materials – General Requirements

The Contractor shall not place fill until preparation of the underlying surface has been completed in accordance with these Special Provisions and has been accepted by the Engineer or representative.

The Contractor shall place fill materials as follows:

1. Fill shall be placed in layers no thicker than eight (8) inches (loose lifts).
2. Each lift shall be compacted to 92 percent of its maximum dry density as determined by ASTM D 1557.

The Contractor shall stop fill placement temporarily during unsuitable weather conditions, or when specified compaction is not being achieved due to unsuitably high moisture content as directed by the Engineer or representative.

The Contractor shall place fill materials in continuous layers not exceeding the requirements for loose lifts described for fill material or fill application of this specification.

The Contractor shall employ a placement method that does not disturb or damage settlement plates or utilities.

The Contractor shall grade in a manner that shall promote positive site drainage and that shall direct drainage away from the Work and prevent ponding.

The Contractor shall uniformly grade areas to provide a finished surface that is smooth, compacted, and free of irregularities. Comply with compaction requirements and grade to cross sections, lines and elevations indicated in the Plans or as directed by the Engineer.

The Contractor shall protect newly graded surfaces from erosion per Section 8-01 of the Standard Specifications and these Special Provisions until the Engineer determines that settlements are substantially complete. This determination will be

based on settlement plate readings in accordance with Special Provision "Contractor Surveying – Preloading" in Section 1-05.4.

2-03.3(20)F Settlement Plate Installation, Protection, and Monitoring

The Contractor shall construct and install settlement plates in accordance with the details in the Plans and these Specifications and at the locations shown in the Plans or as approved by the Engineer. The Contractor shall remove portions of the settlement plate pipes when directed by the Engineer.

2-03.3(20)F1 Materials

Materials shall meet the requirements shown in the Plans and the following requirements:

Steel Pipe and Fittings

Steel pipes and pipe fittings shall be 3 inches in diameter, threaded, and be hot-dip galvanized inside and out and meet the requirements of ASTM A 53.

Steel Bases

Steel bases shall consist of 1/4 inch thick (minimum) steel plates measuring a minimum of 2 foot by 2 foot square. A 3-inch flange should be welded to the center of each steel base.

Bedding Sand

Bedding material for settlement plates shall be clean sand/gravel mixture free from organic matter or material used for sand blanket. Bedding material used, other than for sand blanket, shall be graded in accordance with ASTM C136 to a maximum size of 3/4 inch and a maximum of 3 percent passing the No. 200 sieve in accordance with ASTM C117 and conforming to the gradation in Table 1.

Table 1
Settlement Plate Bedding Material

US Standard Sieve Size	Percent Passing by Weight
¾ in. square	100
3/8 in. square	70-100
U.S. No. 4	55-100
U.S. No. 10	35-95
U.S. No. 20	20-80
U.S. No. 40	10-55
U.S. No. 100	0-10
U.S. No. 200	0-3

All percentages are by weight

2-03.3(20)F2 Settlement Plate Assembly

Each settlement plate shall be installed on level firm ground, or on a level bedding sand pad if needed for stability, as detailed in the Plans. The steel pipe shall be securely threaded into the flange, so all vertical movement of the base will create an equal vertical movement in the steel pipe. As each section of the steel pipe is added to the settlement plate, the added section shall be securely attached to the section(s) below it using steel couplers, threaded to match the pipe threads.

A steel cap, threaded to match the pipe threads, shall be threaded to the top of the upper most pipe section and remain in place at all times, other than when being surveyed, to avoid debris falling into the pipe.

The Contractor shall clearly mark each settlement plate location with red flagging and cones, as a minimum, so they can be easily seen and avoided by equipment operators.

2-03.3(20)F3 Extending Settlement Plates

Additional 5- to 7-foot long sections of pipe shall be added to the settlement plate raisers, per the Plans, as fill height comes within three (3) feet of the top of the existing settlement plate riser.

Care shall be taken to make sure that the settlement plate cap and additional red flagging is placed on the new section of pipe before it is added to the settlement plate riser.

Additional pipe sections shall be connected through the use of 3-inch threaded couplers.

Legible marks shall be made on the outside of the settlement plate pipe at one (1) foot increments from the base plate. Numeric distances shall be marked every five (5) feet.

2-03.3(20)F4 Settlement Plate Monitoring

Settlement plate monitoring shall be done in accordance with Special Provision "Contractor Surveying – Preloading" in Section 1-05.4.

2-03.3(20)F5 Protection and Restoration of Settlement Plates

The Contractor shall make every effort to protect all settlement plates. If a settlement plate is damaged by the Contractor, the settlement plates shall be repaired to the satisfaction of the Engineer by the end of the same day the damage occurred at the Contractor's expense. The Engineer may also require extending the preload settlement period as a result of the damages. Delays and costs associated with time extensions of the settlement period shall also be borne by the Contractor.

Repairs should be immediate. No placement of fill is allowed within twenty (20) feet of a damaged settlement plate until Contractor has made sufficient repairs as determined by the Engineer.

2-03.3(20)F6 Removal of Settlement Plates

The Contractor shall remove and abandon settlement plate assemblies encountered during removal of preload material. If it is determined that a settlement plate will be within four (4) feet or less from Subgrade elevation, the Contractor shall remove the settlement plate entirely. Settlement plates that are four (4) feet or more from Subgrade elevation may be abandoned. A settlement plate shall be abandoned by filling risers and any remaining hole completely with sand. Abandoned risers should be noted by the Contractor to avoid interference with other Work. If an abandoned settlement plate is encountered during other Work, the remaining plate elements shall be removed and disposed of at the

Contractor's expense.

2-03.3(20)G Site Monitoring and Maintenance

The Contractor shall provide weekly inspections and maintenance of the site during preloading. The Contractor's site monitoring and maintenance responsibilities are as follows:

1. Weekly inspections of the site will be immediately followed by necessary repairs to TESC measures/BMPs or fencing found to be damaged.
2. Inspection of TESC measures/BMPs, and repairs as necessary, are required after any storm with an intensity greater than 6 months for any duration.
3. Inspections and maintenance/repairs required for points of runoff discharge to City or any offsite owner shall be included on the same inspection and maintenance schedule.
4. Inspections and maintenance shall occur indefinitely until the site preloading is complete or unless otherwise directed by the Engineer.
5. An inspections checklist shall be submitted to the Engineer for approval upon Notice to Proceed for Stage 1. The inspections checklist shall be filled out for each inspection and submitted to the Engineer.

2-03.3(20)H Quality Control

The Contractor is responsible for layout and surveying, and achieving the required fill grades.

The Contractor's confirmation testing responsibilities are as follows:

1. Accomplish specified compaction.
2. Control operations by confirmation tests to verify that compaction work complies, and is complying at all times, with requirements specified in this Section concerning compaction, control, and testing.
3. Cost of confirmation tests: Paid for by the Contractor.
4. Qualifications of Contractor's testing laboratory: Perform confirmation testing by soils testing laboratory acceptable to the Engineer.
5. Verbally inform the Engineer of all field test results within 1 hour after completion of the test.
6. Copies of confirmation test reports: Submit to the Engineer at the same time they are issued to the Engineer.
7. In-place density tests shall be performed no less than twice per lift.

The Contractor's compliance testing responsibilities are as follows:

1. Periodic compliance tests will be made by the Engineer to verify that compaction is meeting requirements previously specified.
2. Remove overburden above level at which the Engineer wishes to test. Backfill and recompact excavation after testing is completed.
3. If compaction fails to meet specified requirements, perform remedial work by one of the following methods:
    a. Remove and replace materials at proper density.
    b. Bring density up to specified level by other means acceptable to the Engineer.

The Contractor's retesting responsibilities are as follows:

1. The Contractor bears the costs of retesting required to confirm and verify that remedial work has brought compaction within specified requirements.
2. The Contractor's confirmation tests during performance of remedial work: Double the normal rate specified.

2-03.3(20)I Roadway Excavation Including Haul – Preload Material

Upon completion of the preload settlement period (Stage 1), preload crushed surfacing material above Subgrade elevation shall be removed and stockpiled on-site. Preload crushed surfacing material removed from the preload area and not reused on-site, shall be disposed of off-site at Contractor expense.

The Contractor shall be aware of settlement plates installed within the preload material. During the excavation of the preload material, the Contractor shall remove settlement plates in accordance with Section 2-03.3(20)F6 of these Special Provisions.

2-03.4 Measurement

Section 2-03.4 is supplemented with the following:

There will be two determinations of the original ground elevation for this contract. The first determination of the original ground elevation will be made prior to preloading as shown in the Contract Plans for Stage 1. Measurement for earthwork quantities for Stage 1 will be based on the original ground elevations recorded prior to the award of this Contract.

If discrepancies are discovered in the ground elevations which will materially affect the quantities of earthwork, the original computations of earthwork quantities will be adjusted accordingly.

Earthwork quantities will be computed, either manually or by means of electronic data processing equipment, by use of the average end area method or by the finite element analysis method utilizing digital terrain modeling techniques.

Copies of the ground cross-section notes will be available for the bidder's inspection, before the opening of bids, upon request at the Contracting Agency's office.

Upon award of this Contract, copies of the original ground cross-sections will be furnished to the successful bidder on request to the Engineer.

A new determination of the ground will be made by the Contractor per Special Provision "Contractor Surveying – Preloading" after the Engineer determines that settlements are substantially complete. The survey data will be provided to the Engineer and the original computations of earthwork quantities (roadway excavation including haul – preload material and embankment compaction) for Stage 2 will be adjusted accordingly.

Roadway excavation including haul – preload material will be measure by the cubic yard and will include excavating and stockpiling on-site. No additional measurements following the new determination of the ground after substantial completion of the preloading will be taken regardless of the number of times the Contractor is required to stockpile, re-excavate, move, and regrade any excavated materials for reuse in the Project limits or for disposal.

Settlement Plates will be measured per each, as determined by count of the actual number of plates installed. No measurement will be made for Work to abandon or salvage existing settlement plates.

2-03.5 Payment

Section 2-03.5 is supplemented with the following:

The unit Contract price per cubic yard for "Roadway Excavation Incl. Haul" shall be full compensation for all costs incurred for excavating, loading, hauling, and otherwise disposing of the material outside the preloading area shown in the Plans.

"Roadway Excavation Incl. Haul – Preload Material", per cubic yard.
The unit Contract price per cubic yard for "Roadway Excavation Incl. Haul – Preload Material" shall be full compensation for all costs incurred for excavating, loading, hauling, grading, stockpiling, or otherwise disposing of the Stage 1 preload material. Abandonment or removal and disposal of settlement plates and associated materials in preloading crushed surfacing material will be considered as included in the unit Contract price for "Roadway Excavation Incl. Haul – Preload Material" and no separate payment will be made.

"Settlement Plate", per each.
The unit Contract price per each for "Settlement Plate" shall be full pay for all Work to complete the installation of the settlement plate including but not limited to furnishing and placing the bedding sand, steel base plate, steel pipe, pipe couplings, and pipe cap.

Monitoring preload settlement will be considered as paid for in the lump sum Contract price for "Preload Surveying". Safe access to the top of preload embankment during survey monitoring shall be the responsibility of the Contractor and no separate payment will be made.

The paragraph following ""Embankment Compaction", per cubic yard." is replaced with the following:

The unit Contract price per cubic yard for "Embankment Compaction" shall be full compensation for all costs incurred for recompacting preload material and placing and compacting preload material used outside of the preload area and labor, tools, equipment, and incidentals required.

2-08 Vacant

Section 2-08, including title, is replaced with the following:

2-08 Dewatering

2-08.1 Description

This Section specifies the definition, responsibilities, and execution for control of ground water. Control of ground water shall consist of the design, furnishing, installation, operation, maintenance and removal of a ground water control system to achieve proper completion of all Work performed under this Contract.

Site soil and ground water conditions are presented in reports available for review as an appendix to these Special Provisions. The use of the available data and information in no way relieves the Contractor from the sole responsibility for proper installation, operation,

maintenance, and any failure of any component of the dewatering systems for the duration of this Contract.

2-08.2 Vacant

2-08.3 Construction Requirements

2-08.3(1) General

The Contractor shall be fully responsible for acquainting itself with the soils reports that are available for review, existing site conditions, and all regulatory requirements prior to commencing with ground water control activities.

The Contractor shall provide, operate, maintain, and decommission ground water control systems as needed for all excavations deeper than the ground water table. The ground water control system shall be adequate to keep excavations sufficiently free of water to prevent destabilization of soils and to allow for placement of backfill materials after soil cleanup in dry conditions. The ground water control system will maintain the ground water in a hydrostatically-controlled condition during excavation and shall dewater and dispose of the water so as not to cause injury to public or private property, or to cause a nuisance or a menace to the public.

The Contractor shall control ground water so as to prevent softening of the bottom of excavations, or formation of "quick" conditions or "boils" during excavation. The Contractor shall design, install, maintain and operate dewatering systems so as to prevent removal of the natural soils. In addition, the Contractor shall minimize ground water level drawdowns to avoid adverse impacts to adjacent Structures.

The Contractor shall employ materials, equipment, and construction methods commonly used and proven as suitable for operation of construction dewatering systems. The Contractor shall provide submittals and/or product data that demonstrate the suitability of the materials and equipment proposed for use on these systems. The Contractor shall test the dewatering system to the reasonable satisfaction of the Engineer and make operational any deficiency prior to acceptance and payment.

If utilized, dewatering well or well point construction and abandonment shall be in accordance with WAC 173-160. The Contractor shall obtain variances as required to construct dewatering systems that achieve the level of ground water control specified.

The Contractor shall notify the Engineer seven (7) days prior to installation of any dewatering wells or well points. The Contractor shall provide the Engineer with a well log and formation samples at 5-foot intervals for each of the wells.

Dewatering wells, well points, or sump pumps shall be operated continuously for as long as they are needed in a given area. Turning off wells or pumps at night and turning them back on the next day will not be allowed in order to prevent rapid drawdown conditions in the soils causing caving and sloughing of excavation slopes. Additionally, the pumping rate shall be set low enough to minimize the silt mobilization during dewatering.

The Contractor shall provide backup systems for all ordinary emergencies, including power outage and flooding, and shall have available at all times competent workers for the continuous and successful operation of the ground water control system. The Contractor shall not disable or shut down this system between shifts, on holidays, or

weekends, or during Work stoppages, without written permission from the Engineer. The Contractor shall be responsible for maintaining all electric power service connections to the dewatering system components; the Contractor shall be responsible for the cost of electric power used in the operation of the dewatering system.

During excavation, the Contractor shall also control surface runoff so as to prevent entry or collection of water in excavations or in other isolated areas of the site.

Before the commencement of any dewatering, the Contractor shall obtain acceptance by the Engineer of any proposed ground water control system(s).

2-08.3(2) Submittals

Within two (2) weeks of the Notice to Proceed and prior to beginning Work, the Contractor shall submit a detailed Dewatering Plan of its proposed ground water control system.

The Contractor's Dewatering Plan shall be submitted to the Engineer for review, and shall include complete design data showing methods and equipment the Contractor proposes to utilize in installation and construction of the ground water control systems. The Dewatering Plan shall include, at a minimum, placement of sumps, wells, or well points, and plans for dealing with the effluent such as settlement tanks or other best management practices.

Acceptance by the Engineer of the method, installation, and operation and maintenance submitted by the Contractor shall not in any way relieve the Contractor from responsibility for errors therein or from the entire responsibility for complete and adequate operation, materials, installation, and maintenance of the ground water control system. The Contractor shall bear sole responsibility for proper design, installation, operation, maintenance, and any failure of any component of the ground water control system for the duration of this Contract.

2-08.3(3) Treatment and Discharge of Water

The Contractor shall treat and discharge all dewatering effluent as specified herein.

The Contractor shall provide in-line, totalizing flow meters on the discharge pipe for each discharge point or diversion of discharge. The flow meters will read in gallons per minute for the range of flows pumped, and the Contractor shall provide evidence that the flow meters are calibrated and installed to the manufacturer's Specifications.

The Contractor shall extend discharge piping to discharge point(s) approved by the Engineer and consistent with requirements of the discharge permits.

The quality of the ground water discharged from the dewatering system shall not be allowed to degrade the water quality of any surface waters. The Contractor shall provide a water treatment system to meet storm or sanitary sewer Discharge Permit criteria for contaminants, turbidity and suspended solids.

2-08.3(4) Operation of Dewatering System

The Contractor shall design, construct, operate, and maintain any ground water control system such that foundation soils, natural or engineered, will not experience fines removal upon pumping.

The Contractor shall bear full responsibility for all damages to Work in the excavation area and for damages to any other area caused by the Contractor's failure to maintain and operate the system properly.

The Contractor shall use electrical generators or obtain electrical service from the utility company and shall pay application fees. The Contractor shall pay for power usage fees throughout the Contract period. The Contractor shall use this electric service solely to power the ground water control system, separate from all other power needs.

The Contractor shall provide all of the equipment and fittings for monitoring sand content and properly mount them near the system discharge point(s). The Contractor shall monitor discharge from all parts of the system to ensure that the sand content of the discharge water does not exceed ten (10) milligrams per liter (ppm) as determined by a centrifugal, separating meter such that as that described in the Journal AWWA, 46:123 (February 1954) (Rossum Sand Tester) or equivalent. The Contractor shall take sand content measurements daily in the presence of the Engineer until ten (10) days after the last well has been installed and weekly thereafter.

2-08.3(5) System Removal

Upon written authorization of the Engineer, the Contractor shall remove from the site all ground water control system elements. The Contractor shall assume ownership and responsibility for the disposal of all dewatering pumps, pipes and other assorted system hardware. The Contractor shall be or shall employ the services of a Washington-licensed water well Contractor for any well abandonment.

2-08.4 Measurement

No specific unit of measurement will apply to the lump sum item of "Dewatering".

2-08.5 Payment

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

"Dewatering", lump sum.

The lump sum Contract price for "Dewatering" shall be full compensation for all Work to dewater excavations, including the design and submittal of a Dewatering Plan; furnishing, installing, operation, maintenance, and removal of a dewatering system to control ground water as specified; and all Work to handle, store, test, settle or filter, treat and discharge collected ground water from dewatering operations for solids or turbidity to meet storm or sanitary sewer Discharge Permit criteria. No additional payment will be made for treatment permits or delays encountered for controlling and/or discharging ground water.

2-09 Structure Excavation

2-09.2 Materials

Section 2-09.2 is supplemented with the following:

Permeable Ballast	9-03.9(2)

2-09.3 Construction Requirements

2-09.3(1) General Requirements

2-09.3(1)E Backfilling

Section 2-03(1)E is supplemented with the following:

It is anticipated that native material will not be suitable for use as backfill and bedding material. Stockpiled crushed surfacing base course used as preload fill material in Stage 1 shall be used as the backfill and bedding material for storm sewer, modular wetlands, manholes, and catch basins. Permeable ballast shall be used as the pipe zone foundation and drainage structure foundation material as detailed in the Plans.

Stockpiled crushed surfacing base course used as preload fill material in Stage 1 shall also be used as backfill material for the voids left from removing drainage pipes and structures.

Areas where unsuitable materials have been encountered and removed shall be backfilled with permeable ballast conforming to the Standard Specification 9-03.9(2).

2-09.3(4) Construction Requirements, Structure Excavation, Class B

Section 2-09.3(4) is supplement with the following:

When a bucket is used for trench excavation, it shall be performed with a toothless bucket or as directed by the Engineer.

2-09.5 Payment

Section 2-09.5 is supplemented with the following:

All costs associated with placing, grading, and compacting stockpiled crushed surfacing base course as backfill and bedding material in the pipe zone and drainage structure foundation pads shall be considered incidental to and included in the unit Contract price for the various storm sewer utility items included in the Contract.

All costs associated with furnishing and installing permeable ballast material within the pipe zone foundation and drainage structure foundation, including compaction, will be made under the applicable item shown in the Proposal.

The unit Contract price per cubic yard for "Structure Excavation Class B" shall include plugging existing pipe(s), regardless of the size or type, encountered during excavation activities in accordance with Section 7-08.3(4) of the Standard Specifications.

2-10 Vacant

Section 2-10, including title, is replaced with the following:

2-10 Geogrid Reinforcement of Subgrade

2-10.1 Description

This section describes the geogrid reinforcement of roadway and utility subgrade and similar installations. Design details for geogrid reinforcement, such as geogrid type and placement, shall be as shown in the Plans. Work consists of:

1. Providing supplier representative for pre-construction conference with the Contractor and the Engineer.
2. Furnishing geogrids as specified herein and shown in the Plans.

3. Storing, cutting, and placing geogrids in accordance with these Specifications and in reasonably close conformity with the lines, grades, and dimensions shown in the Plans or as established by the Engineer.

The Contractor shall also adhere to the following Sections as they apply to the specific Work:

1. Section 2-01 Clearing, Grubbing, and Roadside Cleanup
2. Section 2-06 Subgrade Preparation
3. Section 4-04 Ballast and Crushed Surfacing

2-10.1(1) References

American Association of State Highway and Transportation Officials (AASHTO)

1. AASHTO Recommended Practice for Geosynthetic Reinforcement of the Aggregate Base Course of Flexible Pavement Structures, AASHTO PP46-01, April 2001 Interim Edition of the AASHTO Provisional Standards.
2. Standard Specification for Highway Bridges (1997 Interim)
3. AASHTO Guide for Design of Pavement Structures (1993)

American Society for Testing and Materials (ASTM)

1. D1388-96 – Standard Test Method for Stiffness of Fabrics, Option A, "Heart Loop"

Geosynthetic Research Institute (GRI)

1. GRI-GG2-87 – Standard Test Method for Geogrid Junction Strength
2. GRI-GG1-87- Standard Test Method for Geogrid Rib Tensile Strength

International Standards Organization (ISO)

1. ISO 10319:1996 Wide width Tensile Tests, Radial stiffness determined from tensile stiffness measured in any in-plane axis
2. ISO 13434:1999 Guidelines for the Assessment of Durability of Geosynthetics
3. ISO 12960 Resistance to loss of load capacity when subjected to chemically aggressive environments as part of a durability assessment in accordance with ISO 13434:1999 7.3

European Standards (EN)

1. EN 12224 Weathering Resistance-Resistance to loss of load capacity when subjected to ultra-violet light and weathering assessment in accordance with ISO 13434:1999 7.2

U.S. Army Corps of Engineers (USACE)

1. Draft Specification for Grid Aperture Stability by In-Plane Rotation
2. CW-02215 Determination of Percent Open Area.

American Society of Civil Engineers (ASCE)

1. Giroud, J.P., and Han, J. (2004). "Design method for geogrid-reinforced unpaved roads. Part I – Development of design method." Journal of Geotechnical and Geoenvironmental Engineering, 130 (8), 775-786.
2. Giroud, J.P., and Han, J. (2004). "Design method for geogrid-reinforced unpaved roads. Part II – Calibration and applications." Journal of Geotechnical and Geoenvironmental Engineering, 130 (8), 787-797.

2-10.1(2) Definitions

Geogrid – A polymeric grid formed by a regular network of integrally connected, multi-directional tensile elements of appropriate orientation, size and shape with triangular apertures of appropriate size and shape to allow interlocking with surrounding soil, rock, or earth to function primarily as reinforcement.

Radial Stiffness – determined from tensile stiffness measured in any in-plane axis from testing in accordance with the scope of ISO 10319:1996.

Junction Strength – Breaking tensile strength of junctions when tested in accordance with GRI-GG2 as modified by AASHTO Standard Specification for Highway Bridges, 1997 Interim, using a single rib having the greater of 3 junctions or 8 inches and tested at a strain rate of 10 percent per minute based on this gauge length.

Aperture Stability Modulus (also known as **Torsional Rigidity** or **Torsional Stiffness**) – Resistance to in-plane rotational movement measured by applying a 5 kg-cm (2.0 m-N) moment to the central junction of a 9-inch by 9-inch specimen restrained at its perimeter.

2-10.2 Materials

Structure Soil Reinforcement Geogrid – The geogrid shall consist of a multi axial geogrid that is integrally formed and deployed as a single layer having the following characteristics:

Index Properties	Longitudinal	Diagonal	Transverse	General
Rib pitch, mm (in)	40 (1.60)	40 (1.60)	-	
Mid-rib depth, mm (in)	-	2.0 (0.08)	1.6 (0.06)	
Mid-rib width, mm (in)	-	1.0 (0.04)	1.3 (0.05)	
Nodal thickness, mm (in)				3.1 (0.12)
Rib shape				rectangular
Aperture shape				triangular
Rib Aspect Ratio (height: width)				> 1.0
Structural Integrity				
Junction efficiency,[1] %				93
Aperture stability,[2] kg-cm/deg @ 5.0kg-cm				3.6
Radial stiffness at low strain,[3] kN/m @ 0.5% strain				300
Radial stiffness at low strain,[3] (lb/ft @ 0.5% strain)				20,580
Durability				
Resistance to chemical degradation[4]				100%
Resistance to ultra-violet light and weathering[5]				100%

Notes:

1. Load transfer capability determined in accordance with GRI-GG2-87 and GRI-GG1-87 and expressed as a percentage of ultimate tensile strength.
2. In-plane torsional rigidity measured by applying a moment to the central junction of a 225mm x 225mm specimen restrained at its perimeter in accordance with U.S. Army Corps of Engineers Methodology for Measurement of Torsional Rigidity, (Kinney, T.C. Aperture stability Modulus ref 3, 3-1-2000).
3. Radial stiffness is determined from tensile stiffness measured in any in-plane axis from testing in accordance with the scope of ISO 10319:1996.
4. Resistance to loss of load capacity when subjected to chemically aggressive environments in accordance with testing to ISO12960 as part of a durability assessment in accordance with ISO13434:1999 7.3
5. Resistance to loss of load capacity when subjected to ultra-violet light and weathering in accordance with testing to EN12224 as part of a durability assessment in accordance with ISO13434:1999 7.2
6. All dimensions and values are typical unless otherwise stated.

Alternate Structural Soil Reinforcement Materials – Alternate structural soil reinforcement materials will be considered if submitted at least 15 days prior to bid letting in accordance with the following conditions:

1. Geotextile materials shall not be considered as an alternate to geogrid materials for subgrade improvement or base/subbase reinforcement applications. A geotextile may be used in the cross-section to provide separation, filtration or drainage; however, no structural contribution shall be attributed to the geotextile.
2. Alternate geogrid materials shall not be used unless submitted to and pre-approved in writing by the Engineer. Consideration of alternate geogrid products will not be evaluated based solely upon index and strength properties outlined in this specification. In the event that material index properties of an alternate product do not satisfy the requirements set forward in this specification, then a separate design incorporating the alternate geogrid product must be submitted for approval by the Engineer. Submittal packages for alternate geogrid materials must be in the form of an engineered design certified by a licensed professional engineer. Submittal must include, but not limited to, the following items:
    a. Design pavement/unpaved surface typical section including the alternate geogrid product.
    b. Letter summary of the alternate design describing the basis for design sealed by a licensed professional engineer.
    c. Research documentation of relevant and comparable full-scale evidence which quantifies the performance of the alternate geogrid material with repetitive loading applied by a passing wheel load of at least 4,500 pounds per single wheel or 9,000 pounds per dual wheel.
    d. A list of 5 comparable projects that are similar in terms of size and application, are located in the United States, and where the results of using the specific alternate geogrid material can be verified after a minimum of 1 year of service life.
    e. A sample (meeting the requirements of sub-part 1.05A of this Section) of the alternate geogrid material and certified specification sheets.
    f. Recommended installation instructions.
    g. Additional information as requested by the Engineer to fully evaluate the product.

2-10.3 Construction Requirements

2-10.3(1) Submittals

The Contractor's submittals shall include:

1. A geogrid product sample approximately 4 inches by 7 inches or large.
2. A geogrid product data sheet and certification from the Manufacturer that the geogrid product supplied meets the requirements of Section 2.10.2 of these Special Provisions.
3. The Manufacturer's installation instructions and general recommendations.

2-10.3(2) Quality Assurance

Pre-Construction Conference – Prior to the installation of the geogrid, the Contractor shall arrange a meeting at the site with the geogrid material supplier and, where applicable, the geogrid installer. The Owner and the Engineer shall be notified at least 3 days in advance of the time of the meeting. A representative of the geogrid supplier shall be available on an "as needed" basis during construction.

2-10.3(3) Delivery, Storage, and Handling

For Storage and Protection, the Contractor shall:

1. Prevent excessive mud, wet concrete, epoxy, or other deleterious materials from coming in contact with and affixing to the geogrid materials.
2. Store the geogrid materials at temperatures above -20 degrees F (-29 degrees C).
3. Rolled geogrid materials may be laid flat or stood on end.
4. Geogrid materials should not be left directly exposed to sunlight for a period longer than the period recommended by the manufacturer.

The Contractor shall check the geogrid upon delivery to verify that the proper material has been received. The geogrid shall be inspected by the Contractor to be free of flaws or damage occurring during manufacturing, shipping, or handling.

2-10.3(4) Installation

The geogrid shall be laid at the proper elevation and alignment as shown in the Plans.

The geogrid shall be installed in accordance with the installation guidelines provided by the manufacturer or as directed by the Engineer.

The geogrid may be temporarily secured in place with ties, staples, pins, sand bags or backfill as required by fill properties, fill placement procedures or weather conditions or as directed by the Engineer.

2-10.3(5) Granular Fill Placement over Geogrid

Granular fill material shall be placed in lifts and compacted as directed under Section 2-09 of the Standard Specifications. Granular fill material shall be placed, spread, and compacted in such a manner that minimizes the development of wrinkles in the geogrid and/or movement of the geogrid.

A minimum loose fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Turning of tracked vehicles should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid. When underlying substrate is trafficable with minimal rutting, rubber-tired equipment may pass over the geogrid

reinforcement at slow speeds (less than 5 mph). Sudden braking and sharp turning movements shall be avoided.

2-10.3(6) Inspection

The Owner or Owner's representative may randomly inspect the geogrid before, during and after (using test pits) installation.

Any damaged or defective geogrid (i.e. frayed coating, separated junctions, separated layers, tears, etc.) will be repaired/replaced in accordance with Section 3.06 of the Standard Specifications.

2-10.3(7) Repair

Any roll of geogrid damaged before, during and after installation shall be replaced by the Contractor at no additional cost to the Owner.

Proper replacement shall consist of replacing the affected area adding 3 feet (1 meter) of geogrid beyond the limits of the affected area.

2-10.3(8) Protection

Follow the Manufacturer's recommendations regarding protection from exposure to sunlight.

2-10.4 Measurement

Triaxial geogrid reinforcement for subgrade will be measured by the square yard of area completed in place.

2-10.5 Payment

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

"Triaxial Geogrid Reinforcement for Subgrade", per square yard.

The unit Contract price per square foot for "Triaxial Geogrid Reinforcement for Subgrade" shall be full pay for all Work to complete the installation, including labor, materials, equipment, storage, and protection.

END OF DIVISION 2

Division 4
Bases

4-04 Ballast and Crushed Surfacing

4-04.3 Construction Requirements

4-04.3(5) Shaping and Compaction

The first sentence of Section 4-04.3(5) is revised to read:

Immediately following spreading and final shaping, each layer of permeable ballast and crushed surfacing used for pavement base layers shall be compacted using static rolling method to at least 95 percent of maximum density determined by the requirement of section 2-03.3(14)D before the next succeeding layer of ballast, surfacing, or pavement is placed.

4-04.4 Measurement

Section 4-04.4 is supplement with the following:

Crushed surfacing base course will be measured by the ton of imported crushed surfacing to be used as preload fill material in Stage 1. Base course to be used as permanent fill for the roadway following Stage 1 located in the preload area shall remain in place and be compacted in accordance with Section 2-03.

4-04.5 Payment

Section 4-04.5 is supplement with the following:

The unit Contract price per cubic yard for "Crushed Surfacing Base Course from Stockpile" shall be full pay for all Work to complete the moving, placing, spreading, watering, and compaction.

END OF DIVISION 4

Division 5
Surface Treatments and Pavements

5-04 Hot Mix Asphalt

Delete Section 5-04, Hot Mix Asphalt, and replace it with the following:

5-04.1 Description

This Work shall consist of providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections shown in the Plans. The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

HMA shall be composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

5-04.2 Materials

Materials shall meet the requirements of the following sections:

Asphalt Binder	9-02.1(4)
Cationic Emulsified Asphalt	9-02.1(6)
Anti-Stripping Additive	9-02.4
HMA Additive	9-02.5
Aggregates	9-03.8
Recycled Asphalt Pavement (RAP)	9-03.8(3)B, 9-03.21
Reclaimed Asphalt Shingles (RAS)	9-03.8(3)B, 9-03.21
Mineral Filler	9-03.8(5)
Recycled Material	9-03.21

The Contract documents may establish that the various mineral materials required for the manufacture of HMA will be furnished in whole or in part by the Contracting Agency. If the documents do not establish the furnishing of any of these mineral materials by the Contracting Agency, the Contractor shall be required to furnish such materials in the amounts required for the designated mix. Mineral materials include coarse and fine aggregates, and mineral filler.

The Contractor may choose to utilize recycled asphalt pavement (RAP) in the production of HMA. The RAP may be from pavements removed under the Contract, if any, or pavement material from an existing stockpile.

The Contractor may use up to 20 percent RAP by total weight of HMA with no additional sampling or testing of the RAP.

If the Contractor wishes to utilize High RAP/Any RAS, the design must be listed on the WSDOT Qualified Products List (QPL).

The grade of asphalt binder shall be as required by the Contract. Blending of asphalt binder from different sources is not permitted.

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 20 percent or less RAP by total weight of HMA. The Contractor shall submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

Production of aggregates shall comply with the requirements of Section 3-01. Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall comply with the requirements of Section 3-02.

5-04.2(1) How to Get an HMA Mix Design on the QPL

If the Contractor wishes to submit a mix design for inclusion in the Qualified Products List (QPL), please follow the WSDOT process outlined in Standard Specification 5-04.2(1).

5-04.2(1)A Vacant

5-04.2(2) Mix Design - Obtaining Project Approval

No paving shall begin prior to the approval of the mix design by the Engineer.

Nonstatistical evaluation will be used for all HMA not designated as Commercial HMA in the Contract documents.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, 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. The Proposal quantity of HMA that is accepted by commercial evaluation will be excluded from the quantities used in the determination of nonstatistical evaluation.

Nonstatistical Mix Design. Fifteen days prior to the first day of paving the Contractor shall provide one of the following mix design verification certifications for Contracting Agency review;

- The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.
- The proposed HMA mix design on WSDOT Form 350-042 with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.
- The Mix Design Report for the proposed HMA mix design developed by a qualified City or County laboratory that is within one year of the approval date.

The mix design shall be performed by a lab accredited by a national authority such as Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction Materials Engineering Council (CMEC's) ISO 17025 or AASHTO Accreditation Program (AAP) and shall supply evidence of participation in the AASHTO: resource proficiency sample program.

Mix designs for HMA accepted by Nonstatistical evaluation shall:

- Have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2), except that Hamburg testing for ruts and stripping are at the discretion of the Engineer, and 9-03.8(6).
- Have anti-strip requirements, if any, for the proposed mix design determined in accordance with AASHTO T 283 or T 324 or based on historic anti-strip and aggregate source compatibility from previous WSDOT lab testing.

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

Commercial Evaluation Mix Design. Approval of a mix design for "Commercial Evaluation" will be based on a review of the Contractor's submittal of WSDOT Form 350-042 (for commercial mixes, AASHTO T 324 evaluation is not required) or a Mix Design from the current WSDOT QPL or from one of the processes allowed by this section. Testing of the HMA by the Contracting Agency for mix design approval is not required.

For the Bid Item Commercial HMA, the Contractor shall select a class of HMA and design level of ESALs appropriate for the required use.

5-04.2(2)B Using Warm Mix Asphalt Processes

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

- Do not use additives that reduce the mixing temperature more than allowed in Section 5-04.3(6) in the production of mixtures.
- Before using additives, obtain the Engineer's approval using WSDOT Form 350-076 to describe the proposed additive and process.

5-04.3 Construction Requirements

5-04.3(1) Weather Limitations

Do not place HMA for wearing course on any Traveled Way beginning October 1st through March 31st of the following year without written concurrence from the Engineer.

Do not place HMA on any wet surface, or when the average surface temperatures are less than those specified below, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

Minimum Surface Temperature for Paving

Compacted Thickness (Feet)	Wearing Course	Other Courses
Less than 0.10	55°F	45°F
0.10 to .20	45°F	35°F
More than 0.20	35°F	35°F

5-04.3(2) Paving Under Traffic

When the Roadway being paved is open to traffic, the requirements of this Section shall apply.

The Contractor shall keep intersections open to traffic at all times except when paving the intersection or paving across the intersection. During such time, and provided that there has been an advance warning to the public, the intersection may be closed for the minimum time required to place and compact the mixture. In hot weather, the Engineer may require the application of water to the pavement to accelerate the finish rolling of the pavement and to shorten the time required before reopening to traffic.

Before closing an intersection, advance warning signs shall be placed, and signs shall also be placed marking the detour or alternate route.

During paving operations, temporary pavement markings shall be maintained throughout the project. Temporary pavement markings shall be installed on the Roadway prior to opening to traffic. Temporary pavement markings shall be in accordance with Section 8-23.

All costs in connection with performing the Work in accordance with these requirements, except the cost of temporary pavement markings, shall be included in the unit Contract prices for the various Bid items involved in the Contract.

5-04.3(3) Equipment

5-04.3(3)A Mixing Plant

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

1. **Equipment for Preparation of Asphalt Binder** – Tanks for the storage of asphalt binder shall be equipped to heat and hold the material at the required temperatures. The heating shall be accomplished by steam coils, electricity, or other approved means so that no flame shall be in contact with the storage tank. The circulating system for the asphalt binder shall be designed to ensure proper and continuous circulation during the operating period. A valve for the purpose of sampling the asphalt binder shall be placed in either the storage tank or in the supply line to the mixer.

2. **Thermometric Equipment** – An armored thermometer, capable of detecting temperature ranges expected in the HMA mix, shall be fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit. The thermometer location shall be convenient and safe for access by Inspectors. The plant shall also be equipped with an approved dial-scale thermometer, a mercury actuated thermometer, an electric pyrometer, or another approved thermometric instrument placed at the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates. This device shall be in full view of the plant operator.

3. **Heating of Asphalt Binder** – The temperature of the asphalt binder shall not exceed the maximum recommended by the asphalt binder manufacturer nor shall it be below the minimum temperature required to maintain the asphalt binder in a homogeneous state. The asphalt binder shall be heated in a manner that will avoid local variations in heating. The heating method shall provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25°F. Also, when a WMA additive is included in the asphalt binder, the temperature of the asphalt binder shall not exceed the maximum recommended by the manufacturer of the WMA additive.

4. **Sampling and Testing of Mineral Materials** – The HMA plant shall be equipped with a mechanical sampler for the sampling of the mineral materials. The mechanical sampler shall meet the requirements of Section 1-05.6 for the crushing and screening operation. The Contractor shall provide for the setup and operation of the field-testing facilities of the Contracting Agency as provided for in Section 3-01.2(2).

5. **Sampling HMA** – The HMA plant shall provide for sampling HMA by one of the following methods:

    a. A mechanical sampling device attached to the HMA plant.

    b. Platforms or devices to enable sampling from the hauling vehicle without entering the hauling vehicle.

5-04.3(3)B Hauling Equipment

Trucks used for hauling HMA shall have tight, clean, smooth metal beds and shall have a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. Whenever the weather conditions during the work shift include, or are forecast to include precipitation or an air temperature less than 45°F or when time from loading to unloading exceeds 30 minutes, the cover shall be securely attached to protect the HMA.

The Contractor shall provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Excess release agent shall be drained prior to filling hauling equipment with HMA. Petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA shall not be used. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

5-04.3(3)C Pavers

HMA pavers shall be self-contained, power-propelled units, provided with an internally heated vibratory screed and shall be capable of spreading and finishing courses of HMA plant mix material in lane widths required by the paving section shown in the Plans.

The HMA paver shall be in good condition and shall have the most current equipment available from the manufacturer for the prevention of segregation of the HMA mixture installed, in good condition, and in working order. The equipment certification shall list the make, model, and year of the paver and any equipment that has been retrofitted.

The screed shall be operated in accordance with the manufacturer's recommendations and shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. A copy of the manufacturer's recommendations shall be provided upon request by the Contracting Agency. Extensions will be allowed provided they produce the same results, including ride, density, and surface texture as obtained by the primary screed. Extensions without augers and an internally heated vibratory screed shall not be used in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Lines shall be placed on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. The grade and slope for intermediate lanes shall be controlled automatically from reference lines or by means of a mat referencing device and a slope control device. When the finish of the grade prepared for paving is superior to the established tolerances and when, in the opinion of the Engineer, further improvement to the line, grade, cross-section, and smoothness can best be achieved without the use of the reference line, a mat referencing device may be substituted for the reference line. Substitution of the device will be subject to the continued approval of the Engineer. A joint matcher may be used subject to the approval of the Engineer. The reference line may be removed after the completion of the first course of HMA when approved by the Engineer.

Whenever the Engineer determines that any of these methods are failing to provide the necessary vertical control, the reference lines will be reinstalled by the Contractor.

The Contractor shall furnish and install all pins, brackets, tensioning devices, wire, and accessories necessary for satisfactory operation of the automatic control equipment.

If the paving machine in use is not providing the required finish, the Engineer may suspend Work as allowed by Section 1-08.6. Any cleaning or solvent type liquids spilled on the pavement shall be thoroughly removed before paving proceeds.

5-04.3(3)D Material Transfer Device or Material Transfer Vehicle

A Material Transfer Device/Vehicle (MTD/V) shall only be used with the Engineer's approval, unless otherwise required by the Contract.

Where an MTD/V is required by the Contract, the Engineer may approve paving without an MTD/V, at the request of the Contractor. The Engineer will determine if an equitable adjustment in cost or time is due.

When used, the MTD/V shall mix the HMA after delivery by the hauling equipment and prior to laydown by the paving machine. Mixing of the HMA shall be sufficient to obtain a uniform temperature throughout the mixture. If a windrow elevator is used, the length of the windrow may be limited in urban areas or through intersections, at the discretion of the Engineer.

To be approved for use, an MTV:

1. Shall be self-propelled vehicle, separate from the hauling vehicle or paver.

2. Shall not be connected to the hauling vehicle or paver.

3. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.

4. Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.

5. Shall mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

To be approved for use, an MTD:

1. Shall be positively connected to the paver.

2. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.

3. Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.

4. Shall mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

5-04.3(3)E Rollers

Rollers shall be of the steel wheel or pneumatic tire type and operated only in static mode. Rollers shall also be in good condition and capable of reversing without backlash. Operation of the roller shall be in accordance with the manufacturer's recommendations. When ordered by the Engineer for any roller planned for use on the project, the Contractor shall provide a copy of the manufacturer's recommendation for the use of that roller for compaction of HMA. The number and weight of rollers shall be sufficient to compact the mixture in compliance with the requirements of Section 5-04.3(10). The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, displacement of the mixture or other undesirable results shall not be used.

5-04.3(4) Preparation of Existing Paved Surfaces

When the surface of the existing pavement or old base is irregular, the Contractor shall bring it to a uniform grade and cross-section as shown on the Plans or approved by the Engineer.

Preleveling of uneven or broken surfaces over which HMA is to be placed may be accomplished by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

Compaction of preleveling HMA shall be to the satisfaction of the Engineer and may require the use of small steel wheel rollers, plate compactors, or pneumatic rollers to avoid bridging across preleveled areas by the compaction equipment. Equipment used for the compaction of preleveling HMA shall be approved by the Engineer.

Before construction of HMA on an existing paved surface, the entire surface of the pavement shall be clean. All fatty asphalt patches, grease drippings, and other objectionable matter shall be entirely removed from the existing pavement. All pavements or bituminous surfaces shall be thoroughly cleaned of dust, soil, pavement grindings, and other foreign matter. All holes and small depressions shall be filled with an appropriate class of HMA. The surface of the patched area shall be leveled and compacted thoroughly. Prior to the application of tack coat, or paving, the condition of the surface shall be approved by the Engineer.

A tack coat of asphalt shall be applied to all paved surfaces on which any course of HMA is to be placed or abutted; except that tack coat may be omitted from clean, newly paved surfaces at the discretion of the Engineer. Tack coat shall be uniformly applied to cover the existing pavement with a thin film of residual asphalt free of streaks and bare spots at a rate between 0.02 and 0.10 gallons per square yard of retained asphalt. The rate of application shall be approved by the Engineer. A heavy application of tack coat shall be applied to all joints. For Roadways open to traffic, the application of tack coat shall be limited to surfaces that will be paved during the same working shift. The spreading equipment shall be equipped with a thermometer to indicate the temperature of the tack coat material.

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

The tack coat shall be CSS-1, or CSS-1h emulsified asphalt. The CSS-1 and CSS-1h emulsified asphalt may be diluted once with water at a rate not to exceed one-part water to one-part emulsified asphalt. The tack coat shall have sufficient temperature such that it may be applied uniformly at the specified rate of application and shall not exceed the maximum temperature recommended by the emulsified asphalt manufacturer.

5-04.3(4)A Crack Sealing

When the Proposal includes a pay item for crack sealing, seal cracks in accordance with Section 5-03.

5-04.3(4)B Vacant

5-04.3(4)C Pavement Repair

The Contractor shall excavate pavement repair areas and shall backfill these with HMA in accordance with the details shown in the Plans and as marked in the field. The Contractor shall conduct the excavation operations in a manner that will protect the pavement that is to remain. Pavement not designated to be removed that is damaged as a result of the Contractor's operations shall be repaired by the Contractor to the satisfaction of the Engineer at no cost to the Contracting Agency. The Contractor shall excavate only within one lane at a time unless approved otherwise by the Engineer. The Contractor shall not excavate more area than can be completely finished during the same shift, unless approved by the Engineer.

Unless otherwise shown in the Plans or determined by the Engineer, excavate to a depth of 1.0 feet. The Engineer will make the final determination of the excavation depth required. The minimum width of any pavement repair area shall be 40 inches unless shown otherwise in the Plans. Before any excavation, the existing pavement shall be sawcut or shall be removed by a pavement grinder. Excavated materials will become the property of the Contractor and shall be disposed of in a Contractor-provided site off the Right of Way or used in accordance with Sections 2-02.3(3) or 9-03.21.

Asphalt for tack coat shall be required as specified in Section 5-04.3(4). A heavy application of tack coat shall be applied to all surfaces of existing pavement in the pavement repair area.

Placement of the HMA backfill shall be accomplished in lifts not to exceed 0.35-foot compacted depth. Lifts that exceed 0.35-foot of compacted depth may be accomplished with the approval of the Engineer. Each lift shall be thoroughly compacted by a mechanical tamper or a roller.

5-04.3(5) Producing/Stockpiling Aggregates and RAP

Aggregates and RAP shall be stockpiled according to the requirements of Section 3-02. Sufficient storage space shall be provided for each size of aggregate and RAP. Materials shall be removed from stockpile(s) in a manner to ensure minimal segregation when being moved to the HMA plant for processing into the final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

5-04.3(5)A Vacant

5-04.3(6) Mixing

After the required amount of mineral materials, asphalt binder, recycling agent and anti-stripping additives have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

When discharged, the temperature of the HMA shall not exceed the optimum mixing temperature by more than 25°F as shown on the reference mix design report or as approved by the Engineer. Also, when a WMA additive is included in the manufacture of HMA, the discharge temperature of the HMA shall not exceed the maximum recommended by the manufacturer of the WMA additive. A maximum water content of 2 percent in the mix, at discharge, will be allowed providing the water causes no problems with handling, stripping, or flushing. If the water in the HMA causes any of these problems, the moisture content shall be reduced as directed by the Engineer.

Storing or holding of the HMA in approved storage facilities will be permitted with approval of the Engineer, but in no event shall the HMA be held for more than 24 hours. HMA held for more than 24 hours after mixing shall be rejected. Rejected HMA shall be disposed of by the Contractor at no expense to the Contracting Agency. The storage facility shall have an accessible device located at the top of the cone or about the third point. The device shall indicate the amount of material in storage. No HMA shall be accepted from the storage facility when the HMA in storage is below the top of the cone of the storage facility, except as the storage facility is being emptied at the end of the working shift.

Recycled asphalt pavement (RAP) utilized in the production of HMA shall be sized prior to entering the mixer so that a uniform and thoroughly mixed HMA is produced. If there is evidence of the recycled asphalt pavement not breaking down during the heating and mixing of the HMA, the Contractor shall immediately suspend the use of the RAP until changes have been approved by the Engineer. After the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, and RAP is ensured.

5-04.3(7) Spreading and Finishing

The mixture shall be laid upon an approved surface, spread, and struck off to the grade and elevation established. HMA pavers complying with Section 5-04.3(3) shall be used to distribute the mixture. Unless otherwise directed by the Engineer, the nominal compacted depth of any layer of any course shall not exceed the following:

HMA Class 1"		0.35 feet
HMA Class ¾" and HMA Class ½"		
	wearing course	0.30 feet
	other courses	0.35 feet
HMA Class ⅜"		0.15 feet

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

When more than one JMF is being utilized to produce HMA, the material produced for each JMF shall be placed by separate spreading and compacting equipment. The intermingling of HMA produced from more than one JMF is prohibited. Each strip of HMA placed during a work shift shall conform to a single JMF established for the class of HMA specified unless there is a need to make an adjustment in the JMF.

5-04.3(8) Aggregate Acceptance Prior to Incorporation in HMA

For HMA accepted by nonstatistical evaluation, the aggregate properties of sand equivalent, uncompacted void content, and fracture will be evaluated in accordance with Section 3-04. Sampling and testing of aggregates for HMA accepted by commercial evaluation will be at the option of the Engineer.

5-04.3(9) HMA Mixture Acceptance

Acceptance of HMA shall be as provided under nonstatistical, or commercial evaluation.

Nonstatistical evaluation will be used for the acceptance of HMA unless Commercial Evaluation is specified.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Engineer.

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 Engineer and may be made in accordance with this section.

HMA Tolerances and Adjustments

1. **Job Mix Formula Tolerances** – The constituents of the mixture at the time of acceptance shall be within tolerance. The tolerance limits will be established as follows:

   For Asphalt Binder and Air Voids (Va), the acceptance limits are determined by adding the tolerances below to the approved JMF values. These values will also be the Upper Specification Limit (USL) and Lower Specification Limit (LSL) required in Section 1-06.2(2)D2

Property	Non-Statistical Evaluation	Commercial Evaluation
Asphalt Binder	+/- 0.5%	+/- 0.7%
Air Voids, Va	2.5% min. and 5.5% max	N/A

   For Aggregates in the mixture:

   a. First, determine preliminary upper and lower acceptance limits by applying the following tolerances to the approved JMF.

Aggregate Percent Passing	Non-Statistical Evaluation	Commercial Evaluation
1", ¾", ½", and 3/8" sieves	+/- 6%	+/- 8%
No. 4 sieve	+/-6%	+/- 8%
No. 8 Sieve	+/- 6%	+/-8%
No. 200 sieve	+/- 2.0%	+/- 3.0%

   b. Second, adjust the preliminary upper and lower acceptance limits determined from step (a) the minimum amount necessary so that none of the aggregate properties are outside the control points in Section 9-03.8(6). The resulting values will be the upper and lower acceptance limits for aggregates, as well as the USL and LSL required in Section 1-06.2(2)D2.

2. Job Mix Formula Adjustments – An adjustment to the aggregate gradation or asphalt binder content of the JMF requires approval of the Engineer. Adjustments to the JMF will only be considered if the change produces

material of equal or better quality and may require the development of a new mix design if the adjustment exceeds the amounts listed below.

a. **Aggregates** –2 percent for the aggregate passing the 1½", 1", ¾", ½", ⅜", and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. The adjusted JMF shall be within the range of the control points in Section 9-03.8(6).

b. **Asphalt Binder Content** – The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content shall be 0.3 percent.

5-04.3(9)A Vacant

5-04.3(9)B Vacant

5-04.3(9)C Mixture Acceptance – Nonstatistical Evaluation

HMA mixture which is accepted by Nonstatistical Evaluation will be evaluated by the Contracting Agency by dividing the HMA tonnage into lots.

5-04.3(9)C1 Mixture Nonstatistical Evaluation – Lots and Sublots

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot shall be equal to one day's production or 800 tons, whichever is less except that the final sublot will be a minimum of 400 tons and may be increased to 1200 tons.

All of the test results obtained from the acceptance samples from a given lot shall be evaluated collectively. If the Contractor requests a change to the JMF that is approved, the material produced after the change will be evaluated on the basis of the new JMF for the remaining sublots in the current lot and for acceptance of subsequent lots. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

Sampling and testing for evaluation shall be performed on the frequency of one sample per sublot.

5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling

Samples for acceptance testing shall be obtained by the Contractor when ordered by the Engineer. The Contractor shall sample the HMA mixture in the presence of the Engineer and in accordance with AASH-TO T 168. A minimum of three samples should be taken for each class of HMA placed on a project. If used in a structural application, at least one of the three samples shall be tested.

Sampling and testing HMA in a structural application where quantities are 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. In all cases, a minimum of 3 samples will be obtained at the point of acceptance, a minimum of one of the three samples will be tested for conformance to the JMF:

- If the test results are found to be within specification requirements, additional testing will be at the Engineer's discretion.

- If test results are found not to be within specification requirements, additional testing of the remaining samples to determine a CPF shall be performed.

5-04.3(9)C3 Mixture Nonstatistical Evaluation – Acceptance Testing

Testing of HMA for compliance of V_a will at the option of the Contracting Agency. If tested, compliance of V_a will use WSDOT SOP 731.

Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308.

Testing for compliance of gradation will be by FOP for WAQTC T 27/T 11.

5-04.3(9)C4 Mixture Nonstatistical Evaluation – Pay Factors

For each lot of material falling outside the tolerance limits in 5-04.3(9), the Contracting Agency will determine a CPF using the following price adjustment factors:

Table of Price Adjustment Factors	
Constituent	**Factor "f"**
All aggregate passing: 1½", 1", ¾", ½", ⅜" and No.4 sieves	2
All aggregate passing No. 8 sieve	15
All aggregate passing No. 200 sieve	20
Asphalt binder	40
Air Voids (Va) (where applicable)	20

Each lot of HMA produced under Nonstatistical Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents

fall outside the nonstatistical tolerance limits in the Job Mix Formula shown in Table of Price Adjustment Factors, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The nonstatistical tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the Roadway shall be tested to provide a minimum of three sets of results for evaluation.

5-04.3(9)C5 Vacant

5-04.3(9)C6 Mixture Nonstatistical Evaluation – Price Adjustments

For each lot of HMA mix produced under Nonstatistical Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The total job mix compliance price adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the CPF.

5-04.3(9)C7 Mixture Nonstatistical Evaluation - Retests

The Contractor may request a sublot be retested. To request a retest, the Contractor shall submit a written request within 7 calendar days after the specific test results have been received. A split of the original acceptance sample will be retested. The split of the sample will not be tested with the same tester that ran the original acceptance test. The sample will be tested for a complete gradation analysis, asphalt binder content, and, at the option of the agency, V_a. The results of the retest will be used for the acceptance of the HMA in place of the original sublot sample test results. The cost of testing will be deducted from any monies due or that may come due the Contractor under the Contract at the rate of $500 per sample.

5-04.3 (9)D Mixture Acceptance – Commercial Evaluation

If sampled and tested, HMA produced under Commercial Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the commercial tolerance limits in the Job Mix Formula shown in 5-04.3(9), the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The commercial tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the street shall be tested to provide a minimum of three sets of results for evaluation.

For each lot of HMA mix produced and tested under Commercial Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The Job Mix Compliance Price Adjustment will be calculated as the

product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the CPF.

5-04.3(10) HMA Compaction Acceptance

HMA mixture accepted by nonstatistical evaluation that is used in traffic lanes, including lanes for intersections, ramps, truck climbing, weaving, and speed change, and having a specified compacted course thickness greater than 0.10-foot, shall be compacted to a specified level of relative density. The specified level of relative density shall be a CPF of not less than 0.75 when evaluated in accordance with Section 1-06.2, using a LSL of 92.0 (minimum of 92 percent of the maximum density). The maximum density shall be determined by WSDOT FOP for AASHTO T 729. The specified level of density attained will be determined by the evaluation of the density of the pavement. The density of the pavement shall be determined in accordance with WSDOT FOP for WAQTC TM 8, except that gauge correlation will be at the discretion of the Engineer, when using the nuclear density gauge and WSDOT SOP 736 when using cores to determine density.

Tests for the determination of the pavement density will be taken in accordance with the required procedures for measurement by a nuclear density gauge or Roadway cores after completion of the finish rolling.

If the Contracting Agency uses a nuclear density gauge to determine density the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the mix is placed and prior to opening to traffic.

Roadway cores for density may be obtained by either the Contracting Agency or the Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches minimum, unless otherwise approved by the Engineer. Roadway cores will be tested by the Contracting Agency in accordance with WSDOT FOP for AASHTO T 166.

If the Contract includes the Bid item "Roadway Core", the cores shall be obtained by the Contractor in the presence of the Engineer on the same day the mix is placed and at locations designated by the Engineer. If the Contract does not include the Bid item "Roadway Core", the Contracting Agency will obtain the cores.

For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an

approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used for preleveling wheel rutting shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

Test Results

For a sublot that has been tested with a nuclear density gauge that did not meet the minimum of 92 percent of the reference maximum density in a compaction lot with a CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may request that a core be used for determination of the relative density of the sublot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the sublot and will be used for calculation of the CPF and acceptance of HMA compaction lot.

When cores are taken by the Contracting Agency at the request of the Contractor, they shall be requested by noon of the next workday after the test results for the sublot have been provided or made available to the Contractor. Core locations shall be outside of wheel paths and as determined by the Engineer. Traffic control shall be provided by the Contractor as requested by the Engineer. Failure by the Contractor to provide the requested traffic control will result in forfeiture of the request for cores. When the CPF for the lot based on the results of the HMA cores is less than 1.00, the cost for the coring will be deducted from any monies due or that may become due the Contractor under the Contract at the rate of $200 per core and the Contractor shall pay for the cost of the traffic control.

5-04.3(10)A HMA Compaction – General Compaction Requirements

Compaction shall take place when the mixture is in the proper condition so that no undue displacement, cracking, or shoving occurs. Areas inaccessible to large compaction equipment shall be compacted by other mechanical means. Any HMA that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt, or is in any way defective, shall be removed and replaced with new hot mix that shall be immediately compacted to conform to the surrounding area.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option, provided the specified densities are attained. Unless the Engineer has approved otherwise, rollers shall only be operated in the static mode when the internal temperature of the mix is less than 175°F. Regardless of mix temperature, a roller shall not be operated in a mode that results in checking or cracking of the mat. Rollers shall only be operated in static mode on bridge decks.

5-04.3(10)B HMA Compaction - Cyclic Density

Low cyclic density areas are defined as spots or streaks in the pavement that are less than 90 percent of the theoretical maximum density. At the Engineer's discretion, the Engineer may evaluate the HMA pavement for low cyclic density, and

when doing so will follow WSDOT SOP 733. A $500 Cyclic Density Price Adjustment will be assessed for any 500-foot section with two or more density readings below 90 percent of the theoretical maximum density.

5-04.3(10)C Vacant

5-04.3(10)D HMA Nonstatistical Compaction

5-04.3(10)D1 HMA Nonstatistical Compaction - Lots and Sublots

HMA compaction which is accepted by nonstatistical evaluation will be based on acceptance testing performed by the Contracting Agency dividing the project into compaction lots.

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot shall be equal to one day's production or 400 tons, whichever is less except that the final sublot will be a minimum of 200 tons and may be increased to 800 tons. Testing for compaction will be at the rate of 5 tests per sublot per WSDOT T 738.

The sublot locations within each density lot will be determined by the Engineer. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used to prelevel wheel ruts shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

5-04.3(10)D2 HMA Compaction Nonstatistical Evaluation – Acceptance Testing

The location of the HMA compaction acceptance tests will be randomly selected by the Engineer from within each sublot, with one test per sublot.

5-04.3(10)D3 HMA Nonstatistical Compaction – Price Adjustments

For each compaction lot with one or two sublots, having all sublots attain a relative density that is 92 percent of the reference maximum density the HMA shall be accepted at the unit Contract price with no further evaluation. When a sublot does not attain a relative density that is 92 percent of the reference maximum density, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate

CPF. The maximum CPF shall be 1.00, however, lots with a calculated CPF in excess of 1.00 will be used to offset lots with CPF values below 1.00 but greater than 0.90. Lots with CPF lower than 0.90 will be evaluated for compliance per 5-04.3(11). Additional testing by either a nuclear moisture-density gauge or cores will be completed as required to provide a minimum of three tests for evaluation.

For compaction below the required 92%, a Non-Conforming Compaction Factor (NCCF) will be determined. The NCCF equals the algebraic difference of CPF minus 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of CPF, the quantity of HMA in the compaction control lot in tons, and the unit Contract price per ton of mix.

5-04.3(11) Reject Work

5-04.3(11)A Reject Work General

Work that is defective or does not conform to Contract requirements shall be rejected. The Contractor may propose, in writing, alternatives to removal and replacement of rejected material. Acceptability of such alternative proposals will be determined at the sole discretion of the Engineer. HMA that has been rejected is subject to the requirements in Section 1-06.2(2) and this specification, and the Contractor shall submit a corrective action proposal to the Engineer for approval.

5-04.3(11)B Rejection by Contractor

The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material. Any such new material will be sampled, tested, and evaluated for acceptance.

5-04.3(11)C Rejection Without Testing (Mixture or Compaction)

The Engineer may, without sampling, reject any batch, load, or section of Roadway that appears defective. Material rejected before placement shall not be incorporated into the pavement. Any rejected section of Roadway shall be removed.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests that the rejected material be tested. If the Contractor elects to have the rejected material tested, a minimum of three representative samples will be obtained and tested. Acceptance of rejected material will be based on conformance with the nonstatistical acceptance Specification. If the CPF for the rejected material is less than 0.75, no payment will be made for the rejected material; in addition, the cost of sampling and testing shall be borne by the Contractor. If the CPF is greater than or equal to 0.75, the cost of sampling and testing will be borne by the Contracting Agency. If the material is rejected before placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at a CPF of 0.75. If rejection occurs after placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at the calculated CPF with an addition of 25 percent of the unit Contract price added for the cost of removal and disposal.

5-04.3(11)D Rejection - A Partial Sublot

In addition to the random acceptance sampling and testing, the Engineer may also isolate from a normal sublot any material that is suspected of being defective in relative density, gradation or asphalt binder content. Such isolated material will not include an original sample location. A minimum of three random samples of the suspect material will be obtained and tested. The material will then be statistically evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)E Rejection - An Entire Sublot

An entire sublot that is suspected of being defective may be rejected. When a sublot is rejected a minimum of two additional random samples from this sublot will be obtained. These additional samples and the original sublot will be evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)F Rejection - A Lot in Progress

The Contractor shall shut down operations and shall not resume HMA placement until such time as the Engineer is satisfied that material conforming to the Specifications can be produced:

1. When the CPF of a lot in progress drops below 1.00 and the Contractor is taking no corrective action, or
2. When the Pay Factor (PF) for any constituent of a lot in progress drops below 0.95 and the Contractor is taking no corrective action, or
3. When either the PF for any constituent or the CPF of a lot in progress is less than 0.75.

5-04.3(11)G Rejection - An Entire Lot (Mixture or Compaction)

An entire lot with a CPF of less than 0.75 will be rejected.

5-04.3(12) Joints

5-04.3(12)A HMA Joints

5-04.3(12)A1 Transverse Joints

The Contractor shall conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed, and the roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When the Work is resumed, the previously compacted mixture shall be cut back to produce a slightly beveled edge for the full thickness of the course.

A temporary wedge of HMA constructed on a 20H:1V shall be constructed where a transverse joint as a result of paving or planing is open to traffic. The HMA in the temporary wedge shall be separated from the permanent HMA by strips of heavy

wrapping paper or other methods approved by the Engineer. The wrapping paper shall be removed and the joint trimmed to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

The material that is cut away shall be wasted and new mix shall be laid against the cut. Rollers or tamping irons shall be used to seal the joint.

5-04.3(12)A2 Longitudinal Joints

The longitudinal joint in any one course shall be offset from the course immediately below by not more than 6 inches nor less than 2 inches. All longitudinal joints constructed in the wearing course shall be located at a lane line or an edge line of the Traveled Way. A notched wedge joint shall be constructed along all longitudinal joints in the wearing surface of new HMA unless otherwise approved by the Engineer. The notched wedge joint shall have a vertical edge of not less than the maximum aggregate size or more than ½ of the compacted lift thickness and then taper down on a slope not steeper than 4H:1V. The sloped portion of the HMA notched wedge joint shall be uniformly compacted.

5-04.3(12)B Bridge Paving Joint Seals

Bridge Paving Joint Seals shall be in accordance with Section 5-03.

5-04.3(13) Surface Smoothness

The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course shall not vary more than ⅛ inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. The transverse slope of the completed surface of the wearing course shall vary not more than ¼ inch in 10 feet from the rate of transverse slope shown in the Plans.

When deviations in excess of the above tolerances are found that result from a high place in the HMA, the pavement surface shall be corrected by one of the following methods:

1. Removal of material from high places by grinding with an approved grinding machine, or

2. Removal and replacement of the wearing course of HMA, or

3. By other method approved by the Engineer.

Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances.

Deviations in excess of the above tolerances that result from a low place in the HMA and deviations resulting from a high place where corrective action, in the opinion of

the Engineer, will not produce satisfactory results will be accepted with a price adjustment. The Engineer shall deduct from monies due or that may become due to the Contractor the sum of $500.00 for each and every section of single traffic lane 100 feet in length in which any excessive deviations described above are found.

When utility appurtenances such as manhole covers and valve boxes are located in the traveled way, the utility appurtenances shall be adjusted to the finished grade prior to paving. This requirement may be waived when requested by the Contractor, at the discretion of the Engineer or when the adjustment details provided in the project plan or specifications call for utility appurtenance adjustments after the completion of paving.

Utility appurtenance adjustment discussions will be included in the Pre-Paving and Pre-Planing Briefing (5-04.3(14)B3). Submit a written request to waive this requirement to the Engineer prior to the start of paving.

5-04.3(14) Planing Bituminous Pavement

The planing plan must be approved by the Engineer and a pre-planing meeting must be held prior to the start of any planing. See Section 5-04.3(14)B2 for information on planing submittals.

Where planing an existing pavement is specified in the Contract, the Contractor must remove existing surfacing material and to reshape the surface to remove irregularities. The finished product must be a prepared surface acceptable for receiving an HMA overlay.

Use the cold milling method for planing unless otherwise specified in the Contract. Do not use the planer on the final wearing course of new HMA.

Conduct planing operations in a manner that does not tear, break, burn, or otherwise damage the surface which is to remain. The finished planed surface must be slightly grooved or roughened and must be free from gouges, deep grooves, ridges, or other imperfections. The Contractor must repair any damage to the surface by the Contractor's planing equipment, using an Engineer approved method.

Repair or replace any metal castings and other surface improvements damaged by planing, as determined by the Engineer.

A tapered wedge cut must be planed longitudinally along curb lines sufficient to provide a minimum of 4 inches of curb reveal after placement and compaction of the final wearing course. The dimensions of the wedge must be as shown on the Drawings or as specified by the Engineer.

A tapered wedge cut must also be made at transitions to adjoining pavement surfaces (meet lines) where butt joints are shown on the Drawings. Cut butt joints in

a straight line with vertical faces 2 inches or more in height, producing a smooth transition to the existing adjoining pavement.

After planing is complete, planed surfaces must be swept, cleaned, and if required by the Contract, patched and preleveled.

The Engineer may direct additional depth planing. Before performing this additional depth planing, the Contractor must conduct a hidden metal in pavement detection survey as specified in Section 5-04.3(14)A.

5-04.3(14)A Pre-Planing Metal Detection Check

Before starting planing of pavements, and before any additional depth planing required by the Engineer, the Contractor must conduct a physical survey of existing pavement to be planed with equipment that can identify hidden metal objects.

Should such metal be identified, promptly notify the Engineer.

See Section 1-07.16(1) regarding the protection of survey monumentation that may be hidden in pavement.

The Contractor is solely responsible for any damage to equipment resulting from the Contractor's failure to conduct a pre-planing metal detection survey, or from the Contractor's failure to notify the Engineer of any hidden metal that is detected.

5-04.3(14)B Paving and Planing Under Traffic

5-04.3(14)B1 General

In addition, the requirements of Section 1-07.23 and the traffic controls required in Section 1-10, and unless the Contract specifies otherwise or the Engineer approves, the Contractor must comply with the following:

1. Intersections:

    a. Keep intersections open to traffic at all times, except when paving or planing operations through an intersection requires closure. Such closure must be kept to the minimum time required to place and compact the HMA mixture, or plane as appropriate. For paving, schedule such closure to individual lanes or portions thereof that allows the traffic volumes and schedule of traffic volumes required in the approved traffic control plan. Schedule work so that adjacent intersections are not impacted at the same time and comply with the traffic control restrictions required by the Traffic Engineer. Each individual intersection closure or partial closure must be addressed in the traffic control plan, which must be submitted to and accepted by the Engineer, see Section 1-10.2(2).

b. When planing or paving and related construction must occur in an intersection, consider scheduling and sequencing such work into quarters of the intersection, or half or more of an intersection with side street detours. Be prepared to sequence the work to individual lanes or portions thereof.

c. Should closure of the intersection in its entirety be necessary, and no trolley service is impacted, keep such closure to the minimum time required to place and compact the HMA mixture, plane, remove asphalt, tack coat, and as needed.

d. Any work in an intersection requires advance warning in both signage and a number of Working Days advance notice as determined by the Engineer, to alert traffic and emergency services of the intersection closure or partial closure.

e. Allow new compacted HMA asphalt to cool to ambient temperature before any traffic is allowed on it. Traffic is not allowed on newly placed asphalt until approval has been obtained from the Engineer.

2. Temporary centerline marking, post-paving temporary marking, temporary stop bars, and maintaining temporary pavement marking must comply with Section 8-23.

3. Permanent pavement marking must comply with Section 8-22.

5-04.3(14)B2 Submittals - Planing Plan and HMA Paving Plan

The Contractor must submit a separate planing plan and a separate paving plan to the Engineer at least 5 Working Days in advance of each operation's activity start date. These plans must show how the moving operation and traffic control are coordinated, as they will be discussed at the pre-planing briefing and pre-paving briefing. When requested by the Engineer, the Contractor must provide each operation's traffic control plan on 24 x 36 inch or larger size Shop Drawings with a scale showing both the area of operation and sufficient detail of traffic beyond the area of operation where detour traffic may be required. The scale on the Shop Drawings is 1 inch = 20 feet, which may be changed if the Engineer agrees sufficient detail is shown.

The planing operation and the paving operation include, but are not limited to, metal detection, removal of asphalt and temporary asphalt of any kind, tack coat and drying, staging of supply trucks, paving trains, rolling, scheduling, and as may be discussed at the briefing.

When intersections will be partially or totally blocked, provide adequately sized and noticeable signage alerting traffic of closures to come, a minimum 2 Working Days in advance. The traffic control plan must show where police officers will be stationed when signalization is or may be, countermanded, and show areas where flaggers are proposed.

At a minimum, the planing and the paving plan must include:

1. A copy of the accepted traffic control plan, see Section 1-10.2(2), detailing each day's traffic control as it relates to the specific requirements of that day's planing and paving. Briefly describe the sequencing of traffic control consistent with the proposed planing and paving sequence, and scheduling of placement of temporary pavement markings and channelizing devices after each day's planing, and paving.

2. A copy of each intersection's traffic control plan.

3. Haul routes from supplier facilities, and locations of temporary parking and staging areas, including return routes. Describe the complete round trip as it relates to the sequencing of paving operations.

4. Names and locations of HMA supplier facilities to be used.

5. List of all equipment to be used for paving.

6. List of personnel and associated job classification assigned to each piece of paving equipment.

7. Description (geometric or narrative) of the scheduled sequence of planing and of paving and intended area of planing and of paving for each day's work, must include the directions of proposed planing and of proposed paving, sequence of adjacent lane paving, sequence of skipped lane paving, intersection planing and paving scheduling and sequencing, and proposed notifications and coordinations to be timely made. The plan must show HMA joints relative to the final pavement marking lane lines.

8. Names, job titles, and contact information for field, office, and plant supervisory personnel.

9. A copy of the approved Mix Designs.

10. Tonnage of HMA to be placed each day.

11. Approximate times and days for starting and ending daily operations.

5-04.3(14)B3 Pre-Paving and Pre-Planing Briefing

At least 2 Working Days before the first paving operation and the first planing operation, or as scheduled by the Engineer for future paving and planing operations to ensure the Contractor has adequately prepared for notifying and coordinating as required in the Contract, the Contractor must be prepared to discuss that day's

operations as they relate to other entities and to public safety and convenience, including driveway and business access, garbage truck operations, transit operations and working around energized overhead wires, school and nursing home and hospital and other accesses, other Contractors who may be operating in the area, pedestrian and bicycle traffic, and emergency services. The Contractor, and Subcontractors that may be part of that day's operations, must meet with the Engineer and discuss the proposed operation as it relates to the submitted planing plan and paving plan, approved traffic control plan, and public convenience and safety. Such discussion includes, but is not limited to:

1. General for both the Paving and Planing:

   a. The actual times of starting and ending daily operations.

   b. In intersections, how to break up the intersection, and address traffic control and signalization for that operation, including use of peace officers.

   c. The sequencing and scheduling of paving operations and of planing operations, as applicable, as it relates to traffic control, public convenience and safety, and other Contractors who may operate in the Project limits.

   d. Notifications required of Contractor activities and coordinating with other entities and the public as necessary.

   e. Description of the sequencing of installation and types of temporary pavement markings as it relates to planning and paving.

   f. Description of the sequencing of installation of, and the removal of, temporary pavement patch material around exposed castings and as may be needed.

   g. Description of procedures and equipment to identify hidden metal in the pavement, such as survey monumentation, monitoring wells, streetcar rail, and castings, before planing as per Section 5-04.3(14)B2.

   h. Description of how flaggers will be coordinated with the planing, paving, and related operations.

   i. Description of sequencing of traffic controls for the process of rigid pavement base repairs.

   j. Other items the Engineer deems necessary to address.

2. Paving – additional topics:

a. When to start applying tack and coordinating with paving.

b. Types of equipment and numbers of each type of equipment to be used. If more pieces of equipment than personnel are proposed, describe the sequencing of the personnel operating the types of equipment. Discuss the continuance of operator personnel for each type of equipment as it relates to meeting Specification requirements.

c. Number of JMFs to be placed, and if more than one JMF is used, how the Contractor will ensure different JMFs are distinguished, how pavers and how MTVs are distinguished, and how pavers and MTVs are cleaned so that one JMF does not adversely influence the other JMF.

d. Description of contingency plans for that day's operations such as equipment breakdown, rain out, and supplier shutdown of operations.

e. Number of sublots to be placed, sequencing of density testing, and other sampling and testing.

5-04.3(15) Sealing Pavement Surfaces

Apply a fog seal where shown in the plans. Construct the fog seal in accordance with Section 5-02.3. Unless otherwise approved by the Engineer, apply the fog seal prior to opening to traffic.

5-04.3(16) HMA Road Approaches

Construct HMA approaches at the locations shown in the Plans or where staked by the Engineer, in accordance with Section 5-04.

5-04.4 Measurement

HMA Cl. ___ PG ___, HMA for ___ Cl. ___ PG ___, and Commercial HMA will be measured by the ton in accordance with Section 1-09.2, with no deduction being made for the weight of asphalt binder, mineral filler, or any other component of the mixture. If the Contractor elects to remove and replace mix as allowed by Section 5-04.3(11), the material removed will not be measured.

Roadway cores will be measured per each for the number of cores taken.

Pavement repair excavation will be measured by the square yard of surface marked prior to excavation.

Planing bituminous pavement will be measured by the square yard.

5-04.5 Payment

Payment will be made for each of the following Bid items that are included in the Proposal:

"HMA Cl. ___ PG ___", per ton.

"HMA for Approach Cl. ___ PG ___", per ton.

"HMA for Preleveling Cl. ___ PG ___", per ton.

"HMA for Pavement Repair Cl. ___ PG ___", per ton.

"Commercial HMA", per ton.

The unit Contract price per ton for "HMA Cl. ___ PG ___", "HMA for Approach Cl. ___ PG ___", "HMA for Preleveling Cl. ___ PG ___", "HMA for Pavement Repair Cl. ___ PG ___", and "Commercial HMA" shall be full compensation for all costs, including anti-stripping additive, incurred to carry out the requirements of Section 5-04 except for those costs included in other items which are included in this Subsection and which are included in the Proposal.

"Pavement Repair Excavation Incl. Haul", per square yard.

The unit Contract price per square yard for "Pavement Repair Excavation Incl. Haul" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(4) with the exception, however, that all costs involved in the placement of HMA shall be included in the unit Contract price per ton for "HMA for Pavement Repair Cl. ___ PG ___", per ton.

"Asphalt for Prime Coat", per ton.

The unit Contract price per ton for "Asphalt for Prime Coat" shall be full payment for all costs incurred to obtain, provide and install the material in accordance with Section 5-04.3(4).

"Prime Coat Agg.", per cubic yard, or per ton.

The unit Contract price per cubic yard or per ton for "Prime Coat Agg." shall be full pay for furnishing, loading, and hauling aggregate to the place of deposit and spreading the aggregate in the quantities required by the Engineer.

"Planing Bituminous Pavement", per square yard.

The unit Contract price per square yard for "Planing Bituminous Pavement" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(14).

"Job Mix Compliance Price Adjustment", by calculation.

"Job Mix Compliance Price Adjustment" will be calculated and paid for as described in Section 5-04.3(9)C6.

"Compaction Price Adjustment", by calculation.

"Compaction Price Adjustment" will be calculated and paid for as described in Section 5-04.3(10)D3.

"Roadway Core", per each.

The Contractor's costs for all Work associated with the coring (e.g., traffic control) shall be incidental and included in the unit Bid price per each.

"Cyclic Density Price Adjustment", by calculation.

"Cyclic Density Price Adjustment" will be calculated and paid for as described in Section 5-04.3(10)B.

END OF DIVISION 5

Division 7
Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits

7-01 DRAINS

(*****)

Cleanouts

Section 7-01 is supplemented with the following:

7-01.1 Description

This Work consists of furnishing and installing underdrain pipe cleanouts in accordance with the Plans and these Specifications, at the locations staked or approved by the Engineer.

7-01.2 Materials

Cement concrete Class 4000, in accordance with Section 6-02.3 of the Standard Specifications, shall be used for securing the locking ring and cover on cleanouts in paved areas.

Locking ring and cover for cleanouts in paved areas shall be ductile iron.

PVC pipe and fittings shall be in accordance with Section 9-05.12(1) of the Standard Specifications

7-01.3 Construction Requirements

Underdrain pipe cleanouts shall be provided in accordance with the details shown in the Plans.

7-01.4 Measurement

Underdrain cleanouts will be measured per each.

7-01.5 Payment

"Underdrain Cleanout 6 In. Diam.", per each.

The unit Contract price per each for "Underdrain Cleanout 6 In. Diam." shall be full pay for furnishing and installing the wye, pipe, pipe bends, cross fittings, gaskets, castings, cement concrete, and caps as specified herein and as shown in the Plans.

7-05 Manholes, Inlets, Catch Basins, and Drywells

7-05.3 Construction Requirements

Section 7-05.3 is supplemented with the following:

Foundation pads for catch basins, manholes, and inlets shall be constructed as detailed in the Plans, including the stockpiled crushed surfacing base course foundation pad in accordance with Section 2-09 and 4-04 of these Special Provisions, triaxial geogrid reinforcement for subgrade in accordance with Section 2-10 of these Special Provisions, and construction geotextile for separation in accordance with Section 2-12.

Backfill material shall be in accordance with Section 2-09 of these Special Provisions.

7-05.3(1) Adjusting Catch Basins and Manholes to Grade

Section 7-05.3(1) is supplemented with the following:

All manholes and catch basins shall be adjusted to finished grade after paving operations are complete. The Contractor shall adjust the structure using concrete brick or adjustment rings, or by other necessary means approved by the Engineer, in accordance with Contracting Agency standards, to the satisfaction of the Engineer.

All catch basins and manholes for storm sewers shall be grouted water tight, including under frames, rims, manhole barrel, riser sections, and pipe collars.

7-05.3(5) Connections to Existing Structures

Section 7-05.3(5) is added as follows:

Where shown in the Plans, the Contractor shall connect new drainage pipe to existing drainage Structures such as catch basins, manholes, and inlets; or shall connect new drainage Structures such as catch basins, manholes, and inlets to existing drainage pipe; or shall connect new drainage pipe to existing drainage pipe.

7-05.3(6) Replacement of Existing Frame and Covers

Section 7-05.3(6) is added as follows:

Replace Existing Rectangular Frame and Grate with New Rectangular Frame and Solid Locking Cover

Where shown in the Plans or as directed by the Engineer, the Contractor shall remove and dispose of existing rectangular frames and covers, and replace them with new rectangular frame solid locking covers in accordance with WSDOT Standard Plans B-30.10 (frames) and B-30.20 (solid metal covers).

7-05.4 Measurement

The third paragraph of Section 7-05.4 is supplement with the following:

Additional adjustments of manholes, catch basins, and inlets required prior to paving work will not be measured.

Section 7-05.4 is supplemented with the following:

Measurement for backfill and foundation pad material shall be in accordance with Section 2-09 of these Special Provisions.

Replacement of existing rectangular frame and grate with new rectangular frame and solid locking cover will be measured per each replacement.

7-05.5 Payment

The ninth and thirteenth paragraphs in Section 7-05.5 are deleted.

Section 7-05.5 is supplemented with the following:

The unit Contract price per each for catch basins, manholes, and inlets of the kind and size specified shall be full pay for all Work to complete the installation, including sawcutting as needed for structure installation, placing and compacting stockpiled CSBC backfill and foundation pads, adjustments to finish grade, flexible pipe to structure connection elements as shown in the Plans, and temporary pavement patch prior to final roadway paving.

Payment for triaxial geogrid reinforcement and construction geotextile will be made under the applicable items shown in the Proposal.

All costs associated with furnishing and installing permeable ballast material within the drainage structure foundation, including compaction, will be made under the applicable item shown in the Proposal.

The unit Contract price per each for "Connection to Drainage Structure" shall be full pay for all costs necessary to connect new drainage pipe to existing drainage Structures such as catch basins, manholes, and inlets; or to connect new drainage Structures such as catch basins, manholes, and inlets to existing drainage pipe; or to connect new drainage pipe to existing drainage pipe.

"Replace Existing Frame and Grate with Solid Locking Cover", per each.
The unit Contract price per each for "Replace Existing Frame and Grate with Solid Locking Cover" shall be full pay for all costs necessary to remove existing frames and grates and replace them with new frames and covers, including disposal of removed materials.

7-08 General Pipe Installation Requirements

7-08.1 Description

7-08.1(1) Definitions

Section 7-08.1(1) is added as follows:

7-08.1(1)A Unsuitable Material

Material removed because it is unsatisfactory for foundations is defined as unsuitable foundation material.

7-08.3 Construction Requirements

7-08.3(3) Backfilling

Section 7-08.3(3) is supplemented with the following:

Backfill and bedding material within the pipe zone shall be in accordance with Section 2-09 of these Special Provisions and as detailed in the Plans.

Section 7-08.3 is supplemented with the following:

Abandoning or Removing Existing Storm Sewer

Where shown in the Plans, the Contractor shall abandon, or where necessary to facilitate project improvements, remove existing storm sewer. Ends of abandoned or removed pipe shall be plugged in accordance with Section 7-08.3(4). Abandoning and plugging existing pipe shall be incidental to Structure Excavation Class B Incl. Haul.

7-08.3(5) Utility Clearances

Section 7-08.3(5) is added as follows:

An Ethafoam® pad shall is required for installations where other utilities are closer than 12 inches to provide additional protection between the adjacent utilities. The size of the pad shall be based on the outside diameter (O.D.) of the larger crossing pipe. The pipe shall be O.D. long by O.D. wide by 3 inches thick minimum, or as required to protect the pipes. The pad shall be a strong, resilient, medium-density, closed-cell, polyethylene foam plank (Dow Ethafoam 220, or accepted equivalent).

7-08.3(6) Removal and Replacement of Unsuitable Materials

Section 7-08.3(6) is added as follows:

Whenever in excavating the trench for storm sewers, the bottom of the trench exposes peat, soft clay, quicksand, or other unsuitable foundation material, such material shall be removed to the depth directed by the Engineer and backfilled with foundation material meeting the requirements of Section 9-03.9(2).

Unsuitable material shall be loaded directly into trucks and hauled to a waste site obtained by the Contractor. Stockpiling of unsuitable material at the project site shall not be allowed.

7-08.4 Measurement

The second paragraph of Section 7-08.4 is deleted.

Section 7-08.4 is supplemented with the following:

Removal and replacement of unsuitable material will be measured by the cubic yard. The depth shall be the actual depth removed below the depth specified in Section 7-08.3(1)A. The width shall be the actual width removed, but in no case shall the measured width exceed the allowable widths specified in Section 2-09.4.

Measurement for backfill and bedding material within the pipe zone shall be in accordance with Section 2-09 of these Special Provisions.

7-08.5 Payment

Section 7-08.5 is revised as follows:

The Bid item "Plugging Existing Pipe" is deleted.

Section 7-08.5 is supplemented with the following:

"Removal and Replacement of Unsuitable Material", per cubic yard.

The unit Contract price per cubic yard for "Removal and Replacement of Unsuitable Material" shall include all costs for removal and disposal of unsuitable material below the pipe zone foundation, furnishing and installing backfill material below the pipe zone foundation, and compaction.

All costs associated with furnishing and installing permeable ballast material within the pipe zone foundation, including compaction, will be made under the applicable item shown in the Proposal.

Section 7-10 is added as follows:

7-10 Modular Wetland

7-10.1 Description

This Work consists of providing and installing a Modular Wetland stormwater biofiltration system in accordance with the Plans and these Specifications, in conformity with the lines and grades staked.

7-10.2 Materials

Each manufactured Modular Wetland shall consist of a concrete Structure constructed of concrete with a minimum 28 day compressive strength of 5,000 psi, with reinforcing per ASTM A 615 or ASTM A706, Grade 60, and supports and H20 loading as indicated by AASHTO. Each chamber shall have appropriate access hatches for easy maintenance and sized to allow removal of all internal components without disassembly. All water transfer system components shall conform with the following:

1. Filter netting shall be 100% Polyester with a number 16 sieve size, and strength tested per ASTM D 3787.
2. Drainage cells shall be manufactured of lightweight injection-molded plastic and have a minimum compressive strength test of 6,000 psi and a void area along the surface making contact with the filter media of 75% or greater. The cells shall be at least 2" in thickness and allow water to freely flow in all four directions.

Pretreatment Chamber Components:

1. Filter Cartridges shall have a minimum 35 square feet of surface area per cartridge. The filter media contained in the cartridge should be solid in state (not granular) with a void percentage of equal to or greater than 80% and be composed materials listed below.

Silicon dioxide	Si0	47%
Aluminum oxide	A1203	14%
Titanium oxide	TiOZ	1%
Ferrous oxide	FeO	8%
Calcium oxide	CaO	16%
Magnesium oxide	MgO	10%
Manganese oxide	MnO	1%
Sodium oxide	NA20	2%
Potassium oxide	K2°	1%

2. Drain Down System shall include a pervious floor that allows water to drain into the underdrain pipe that is connected to the discharge chamber.

Biofiltration Chamber Components:

1. Media shall consist of ceramic material produced by expanding and vitrifying select material in a rotary kiln. Media must be produced to meet the requirements of ASTM C330, ASTM C331, and AASHTO M195. Aggregates must have a minimum 24-hour water absorption of 10.5% mass. Media shall not contain any organic material. Flow through media shall be horizontal from the outer perimeter of the chamber toward the centralized and vertically extending underdrain. The retention time in the media shall be at least 3 minutes. Downward flow filters are not acceptable alternatives. The thickness of the media shall be at least 19" from influent end to effluent end. The loading rate on the media shall not exceed 1.1 gallons per minute per square foot surface area. Media must be contained within structure that spaces the surface of the media at least 2" from all vertically extending walls of the concrete structure.

Discharge Device:

1. The discharge device shall house a flow control orifice plate that restricts flows greater than designed treatment flow rate. All piping components shall be made of a high-density polyethylene.

7-10.3 Construction Requirements

General

The contractor shall furnish all labor, equipment, materials and incidentals required to install the Modular Wetland and appurtenances in accordance with the drawings and these specifications. The installation of the Modular Wetland shall conform to all applicable National, State, State Highway, municipal and local Specifications.

Installation

Grading and Excavation - Site shall be properly surveyed by a registered Professional Surveyor, and clearly marked with excavation limits and elevations. After site is marked it is the responsibility of the Contractor to contact local utility companies and/or DigAlert to check for underground utilities. All grading permits shall be approved by governing agencies before commencement of grading and excavation. Soil conditions shall be tested in accordance with the governing agencies requirements. All earth removed shall be transported, disposed, stored, and handled per governing agencies standards. It is the responsibility of the Contractor to install and maintain proper erosion control measures during grading and excavation operations.

Compaction – All soil shall be compacted per registered professional soils Engineer's recommendations prior to installation of Modular Wetland components.

Backfill shall be placed according to a registered professional soils Engineer's recommendations, and with a minimum of 6" of stockpiled CSBC under all concrete Structures.

Concrete Structures – After backfill has been inspected by the governing agency and approved the concrete Structures shall be lifted and placed in proper position per the Drawings.

Subsurface Flow Wetland Media shall be carefully loaded into area so not to damage the Wetland Liner or Water Transfer Systems. The entire wetland area shall be filled to a level 9 inches below finished surface.

Shipping, Storage and Handling

Shipping – Modular Wetlands shall be shipped to the Contractor's address or job site, and is the responsibility of the Contractor to offload the unit(s) and place in the exact site of installation.

Storage and Handling – The Contractor shall exercise care in the storage and handling of the Modular Wetland(s) and all components prior to and during installation. Any repair or replacement costs associated with events occurring after delivery is accepted and unloading has commenced shall be borne by the Contractor. The Modular Wetland(s) and all components shall always be stored indoors and transported inside the original shipping container until the unit(s) are ready to be installed. The Modular Wetland shall always be handled with care and lifted according to OSHA and NIOSA lifting recommendations and/or Contractor's workplace safety professional recommendations.

Maintenance and Inspection

Inspection – After installation, the Contractor shall demonstrate that the Modular Wetland has been properly installed at the correct location(s), elevations, and with appropriate components. All components associated with the Modular Wetland and its installation shall be subject to inspection by the Engineer at the place of installation. In addition, the Contractor shall demonstrate that the Modular Wetland has been installed per the manufacturer's Specifications and recommendations. All components shall be inspected by a qualified person once a year and results of inspection shall be kept in an inspection log.

Maintenance – The manufacturer recommends cleaning and debris removal maintenance of once a year and replacement of the Cartridge Filters as needed. The maintenance shall be preformed by someone qualified. A Maintenance Manual is available upon request from the manufacturer. The manual has detailed information regarding the maintenance of the Modular Wetland. A Maintenance/Inspection record shall be kept by the maintenance operator. The record shall include any maintenance activities preformed, amount and description of debris collected, and the condition of the filter.

Material Disposal - All debris, trash, organics, and sediments captured by the Modular Wetland shall be transported and disposed of at an approved facility for disposal in accordance with local and State requirements. Refer to State and local regulations for the proper disposal of toxic and non-toxic material.

7-10.4 Measurement

Modular Wetland of the type and size specified will be measured per each.

7-10.5 Payment

Payment will be made for the following Bid item when included in the Proposal:

"Modular Wetland ___ Ft. x ___ Ft.", per each.
The unit Contract price per each for "Modular Wetland ___ Ft. x ___ Ft." shall be full compensation to provide and install the Modular Wetland, including installation of hatches and manhole lids and placing and compacting stockpiled CSBC backfill and foundation pad. External connecting pipes will be paid under applicable Bid items included in the Proposal.

Payment for triaxial geogrid reinforcement and construction geotextile will be made under the applicable items shown in the Proposal.

All costs associated with furnishing and installing permeable ballast material within the drainage structure foundation, including compaction, will be made under the applicable item shown in the Proposal.

7-12 Valves for Water Mains

7-12.1 Description

Section 7-12.1 is supplemented with the following:

This Work consists of adjusting existing water valve boxes at locations shown in the Plans, or as directed by the Engineer.

7-12.3 Construction Requirements

Section 7-12.3 is supplemented with the following:

Existing water valve boxes shall be adjusted to the grade as staked or otherwise designated by the Engineer. The adjustment of the water valve box to grade by the use of riser rings is not allowed.

Removal operations shall be conducted to prevent damage to the existing water valve box. Any damage due to the Contractor's operations shall be repaired or replaced at the Contractor's expense and to the Engineer's satisfaction.

The Contractor shall conduct water valve box adjustments so that the fully-adjusted box allows the respective valve to be fully operational. The Contractor shall make the adjustment and remove all debris from the adjusted water valve box to ensure such operational condition.

7-12.4 Measurement

Section 7-12.4 is supplemented with the following:

Water valve box adjustment will be measured per each existing water valve box adjusted to finished grade.

7-12.5 Payment

Section 7-12.5 is supplemented with the following:

"Adjust Water Valve Box to Grade", per each.

The unit Contract price per each for "Adjust Water Valve Box to Grade" shall be full compensation to perform the Work as specified, including restoration of adjacent area directly surrounding the water valve box.

END OF DIVISION 7

Division 8
Miscellaneous Construction

8-01 Erosion Control and Water Pollution Control

8-01.1 Description

Section 8-01.1 is supplemented with the following:

This Work shall consist of preparing and implementing a Stormwater Pollution Prevention Plan (SWPPP).

8-01.3 Construction Requirements

8-01.3(1) General

Section 8-01.3(1) is supplemented with the following:

The Contractor shall delineate erosion control measures and BMPs for inspection and approval of the Engineer prior to commencement of any clearing, grubbing, and grading.

8-01.3(1)A Submittals

Section 8-01.3(1)A is supplemented with the following:

Prior to beginning Work, the Contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP) as part of the TESC Plan, meeting the requirements of the Washington State Department of Ecology's *2005 Stormwater Management Manual for Western Washington Volume II – Construction Stormwater Pollution Prevention*, and the Department of Ecology's *Construction Stormwater General Permit*. These documents are available here:

Stormwater Manual:
http://www.ecy.wa.gov/pubs/0510030.pdf

General Permit:
http://www.ecy.wa.gov/programs/wq/Stormwater/construction/resourcesguidance.html

The Contractor shall obtain the Engineer's approval of the SWPPP for implementation before any Work begins. The SWPPP shall cover all areas that the Contractor's Work may affect inside and outside the limits of the project, and shall include all necessary measures to comply with the Construction Stormwater General Permit's conditions.

The Contractor shall include a copy of the SWPPP document and subsequent SWPPP revisions made during the project in inspection documentation recorded by the ESC Lead.

8-01.3(1)F Stormwater Sampling

Section 8-01.3(1)F is added as follows:

Stormwater sampling shall be performed by the Contractor or authorized representative at the frequencies required in the Construction Stormwater General Permit (weekly at minimum). Samples shall be analyzed for turbidity and pH in accordance with the Construction Stormwater General Permit. Sampling shall be conducted in accordance with the EPA 180.1 analytical method and the Washington State Department of Ecology's *How to do Stormwater Monitoring: A guide for construction sites*, available online at http://www.ecy.wa.gov/pubs/0610020.pdf. Samples shall be taken at the point of discharge from the site. Reports of the sampling results shall be recorded in the project SWPPP and shall be submitted monthly to the Contracting Agency and the Washington State Department of Ecology. The DMR forms are mailed to permittees when permit coverage is granted for the project. If there are no discharges during the month, the Contractor is still required to submit a form stating "no discharge". The sampling results shall be submitted via mail to:

Department of Ecology
Water Quality Program - Construction Stormwater
PO Box 47696
Olympia, Washington 98504-7696

Ecology must receive DMR's within 15 days after the end of each month. If the permittee monitors more frequently than required by the permit, these results also need to be submitted in the DMR.

Corrective measures shall be taken if benchmark values are exceeded.

The key benchmark turbidity value is 25 nephelometric turbidity units (NTU) for the downstream receiving water body. If the 25 NTU benchmark is exceeded in any sample collected from the discharge point, the following steps will be conducted:

a. Ensure all BMPs specified in this SWPPP are installed and functioning as intended.

b. Assess whether additional BMPs should be implemented, and document modified BMPs in the SWPPP as necessary.

c. Sample discharge daily until the discharge is 25 NTU or lower.

If the turbidity exceeds 250 NTU at any time, the following steps will be conducted:

a. Notify Ecology by phone within 24 hours of analysis.

b. Continue sampling daily until the discharge is 25 NTU or lower Initiate additional treatment BMPs such as off-site treatment, infiltration, filtration and chemical treatment within 24 hours, and implement those additional treatment BMPs as soon as possible, but within a minimum of 7 days.

    1. Describe inspection results and remedial actions taken in the site log book and in monthly discharge monitoring reports.

Sampling and monitoring for pH will occur during the phase of construction when concrete pouring will be conducted until fully cured (3 weeks from pour). Samples will be collected weekly at all discharge points prior to discharge to surface water. Samples will be analyzed for pH using a calibrated pH meter and recorded in the site log book.

The key benchmark pH value for stormwater is a maximum of 8.0. If a pH greater than 8.0 is measured at a discharge point that has the potential to discharge to surface water, the following steps will be conducted:

a. Assess whether additional BMPs should be implemented and whether associated revisions to the SWPPP are necessary.

b. Stop (detain) all discharges from leaving the site and entering surface waters or storm drains if the pH is greater than 8.5.

c. Sample sedimentation pond the following day, and if the pH exceeds 8.0 for the second consecutive day, implement CO_2 sparging treatment.

d. Sample and measure pH daily until there are 3 consecutive pH measurements less than 8.0.

e. If there are 3 consecutive pH measurements greater than 8.0, notify the Washington Department of Ecology by phone within 24 hours of the 3rd measurement exceeding a pH of 8.0 and initiate discussions with Ecology regarding additional treatment BMPs.

f. Describe inspection results and remedial actions that are taken in the site log book and in monthly Discharge Monitoring Reports.

8-01.3(2) Temporary Seeding and Mulching

8-01.3(2)A Preparation for Application

Section 8-01.3(2)A is supplemented with the following:

In erosion control seed planting areas, the Subgrade shall be scarified to a depth of six (6) inches prior to receiving Topsoil Type A. The Contractor shall notify the Engineer of possible poor draining or heavily compacted soil conditions prior to proceeding with construction. All debris, including sticks, roots, and rocks larger than one (1) inch, shall be removed and disposed of off the project site before Topsoil Type A is placed.

Within erosion control seed planting areas, spread a minimum four (4) inch compacted depth of Topsoil Type A and scarify to a six (6) inch depth into Subgrade. Rake to a smooth, uniform finish grade and remove all rocks and debris larger than one (1) inch. Topsoil Type A shall not be placed when ground is frozen, excessively wet, or in the opinion of the Engineer, in a condition detrimental to the Work.

8-01.3(2)B Temporary Seeding

Section 8-01.3(2)B is supplemented with the following:

(September 3, 2019)
Grass seed shall be a commercially prepared mix, made up of low growing species which will grow without irrigation at the project location, and approved by the Engineer. The application rate shall be two pounds per 1000 square feet. Fertilizer shall be a commercially prepared mix of 10-20-20 and shall be applied at the rate of 10 pounds per 1000 square feet.

8-01.4 Measurement

8-01.4(2) Item Bids

Section 8-01.4(2) is supplement with the following:

Temporary seeding will be measured by the square yard by ground slope measurement.

8-01.5 Payment

8-01.5(2) Item Bids

Section 8-01.5(2) is supplement with the following:

"Temporary Seeding", per square yard.

"Erosion and Water Pollution Control", per lump sum, shall be full pay for all Work and materials necessary to develop and implement the SWPPP and achieve the runoff turbidity and pH levels compliant with the identified benchmarks and permit requirements, as approved by the Engineer. All erosion control measures are included in "Erosion and Water Pollution Control", per lump sum, except as otherwise noted in the Contract Documents.

8-02 Roadside Restoration

8-02.1 Description

Section 8-02.1 is supplemented with the following:

This Work consists of furnishing and installing tree grates and frames in accordance with the Plans and these Specifications at the locations staked.

8-02.2 Materials

Section 8-02.2 is supplement with the following:

Root Barrier	9-14.9

8-02.3 Construction Requirements

8-02.3(1) Responsibility During Construction

Section 8-02.3(1) is supplemented with the following:

Landscape construction is anticipated to begin after all curbs, pathways and associated Work is completed.

The Contractor shall report to the Engineer all deviation and/or conflicts between Contract Documents and site conditions. Extra Work arising from failure to do so shall be done at the Contractor's expense.

The Contractor is responsible for protection of plant materials during unsuitable weather conditions as determined by the Engineer. Unsuitable weather conditions may include freezing weather, high winds, and heavy rains.

The Contractor is responsible for ensuring positive drainage in all landscape areas.

Landscape materials shall not be installed until weather permits and installation has been authorized by the Engineer.

8-02.3(2) Work Plans

8-02.3(2)A Roadside Work Plan

Section 8-02.3(2)A is supplemented with the following:

Twelve weeks prior to installation of plantings, the Contractor shall submit written documentation to the Engineer that all specified plant materials have been ordered. Documentation shall include a list of suppliers' names, addresses, and phone numbers along with a list of respective growing or storage locations with addresses.

Plant Photographs

Include color photographs in digital or 3- by 5-inch print format of each required species and size of plant material as it will be furnished to the project. Take photographs from an angle depicting true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph. For species where more than 45 plants are required, include a minimum of three photographs showing the average plant, the best quality plant, and the worst quality plant to be furnished. Identify each photograph with the full scientific name of the plant, plant size, and name of the growing nursery.

The Contractor shall provide all plants of the size, species, variety, and quality noted and specified. If unavailable, the Contractor shall notify the Engineer in writing immediately and provide the names and telephone numbers of five (5) nursery suppliers that have been contacted. If substitution should be permitted, it can be made only with the prior written approval of the Engineer.

8-02.3(4) Topsoil

The last sentence of the first paragraph of Section 8-02.3(4) is deleted and replaced with the following:

After the topsoil has been spread, all large clods, hard lumps and rocks one (1) inch in diameter and larger, and litter shall be raked up, removed, and disposed of by the Contractor.

8-02.3(5) Roadside Seeding, Lawn and Planting Area Preparation

8-02.3(5)C Planting Area Preparation

The third paragraph of Section 8-02.3(5)C deleted and replaced with the following:

All excess material and debris, stumps, and rocks larger than one (1) inch, shall be removed and disposed of off the project site or as approved by the Engineer prior to placement of Topsoil Type A.

8-02.3(6) Mulch and Amendments

8-02.3(6)B Fertilizers

Section 8-02.3(6)B is supplemented with the following:

(September 3, 2019)

Fertilizer shall be a commercially prepared mix of 10-20-20 and shall be applied at the rate of 10 pounds per 1000 square feet.

8-02.3(8) Planting

Section 8-02.3(8) is supplemented with the following:

Trees adjacent to Roadways shall be sited such that the lowest major branches are located parallel with traffic flow. During installation, the Contractor shall notify the Engineer of any conditions that may be harmful to plant life, such as but not limited to poor drainage or hazardous materials.

8-02.3(8)C Pruning, Staking, Guying, and Wrapping

Section 8-02.3(8)C 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.

8-02.3(9) Seeding, Fertilizing, and Mulching

8-02.3(9)B Seeding and Fertilizing

Section 8-02.3(9)B is supplemented with the following:

(September 3, 2019)

Grass seed shall be a commercially prepared mix, made up of low growing species which will grow without irrigation at the project location, and accepted by the Engineer. The application rate shall be two pounds per 1000 square feet.

8-02.3(17) Property Restoration

Section 8-02.3(17) is added as follows:

The Contractor must blend the new construction into developed private property adjacent to the project using similar materials to those existing, (e.g. seeding must be used to match into lawn areas, bark mulch must be used to match into planting areas, planting soil must be used to match into garden areas, etc.)

If the items used for the restoration have pay items in the Contract, they will be paid under those items.

If restoration of adjacent property requires use of materials that have no pay items, payment will be by force account under the item "Property Restoration."

The Contractor must repair and restore any existing irrigation system damaged by construction, as directed by Engineer.

The Contractor must verify, in the presence of the adjacent property owner and Engineer, operation, location, and existing water pressure capabilities and continuity of the existing private irrigation system prior to excavation and removal.

Property restoration shall consist of restoring existing landscape areas, walkways, retaining and fence support walls of various types, miscellaneous construction associated with adjacent private property restoration, including irrigation systems and roof downspout drains and outfalls, to their original condition, as directed by the Engineer.

8-02.3(18) Root Barrier

Section 8-02.3(18) is added as follows:

Work shall consist of providing and installing root barriers per the manufacturer's recommendations where indicated in the Plans.

8-02.3(19) Tree Grate and Frame

Section 8-02.3(19) is added as follows:

Tree grates and frames shall be constructed as detailed in the Plans.

The Contractor shall supply tree grates with the pattern detailed in the Plans, or an approved equal. Any pattern to be supplied not matching the pattern detailed in the Plans shall be approved by the Engineer **prior** to installation.

8-02.4 Measurement

Section 8-02.4 is supplemented with the following:

Root barrier will be measured by the linear foot. The measurement in the bid item name indicates the height of the root barrier to be installed.

Tree grate and frame will be measured per each.

8-02.5 Payment

Section 8-02.5 is supplemented with the following:

"Property Restoration", by force account.

Payment for "Property Restoration" shall be by force account as described in Section 1-09.6 of the Standard Specifications and no other compensation will be allowed.

For the purpose of providing a common Bid Proposal for all Bidders and for that purpose only, the estimated cost of this Bid item has been arbitrarily entered in the Proposal to become part of the total Bid by the Contractor.

"Root Barrier - __ In.", per linear foot.
The unit Contract price per linear foot for "Root Barrier - __ In." shall be full pay for all labor, equipment, materials, tools, and incidentals necessary to perform the Work.

"Tree Grate and Frame", per each.
The unit Contract price for "Tree Grate and Frame", per each shall be full pay for all costs necessary for performing the Work, including furnishing and installing the grate, frame and steel reinforcing materials; furnishing, placing, and compacting the pea gravel.

8-03 Irrigation Systems

8-03.1 Description

Section 8-03.1 is supplemented with the following:

This Work consists of designing, furnishing, and installing an irrigation system complete and ready for use in all new planting areas in accordance with these Specifications and as shown in the Plans, or as approved by the Engineer.

8-03.2 Materials

Section 8-03.2 is supplemented with the following:

Copper Wire
Any necessary copper piping shall be Type K copper and shall conform to industry standards and be in conformance with applicable ASTM or ANSI standards.

Brass Pipe
Any necessary brass pipe and fittings shall conform to industry standards and be in conformance with applicable ASTM or ANSI standards.

Plastic Pipe
Polyvinyl Chloride (PVC) pipe (mainline) upstream of the control valves (mainlines) shall be Schedule 40 or and shall conform to all requirements of ASTM D1785, Standard Specification for PVC Plastic Pipe, Schedules 40, 80, and 120. Mainlines shall be 1-1/2" O.D.

PVC pipe (zone lines) downstream of the control valves (laterals) shall be Class 200 or better and shall conform to all requirements of ASTM D1785. Laterals shall be 3/4" O.D. minimum size.

All PVC pipe shall be marked with the manufacturer's name, class of pipe, and NSF seal. Pipe shall bear no evidence of interior or exterior extrusion marks. Pipe walls shall be uniform, smooth, and glossy. Pipe may be pre-belled or with individual solvent-weld couplings.

All PVC fittings shall be of the solvent weld type except where risers, valves, etc., require threaded transition fittings. All fittings shall conform to the requirements of ASTM D2466, Standard Specification for PVC Plastic Pipe Fittings, Schedule 40. All threaded PVC tees, fittings, adaptors, and nipples shall be Schedule 80 or better.

All PVC pipe must be delivered in at least twenty foot (20') lengths. All PVC pipes and fittings for swing joints shall conform to all requirements of ASTM D3139, Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.

Sleeves required for main and lateral lines located under pedestrian paving shall be minimum 4" minimum O.D. Schedule 40 PVC, or sized as necessary to accommodate wires, laterals, and mainlines. Sleeves under Roadways (parking lots and isles) where heavy vehicular traffic is anticipated shall be ductile iron pipe, with the inside diameter (I.D.) of the sleeve shall be at least 1 inch greater than the outside diameter (O.D.) of the total inserted pipes. All wiring shall be in separate conduit within the iron pipe.

Use Teflon tape on all threaded fittings.

Spray Heads

Tree grate wells shall be irrigated with bubbler nozzles with nozzles set flush with the surface elevation of pea gravel in tree wells and mounted on PVC risers. Two bubbler heads shall be provided for each tree well, placed near opposite corners of the tree well. Bubblers for tree wells shall be on separate individual zones and not tied to other spray irrigation in other zones and all nozzles in tree well bubbler zones shall be matched. Bubblers for tree wells shall be Rain Bird® 1804 Pressure Compensating Full Circle Bubblers (or equal).

Control Valves

Control Valves shall be Rain Bird® PEB-PRS (or equal) sized to provide optimal operating pressure and zoned to allow for segregation of planting areas of differing sun exposure, heat gain, and maintenance areas.

Automatic Irrigation Controller Assembly

The controller shall have a base station capacity of 8 or 12 stations as well as three expansion slots capable of receiving station modules.

Each module shall be capable of receiving expansion modules of 4, 8, or 12 stations to create a controller capacity of up to 48 stations. Modules shall be hot swappable and can be installed while in operation with the dial in any position and in any open module.

Include provision of a for mounted monitoring rainfall sensor at each controller location.

The controllers shall be provided with a metal lockable cabinet and pedestal.

Control Wire for Automatic Control Valves

Control wire shall be insulated single strand copper designed for twenty (20) to fifty (50) volts and UL approved as Type U.F. (Underground Feeder). The UL and U.F. designations shall be clearly marked or indented on the insulation jacket of the wire.

Expansion curls shall be provided within three (3) feet of each wire connection to solenoid and at least every three hundred (300) feet in length of control wire length. Expansion curls are formed by wrapping at least 5 turns of control wire around a rod or pipe 1" or more in diameter. Withdraw the rod or pipe once curls are formed.

Copper conductors must meet or exceed ASTM B3, Standard Specification for Soft or Annealed Copper Wire, requirements.

Quick Coupling Valves

Shall be one inch (1"), all brass, and one or two piece bodies with locking brass tops and have galvanized steel swing joints as shown in the Plans. Provide five (5) operating keys and hose swivels.

Quick coupler valve (QCV) for use of compressed air for winterizing shall be 1" all brass, two piece bodies with locking brass tops. Provide one (1) operating key.

Shall be of the same type and manufacture of any QCVs existing on the site (if existing) and/or shall have a 1" outlet, single lug 2-piece with locking lid and matching key. All quick coupling valves shall be installed in a 10" diameter valve box.

Manual Valves

Gate valves 2" and larger shall be flanged, iron body, brass trimmed, resilient double disc wedge, and integral taper seats with non-rising stem and square actuator. All gate valves shall be Class 150 with a minimum 150 PSI - 300 WOG.

Curb or Gate Valves one and one half inches (1½") and smaller shall be all bronze construction with 'tee' handle, 175 PSI water working pressure.

Stop and Waste Valves shall be all bronze construction, 175 PSI water working pressure.

Valve Boxes

Automatic control valves shall be enclosed in valve boxes of HDPE or polyolefin and fibrous material (preferably recycled material) with locking lids. The bottom section is to be slotted so as to extend below the pipe. Extensions shall be added as required to meet grades per the Plans. Automatic control valves shall read ACV, master valve boxes shall read MV, gate valves shall read GV, etc.

Drain valves and individual gate valves shall be enclosed in a Cast Iron Roadway Box with bottom, top, and lid, sized and extensions, as required. Lid shall have the word "water" printed on it.

Provide two (2) sets of all keys required for valves, valve box covers, and protective sleeve covers unless otherwise noted.

Backflow Prevention Devices

For each point of connection, a backflow prevention device shall meet the requirements specified in Section 9-30.16 of The Standard Specifications. Proper drainage shall be provided at all backflow prevention devices. Drainage problems shall be brought to the attention of the Contracting Agency at the time of system layout.

Manufacturer must be on the "Approved Cross Connection Control Devices" list of the Washington State Department of Social and Health Services for that size device.

Devices shall be type and size to insure complete system operation.

Other Supplies

Electrical tape shall be black plastic, three-quarters inch (3/4") wide and a minimum of 0.007 inches thick and the all-weather type.

Teflon tape shall be used for all threaded connections. Tape shall be set back a minimum of one-quarter inch (1/4") into the pipe threading.

Pressure gages for the pressure reducing valve assembly shall be liquid-filled with one quarter inch (1/4") gage cock attached.

Encapsulate all splices with waterproof splice kit.

Identification

Underground Plastic Line Marker: Permanent, bright-colored, continuous-printed plasticized aluminum tape, intended for direct-burial service; not less than 3" wide x 5 mils thick and shall be placed directly over mainlines at 6" below finished grade. Provide blue tape with black printing reading "CAUTION IRRIGATION LINE BURIED BELOW". Line Tec. Inc., PO Box 67, Glen Ellyn, IL 60138. Detectable Marking Tape; Allen Systems, P.O. Box 33569, Houston, TX 77233 (713) 943-7213, (800) 231-2077; or Magnatec by Thor Enterprises, Inc. P.O. Box 450, Sun Prairie, WI 53590.

8-03.3 Construction Requirements

Section 8-03.3 is supplemented with the following:

Contractor-Designed Irrigation System

The Contractor shall design the irrigation system in accordance with these Specifications. All irrigation design Work by the Contractor shall be reviewed and approved by the Engineer and Contracting Agency prior to construction. All Working Drawings shall be prepared in accordance with Section 6-01.9 and include all necessary information (such as psi, gpm, pipe sizes, sleeving size and location, valve schedule, quick connect locations, utility locations, etc.) for a complete design review. The Contractor shall submit two (2) hardcopies of the Working Drawings to the Engineer for review. Minimum Working Drawing scale shall be 1"-20' unless otherwise approved by the Engineer.

Any item of labor, material or equipment not specified or shown in detail in the Working Drawings, but incidental to or necessary for the complete installation and proper operation of the system, shall be furnished by the Contractor without additional cost to the Contracting Agency.

The underground irrigation system shall be designed and constructed using components, valves, piping, fittings, wiring, etc., of sizes and types as called for in these Specifications.

The system shall be constructed to proposed grades and conform to the site Landscape Plan.

All system components shall be installed pursuant to the written specifications and applicable construction details of the product manufacturer.

Layout of Irrigation System

Stake the sprinkler irrigation system following the submittal and approval of the Contractor design before the construction begins. Alterations and changes in the layout may be expected in order to conform to the ground conditions and to obtain full and adequate coverage of water. It is understood that corrective measures in the system may become necessary, but no changes or alterations in the system as planned shall be made without the prior authorization of the Contracting Agency.

Before starting Work, determine that Work may proceed without disruption of activities of other trades.

The Contractor shall carefully check grades to ensure that the area is ready to begin Work.

The Contractor is responsible for taking all reasonable investigative actions and precautions when working around all utility systems.

The pressure variation within each zone from the first to the last head must not exceed 15%.

Trenching

Exercise care when excavating trenches near any existing trees. Where roots are two inches (2") and greater in diameter, hand excavate and tunnel. When large roots are exposed, wrap with heavy burlap for protection and prevent excessive drying. Trenches dug by machines adjacent to trees having roots two inches (2") and less in diameter shall have the sides hand trimmed making a clean cut of the roots. Trenches having exposed tree roots shall be back-filled within twenty-four (24) hours unless adequately protected with moist burlap or canvas.

The top six inches (6") of soil shall be kept separate from subsoil and shall be replaced as the top layer when backfill is made.

Trenches shall be excavated for all pipe to provide the minimum depth of cover below finish grade of 24" for live lines (mains), and 18" for laterals and all others, no wider at any point than is necessary to lay the pipe or install equipment. Trenches shall be excavated with vertical sides. Locate outside of paved areas wherever possible.

Shallow trenches for in-line drip tubing (dripperline) shall be between four to six inches (4" - 6") deep within the finished grade of topsoil.

Materials unsuitable for bedding of pipe to be removed to a depth 4" below trench bottom, and replaced with suitable bedding material as directed by the Engineer. Suitable bedding material shall be: excavated trench material, free from rocks, roots, sticks, debris, or other sharp objects over one inch in diameter; or sand, as required.

All trenches must be straight, with appropriate pipe-fittings used to allow pipe to be laid without undue bending and not have abrupt changes in grade.

The trench bottom must be free of rocks or sharp-edged objects.

The use of an underground vibratory plow or similar device to pull pipe will not be permitted.

The QCV at the point of connection shall be used to purge each irrigation system of water using a suitably sized air compressor.

Spray Heads

Bubbler nozzles in tree grate wells shall be installed flush with the surface elevation of pea gravel and mounted on PVC risers.

All piping must be thoroughly flushed prior to the installation of sprinklers and nozzles. Large zones will require progressive flushing.

PVC Pipe and Fittings

The Contractor shall exercise care in handling, loading, unloading and storing to avoid damage. The pipe and fittings shall be stored under cover, and shall be transported in a vehicle with a bed long enough to allow the length of pipe to lay flat, so as not to be subject to undue bending or concentrated external load at any point. Any pipe that has been dented or damaged shall be discarded until such damage has been cut out and the pipe is rejoined with a coupling.

PVC pipe ends shall be cut to ninety (90) degrees to the pipe length and cleaned of all cutting burrs prior to cementing. Use approved reaming tool. Pipe ends shall be wiped clean with a rag and lightly wetted with PVC primer. Cement shall be applied with a light coat on the inside of the fitting and heavier coat on the outside of the pipe. Pipe shall be inserted into the fitting and given a quarter turn to seat the cement. Excess cement shall be wiped from the outside of the pipe. Pipe will be tested as indicated elsewhere in these specifications. No back filling will be permitted other than at the centers of pipe lengths until the pressure test is completed.

Appropriate primer shall be used with solvent glue. Solvent welded joints shall be given at least fifteen (15) minutes set-up time before moving or handling. Pipe shall be partially center loaded to prevent arching and slipping. No water shall be permitted in pipe until a period of at least ten (10) hours has elapsed for solvent weld setting and curing.

Before pressure testing, soluble weld joints shall be given at least twenty-four (24) hours curing time.

No PVC pipe may be threaded or connected to a threaded fitting without an adapter. Use Teflon tape on all male threads.

Great care must be taken to insure that the inside of the pipe is absolutely clean. Any pipe ends not being worked on must be protected and not left open.

Pipe size for laterals shall be sized according to industry standard PSI/100 pipe sizes.

Brass Pipe and Fittings

Brass pipe shall be installed in accordance with the local Plumbing Code.

Teflon tape all male threads to prevent leaks and corrosion.

Wrap all brass pipes with black PVC tape where they pass through grouted openings in concrete vaults.

Control Wiring

Control wires shall be taped together at five (5) foot intervals with black electrical tape, then this bundle shall be taped to the bottom of the supply lines at ten foot (10') intervals with at least three (3) wraps of electrical tape. A bare copper wire (#14 or greater) shall be installed on top of the PVC supply line for future detection with the wire ends clearly exposed in the valve boxes.

Tie a loose twenty-four inch (24") long loop in all wiring at changes of direction greater than 30 degrees. Untie all loops after all connections have been made.

Splices shall be permitted only at junction boxes, valve boxes, or at control equipment and never between valves or valve and controller. A minimum of 24 inches of excess conductor shall be left at all splices, terminal and control valves to facilitate inspection and future splicing. All splices must be encapsulated with sealant in approved splice kit. Splice kit shall be a water-proof wire splice.

One unconnected spare orange control wire (one spare wire for each 5 valves) is to be run from the controller through each intermediate control valve box. Provide a twenty-four inch (24") long, tight loop in each box. Where control valves run in opposite directions from the controller, run a separate spare wire in each direction.

A schedule diagram shall be posted in the controller to facilitate the selection of the valves to be operated.

Location and type of monitoring of controllers shall be directed by the Engineer or as shown in the Plans.

Minimum size of wire is to be determined by the following chart:

No. of	Maximum Length of Common Wire			
Valves	500'	1000'	2000'	3000'
1	14	14	14	14
2	14	14	14	10
3	14	14	10	8
4	14	14	10	8
5	14	10	8	6
6	14	10	6	6
7	14	8	6	4
8	14	8	6	4
9	14	8	4	4
10	10	6	4	2
11+	10	6	4	-

New control wires shall be color coded as follows:

Neutral or common wire - White.
Lead-in wire - Black.
Extra wire – Orange

Control wires shall be installed in 1½ inch minimum PVC Schedule 40 sleeve under all paved areas.

Sleeves

Trenches located under areas new paving shall have sleeves installed by Contractor before base and paving material is installed. Sleeves shall extend 12" beyond the pavement on each side and be staked in the field and demarcated on as-built plans for location. Trenches shall be backfilled with sand (6 inches above and 4 inches below the pipe) and compacted in layers to 95% compaction, using manual or mechanical tamping devices. Trenches for piping shall be compacted to equal the compaction of the existing adjacent undisturbed soil and shall be left in firm unyielding condition. All trenches shall be left flush with the adjoining grade. The

Contractor shall set in-place, cap and pressure test all piping under paving prior to paving Work.

Automatic Controllers
Install irrigation controllers per manufacturer's Specifications.

Electrical wiring (120 V.A.C.) shall be installed according to local code. A licensed electrician must perform hard wiring of controller, and the Work must be permitted per local jurisdiction requirements. The cost of all electrical Work necessary to make the automatic equipment operate properly shall be included in the Contract.

The Engineer shall direct final location and type of mounting of controllers.

A diagram of schedule shall be posted in the controller to facilitate the selection of the valves to be operated.

Install any existing decoders, transmitters, and all control equipment in controller housing per manufacturer's Specifications.

Double Check Valve Back-Flow Prevention Device
Install the Double Check Valve Assemblies (DVCAs) in accordance with local plumbing code to provide one DVCA per point of connection.

For proper maintenance, the Double Check Valve Assembly shall be located with sufficient clearance from other site features and away from traffic patterns.

The Double Check Valve Assembly shall be installed in a specified and approved vault.

Drain valves shall be installed in accordance with current local plumbing codes.

Once installed, the DCVA must be tested by the local water jurisdiction.

Quick Couplers
Quick coupling valves shall be installed in a 10" diameter valve box at the end of each mainline run and near the DVCA.

Automatic Control Valves
Install per manufactures Specifications to insure proper system operation.

Before installation of any automatic valves, the supply line must be thoroughly flushed.

All automatic valves shall be enclosed in valve boxes with valve box extensions as required.

Service Connection
Install per City of Stanwood Standard Detail W-3.

Backfilling
Backfilling shall be done when pipe is not in an expanded condition due to heat or pressure. Cooling of the pipe can be accomplished by operating the system for a short time before backfill, or by backfilling in the early part of the morning before the heat of the day.

In refilling the trenches, the fill around, 4 inches below, and 6 inches above the pipe and fittings shall be suitable bedding material or sand, as required, and tamped. The remainder of the backfill shall contain no lumps or rocks larger than three inches. A six inch separation is required between all pipes when more than one pipe occupies the trench. If no sodding is required, the top 6 inches of backfill shall be replaced by topsoil where it exists (free of rocks over one inch, subsoil, or trash) or selected fill soil or sand if soil conditions are rocky.

All roots, rocks, and surplus excavation shall be removed from the site unless otherwise directed. Any turf areas buried under ditch excavation shall be raked clean of any excavated material.

Trenches under roads or paved areas shall be backfilled and tamped with a mechanical tamper in successive six inch (6") lifts. Paving shall be replaced to the satisfaction of the Engineer.

Prior to completing backfill, place detection tape 6 inches below finished grades and directly above the installed lateral and supply mains for future line detection. Provide extra length to clearly expose ends in the valve boxes.

Before complete back-filling, all underground appurtenances including risers, valves, double check valve assembly, drain valves, and joints must remain exposed so that they can be viewed during testing and located "as-built" by the Contracting Agency. It is suggested that the Contractor partially backfill the pipe as it is laid, leaving all joints exposed; then complete back-filling later after flushing, pressure testing, inspection, and "record drawing" location. The location, inspecting, and testing provisions of these Specifications will be strictly adhered to. If, for any reason, any part of the sprinkler system is back-filled before approved location, testing, or inspection is authorized, it must be completely uncovered and exposed until approved for back-filling by the Engineer.

Coverage Test

Before the irrigation system will be accepted, the Contractor, in the presence of the Engineer, shall perform a water coverage test for each zone of the system. The Contractor shall be responsible to add or change the system components at discretion of the Engineer in order to obtain adequate coverage for survival of new landscape plantings. The Contractor shall be required to add, adjust, and/or replace existing heads, nozzles or new dripperlines to meet this requirement. The Contractor shall accomplish the following: complete all Work including balancing and adjusting the system (pressure reducing valves, flow adjustments, etc.) to provide optimum coverage.

Notify the Contracting Agency at least forty eight (48) hours in advance of the coverage test.

8-03.5 Payment

Section 8-03.5 is supplemented with the following:

"Irrigation System Complete", lump sum.

The lump sum Contract price for "Irrigation System Complete" shall be full compensation for all costs incurred by the Contractor in providing a complete irrigation system as specified, including furnishing all materials necessary for a complete design and installation, including wire, sleeves, pipe, valves, fittings, heads, nozzles, controller, back-flow prevention device, and all appurtenances related thereto. Included shall be all labor of design and installation,

including trenching, plumbing, back-filling, irrigation, electrical Work, adjustments, and all other items of labor necessary for a satisfactory operating system.

8-04 Curbs, Gutters, and Spillways

8-04.3 Construction Requirements

8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways

Section 8-04.3(1) is supplement with the following:

Cement concrete drain curb cuts shall be construction in accordance with the details show in the Plans.

8-04.4 Measurement

Section 8-04.4 is supplement with the following:

Cement concrete drain curb cut will be measured per each.

8-04.5 Payment

Section 8-04.5 is supplement with the following:

"Cement Conc. Drain Curb Cut", per each.

The unit Contract price per each for "Cement Conc. Drain Curb Cut" shall be full payment for all costs for the specified Work, including furnishing and installing streambed cobbles.

8-14 Cement Concrete Sidewalks

8-14.3 Construction Requirements

Section 8-14.3 is supplemented with the following:

(October 3, 2022)

The Contractor shall request a pre-construction meeting with the Engineer to be held two to five working days before any work can start on cement concrete sidewalks, curb ramps or other pedestrian access routes to discuss construction requirements. Those attending shall include:

1. The Contractor and subcontractor in charge of constructing forms, and placing, and finishing the cement concrete.

2. Engineer (or representative) and Project Inspectors for the cement concrete sidewalk, curb ramp or pedestrian access route Work.

Items to be discussed in this meeting shall include, at a minimum, the following:

1. Slopes shown on the Plans.

2. Inspection

3. Traffic control

4. Pedestrian control, access routes and delineation

5. Accommodating utilities

6. Form work

7. Installation of detectable warning surfaces

8. Contractor ADA survey and ADA Feature as-built requirements

9. Cold Weather Protection

(January 7, 2019)
Timing Restrictions
Curb ramps shall be constructed on one leg of the intersection at a time. The curb ramps shall be completed and open to traffic within five calendar days before construction can begin on another leg of the intersection unless otherwise allowed by the Engineer.

Unless otherwise allowed by the Engineer, the five calendar day time restriction begins when an existing curb ramp for the quadrant or traffic island/median is closed to pedestrian use and ends when the quadrant or traffic island/median is fully functional and open for pedestrian access.

(January 7, 2019)
Layout and Conformance to Grades
Using the information provided in the Contract documents, the Contractor shall lay out, grade, and form each new curb ramp, sidewalk, and curb and gutter.

8-14.4 Measurement

Section 8-14.4 is supplemented with the following:

Cement concrete curb ramps will be measured by the square yard of completed curb ramp installed includes the installation of the detectable warning surface.

8-14.5 Payment

Section 8-14.5 is supplemented with the following:

"Cement Conc. Curb Ramp Type _____", per square yard.
The unit Contract price per square yard for "Cement Conc. Curb Ramp Type _____" shall be full pay for installing the curb ramp as specified, including the installation of the detectable warning surface.

Payment for "Cement Conc. Sidewalk" and "Cement Conc. Curb Ramp Type ___" as specified shall be contingent on the Contractor certifying that all slopes, lines and grades comply with Contract Documents in provided and accepted documentation. All Work not in compliance with Contract Documents shall be considered defective and all costs associated with removing or replacing defective Work shall be the Contractor's responsibility in accordance with Section 1-05.7.

Payment for documentation requirements as specified shall be considered as incidental to the "Cement Conc. Sidewalk" and "Cement Conc. Curb Ramp Type ___" Bid items.

8-20 Illumination, Traffic Signal Systems, Intelligent Transportation Systems, and Electrical

8-20.2 Materials

8-20.2 (9-29.1) Conduit, Innerduct, and Outerduct

8-20.2 (9-29.1(11) Foam Conduit Sealant
Section 9-29.1(11) is supplemented with the following:

(January 7, 2019)
The following products are accepted for use as foam conduit sealant:

- CRC Minimal Expansion Foam (No. 14077)
- Polywater FST Foam Duct Sealant
- Superior Industries Foam Seal
- Todol Duo Fill 400

8-20.20 (9-29.2) Junction Boxes, Cable Vaults, and Pull Boxes
Section 9-29.2 is supplemented with the following:

(September 3, 2019)
Slip-Resistant Surfacing for Junction Boxes, Cable Vaults, and Pull Boxes
Where slip-resistant junction boxes, cable vaults, or pull boxes are required, each box or vault shall have slip-resistant surfacing material applied to the steel lid and frame of the box or vault. Where the exposed portion of the frame is ½ inch wide or less, slip-resistant surfacing material may be omitted from that portion of the frame.

Slip-resistant surfacing material shall be identified with a permanent marking on the underside of each box or vault lid where it is applied. The permanent marking shall be formed with a mild steel weld bead, with a line thickness of at least 1/8 inch. The marking shall include a two character identification code for the type of material used and the year of manufacture or application. The following materials are approved for application as slip-resistant material, and shall use the associated identification codes:

1. Harsco Industrial IKG, Mebac #1 - Steel: **M1**

2. W. S. Molnar Co., SlipNOT Grade 3 – Coarse: **S3**

3. Thermion, SafTrax TH604 Grade #1 – Coarse: **T1**

8-20.2 (9-26.6) Light And Signal Standards
Section 9-29.6 is supplemented with the following:

8-20.2 (9-29.6(5) Foundation Hardware
Section 9-29.6(5) is supplemented with the following:

(January 13, 2021)

Anchor bolt assemblies for light standards installed on top of barrier (median barrier mount) shall consist of the following:

- (4) 1-inch diameter threaded rods (bolts), minimum 36 inches in length
- (24) heavy hex nuts, six per anchor rod
- (24) flat washers, six per anchor rod
- Two anchor plates

Each anchor plate shall be constructed from 1/2" ASTM A36 plate and hot-dip galvanized in accordance with AASHTO M111. Each anchor plate shall be ring shaped, with an outside diameter of 16 inches and an inside diameter of 12 inches. Each anchor plate shall have four 1 1/8" diameter holes on a 13.89" bolt circle, with the holes positioned to match the anchor rod layout shown in the Standard Plans.

Anchor rods shall extend a minimum of five inches and a maximum of six inches above the top of the traffic barrier. The lower anchor plate shall be embedded 29 inches below the top of the traffic barrier. Each anchor plate shall be clamped with a heavy hex nut and washer above and below the anchor plate. The lower heavy hex nut for the pole base plate shall be no more than one inch from the top of the traffic barrier.

8-20.5 Payment

Section 8-20.5 is supplemented with the following:

"Illumination System – Complete", per lump sum.
The lump sum Contract price for "Illumination System – Complete" shall be full compensation for the costs of all tools, equipment, materials, and labor necessary or incidental to provide a complete and operational illumination system, including but not limited to: removal and salvage of the existing system, conduits, wiring, junction boxes, luminaires, luminaire poles, and foundations, service cabinet, modification to existing service cabinet, protection and maintenance or replacement of conduit as necessary to facilitate other Work activities in the Contract, all required submittals, and all other Work as specified and shown in the Plans.

8-24 Rock and Gravity Block Wall and Gabion Cribbing

8-24.1 Description

Section 8-24.1 is supplemented with the following:

This Work consists of designing, furnishing, and installing cement concrete modular block wall units to form a **non-reinforced modular block wall system** as indicated in the Plans and as specified herein.

8-24.2 Materials

Section 8-24.2 is supplemented with the following:

Gravel Backfill for Drains	9-03.12(4)
Gravel Backfill for Walls	9-03.12(2)
Perforated PVC Underdrain Pipe	9-05.2(6)

The face of the modular block wall shall offer a rock-face type appearance. Modular block units shall be gray in color. Each modular block shall be the same type, size, and color.

Width = 18 inch (minimum) – parallel to the wall Working line
Depth = 12 inch (minimum) – perpendicular to the wall Working line
Height = 8 inch (minimum)

Modular block units shall be interlocked as to provide a maximum one (1) inch setback per each course of wall height (1:8 batter). Interlocking shall consist of concrete shear keys or non-corrosive polyester/fiberglass or polyethylene solid pins. Interlocking material shall be per the recommendation of the manufacturer of the modular block wall system proposed for use by the Contractor, as approved by the Engineer.

8-24.3 Construction Requirements

Section 8-24.3 is supplemented with the following:

Modular Block Walls

Modular block walls shall be of the type not requiring reinforcement, with a maximum height of four (4) feet. The Contractor shall make arrangements to purchase the modular block wall components from a source capable of providing materials meeting these Specifications.

Submittals

The Contractor shall submit catalog cuts of the modular blocks and Shop Drawings of the wall layout for approval prior to beginning the Work, and submit a sample of each different unit for approval by the Engineer.

Installation shall conform to the manufacturers recommendations for the type of modular block wall system furnished.

Provide copies of the manufacturer's installation instructions at least two (2) weeks prior to beginning the Work. Should a conflict arise between these Specifications and the manufacturer's instructions, the more rigorous Specification shall apply.

Installation

The leveling pad (wall footing) shall be embedded below finish grade a minimum of one (1) foot. The wall foundation shall be the two (2) feet below the wall footing, as detailed in the Plans.

Place, level, and compact the leveling pad and wall foundation materials. Compact the materials per acceptable compaction methods. Material shall be placed so as to provide a level surface on which to place the first course of concrete wall face units. The leveling pad shall be prepared to ensure complete contact of retaining wall unit with base.

First course of concrete wall face units shall be placed on the base leveling pad. **The units shall be checked for level and alignment**. The first course is the most important to ensure accurate and acceptable results.

Units are placed side by side for full length of wall alignment, accounting for exact location of curves, corners, and vertical/horizontal steps. Begin laying wall units at the lowest point of the wall and/or 90-degree corner. Alignment may be accomplished by means of a string line or offset from base line.

Sweep top of underlying block unit course prior to placing the next block unit course. Install following courses of block units in running bond pattern so the middle of the unit is above the joint between adjacent blocks below, until reaching the top course. **Backfill and compact the material in cells for each course installed before proceeding to the next course.**

Modular block units may be sawcut as necessary using standard masonry tools. Sawn, half-width block units shall not be used in the first course of concrete wall face units.

If so indicated in the Plans, cap units shall be bonded to underlying units with an approved adhesive recommended by the modular block wall system manufacturer.

8-24.4 Measurement

Section 8-24.4 is supplemented with the following:

Modular block wall will be measured by the square foot of completed front face in place. The bottom limits for vertical measurement will be the top of the leveling pad. The top limits for vertical measurement will be the top of wall as shown in the Plans, including any top wall units or caps. The horizontal limits for measurement are from the end of the wall to the end of the wall.

8-24.5 Payment

Section 8-24.5 is supplemented with the following:

"Modular Block Wall", per square foot.
The unit Contract price per square foot for "Modular Block Wall" shall be full pay for all costs in conjunction with designing, furnishing, and constructing the wall systems; including gravel backfill for walls, placing and compacting stockpiled crushed surfacing base course leveling pad, structure excavation class A including haul, shoring or extra excavation class A, Shop Drawings, wall units including interlocking features, caps, and all Work and materials required to install wall underdrain pipe, including gravel backfill for drains and construction geotextile for underground drainage.

"Gravel Backfill for Wall" will be considered **incidental** to various wall systems.

"Structure Excavation Class A Incl. Haul" will be considered **incidental** to the various wall systems.

"Shoring or Extra Excavation Class A" will be considered **incidental** to the various wall systems.

All costs associated with furnishing and installing permeable ballast material within the wall foundation, including compaction, will be made under the applicable item shown in the Proposal.

8-26 Vacant

Section 8-26, including title, is replaced with the following:

8-26 Pedestrian Handrail

8-26.1 Description

This Work consists of furnishing and constructing metal pedestrian handrail of the type specified in accordance with the Plans, and these Specifications, at the locations shown in the Plans and in conformity with the lines as staked.

8-26.2 Materials

Materials shall meet the requirements shown in the Plans and the following sections:

Non-Shrink Grout	9-20.3(2)

Pedestrian handrail shall be galvanized steel.

8-26.3 Construction Requirements

8-26.3(1) Fabrication

Before fabricating the handrail, the Contractor shall submit Shop Drawings for the Engineer's approval showing dimensions and details of fabrication and including an erection diagram. Material being used shall be specified in the Shop Drawings. In reviewing Shop Drawings, the Engineer indicates only that they appear complete and address the basic project requirements. Approval does not indicate a check on dimensions.

Cutting shall be done by sawing or milling and all cuts shall be true and smooth. Flame cutting will not be permitted.

All top rails, panels and posts shall be powder coated black.

8-26.3(2) Installation

The handrailing shall be erected in accordance with the details in the Plans.

Pipe railing, pipe balusters, and pipe railing splices shall be adequately wrapped to insure surface protection during handling and transportation to the job site.

The handrail shall be carefully erected, true to line and grade. Posts and balusters shall be vertical with the direction from the vertical for the full height of the panel not exceeding 1/8 inch.

8-26.4 Measurement

Pedestrian Handrail will be measured per linear foot of handrail along the line and slope at the base of the completed handrail.

8-26.5 Payment

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

"Pedestrian Handrail", per linear foot.

The unit Contract price per linear foot for "Pedestrian Handrail" shall be full pay for all labor, material, hardware, grout, galvanizing, coating, tools and equipment, supplies, and all incidental Work to complete the Work detailed in the Plans and these Special Provisions.

8-27 Vacant

Section 8-27, including title, is replaced with the following:

8-27 Remove and Reinstall Existing Bench

8-27.1 Description

This Work consists of removing, maintaining in temporary locations during construction, and reinstalling in permanent locations, the bench affected by the Work in accordance with the Plans and these Specifications.

8-27.2 Vacant

8-27.3 Construction Requirements

During construction, the existing bench shall be protected and removed from its existing location. Any concrete foundation or sidewalk material (if any) that remains attached to the bench after its removal shall be carefully removed so as not to damage the bench.

The bench shall be moved to a temporary location, and it will be protected from damage.

The bench shall be reinstalled in the new location, in accordance with the Plans and to the satisfaction of the Engineer.

8-27.4 Measurement

Removal and reinstallation of bench will be measured.

8-27.5 Payment

Payment will be made for the following Bid item when included in the Proposal:

"Remove and Reinstall Existing Bench", per each.
The unit Contract price for "Remove and Reinstall Existing Bench" per each shall be full payment for removing, cleaning, hauling, storing, and reinstalling the bench. All material, costs and labor associated with attachment hardware to secure the bench to the sidewalk will be incidental to the installation of the bench.

8-28 Vacant

Section 8-28, including title, is replaced with the following:

8-28 Remove and Reinstall Existing Trash Receptacle

8-28.1 Description

This Work consists of removing, maintaining in temporary locations during construction, and reinstalling in permanent locations, the trash receptacle affected by the Work in accordance with the Plans and these Specifications.

8-28.2 Vacant

8-28.3 Construction Requirements

During construction, the existing trash receptacle shall be protected and removed from its existing location.

The trash receptacle shall be moved to a temporary location, and it will be protected from damage.

The trash receptacle shall be reinstalled in the new location, in accordance with the Plans and to the satisfaction of the Engineer.

8-28.4 Measurement

Removal and reinstallation of trash receptacle will be measured per each.

8-28.5 Payment

Payment will be made for the following Bid item when included in the Proposal:

"Remove and Reinstall Existing Trash Receptacle", per each.

The unit Contract price for "Remove and Reinstall Existing Trash Receptacle" per each shall be full payment for removing, cleaning, hauling, storing, and reinstalling the trash receptacle. All material, costs and labor associated with attachment hardware to secure the trash receptacle to the sidewalk will be incidental to the installation of the trash receptacle.

END OF DIVISION 8

Division 9
Materials

9-14 Erosion Control and Roadside Planting

9-14.7 Plant Materials

9-14.7(1) Description

Section 9-14.7(1) is supplement with the following:

Street tree species shall be Persian Ironwood (Parrotia Persica) and have a minimum 2" diameter at 4.5' above the ground. Trees shall have a matched growth character and have 6' minimum clear from lowest branch to the ground.

9-14.9 Root Barrier

Section 9-14.9, including title, is added as follows:

Root barriers shall be injection molded, 50% post-consumer recycled plastic, minimum twelve (12) inch wide and eighteen (18) inch high panels with ½" raised 90% molded root deflecting ribs, and meet or exceed the following criteria:

Test	ASTM Test Method	Value Copolymer Polypropylene
Tensile Stress @ yield	D638	3800 PS
Elongation @ yield	D638	6.3%
Flexural Modulus	D790B	150,000 PSI
Notched Izod Impact	D256A	7.1
Rockwell Hardness r. scale	D785A	68

9-29 Illumination, Signal, Electrical

9-29.6(1) Steel Light and Signal Standards

9-29.6(1)A Decorative Light Standards

Section 9-29.6(1)A is added as follows:

Decorative Roadway and Decorative Pedestrian light standards shall be per the dimensions as shown in the Contract Plans and as specified below without substitution.

Decorative Roadway Light Standard
KWH25-G-E58-SBP-GFI W/ KA106BLK S/F KPL20 by Stresscrete (6' arm)

Decorative Pedestrian Light Standard
KWC15-G-E58-SBP-GFI-C/W 140 by Stresscrete

Roadway and Pedestrian light standards shall include banner arms.

9-29.10 Luminaires

Section 9-29.10(2) is supplemented with the following:

Decorative Roadway and Decorative Pedestrian luminaires shall be per the dimensions as shown in the Contract Plans and as specified below without substitution.

Decorative Roadway Luminaire
DMS50-SHA-110W64LED4K-R-LE3-BKTX-SMB by Philips Lumec

Decorative Pedestrian Luminaire
DMS60-SHA-80W48LED4K-R-LE4-UNIV-BKTX by Philips Lumec
DMS60-SHA-35W32LED4K-R-LE4-UNIV-BKTX by Philips Lumec

9-29.24 Service Cabinets

Section 9-29.24 is supplemented with the following:

The electrical service cabinet shall be furnished by the Contractor per the Plans and be wired ready for operation. The Contractor's Work shall include a construction of a foundation (per Plans), placing cabinets and equipment and connecting field wiring to field terminal strips.

9-30 Water Distribution Materials

9-30.2 Fittings

Section 9-30.2 is supplemented with the following:

High potential magnesium anodes per City of Stanwood Standard Detail W-16 shall be required at all fittings. All pipes and fittings shall be fastened using stainless steel bolts.

END OF DIVISION 9

(February 26, 2024)
Standard Plans

The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-01, effective October 23, 2023, is made a part of this contract.

The Standard Plans are revised as follows:

A-10.30
RISER RING detail (Including SECTION view and RISER RING DIMENSIONS table): The RISER RING detail is deleted from the plan.

INSTALLATION detail, SECTION A: The "1/4"" callout is revised to read "+/- 1/4" (SEE CONTRACT ~ Note: The + 1/4" installation is shown in the Section A view)"

A-40.20
Sheet 1, NOTES 1, 2, 3, and 4 are replaced with the following:

1. Use the ½ inch joint details for bridges with expansion length less than 100 feet and for bridges with L type abutments. Use the 1 inch joint details for other applications.
2. Use detail 5, 6, 7 on steel trusses and timber bridges with concrete bridge deck panels.
3. For details 1, 2, 3, and 4, the item "HMA Joint Seal at Bridge End" shall be used for payment. For details 5 and 6, the item "HMA Joint Seal at Bridge Deck Panel Joint" shall be used for payment. For detail 7, the item "Clean and Seal Bridge Deck Panel Joint" shall be used for payment.

Sheet 2, Detail 8 reference to "6-09.3(6)" is revised to read "6-21.3(7)".

A-60.40
Note 2 reference to "6-09.3(6)" is revised to read "6-21.3(7)".

B-90.40
Valve Detail – DELETED

C-60.10
Sheet 1 of 2, Side view, add new callout pointing to the outer edges of the 3" x 12" lifting slots at bottom of barrier. New callout reads "PERMISSIBLE 3/4" CHAMFER."
Sheet 1 of 2, Side view, add 2-inch diameter lifting holes centered 32" from each end of the barrier and 15" from the top face (2 lifting holes total). Add new callout pointing to the new lifting holes. New callout reads "PERMISSIBLE 2" DIAM. LIFTING HOLE"

C-85.11
On Section B, the callout "3" EXPANDED POLYSTYRENE AROUND COLUMN (TYP.)" is revised to read "3" EXPANDED POLYSTYRENE OR POLYETHYLENE FOAM AROUND COLUMN (TYP.)"

D-3.10
Sheet 1, Typical Section, callout – "FOR WALLS WITH SINGLE SLOPE TRAFFIC BARRIER. USE THE DETAILS ABOVE THE MATCH LINE ON STANDARD PLAN D-3.15" is revised to read; "FOR WALLS WITH SINGLE SLOPE TRAFFIC BARRIER, SEE CONTRACT PLANS"

Sheet 1, Typical Section, callout – "FOR WALLS WITH F-SHAPE TRAFFIC BARRIER. USE THE DETAILS ABOVE THE MATCH LINE ON STANDARD PLAN D-3.16" is revised to read; "FOR WALLS WITH F-SHAPE TRAFFIC BARRIER, SEE CONTRACT PLANS"

D-3.11

Sheet 1, Typical Section, callout – ""B" BRIDGE APPROACH SLAB (SEE BRIDGE PLANS) OR PERMANENT GEOSYNTHETIC WALL BARRIER ~ SEE STANDARD PLANS D-3.15 OR D-3.16" is revised to read; "B" BRIDGE APPROACH SLAB OR MOMENT SLAB (SEE CONTRACT PLANS)

Sheet 1, Typical Section, callout – "TYPICAL BARRIER ON BRIDGE APPROACH SLAB (SEE BRIDGE PLANS) OR PERMANENT GEOSYNTHETIC WALL BARRIER ~ SEE STANDARD PLANS D-3.15 OR D-3.16" is revised to read; "TYPICAL BARRIER ON BRIDGE APPROACH SLAB OR MOMENT SLAB (SEE CONTRACT PLANS)

D-10.10

Wall Type 1 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT Bridge Design Manual (BDM) and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.15

Wall Type 2 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.30

Wall Type 5 may be used in all cases.

D-10.35

Wall Type 6 may be used in all cases.

D-10.40

Wall Type 7 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15 Bridge Design memorandum.

D-10.45

Wall Type 8 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the revisions stated in the 11/3/15 Bridge Design memorandum.

F-10.18

Note 2, "Region Traffic engineer approval is needed to install a truck apron lower than 3"." - DELETED

J-10.10

Sheet 4 of 6, "Foundation Size Reference Table", PAD WIDTH column, Type 33xD=6' – 3" is revised to read: 7' – 3". Type 342LX / NEMA P44=5' – 10" is revised to read: 6' – 10"

Sheet 5 of 6, Plan View, "FOR EXAMPLE PAD SHOWN HERE:, "first bullet" item, "-SPACE BETWEEN TYPE B MOD. CABINET AND 33x CABINET IS 6" (IN)" IS REVISED TO READ: "SPACE BETWEEN TYPE B MOD. CABINET (BACK OF ALL CHANNEL STEEL) AND 33x CABINET IS 6" (IN) (CHANNEL STEEL ADDS ABOUT 5" (IN)"

J-10.16
Key Note 1, Standard Plan J-10.30 revised to Standard Plan J-10.14

J-10.17
Key Note 1, Standard Plan J-10.30 revised to Standard Plan J-10.14

J-10.18
Key Note 1, Standard Plan J-10.30 revised to Standard Plan J-10.14

J-20.26
Add Note 1, "1. One accessible pedestrian pushbutton station per pedestrian pushbutton post."

J-20.16
View A, callout, was – LOCK NIPPLE, is revised to read; CHASE NIPPLE

J-21.10
Sheet 1 of 2, Elevation View, Round Concrete Foundation Detail, callout – "ANCHOR BOLTS ~ ¾" (IN) x 30" (IN) FULL THREAD ~ THREE REQ'D. PER ASSEMBLY" IS REVISED TO READ: "ANCHOR BOLTS ~ ¾" (IN) x 30" (IN) FULL THREAD ~ FOUR REQ'D. PER ASSEMBLY"
Sheet 1 of 2, Elevation view (Round), add dimension depicting the distance from the top of the foundation to find 2 #4 reinforcing bar shown, to read; 3" CLR Delete "(TYP.)" from the 2 ½" CLR. dimension, depicting the distance from the bottom of the foundation to find 2 # 4 reinf. Bar.
Sheet 1 of 2, Elevation view (Square), add dimension depicting the distance from the top of the foundation to find 1 #4 reinforcing bar shown, to read; 3" CLR. Delete "(TYP.)" from the 2 ½" CLR. dimension, depicting the distance from the bottom of the foundation to find 1 # 4 reinf. Bar.
Sheet 2 of 2, Elevation view (Round), add dimension depicting the distance from the top of the foundation to find 2 #4 reinforcing bar shown, to read; 3" CLR. Delete "(TYP.)" from the 2 ½" CLR. dimension, depicting the distance from the bottom of the foundation to find 2 # 4 reinf. Bar.
Sheet 2 of 2, Elevation view (Square), add dimension depicting the distance from the top of the foundation to find 1 #4 reinforcing bar shown, to read; 3" CLR. Delete "(TYP.)" from the 2 ½" CLR. dimension, depicting the distance from the bottom of the foundation to find 1 # 4 reinf. Bar.
Detail F, callout, "Heavy Hex Clamping Bolt (TYP.) ~ 3/4" (IN) Diam. Torque Clamping Bolts (see Note 3)" is revised to read; "Heavy Hex Clamping Bolt (TYP.) ~ 3/4" (IN) Diam. Torque Clamping Bolts (see Note 1)"
Detail F, callout, "3/4" (IN) x 2' – 6" Anchor Bolt (TYP.) ~ Four Required (See Note 4)" is revised to read; "3/4" (IN) x 2' – 6" Anchor Bolt (TYP.) ~ Three Required (See Note 2)"

J-21.15
Partial View, callout, was – LOCK NIPPLE ~ 1 ½" DIAM., is revised to read; CHASE NIPPLE ~ 1 ½" (IN) DIAM.

J-21.16
Detail A, callout, was – LOCKNIPPLE, is revised to read; CHASE NIPPLE

J-22.15
Ramp Meter Signal Standard, elevation, dimension 4' - 6" is revised to read; 6'-0"
(2x) Detail A, callout, was – LOCK NIPPLE ~ 1 ½" DIAM. is revised to read; CHASE NIPPLE ~ 1 ½" (IN) DIAM.

J-40.10
Sheet 2 of 2, Detail F, callout, "12 – 13 x 1 ½" S.S. PENTA HEAD BOLT AND 12" S. S. FLAT WASHER" is revised to read; "12 – 13 x 1 ½" S.S. PENTA HEAD BOLT AND 1/2" (IN) S. S. FLAT WASHER"

J-40.36
Note 1, second sentence; "Finish shall be # 2B for backbox and # 4 for the cover." Is revised to read; "Finish shall be # 2B for barrier box and HRAP (Hot Rolled Annealed and Pickled) for the cover.

J-40.37
Note 1, second sentence; "Finish shall be # 2B for backbox and # 4 for the cover." Is revised to read; "Finish shall be # 2B for barrier box and HRAP (Hot Rolled Annealed and Pickled) for the cover.

J-75.20
Key Notes, note 16, second bullet point, was: "1/2" (IN) x 0.45" (IN) Stainless Steel Bands", add the following to the end of the note: "Alternate: Stainless steel cable with stainless steel ends, nuts, bolts, and washers may be used in place of stainless steel bands and associated hardware."

J-75.55
Notes, Note A1, Revise reference, was – G-90.29, should be – G-90.20.

L-5.10
Sheet 1, General Note 8, third sentence – was; "For traffic barrier having no deflection distance, the fence shall be placed a minimum horizontal distance of 3' – 6' as measured form the top front face of the barrier." Is revised to read; "For traffic barrier having no deflection distance, the fence shall be placed a minimum horizontal distance of 2' – 6" as measured form the top front face of the barrier."

Sheet 2, Reinforcing Steel Bending Diagram, (mark) B detail, callout – "128 deg." is revised to read: "123 deg.", callout – "51 deg." is revised to read: "57 deg."

M-40.10
Guide Post Type ~ Reflective Sheeting Applications Table, remove reference - "(SEE NOTE 5)"

The following are the Standard Plan numbers applicable at the time this project was advertised. The date shown with each plan number is the publication approval date shown in the lower right-hand corner of that plan. Standard Plans showing different dates shall not be used in this contract.

1

A-10.10-00 ..... 8/7/07	A-30.35-00 ..... 10/12/07	A-50.10-01 ..... 8/17/21
A-10.20-00 ..... 10/5/07	A-40.00-01 ..... 7/6/22	A-50.40-01 ..... 8/17/21
A-10.30-00 ..... 10/5/07	A-40.10-04 ..... 7/31/19	A-60.10-03 ..... 12/23/14
A-20.10-00 ..... 8/31/07	A-40.15-00 ..... 8/11/09	A-60.20-03 ..... 12/23/14
A-30.10-00 ..... 11/8/07	A-40.20-04 ..... 1/18/17	A-60.30-01 ..... 6/28/18
A-30.30-01 ..... 6/16/11	A-40.50-03 ..... 9/12/23	A-60.40-00 ..... 8/31/07

2

B-5.20-03 ..... 9/9/20	B-30.50-03 ..... 2/27/18	B-75.20-03 ..... 8/17/21
B-5.40-02 ..... 1/26/17	B-30.60-00 ..... 9/9/20	B-75.50-02 ..... 3/15/22
B-5.60-02 ..... 1/26/17	B-30.40-03 ..... 2/27/18	B-70.60-01 ..... 1/26/17
B-10.20-03 ..... 8/23/23	B-30.70-04 ..... 2/27/18	B-75.60-00 ..... 6/8/06
B-10.40-02 ..... 8/17/21	B-30.80-01 ..... 2/27/18	B-80.20-00 ..... 6/8/06
B-10.70-03 ..... 8/23/23	B-30.90-02 ..... 1/26/17	B-80.40-00 ..... 6/1/06
B-15.20-01 ..... 2/7/12	B-35.20-00 ..... 6/8/06	B-85.10-01 ..... 6/10/08
B-15.40-01 ..... 2/7/12	B-35.40-01 ..... 8/23/23	B-85.20-00 ..... 6/1/06
B-15.60-02 ..... 1/26/17	B-40.20-00 ..... 6/1/06	B-85.30-00 ..... 6/1/06
B-20.20-02 ..... 3/16/12	B-40.40-02 ..... 1/26/17	B-85.40-00 ..... 6/8/06
B-20.40-04 ..... 2/27/18	B-45.20-01 ..... 7/11/17	B-85.50-01 ..... 6/10/08
B-20.60-03 ..... 3/15/12	B-45.40-01 ..... 7/21/17	B-90.10-00 .... 6/8/06
B-25.20-02 ..... 2/27/18	B-50.20-00 ..... 6/1/06	B-90.20-00 ..... 6/8/06
B-25.60-03 ..... 8/23/23	B-55.20-03 ..... 8/17/21	B-90.30-00 ..... 6/8/06
B-30.05-00 ..... 9/9/20	B-60.20-02 ..... 9/9/20	B-90.40-01 ..... 1/26/17
B-30.10-03 ..... 2/27/18	B-60.40-01 ..... 2/27/18	B-90.50-00 ..... 6/8/06
B-30.15-00 ..... 2/27/18	B-65.20-01 ..... 4/26/12	B-95.20-02 ..... 8/17/21
B-30.20-04 ..... 2/27/18	B-65.40-00 ..... 6/1/06	B-95.40-01 ..... 6/28/18
B-30.30-03 ..... 2/27/18	B-70.20-01 ..... 3/15/22	

3

C-1 ..... 9/8/22	C-22.40-10 ..... 10/16/23	C-60.70-01 ..... 9/8/22
C-1b 10/12/23	C-22.45-06 ..... 9/8/22	C-60.80-01 ..... 9/8/22
C-1d 10/31/03	C-23.70-01 ..... 10/16/23	C-70.15-00 ..... 8/17/21
C-2c 8/12/19	C.24.10-04 ..... 10/16/23	C-70.10-04 ..... 10/16/23
C-4f 8/12/19	C-24.15-00 ..... 3/15/22	C-75.10-02 ..... 9/16/20
C-6a 9/8/22	C-25.20-07 ..... 8/20/21	C-75.20-03 ..... 8/20/21
C-7 ..... 9/8/22	C-25.22-06 ..... 8/20/21	C-75.30-03 ..... 8/20/21
C-7a 9/8/22	C-25.26-05 ..... 8/20/21	C-80.10-03 ..... 10/16/23
C-20.10-09 ..... 10/12/23	C-25.30-01 ..... 8/20/21	C-80.20-01 ..... 6/11/14
C-20.14-05 ..... 9/8/22	C-25.80-05 ..... 8/12/19	C-80.30-02 ..... 8/20/21
C-20.15-03 ..... 10/12/23	C-60.10-03 ..... 10/16/23	C-80.40-01 ..... 6/11/14
C-20.18-04 ..... 9/8/22	C-60.15-00 ..... 8/17/21	C-85.10-00 ..... 4/8/12
C-20.40-10 ..... 10/12/23	C-60.20-01 ..... 9/8/22	C-85.11-01 ..... 9/16/20
C-20.41-04 ..... 8/22/22	C-60.30-01 ..... 8/17/21	C-85.15-03 ..... 10/17/23
C-20.42-06 ..... 10/12/23	C-60.40-00 ..... 8/17/21	C-85-18-03 ..... 9/8/22
C-20.43-00 ..... 8/22/22	C-60.45-00 ..... 8/17/21	C-81.10-00 ..... 9/12/23
C-20.45.03 ..... 9/8/22	C-60.50-00 ..... 8/17/21	C-81.15-00 ..... 9/12/23
C-22.16-08 ..... 10/17/23	C-60.60-00 ..... 8/17/21	

4

D-2.36-03 ..... 6/11/14	D-3.11-03 ..... 6/11/14	D-10.25-01 ..... 8/7/19
D-2.46-02 ..... 8/13/21	D-4 ..... 12/11/98	D-10.30-00 ..... 7/8/08
D-2.84-00 ..... 11/10/05	D-6 ..... 6/19/98	D-10.35-00 ..... 7/8/08

D-2.92-01 ..... 4/26/22
D-3.09-00 ..... 5/17/12
D-3.10-01 ..... 5/29/13
D-10.10-01 ..... 12/2/08
D-10.15-01 ..... 12/2/08
D-10.20-01 ..... 8/7/19
D-10.40-01 ..... 12/2/08
D-10.45-01 ..... 12/2/08
D-20.10-00 ..... 10/9/23

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E-1 ..... 2/21/07
E-2 ..... 5/29/98
E-4 ..... 8/27/03
E-4a 8/27/03
E-20.10-00 ..... 9/12/23
E-20.20-00 ..... 10/4/23

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F-10.12-04 ..... 9/24/20
F-10.16-00 ..... 12/20/06
F-10.18-03 ..... 3/28/22
F-10.40-04 ..... 9/24/20
F-10.42-00 ..... 1/23/07
F-10.62-02 ..... 4/22/14
F-10.64-03 ..... 4/22/14
F-30.10-04 ..... 9/25/20
F-40.12-03 ..... 6/29/16
F-40.14-03 ..... 6/29/16
F-40.15-04 ..... 9/25/20
F-40.16-03 ..... 6/29/16
F-45.10-04 ..... 10/16/23
F-80.10-04 ..... 7/15/16

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G-10.10-00 ..... 9/20/07
G-20.10-03 ..... 8/20/21
G-22.10-04 ..... 6/28/18
G-24.10-00 ..... 11/8/07
G-24.20-01 ..... 2/7/12
G-24.30-02 ..... 6/28/18
G-24.40-07 ..... 6/28/18
G-24.50-05 ..... 8/7/19
G-24.60-05 ..... 6/28/18
G-25.10-05 ..... 9/16/20
G-26.10-00 ..... 7/31/19
G-30.10-04 ..... 6/23/15
G-50.10-03 ..... 6/28/18
G-90.10-03 ..... 7/11/17
G-90.20-05 ..... 7/11/17
G-90.30-04 ..... 7/11/17
G-95.10-02 ..... 6/28/18
G-95.20-03 ..... 6/28/18
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H-10.10-00 ..... 7/3/08
H-10.15-00 ..... 7/3/08
H-30.10-00 ..... 10/12/07
H-32.10-00 ..... 9/20/07
H-60.10-01 ..... 7/3/08
H-60.20-01 ..... 7/3/08
H-70.10-02 ..... 8/17/21
H-70.20-02 ..... 8/17/21

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I-10.10-01 ..... 8/11/09
I-30.10-02 ..... 3/22/13
I-30.15-02 ..... 3/22/13
I-30.16-01 ..... 7/11/19
I-30.17-01 ..... 6/12/19
I-30.20-00 ..... 9/20/07
I-30.30-02 ..... 6/12/19
I-30.40-02 ..... 6/12/19
I-30.60-02 ..... 6/12/19
I-40.10-00 ..... 9/20/07
I-40.20-00 ..... 9/20/07
I-50.20-02 ..... 7/6/22
I-60.10-01 ..... 6/10/13
I-60.20-01 ..... 6/10/13
I-80.10-02 ..... 7/15/16

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J-05.50-00 ..... 8/30/22
J-10 ..... 7/18/97
J-10.10-04 ..... 9/16/20
J-10.12-00 ..... 9/16/20
J-10.14-00 ..... 9/16/20
J-10.15-01 ..... 6/11/14
J-10.16-02 ..... 8/18/21
J-10.17-02 ..... 8/18/21
J-10.18-02 ..... 8/18/21
J-10.20-04 ..... 8/18/21
J-10.21-02 ..... 8/18/21
J-10.22-03 ..... 10/4/23
J-10.25-00 ..... 7/11/17
J-10.26-00 ..... 8/30/22
J-12.15-00 ..... 6/28/18
J-12.16-00 ..... 6/28/18
J-15.10-01 ..... 6/11/14
J-15.15-02 ..... 7/10/15
J-20.01-00 ..... 8/30/22
J-20.10-05 ..... 10/4/23
J-26.20-01 ..... 6/28/18
J-27.10-01 ..... 7/21/16
J-27.15-00 ..... 3/15/12
J-28.01-00 ..... 8/30/22
J-28.10-02 ..... 8/7/19
J-28.22-00 ..... 8/07/07
J-28.24-02 ..... 9/16/20
J-28.26-01 ..... 12/02/08
J-28.30-03 ..... 6/11/14
J-28.40-02 ..... 6/11/14
J-28.42-01 ..... 6/11/14
J-28.43-01 ..... 6/28/18
J-28.45-03 ..... 7/21/16
J-28.50-03 ..... 7/21/16
J-28.60-03 ..... 8/27/21
J-28.70-04 ..... 8/30/22
J-29.10-02 ..... 8/26/22
J-29.15-01 ..... 7/21/16
J-29.16-02 ..... 7/21/16
J-30.10-01 ..... 8/26/22
J-50.10-01 ..... 7/31/19
J-50.11-02 ..... 7/31/19
J-50.12-02 ..... 8/7/19
J-50.13-01 ..... 8/30/22
J-50.15-01 ..... 7/21/17
J-50.16-01 ..... 3/22/13
J-50.18-00 ..... 8/7/19
J-50.19-00 ..... 8/7/19
J-50.20-00 ..... 6/3/11
J-50.25-00 ..... 6/3/11
J-50.30-00 ..... 6/3/11
J-60.05-01 ..... 7/21/16
J-60.11-00 ..... 5/20/13
J-60.12-00 ..... 5/20/13
J-60.13-00 ..... 6/16/10
J-60.14-01 ..... 7/31/19
J-75.10-02 ..... 7/10/15
J-75.20-01 ..... 7/10/15
J-75.30-02 ..... 7/10/15
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J-20.11-03 ..... 7/31/19
J-20.15-03 ..... 6/30/14
J-20.16-02 ..... 6/30/14
J-20.20-02 ..... 5/20/13
J-20.26-01 ..... 7/12/12
J-21.10-04 ..... 6/30/14
J-21.15-01 ..... 6/10/13
J-21.16-01 ..... 6/10/13
J-21.17-01 ..... 6/10/13
J-21.20-01 ..... 6/10/13
J-22.15-02 ..... 7/10/15
J-22.16-03 ..... 7/10/15
J-26.10-03 ..... 7/21/16
J-26.15-01 ..... 5/17/12
J-40.01-00 ..... 8/30/22
J-40.05-00 ..... 7/21/16
J-40.10-04 ..... 4/28/16
J-40.20-03 ..... 4/28/16
J-40.30-04 ..... 4/28/16
J-40.35-01 ..... 5/29/13
J-40.36-02 ..... 7/21/17
J-40.37-02 ..... 7/21/17
J-40.38-01 ..... 5/20/13
J-40.39-00 ..... 5/20/13
J-40.40-02 ..... 7/31/19
J-45.36-00 ..... 7/21/17
J-50.05-00 ..... 7/21/17
J-75.55-00 .....8/30/22
J-80.05-00 .....8/30/22
J-80.10-01 .....8/18/21
J-80.12-00 .....8/18/21
J-80.15-00 .....6/28/18
J-81.10-02 .....8/18/21
J-81.12-00 .....9/3/21
J-84.05-00 .....8/30/22
J-86.10-00 .....6/28/18
J-90.10-03 .....6/28/18
J-90.20-03 .....6/28/18
J-90.21-02 .....6/28/18
J-90.50-00 .....6/28/18

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K-70.20-01 ..... 6/1/16
K-80.10-02 ..... 9/25/20
K-80.32-00..... 8/17/21
K-80.34-00..... 8/17/21
K-80.35-01.....9/16/20
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L-5.10-01..... 7/17/23
L-5.15-00..... 9/19/22
L-10.10-02..... 6/21/12
L-20.10-03 ..... 7/14/15
L-30.10-02 .....6/11/14
L-40.15-01 .....6/16/11
L-40.20-02 .....6/21/12
L-70.10-01 .....5/21/08
L-70.20-01 .....5/21/08

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M-1.20-04..... 9/25/20
M-1.40-03..... 9/25/20
M-1.60-03..... 9/25/20
M-1.80-03..... 6/3/11
M-2.20-03..... 7/10/15
M-2.21-00..... 7/10/15
M-3.10-04..... 9/25/20
M-3.20-04..... 8/2/22
M-3.30-04..... 9/25/20
M-3.40-04..... 9/25/20
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M-5.10-03..... 9/25/20
M-7.50-01..... 1/30/07
M-9.50-02..... 6/24/14
M-9.60-00 ..... 2/10/09
M-11.10-04..... 8/2/22
M-12.10-03 ..... 8/2/22
M-15.10-02 ..... 7/17/23
M-17.10-02 ..... 7/3/08
M-20.10-04 ..... 8/2/22
M-20.20-02 ..... 4/20/15
M-20.30-04 ..... 2/29/16
M-20.40-03 ..... 6/24/14
M-20.50-02 .....6/3/11
M-24.20-02 ..... 4/20/15
M-24.40-02 ..... 4/20/15
M-24.60-04 ..... 6/24/14
M-24.65-00 .....7/11/17
M-24.66-00 .....7/11/17
M-40.10-04 .....10/17/23
M-40.20-00 .....10/12/07
M-40.30-01 .....7/11/17
M-40.40-00 .....9/20/07
M-40.50-00 .....9/20/07
M-40.60-00 .....9/20/07
M-60.10-01 .....6/3/11
M-60.20-03 .....8/17/21
M-65.10-03 .....8/17/21
M-80.10-01 .....6/3/11
M-80.20-00 .....6/10/08
M-80.30-00 .....6/10/08

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