Contract Provisions and Plans

For Construction of:

2018 HMA OVERLAY PROJECT #ESHMA18-1

SKAGIT COUNTY PUBLIC WORKS

2018 HMA Overlay Project #ESHMA18-1

McLean Road #31150 between Best Road and La Conner-Whitney Road: includes, but is not limited to: full width and length planing of existing asphalt for approximately one mile; hauling planings to a County determined site; placing and compacting a two inch HMA Cl. ½" PG 64-22 wearing course on the planed surface and driveway approaches; placement of temporary pavement markers; erosion control; and other work.

Schedule: All work is to be completed within 10 working days from Notice to Proceed.

Measurement & Payment: Each item will be per the bid proposal.

2018 HMA OVERLAY PROJECT
#ESHMA18-1

SKAGIT COUNTY, WASHINGTON

2018
SKAGIT COUNTY
DEPARTMENT OF PUBLIC WORKS
MOUNT VERNON, WASHINGTON 98273-5625

NOTICE TO ALL PLAN HOLDERS

Copies of the Plans and specifications are available at Skagit County Public Works, 1800 Continental Place, Mount Vernon, Washington 98273-5625. Telephone: (360) 416-1400. You may receive the bid information electronically; copies of the plans and specifications are available at: http://www.skagitcounty.net/rfp

APPROVED:

Paul A. Randall-Grutter, P.E.
County Engineer

MAPS, PLANS, AND SPECIFICATIONS APPROVED:

BOARD OF COUNTY COMMISSIONERS
SKAGIT COUNTY, WASHINGTON

ABSENT

Kenneth A. Dahlstedt, Chair

Lisa Janicki, Commissioner

Ron Wesen, Commissioner

2018 HMA OVERLAY PROJECT
#ESHMA18-1

CERTIFICATION

We hereby certify that these contract documents were prepared by us or under our direct supervision, and that we are duly registered Professional Engineers under the laws of the State of Washington.

Engineer of Record

Design Engineer

NOTICE OF CALL FOR BIDS

NOTICE IS HEREBY GIVEN by SKAGIT COUNTY that sealed bids will be received and publicly opened in the Commissioners' Hearing Room, 1800 Continental Place, Mount Vernon, WA 98273 on **Monday, April 16, 2018, at the hour of 2:45 p.m.,** or as soon thereafter as possible, for the following construction work:

PROJECT DESCRIPTION: 2018 HMA Overlay Project #ESHMA18-1

McLean Road #31150 between Best Road and La Conner-Whitney Road: includes, but is not limited to: full width and length planing of existing asphalt for approximately one mile; hauling planings to a County determined site; placing and compacting a two inch HMA Cl. ½" PG 64-22 wearing course on the planed surface and driveway approaches; placement of temporary pavement markers; erosion control; and other work.

The time limit for physical completion of work is a total of 10 WORKING DAYS. The Engineer's Estimate Range is $390,495 to $459,154.

Contractor and all subcontractors shall have a contractor's license to work in the State of Washington.

Information, copies of maps, plans, specifications, and addenda for this project will be available on-line beginning **March 29, 2018** at http://www.skagitcounty.net/rfp or obtained at Skagit County Public Works Department, 1800 Continental Place, Mount Vernon, Washington; (360) 416-1400. Contractors who download plans and specifications are advised to e-mail pw@co.skagit.wa.us to be added to plan holders list to receive any addenda that may be issued.

All technical questions regarding this project are to be submitted **no later than 4:00 p.m., Monday, April 9, 2018** in writing to David Walde, Project Manager, or by e-mail to davidw@co.skagit.wa.us with the subject line reading, **"2018 HMA Overlay Project #ESHMA18-1"**. All project specific questions and response to answers for this project will be available on-line as received. **All Addenda will be posted on-line for this project by 5:00 p.m. Wednesday, April 11, 2018**. If further Addenda are required to be issued, the bid opening will be postponed.

All bid envelopes must be plainly marked on the outside, "**Sealed Bid for 2018 HMA Overlay Project #ESHMA18-1".** Sealed bids shall be received by one of the following delivery methods before **Monday, April 16, 2018 at the hour of 2:45 p.m**. Proposals are to be submitted on the forms provided in the Bid Proposal Packet. Incomplete proposals and proposals received after the time fixed for the opening cannot be considered. Oral, telephonic, telegraphic, electronic or faxed proposals will not be accepted. All bidding shall be based upon compliance with the Contract Provisions and Plans.

1. **Hand delivered**: Bids delivered in person shall be received only at the office of the SKAGIT COUNTY COMMISSIONERS, Reception Desk, 1800 Continental Place, Suite 100, Mount Vernon, WA 98273-5625.
2. **Via mail**: Bids shall be mailed to the SKAGIT COUNTY COMMISSIONERS, 1800 Continental Place, Suite 100, Mount Vernon, WA 98273-5625.

BID GUARANTY: No bid will be considered unless accompanied by a surety company bid bond, or a certified or cashier's check payable to the order of Skagit County for a sum not less than five percent (5%) of the total amount of the bid. A Contract Bond covering performance and payment will be required with the contract. Washington State Prevailing Wage Rates apply to this contract and bidders are advised to consider this charge when tabulating bids.

Skagit County reserves the right to reject any or all bids, and the right to waive any informalities or irregularities in any bid or in any bidding and to further award the Project to the lowest, responsive, responsible bidder whose bid complies with all of the prescribed formalities, as it best serves the interest of Skagit County. After the date and hour set for the opening of bids, no bidder may withdraw

its bid unless the award of the contract is delayed for a period exceeding sixty (60) calendar days following bid opening. All bidders agree to be bound by their bids until the expiration of this stated time period.

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

For questions regarding Skagit County's Title VI Program, you may contact the Public Works Department's Title VI Liaison, Keith M. Elefson, P.E., at (360) 416-1400

The Board of Skagit County Commissioners reserves the right to reject any or all bids.

NOTICE GIVEN BY ORDER OF THE BOARD OF SKAGIT COUNTY COMMISSIONERS this 24 day of March, 2018.

Clerk of the Board

Published: Skagit Valley Herald – March 29 and April 5, 2017

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INTRODUCTION

The following Amendments and Special Provisions shall be used in conjunction with the 2016 Standard Specifications for Road, Bridge, and Municipal Construction.

AMENDMENTS TO THE STANDARD SPECIFICATIONS

The following Amendments to the Standard Specifications are made a part of this contract and supersede any conflicting provisions of the Standard Specifications. For informational purposes, the date following each Amendment title indicates the implementation date of the Amendment or the latest date of revision.

Each Amendment contains all current revisions to the applicable section of the Standard Specifications and may include references which do not apply to this particular project.

Section 1-01, Definitions and Terms
August 1, 2016

1-01.3 Definitions

The following new term and definition is inserted after the eighth paragraph:

Cold Weather Protection Period – A period of time 7 days from the day of concrete placement or the duration of the cure period, whichever is longer.

Section 1-02, Bid Procedures and Conditions
June 1, 2017

1-02.4(1) General

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

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

1-02.6 Preparation of Proposal

In this section, “Disadvantaged Business Enterprise” is revised to read “Underutilized Disadvantaged Business Enterprise”, and “DBE” is revised to read “UDBE”.

1-02.9 Delivery of Proposal

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

The Contracting Agency will not open or consider any Proposal when the Proposal or Bid deposit is received after the time specified for receipt of Proposals or received in a location other than that specified for receipt of Proposals unless an emergency or unanticipated event interrupts normal work processes of the Contracting Agency so that Proposals cannot be received.

The following new paragraph is inserted before the last paragraph:

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.

1-02.12 Public Opening of Proposals

This section is supplemented with the following new paragraph:

If an emergency or unanticipated event interrupts normal work processes of the Contracting Agency so that Proposals cannot be opened at the time indicated in the call for Bids the time specified for opening of Proposals will be deemed to be extended to the same time of day on the first work day on which the normal work processes of the Contracting Agency resume.

1-02.13 Irregular Proposals

In this section, "Disadvantaged Business Enterprise" is revised to read "Underutilized Disadvantaged Business Enterprise", and "DBE" is revised to read "UDBE".

Section 1-04, Scope of the Work
June 1, 2017

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

The following new paragraph is inserted before the second to last paragraph:

Whenever reference is made in these Specifications or the Special Provisions to codes, rules, specifications, and standards, the reference shall be construed to mean the code, rule, specification, or standard that is in effect on the Bid advertisement date, unless otherwise stated or as required by law.

1-04.3 Reference Information

This section is supplemented with the following new sentence:

If a document that is provided as reference information contains material also included as a part of the Contract, that portion of the document shall be considered a part of the Contract and not as Reference Information.

1-04.4(2)A General

Item number 4 in the third paragraph is revised to read:

4. Provide substitution for deleted or reduced Condition of Award Work, Apprentice Utilization and Training.

Section 1-06, Control of Material
August 7, 2017

This section is supplemented with the following new section and subsections:

1-06.6 Recycled Materials

The Contractor shall make their best effort to utilize recycled materials in the construction of the project; the use of recycled concrete aggregate as specified in Section 1-06.6(1)A is a requirement of the Contract.

The Contractor shall submit a Recycled Material Utilization Plan as a Type 1 Working Drawing within 30 calendar days after the Contract is executed. The plan shall provide the Contractor's anticipated usage of recycled materials for meeting the requirements of these Specifications. The quantity of recycled materials will be provided in tons and as a percentage of the Plan quantity for each material listed in Section 9-03.21(1)E Table on Maximum Allowable Percent (By Weight) of Recycled Material. When a Contract does not include Work that requires the use of a material that is included in the requirements for using materials the Contractor may state in their plan that no recycled materials are proposed for use.

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.

1-06.6(1) Recycling of Aggregate and Concrete Materials

1-06.6(1)A General

The minimum quantity of recycled concrete aggregate shall be 25 percent of the total quantity of aggregate that is incorporated into the Contract for those items listed in Section 9-03.21(1)E Table on Maximum Allowable Percent (By Weight) of Recycled Material that allow the use of recycled concrete aggregate. The percentage of recycled material incorporated into the project for meeting the required percentage will be calculated in tons based on the quantity of recycled concrete used on the entire Contract and not as individual items.

If the Contractor's total cost for Work with recycled concrete aggregate is greater than without the Contractor may choose to not use recycled concrete aggregate. If the Recycled Material Utilization Plan does not indicate the minimum usage of recycled concrete aggregate required above, or if completed project quantities do not meet the minimum usage required, the Contractor shall develop the following:

1. A cost estimate for each material listed in Section 9-03.21(1)E that is utilized on the Contract. The cost estimate shall include the following:

    a. The estimated costs for the Work for each material with 25 percent recycled concrete aggregate. The cost estimate shall include for each material a copy of the price quote from the supplier with the lowest total cost for the Work.

    b. The estimated costs for the Work for each material without recycled concrete aggregate.

The Contractor's cost estimates shall be submitted as an attachment to the Recycled Material Utilization Plan, or with the Reporting form.

Section 1-07, Legal Relations and Responsibilities to the Public
August 7, 2017

1-07.1 Laws to be Observed

The second paragraph is deleted.

In the second to last sentence of the third paragraph, "WSDOT" is revised to read "Contracting Agency".

1-07.2(2) State Sales Tax: WAC 458-20-170 – Retail Sales Tax

The last three sentences of the first paragraph are deleted and replaced with the following new sentence:

> The Contractor (Prime or Subcontractor) shall include sales or use tax on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project, in the unit bid prices.

1-07.3(1) Forest Fire Prevention

This section is supplemented with the following new subsections:

1-07.3(1)A Fire Prevention Control and Countermeasures Plan

The Contractor shall prepare and implement a project-specific fire prevention, control, and countermeasures plan (FPCC Plan) for the duration of the project. The Contractor shall submit a Type 2 Working Drawing no later than the date of the preconstruction conference.

1-07.3(1)A1 FPCC Plan Implementation Requirements

The Contractor's FPCC Plan shall be fully implemented at all times. The Contractor shall update the FPCC Plan throughout project construction so that the plan reflects actual site conditions and practices. The Contractor shall update the FPCC Plan at least annually and maintain a copy of the updated FPCC Plan that is available for inspection on the project site. Revisions to the FPCC Plan and the Industrial Fire Precaution Level (IFPL) shall be discussed at the weekly project safety meetings.

1-07.3(1)A2 FPCC Plan Element Requirements

The FPCC Plan shall include the following:

1. The names, titles, and contact information for the personnel responsible for implementing and updating the plan.

2. The names and telephone numbers of the Federal, State, and local agencies the Contractor shall notify in the event of a fire.

3. All potential fire causing activities such as welding, cutting of metal, blasting, fueling operations, etc.

4. The location of fire extinguishers, water, shovels, and other firefighting equipment.

5. The response procedures the Contractor shall follow in the event of a fire.

Most of Washington State is covered under the IFPL system which, by law, is managed by the Department of Natural Resources (DNR). It is the Contractor's responsibility to be familiar with the DNR requirements and to verify whether or not IFPL applies to the specific project.

If the Contractor wishes to continue a work activity that is prohibited under an industrial fire precaution level, the Contractor shall obtain a waiver from the DNR and provide a copy to the Engineer prior to continuation of work on the project.

If the IFPL requirements prohibit the Contractor from performing Work the Contractor may be eligible for an unworkable day in accordance with Section 1-08.5.

The Contractor shall comply with the requirements of these provisions at no additional cost to the Contracting Agency.

1-07.8 High-Visibility Apparel

The last paragraph is revised to read:

High-visibility garments shall be labeled as, and in a condition compliant with the ANSI/ISEA 107 (2004 or later version) and shall be used in accordance with manufacturer recommendations.

1-07.8(1) Traffic Control Personnel

In this section, references to "ANSI/ISEA 107-2004" are revised to read "ANSI/ISEA 107".

1-07.8(2) Non-Traffic Control Personnel

In this section, the reference to "ANSI/ISEA 107-2004" is revised to read "ANSI/ISEA 107".

1-07.9(2) Posting Notices

Items 1 and 2 are revised to read:

1. EEOC - P/E-1 (revised 11/09, supplemented 09/15) – **Equal Employment Opportunity IS THE LAW** published by US Department of Labor. Post for projects with federal-aid funding.

2. FHWA 1022 (revised 05/15) – **NOTICE Federal-Aid Project** published by Federal Highway Administration (FHWA). Post for projects with federal-aid funding.

Items 5, 6 and 7 are revised to read:

5. WHD 1420 (revised 02/13) – **Employee Rights and Responsibilities Under The Family And Medical Leave Act** published by US Department of Labor. Post on all projects.

6. WHD 1462 (revised 01/16) – **Employee Polygraph Protection Act** published by US Department of Labor. Post on all projects.

7. F416-081-909 (revised 09/15) – **Job Safety and Health Law** published by Washington State Department of Labor and Industries. Post on all projects.

Items 9 and 10 are revised to read:

9. F700-074-909 (revised 06/13) – **Your Rights as a Worker in Washington State** by Washington State Department of Labor and Industries (L&I). Post on all projects.

10. EMS 9874 (revised 10/15) – **Unemployment Benefits** published by Washington State Employment Security Department. Post on all projects.

1-07.15(1) Spill Prevention, Control, and Countermeasures Plan

The second sentence of the first paragraph is deleted.

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

The SPCC Plan shall address all fuels, petroleum products, hazardous materials, and other materials defined in Chapter 447 of the WSDOT Environmental Manual M 31-11.

Item number four of the fourth paragraph (up until the colon) is revised to read:

4. **Potential Spill Sources** – Describe each of the following for all potentially hazardous materials brought or generated on-site, including but not limited to materials used for equipment operation, refueling, maintenance, or cleaning:

The first sentence of item 7e of the fourth paragraph is revised to read:

BMP methods and locations where they are used to prevent discharges to ground or water during mixing and transfer of hazardous materials and fuel.

The last paragraph is deleted.

Section 1-08, Prosecution and Progress
June 1, 2017

1-08.1 Subcontracting

The sixth and seventh paragraphs are revised to read:

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

The Contractor shall comply with the requirements of RCW 39.04.250, 39.76.011, 39.76.020, and 39.76.040, in particular regarding prompt payment to Subcontractors. Whenever the Contractor withholds payment to a Subcontractor for any reason including disputed amounts, the Contractor shall provide notice within 10 calendar days to the Subcontractor with a copy to the Contracting Agency identifying the reason for the withholding and a clear description of what the Subcontractor must do to have the withholding released. Retainage withheld by the Contractor prior to completion of the

Subcontractors work is exempt from reporting as a payment withheld and is not included in the withheld amount. The Contracting Agency's copy of the notice to Subcontractor for deferred payments shall be submitted to the Engineer concurrently with notification to the Subcontractor.

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

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

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

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

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

12. If the Contractor fails to comply with the requirements of the Specification and the Subcontractor's retainage or retainage bond is wrongfully withheld, the Contractor will be subject to the actions described in No. 7 listed above. The Subcontractor may also seek recovery against the Contractor under applicable prompt pay statutes in addition to any other remedies provided for by the subcontract or by law.

1-08.5 Time for Completion

In item 2c of the last paragraph, "Quarterly Reports" is revised to read "Monthly Reports".

Section 1-09, Measurement and Payment
April 4, 2016

1-09.6 Force Account

The second sentence of item number 4 is revised to read:

A "specialized service" is a work operation that is not typically done by worker classifications as defined by the Washington State Department of Labor and Industries and by the Davis Bacon Act, and therefore bills by invoice for work in road, bridge and municipal construction.

Section 1-10, Temporary Traffic Control
January 3, 2017

1-10.1(2) Description

The first paragraph is revised to read:

The Contractor shall provide flaggers and all other personnel required for labor for traffic control activities that are not otherwise specified as being furnished by the Contracting Agency.

In the third paragraph, "Project Engineer" is revised to read "Engineer".

The following new paragraph is inserted after the third paragraph:

The Contractor shall keep lanes, on-ramps, and off-ramps, open to traffic at all times except when Work requires closures. Ramps shall not be closed on consecutive interchanges at the same time, unless approved by the Engineer. Lanes and ramps shall be closed for the minimum time required to complete the Work. When paving hot mix asphalt the Contractor may apply water to the pavement to shorten the time required before reopening to traffic.

1-10.3(2)C Lane Closure Setup/Takedown

The following new paragraph is inserted before the last paragraph:

Channelization devices shall not be moved by traffic control personnel across an open lane of traffic. If an existing setup or staging of traffic control devices require crossing an open lane of traffic, the traffic control devices shall be taken down completely and then set up in the new configuration.

Section 2-02, Removal of Structures and Obstructions
August 7, 2017

2-02.3(2)A Bridge Removal

This section's title is revised to read:

Bridge and Structure Removal

Section 2-03, Roadway Excavation and Embankment
August 1, 2016

2-03.3(7)C Contractor-Provided Disposal Site

The second paragraph is revised to read:

The Contractor shall acquire all permits and approvals required for the use of the disposal sites before any waste is hauled off the project. The Contractor shall submit a Type 1 Working Drawing consisting of copies of the permits and approvals for any disposal sites to be used. The cost of any such permits and approvals shall be included in the Bid prices for other Work.

The third paragraph is deleted.

Section 2-06, Subgrade Preparation
January 3, 2017

2-06.3(2) Subgrade for Pavement

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

The Contractor shall compact the Subgrade to a depth of 6 inches to 95 percent of maximum density as determined by the compaction control tests for granular materials.

Section 3-04, Acceptance of Aggregate
January 3, 2017

3-04.5 Payment
In Table 1, the **Contingent Unit Price Per Ton** value for the item HMA Aggregate is revised to read "$15.00".

Section 4-04, Ballast and Crush Surfacing
January 3, 2017

4-04.3(5) Shaping and Compaction
The first sentence is revised to read:

> Immediately following spreading and final shaping, each layer of surfacing shall be compacted to at least 95 percent of maximum density determined by the requirements of Section 2-03.3(14)D before the next succeeding layer of surfacing or pavement is placed.

Section 5-01, Cement Concrete Pavement Rehabilitation
January 3, 2017

In this section, "portland cement" is revised to read "cement".

5-01.2 Materials
In the first paragraph, the following item is inserted after the item "Joint Sealants":

> Closed Cell Foam Backer Rod 9-04.2(3)A

5-01.3(1)A Concrete Mix Designs
This section, including title, is revised to read:

> **5-01.3(1)A Mix Designs**
> The Contractor shall use either concrete patching materials or cement concrete for the rehabilitation of cement concrete pavement. Concrete patching materials shall be used for spall repair and dowel bar retrofitting and cement concrete shall be used for concrete panel replacement.

5-01.3(1)A1 Concrete Patching Materials
Item number 1 is revised to read:

> 1. **Materials** – The prepackaged concrete patching material and the aggregate extender shall conform to Section 9-20.

5-01.3(1)A2 Portland Cement Concrete
This section, including title, is revised to read:

> **5-01.3(1)A2 Cement Concrete for Panel Replacement**
> Cement concrete for panel replacement shall meet the requirements of Sections 5-05.3(1) and 5-05.3(2) and be air entrained with a design air content of 5.5 percent. Cement concrete for panel replacement may use rapid hardening hydraulic cement meeting the requirements of Section 9-01.2(2). Rapid hardening hydraulic cement will

be considered a cementitious material for the purpose of calculating the water/cementitious materials ratio and the minimum cementitious materials requirement.

5-01.3(1)B Equipment

This section's title is revised to read:

Equipment for Panel Replacement

5-01.3(2)B Portland Cement Concrete

This section's title is revised to read:

Cement Concrete for Panel Replacement

This section is supplemented with the following new subsection:

5-01.3(2)B1 Conformance to Mix Design

Acceptance of cement concrete pavement for panel replacement shall be in accordance with Section 5-01.3(2)B. The cement, coarse, and fine aggregate weights shall be within the tolerances of the mix design in accordance with Section 5-05.3(1).

5-01.3(2)B1 Rejection of Concrete

This section is renumbered as follows:

5-01.3(2)B2 Rejection of Concrete

5-01.3(4) Replace Portland Cement Concrete Panel

This section's title is revised to read:

Replace Cement Concrete Panel

5-01.3(8) Sealing Existing Transverse and Longitudinal Joints

This section's title is revised to read:

Sealing Existing Longitudinal and Transverse Joint

The first paragraph is revised to read:

The Contractor shall clean and seal existing longitudinal and transverse joints where shown in the Plans or as marked by the Engineer.

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

Old sealant and incompressible material shall be completely removed from the joint to the depth of the new reservoir with a diamond blade saw in accordance with the detail shown in the Standard Plans.

The fifth paragraph is revised to read:

Immediately prior to sealing, the cracks shall be blown clean with dry oil-free compressed air. If shown in the Plans, a backer rod shall be placed at the base of the sawn reservoir. The joints shall be completely dry before the sealing installation may

begin. Immediately following the air blowing and backer rod placement, if required, the sealant material shall be installed in conformance to manufacturer's recommendations and in accordance with Section 5-05.3(8)B.

5-01.3(9) Portland Cement Concrete Pavement Grinding

This section's title is revised to read:

Cement Concrete Pavement Grinding

5-01.3(11) Concrete Slurry and Grinding Residue

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

Slurry shall not be allowed to drain into an area open to traffic, off of the paved surface, into any drainage structure, water of the state, or wetlands.

The following new sentence is inserted at the end of the second paragraph:

The Contractor shall submit copies of all disposal tickets to the Engineer within 5 calendar days.

5-01.4 Measurement

The fourth paragraph is revised to read:

Sealing existing longitudinal and transverse joint will be measured by the linear foot, measured along the line of the completed joint.

5-01.5 Payment

The Bid item "Sealing Transverse and Longitudinal Joints", per linear foot and the paragraph following Bid item are revised to read:

"Sealing Existing Longitudinal and Transverse Joint", per linear foot.

The unit Contract price per linear foot for "Sealing Existing Longitudinal and Transverse Joint", shall be full payment for all costs to complete the Work as specified, including removing incompressible material, preparing and sealing existing transverse and longitudinal joints where existing transverse and longitudinal joints are cleaned and for all incidentals required to complete the Work as specified.

Section 5-02, Bituminous Surface Treatment
April 4, 2016

5-02.3(2) Preparation of Roadway Surface

This section is supplemented with the following new subsection:

5-02.3(2)E Crack Sealing

Where shown in the Plans, seal cracks and joints in the pavement in accordance with Section 5-04.3(4)A1 and the following:

1. Cracks ¼ inch to 1 inch in width - fill with hot poured sealant.

2. Cracks greater than 1 inch in width – fill with sand slurry.

Section 5-04, Hot Mix Asphalt
April 3, 2017

This section (and all subsections) is revised to read:

This Section 5-04 is written in a style which, unless otherwise indicated, shall be interpreted as direction to the Contractor.

5-04.1 Description

This Work consists 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.

HMA shall be composed of asphalt binder and mineral materials as required, and may include reclaimed asphalt pavement (RAP) or reclaimed asphalt shingles (RAS), mixed in the proportions specified to provide a homogeneous, stable, and workable mix.

5-04.2 Materials

Provide materials as specified in these sections:

Asphalt Binder	9-02.1(4)
Cationic Emulsified Asphalt	9-02.1(6)
Anti-Stripping Additive	9-02.4
Warm Mix Asphalt Additive	9-02.5
Aggregates	9-03.8
Reclaimed Asphalt Pavement (RAP)	9-03.8(3)B
Reclaimed Asphalt Shingles (RAS)	9-03.8(3)B
Mineral Filler	9-03.8(5)
Recycled Material	9-03.21
Joint Sealants	9-04.2
Closed Cell Foam Backer Rod	9-04.2(3)A

5-04.2(1) How to Get an HMA Mix Design on the QPL

Comply with each of the following:

- Develop the mix design in accordance with WSDOT SOP 732.
- Develop a mix design that complies with Sections 9-03.8(2) and 9-03.8(6).
- Develop a mix design no more than 6 months prior to submitting it for QPL evaluation.
- Submit mix designs to the WSDOT State Materials Laboratory in Tumwater, including WSDOT Form 350-042.
- Include representative samples of the materials that are to be used in the HMA production as part of the mix design submittal.

- Identify the brand, type, and percentage of anti-stripping additive in the mix design submittal.

- Include with the mix design submittal a certification from the asphalt binder supplier that the anti-stripping additive is compatible with the crude source and the formulation of asphalt binder proposed for use in the mix design.

- Do not include warm mix asphalt (WMA) additives when developing a mix design or submitting a mix design for QPL evaluation. The use of warm mix asphalt (WMA) additives is not part of the process for obtaining approval for listing a mix design on the QPL. Refer to Section 5-04.2(2)B.

The Contracting Agency's basis for approving, testing, and evaluating HMA mix designs for approval on the QPL is dependent on the contractual basis for acceptance of the HMA mixture, as shown in Table 1.

Table 1

Basis for Contracting Agency Evaluation of HMA Mix Designs for Approval on the QPL

Contractual Basis for Acceptance of HMA Mixture (see Section 5-04.3(9))	Basis for Contracting Agency Approval of Mix Design for Placement on QPL	Contracting Agency Materials Testing for Evaluation of the Mix Design
Statistical Evaluation	WSDOT Standard Practice QC-8	The Contracting Agency will test the mix design materials for compliance with Sections 9-03.8(2) and 9-03.8(6).
Visual Evaluation	Review of Form 350-042 for compliance with Sections 9-03.8(2) and 9-03.8(6)	The Contracting Agency may elect to test the mix design materials, or evaluate in accordance with WSDOT Standard Practice QC-8, at its sole discretion.

If the Contracting Agency approves the mix design, it will be listed on the QPL for 12 consecutive months. The Contracting Agency may extend the 12 month listing provided the Contractor submits a certification letter to the Qualified Products Engineer verifying that the aggregate source and job mix formula (JMF) gradation, and asphalt binder crude source and formulation have not changed. The Contractor may submit the certification no sooner than three months prior to expiration of the initial 12 month mix design approval. Within 7 calendar days of receipt of the Contractor's certification, the Contracting Agency will update the QPL. The maximum duration for approval of a mix design and listing on the QPL will be 24 months from the date of initial approval or as approved by the Engineer.

5-04.2(1)A Mix Designs Containing RAP and/or RAS

Mix designs are classified by the RAP and/or RAS content as shown in Table 2.

Table 2

Mix Design Classification Based on RAP/RAS Content	
RAP/RAS Classification	**RAP/RAS Content[1]**
Low RAP/No RAS	0% ≤ RAP% ≤ 20% and RAS% = 0%
High RAP/Any RAS	20% < RAP% ≤ Maximum Allowable RAP[2] and/or 0% < RAS% ≤ Maximum Allowable RAS[2]

[1]Percentages in this table are by total weight of HMA
[2]See Table 4 to determine the limits on the maximum amount RAP and/or RAS.

5-04.2(1)A1 Low RAP/No RAS – Mix Design Submittals for Placement on QPL

For Low RAP/No RAS mix designs, comply with the following additional requirements:

1. Develop the mix design with or without the inclusion of RAP.

2. The asphalt binder grade shall be the grade indicated in the Bid item name or as otherwise required by the Contract.

3. Submit samples of RAP if used in development of the mix design.

4. Testing RAP or RAS stockpiles is not required for obtaining approval for placing these mix designs on the QPL.

5-04.2(1)A2 High RAP/Any RAS - Mix Design Submittals for Placement on QPL

For High RAP/Any RAS mix designs, comply with the following additional requirements:

1. For mix designs with any RAS, test the RAS stockpile (and RAP stockpile if any RAP is in the mix design) in accordance with Table 3.

2. For High RAP mix designs with no RAS, test the RAP stockpile in accordance with Table 3.

3. For mix designs with High RAP/Any RAS, construct a single stockpile for RAP and a single stockpile for RAS and isolate (sequester) these stockpiles from further stockpiling before beginning development of the mix design. Test the RAP and RAS during stockpile construction as required by item 1 and 2 above. Use the test data in developing the mix design, and report the test data to the Contracting Agency on WSDOT Form 350-042 as part of the mix design submittal for approval on the QPL. Account for the reduction in asphalt binder contributed from RAS in accordance with AASHTO PP 78. Do not add to these stockpiles after starting the mix design process.

Table 3

Test Frequency Of RAP/RAS During RAP/RAS Stockpile Construction For Approving a High RAP/Any RAS Mix Design for Placement on the QPL		
Test Frequency[1] • 1/1000 tons of RAP (minimum of 10 per mix design) and • 1/100 tons of RAS (minimum of 10 per mix design)	Test for	Test Method
	Asphalt Binder Content and Sieve Analysis of Fine and Coarse Aggregate	FOP for AASHTO T 308 and FOP for WAQTC T 27/T 11

[1]"tons", in this table, refers to tons of the reclaimed material before being incorporated into HMA.

4. Limit the amount of RAP and/or RAS used in a High RAP/Any RAS mix design by the amount of binder contributed by the RAP and/or RAS, in accordance with Table 4.

Table 4

Maximum Amount of RAP and/or RAS in HMA Mixture	
Maximum Amount of Binder Contributed from:	
RAP	RAS
40%[1] minus contribution of binder from RAS	20%[2]

[1] Calculated as the weight of asphalt binder contributed from the RAP as a percentage of the total weight of asphalt binder in the mixture.

[2] Calculated as the weight of asphalt binder contributed from the RAS as a percentage of the total weight of asphalt binder in the mixture.

5. Develop the mix design including RAP, RAS, recycling agent, and new binder.

6. Extract, recover, and test the asphalt residue from the RAP and RAS stockpiles to determine the percent of recycling agent and/or grade of new asphalt binder needed to meet but not exceed the performance grade (PG) of asphalt binder required by the Contract.

   a. Perform the asphalt extraction in accordance with AASHTO T 164 or ASTM D 2172 using reagent grade solvent.

   b. Perform the asphalt recovery in accordance with AASHTO R 59 or ASTM D 1856.

   c. Test the recovered asphalt residue in accordance with AASHTO R 29 to determine the asphalt binder grade in accordance with Section 9-02.1(4).

d. After determining the recovered asphalt binder grade, determine the percent of recycling agent and/or grade of new asphalt binder in accordance with ASTM D 4887.

e. Test the final blend of recycling agent, binder recovered from the RAP and RAS, and new asphalt binder in accordance with AASHTO R 29. The final blended binder shall meet but not exceed the performance grade of asphalt binder required by the Contract and comply with the requirements of Section 9-02.1(4).

7. Include the following test data with the mix design submittal:

   a. All test data from RAP and RAS stockpile construction.

   b. All data from testing the recovered and blended asphalt binder.

8. Include representative samples of the following with the mix design submittal:

   a. RAP and RAS.

   b. 150 grams of recovered asphalt residue from the RAP and RAS that are to be used in the HMA production.

5-04.2(1)B Commercial HMA - Mix Design Submittal for Placement on QPL

For HMA used in the Bid item Commercial HMA, in addition to the requirements of 5-04.2(1) identify the following in the submittal:

1. Commercial HMA

2. Class of HMA

3. Performance grade of binder

4. Equivalent Single Axle Load (ESAL)

The Contracting Agency may elect to approve Commercial HMA mix designs without evaluation.

5-04.2(1)C Mix Design Resubmittal for QPL Approval

Develop a new mix design and resubmit for approval on the QPL when any of the following changes occur. When these occur, discontinue using the mix design until after it is reapproved on the QPL.

1. Change in the source of crude petroleum used in the asphalt binder.

2. Changes in the asphalt binder refining process.

3. Changes in additives or modifiers in the asphalt binder.

4. Changes in the anti-strip additive, brand, type or quantity.

5. Changes to the source of material for aggregate.

6. Changes to the job mix formula that exceed the amounts as described in item 2 of Section 9-03.8(7), unless otherwise approved by the Engineer.

7. Changes in the percentage of material from a stockpile, when such changes exceed 5% of the total aggregate weight.

    a. For Low RAP/No RAS mix designs developed without RAP, changes to the percentage of material from a stockpile will be calculated based on the total aggregate weight not including the weight of RAP.

    b. For Low RAP/No RAS mix designs developed with RAP, changes to the percentage of material from a stockpile will be calculated based on the total aggregate weight including the weight of RAP.

    c. For High RAP/Any RAS mix designs, changes in the percentage of material from a stockpile will be based on total aggregate weight including the weight of RAP (and/or RAS when included in the mixture).

Prior to making any change in the amount of RAS in an approved mix design, notify the Engineer for determination of whether a new mix design is required, and obtain the Engineer's approval prior to implementing such changes.

5-04.2(2) Mix Design – Obtaining Project Approval

Use only mix designs listed on the Qualified Products List (QPL). Submit WSDOT Form 350-041 to the Engineer to request approval to use a mix design from the QPL. Changes to the job mix formula (JMF) that have been approved on other contracts may be included. The Engineer may reject a request to use a mix design if production of HMA using that mix design on any contract is not in compliance with Section 5-04.3(11)D, E, F, and G for mixture or compaction.

5-04.2(2)A Changes to the Job Mix Formula

The approved mix design obtained from the QPL will be considered the starting job mix formula (JMF) and shall be used as the initial basis for acceptance of HMA mixture, as detailed in Section 5-04.3(9).

During production the Contractor may request to adjust the JMF. Any adjustments to the JMF will require approval of the Engineer and shall be made in accordance with item 2 of Section 9-03.8(7). After approval by the Engineer, such adjusted JMF's shall constitute the basis for acceptance of the HMA mixture.

5-04.2(2)B Using Warm Mix Asphalt Processes

The Contractor may, at the Contractor's discretion, elect to use warm mix asphalt (WMA) processes for producing HMA. WMA processes include organic additives, chemical additives, and foaming. The use of WMA is subject to the following:

- Do not use WMA processes in the production of High RAP/Any RAS mixtures.
- Before using WMA processes, obtain the Engineer's approval using WSDOT Form 350-076 to describe the proposed WMA 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 in Table 5, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

Table 5

Minimum Surface Temperature for Paving

Compacted Thickness (Feet)	Wearing Course	Other Courses
Less than 0.10	55°F	45°F
0.10 to 0.20	45°F	35°F
More than 0.20	35°F	35°F

5-04.3(2) Paving Under Traffic

These requirements apply when the Roadway being paved is open to traffic.

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.

During paving operations, maintain temporary pavement markings throughout the project. Install temporary pavement markings on the Roadway prior to opening to traffic. Temporary pavement markings shall comply with Section 8-23.

5-04.3(3) Equipment

5-04.3(3)A Mixing Plant

Equip mixing plants as follows.

1. **Use tanks for storage and preparation of asphalt binder which:**

   - Heat the contents by means that do not allow flame to contact the contents or the tank, such as by steam or electricity.

   - Heat and hold contents at the required temperatures.

- Continuously circulate contents to provide uniform temperature and consistency during the operating period.

- Provide an asphalt binder sampling valve, in either the storage tank or the supply line to the mixer.

2. **Provide thermometric equipment:**

   - In the asphalt binder feed line near the charging valve at the mixer unit, capable of detecting temperature ranges expected in the HMA and in a location convenient and safe for access by Inspectors.

   - At the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates, and situated in full view of the plant operator.

3. **When heating asphalt binder:**

   - Do not exceed the maximum temperature of the asphalt binder recommended by the asphalt binder supplier.

   - Avoid local variations in heating.

   - Provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25°F.

4. **Provide a mechanical sampler for sampling mineral materials that:**

   - Meets the crushing or screening requirements of Section 1-05.6.

5. **Provide HMA sampling equipment that complies with WSDOT T168.**

   - Use a mechanical sampling device installed between the discharge of the silo and the truck transport, approved by the Engineer, or

   - Platforms or devices to enable sampling from the truck transport without entering the truck transport for sampling HMA.

6. **Provide for setup and operation of the Contracting Agency's field testing:**

   - As required in Section 3-01.2(2).

7. **Provide screens or a lump breaker:**

   - When using any RAP or any RAS, to eliminate oversize RAP or RAS particles from entering the pug mill or drum mixer.

5-04.3(3)B Hauling Equipment

Provide HMA hauling equipment with tight, clean, smooth metal beds and a cover of canvas or other suitable material of sufficient size to protect the HMA from adverse weather. Securely attach the cover to protect the HMA whenever the weather conditions during the work shift include, or are forecast to include, precipitation or an air temperature less than 45°F.

Prevent HMA from adhering to the hauling equipment. Spray metal beds with an environmentally benign release agent. Drain excess release agent prior to filling hauling equipment with HMA. Do not use petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA. For hopper trucks, operate the conveyer during the process of applying the release agent.

5-04.3(3)C Pavers

Use self-contained, power-propelled pavers provided with an internally heated vibratory screed that is capable of spreading and finishing courses of HMA in lane widths required by the paving section shown in the Plans.

When requested by the Engineer, provide written certification that the paver is equipped with the most current equipment available from the manufacturer for the prevention of segregation of the coarse aggregate particles. The certification shall list the make, model, and year of the paver and any equipment that has been retrofitted to the paver.

Operate the screed in accordance with the manufacturer's recommendations and in a manner to produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. Provide a copy of the manufacturer's recommendations upon request by the Contracting Agency. Extensions to the screed will be allowed provided they produce the same results, including ride, density, and surface texture as obtained by the primary screed. In the Travelled Way do not use extensions without both augers and an internally heated vibratory screed.

Equip the paver with automatic screed controls and sensors for either or both sides of the paver. The controls shall be capable of sensing grade from an outside reference line, sensing the transverse slope of the screed, and providing automatic signals that operate the screed to maintain the desired grade and transverse slope. Construct the sensor so it will operate from a reference line or a mat referencing device. The transverse slope controller shall be capable of maintaining the screed at the desired slope within plus or minus 0.1 percent.

Equip the paver with automatic feeder controls, properly adjusted to maintain a uniform depth of material ahead of the screed.

Manual operation of the screed is permitted in the construction of irregularly shaped and minor areas. These areas include, but are not limited to, gore areas, road approaches, tapers and left-turn channelizations.

When specified in the Contract, provide reference lines for vertical control. Place reference lines on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line is permitted. Automatically control the grade and slope of intermediate lanes by means of reference lines or 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 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.

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.

5-04.3(3)D Material Transfer Device or Material Transfer Vehicle

Use a material transfer device (MTD) or material transfer vehicle (MTV) to deliver the HMA from the hauling equipment to the paving machine for any lift in (or partially in) the top 0.30 feet of the pavement section used in traffic lanes. However, an MTD/V is not required for HMA placed in irregularly shaped and minor areas such as tapers and turn lanes, or for HMA mixture that is accepted by Visual Evaluation. At the Contractor's request the Engineer may approve paving without an MTD/V; the Engineer will determine if an equitable adjustment in cost or time is due. If a windrow elevator is used, the Engineer may limit the length of the windrow in urban areas or through intersections.

To be approved for use, an MTV:

1. Shall be a self-propelled vehicle, separate from the hauling vehicle or paver.

2. Shall not 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

Operate rollers in accordance with the manufacturer's recommendations. When requested by the Engineer, provide a Type 1 Working Drawing of the manufacturer's recommendation for the use of any roller planned for use on the project. Do not use rollers that crush aggregate, produce pickup or washboard, unevenly compact the surface, displace the mix, or produce other undesirable results.

5-04.3(4) Preparation of Existing Paved Surfaces

Before constructing HMA on an existing paved surface, the entire surface of the pavement shall be clean. Entirely remove all fatty asphalt patches, grease drippings, and other deleterious substances from the existing pavement to the satisfaction of the Engineer. Thoroughly clean all pavements or bituminous surfaces of dust, soil, pavement grindings, and other foreign matter. Thoroughly remove any cleaning or solvent type liquids used to clean equipment spilled on the pavement before paving proceeds. Fill all holes and small depressions with an appropriate class of HMA. Level and thoroughly compact the surface of the patched area.

Apply a uniform coat of asphalt (tack coat) to all paved surfaces on which any course of HMA is to be placed or abutted. Apply tack coat to cover the cleaned existing pavement with a thin film of residual asphalt free of streaks and bare spots. Apply a heavy application of tack coat to all joints. For Roadways open to traffic, limit the application of tack coat to surfaces that will be paved during the same working shift. Equip the spreading equipment with a thermometer to indicate the temperature of the tack coat material.

Do not operate equipment on tacked surfaces until the tack has broken and cured. Repair tack coat damaged by the Contractor's operation, prior to placement of the HMA.

Unless otherwise approved by the Engineer, use cationic emulsified asphalt CSS-1, CSS-1h, STE-1, or Performance Graded (PG) asphalt for tack coat. The CSS-1 and CSS-1h may be diluted with water at a rate not to exceed one part water to one part emulsified asphalt. Do not allow the tack coat material to exceed the maximum temperature recommended by the asphalt supplier.

When shown in the Plans, prelevel uneven or broken surfaces over which HMA is to be placed by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

5-04.3(4)A Crack Sealing

5-04.3(4)A1 General

When the Proposal includes a pay item for crack sealing, seal all cracks ¼ inch in width and greater.

Cleaning: Ensure that cracks are thoroughly clean, dry and free of all loose and foreign material when filling with crack sealant material. Use a hot compressed air lance to dry and warm the pavement surfaces within the crack immediately prior to filling a crack with the sealant material. Do not overheat pavement. Do not use direct flame dryers. Routing cracks is not required.

Sand Slurry: For cracks that are to be filled with sand slurry, thoroughly mix the components and pour the mixture into the cracks until full. Add additional CSS-1 cationic emulsified asphalt to the sand slurry as needed for workability to ensure the mixture will completely fill the crack. Strike off the sand slurry flush with the existing pavement surface and allow the mixture to cure. Top off cracks that were not completely filled with additional sand slurry. Do not place the HMA overlay until the slurry has fully cured.

Hot Poured Sealant: For cracks that are to be filled with hot poured sealant, apply the material in accordance with these requirements and the manufacturer's recommendations. Furnish a Type 1 Working Drawing of the manufacturer's product information and recommendations to the Engineer prior to the start of work, including the manufacturer's recommended heating time and temperatures, allowable storage time and temperatures after initial heating, allowable reheating criteria, and application temperature range. Confine hot poured sealant material within the crack. Clean any overflow of sealant from the pavement surface. If, in the opinion of the Engineer, the Contractor's method of sealing the cracks with hot poured sealant results in an excessive amount of material on the pavement surface, stop and correct the operation to eliminate the excess material.

5-04.3(4)A2 Crack Sealing Areas Prior to Paving

In areas where HMA will be placed, use sand slurry to fill the cracks.

5-04.3(4)A3 Crack Sealing Areas Not to be Paved

In areas where HMA will not be placed, fill the cracks as follows:

1. Cracks ¼ inch to 1 inch in width - fill with hot poured sealant.

2. Cracks greater than 1 inch in width – fill with sand slurry.

5-04.3(4)B Soil Residual Herbicide

Where shown in the Plans, apply one application of an approved soil residual herbicide. Comply with Section 8-02.3(3)B. Complete paving within 48 hours of applying the herbicide.

Use herbicide registered with the Washington State Department of Agriculture for use under pavement. Before use, obtain the Engineer's approval of the

herbicide and the proposed rate of application. Include the following information in the request for approval of the material:

1. Brand Name of the Material,

2. Manufacturer,

3. Environmental Protection Agency (EPA) Registration Number,

4. Material Safety Data Sheet, and

5. Proposed Rate of Application.

5-04.3(4)C Pavement Repair

Excavate pavement repair areas and backfill these with HMA in accordance with the details shown in the Plans and as staked. Conduct the excavation operations in a manner that will protect the pavement that is to remain. Repair pavement not designated to be removed that is damaged as a result of the Contractor's operations to the satisfaction of the Engineer at no cost to the Contracting Agency. Excavate only within one lane at a time unless approved otherwise by the Engineer. Do not excavate more area than can be completely backfilled and compacted during the same shift.

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, sawcut the perimeter of the pavement area to be removed unless the pavement in the pavement repair area is to be removed by a pavement grinder.

Excavated materials shall be 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.

Apply a heavy application of tack coat to all surfaces of existing pavement in the pavement repair area, in accordance with Section 5-04.3(4).

Place the HMA backfill in lifts not to exceed 0.35-foot compacted depth. Thoroughly compact each lift by a mechanical tamper or a roller.

5-04.3(5) Producing/Stockpiling Aggregates, RAP, & RAS

Produce aggregate in compliance with Section 3-01. Comply with Section 3-02 for preparing stockpile sites, stockpiling, and removing from stockpile each of the following: aggregates, RAP, and RAS. Provide sufficient storage space for each size of aggregate, RAP and RAS. Fine aggregate or RAP may be uniformly blended with the RAS as a method of preventing the agglomeration of RAS particles. Remove the aggregates, RAP and RAS from stockpile(s) in a manner that ensures minimal segregation when being moved to the HMA plant for processing into the final mixture. Keep different aggregate sizes separated until they have been delivered to the HMA plant.

5-04.3(5)A Stockpiling RAP or RAS for High RAP/Any RAS Mixes

Do not place any RAP or RAS into a stockpile which has been sequestered for a High RAP/Any RAS mix design. Do not incorporate any RAP or RAS into a High RAP/Any RAS mixture from any source other than the stockpile which was sequestered for approval of that particular High RAP/Any RAS mix design.

RAP that is used in a Low RAP/No RAS mix is not required to come from a sequestered stockpile.

5-04.3(6) Mixing

The asphalt supplier shall introduce anti-stripping additive, in the amount designated on the QPL for the mix design, into the asphalt binder prior to shipment to the asphalt mixing plant.

Anti-strip is not required for temporary work that will be removed prior to Physical Completion.

Use asphalt binder of the grade, and from the supplier, in the approved mix design.

Prior to introducing reclaimed materials into the asphalt plant, remove wire, nails, and other foreign material. Discontinue use of the reclaimed material if the Engineer, in their sole discretion, determines the wire, nails, or other foreign material to be excessive.

Size RAP and RAS prior to entering the mixer to provide uniform and thoroughly mixed HMA. If there is evidence of the RAP or RAS not breaking down during the heating and mixing of the HMA, immediately suspend the use of the RAP or RAS until changes have been approved by the Engineer.

After the required amount of mineral materials, RAP, RAS, new asphalt binder and recycling agent have been introduced into the mixer, mix the HMA until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, RAP and RAS is ensured.

Upon discharge from the mixer, ensure that the temperature of the HMA does not exceed the optimum mixing temperature shown on the approved Mix Design Report by more than 25°F, or as approved by the Engineer. When a WMA additive is included in the manufacture of HMA, do not heat the WMA additive (at any stage of production including in binder storage tanks) to a temperature higher than 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, reduce the moisture content.

During the daily operation, HMA may be temporarily held in approved storage facilities. Do not incorporate HMA into the Work that has been held for more

than 24 hours after mixing. Provide an easily readable, low bin-level indicator on the storage facility that indicates the amount of material in storage. Waste the HMA in storage when the top level of HMA drops 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. Dispose of rejected or waste HMA at no expense to the Contracting Agency.

5-04.3(7) Spreading and Finishing

Do not exceed the maximum nominal compacted depth of any layer in any course, as shown in Table 6, unless approved by the Engineer:

Table 6

Maximum Nominal Compacted Depth of Any Layer		
HMA Class	**Wearing Course**	**Other than Wearing Course**
1 inch	0.35 feet	0.35 feet
¾ and ½ inch	0.30 feet	0.35 feet
⅜ inch	0.15 feet	0.15 feet

Use HMA pavers complying with Section 5-04.3(3) to distribute the mix. 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, place the material produced for each JMF with separate spreading and compacting equipment. Do not intermingle HMA produced from more than one JMF. 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

Sample aggregate for meeting the requirements of Section 3-04 prior to being incorporated into HMA. (The acceptance data generated for the Section 3-04 acceptance analysis will not be commingled with the acceptance data generated for the Section 5-04.3(9) acceptance analysis.) Aggregate acceptance samples shall be taken as described in Section 3-04. Aggregate acceptance testing will be performed by the Contracting Agency. Aggregate contributed from RAP and/or RAS will not be evaluated under Section 3-04.

For aggregate that will be used in HMA mixture which will be accepted by Statistical Evaluation, the Contracting Agency's acceptance of the aggregate will be based on:

1. Samples taken prior to mixing with asphalt binder, RAP, or RAS;

2. Testing for the materials properties of fracture, uncompacted void content, and sand equivalent;

3. Evaluation by the Contracting Agency in accordance with Section 3-04, including price adjustments as described therein.

For aggregate that will be used in HMA which will be accepted by Visual Evaluation, evaluation in accordance with items 1, 2, and 3 above is at the discretion of the Engineer.

5-04.3(9) HMA Mixture Acceptance

The Contracting Agency will evaluate HMA mixture for acceptance by one of two methods as determined from the criteria in Table 7.

Table 7

Basis of Acceptance for HMA Mixture		
	Visual Evaluation	**Statistical Evaluation**
Criteria for Selecting the Evaluation Method	• Commercial HMA placed at any location • Any HMA placed in: o sidewalks o road approaches o ditches o slopes o paths o trails o gores o prelevel o temporary pavement[1] o pavement repair • Other nonstructural applications of HMA as approved by the Engineer	• All HMA mixture other than that accepted by Visual Evaluation

[1] Temporary pavement is HMA that will be removed before Physical Completion of the Contract.

5-04.3(9)A Test Sections

This Section applies to HMA mixture accepted by Statistical Evaluation. A test section is not allowed for HMA accepted by Visual Evaluation.

The purpose of a test section is to determine whether or not the Contractor's mix design and production processes will produce HMA meeting the Contract requirements related to mixture. Construct HMA mixture test sections at the beginning of paving, using at least 600 tons and a maximum of 1,000 tons or as specified by the Engineer. Each test section shall be constructed in one continuous operation.

5-04.3(9)A1 Test Section – When Required, When to Stop

Use Tables 8 and 9 to determine when a test section is required, optional, or not allowed, and to determine when performing test sections may end. Each mix design will be evaluated independently for the test section requirements. If more than one test section is required, each test section shall be evaluated separately by the criteria in table 8 and 9.

Table 8

Criteria for Conducting and Evaluating HMA Mixture Test Sections
(For HMA Mixture Accepted by Statistical Evaluation)

	High RAP/Any RAS	Low RAP/No RAS
Is Mixture Test Section Optional or Mandatory?	Mandatory[1]	At Contractor's Option
Waiting period after paving the test section.	4 calendar days[2]	4 calendar days[2]
What Must Happen to Stop Performing Test Sections?	Meet "Results Required to Stop Performing Test Sections" in Table 9 for High RAP/Any RAS.	Provide samples and respond to WSDOT test results required by Table 9 for Low RAP/No RAS.

[1]If a mix design has produced an acceptable test section on a previous contract (paved in the same calendar year, from the same plant, using the same JMF) the test section may be waived if approved by the Engineer.

[2]This is to provide time needed by the Contracting Agency to complete testing and the Contractor to adjust the mixture in response to those test results. Paving may resume when this is done.

1

Table 9

Results Required to Stop Performing HMA Mixture Test Sections[1]
(For HMA Mixture Accepted by Statistical Evaluation)

Test Property	Type of HMA	
	High RAP/Any RAS	Low RAP/No RAS
Gradation	Minimum PF_i of 0.95 based on the criteria in Section 5-04.3(9)B4[2]	None[4]
Asphalt Binder	Minimum PF_i of 0.95 based on the criteria in Section 5-04.3(9)B4[2]	None[4]
V_a	Minimum PF_i of 0.95 based on the criteria in Section 5-04.3(9)B4[2]	None[4]
Hamburg Wheel Track	Meet requirements of Section 9-03.8(2).[3]	These tests will not be done as part of Test Section.
Indirect Tensile Strength		
Aggregates	Nonstatistical Evaluation in	None[3]
Sand Equivalent		

Uncompacted Void Content	accordance with the requirements of Section 3-04[3]
Fracture	

[1]In addition to the requirements of this table, acceptance of the HMA mixture used in each test section is subject to the acceptance criteria and price adjustments for Statistical Evaluation (see Table 9a).

[2]Divide the test section lot into three sublots, approximately equal in size. Take one sample from each sublot, and test each sample for the property in the first column.

[3]Take one sample for each test section lot. Test the sample for the properties in the first column.

[4]Divide the test section lot into three sublots, approximately equal in size. Take one sample from each sublot, and test each sample for the property in the first column. There are no criteria for discontinuing test sections for these mixes; however, the contractor must comply with Section 5-04.3(11)F before resuming paving.

5-04.3(9)A2 Test Section – Evaluating the HMA Mixture in a Test Section

The Engineer will evaluate the HMA mixture in each test section for rejection, acceptance, and price adjustments based on the criteria in Table 9a using the data generated from the testing required by Table 9. Each test section shall be considered a separate lot.

Table 9a

Acceptance Criteria for HMA Mixture Placed in a Test Section (For HMA Mixture Accepted by Statistical Evaluation)

Test Property	Type of HMA	
	High RAP/Any RAS	Low RAP/No RAS
Gradation Asphalt Binder V_a	Statistical Evaluation	Statistical Evaluation
Hamburg Wheel Track Indirect Tensile Strength	Pass/Fail for the requirements of Section 9-03.8(2)[1]	N/A
HMA Aggregate Sand Equivalent Uncompacted Void Content	Nonstatistical Evaluation in accordance with the requirements of Section 3-04	Nonstatistical Evaluation in accordance with the requirements of Section 3-04

[1]Failure to meet the specifications for Hamburg and/or IDT will cause the mixture in the test section to be rejected. Refer to Section 5-04.3(11).

5-04.3(9)B Mixture Acceptance – Statistical Evaluation

5-04.3(9)B1 Mixture Statistical Evaluation – Lots and Sublots

HMA mixture which is accepted by Statistical Evaluation will be evaluated by the Contracting Agency dividing that HMA tonnage into mixture lots, and each mixture lot will be evaluated using stratified random sampling by the Contracting Agency sub-dividing each mixture lot into mixture sublots. All mixture in a mixture lot shall be of the same mix design. The mixture sublots will be numbered in the order in which the mixture (of a particular mix design) is paved.

Each mixture lot comprises a maximum of 15 mixture sublots, except:

- The final mixture lot of each mix design on the Contract will comprise a maximum of 25 sublots.
- A mixture lot for a test section will consist of three sublots.

Each mixture sublot shall be approximately uniform in size with the maximum mixture sublot size as specified in Table 10. The quantity of material represented by the final mixture sublot of the project, for each mix design on the project, may be increased to a maximum of two times the mixture sublot quantity calculated.

Table 10

Maximum HMA Mixture Sublot Size For HMA Accepted by Statistical Evaluation

HMA Original Plan Quantity (tons)[1]	Maximum Sublot Size (tons)[2]
< 20,000	1,000
20,000 to 30,000	1,500
>30,000	2,000

[1] "Plan quantity" means the plan quantity of all HMA of the same class and binder grade which is accepted by Statistical Evaluation.

[2] The maximum sublot size for each combination of HMA class and binder grade shall be calculated separately.

- For a mixture lot in progress with a mixture CPF less than 0.75, a new mixture lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced. See also Section 5-04.3(11)F.

- If, before completing a mixture lot, the Contractor requests a change to the JMF which is approved by the Engineer, the mixture produced in that lot after the approved change will be evaluated on the basis of the changed JMF, and the mixture produced in that lot before the approved change will be evaluated on the basis of the unchanged JMF; however, the mixture before and after the change will be evaluated in the same lot. Acceptance of subsequent mixture lots will be evaluated on the basis of the changed JMF.

5-04.3(9)B2 Mixture Statistical Evaluation – Sampling

Comply with Section 1-06.2(1).

Samples of HMA mixture which is accepted by Statistical Evaluation will be randomly selected from within each sublot, with one sample per sublot. The Engineer will determine the random sample location using WSDOT Test Method T 716. The Contractor shall obtain the sample when ordered by the Engineer. The Contractor shall sample the HMA mixture in the presence of the Engineer and in accordance with FOP for WAQTC T 168.

5-04.3(9)B3 Mixture Statistical Evaluation – Acceptance Testing

Comply with Section 1-06.2(1).

The Contracting Agency will test the mixture sample from each sublot (including sublots in a test section) for the properties shown in Table 11.

Table 11

Testing Required for each HMA Mixture Sublot		
Test	**Procedure**	**Performed by**
V_a	WSDOT SOP 731	Engineer
Asphalt Binder Content	FOP for AASHTO T 308	Engineer
Gradation: Percent Passing 1½″, 1″, ¾″, ½″, ⅜″, No. 4, No. 8, No. 200	FOP for WAQTC T 27/T 11	Engineer

The mixture samples and tests taken for the purpose of determining acceptance of the test section (as described in Section 5-04.3(9)A) shall also be used as the test results for acceptance of the mixture described in 5-04.3(9)B3, 5-04.3(9)B4, 5-04.3(9)B5, and 5-04.3(9)B6.

5-04.3(9)B4 Mixture Statistical Evaluation – Pay Factors

Comply with Section 1-06.2(2).

The Contracting Agency will determine a pay factor (PF_i) for each of the properties in Table 11, for each mixture lot, using the quality level analysis in Section 1-06.2(2)D. For Gradation, a pay factor will be calculated for each of the sieve sizes listed in Table 11 which is equal to or smaller than the maximum allowable aggregate size (100 percent passing sieve) of the HMA mixture. The USL and LSL shall be calculated using the Job Mix Formula Tolerances (for Statistical Evaluation) in Section 9-03.8(7).

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

5-04.3(9)B5 Mixture Statistical Evaluation – Composite Pay Factors (CPF)

Comply with Section 1-06.2(2).

In accordance with Section 1-06.2(2)D4, the Contracting Agency will determine a Composite Pay Factor (CPF) for each mixture lot from the pay factors calculated in Section 5-04.3(9)B4, using the price adjustment factors in Table 12. Unless otherwise specified, the maximum CPF for HMA mixture shall be 1.05.

Table 12

HMA Mixture 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 (V_a)	20

5-04.3(9)B6 Mixture Statistical Evaluation – Price Adjustments

For each HMA mixture lot, a Job Mix Compliance Price Adjustment will be determined and applied, as follows:

JMCPA = [0.60 x (CPF – 1.00)] x Q x UP

Where

JMCPA = Job Mix Compliance Price Adjustment for a given lot of mixture ($)
CPF = Composite Pay factor for a given lot of mixture (maximum is 1.05)
Q = Quantity in a given lot of mixture (tons)
UP = Unit price of the HMA in a given lot of mixture ($/ton)

5-04.3(9)B7 Mixture Statistical Evaluation – Retests

The Contractor may request that a mixture sublot be retested. To request a retest, submit a written request to the Contracting Agency within 7 calendar days after the specific test results have been posted to the website or emailed to the Contractor, whichever occurs first. The Contracting Agency will send a split of the original acceptance sample for testing by the Contracting Agency to either the Region Materials Laboratory or the State Materials Laboratory as determined by the Engineer. The Contracting Agency will not test the split of the sample with the same equipment or by the same tester that ran the original acceptance test. The sample will be tested for a complete gradation analysis, asphalt binder content, and V_a, and the results of the retest will be used for the acceptance of the HMA mixture in place of the original mixture 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 $250 per sample.

5-04.3(9)C Vacant

5-04.3(9)D Mixture Acceptance – Visual Evaluation

Visual Evaluation of HMA mixture will be by visual inspection by the Engineer or, in the sole discretion of the Engineer, the Engineer may sample and test the mixture.

5-04.3(9)D1 Mixture Visual Evaluation – Lots, Sampling, Testing, Price Adjustments

HMA mixture accepted by Visual Evaluation will not be broken into lots unless the Engineer determines that testing is required. When that occurs, the Engineer will identify the limits of the questionable HMA mixture, and that questionable HMA mixture shall constitute a lot. Then, the Contractor will take samples from the truck, or the Engineer will take core samples from the roadway at a minimum of three random locations from within the lot, selected in accordance with WSDOT Test Method T 716, taken from the roadway in accordance with WSDOT SOP 734, and tested in accordance with WSDOT SOP 737. The Engineer will test one of the samples for all constituents in Section 5-04.3(9)B3. If all constituents from that test fall within the Job Mix Formula Tolerances (for Visual Evaluation) in Section 9-03.8(7), the lot will be accepted at the unit Contract price with no further evaluation.

When one or more constituents fall outside those tolerance limits, the other samples will be tested for all constituents in Section 5-04.3(9)B3, and a Job Mix Compliance Price Adjustment will be calculated in accordance with Table 13.

Table 13

Visual Evaluation – Out of Tolerance Procedures	
Comply with the Following	
Pay Factors[1]	Section 5-04.3(9)B4
Composite Pay Factors[2]	Section 5-04.3(9)B5
Price Adjustments	Section 5-04.3(9)B6

[1]The Visual Evaluation tolerance limits in Section 9-03.8(7) will be used in the calculation of the PF_i.

[2]The maximum CPF shall be 1.00.

5-04.3(9)E Mixture Acceptance – Notification of Acceptance Test Results

The results of all mixture acceptance testing and the Composite Pay Factor (CPF) of the lot after three sublots have been tested will be available to the Contractor through The Contracting Agency's website.

The Contracting Agency will endeavor to provide written notification (via email to the Contractor's designee) of acceptance test results through its web-based materials testing system Statistical Analysis of Materials (SAM) within 24 hours of the sample being made available to the Contracting Agency. However, the Contractor agrees:

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

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

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

5-04.3(10) HMA Compaction Acceptance

For all HMA, the Contractor shall comply with the General Compaction Requirements in Section 5-04.3(10)A. The Contracting Agency will evaluate all HMA for compaction compliance with one of the following - Statistical Evaluation, Visual Evaluation, or Test Point Evaluation - determined by the criteria in Table 14:

Table 14

Criteria for Determining Method of Evaluation for HMA Compaction[1]

Statistical Evaluation of HMA Compaction is Required For:	**Visual Evaluation of HMA Compaction is Required For:**	**Test Point Evaluation of HMA Compaction is Required For:**
• Any HMA for which the specified course thickness is greater than 0.10 feet, and the HMA is in: o traffic lanes, including but not limited to: • ramp lanes • truck climbing lanes • weaving lanes • speed change lanes	• "HMA for Preleveling…" • "HMA for Pavement Repair…"	• Any HMA not meeting the criteria for Statistical Evaluation or Visual Evaluation

[1]This table applies to all HMA, and shall be the sole basis for determining the acceptance method for compaction.

The Contracting Agency may, at its sole discretion, evaluate any HMA for compliance with the Cyclic Density requirements of Section 5-04.3(10)B.

5-04.3(10)A HMA Compaction – General Compaction Requirements

Immediately after the HMA has been spread and struck off, and after surface irregularities have been adjusted, thoroughly and uniformly compact the mix. The completed course shall be free from ridges, ruts,

humps, depressions, objectionable marks, and irregularities and shall conform to the line, grade, and cross-section shown in the Plans. If necessary, alter the JMF in accordance with Section 9-03.8(7) to achieve desired results.

Compact the mix when it is in the proper condition so that no undue displacement, cracking, or shoving occurs. Compact areas inaccessible to large compaction equipment by mechanical or hand tampers. Remove HMA that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt, or is in any way defective. Replace the removed material with new HMA, and compact it immediately 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. An exception shall be that pneumatic tired rollers shall be used for compaction of the wearing course beginning October 1st of any year through March 31st of the following year. Coverage with a steel wheel roller may precede pneumatic tired rolling. Unless otherwise approved by the Engineer, operate rollers in the static mode when the internal temperature of the mix is less than 175°F. Regardless of mix temperature, do not operate a roller in a mode that results in checking or cracking of the mat.

On bridge decks and on the five feet of roadway approach immediately adjacent to the end of bridge/back of pavement seat, operate rollers in static mode only.

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 HMA Compaction Acceptance – Statistical Evaluation

HMA compaction which is accepted by Statistical Evaluation will be based on acceptance testing performed by the Contracting Agency, and statistical analysis of those acceptance tests results. This will result in a Compaction Price Adjustment.

5-04.3(10)C1 HMA Compaction Statistical Evaluation – Lots and Sublots

HMA compaction which is accepted by Statistical Evaluation will be evaluated by the Contracting Agency dividing the project into compaction lots, and each compaction lot will be evaluated using stratified random sampling by the Contracting Agency sub-dividing each compaction lot into compaction sublots. All mixture in any individual compaction lot shall be of the same mix design. The

compaction sublots will be numbered in the order in which the mixture (of a particular mix design) is paved.

Each compaction lot comprises a maximum of 15 compaction sublots, except for the final compaction lot of each mix design on the Contract, which comprises a maximum of 25 sublots.

Each compaction sublot shall be uniform in size as shown in Table 15, except that the last compaction sublot of each day may be increased to a maximum of two times the compaction sublot quantity calculated. Minor variations in the size of any sublot shall not be cause to invalidate the associated test result.

Table 15

HMA Compaction Sublot Size

HMA Original Plan Quantity (tons)[1]	Compaction Sublot Size (tons)
<20,000	100
20,000 to 30,000	150
>30,000	200

[1] In determining the plan quantity tonnage, do not include any tons accepted by test point evaluation.

The following will cause one compaction lot to end prematurely and a new compaction lot to begin:

- For a compaction lot in progress with a compaction CPF less than 0.75, a new compaction lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced. See also Section 5-04.3(11)F.

All HMA which is paved on a bridge and accepted for compaction by Statistical Evaluation will compose a bridge compaction lot. If the contract includes such HMA on more than one bridge, compaction will be evaluated on each bridge individually, as separate bridge compaction lots.

Bridge compaction sublots will be determined by the Engineer subject to the following:

- All sublots on a given bridge will be approximately the same size.

- Sublots will be stratified from the lot.

- In no case will there be less than 3 sublots in each bridge compaction lot.

- No sublot will exceed 50 tons.

- Compaction test locations will be determined by the Engineer in accordance with WSDOT FOP for AASHTO T716.

5-04.3(10)C2 HMA Compaction Statistical Evaluation – Acceptance Testing

Comply with Section 1-06.2(1).

The location of HMA compaction acceptance tests will be randomly selected by the Contracting Agency from within each sublot, with one test per sublot. The Contracting Agency will determine the random sample location using WSDOT Test Method T 716.

Use Table 16 to determine compaction acceptance test procedures and to allocate compaction acceptance sampling and testing responsibilities between the Contractor and the Contracting Agency. HMA cores shall be taken or nuclear density testing shall occur after completion of the finish rolling, prior to opening to traffic, and on the same day that the mix is placed.

Table 16

HMA Compaction Acceptance Testing Procedures and Responsibilities

	When Contract Includes Bid Item "HMA Core – Roadway" or "HMA Core – Bridge"[4]	When Contract Does Not Include Bid Item "HMA Core – Roadway" or "HMA Core – Bridge"[4]	
Basis for Test:	Cores	Cores[3]	Nuclear Density Gauge[3]
In-Place Density Determined by:	Contractor shall take cores[1] using WSDOT SOP 734[2] Contracting Agency will determine core density using FOP for AASHTO T 166	Contracting Agency will take cores[1] using WSDOT SOP 734 Contracting Agency will determine core density using FOP for AASHTO T 166	Contracting Agency, using WSDOT FOP for AASHTO T 355
Theoretical Maximum Density Determined by:	Contracting Agency, using FOP for AASHTO T 209		
Rolling Average of Theoretical Maximum Densities	Contracting Agency, using WSDOT SOP 729		

Determined by:			
Percent Compaction in Each Sublot Determined by:	Contracting Agency, using WSDOT SOP 736	Contracting Agency, using WSDOT SOP 736	Contracting Agency, using WSDOT FOP for AASHTO T 355

[1]The core diameter shall be 4-inches unless otherwise approved by the Engineer.

[2]The Contractor shall take the core samples in the presence of the Engineer, at locations designated by the Engineer, and deliver the core samples to the Contracting Agency.

[3]The Contracting Agency will determine, in its sole discretion, whether it will take cores or use the nuclear density gauge to determine in-place density. Exclusive reliance on cores for density acceptance is generally intended for small paving projects and is not intended as a replacement for nuclear gauge density testing on typical projects.

[4]The basis for test of all compaction sublots in a bridge compaction lot shall be cores. These cores shall be taken by the Contractor when the Proposal includes the bid item "HMA Cores – Bridge". When there is no bid item for "HMA Cores – Bridge", the Engineer will be responsible for taking HMA cores for all compaction sublots in a bridge compaction lot. In either case, the Engineer will determine core location, in-place density of the core, theoretical maximum density, rolling average of theoretical maximum density, and percent compaction using the procedure called for in this Section.

When using the nuclear density gauge for acceptance testing of pavement density, the Engineer will follow WSDOT SOP 730 for correlating the nuclear gauge with HMA cores. When cores are required for the correlation, coring and testing will be by the Contracting Agency. When a core is taken for gauge correlation at the location of a sublot, the relative density of the core will be used for the sublot test result and is exempt from retesting.

5-04.3(10)C3 HMA Statistical Compaction – Price Adjustments

For each HMA compaction lot (that is accepted by Statistical Evaluation) which has less than three compaction sublots, for which all compaction sublots attain a minimum of 91 percent compaction determined in accordance with WSDOT FOP for AASHTO T 355 (or WSDOT SOP 736 when provided by the Contract), the HMA will be accepted at the unit Contract price with no further evaluation.

For each HMA compaction lot (that is accepted by Statistical Evaluation) which does not meet the criteria in the preceding paragraph, the compaction lot shall be evaluated in accordance with Section 1-06.2(2) to determine the appropriate Compaction Price Adjustment (CPA). All of the test results obtained from the acceptance samples from a given compaction lot shall be evaluated collectively. Additional testing by either a nuclear density gauge or cores will be completed as required to provide a minimum of three tests for evaluation.

For the statistical analysis in Section 1-06.2, use the following values:

x = Percent compaction of each sublot
USL = 100
LSL= 91

Each CPA will be determined as follows:

CPA = [0.40 x (CPF – 1.00)] x Q x UP

Where

CPA = Compaction Price Adjustment for the compaction lot ($)
CPF = Composite Pay Factor for the compaction lot (maximum is 1.05)
Q = Quantity in the compaction lot (tons)
UP = Unit price of the HMA in the compaction lot ($/ton)

5-04.3(10)C4 HMA Statistical Compaction – Requests for Retesting

For a compaction sublot that has been tested with a nuclear density gauge that did not meet the minimum of 91 percent of the theoretical 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, taken at the same location as the nuclear density test, be used for determination of the relative density of the compaction sublot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the compaction 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 compaction sublot have been provided or made available to the Contractor. 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 retesting. When the CPF for the compaction lot based on the results of the cores is less than 1.00, the Contracting Agency will deduct the cost for the coring 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)D HMA Compaction – Visual Evaluation

Visual Evaluation will be the basis of acceptance for compaction of the Bid items “HMA for Pavement Repair Cl. ___ PG ___”and “HMA for Prelevelling Class___ PG___”. This HMA shall be thoroughly compacted to the satisfaction of the Engineer. HMA that is used to prelevel wheel ruts shall be compacted with a pneumatic tire roller.

5-04.3(10)E HMA Compaction – Test Point Evaluation

When compaction acceptance is by Test Point Evaluation, compact HMA based on a test point evaluation of the compaction train. Perform the test point evaluation 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.

5-04.3(10)F HMA Compaction Acceptance – Notification of Acceptance Test Results

The obligations and responsibilities for notifying the Contractor of compaction acceptance test results are the same as for mixture acceptance test results. See Section 5-04.3(9)E.

5-04.3(11) Reject Work

This Section applies to HMA and all requirements related to HMA (except aggregates prior to being incorporated into HMA). For rejection of aggregate prior to its incorporation into HMA refer to Section 3-04.

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.

5-04.3(11)B Rejection by Contractor

The Contractor may, prior to acceptance sampling and testing, 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.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests the rejected material to be tested. If the Contractor requests testing, acceptance will be by Statistical Evaluation, and a minimum of three samples will be obtained and tested. When uncompacted material is required for testing but not available, the Engineer will determine random sample locations on the roadway in accordance with WSDOT Test Method T 716, take cores in accordance with WSDOT SOP 734, and test the cores in accordance with WSDOT SOP 737.

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 (Mixture or Compaction)

In addition to the random acceptance sampling and testing, the Engineer may also isolate from a mixture or compaction 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. The Contracting Agency will obtain a minimum of three random samples of the suspect material and perform the testing. When uncompacted material is required for testing but is not available, the Engineer will select random sample locations on the roadway in accordance with WSDOT Test Method T 716, take cores samples in accordance with WSDOT SOP 734, and test the material in accordance with WSDOT SOP 737. 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 (Mixture or Compaction)

An entire mixture or compaction sublot that is suspected of being defective may be rejected. When this occurs, a minimum of two additional random samples from this sublot will be obtained. When uncompacted material is required for the additional samples but the material has been compacted, the Contracting Agency will take and test cores from the roadway as described in Section 5-04.3(11)D. The 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 (Mixture or Compaction)

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 when:

1. the Composite Pay Factor (CPF) of a mixture or compaction lot in progress drops below 1.00 and the Contractor is taking no corrective action, or

2. the Pay Factor (PF_i) for any constituent of a mixture or compaction lot in progress drops below 0.95 and the Contractor is taking no corrective action, or

3. either the PF_i for any constituent (or the CPF) of a mixture or compaction 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

Conduct operations such that placement of the top or wearing course is a continuous operation or as close to continuous as possible.

Unscheduled transverse joints will be allowed, but the roller may pass over the unprotected end of the freshly laid HMA only when the placement of the course is discontinued for such a length of time that the HMA will cool below compaction temperature. When the Work is resumed, cut back the previously compacted HMA to produce a slightly beveled edge for the full thickness of the course.

Construct a temporary wedge of HMA on a 50H:1V where a transverse joint as a result of paving or planing is open to traffic. Separate the HMA in the temporary wedge from the permanent HMA upon which it is placed by strips of heavy wrapping paper or other methods approved by the Engineer. Remove the wrapping paper and trim the joint to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

Waste the material that is cut away and place new HMA against the cut. Use rollers or tamping irons to seal the joint.

5-04.3(12)A2 Longitudinal Joints

Offset the longitudinal joint in any one course from the course immediately below by not more than 6 inches nor less than 2 inches. Locate all longitudinal joints constructed in the wearing course at a lane line or an edge line of the Traveled Way. Construct a notched wedge joint 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 nor more than ½ of the compacted lift thickness, and then taper down on a slope not steeper than 4H:1V. Uniformly compact the sloped portion of the HMA notched wedge joint.

On one-lane ramps a longitudinal joint may be constructed at the center of the traffic lane, subject to approval by the Engineer, if:

1. The ramp must remain open to traffic, or

2. The ramp is closed to traffic and a hot-lap joint is constructed.

    a. Two paving machines shall be used to construct the hot-lap joint.

    b. The pavement within 6 inches of the hot-lap joint will not be excluded from random location selection for compaction testing.

    c. Construction equipment other than rollers shall not operate on any uncompacted HMA.

When HMA is placed adjacent to cement concrete pavement, construct longitudinal joints between the HMA and the cement concrete pavement. Saw the joint to the dimensions shown on

Standard Plan A-40.10 and fill with joint sealant meeting the requirements of Section 9-04.2.

5-04.3(12)B Bridge Paving Joint Seals

5-04.3(12)B1 HMA Sawcut and Seal

Prior to placing HMA on the bridge deck, establish sawcut alignment points at both ends of the bridge paving joint seals to be placed at the bridge ends, and at interior joints within the bridge deck when and where shown in the Plans. Establish the sawcut alignment points in a manner that they remain functional for use in aligning the sawcut after placing the HMA overlay.

Submit a Type 1 Working Drawing consisting of the sealant manufacturer's application procedure.

Construct the bridge paving joint seal as specified in the Plans and in accordance with the detail shown in the Standard Plans. Construct the sawcut in accordance with Section 5-05.3(8). Apply the sealant in accordance with Section 5-05.3(8)B and the manufacturer's application procedure.

5-04.3(12)B2 Paved Panel Joint Seal

Construct the paved panel joint seal in accordance with the requirements specified in Section 5-04.3(12)B1 and the following requirement:

1. Clean and seal the existing joint between concrete panels in accordance with Section 5-01.3(8) and the details shown in the Standard Plans.

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, correct the pavement surface by one of the following methods:

1. Remove material from high places by grinding with an approved grinding machine, or

2. Remove and replace the wearing course of HMA, or

3. By other method approved by the Engineer.

Correct defects 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 portland cement concrete pavement is to be placed on HMA, the surface tolerance of the HMA shall be such that no surface elevation lies above the Plan grade minus the specified Plan depth of portland cement concrete pavement. Prior to placing the portland cement concrete pavement, bring any such irregularities to the required tolerance by grinding or other means approved by the Engineer.

When utility appurtenances such as manhole covers and valve boxes are located in the Traveled Way, pave the Roadway before the utility appurtenances are adjusted to the finished grade.

5-04.3(14) Planing Bituminous Pavement

Plane in such a manner that the underlying pavement is not torn, broken, or otherwise damaged by the planing operation. Delamination or raveling of the underlying pavement will not be construed as damage due to the Contractor's operations. Pavement outside the limits shown in the Plans or designated by the Engineer that is damaged by the Contractor's operations shall be repaired to the satisfaction of the Engineer at no additional cost to the Contracting Agency.

For mainline planing operations, use equipment with automatic controls and with sensors for either or both sides of the equipment. The controls shall be capable of sensing the grade from an outside reference line, or a mat-referencing device. The automatic controls shall have a transverse slope controller capable of maintaining the mandrel at the desired transverse slope (expressed as a percentage) within plus or minus 0.1 percent.

Remove all loose debris from the planed surface before opening the planed surface to traffic. The planings and other debris resulting from the planing operation shall become the property of the Contractor and be disposed of in accordance with Section 2-03.3(7)C, or as otherwise allowed by the Contract.

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 HMA. If the Contractor elects to remove and replace HMA 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.

Crack Sealing-LF will be measured by the linear foot along the line of the crack.

Soil residual herbicide will be measured by the mile for the stated width to the nearest 0.01 mile or by the square yard, whichever is designated in the Proposal.

Pavement repair excavation will be measured by the square yard of surface marked prior to excavation.

Asphalt for fog seal will be measured by the ton, as provided in Section 5-02.4.

Longitudinal joint seals between the HMA and cement concrete pavement will be measured by the linear foot along the line and slope of the completed joint seal.

HMA sawcut and seal, and paved panel joint seal, will be measured by the linear foot along the line and slope of the completed joint seal.

Planing bituminous pavement will be measured by the square yard.

Temporary pavement marking will be measured by the linear foot as provided in Section 8-23.4.

Water will be measured by the M gallon as provided in Section 2-07.4.

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.

"Crack Sealing-FA", by force account.
"Crack Sealing-FA" will be paid for by force account as specified in Section 1-09.6. For the purpose of providing a common Proposal for all Bidders, the Contracting

Agency has entered an amount in the Proposal to become a part of the total Bid by the Contractor.

"Crack Sealing-LF", per linear foot.
The unit Contract price per linear foot for "Crack Sealing-LF" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(4)A.

"Soil Residual Herbicide ____ ft. Wide", per mile, or
"Soil Residual Herbicide", per square yard.
The unit Contract price per mile or per square yard for "Soil Residual Herbicide" shall be full payment for all costs incurred to obtain, provide and install herbicide in accordance with Section 5-04.3(4)B.

"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)C 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 Fog Seal", per ton.
Payment for "Asphalt for Fog Seal" is described in Section 5-02.5.

"Longitudinal Joint Seal", per linear foot.
The unit Contract price per linear foot for "Longitudinal Joint Seal" shall be full payment for all costs incurred to construct the longitudinal joint between HMA and cement concrete pavement, as described in Section 5-04.3(12)B.

"HMA Sawcut And Seal", per linear foot.
The unit Contract price per linear foot for "HMA Sawcut And Seal" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(12)B1.

"Paved Panel Joint Seal", per linear foot.
The unit Contract price per linear foot for "Paved Panel Joint Seal" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(12)B2.

"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).

"Temporary Pavement Marking", per linear foot.
Payment for "Temporary Pavement Marking" is described in Section 8-23.5.

"Water", per M gallon.
Payment for "Water" is described in Section 2-07.5.

"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)B6 and 5-04.3(9)D1.

"Compaction Price Adjustment", by calculation.
"Compaction Price Adjustment" will be calculated and paid for as described in Section 5-04.3(10)C3.

"HMA Core – Bridge", per each.
The unit Contract price per each for "HMA Core – Bridge" shall be full payment for all costs, including traffic control, associated with taking HMA density cores in pavement that is on a bridge deck.

"HMA Core – Roadway", per each.
The unit Contract price per each for "HMA Core – Roadway" shall be full payment for all costs, including traffic control, associated with taking HMA density cores in pavement that is not on a bridge deck.

"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.

Section 5-05, Cement Concrete Pavement
January 3, 2017

5-05.3(1) Concrete Mix Design for Paving

In last sentence of the second paragraph of item number 1, the reference to "Section 9-01.2(4)" is revised to read "Section 9-01.2(1)B".

The following is inserted after item number 2:

3. **Mix Design Modifications** - The Contractor may initiate adjustments to the aggregate proportions of the approved mix design. An adjustment in both the fine and coarse aggregate batch target weights of plus or minus 200 pounds per cubic yard will be allowed without resubmittal of the mix design. The adjusted aggregate weights shall become the new batch target weights for the mix design.

Item number 3 is renumbered to 4 and revised (up until the table) to read:

4. **Conformance to Mix Design** - Cement and coarse and fine aggregate weights shall be within the following tolerances of the batch target weights of the mix design:

Portland Cement Concrete Batch Weights

Cement	+5%	-1%
Coarse Aggregate	+2%	-2%
Fine Aggregate	+2%	-2%

5-05.3(3)B Mixing Equipment

The last sentence of item number 4 is revised to read:

Plant-mixed concrete may be transported in nonagitated vehicles provided that the concrete is in a workable condition when placed and:

a. discharge is completed within 45 minutes after the introduction of mixing water to the cement and aggregates, or

b. discharge is completed within 60 minutes after the introduction of mixing water to the cement and aggregates, provided the concrete mix temperature is 70°F or below during placement, or

c. discharge is completed within 60 minutes after the introduction of mixing water to the cement and aggregates, provided the mix contains an approved set retarder at the manufacturer's minimum dosage rate.

5-05.3(6) Subgrade

This section, including title, is revised to read:

5-05.3(6) Surface Preparation

The Subgrade surface shall be prepared and compacted a minimum of 3 feet beyond each edge of the area which is to receive concrete pavement in order to accommodate the slip-form equipment.

Concrete shall not be placed during a heavy rainfall. Prior to placing concrete:

1. The surface shall be moist;

2. Excess water (e.g., standing, pooling or flowing) shall be removed from the surface.

3. The surface shall be clean and free of any deleterious materials.

4. The surface temperature shall not exceed 120°F or be frozen.

5-05.3(7)A Slip-Form Construction

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

The alignment and elevation of the paver shall be regulated from outside reference lines established for this purpose, or by an electronic control system capable of controlling the line and grade within required tolerances.

Section 6-02, Concrete Structures
August 7, 2017

6-02.2 Materials

The item "Elastomeric Bearing Pads" is revised to read "Fabricated Bridge Bearing Assemblies".

6-02.3(2) Proportioning Materials

In the sixth paragraph, the reference to "Section 9-01.2(4)" is revised to read "9-01.2(1)B".

6-02.3(2)A Contractor Mix Design

The following new sentence is inserted after the first sentence of the third paragraph:

The mix design submittal shall also include test results no older than one year showing that the Aggregates do not contain Deleterious Substances in accordance with Section 9-03.

6-02.3(2)A1 Contractor Mix Design for Concrete Class 4000D

Item number 4 of the first paragraph is deleted.

Items number 5, 6, and 7 of the first paragraph are renumbered to 4, 5, and 6, respectively.

The following new sentence is inserted after the second sentence of the last paragraph:

Mix designs using shrinkage reducing admixture shall state the specific quantity required.

The following new sentence is inserted before the last sentence of the last paragraph:

Testing samples of mixes using shrinkage reducing admixture shall use the admixture amount specified in the mix design submittal.

6-02.3(2)B Commercial Concrete

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

Commercial concrete does not require mix design or source approvals for cement, aggregate, and other admixtures.

6-02.3(5)G Sampling and Testing for Temperature, Consistency and Air Content

The last three paragraphs are revised to read:

Sampling and testing will be performed before concrete placement from the first load. Concrete shall not be placed until all tests have been completed by the Engineer, and the results indicate that the concrete is within acceptable limits. If the concrete is not within acceptable limits, sampling and testing will continue before concrete placement for each load until one load meets all of the applicable acceptance requirements. After one test indicates that the concrete is within specified limits, the concrete may be placed and the sampling and testing frequency may decrease to one for every 100 cubic yards. Sampling shall be performed in accordance with FOP for WAQTC TM 2 and random samples shall be selected in accordance with WSDOT T 716. After the first acceptable load of concrete, up to ½ cubic yard may be placed from subsequent loads to be tested prior to testing for acceptance.

When the results for any subsequent acceptance test indicates that the concrete as delivered and approved by the Contractor for placement does not conform to the specified limits, the sampling and testing frequency will be resumed for each load. Whenever one subsequent test indicates that the concrete is within the specified limits, the random sampling and testing frequency of one for every 100 cubic yards may resume.

Sampling and testing for a placement of one class of concrete consisting of 50 cubic yards or less will be as listed above, except that after one set of tests indicate that the concrete is within specified limits, the remaining concrete to be placed may be accepted by visual inspection.

6-02.3(6)A1 Hot Weather Protection

This section is revised to read:

The Contractor shall provide concrete within the specified temperature limits. Cooling of the coarse aggregate piles by sprinkling with water is permitted provided the moisture content is monitored and the mixing water is adjusted for the free water in the aggregate. Shading or cooling aggregate piles (sprinkling of fine aggregate piles with water is not allowed). If sprinkling of the coarse aggregates is to be used, the piles moisture content shall be monitored and the mixing water adjusted for the free water in the aggregate. In addition, when removing the coarse aggregate, it shall be removed from at least 1 foot above the bottom of the pile. Refrigerating mixing water; or replacing all or part of the mixing water with crushed ice, provided the ice is completely melted by placing time.

If air temperature exceeds 90°F, the Contractor shall use water spray or other accepted methods to cool all concrete-contact surfaces to less than 90°F. These surfaces include forms, reinforcing steel, steel beam flanges, and any others that touch the mix.

6-02.3(6)A2 Cold Weather Protection

This section is revised to read:

Concrete shall be maintained at or above a temperature of 40°F during the first seven days of the Cold Weather Protection Period and at or above a temperature of 35°F during the remainder of the Cold Weather Protection Period. Cold weather protection requirements do not apply to concrete in shafts and piles placed below the ground line.

Prior to placing concrete in cold weather, the Contractor shall submit a Type 2 Working Drawing with a written procedure for cold weather concreting. The procedure shall detail how the Contractor will adequately cure the concrete and prevent the concrete temperature from falling below the minimum temperature. Extra protection shall be provided for areas especially vulnerable to freezing (such as exposed top surfaces, corners and edges, thin sections, and concrete placed into steel forms). Concrete placement will only be allowed if the Contractor's cold weather protection plan has been accepted by the Engineer.

Prior to concrete placement, the Contractor shall review the 7-day temperature predictions for the job site from the Western Region Headquarters of the National Weather Service (www.wrh.noaa.gov). When temperatures below 35°F are predicted, the Contractor shall:

1. Install temperature sensors in each concrete placement. One sensor shall be installed for every 100 cubic yards of concrete placed. Sensors shall be installed at locations directed by the Engineer, and shall be placed 1.5 inches from the face of concrete.

2. Immediately after concrete placement, temperature sensors shall be installed on the concrete surface at locations directed by the Engineer. One sensor shall be installed for every 100 cubic yards of concrete placed.

Temperatures shall be measured and recorded a minimum of every hour for the duration of the Cold Weather Protection Period. Temperature data shall be submitted to

the Engineer as a Type 1 Working Drawing within three days following the end of the Cold Weather Protection Period.

For each day that the concrete temperature falls below 40°F during the first seven days of the Cold Weather Protection Period, no curing time is awarded for that day and the Cold Weather Protection Period is extended for one additional day. If the concrete temperature falls below 35°F during the Cold Weather Protection Period, the concrete may be rejected by the Engineer.

6-02.3(7) Concrete Exposed to Sea Water

This section including title is revised to read:

6-02.3(7) Vacant

6-02.3(8) Concrete Exposed to Alkaline Soils or Water

This section including title is revised to read:

6-02.3(8) Vacant

6-02.3(10)D4 Monitoring Bridge Deck Concrete Temperature After Placement

This section is revised to read:

The Contractor shall measure and record the concrete temperature and ambient temperature a minimum of every hour for seven calendar days after concrete placement. The Contractor shall place two temperature sensors in the bridge deck at locations specified by the Engineer. The Contractor shall measure ambient temperature near the locations where concrete temperature is being measured. When the bridge deck is being enclosed and heated to meet cold weather requirements, ambient temperature readings shall be taken within the enclosure. The Contractor shall submit the concrete temperature and ambient temperature data as a Type 1 Working Drawing in spreadsheet format within 14 calendar days from placing the bridge deck concrete.

The Contractor shall submit a Type 1 Working Drawing consisting of the type and model of each device and the method used to measure and record the temperatures.

6-02.3(13)A Strip Seal Expansion Joint System

The first paragraph is revised to read:

The Contractor shall submit Type 2 Working Drawings consisting of the strip seal expansion joint shop drawings. These plans shall include, at a minimum, the following:

1. Plan, elevation, and sections of the joint system and all components, with dimensions and tolerances.

2. All material designations.

3. Manufacturer's written installation procedure. The installation procedure shall indicate how the extrusions set into the two sides of the joint will be allowed to move independently of one another.

4. Corrosion protection system used on the metal components.

5. Locations of welded shear studs, lifting mechanisms, temperature setting devices, and construction adjustment devices.

6. Method of sealing the system to prevent leakage of water through the joint.

7. Details of the temporary supports for the steel extrusions while the encapsulating concrete of the headers is placed and cured.

8. The gland installation procedure, including the means and methods used to install the gland and assure correct seating of the gland within the steel extrusions.

The following new paragraph is inserted after the third paragraph:

If the gland is installed in the field, the Contractor shall have the services of a strip seal expansion joint system manufacturer's technical representative physically present at the job site. The manufacturer's technical representative shall train the Contractor's personnel performing the field installation of the gland, provide technical assistance for installing the gland, and observe and inspect the installation of at least the first complete joint.

The second to last paragraph is deleted.

6-02.3(14)D General Requirements for Concrete Surface Finishes Produced by Form Liners

The first two sentences of the third paragraph are deleted.

6-02.3(16) Plans for Falsework and Formwork

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

A submittal is not required for footing or retaining wall formwork if the concrete placement is 4 feet or less in height.

The second to last paragraph is revised to read:

The Contractor shall furnish associated design calculations to the Engineer as part of the submittal. The design calculations shall include the structural and geotechnical design of the foundation and shall show the stresses and deflections in all load-carrying members that are part of the falsework system. Construction details which may be shown in the form of sketches on the calculation sheets shall be shown in the falsework or formwork drawings as well. Falsework or formwork plans will not be accepted in cases where it is necessary to refer to the calculation sheets for information needed for complete understanding of the falsework and formwork plans or how to construct the falsework and formwork.

The last paragraph is deleted.

6-02.3(17)D Falsework Support Systems: Piling, Temporary Concrete Footings, Timber Mudsills, Manufactured Shoring Towers, Caps, and Posts

This section, including title, is revised to read:

6-02.3(17)D Falsework Support Systems: Foundations, Manufactured Shoring Towers, Caps, and Posts

Foundations for falsework shall be designed for conditions stated in this Section using methods shown in the AASHTO Standard Specifications for Highway Bridges Seventeenth Edition – 2002 for allowable stress design, the AASHTO LRFD Bridge Design Specifications for load and resistance factor design or the AASHTO Guide Design Specifications for Bridge Temporary Works. Allowable stresses for materials shall not exceed stresses and conditions allowed by Section 6-02.3(17)B.

6-02.3(17)D1 Piling

This section including title is revised to read:

6-02.3(17)D1 Vacant

6-02.3(17)D2 Temporary Concrete Footings and Timber Mudsills

This section including title is revised to read:

6-02.3(17)D2 Vacant

6-02.3(17)D4 Manufactured Shoring Tower Systems and Devices

The fifth paragraph is deleted.

6-02.3(17)D5 Cross-Braced Type Base Frames

This section is deleted in its entirety.

6-02.3(17)D6 Ladder Type Base Frames

This section is deleted in its entirety.

6-02.3(17)D7 Intermediate Strength Shoring

This section is deleted in its entirety.

6-02.3(17)D8 Heavy-Duty Shoring Systems

This section is deleted in its entirety.

6-02.3(17)K Concrete Forms on Steel Spans

In the last paragraph, “ASTM A325” is revised to read “ASTM F3125 Grade A325”.

6-02.3(17)N Removal of Falsework and Forms

The fifth paragraph is deleted.

6-02.3(19)A Vacant

This section, including title, is revised to read:

6-02.3(19)A Submittals of Acceptance Test Reports and Certificates

The Contractor shall submit the following production samples and test reports and certificates for fabricated bridge bearing assemblies as applicable:

1. A Type 2 Working Drawing consisting of a six-inch square by $\frac{1}{8}$-inch thick sample of PTFE taken from the lot of production material.

2. A Type 2 Working Drawing consisting of a six-inch square by 1-inch thick sample of pre-formed fabric pad taken from the lot of production material.

3. Type 1 Working Drawings consisting of Manufacturers' Certificates of Compliance for the PTFE, polyether urethane, pre-formed fabric pad duck, silicone grease, epoxy gel, and resin filler.

4. Type 1 Working Drawings consisting of certified mill test reports for all steel and stainless steel in the bearing assemblies.

5. Type 1 Working Drawings consisting of certified test reports confirming that the pre-formed fabric pads meet the specific requirements of proof load.

6-02.3(24)A Field Bending

This section (excluding the tables) is revised to read:

Field bending of AASHTO M31 Grade 60 and ASTM A706 Grade 60 reinforcement shall be done in accordance with the requirements of this section. Field bending of all other reinforcement shall require a Type 2 Working Drawing showing the bend radii, bending and heating procedures, and any inspection or testing requirements.

Field bending shall not be done on reinforcement within the top or bottom third of column lengths or within plastic hinge regions identified in the Plans. Field bending shall not be done on bar sizes No. 14 or No. 18.

In field-bending steel reinforcing bars, the Contractor shall:

1. Make the bend gradually using a bending tool equipped with a bending diameter as listed in Table 1. Bending shall not be done by means of hammer blows and pipe sleeves. When bending to straighten a previously bent bar, move a hickey bar progressively around the bend.

2. Apply heat as described below for bending bar sizes No. 6 through No. 11 and for bending bar sizes No. 5 and smaller when the bars have been previously bent. Previously unbent bars of sizes No. 5 and smaller may be bent without heating when the bar temperature is 40°F or higher. When previously unbent bars of sizes No. 5 and smaller have a bar temperature lower than 40°F, they shall be heated to within the range of 100°F to 150°F prior to bending. In applying heat for field-bending steel reinforcing bars, the Contractor shall:

    a. Avoid damage to the concrete by insulating any concrete within 6 inches of the heated bar area;

    b. Apply two heat tips simultaneously at opposite sides of bar sizes No. 7 or larger;

    c. Heat the bar to within the required temperature range shown in Table 2 as verified by using temperature-indicating crayons or other suitable means;

    d. Heat a minimum bar length as shown in Table 3. Locate the heated section of the bar to include the entire bending length;

e. Bend immediately after the required temperature range has been achieved. Maintain the bar within the required temperature range during the entire bending process;

f. Do not cool bars artificially with water, forced air, or other means.

3. Limit any bend or straightening to these maximum angles: 135 degrees for bar sizes No. 8 or smaller, and 90 degrees for bar sizes No. 9 through No. 11.

4. Repair epoxy coating on epoxy coated bars in accordance with Section 6-02.3(24)H.

6-02.3(25) Prestressed Concrete Girders

Under the heading "**Prestressed Concrete Slab Girder**", the second sentence is deleted.

6-02.3(25)A Shop Drawings

The sixth paragraph is deleted.

6-02.3(25)F Prestress Release

The last two sentences of the last paragraph are deleted and replaced with the following single sentence:

This request shall be submitted as a Type 2E Working Drawing analyzing changes in vertical deflection, girder lateral stability and concrete stresses in accordance with Section 6-02.3(25)L2.

6-02.3(25)H Finishing

Item number 2 in the first paragraph is revised to read:

2. The bottoms, sides, and tops of the lower flanges on all girders, including the top of the bottom slab between the tub girder webs.

6-02.3(25)I Fabrication Tolerances

Items 4 and 5 in the first paragraph are revised to read:

4. Flange Depth: ± ¼ inch

5. Strand Position:

   Individual strands: ± ¼ inch

   Bundled strands: ± ½ inch

   Harped strand group center of gravity at the girder ends: ± 1 inch

Items 7, 8, 9 and 10 in the first paragraph are revised to read:

7. Position of an Interior Void, vertically and horizontally: ± ½ inch.

8. Bearing Recess (center of recess to girder end): ± ⅝ inch.

9. Girder Ends (deviation from square or designated skew):

Horizontal: ± ⅛ inch per foot of girder width, up to a maximum of ± ½ inch

Vertical: ± $^{3}/_{16}$ inch per foot of girder depth, up to a maximum of ± 1 inch

10. Bearing Area Deviation from Plane (in length or width of bearing): ± ⅛ inch

Items 14 and 15 in the first paragraph are revised to read:

14. Local smoothness of any surface: ± ¼ inch in 10 feet.

15. Differential Camber between Girders in a Span (measured in place at the job site):

For wide flange deck and deck bulb tee girders with a cast-in-place reinforced concrete deck:	Cambers shall be equalized when the differences in cambers between adjacent girders exceeds ± ¾ inch
For wide flange deck, deck bulb tee and slab girders without a cast-in-place reinforced concrete deck:	Cambers shall be equalized when the differences in cambers between adjacent girders exceeds ± ¼ inch

Item 17 in the first paragraph is revised to read:

17. Position of Lifting Embedments: ± 3 inches longitudinal, ± ¼ inch transverse.

6-02.3(25)J Horizontal Alignment

This section is revised to read:

The Contractor shall check and record the horizontal alignment (sweep) of each girder at the following times:

1. Initial – Upon removal of the girder from the casting bed

2. Shipment – Within 14 days prior to shipment; and

3. Erection – After girder erection and cutting temporary top strands but prior to any equalization, welding ties or placement of diaphragms.

Horizontal alignment of the top and bottom flanges shall be checked and recorded. Alternatively, the Contractor may check and record the horizontal alignment of the web near mid-height of the girder. Each check shall be made by measuring the maximum offset at mid-span relative to a chord that starts and stops at the girder ends. The Contractor shall check and record the alignment at a time when the girder is not influenced by temporary differences in surface temperature. Records for the initial check (item 1 above) shall be included in the Contractor's prestressed concrete certificate of compliance. Records for all other checks shall be submitted as a Type 1 Working Drawing.

For each check (Items 1 to 3 above), the alignment shall not be offset more than ⅛ inch for each 10 feet of girder length. Girders not meeting this tolerance for the shipment check (Item 2 above) shall require an analysis of girder lateral stability and stresses in accordance with Section 6-02.3(25)L1. The Contractor shall perform this analysis and submit it as a Type 2E Working Drawing prior to shipment of the girder. Any girder that

exceeds an offset of $\frac{1}{8}$ inch for each 10 feet of girder length for the erection check (Item 3 above) shall be corrected at the job site to the $\frac{1}{8}$ inch maximum offset per 10 feet of girder length before concrete is placed into the diaphragms. The Contractor shall submit a Type 2 Working Drawing for any required corrective action.

The maximum distance between the side of a prestressed concrete slab girder, or the edge of the top flange of a wide flange deck, wide flange thin deck or deck bulb tee girder, and a chord that extends the full length of the girder shall be ±½ inch after erection (Item 3 above).

6-02.3(25)K Vertical Deflection

Items 2 and 3 in the first paragraph are revised to read:

2. Shipment – Within 14 days prior to shipment;

3. Erection – After girder erection and cutting temporary top strands but prior to any equalization, welding ties or placement of diaphragms.

The following new paragraph is inserted after the second paragraph:

Girders with vertical deflections not meeting the limit shown in the Plans for the shipment check (Item 2 above) shall require an analysis of girder lateral stability and stresses in accordance with Section 6-02.3(25)L1. The Contractor shall perform this analysis and submit it as a Type 2E Working Drawing prior to shipment.

The following new sentence is inserted after the second sentence of the fourth to last paragraph:

Any diaphragms are assumed to be placed.

The last three paragraphs are deleted and replaced with the following:

If the girder vertical deflection measured for the erection check (Item 3 above) is not between the lower "D" dimension bound shown in the Plans and the upper "D" dimension bound shown in the Plans plus ¾ inches, the Engineer may require corrective action. The Contractor shall submit a Type 2 Working Drawing for any required corrective action.

6-02.3(25)L Handling and Storage

The second paragraph is revised to read:

For strand lift loops, only ½-inch diameter or 0.6-inch diameter strand conforming to Section 9-07.10 shall be used, and a minimum 2-inch diameter straight pin of a shackle shall be used through the loops. Multiple loops shall be held level in the girder during casting in a manner that allows each loop to carry its share of the load during lifting. The minimum distance from the end of the girder to the centroid of the strand lift loops shall be 3 feet. The loops for all prestressed concrete girders, with the exception of prestressed concrete slab girders, shall project a minimum of 1′-6″ from the top of the girder. The loops for prestressed concrete slab girders shall project a minimum of 4 inches. Loops shall extend to within 3 inches clear of the bottom of the girder, terminating with a 9-inch long 90-degree hook. Loads on individual loops shall be limited

to 12 kips, and all girders shall be picked up at a minimum angle of 60 degrees from the top of the girder.

The third sentence of the fourth paragraph is revised to read:

Alternatively, these temporary strands may be post-tensioned provided the strands are stressed on the same day that the permanent prestress is released into the girder and the strands are tensioned prior to lifting the girder.

The second to last sentence of the fourth paragraph is revised to read:

When the post-tensioned alternative is used, the Contractor shall be responsible for properly sizing the anchorage plates, and configuring the reinforcement adjacent to the anchorage plates, to prevent bursting or splitting of the concrete in the top flange.

The second to last paragraph is deleted.

This section is supplemented with the following new subsections:

6-02.3(25)L1 Girder Lateral Stability and Stresses

The Contractor shall be responsible for safely lifting, storing, shipping and erecting prestressed concrete girders.

The Contract documents may provide shipping and handling details for girders including lifting embedment locations (L), shipping support locations (L_1 and L_2), minimum shipping support rotational spring constants (K_θ), minimum shipping support center-to-center wheel spacings (W_{cc}), vertical deflections and number of temporary top strands. These shipping and handling details have been determined in accordance with Section 6-02.3(25)L2.

The Contractor shall submit a Type 2E Working Drawing analyzing girder lateral stability and concrete stresses during lifting, storage, shipping and erection in accordance with Section 6-02.3(25)L2 in the following cases:

1. Any of the analysis assumptions listed in Section 6-02.3(25)L2 are invalid. Determination of validity shall be made by the Contractor, except that analysis assumptions shall be considered invalid if the actual values are outside of the provided tolerances.

2. The Contractor intends to alter the shipping and handling details provided in the Contract documents.

3. The Contract documents do not provide shipping and handling details.

6-02.3(25)L2 Lateral Stability and Stress Analysis

Analysis for girder lateral stability and concrete stresses during lifting, storage, shipping and erection shall be in accordance with the PCI Recommended Practice for Lateral Stability of Precast, Prestressed Concrete Bridge Girders, First Edition, Publication CB-02-16-E and the AASHTO LRFD Bridge Design Specifications edition identified in the Contract documents. The following design criteria shall be met:

1. Factor of Safety against cracking shall be at least 1.0

2. Factor of Safety against failure shall be at least 1.5

3. Factor of Safety against rollover shall be at least 1.5

4. Allowable concrete stresses shall be as specified in Section 6-02.3(25)L3

The analysis shall address any effects on girder vertical deflection (camber), "A" dimensions at centerline of bearings and deck screed cambers (C).

Shipping and handling details provided in the Contract documents have been determined using the following analysis assumptions:

1. Girder dimensions, strand locations and lifting embedment locations are within the tolerances specified in Section 6-02.3(25)I

2. Girder horizontal alignment (sweep) is within the tolerance specified in Section 6-02.3(25)J

3. Girder vertical deflection (camber) at midspan is less than or equal to the value shown in the Plans for shipping

4. Minimum concrete compressive strength at release (f'_{ci}) has been reached before initial lifting from casting bed. Minimum concrete compressive strength at 28 days (f'_c) has been reached before shipping.

5. Height of girder bottom above roadway at shipping supports is less than or equal to 72 inches

6. Height of shipping support roll center above roadway is 24 inches, ± 2 inches

7. Shipping support longitudinal placement (L_1 and L_2) tolerance is ± 6 inches

8. Shipping support lateral placement tolerance is ±1 inches

9. Shipping supports provide the minimum shipping support rotational spring constant (K_θ) and minimum shipping support center-to-center wheel spacings (W_{cc}) shown in the Plans

10. For shipping at highway speeds a ± 20% dynamic load allowance (impact) is included with a typical roadway superelevation of 2%

11. For turning at slow speeds, no dynamic load allowance (impact) is included with a maximum roadway superelevation of 6%

12. Wind, centrifugal and seismic forces are not considered

6-02.3(25)L3 Allowable Stresses

Prestressed concrete girder stresses shall be limited to the following values at all stages of construction and in service:

Condition	Stress	Location	Allowable Stress (ksi)

Temporary Stress at Transfer and Lifting from Casting Bed	Tensile	In areas without bonded reinforcement sufficient to resist the tensile force in the concrete	$0.0948\sqrt{f'_{ci}} \le 0.2$
		In areas with bonded reinforcement sufficient to resist the tensile force in the concrete	$0.24\sqrt{f'_{ci}}$
	Compressive	All locations	$0.65f'_{ci}$
Temporary Stress at Shipping and Erection	Tensile	In areas without bonded reinforcement sufficient to resist the tensile force in the concrete	$0.0948\sqrt{f'_c} \le 0.2$
		In areas with bonded reinforcement sufficient to resist the tensile force in the concrete	$0.19\sqrt{f'_c}$
		In areas with bonded reinforcement sufficient to resist the tensile force in the concrete when shipping at 6% superelevation, without impact	$0.24\sqrt{f'_c}$
	Compressive	All locations	$0.65f'_c$
Final Stresses at Service Load	Tensile	Precompressed tensile zone	0.0
	Compressive	Effective prestress and permanent loads	$0.45f'_c$
		Effective prestress, permanent loads and transient (live) loads	$0.60f'_c$
Final Stresses at Fatigue Load	Compressive	Fatigue I Load Combination plus one-half effective prestress and permanent loads	$0.40f'_c$

Variables are as defined in the AASHTO LRFD Bridge Design Specifications.

6-02.3(25)M Shipping

The last four paragraphs are deleted and replaced with the following:

Girder lateral stability and stresses during shipping shall be in accordance with Section 6-02.3(25)L1.

If the Contractor elects to assemble spliced prestressed concrete girders into shipping configurations not shown in the Contract documents, the Contractor shall submit a Type 2E Working Drawing analyzing girder lateral stability and concrete stresses in accordance with Section 6-02.3(25)L2 before shipping.

6-02.3(25)N Prestressed Concrete Girder Erection

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

The erection plan shall conform to Section 6-02.3(25)L1.

The last paragraph is revised to read:

Stop plates and dowel bars for prestressed concrete girders shall be set with either epoxy grout conforming to Section 9-26.3 or type IV epoxy bonding agent conforming to Section 9-26.1.

6-02.3(25)O Girder to Girder Connections

The second paragraph is revised to read:

Prestressed concrete girders shall be constructed in the following sequence:

1. If required, deflections shall be equalized in accordance with the Contractor's equalization plan.

2. Any intermediate diaphragms shall be placed and any weld ties shall be welded in accordance with Section 6-03.3(25). Welding ground shall be attached directly to the steel plates being welded when welding the weld-ties.

3. Any keyways between adjacent girders shown in the Plans to receive grout shall be filled flush with the surrounding surfaces using a grout conforming to Section 9-20.3(2).

4. Equalization equipment shall not be removed and other construction equipment shall not be placed on the structure until intermediate diaphragms and keyway grout have attained a minimum compressive strength of 2,500 psi.

6-02.3(26)D2 Test Block Dimensions

The first sentence is revised to read:

The dimensions of the test block perpendicular to the tendon in each direction shall be the smaller of twice the minimum edge distance or the minimum spacing specified by the special anchorage device manufacturer, with the stipulation that the concrete cover over any confining reinforcing steel or supplementary skin reinforcement shall be appropriate for the project-specific application and circumstances.

6-02.3(26)E2 Ducts for External Exposed Installation

In the first paragraph, "ASTM D3350" is revised to read "ASTM D3035".

In the fourth paragraph, "ASTM D3505" is revised to read "ASTM D3035".

6-02.3(26)G Tensioning

Item number 1 of the second paragraph is revised to read:

1. All concrete has reached a compressive strength of at least 4,000 psi or the strength specified in the Plans. When tensioning takes place prior to 28-day compressive strength testing on concrete sampled in accordance with Section 6-

02.3(25)H, compressive strength shall be verified on field cured cylinders in accordance with the FOP for AASHTO T23.

6-02.3(27)A Use of Self-Consolidating Concrete for Precast Units

Item number 2 of the first paragraph is revised to read:

2. Precast reinforced concrete three-sided structures, box culverts and split box culverts in accordance with Section 7-02.3(6).

Section 6-03, Steel Structures
January 3, 2017

6-03.3(33) Bolted Connections

In this section, "AASHTO M253" is revised to read "ASTM F3125 Grade A490", "ASTM F1852" is revised to read "ASTM F3125 Grade F1852", and "ASTM A325" is revised to read "ASTM F3125 Grade A325".

In the headings of Table 3, "A 325" is revised to read "ASTM F3125 Grade A325".

In the headings of Table 3, "M 253" is revised to read "ASTM F3125 Grade A490".

Section 6-05, Piling
August 1, 2016

In this section, the words "capacity" and "capacities" are replaced with "resistance" and "resistances", respectively.

6-05.3(1) Piling Terms

The third paragraph is revised to read:

Overdriving – Over-driving of piles occurs when the ultimate bearing resistance calculated from the equation in Section 6-05.3(12), or the wave equation driving criteria if applicable, exceeds the ultimate bearing resistance required in the Contract in order to reach the minimum tip elevation specified in the Contract, or as required by the Engineer.

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

Minimum Tip Elevation – The minimum tip elevation is the elevation to which the pile tip shall be driven.

6-05.3(3)A Casting and Stressing

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

If the corrective action is not acceptable to the Engineer, the piling(s) will be subject to rejection by the Engineer.

6-05.3(5) Manufacture of Steel Piles

This section is supplemented with the following new paragraph:

At least 14-days prior to the start of production of the piling, the Contractor shall advise the Engineer of the production schedule. The Contractor shall give the Inspector safe and free access to the Work. If the Inspector observes any nonspecification Work or unacceptable quality control practices, the Inspector will advise the plant manager. If the corrective action is not acceptable to the Engineer, the piling(s) will be subject to rejection by the Engineer.

6-05.3(9)A Pile Driving Equipment Approval

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

The Contractor shall submit Type 2E Working Drawings consisting of a wave equation analysis for all pile driving systems used to drive piling with required maximum driving resistances of greater than 300 tons.

Section 6-07, Painting
August 7, 2017

6-07.3(2) Submittals

This section is revised to read:

The Contractor shall submit a painting plan consisting of one comprehensive submittal including all components described in this Section. The Contractor shall submit Type 2 Working Drawings of the painting plan components.

For shop application of paint, the painting plan shall include the documents and samples listed in Sections 6-07.3(2)B, 6-07.3(2)C, and 6-07.3(2)E.

For field application of paint, the painting plan shall include the documents and samples listed in Section 6-07.3(2)A through 6-07.3(2)F.

6-07.3(2)A Work Force Qualifications Submittal Component

Item number 2 is revised to read:

2. Resumé of qualifications and contact information for the Contractor's on-site supervisors. Each on-site supervisor shall have 3 years' minimum of industrial painting field experience with 1 year minimum of field supervisory or management experience in bridge painting projects.

6-07.3(2)D Hazardous Waste Containment, Collection, Testing, and Disposal Submittal Component

This section is revised to read:

The hazardous waste containment, collection, testing, and disposal submittal component of the painting plan shall include the following:

1. Abrasive blasting containment system attachment and support in accordance with Section 6-07.3(10)A, with a complete description of each attachment device.

2. Details of jobsite material storage facilities and containment waste storage facilities, including location, security, and environmental control.

3. Methods and materials used to contain, collect, and dispose of all containment waste and all construction-related waste, including transportation of waste.

4. Details of the containment waste sampling plan conforming to WAC 173-303 for waste designated as dangerous waste or extremely hazardous waste.

5. The name of, and contact information for, the accredited analytical laboratory performing the testing of the containment waste samples in accordance with Section 6-07.3(10)F.

6. Process for tracking the disposal of hazardous waste, including a sample form of the tracking documentation.

7. When a wind speed threshold is specified, a description of the method to lower or withdraw tarps, plastic exterior, and other containment components presenting an exposed face to wind, and the estimated time required to accomplish this action.

8. Provisions for dust and debris collection, ventilation, and auxiliary lighting within the containment system.

6-07.3(2)E Cleaning and Surface Preparation Equipment Submittal Component

This section, including title, is revised to read:

6-07.3(2)E Cleaning and Surface Preparation Submittal Component

The cleaning and surface preparation submittal component of the painting plan shall include the following:

1. Details of the abrasive blast cleaning operation, including:

   a. Description of the abrasive blast cleaning procedure.

   b. Type, manufacturer, and brand of abrasive blast material and all associated additives, including Materials Safety Data Sheets (MSDS).

   c. Description of the abrasive blast cleaning equipment to be used.

6-07.3(3)A Quality Control and Quality Assurance for Shop Application of Paint

In this section, “approved” is revised to read “accepted”.

6-07.3(3)B Quality Control and Quality Assurance for Field Application of Paint

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

For field application of paint, the Contractor shall conduct quality control inspections as required by SSPC-PA 1, using the personnel and the processes outlined in the painting plan.

The second paragraph is revised to read:

A Type 1 Working Drawing consisting of the Contractor’s daily quality control report, signed and dated by the Contractor’s quality control inspector, accompanied by copies

of the test results of quality control tests performed on the work covered by the daily quality control report, shall be submitted before the end of the next day's work shift.

In the third paragraph, "approval" is revised to read "acceptance".

Item number 2 of the fourth paragraph is deleted.

In the fourth paragraph, items 3, 4 and 5 are renumbered to 2, 3 and 4, respectively.

6-07.3(9)F Shop Surface Cleaning and Preparation

In the first sentence, "approved" is revised to read "accepted".

6-07.3(9)G Application of Shop Primer Coat

In the first sentence of the first paragraph, "approval" is revised to read "acceptance".

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

Primer shall be applied with the spray nozzles and pressures recommended by the manufacturer of the paint system, to attain the film thicknesses specified.

In the third paragraph, the first sentence is revised to read:

The Contractor shall provide access to the steel to permit inspection by the Engineer.

6-07.3(9)I Application of Field Coatings

The following new paragraph is inserted before to the first paragraph:

An on-site supervisor shall be present for each work shift at the bridge site.

In the fourth paragraph (after the preceding Amendment is applied), "approved" is deleted from the first sentence.

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

All paint damage that occurs shall be repaired in accordance with the manufacturer's written recommendations.

6-07.3(10)A Containment

The first four paragraphs are deleted and replaced with the following three paragraphs:

The containment system shall be in accordance with SSPC Technology Guide No. 6, Guide for Containing Surface Preparation Debris Generated During Paint Removal Operations Class 1. The containment system shall fully enclose the steel to be painted and not allow any material to escape the containment system. The Contractor shall protect the surrounding environment from all debris or damage resulting from the Contractor's operations.

Except as otherwise specified in the Contract, the containment length shall not exceed the length of a span (defined as pier to pier). The containment system shall not cause any damage to the existing structure. Attachment devices shall not mark or otherwise damage the steel member to which they are attached. Field-welding of attachments to the existing structure will not be allowed. The Contractor shall not drill holes into the

existing structure or through existing structural members except as shown in the Contractor's painting plan Working Drawing submittal.

Emissions shall be assessed by Visible Emission Observations (Method A) in SSPC Technology Update No. 7 Section 6.2 and shall be limited to the Level A Acceptance Criteria Option Level 0 Emissions standard. If visible emissions occur or if failure to the containment system occurs or if signs of failure to the containment system are present, the Contractor shall stop work immediately. Work shall not resume until the failure has been corrected to the satisfaction of the Engineer.

6-07.3(10)B Bird Guano, Fungus, and Vegetation Removal

The last paragraph is revised to read:

Bird guano, bird nesting materials, fungus, and vegetative growth shall be disposed of at a land disposal site accepted by the Engineer. The Contractor shall submit a Type 1 Working Drawing consisting of a copy of the disposal receipt, which shall include a description of the disposed material.

6-07.3(10)C Dry Cleaning

This section is revised to read:

Dry cleaning shall include removal of accumulated dirt and debris on the surfaces to be painted. Collected dirt and debris shall be disposed of at a land disposal site accepted by the Engineer. The Contractor shall submit a Type 1 Working Drawing consisting of a copy of the disposal receipt, which shall include a description of the disposed material.

6-07.3(10)D Surface Preparation Prior to Overcoat Painting

The second paragraph is revised to read:

Following any preparation by SSPC-SP1, all steel surfaces to be painted shall be prepared in accordance with SSPC-SP 7, brush-off blast cleaning. Surfaces inaccessible to brush-off blast shall be prepared in accordance with SSPC-SP 15, commercial grade power tool cleaning, as allowed by the Engineer.

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

Following brush-off blast cleaning, the Contractor shall perform spot abrasive blast cleaning in accordance with SSPC-SP 6, commercial blast cleaning.

In the fifth sentence of the third paragraph, "approved" is revised to read "accepted".

The second sentence of the last paragraph is deleted.

6-07.3(10)F Collecting, Testing, and Disposal of Containment Waste

The third, fourth and fifth paragraphs are deleted and replaced with the following two new paragraphs:

Containment waste is defined as all paint chips and debris removed from the steel surface and all abrasive blast media, as contained by the containment system. After all waste from the containment system has been collected, the Contractor shall collect representative samples of the components that field screening indicates are lead-contaminated material. The Contractor shall collect at least one representative sample

from each container. The Contractor may choose to collect a composite sample of each container, but the composite sample must consist of several collection points (a minimum of 3 random samples) that are representative of the entire contents of the container and representative of the characteristics of the type of waste in the container. In accordance with WAC 173–303-040, a representative sample means "a sample which can be expected to exhibit the average properties of the sample source."

The debris shall be tested for metals using the Toxicity Characteristics Leaching Procedure (TCLP) and EPA Methods 1311 and 6010. At a minimum, the materials should be analyzed for the Resource Conservation and Recovery Act (RCRA) 8 Metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). Pursuant to the Dangerous Waste (DW) Regulations Chapter 173-303-90(8)(c) WAC, "Any waste that contains contaminants which occur at concentrations at or above the DW threshold must be designated as DW." All material within each individual container or containment system that designates as DW shall be disposed of at a legally permitted Subtitle C Hazardous Waste Landfill. All material within each individual container or containment system that designate below the DW threshold, will be designated as "Solid Waste" and shall be disposed of at a legally permitted Subtitle D Landfill. Disposal shall be in accordance with WAC 173-303 for waste designated "Dangerous Waste" and pursuant to WAC 173-350 for waste designated as "Solid Waste".

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

The Contractor shall submit a Type 1 Working Drawing consisting of two copies of the transmittal documents or bill of lading listing the waste material shipped from the construction site to the waste disposal site.

6-07.3(10)G Treatment of Pack Rust and Gaps

In this section, "approved by the Engineer" is revised to read "accepted by the Engineer".

6-07.3(10)H Paint System

In the last paragraph, "approved" is revised to read "allowed".

6-07.3(10)I Paint Color

In the last sentence, "approved" is revised to read "allowed".

6-07.3(10)J Mixing and Thinning Paint

In the third paragraph, "approved" is revised to read "allowed".

6-07.3(10)O Applying Field Coatings

The following new paragraph is inserted before the first paragraph:

An on-site supervisor shall be present for each work shift at the bridge site.

In the sixth paragraph (after the preceding Amendment is applied), "approved" and "approval" are revised to read "accepted" and "acceptance", respectively.

In the seventh paragraph (after the preceding Amendment is applied), "approval" is revised to read "concurrence".

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

Any plank removal or cutting shall be done with the concurrence of the Engineer.

6-07.3(10)P Field Coating Repair

In the second to last sentence, “approved” is revised to read “accepted”.

The last sentence is deleted.

6-07.3(11)A Painting of Galvanized Surfaces

In the last sentence, “approval” is revised to read “acceptance”.

6-07.5 Payment

The following new paragraph is inserted after the paragraph following the Bid item “Cleaning and Painting - _____”, lump sum:

When a weather station is specified, all costs in connection with furnishing, installing, operating, and removing the weather station, including furnishing mounting hardware and repeaters, accessories and wireless display console units, processing and submitting daily weather data reports, maintenance and upkeep, shall be included in the lump sum Contract price for “Cleaning And Painting – _____”.

Section 6-08, Waterproofing
January 3, 2017

This section and all subsections, including title, is revised to read:

6-08 Bituminous Surfacing on Structure Decks

6-08.1 Description

This Work consists of removing and placing Hot Mix Asphalt (HMA) or Bituminous Surface Treatment (BST) directly on or over a Structure. This Work also includes performing concrete bridge deck repair, applying waterproofing membrane, and sealing paving joints.

6-08.2 Materials

Materials shall meet the requirements of the following sections:

Bituminous Surface Treatment	5-02.2
Hot Mix Asphalt	5-04.2
Joint Sealants	9-04.2
Closed Cell Foam Backer Rod	9-04.2(3)A
Waterproofing Membrane (Deck Seal)	9-11
Bridge Deck Repair Material	9-20.5

6-08.3 Construction Requirements

6-08.3(1) Definitions

Adjusted Removal Depth – the Bituminous Pavement removal depth specified by the Engineer to supersede the Design Removal Depth after review of the Contractor survey of the existing Bituminous Pavement grade profile.

Bituminous Pavement – the surfacing material containing an asphalt binder.

Design Removal Depth – the value shown in the "pavement schedule" or elsewhere in the Plans to indicate the design thickness of Bituminous Pavement to be removed.

Final Grade Profile – the compacted finished grade surface of completed Bituminous Pavement surfacing consisting of a vertical profile and superelevation cross-slope, developed by the Engineer for Grade Controlled Structure Decks based on the Contractor survey.

Grade Controlled – a Structure Deck requiring restriction of Bituminous Pavement work, including restriction of pavement removal methods and restriction of overlay pavement thicknesses.

Structure Deck – the bridge deck (concrete or timber), bridge approach slab, top of concrete box culvert, or other concrete surfaces over or upon which existing Bituminous Pavement is removed and new Bituminous Pavement is applied.

6-08.3(2) Contractor Survey for Grade Controlled Structure Decks

Prior to removing existing Bituminous Pavement from a Grade Controlled Structure Deck, the Contractor shall complete a survey of the existing surface for use in establishing the existing cross section and grade profile elevations. When removal of Bituminous Pavement is to be achieved by rotary milling/planing, the Contractor's survey shall also include the depths of the existing surfacing at each survey point.

The Contractor is responsible for all calculations, surveying, installation of control points, and measuring required for setting, maintaining and resetting equipment and materials necessary for the construction of the overlay to the Final Grade Profile.

6-08.3(2)A Survey Requirements

The Contractor shall establish at least two primary survey control points for controlling actual Bituminous Pavement removal depth and the Final Grade Profile. Horizontal control shall be by station and offset which shall be tied to either the Roadway centerline or the Structure centerline. Vertical control may be an assumed datum established by the Contractor.

Primary control points shall be described by station or milepost and offset on the baseline selected by the Contractor. The Contractor may expand the survey control information to include secondary horizontal and vertical control points as needed for the project.

Survey information collected shall include station or milepost, offset, and elevation for each lane line and curb line. Survey information shall be collected at even 20 foot station intervals, and along the centerline of each bridge expansion joint. The survey shall extend 300'-0" beyond the bridge back of pavement seat or end of Structure Deck. The survey information shall include the top of Bituminous Pavement elevation and, when rotary milling/planing equipment is used, the corresponding depth of Bituminous Pavement to the Structure Deck. The Contractor shall ensure a surveying

accuracy to within ± 0.01 feet for vertical control and ± 0.2 feet for horizontal control.

Voids in HMA created by the Contractor's Bituminous Pavement depth measurements shall be filled by material conforming to Section 9-20 or another material acceptable to the Engineer.

6-08.3(2)B Survey Submittal

The Contractor's survey records shall include descriptions of all survey control points including station/milepost, offset, and elevations of all secondary control points. The Contractor shall maintain survey records of sufficient detail to allow the survey to be reproduced. The Contractor shall submit a Type 2 Working Drawing consisting of the compiled survey records and information. Survey data shall be submitted as an electronic file in Microsoft Excel format.

6-08.3(2)C Final Grade Profile and Adjusted Removal Depth

Based on the results of the survey, the Engineer may develop a Final Grade Profile and Adjusted Removal Depth. If they are developed, the Final Grade Profile and Adjusted Removal Depth will be provided to the Contractor within three working days after receiving the Contractor's survey information. When provided, the Adjusted Removal Depth supersedes the Design Removal Depth to become the Bituminous Pavement removal depth for that Structure Deck.

6-08.3(3) General Bituminous Pavement Removal Requirements

The Contractor shall remove Bituminous Pavement and associated deck repair material from Structure Decks to the horizontal limits shown in the Plans and to either the specified or adjusted Bituminous Pavement removal depth as applicable.

Removal of Bituminous Pavement within 12-inches of existing permanent features that limit the reach of the machine or the edge of the following items shall be by hand or by hand operated (nominal 30-pounds class) power tools: existing bridge expansion joint headers; steel expansion joint assemblies; concrete butt joints between back of pavement seats and bridge approach slabs, bridge drain assemblies; thrie beam post steel anchorage assemblies fastened to the side or top of the Structure Deck.

When removing Bituminous Pavement with a planer, Section 5-04.3(14) shall apply. If the planer contacts the Structure Deck in excess of the specified planing depth tolerance, or contacts steel reinforcing bars at any time, the Contractor shall immediately cease planing operations and notify the Engineer. Planing operations shall not resume until completion of the appropriate adjustments to the planing machine and receiving the Engineer's concurrence to resume.

6-08.3(4) Partial Depth Removal of Bituminous Pavement from Structure Decks

The depth of surfacing removal, as measured to the bottom of the lowest milling groove generated by the rotary milling/planing machine shall be +0.01, -0.02-feet of the specified or Adjusted Removal Depth as applicable.

6-08.3(5) Full Depth Removal of Bituminous Pavement from Structure Decks

6-08.3(5)A Method of Removal

The Contractor shall perform full depth removal by a method that does not damage or remove the Structure Deck in excess of the specified Bituminous Pavement removal tolerance. The Contractor shall submit a Type 2 Working Drawing consisting of the proposed methods and equipment to be used for full depth removal.

6-08.3(5)B Planer Requirements for Full Depth Removal

The final planed surface shall have a finished surface with a tolerance of +0.01, -0.02 feet within the planed surface profile, as measured from a 10-foot straight edge. Multiple passes of planing to achieve smoothness will not be allowed.

In addition to Section 6-08.3(3), the planing equipment shall conform to the following additional requirements:

1. The cutting tooth spacing on the rotary milling head shall be less than or equal to ¼ inch.

2. The rotary milling/planing machine shall have cutting teeth that leave a uniform plane surface at all times. All teeth on the mill head shall be kept at a maximum differential tolerance of $\frac{3}{8}$-inch between the shortest and longest tooth, as measured by a straight edge placed the full width of the rotary milling head.

3. Cutting tips shall be replaced when 30 percent of the total length of the cutting tip material remains.

Prior to each day's Bituminous Pavement removal operations, the Contractor shall confirm to the satisfaction of the Engineer that the rotary head cutting teeth are within the specified tolerances.

6-08.3(5)C Structure Deck Cleanup after Bituminous Pavement Removal

Waterproofing membrane that is loose or otherwise not firmly bonded to the Structure Deck shall be removed as an incidental component of the Work of surfacing removal. Existing waterproofing membrane bonded to the Structure Deck need not be removed.

6-08.3(6) Repair of Damage due to Bituminous Pavement Removal Operations

All concrete bridge deck, pavement seat, and steel reinforcing bar damage due to the Contractor's surfacing removal operations shall be repaired by the Contractor in accordance with Section 1-07.13, and as specified below.

Damaged concrete in excess of the specified Bituminous Pavement removal tolerance shall be repaired in accordance with Section 6-08.3(7), with the bridge deck repair material placed to the level of the surrounding bridge deck and parallel to the final grade paving profile.

Damaged steel reinforcing bar shall be repaired as follows:

1. Damage to steel reinforcing bar resulting in a section loss less than 20-percent of the bar with no damage to the surrounding concrete shall be left in place and shall be repaired by removing the concrete to a depth ¾-inches around the top steel reinforcing bar and placing bridge deck repair material accepted by the Engineer to the level of the bridge deck and parallel to the final grade paving profile.

2. Damage to steel reinforcing bar resulting in a section loss of 20-percent or more in one location, bars partially or completely removed from the bridge deck, or where there is a lack of bond to the concrete, shall be repaired by removing the adjacent concrete and splicing a new bar of the same size. Concrete shall be removed to provide a ¾-inch minimum clearance around the bars. The splice bars shall extend a minimum of 40 bar diameters beyond each end of the damage.

6-08.3(7) Concrete Deck Repair

This Work consists of repairing the concrete deck after Bituminous Pavement has been removed.

6-08.3(7)A Concrete Deck Preparation

The Contractor, with the Engineer, shall inspect the exposed concrete deck to establish the extent of bridge deck repair in accordance with Section 6-09.3(6), except item 4 in Section 6-09.3(6) does not apply. Areas of Structure Deck left with existing well bonded waterproof membrane after full depth Bituminous Pavement removal are exempt from this inspection requirement.

All loose and unsound concrete within the repair area shall be removed with jackhammers or chipping hammers no more forceful than the nominal 30 pounds class, or other mechanical means acceptable to the Engineer, and operated at angles less than 45 degrees as measured from the surface of the deck to the tool. If unsound concrete exists around the existing steel reinforcing bars, or if the bond between concrete and steel reinforcing bar is broken, the Contractor shall remove the concrete to provide a ¾ inch minimum clearance to the bar. The Contractor shall take care to prevent damage to the existing steel reinforcing bars and concrete to remain.

After removing sufficient concrete to establish the limits of the repair area, the Contractor shall make ¾ inch deep vertical saw cuts and maintain square edges at the boundaries of the repair area. The exposed steel reinforcing bars and concrete in the repair area shall be abrasive blasted and blown clean just prior to placing the bridge deck repair material.

6-08.3(7)B Ultra-Low Viscosity, Two-Part Liquid, Polyurethane-Hybrid Polymer Concrete

The ultra-low viscosity, two-part liquid, polyurethane-hybrid polymer concrete shall be mixed in accordance with the manufacturer's recommendations.

Aggregate shall conform to the gradation limit requirements recommended by the manufacturer. The aggregate and the ultra-low viscosity, two-part liquid, polyurethane-hybrid polymer concrete shall be applied to the repair areas in accordance with the sequence and procedure recommended by the manufacturer.

All repairs shall be float finished flush with the surrounding surface within a tolerance of $\frac{1}{8}$ inch of a straight edge placed across the full width and breadth of the repair area.

6-08.3(7)C Pre-Packaged Cement Based Repair Mortar

The Contractor shall mix the pre-packaged cement based repair mortar using equipment, materials and proportions, batch sizes, and process as recommended by the manufacturer.

All repairs shall be float finished flush with the surrounding surface within a tolerance of $\frac{1}{8}$ inch of a straight edge placed across the full width and breadth of the repair area.

6-08.3(7)D Cure

All bridge deck repair areas shall be cured in accordance with the manufacturer's recommendations and attain a minimum compressive strength of 2,500 psi before allowing vehicular and foot traffic on the repair and placing waterproofing membrane on the bridge deck over the repair.

6-08.3(8) Waterproof Membrane for Structure Decks

This work consists of furnishing and placing a waterproof sheet membrane system over a prepared Structure Deck prior to placing an HMA overlay. The waterproof membrane system shall consist of a sheet membrane adhered to the Structure Deck with a primer.

The Contractor shall comply with all membrane manufacturer's installation recommendations.

6-08.3(8)A Structure Deck Preparation

The Structure Deck and ambient air temperatures shall be above 50°F and the Structure Deck shall be surface-dry at the time of the application of the primer and membrane.

All areas of a Structure Deck that have fresh cast bridge deck concrete less than 28 days old (not including bridge deck repair concrete placed in accordance with Section 6-08.3(7)) shall cure for a period of time recommended by the membrane manufacturer, or as specified by the Engineer, before application of the membrane.

The entire Structure Deck and the sides of the curb and expansion joint headers to the height of the HMA overlay shall be free of all foreign material such as dirt, grease, etc. Prior to applying the primer or sheet membrane, all dust and loose material shall be removed from the Structure Deck with compressed air. All surface defects such as spalled areas, cracks, protrusions, holes, sharp edges, ridges, etc., and other surface imperfections greater than ¼ inch in width shall be corrected prior to application of the membrane.

6-08.3(8)B Applying Primer

The primer shall be applied to the cleaned deck surfaces at the rate according to the procedure recommended by the membrane manufacturer. All surfaces to be covered by the membrane shall be thoroughly and uniformly coated with primer. Structure Deck areas left with existing well bonded waterproof membrane after bituminous surfacing removal shall receive an application of primer in accordance with the membrane manufacturer's recommendations. Precautionary measures shall be taken to ensure that pools and thick layers of primer are not left on the deck surface. The membrane shall not be applied until the primer has cured or volatile material has substantially dissipated, in accordance with the membrane manufacturer's recommendations.

The primer and waterproof membrane shall extend from the bridge deck up onto the curb face and expansion joint header face the thickness of the HMA overlay. The membrane shall adhere to the vertical surface.

6-08.3(8)C Placing Waterproof Membrane

Membrane application shall begin at the low point on the deck, and continue in a lapped shingle pattern. The overlap shall be a minimum of six inches or greater if recommended by the membrane manufacturer. Membrane seams shall be sealed as recommended by the membrane manufacturer. Hand rollers or similar tools shall be used on the applied membrane to assure firm and uniform contact with the primed Structure surfaces.

The fabric shall be neatly cut and contoured at all expansion joints and drains. The cuts at bridge drains shall be two right angle cuts made to the inside diameter of the bridge deck drain outlet, after which the corners of the waterproof membrane shall be turned down into the drains and laid in a coating of primer.

6-08.3(8)D Membrane Repair and Protection

The waterproof membrane will be visually inspected by the Engineer for uniformity, tears, punctures, bonding, bubbles, wrinkles, voids and other defects. All such deficiencies shall be repaired in accordance with the membrane manufacturer's recommendations prior to placement of the HMA overlay.

The membrane material shall be protected from damage due to the paving operations in accordance with the membrane manufacturer's recommendations. No traffic or equipment except that required for the actual waterproofing and paving operations will be permitted to travel or

rest on the membrane until it is covered by the HMA overlay. The use of windrows is not allowed for laydown of HMA on a membrane.

Where waterproofing membrane is placed in stages or applied at different times, a strip of temporary paper shall be used to protect the membrane overlap from the HMA hand removal methods.

6-08.3(9) Placing Bituminous Pavement on Structure Decks

HMA overlay shall be applied on Grade Controlled Structure Decks using reference lines for vertical control in accordance with Section 5-04.3(3)C.

The compacted elevation of the HMA overlay on Structure Decks shall be within ± 0.02 feet of the specified overlay thickness or Final Grade Profile as applicable. Deviations from the final grade paving profile in excess of the specified tolerance and areas of non-conforming surface smoothness shall be corrected in accordance with Section 5-04.3(13).

Final grade Roadway transitions to a Structure Deck with Bituminous Pavement shall not exceed a 0.20 percent change in grade in accordance with the bridge deck transition for HMA overlay Standard Plan, unless shown otherwise in the Plans.

Final grade compacted HMA elevations shall be higher than an adjacent concrete edge by ¼ inch ± $\frac{1}{8}$ inch at all expansion joint headers and concrete butt joints as shown in the concrete to asphalt butt joint details of the bridge paving joint seals Standard Plan. This also applies to steel edges within the limits of the overlay such as bridge drain frames and steel joint riser bars at bridge expansion joints.

6-08.3(9)A Protection of Structure Attachments and Embedments

The Contractor is responsible for protecting all Structure attachments and embedments from the application of BST and HMA.

Drainage inlets that are to remain open, and expansion joints, shall be cleaned out immediately after paving is completed. Materials passing through expansion joints shall be removed from the bridge within 10 working days.

All costs incurred by the Contractor in protective measures and clean up shall be included in the unit Contract prices for the associated Bid items of Work.

6-08.3(10) HMA Compaction on Structure Decks

Compaction of HMA on Structure Decks shall be in accordance with Section 5-04.3(10).

Work rejected in accordance with Section 5-04.3(11) shall include the materials, work, and incidentals to repair an existing waterproof membrane damaged by the removal of the rejected work.

6-08.3(11) Paved Panel Joint Seals and HMA Sawcut and Seal

Bridge paving joint seals shall be installed in accordance with Section 5-04.3(12)B and the details shown in the Plans and Standard Plans.

When concrete joints are exposed after removal of Bituminous Pavement, the joints shall be cleaned and sealed in accordance with Section 5-01.3(8) and the paved panel joint seal details of the bridge paving joint seals Standard Plan, including placement of the closed cell backer rod at the base of the cleaned joint. If waterproofing membrane is required, the membrane shall be slack or folded at the concrete joint to allow for Structure movements without stress to the membrane. After placement of the HMA overlay, the second phase of the paved panel joint seal shall be completed by sawing the HMA and sealing the sawn joint in accordance with Section 5-04.3(12)B2.

6-08.4 Measurement

Removing existing Bituminous Pavement from Structure Decks will be measured by the square yard of Structure Deck surface area with removed overlay.

Bridge deck repair will be measured by the square foot surface area of deck concrete removed with the measurement taken at the plane of the top mat of steel reinforcing bars.

Waterproof membrane will be measured by the square yard surface area of Structure Deck and curb and header surface area covered by membrane.

6-08.5 Payment

Payment will be made for each of the following Bid items when they are included in the Proposal:

"Structure Surveying", lump sum.

"Removing Existing Overlay From Bridge Deck___", per square yard.
The unit Contract price per square yard for "Removing Existing Overlay From Bridge Deck___", shall be full pay for performing the Work as specified for full removal of Bituminous Pavement on Structure Decks, including the removal of existing waterproof membrane and disposing of materials.

"Bridge Deck Repair Br. No.___", per square foot.
The unit Contract price per square foot for "Bridge Deck Repair Br. No.___" shall be full pay for performing the Work as specified, including removing and disposing of the concrete within the repair area and furnishing, placing, finishing, and curing the repair concrete.

"Waterproof Membrane Br. No.___", per square yard.
The unit Contract price per square yard for "Waterproof Membrane Br. No.___" shall be full pay for performing the Work as specified, including repairing any damaged or defective waterproofing membrane and repair of damaged HMA overlay.

Section 6-09, Modified Concrete Overlays
April 4, 2016

6-09.3(8)A Quality Assurance for Microsilica Modified and Fly Ash Modified Concrete Overlays

The first sentence of the first paragraph is revised to read the following two new sentences:

> The Engineer will perform slump, temperature, and entrained air tests for acceptance in accordance with Section 6-02.3(5)D and as specified in this Section after the Contractor has turned over the concrete for acceptance testing. Concrete samples for testing shall be supplied to the Engineer in accordance with Section 6-02.3(5)E.

The last paragraph is deleted.

6-09.3(8)B Quality Assurance for Latex Modified Concrete Overlays

The first two paragraphs are deleted and replaced with the following:

> The Engineer will perform slump, temperature, and entrained air tests for acceptance in accordance with Section 6-02.3(5)D and as specified in this Section after the Contractor has turned over the concrete for acceptance testing. The Engineer will perform testing as the concrete is being placed. Samples shall be taken on the first charge through each mobile mixer and every other charge thereafter. The sample shall be taken after the first 2 minutes of continuous mixer operation. Concrete samples for testing shall be supplied to the Engineer in accordance with Section 6-02.3(5)E.

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

> Recommendations made by the technical representative on or off the jobsite shall be adhered to by the Contractor.

Section 6-10, Concrete Barrier
August 7, 2017

6-10.3(5) Temporary Concrete Barrier

This section title is revised to read:

> **Temporary Barrier**

The first paragraph is revised to read:

> For temporary barrier, the Contractor may use precast concrete barrier or temporary steel barrier. Temporary concrete barrier shall comply with Standard Plan requirements and cross-sectional dimensions, except that: (1) it may be made in other lengths than those shown in the Standard Plan, and (2) it may have permanent lifting holes no larger than 4 inches in diameter or lifting loops. Temporary steel barrier shall be certified that it meets the requirements of NCHRP 350 or MASH Test Level 3 or 4 and shall be installed in accordance with the manufacturer's recommendations.

6-10.4 Measurement

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

Temporary barrier will be measured by the linear foot along the completed line and slope of the barrier, one time only for each setup of barrier protected area.

6-10.5 Payment

The Bid item "Temporary Conc. Barrier", per linear foot, and the paragraph following this Bid item, is revised to read:

"Temporary Barrier", per linear foot.

The unit Contract price per linear foot for "Temporary Barrier" shall be full pay for all costs, including furnishing, installing, connecting, anchoring, maintaining, temporary storage, and final removal of the temporary barrier.

Section 6-12, Noise Barrier Walls
January 3, 2017

6-12.3(9) Access Doors and Concrete Landing Pads

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

The Contractor shall construct concrete landing pads for each access door location as shown in the Plans.

6-12.5 Payment

In the paragraph following the bid item "Noise Barrier Wall Access Door", per each, "concrete landing pad" is revised to read "concrete landing pads".

Section 6-14, Geosynthetic Retaining Walls
January 3, 2017

6-14.3(2) Submittals

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

The Contractor shall submit Type 2E Working Drawings consisting of detailed plans for each wall.

6-14.5 Payment

The bid item "Concrete Fascia Panel", per square foot, and the paragraph following this bid item are revised to read:

"Concrete Fascia Panel For Geosynthetic Wall", per square foot.

All costs in connection with constructing the concrete fascia panels as specified shall be included in the unit Contract price per square foot for "Concrete Fascia Panel For Geosynthetic Wall", including all steel reinforcing bars, premolded joint filler, polyethylene bond breaker strip, joint sealant, PVC pipe for weep holes, exterior surface finish, and pigmented sealer (when specified), constructing and placing the concrete footing, edge beam, anchor beam, anchor rod assembly, and backfill.

Section 6-19, Shafts
January 3, 2017

6-19.3 Construction Requirements
This section is supplemented with the following new subsection:

6-19.3(10) Engineer's Final Acceptance of Shafts
The Engineer will determine final acceptance of each shaft, based on the nondestructive QA test results and analysis for the tested shafts, and will provide a response to the Contractor within 3 working days after receiving the test results and analysis submittal.

6-19.3(1)B Nondestructive Testing of Shafts
This section's content is deleted and replaced with the following new subsections:

6-19.3(1)B1 Nondestructive Quality Assurance (QA) Testing of Shafts
Unless otherwise specified in the Special Provisions, the Contractor shall perform nondestructive QA testing of shafts, except for those constructed completely in the dry. Either crosshole sonic log (CSL) testing in accordance with ASTM D 6760 or thermal integrity profiling (TIP) testing in accordance with ASTM D 7949 shall be used.

6-19.3(1)B2 Nondestructive Quality Verification (QV) Testing of Shafts
The Contracting Agency may perform QV nondestructive testing of shafts that have been QA tested by the Contractor. The Contracting Agency may test up to ten percent of the shafts. The Engineer will identify the shafts selected for QV testing and the testing method the Contracting Agency will use.

The Contractor shall accommodate the Contracting Agency's nondestructive testing.

6-19.3(2) Shaft Construction Submittal
This section is revised to read:

The shaft construction submittal shall be comprised of the following four components: construction experience; shaft installation narrative; shaft slurry technical assistance; and nondestructive QA testing personnel. The submittals shall be Type 2 Working Drawings, except the shaft slurry technical assistance and nondestructive QA testing personnel submittals shall be Type 1.

This section is supplemented with the following new subsection:

6-19.3(2)D Nondestructive QA Testing Organization and Personnel
The Contractor shall submit the names of the testing organizations, and the names of the personnel who will conduct nondestructive QA testing of shafts. The submittal shall include documentation that the qualifications specified below are satisfied. For TIP testing, the testing organization is the group that performs the data analysis and produces the final report. The testing organizations and the testing personnel shall meet the following minimum qualifications:

1. The testing organization shall have performed nondestructive tests on a minimum of three deep foundation projects in the last two years.

2. Personnel conducting the tests for the testing organization shall have a minimum of one year experience in nondestructive testing and interpretation.

3. The experience requirements for the organization and personnel shall be consistent with the testing methods the Contractor has selected for nondestructive testing of shafts.

4. Personnel preparing test reports shall be a Professional Engineers, licensed under Title 18 RCW, State of Washington, and in accordance with WAC 196-23-020.

6-19.3(3) Shaft Excavation

The second paragraph is revised to read:

Shaft excavation shall not be started until the Contractor has received the Engineer's acceptance for the reinforcing steel centralizers required when the casing is to be pulled during concrete placement.

This section is supplemented with the following:

Except as otherwise noted, the Contractor shall not commence subsequent shaft excavations until receiving the Engineer's acceptance of the first shaft, based on the results and analysis of the nondestructive testing for the first shaft. The Contractor may commence subsequent shaft excavations prior to receiving the Engineer's acceptance of the first shaft, provided the following condition is satisfied:

The Engineer permits continuing with shaft construction based on the Engineer's observations of the construction of the first shaft, including, but not limited to, conformance to the shaft installation narrative in accordance with Section 6-19.3(2)B, and the Engineer's review of Contractor's daily reports and Inspector's daily logs concerning excavation, steel reinforcing bar placement, and concrete placement.

6-19.3(5)B Steel Reinforcing Bar Cage Centralizers

This section is supplemented with the following new sentence:

The Contractor shall furnish and install additional centralizers as required to maintain the specified concrete cover throughout the length of the shaft.

6-19.3(5)C Concrete Cover Over Steel Reinforcing Bars

In the table, the second column (including heading) is revised to read:

Minimum Concrete Cover, and Concrete Cover Tolerance, Except at Permanent Slip Casing (Inches)
3, -1½
4, -2
4, -2
6, -3

The following new paragraph is inserted after the table:

The concrete cover tolerances specified above apply to the concrete cover specified in the Plans, even if it exceeds the minimum concrete cover.

6-19.3(6) Access Tubes for Crosshole Sonic Log (CSL) Testing

This section title is revised to read:

6-19.3(6) Contractor Furnished Accessories for Nondestructive QA Testing

This section is supplemented with the following three new subsections:

6-19.3(6)D Shafts Requiring Thermal Wire

The Contractor shall furnish and install thermal wire in all shafts receiving the thermal wire method of TIP testing, except as otherwise noted in Section 6-19.3(1)B1.

6-19.3(6)E Thermal Wire and Thermal Access Points (TAPs)

The thermal wire and associated couplers shall be obtained from the source specified in the Special Provisions.

The Contractor shall securely attach the thermal wire to the interior of the reinforcement cage of the shaft in conformance with the supplier's instructions. At a minimum, one thermal wire shall be furnished and installed for each foot of shaft diameter, rounded to the nearest whole number, as shown in the Plans. The number of thermal wires for shaft diameters specified as "X feet 6 inches" shall be rounded up to the next higher whole number. The thermal wires shall be placed around the shaft, inside the spiral or hoop reinforcement, and tied to the vertical reinforcement with plastic "zip" ties at a maximum spacing of 2-feet. Steel tie wire shall not be used.

The thermal wire shall be installed in straight alignment and taut, but with enough slack to not be damaged during reinforcing cage lofting. The wires shall be as near to parallel to the vertical axis of the reinforcement cage as possible. The thermal wire shall extend from the bottom of the reinforcement cage to the top of the shaft, with 15-feet of slack wire provided above the top of shaft. Care shall be taken to prevent damaging the thermal wires during reinforcement cage installation and concrete placement operations in the shaft excavation.

After completing shaft reinforcement cage fabrication at the site and prior to installation of the cage into the shaft excavation, the Contractor shall install and connect thermal access points (TAPs) to the thermal wires. The TAPs shall record data for at least one hour after the cage is placed in the excavation to measure the slurry temperature and enable the steel and slurry temperatures to equilibrate prior to placing concrete in the shaft. The TAPs shall record and store data every 15 minutes. The TAPs shall remain active for a minimum of 36 hours.

Prior to beginning concrete placement the TAPs shall be checked to ensure they are recording data and that the wires have not been damaged. If a TAP unit is not functioning due to a damaged wire, the Contractor shall repair or replace the wire. If a TAP unit fails or a wire breaks after concrete placement has started, the Contractor shall not stop the concrete placement operation to repair the wire.

6-19.3(6)F Use of Access Tubes for TIP Testing Under the Thermal Probe Method

The Contractor may use access tubes for TIP testing under the thermal probe method. Access tubes shall be cared for in accordance with Section 6-19.3(6)C. Prior to TIP testing under the thermal probe method, the water in each tube shall be removed, collected, and stored in an insulated container. The access tube shall be blown dry and swabbed to remove residual water. After TIP testing, the collected and stored tube water shall be introduced back into the access tube. New potable water may be used, provided the water temperature is not more than 10°F cooler than the average concrete temperature measured by the probe.

6-19.3(6)A Shafts Requiring CSL Access Tubes

This section, including title, is revised to read:

6-19.3(6)A Shafts Requiring Access Tubes

The Contractor shall furnish and install access tubes in all shafts receiving CSL testing or the thermal probe method of TIP testing, except as otherwise noted in Section 6-19.3(1)B1.

6-19.3(6)B Orientation and Assembly of the CSL Access Tubes

This section's title is revised to read:

6-19.3(6)B Orientation and Assembly of the Access Tubes

6-19.3(6)C Care for CSL Access Tubes from Erection through CSL Testing

This section's title is revised to read:

6-19.3(6)C Care for Access Tubes from Erection Through Nondestructive QA Testing

The second sentence is revised to read:

The Contractor shall keep all of a shaft's access tubes full of water through the completion of nondestructive QA testing of that shaft.

6-19.3(7)A Concrete Class for Shaft Concrete

This section is revised to read:

Shaft concrete shall be Class 5000P conforming to Section 6-02.

6-19.3(7)B Concrete Placement Requirements

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

The Section 6-02.3(6) restriction for 5 feet maximum free fall shall not apply to placement of concrete into a shaft.

6-19.3(7)I Requirements for Placing Concrete Above the Top of Shaft

This section is revised to read:

Concrete shall not be placed above the top of shaft (for column splice zones, columns, footings, or shaft caps) until the Contractor receives the Engineer's acceptance of nondestructive QA testing, if performed at that shaft, and acceptance of the shaft.

6-19.3(9) Nondestructive Testing of Shafts (Crosshole Sonic Log (CSL) Testing)

This section, including title, is revised to read:

6-19.3(9) Nondestructive QA Testing of Shafts

The Contractor shall provide nondestructive QA testing and analysis on all shafts with access tubes or thermal wires and TAPs facilitating the testing (See Section 6-19.3(1)B). The testing and analysis shall be performed by the testing organizations identified by the Contractor's submittal in accordance with Section 6-19.3(2)D.

The Engineer may direct that additional testing be performed at a shaft if anomalies or a soft bottom are detected by the Contractor's testing. If additional testing at a shaft confirms the presence of a defect(s) in the shaft, the testing costs and the delay costs resulting from the additional testing shall be borne by the Contractor in accordance with Section 1-05.6. If the additional testing indicates that the shaft has no defect, the testing costs and the delay costs resulting from the additional testing will be paid by the Contracting Agency in accordance with Section 1-05.6, and, if the shaft construction is on the critical path of the Contractor's schedule, a time extension equal to the delay created by the additional testing will be granted in accordance with Section 1-08.8.

6-19.3(9)A Schedule of CSL Testing

This section, including title, is revised to read:

6-19.3(9)A TIP Testing Using Thermal Probes or CSL Testing

If selected as the nondestructive QA testing method by the Contractor, TIP testing using thermal probes, or CSL testing shall be performed after the shaft concrete has cured at least 96 hours. Additional curing time prior to testing may be required if the shaft concrete contains admixtures, such as set retarding admixture or water-reducing admixture, added in accordance with Section 6-02.3(3). The additional curing time prior to testing required under these circumstances shall not be grounds for additional compensation or extension of time to the Contractor in accordance with Section 1-08.8.

6-19.3(9)B Inspection of CSL Access Tubes

This section's title is revised to read:

6-19.3(9)B Inspection of Access Tubes

6-19.3(9)C Engineer's Final Acceptance of Shafts

This section, including title, is revised to read:

6-19.3(9)C TIP Testing With Thermal Wires and TAPs

If selected as the nondestructive QA testing method by the Contractor, TIP testing with thermal wires and TAPs (See Section 6-19.3(6)E) shall be performed. The TIP testing shall commence at the beginning of the concrete placement operation, recording temperature readings at 15-minute intervals until the peak temperature is captured in the data. Additional curing time may be required if the shaft concrete contains admixtures, such as set retarding admixture or water-reducing admixture, added in

accordance with Section 6-02.3(3). The additional curing time required under these circumstances shall not be grounds for additional compensation or extension of time to the Contractor in accordance with Section 1-08.8.

TIP testing shall be conducted at all shafts in which thermal wires and TAPs have been installed for thermal wire analysis (Section 6-19.3(6)A).

6-19.3(9)D Requirements to Continue Shaft Excavation Prior to Acceptance of First Shaft

This section, including title, is revised to read:

6-19.3(9)D Nondestructive QA Testing Results Submittal

The Contractor shall submit the results and analysis of the nondestructive QA testing for each shaft tested. The Contractor shall submit the test results within three working days of testing. Results shall be a Type 1 Working Drawing presented in a written report.

TIP reports shall include:

1. A map or plot of the wire/tube location within the shaft and their position relative to a known and identifiable location, such as North.

2. Graphical displays of temperature measurements versus depth of each wire or tube for the analysis time selected, overall average temperature with depth, shaft radius or diameter with depth, concrete cover versus cage position with depth, and effective radius.

3. The report shall identify unusual temperatures, particularly significantly cooler local deviations from the overall average.

4. The report shall identify the location and extent where satisfactory or questionable concrete is identified.

    a. Satisfactory (S) - 0 to 6% Effective Radius Reduction and Cover Criteria Met

    b. Questionable (Q) - Effective Local Radius Reduction > 6%, Effective Local Average Diameter Reduction > 4%, or Cover Criteria Not Met

5. Variations in temperature between wire/tubes (at each depth) which in turn correspond to variations in cage alignment.

6. Where shaft specific construction information is available (e.g. elevations of the top of shaft, bottom of casing, bottom of shaft, etc.), these values shall be noted on all pertinent graphical displays.

CSL reports shall include:

1. A map or plot of the tube location within the shaft and their position relative to a known and identifiable location, such as North.

2. Graphical displays of CSL Energy versus Depth and CSL signal arrival time versus depth or velocity versus depth.

3. The report shall identify the location and extent where good, questionable, and poor concrete is identified, where no signal was received, or where water is present.

    a. Good (G) - No signal distortion and decrease in signal velocity of 10% or less is indicative of good quality concrete.

    b. Questionable (Q) - Minor signal distortion and a lower signal amplitude with a decrease in signal velocity between 10% and 20%.

    c. Poor (P) - Severe signal distortion and much lower signal amplitude with a decrease in signal velocity of 20% or more.

    d. No Signal (NS) - No signal was received.

    e. Water (W) - A measured signal velocity of nominally V = 4,800 to 5,000 fps.

All QA test reports will provide a recommendation to accept the shaft as-is, recommendation for further review by the Engineer, or will provide a plan for further testing, investigation or repair to address any deficiencies identified by the testing.

6-19.3(9)E Additional CSL Testing

This section, including title, is revised to read:

6-19.3(9)E Vacant

6-19.3(9)I Requirements for CSL Access Tubes and Cored Holes After CSL Testing

This section's title is revised to read:

6-19.3(9)I Requirements for Access Tubes and Cored Holes After CSL Testing

6-19.4 Measurement

This section is revised to read:

Constructing shafts will be measured by the linear foot. The linear foot measurement will be calculated using the top of shaft elevation and the bottom of shaft elevation for each shaft as shown in the Plans.

Rock excavation for shaft, including haul, will be measured by the linear foot of shaft excavated. The linear feet measurement will be computed using the top of the rock line, defined as the highest bedrock point within the shaft diameter, and the bottom elevation shown in the Plans.

QA shaft test will be measured once per shaft tested.

6-19.5 Payment

This section is revised to read:

Payment will be made for the following Bid items when they are included in the Proposal:

"Constructing___Diam. Shaft", per linear foot.
The unit Contract price per linear foot for "Constructing___Diam. Shaft" shall be full pay for performing the Work as specified, including:

1. Soil excavation for shaft, including all costs in connection with furnishing, mixing, placing, maintaining, containing, collecting, and disposing of all mineral, synthetic and water slurry, and disposing of groundwater collected by the excavated shaft.

2. Furnishing and placing temporary shaft casing, including temporary casing in addition to the required casing specified in the Special Provisions, and including all costs in connection with completely removing the casing after completing shaft construction.

3. Furnishing permanent casing for shaft.

4. Placing permanent casing for shaft.

5. Casing shoring, including all costs in connection with furnishing and installing casing shoring above the specified upper limit for casing shoring but necessary to provide for sufficient water head pressure to resist artesian water pressure present in the shaft excavation, removing casing shoring, and placing seals when required.

6. Furnishing and placing steel reinforcing bar and epoxy-coated steel reinforcing bar, including furnishing and installing steel reinforcing bar centralizers.

7. Installation of CSL tubes or thermal wires.

8. Furnishing, placing and curing concrete to the top of shaft or to the construction joint at the base of the shaft-column splice zone as applicable.

Payment for "Constructing___Diam. Shaft" will be made upon Engineer acceptance of the shaft, including completion of satisfactory QA shaft tests as applicable.

"Rock Excavation For Shaft Including Haul", per linear foot.
When rock excavation is encountered, payment for rock excavation is in addition to the unit Contract price per linear foot for "Constructing___Diam. Shaft"

"Shoring Or Extra Excavation Cl. A - ___", lump sum.
The lump sum Contract price for "Shoring Or Extra Excavation Cl. A - ___" shall be full pay for performing the Work as specified, including all costs in connection with all excavation outside the limits specified for soil and rock excavation for shaft including haul, all temporary telescoping casings, and all temporary casings beyond the limits of required temporary casing specified in the Special Provisions.

"QA Shaft Test", per each.

The unit Contract price per each for "QA Shaft Test" shall be full pay for performing the Work as specified, including operating all associated accessories necessary to record and process data and develop the summary QA test reports. Section 1-04.6 does not apply to this bid item.

"Removing Shaft Obstructions", estimated.

Payment for removing, breaking-up, or pushing aside shaft obstructions, as defined in Section 6-19.3(3)E, will be made for the changes in shaft construction methods necessary to deal with the obstruction. The Contractor and the Engineer shall evaluate the effort made and reach agreement on the equipment and employees utilized, and the number of hours involved for each. Once these cost items and their duration have been agreed upon, the payment amount will be determined using the rate and markup methods specified in Section 1-09.6. For the purpose of providing a common proposal for all Bidders, the Contracting Agency has entered an amount for the item "Removing Shaft Obstructions" in the Bid Proposal to become a part of the total Bid by the Contractor.

If drilled shaft tools, cutting teeth, casing or Kelly bar is damaged as a result of the obstruction removal work, the Contractor will be compensated for the costs to repair this equipment in accordance with Section 1-09.6.

If shaft construction equipment is idled as a result of the Work required to deal with the obstruction and cannot be reasonably reassigned within the project, then standby payment for the idled equipment will be added to the payment calculations. If labor is idled as a result of the Work required to deal with the obstruction and cannot be reasonably reassigned within the project, then all labor costs resulting from Contractor labor agreements and established Contractor policies will be added to the payment calculations.

The Contractor shall perform the amount of obstruction Work estimated by the Contracting Agency within the original time of the Contract. The Engineer will consider a time adjustment and additional compensation for costs related to the extended duration of the shaft construction operations, provided:

1. The dollar amount estimated by the Contracting Agency has been exceeded, and

2. The Contractor shows that the obstruction removal Work represents a delay to the completion of the project based on the current progress schedule provided in accordance with Section 1-08.3.

Section 7-02, Culverts
January 3, 2017

7-02.2 Materials

The following three new items are inserted after the item "Aggregate for Portland Cement Concrete:

Gravel Backfill for Pipe Zone Bedding	9-03.12(3)
Butyl Rubber Sealant	9-04.11

External Sealing Band 9-04.12

The last paragraph is deleted.

7-02.3(6) Precast Reinf. Conc. Three Sided Structures, Box Culverts and Split Box Culverts

This section is supplemented with the following new paragraph:

When the Plans include a complete set of design details for a Structure (defining panel shapes and dimensions, concrete strength requirements, and steel reinforcing bar, joint, and connection details), the design and load rating preparation and calculation submittal requirements of Sections 7-02.3(6)A1 and 7-02.3(6)A2 do not apply for the components shown in the Plans, but all other requirements of this Section remain in effect. The Contractor may propose alternate concrete culvert designs, accommodating the same rise, span, and length as shown in the Plans, to replace the Structure details shown in the Plans. If an alternate concrete culvert design is proposed, all of the requirements of this Section, including design and load rating preparation and calculation submittal, apply.

7-02.3(6)A General

This section is supplemented with the following two new paragraphs:

Tolerances for PRCTSS shall be as follows:

1. Internal Dimensions – The internal dimension shall not vary more than 1 percent or 2 inches, whichever is less, from the Plan dimensions. The haunch dimensions shall not vary more than $^{3}/_{4}$ inch from the Plan dimensions.

2. Slab and Wall Thickness – The slab and wall thickness shall not be less than that shown in the Plans by more than 5 percent or ½ inch, whichever is greater. A thickness more than that required in the Plans will not be a cause for rejection if proper joining is not affected.

3. Length of Opposite Surfaces – Variations in lengths of two opposite surfaces of the three-sided section shall not be more than $^{3}/_{4}$ inch unless beveled sections are being used to accommodate a curve in the alignment.

4. Reinforcing steel placement shall meet the tolerances specified in Section 6-02.3(24)C.

Tolerances for PRCBC and PRCSBC shall be as follows:

1. Internal Dimensions – The internal dimensions shall not vary more than 1 percent from the Plan dimensions. If haunches are used, the haunch dimensions shall not vary more than ¼ inch from the Plan dimensions.

2. Slab and Wall Thickness – The slab and wall thickness shall not be less than that shown in the Plans by more than 5 percent or $^{3}/_{16}$ inch, whichever is greater. A thickness more than that required in the Plans will not be a cause for rejection.

3. Length of Opposite Box Segments – Variations in lengths of two opposite surfaces of the box segments shall not be more than $\frac{1}{8}$ inch per foot of internal span, with a maximum of $\frac{5}{8}$ inch for all sizes through 7 feet internal span, and a maximum of ¾ inch for internal spans greater than 7 feet, except where beveled sections are being used to accommodate a curve in the alignment.

4. Length of Box Segments – The underrun in length of a segment shall not be more than $\frac{1}{8}$ inch per foot of length with a maximum of $\frac{1}{2}$ inch in any box segment.

5. Length of Legs and Slabs – The variation in length of the legs shall not be more than $\frac{1}{8}$ inch per foot of the rise of the leg per leg with a maximum of $\frac{5}{8}$ inches. The differential length between opposing legs of the same segment shall not be more than $\frac{1}{2}$ inch. Length of independent top slab spans shall not vary by more than $\frac{1}{8}$ inch per foot of span of the top slab, with a maximum of $\frac{5}{8}$ inches.

6. Reinforcing steel placement shall meet the tolerances specified in Section 6-02.3(24)C.

This section is supplemented with the following new subsection:

7-02.3(6)A5 Wingwalls and Retaining Walls

Wingwalls and retaining walls (including cutoff walls and headwalls) shall be constructed in accordance with the Contractor's design and Working Drawing submittal or when the Plans include a complete set of design details for a wall (defining panel shapes and dimensions, concrete strength requirements, and steel reinforcing bar, joint, and connection details),the details shown in the Plans.

Precast concrete construction shall conform to Sections 6-02.3(28) and 6-11.3(3).

Culvert bedding material shall be furnished, placed, and compacted in accordance with Section 7-02.3(6)A4.

7-02.3(6)A1 Design Criteria

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

Whenever the minimum finished backfill or surfacing depth above the top of the Structure is less than 1'-0" (except when the top of the Structure is directly exposed to vehicular traffic), either all steel reinforcing bars in the span unit shall be epoxy-coated with 2" minimum concrete cover from the face of concrete to the face of the top mat of steel reinforcing bars, or the minimum concrete cover shall be 2½".

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

Concrete cover from the face of any concrete surface to the face of any steel reinforcement shall be 1-inch minimum end clearance at all joints, and 2-inches minimum at all other locations.

7-02.3(6)A2 Submittals

The first paragraph is revised to read:

The Contractor shall submit shop drawings of the precast Structures. Fabrication shop drawings replicating complete design details when shown in the Plans shall be Type 2 Working Drawings. Submittals completing the design based on the schematic geometric requirements shown in the Plans, or proposing a Contractor designed alternative concrete culvert Structure shall be Type 2E Working Drawings with supporting design calculations.

The last paragraph is revised to read:

For precast Structures with a span length greater than 20-feet (as defined in Section 7-02.3(6)A1), except when the depth of fill above the top of culvert exceeds the Structure span length, a Type 2E Working Drawing shall be submitted consisting of a load rating report prepared in accordance with the AASHTO Manual for Bridge Evaluation and WSDOT Bridge Design Manual LRFD M 23-50 Chapter 13. Soil pressures used shall include effects from the backfill material and compaction methods, and shall be in accordance with the WSDOT Geotechnical Design Manual M 46-03 and the geotechnical report prepared for the project.

7-02.3(6)A3 Casting

This section is revised to read:

Concrete shall conform to Section 6-02.3(28)B, with a 28-day compressive strength as specified in the Plans or the Working Drawings submittal.

7-02.3(6)A4 Excavation and Bedding Preparation

The last paragraph is revised to read:

The upper layer of bedding course shall be a 6-inch minimum thickness layer of culvert bedding material, defined as granular material either conforming to Section 9-03.12(3) or to AASHTO Grading No. 57 as specified in Section 9-03.1(4)C. The plan limits of the culvert bedding material shall extend 1-foot beyond the plan limits of the culvert or the Structure footing as applicable. The culvert bedding material shall be compacted in accordance with the Section 2-09.3(1)E requirements for gravel backfill for drains. After compaction, the culvert bedding material shall be screeded transversely to the specified line and grade. Voids in the screeded culvert bedding material shall be filled and then rescreeded prior to erecting the precast Structure.

7-02.3(6)B3 Erection

The last paragraph is revised to read:

Adjacent precast sections shall be connected by welding the weld-tie anchors in accordance with Section 6-03.3(25). Welding ground shall be attached directly to the steel plates being welded when welding the weld-ties. The weld-tie anchor spacing shall not exceed 6'-0". After connecting the weld-tie anchors, the Contractor shall paint the exposed metal surfaces with one coat of field primer conforming to Section 9-08.1(2)F. Keyways shall be filled with grout conforming to Section 9-20.3(2).

7-02.3(6)C1 Casting

This section is revised to read:

PRCSBC shall consist of lid elements and "U" shaped base elements. The vertical legs of the "U" shaped base elements shall be full height matching the rise of the culvert,

except as otherwise specified for culvert spans greater than 20-feet. For PRCSBC spans greater than 20-feet (as defined in Section 7-02.3(6)A1), the lid elements may include vertical legs of a maximum length of 4-feet.

All vertical and horizontal joints of PRCBC and PRCSBC elements shall be tongue and groove type joints, except PRCBC and PRCSBC of 20-foot span or less may have keyway joints connected by weld-tie anchors in accordance with Section 6-02.3(25)O. The weld-tie anchor spacing shall not exceed 6'-0". There shall be at least two galvanized steel tie plates across each top unit tongue and groove joint and each tongue and groove joint between upper and lower units, unless otherwise shown in the Plans or required by the seismic designed completed in accordance with Section 7-02.3(6)A1.

7-02.3(6)C3 Erection

This section is revised to read:

PRCBC and PRCSBC shall be erected and backfilled in accordance with the erection sequence specified in the Working Drawing submittal, and the construction equipment restrictions specified in Section 6-02.3(25)O.

The Contractor shall install a continuous strip of butyl rubber sealant within all tongue and groove joints prior to connecting the precast elements together. The butyl rubber sealant shall have a minimum cross section of ½-inch by 1½-inch, unless otherwise shown in the Plans.

After connecting the joints with weld-tie anchors, the Contractor shall paint the exposed metal surfaces with one coat of field primer conforming to Section 9-08.1(2)F. Keyways shall be filled with grout conforming to Section 9-20.3(2).

The Contractor shall wrap all exterior joints along the top and sides of the PRCBC and PRCSBC with a 12-inch wide strip of external sealing band centered about the joint and adhesively bonded to the concrete surface.

Backfill beside the PRCBC and PRCSBC shall be brought up in sequential layers, compacted concurrently. The difference in backfill height on opposing sides of the Structure shall not exceed 2-feet.

7-02.4 Measurement

This section is supplemented with the following:

Culvert bedding material will be measured by the cubic yard of material placed.

7-02.5 Payment

This section is supplemented with the following:

"Culvert Bedding Material", per cubic yard.

Section 7-08, General Pipe Installation Requirements
January 3, 2017

7-08.3(1)A Trenches

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

The embankment material shall be compacted to 95 percent of maximum density and the moisture content at the time of compaction shall be between optimum and 3 percentage points below optimum as determined by the Compaction Control Tests specified in Section 2-03.3(14)D.

Section 7-09, Water Mains
April 3, 2017

7-09.3(24)D Dry Calcium Hypochlorite

The second paragraph is revised to read:

The number of grams of 70 percent test calcium hypochlorite required for a 20-foot length of pipe equals $0.238 \times d^2$, in which "d" is the diameter in inches.

Section 8-01, Erosion Control and Water Pollution Control
August 1, 2016

8-01.2 Materials

This section is supplemented with the following new paragraph:

Recycled concrete, in any form, shall not be used for any Work defined in Section 8-01.

8-01.3(7) Stabilized Construction Entrance

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

Material used for stabilized construction entrance shall be free of extraneous materials that may cause or contribute to track out.

8-01.3(8) Street Cleaning

This section is revised to read:

Self-propelled street sweepers shall be used to remove and collect sediment and other debris from the Roadway, whenever required by the Engineer. The street sweeper shall effectively collect these materials and prevent them from being washed or blown off the Roadway or into waters of the State. Street sweepers shall not generate fugitive dust and shall be designed and operated in compliance with applicable air quality standards.

Material collected by the street sweeper shall be disposed of in accordance with Section 2-03.3(7)C.

Street washing with water will require the concurrence of the Engineer.

Section 8-09, Raised Pavement Markers
January 3, 2017

8-09.5 Payment

In the last paragraph, "flaggers and spotters" is revised to read "flaggers".

Section 8-10, Guide Posts
January 4, 2016

8-10.3 Construction Requirements
The last sentence of the second paragraph is deleted.

Section 8-11, Guardrail
January 17, 2017

8-11.3(1)C Terminal and Anchor Installation
This section is supplemented with the following new paragraph:

Beam Guardrail Non-flared Terminals for Type 1 guardrail shall meet the crash test and evaluation criteria of NCHRP 350 or the Manual for Assessing Safety Hardware (MASH). Beam Guardrail Non-flared Terminals for Type 31 guardrail shall meet the crash test and evaluation criteria of MASH.

8-11.3(1)F Removing and Resetting Beam Guardrail
The last sentence of the first paragraph is deleted.

8-11.5 Payment
The paragraph following the Bid item "Removing and Resetting Beam Guardrail", per linear foot is revised to read:

The unit Contract price per linear foot for "Removing and Resetting Beam Guardrail" shall be full payment for all costs to perform the Work as described in Section 8-11.3(1)F, except for replacement posts and blocks.

The paragraph following the Bid item "Raising Existing Beam Guardrail", per linear foot is revised to read:

The unit Contract price per linear foot for "Raising Existing Beam Guardrail" shall be full payment for all costs to perform the Work as described in Section 8-11.3(1)E, except for replacement posts and blocks.

Section 8-20, Illumination, Traffic Signal Systems, Intelligent Transportation Systems, and Electrical
August 7, 2017

8-20.1 Description
This section is supplemented with the following new subsection:

8-20.1(3) Permitting and Inspections
Electrical installations are subject to electrical inspection in accordance with RCW 19.28.101. Electrical inspections may only be performed by an electrical inspector meeting the requirements of RCW 19.28.321. Electrical installations will not be accepted until they have been inspected and approved by an electrical inspector as required by this Section. This inspection is required even if there is no new electrical service or new electrical meter being installed in the Contract.

Installations within WSDOT right of way are subject to a minimum of a final inspection by a WSDOT certified electrical inspector as allowed by RCW 19.28.141. A separate permit is not required for electrical installations within WSDOT right of way. Additional inspections may be required at the discretion of the Engineer.

Installations outside of WSDOT right of way are subject to permitting and inspection by the Washington State Department of Labor and Industries (L&I) or a local jurisdiction approved for that location by L&I. Approved local jurisdictions and their contacts may be found on the L&I website at http://www.lni.wa.gov/TradesLicensing/Electrical/FeePermInsp/CityInspectors/.

8-20.1(1) Regulations and Code

The second paragraph is revised to read:

Wherever reference is made in these Specifications or in the Special Provisions to the Code, the rules, or the standards mentioned above, the reference shall be construed to mean the code, rule, or standard that is in effect on the Bid advertisement date.

8-20.3(5)A General

The last paragraph is revised to read:

Immediately after the sizing mandrel has been pulled through, install an equipment grounding conductor if applicable (see Section 8-20.3(9)) and any new or existing wire or cable as specified in the Plans. Where conduit is installed for future use, install a 200-pound minimum tensile strength pull string with the equipment grounding conductor. The pull string shall be attached to duct plugs or caps at both ends of the conduit.

8-20.3(5)A1 Fiber Optic Conduit

The last paragraph is deleted.

8-20.3(5)B Conduit Type

The second and third paragraphs are deleted and replaced with the following new paragraph:

PVC and HDPE conduits shall be Schedule 80 unless installed as innerduct.

8-20.3(5)D Conduit Placement

Item number 2 is revised to read:

2. 24-inches below the top of the untreated surfacing on a Roadbed.

8-20.3(9) Bonding, Grounding

The following two new paragraphs are inserted after the first paragraph:

Install an equipment grounding conductor in all new conduit, whether or not the equipment grounding conductor is called for in the wire schedule.

For each new conduit with innerduct install an equipment grounding conductor in only one of the innerducts unless otherwise required by the NEC or the Plans.

The fourth paragraph (after the preceding Amendments are applied) is revised to read:

Bonding jumpers and equipment grounding conductors meeting the requirements of Section 9-29.3(2)A3 shall be minimum #8 AWG, installed in accordance with the NEC. Where existing conduits are used for the installation of new circuits, an equipment grounding conductor shall be installed unless an existing equipment ground conductor, which is appropriate for the largest circuit, is already present in the existing raceway. The equipment ground conductor between the isolation switch and the sign lighter fixtures shall be minimum #14 AWG stranded copper conductor. Where parallel circuits are enclosed in a common conduit, the equipment-grounding conductor shall be sized by the largest overcurrent device serving any circuit contained within the conduit.

The second sentence of the fifth paragraph (after the preceding Amendments are applied) is revised to read:

A non-insulated stranded copper conductor, minimum #8 AWG with a full circle crimp on connector (crimped with a manufacturer recommended crimper) shall be connected to the junction box frame or frame bonding stud, the other end shall be crimped to the equipment bonding conductor, using a “C” type crimp connector.

The last two sentences of the sixth paragraph (after the preceding Amendments are applied) are revised to read:

For light standards, signal standards, cantilever and sign bridge Structures the supplemental grounding conductor shall be #4 AWG non-insulated stranded copper conductor. For steel sign posts which support signs with sign lighting or flashing beacons the supplemental grounding conductor shall be #6 AWG non insulated stranded copper conductor.

The fourth to last paragraph is revised to read:

Install a two grounding electrode system at each service entrance point, at each electrical service installation and at each separately derived power source. The service entrance grounding electrode system shall conform to the “Service Ground” detail in the Standard Plans. If soil conditions make vertical grounding electrode installation impossible an alternate installation procedure as described in the NEC may be used. Maintain a minimum of 6 feet of separation between any two grounding electrodes within the grounding system. Grounding electrodes shall be bonded copper, ferrous core materials and shall be solid rods not less than 10 feet in length if they are ½ inch in diameter or not less than 8 feet in length if they are ⅝ inch or larger in diameter.

8-20.3(13)A Light Standards

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

All new and relocated metal light standards shall be numbered for identification using painted 4 inch block gothic letters (similar to series C highway lettering) and numbers installed 3 feet above the base facing the Traveled Way.

The numbered list in the second to last paragraph is deleted and replaced with the following:

NN
CC-SSSS
VVV

Where:

NN – Is the pole number as identified in the Plans. May be one or more characters.

CC – Is the circuit letter as identified in the Plans. May be one or more characters.

SSSS – Is he service cabinet number as identified in the Plans. Do not include the two or three letter prefix. Up to four digits - do not include leading zeros.

VVV – Is the operating voltage of the luminaire. Always three digits.

8-20.3(13)C Luminaires

The first paragraph is revised to read:

The Contractor shall mark the installation date on the inside of the luminaire ballast or driver housing using a permanent marking pen.

Section 8-22, Pavement Marking
August 7, 2017

8-22.3(6) Removal of Pavement Markings

This section is revised to read:

Pavement markings to be removed shall be obliterated until all blemishes caused by the pavement marking removal conform to the coloration of the adjacent pavement.

Grinding to remove pavement markings in their entirety is allowed in areas designated for applications of either Hot Mix Asphalt (HMA) or Bituminous Surface Treatment (BST). Pavement marking removal shall be performed from April 1st through September 30th and only in those areas that shall be paved within the same time window as the grinding, unless otherwise allowed by the Engineer in writing.

For all cement concrete pavement and areas that will not be overlaid with hot mix asphalt or BST, grinding is allowed to a depth just above the pavement surface and then Water blasting or shot blasting shall be required to remove the remaining pavement markings.

If in the opinion of the Engineer, the pavement is materially damaged by pavement marking removal, such damage shall be repaired by the Contractor in accordance with Section 1-07.13(1). Sand or other material deposited on the pavement as a result of removing lines and markings shall be removed as the Work progresses to avoid hazardous conditions. Accumulation of sand or other material which might interfere with drainage will not be permitted.

8-22.4 Measurement

The first two sentences of the fourth paragraph are revised to read:

The measurement for “Painted Wide Lane Line”, “Plastic Wide Lane Line”, “Profiled Plastic Wide Lane Line”, “Painted Barrier Center Line”, “Plastic Barrier Center Line”, “Painted Stop Line”, “Plastic Stop Line”, “Painted Wide Dotted Entry Line”, or “Plastic Wide Dotted Entry Line” will be based on the total length of each painted, plastic or profiled plastic line installed. No deduction will be made for the unmarked area when the marking includes a broken line such as, wide broken lane line, drop lane line, wide dotted lane line or wide dotted entry line.

8-22.5 Payment

The following two new Bid items are inserted after the Bid item "Plastic Crosshatch Marking", per linear foot:

"Painted Wide Dotted Entry Line", per linear foot.

"Plastic Wide Dotted Entry Line", per linear foot.

Section 9-01, Portland Cement
August 7, 2017

This section's title is revised to read:

Cement

9-01.1 Types of Cement

This section is revised to read:

Cement shall be classified as portland cement, blended hydraulic cement, or rapid hardening hydraulic cement.

9-01.2(2) Vacant

This section, including title, is revised to read:

9-01.2(2) Rapid Hardening Hydraulic Cement

Rapid hardening hydraulic cement shall meet the requirements of ASTM C 1600.

9-01.2(3) Low Alkali Cement

This section is renumbered as follows:

9-01.2(1)A Low Alkali Cement

9-01.2(4) Blended Hydraulic Cement

This section is renumbered as follows:

9-01.2(1)B Blended Hydraulic Cement

In the first paragraph, items number 3 through 5 are revised to read:

3. Type IT(PX)(LY), where (PX) equals the targeted percentage of pozzolan, and (LY) equals the targeted percentage of limestone. The pozzolan (PX) shall be Class F fly ash and shall be a maximum of 35 percent. (LY) shall be a minimum of 5 percent and a maximum of 15 percent. Separate testing of each source of fly ash at each proposed replacement level shall be conducted in accordance with ASTM C1012. Expansion at 180 days shall be 0.10 percent or less.

4. Type IT(SX)(LY), where (SX) equals the targeted percentage of slag cement, and (LY) equals the targeted percentage of limestone. (SX) shall be a maximum of 50 percent. (LY) shall be a minimum of 5 percent and a maximum of 15 percent. Separate testing of each source of slag at each proposed replacement level shall

be conducted in accordance with ASTM C1012. Expansion at 180 days shall be 0.10 percent or less.

5. Type IL(X), where (X) equals the targeted percentage of limestone, and shall be a minimum of 5 percent and a maximum of 15 percent. Testing shall be conducted in accordance with ASTM C1012. Expansion at 180 days shall be 0.10 percent or less.

9-01.3 Tests and Acceptance

The second paragraph is revised to read:

Cement producers/suppliers that certify portland cement or blended hydraulic cement shall participate in the Cement Acceptance Program as described in WSDOT Standard Practice QC 1. Rapid hardening hydraulic cement producers/suppliers are not required to participate in WSDOT Standard Practice QC 1.

Section 9-03, Aggregates
August 7, 2017

9-03.1(1) General Requirements

In this section, each reference to “Section 9-01.2(3)” is revised to read “Section 9-01.2(1)A”.

This first paragraph is supplemented with the following:

Reclaimed aggregate may be used if it complies with the specifications for Portland Cement Concrete. Reclaimed aggregate is aggregate that has been recovered from plastic concrete by washing away the cementitious materials.

9-03.1(2) Fine Aggregate for Portland Cement Concrete

This section is revised to read:

Fine aggregate shall consist of natural sand or manufactured sand, or combinations thereof, accepted by the Engineer, having hard, strong, durable particles free from adherent coating. Fine aggregate shall be washed thoroughly to meet the specifications.

9-03.1(2)A Deleterious Substances

This section is revised to read:

The amount of deleterious substances in the washed aggregate shall be tested in accordance with AASHTO M 6 and not exceed the following values:

Material finer than No. 200 Sieve	2.5 percent by weight
Clay lumps and friable particles	3.0 percent by weight
Coal and lignite	0.25 percent by weight
Particles of specific gravity less than 2.00	1.0 percent by weight.

Organic impurities shall be tested in accordance with AASHTO T 21 by the glass color standard procedure and results darker than organic plate no. 3 shall be rejected. A darker color results from AASHTO T 21 may be used provided that when tested for the effect of organic impurities on strength of mortar, the relative strength at 7 days, calculated in accordance with AASHTO T 71, is not less than 95 percent.

9-03.1(4) Coarse Aggregate for Portland Cement Concrete

This section is revised to read:

Coarse aggregate for concrete shall consist of gravel, crushed gravel, crushed stone, or combinations thereof having hard, strong, durable pieces free from adherent coatings. Coarse aggregate shall be washed to meet the specifications.

9-03.1(4)A Deleterious

This section, including title, is revised to read:

9-03.1(4)A Deleterious Substances

The amount of deleterious substances in the washed aggregate shall be tested in accordance with AASHTO M 80 and not exceed the following values:

Material finer than No. 200	1.0[1] percent by weight
Clay lumps and Friable Particles	2.0 percent by weight
Shale	2.0 percent by weight
Wood waste	0.05 percent by weight
Coal and Lignite	0.5 percent by weight
Sum of Clay Lumps, Friable Particles, and Chert (Less Than 2.40 specific gravity SSD)	3.0 percent by weight

[1]If the material finer than the No. 200 sieve is free of clay and shale, this percentage may be increased to 1.5.

9-03.1(4)C Grading

The following new sentence is inserted at the beginning of the last pargraph:

Where coarse aggregate size 467 is used, the aggregate may be furnished in at least two separate sizes.

9-03.1(5) Combined Aggregate Gradation for Portland Cement Concrete

This section is revised to read:

As an alternative to using the fine aggregate sieve grading requirements in Section 9-03.1(2)B, and coarse aggregate sieve grading requirements in Section 9-03.1(4)C, a combined aggregate gradation conforming to the requirements of Section 9-03.1(5)A may be used.

9-03.1(5)A Deleterious Substances

This section is revised to read:

The amount of deleterious substances in the washed aggregates $^{3}/_{8}$ inch or larger shall not exceed the values specified in Section 9-03.1(4)A and for aggregates smaller than $^{3}/_{8}$ inch they shall not exceed the values specified in Section 9-03.1(2)A.

9-03.1(5)B Grading

The first paragraph is deleted.

9-03.8(2) HMA Test Requirements

In the table in item number 3, the heading “Statistical and Nonstatistical” is revised to read “Statistical”.

9-03.8(7) HMA Tolerances and Adjustments

In the table in item number 1, the column titled “Nonstatistical Evaluation” is deleted.

In the table in item 1, the last column titled “Commercial Evaluation” is revised to read “Visual Evaluation”.

9-03.11(1) Streambed Sediment

The following three new sentences are inserted after the first sentence of the first paragraph:

> Alternate gradations may be used if proposed by the Contractor and accepted by the Engineer. The Contractor shall submit a Type 2 Working Drawing consisting of 0.45 power maximum density curve of the proposed gradation. The alternate gradation shall closely follow the maximum density line and have Nominal Aggregate Size of no less than 1½ inches or no greater than 3 inches.

9-03.12(4) Gravel Backfill for Drains

The following new sentence is inserted at the beginning of the second paragraph:

> As an alternative, AASHTO grading No. 57 may be used in accordance with Section 9-03.1(4)C.

9-03.12(5) Gravel Backfill for Drywells

The following new sentence is inserted at the beginning of the second paragraph:

> As an alternative, AASHTO grading No. 4 may be used in accordance with Section 9-03.1(4)C.

9-03.21(1)B Concrete Rubble

This section, including title, is revised to read:

9-03.21(1)B Recycled Concrete Aggregate

Recycled concrete aggregates are coarse aggregates manufactured from hardened concrete mixtures. Recycled concrete aggregate may be used as coarse aggregate or blended with coarse aggregate for Commercial Concrete. Recycled concrete aggregate shall meet all of the requirements for coarse aggregate contained in Section 9-03.1(4) or 9-03.1(5). In addition to the requirements of Section 9-03.1(4) or 9-03.1(5), recycled concrete shall:

1. Contain an aggregated weight of less than 1 percent of adherent fines, vegetable matter, plastics, plaster, paper, gypsum board, metals, fabrics, wood, tile, glass, asphalt (bituminous) materials, brick, porcelain or other deleterious substance(s) not otherwise noted;

2. Be free of components such as chlorides and reactive materials that are detrimental to the concrete, unless mitigation measures are taken to prevent recurrence in the new concrete;

3. Have an absorption of less than 10 percent when tested in accordance with AASHTO T 85.

4. Be considered mechanically fractured and therefore be considered part of the total fracture calculation as determined by the FOP for AASHTO T 335.

Recycled concrete aggregate shall be in a saturated condition prior to mixing.

Recycled concrete aggregate shall not be placed below the ordinary high water mark of any surface water of the State.

9-03.21(1)D Recycled Steel Furnace Slag

This section title is revised to read:

Steel Slag

9-03.21(1)E Table on Maximum Allowable Percent (By Weight) of Recycled Material

In the Hot Mix Asphalt column, each value of “20” is revised to read “25”.

The last column heading “Steel Furnace Slag” is revised to read “Steel Slag”.

The following new row is inserted after the second row:

Coarse Aggregate for Commercial Concrete	9-03.1(4)	0	100	0	0

Section 9-04, Joint and Crack Sealing Materials
January 3, 2017

This section is supplemented with the following two new subsections:

9-04.11 Butyl Rubber Sealant

Butyl rubber sealant shall conform to ASTM C 990.

9-04.12 External Sealing Band

External sealing band shall by Type III B conforming to ASTM C 877.

9-04.1(2) Premolded Joint Filler for Expansion Joints

This section is supplemented with the following:

As an alternative to the above, a semi-rigid, non-extruding, resilient type, closed-cell polypropylene foam, preformed joint filler with the following physical properties as tested to AASHTO T 42 Standard Test Methods may be used.

Closed-Cell Polypropylene Foam Preformed Joint Filler

Physical Property	Requirement	Test Method
Water Absorption	< 1.0%	AASHTO T 42
Compression Recovery	> 80%	AASHTO T 42
Extrusion	< 0.1 in.	AASHTO T 42

Density	> 3.5 lbs./cu.ft.	AASHTO T 42
Water Boil (1 hr.)	No expansion	AASHTO T 42
Hydrochloric Acid Boil (1 hr.)	No disintegration	AASHTO T 42
Heat Resistance °F	392°F± 5°F	ASTM D 5249

9-04.2(1) Hot Poured Joint Sealants

This section's content is deleted and replaced with the following new subsections:

9-04.2(1)A Hot Poured Sealant

Hot poured sealant shall be sampled in accordance with ASTM D5167 and tested in accordance with ASTM D5329.

9-04.2(1)A1 Hot Poured Sealant for Cement Concrete Pavement

Hot poured sealant for cement concrete pavement shall meet the requirements of ASTM D6690 Type IV, except for the following:

1. The Cone Penetration at 25°C shall be 130 maximum.

2. The extension for the Bond, non-immersed, shall be 100 percent.

9-04.2(1)A2 Hot Poured Sealant for Bituminous Pavement

Hot poured sealant for bituminous pavement shall meet the requirements of ASTM D6690 Type I or Type II.

9-04.2(1)B Sand Slurry for Bituminous Pavement

Sand slurry is mixture consisting of the following components measured by total weight:

1. Twenty percent CSS-1 emulsified asphalt,

2. Two percent portland cement, and

3. Seventy-eight percent fine aggregate meeting the requirements of 9-03.1(2)B Class 2. Fine aggregate may be damp (no free water).

9-04.2(2) Poured Rubber Joint Sealer

The last paragraph is deleted.

9-04.4(1) Rubber Gaskets for Concrete Pipes and Precast Manholes

"AASHTO M 198" is revised to read "ASTM C 990".

9-04.4(3) Gaskets for Aluminum or Steel Culvert or Storm Sewer Pipe

In the last sentence, "AASHTO M 198" is revised to read "ASTM C 990".

Section 9-06, Structural Steel and Related Materials
January 3, 2017

9-06.5(3) High-Strength Bolts

In this section, "ASTM A325" is revised to read "ASTM F3125 Grade A325", "ASTM A490" is revised to read "ASTM F3125 Grade A490", and "ASTM F1852" is revised to read "ASTM F3125 Grade F1852".

In the fifth paragraph, “ASTM-A325” is revised to read “ASTM F3125”.

9-06.12 Bronze Castings

In this section, “AASHTO M107” is revised to read “ASTM B22”.

9-06.16 Roadside Sign Structures

In the first paragraph, “ASTM A325” is revised to read “ASTM F3125 Grade A325”.

Section 9-07, Reinforcing Steel
August 1, 2016

9-07.1(1)A Acceptance of Materials

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

> Reinforcing steel rebar manufacturers shall comply with the National Transportation Product Evaluation Program (NTPEP) Work Plan for Reinforcing Steel (rebar) Manufacturers.

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

> Steel reinforcing bar manufacturers use either English or a Metric size designation while stamping rebar.

9-07.1(2) Bending

The first two sentences of the first paragraph are deleted and replaced with the following two new sentences:

> Steel reinforcing bars shall be cut and bent cold to the shapes shown on the Plans. Fabrication tolerances shall be in accordance with ACI 315.

Section 9-10, Piling
August 1, 2016

9-10.3 Cast-In-Place Concrete Piling

This section is revised to read:

> Reinforcement for cast-in-place concrete piles shall conform to Section 9-07.2.

Section 9-11, Waterproofing
January 3, 2017

This section (and all subsections), including title, is revised to read:

9-11 Waterproof Membrane

9-11.1 Asphalt for Waterproofing

Waterproof membrane shall be a sheet membrane conforming to ASTM D 6153 Type III, the puncture capacity specified below, and either the thin polymer sheet tensile stress or the geotextile and fabric grab tensile strength specified below:

Performance Properties	Test Method	Specification Requirements

Tensile Stress (for Thin Polymer Sheets)	ASTM D 882	75 pounds per inch min.
Grab Tensile Strength (for Geotextiles and Fabrics)	ASTM D 4632 (Woven or Nonwoven)	200 pounds min.
Puncture Capacity (For Thin Polymer Sheets, Geotextiles and Fabrics)	ASTM E 154	200 pounds min.

Waterproofing membrane will be accepted based on a Manufacturer's Certificate of Compliance with each lot of waterproof membrane.

9-11.2 Primer for Waterproof Membrane

The primer for the waterproof membrane shall be appropriate for bonding the sheet membrane to the bridge deck surface and shall be compatible with the membrane in accordance with the waterproof membrane manufacturer's recommendations.

Section 9-14, Erosion Control and Roadside Planting
August 7, 2017

9-14.4(2) Hydraulically Applied Erosion Control Products (HECPs)

The first paragraph is revised to read:

All HECPs shall be made of natural plant fibers unaltered by synthetic materials, and in a dry condition, free of noxious weeds, seeds, chemical printing ink, germination inhibitors, herbicide residue, chlorine bleach, rock, metal, plastic, and other materials detrimental to plant life.

The last sentence of the third paragraph is revised to read the following two sentences:

Under no circumstances will field mixing of additives or components be acceptable, with the exception of seed and water. The product shall be hydrated in accordance with the manufacturer's recommendations.

In Table 1 of the fourth paragraph, the following new row is inserted below the table heading:

These test requirements apply to the fully mixed product, including tackifiers, dyes, or other additives that may be included in the HECP final product in its sprayable form.

The last two paragraphs are revised to read:

If the HECP contains a dye to facilitate placement and inspection of the material, it shall be nontoxic to plants, animals, and aquatic life and shall not stain concrete or painted surfaces.

The HECP shall not be harmful to plants, animals, and aquatic life.

9-14.4(4) Wood Strand Mulch

The last paragraph is revised to read:

The Contractor shall provide a test report performed in accordance with WSDOT T 125 demonstrating compliance to this specification prior to acceptance. This product shall not be harmful to plants, animals, and aquatic life.

9-14.4(7) Tackifier

The first paragraph is supplemented with the following:

Tackifiers shall include a mulch tracer added to visible aid uniform application, and shall not be harmful to plants, animals, or aquatic life.

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

The Contractor shall provide test results documenting the tackifier and mulch tracer meets the requirements for Acute Toxicity, Solvents, and Heavy Metals as required in Table 1 in Section 9-14.4(2).

9-14.4(7)A Organic Tackifier

This section is revised to read:

Organic tackifiers shall be derived from natural plant sources and shall not be harmful to plants, animals, and aquatic life.

9-14.4(7)B Synthetic Tackifier

This section is revised to read:

Synthetic tackifiers shall not be harmful to plants, animals, and aquatic life.

9-14.5(2) Biodegradable Erosion Control Blanket

The first paragraph is revised to read:

Biodegradable erosion control blankets, including netting if present, shall be made of natural plant fibers unaltered by synthetic materials. All blanket material shall effectively perform the intended erosion control function until permanent vegetation has been established, or for a minimum of 6 months, whichever comes first.

9-14.5(4)A Biodegradable Check Dams

This section is revised to read:

Biodegradable check dams shall meet the following requirements:

Wattle	Section 9-14.5(5)
Compost Sock	Section 9-14.5(6)
Coir Log	Section 9-14.5(7)

The Contractor may substitute a different biodegradable check dam as long as it complies with the following and is accepted by the Engineer:

1. Made of natural plant fiber unaltered by synthetic material.

2. Netting if present shall be made of natural plant fibers unaltered by synthetic materials. Materials shall effectively perform the intended erosion control

function until permanent vegetation has been established or for a minimum of 6 months, whichever comes first.

3. Straw bales shall not be used as check dams.

9-14.5(5) Wattles

This section is revised to read:

Wattles shall consist of cylinders of plant material such as weed-free straw, coir, wood chips, excelsior, or wood fiber or shavings encased within netting made of natural plant fibers unaltered by synthetic materials. Wattles shall be a minimum of 8 inches in diameter. Netting material shall be clean, evenly woven, and free of encrusted concrete or other contaminating materials such as preservatives. Netting material shall be free from cuts, tears, or weak places and shall effectively perform the intended erosion control function until permanent vegetation has been established or for a minimum of 6 months, whichever comes first.

If wood chip filler is used, it shall meet the material requirements as specified in Section 9-14.4(3). If straw filler is used, it shall meet the material requirements as specified in Section 9-14.4(1). If wood shavings are used, 80 percent of the fibers shall have a minimum length of 6 inches between 0.030 and 0.50 inches wide and between 0.017 and 0.13 inches thick.

Stakes for wattles shall be made of wood from untreated Douglas fir, hemlock, or pine species.

9-14.5(6) Compost Socks

This section is revised to read:

Compost socks shall consist of fabric made of natural plant fibers unaltered by synthetic materials. The compost sock shall be filled with Medium Compost as specified in Section 9-14.4(8). Compost socks shall be at least 8 inches in diameter. The sock shall be clean, evenly woven; free of encrusted concrete or other contaminating materials; free from cuts, tears, broken or missing yarns; free of thin, open, or weak areas; and free of any type of preservative. Sock fabric shall effectively perform the intended erosion control function until permanent vegetation has been established or for a minimum of 6 months, whichever comes first.

Stakes for compost socks shall be made of wood from untreated Douglas fir, hemlock, or pine species.

Section 9-16, Fence and Guardrail
January 17, 2017

9-16.3(3) Galvanizing

The first three sentences are deleted and replaced with the following single sentence:

W-beam or thrie beam rail elements and terminal sections shall be galvanized in accordance with AASHTO M 180, Class A, Type II.

Section 9-20, Concrete Patching Material, Grout, and Mortar
January 3, 2017

This section is supplemented with the following new subsection:

9-20.5 Bridge Deck Repair Material

Bridge deck repair material shall be either an ultra-low viscosity, two-part liquid, polyurethane-hybrid polymer concrete, or a pre-packaged cement based repair mortar, conforming to the following requirements:

1. Minimum compressive strength of 2,500 psi, in accordance with ASTM C 109.

2. Total soluble chloride ion content by mass of product shall conform to the limits specified in Section 6-02.3(2) for reinforced concrete.

3. Permeability of less than 2,000 coulombs at 56-days in accordance with AASHTO T 277.

If pre-packaged deck repair material does not include coarse aggregate, the Contractor shall extend the mix with coarse aggregate as recommended by the manufacturer.

Section 9-23, Concrete Curing Materials and Admixtures
January 3, 2017

9-23.9 Fly Ash

The first paragraph is revised to read:

Fly ash shall conform to the requirements of AASHTO M295 Class C or F including supplementary optional chemical requirements as set forth in Table 2.

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

The supplementary optional chemical limits in AASHTO M295 Table 2 do not apply to fly ash used in Controlled Density Fill.

9-23.12 Metakaolin

This section, including title, is revised to read:

9-23.12 Natural Pozzolan

Natural Pozzolans shall be either Metakaolin or ground Pumice and shall conform to the requirements of AASHTO M295 Class N, including supplementary optional chemical requirements as set forth in Table 2.

Section 9-28, Signing Materials and Fabrication
April 3, 2017

9-28.14(3) Aluminum Structures

This section is revised to read:

Welding of aluminum shall be in accordance with AWS D1.2/D1.2M, latest edition, Structural Welding Code – Aluminum.

Aluminum alloy filler metals utilized on anodized structures shall result in color matching to base metals.

Section 9-29, Illumination, Signal, Electrical
August 7, 2017

9-29.2 Junction Boxes, Cable Vaults, and Pull Boxes

This section is supplemented with the following new subsections:

9-29.2(5) Testing Requirements

The Contractor shall provide for testing of junction boxes, cable vaults and pull boxes. Junction boxes, cable vaults and pull boxes shall be tested by an independent materials testing facility, and a test report issued documenting the results of the tests performed.

For each junction box, vault and pull box type, the independent testing laboratory shall meet the requirements of AASHTO R 18 for Qualified Tester and Verified Test Equipment. The test shall be conducted in the presence of a Professional Engineer, licensed under Title 18 RCW, State of Washington, in the branch of Civil or Structural, and each test sheet shall have the Professional Engineer's original signature, date of signature, original seal, and registration number. One copy of the test report shall be furnished to the Contracting Agency certifying that the box and cover meet or exceed the loading requirements for that box type, and shall include the following information:

1. Product identification.

2. Date of testing.

3. Description of testing apparatus and procedure.

4. All load deflection and failure data.

5. Weight of box and cover tested.

6. Upon completion of the required test(s) the box shall be loaded to failure or to the maximum load possible on the testing machine (70,000 pounds minimum).

7. A brief description of type and location of failure or statement that the testing machine reached maximum load without failure of the box.

9-29.2(5)A Standard Duty Boxes and Vaults

Standard Duty Concrete Junction Boxes, Cable Vaults, and Pull Boxes shall be load tested to 22,500 pounds. The test load shall be applied uniformly through a 10 by 10 by 1-inch steel plate centered on the lid. The test load shall be applied and released ten times, and the deflection at the test load and released state shall be recorded for each interval. At each interval the junction box shall be inspected for lid deformation, failure of the lid/frame welds, vertical and horizontal displacement of the lid/frame, cracks, and concrete spalling.

Concrete junction boxes will be considered to have withstood the test if none of the following conditions are exhibited:

1. Permanent deformation of the lid or any impairment to the function of the lid.

2. Vertical or horizontal displacement of the lid frame.

3. Cracks wider than 0.012 inches that extend 12 inches or more.

4. Fracture or cracks passing through the entire thickness of the concrete.

5. Spalling of the concrete.

9-29.2(5)B Retrofit Security Lids for Standard Duty Concrete Junction Boxes

Security lids used to retrofit existing Standard Duty Concrete Junction Boxes shall be tested as follows:

1. The security lid shall be installed on any appropriately sized box that is currently approved on the Qualified Products List.

2. The security lid and box assembly shall be load tested in accordance with Section 9-29.2(5)A. After the ten load cycles but before loading to failure, the security lid shall be fully opened and removed to verify operability.

3. The locking mechanism(s) shall be tested as follows:

    a. The locking mechanism shall be cycled 250 times (locked, then unlocked again) at room temperature (60-80°F). If there is more than one identical locking mechanism, only one needs to be cycled in this manner.

    b. Temperature changes should be limited to no more than 60°F per hour.

    c. The security lid shall be cooled to and held at -30°F for 15 minutes. The locking mechanism shall then be cycled once to verify operation at this temperature.

    d. The security lid shall be heated to and held at 120-122°F for 15 minutes. The locking mechanism shall then be cycled once to verify operation at this temperature.

    e. The security lid shall be temperature adjusted to and held at 110°F and 95% humidity for 15 minutes. The locking mechanism shall then be cycled once to verify operation at this temperature and humidity.

9-29.2(5)C Standard Duty Non-Concrete Junction Boxes

Non-concrete Junction Boxes shall be tested as defined in the ANSI/SCTE 77 Tier 15 test method using the test load of 22,500 pounds (minimum) in place of the design load during testing. In addition, the Contractor shall provide a Manufacturer Certificate of Compliance for each non-concrete junction box installed.

9-29.2(5)D Heavy-Duty Boxes and Vaults

Heavy-Duty Junction Boxes, Cable Vaults, and Pull Boxes shall be load tested to 46,000 pounds. The test load shall be applied vertically through a 10 by 20 by 1-inch steel plate centered on the lid with an orientation both on the long axis and the short axis of the junction box. The test load shall be applied and released ten times on each axis. The deflection at the test load and released state shall be recorded for each interval. At each interval the test box shall be inspected for lid deformation, failure of the lid or frame welds, vertical and horizontal displacement of the lid frame, cracks, and concrete spalling. After the twentieth loading interval the test shall be terminated with a 60,000 pound load being applied vertically through the steel plate centered on the lid and with the long edge of steel plate orientated parallel to the long axis of the box.

Heavy-Duty Junction Boxes will be considered to have withstood the 46,000 pound test if none of the following conditions are exhibited:

1. Permanent deformation of the lid or any impairment to the function of the lid.

2. Vertical or horizontal displacement of the lid frame.

3. Cracks wider than 0.012 inches that extend 12 inches or more.

4. Fracture or cracks passing through the entire thickness of the concrete.

5. Spalling of the concrete.

Heavy-Duty Junction Boxes will be considered to have withstood the 60,000 pound test if all of the following conditions are exhibited:

1. The lid is operational.

2. The lid is securely fastened.

3. The welds have not failed.

4. Permanent dishing or deformation of the lid is ¼ inch or less.

5. No buckling or collapse of the box.

9-29.2(1) Standard Duty and Heavy Duty Junction Boxes

This section, including title, is revised to read:

9-29.2(1) Junction Boxes

For the purposes of this Specification concrete is defined as portland cement concrete and non-concrete is all others.

The Contractor shall provide shop drawings for all components, hardware, lid, frame, reinforcement, and box dimensions. The shop drawings shall be prepared by (or under the supervision of) a Professional Engineer, licensed under Title 18 RCW, State of Washington, in the branch of Civil or Structural. Each sheet shall carry the following:

1. Professional Engineer's original signature, date of signature, original seal, and registration number. If a complete assembly drawing is included which references additional drawing numbers, including revision numbers for those drawings, then only the complete assembly drawing is required to be stamped.

2. The initials and dates of all participating design professionals.

3. Clear notation of all revisions including identification of who authorized the revision, who made the revision, and the date of the revision.

Design calculations shall carry on the cover page, the Professional Engineer's original signature, date of signature, original seal, and registration number.

For each type of junction box, or whenever there is a change to the junction box design, a proof test, as defined in this Specification, shall be performed and new shop drawings submitted.

9-29.2(1)A Standard Duty Junction Boxes

This section is revised to read:

Standard Duty Junction Boxes are defined as Type 1, 2 and 8 junction boxes and shall have a minimum load rating of 22,500 pounds and be tested in accordance with Section 9-29.2(5). A complete Type 8 Junction Box includes the spread footing shown in the Standard Plans. All Standard Duty Junction Boxes placed in sidewalks, walkways, and shared use paths shall have slip resistant surfaces. Non-slip lids and frames shall be hot dip galvanized in accordance with AASHTO M111.

9-29.2(1)A1 Concrete Junction Boxes

The Standard Duty Concrete Junction Box steel frame, lid support, and lid shall be painted with a black paint containing rust inhibiters or painted with a shop applied, inorganic zinc primer in accordance with Section 6-07.3, or hot-dip galvanized in accordance with AASHTO M 111.

Concrete used in Standard Duty Junction Boxes shall have a minimum compressive strength of 6,000 psi when reinforced with a welded wire hoop, or 4,000 psi when reinforced with welded wire fabric or fiber reinforcement. The frame shall be anchored to the box by welding headed studs ⅜ by 3 inches long, as specified in Section 9-06.15, to the frame. The wire fabric shall be attached to the studs and frame with standard tie practices. The box shall contain ten studs located near the centerline of the frame and box wall. The studs shall be placed one anchor in each corner, one at the middle of each width and two equally spaced on each length of the box.

Materials for Type 1, 2, and 8 Concrete Junction Boxes shall conform to the following:

Materials	Requirement
Concrete	Section 6-02
Reinforcing Steel	Section 9-07
Fiber Reinforcing	ASTM C1116, Type III
Lid	ASTM A786 diamond plate steel
Slip Resistant Lid	ASTM A36 steel

Frame	ASTM A786 diamond plate steel or ASTM A36 steel
Slip Resistant Frame	ASTM A36 steel
Lid Support	ASTM A36 steel, or ASTM A1011 SS Grade 36 (or higher)
Handle & Handle support	ASTM A36 steel, or ASTM A1011 CS (Any Grade) or SS (Any Grade)
Anchors (studs)	Section 9-06.15
Bolts, Studs, Nuts, Washers	ASTM F593 or A193, Type 304 or 316, or Stainless Steel grade 302, 304, or 316 steel in accordance with approved shop drawing
Locking and Latching Mechanism Hardware and Bolts	In accordance with approved shop drawings

9-29.2(1)A2 Non-Concrete Junction Boxes

Material for the non-concrete junction boxes shall be of a quality that will provide for a similar life expectancy as portland cement concrete in a direct burial application.

Type 1, 2, and 8 non-concrete junction boxes shall have a Design Load of 22,500 pounds and shall be tested in accordance with Section 9-29.2(5). Non-concrete junction boxes shall be gray in color and have an open bottom design with approximately the same inside dimensions, and present a load to the bearing surface that is less than or equal to the loading presented by the concrete junction boxes shown in the Standard Plans. Non-concrete junction box lids shall include a pull slot and embedded 6 by 6 by ¼-inch steel plate, and shall be secured with two ½ inch stainless steel Penta-head bolts recessed into the cover. The tapped holes for the securing bolts shall extend completely through the box to prevent accumulation of debris. Bolts shall conform to ASTM F593, stainless steel.

9-29.2(1)B Heavy-Duty Junction Boxes

The first paragraph is revised to read:

Heavy-Duty Junction Boxes are defined as Type 4, 5, and 6 junction boxes and shall be concrete and have a minimum vertical load rating of 46,000 pounds without permanent deformation and 60,000 pounds without failure when tested in accordance with Section 9-29.2(5).

9-29.2(1)C Testing Requirements

This section is deleted in its entirety.

9-29.2(2) Small Cable Vaults, Standard Duty Cable Vaults, Standard Duty Pull Boxes, and Heavy Duty Pull Boxes

This section, including title, is revised to read:

9-29.2(2) Cable Vaults and Pull Boxes

Cable Vaults and Pull Boxes shall be constructed as a concrete box and as a concrete lid. The lids for Cable Vaults and Pull Boxes shall be interchangeable and both shall fit the same box as shown in the Standard Plans.

The Contractor shall provide shop drawings for all components, including concrete box, Cast Iron Ring, Ductile Iron Lid, Steel Rings, and Lid. In addition, the shop drawings shall show placement of reinforcing steel, knock outs, and any other appurtenances.

The shop drawing shall be prepared by or under the direct supervision of a Professional Engineer, licensed under Title 18 RCW, State of Washington, in the branch of Civil or Structural. Each sheet shall carry the following:

1. Professional Engineer's original signature, date of signature, original seal, and registration number. If a complete assembly drawing is included which references additional drawing numbers, including revision numbers for those drawings, then only the complete assembly drawing is required to be stamped.

2. The initials and dates of all participating design professionals.

3. Clear notation of all revisions including identification of who authorized the revision, who made the revision, and the date of the revision.

Design calculations shall carry on the cover page, the Professional Engineer's original signature, date of signature, original seal, and registration number.

For each type of box or whenever there is a change to the Cable Vault or Pull box design, a proof test, as defined in this Specification, shall be performed and new shop drawings submitted.

9-29.2(2)A Small Cable Vaults, Standard Duty Cable Vaults, and Standard Duty Pull Boxes

This section's title is revised to read:

9-29.2(2)A Standard Duty Cable Vaults and Pull Boxes

The first paragraph is revised to read:

Standard Duty Cable Vaults and Pull Boxes shall be concrete and have a minimum load rating of 22,500 pounds and be tested in accordance with Section 9-29.2(5). For the purposes of this Section, Small Cable Vaults are considered a type of Standard Duty Cable Vault.

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

Concrete for Standard Duty Cable Vaults and Pull Boxes shall have a minimum compressive strength of 4,000 psi.

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

All Standard Duty Cable Vaults and Pull Boxes placed in sidewalks, walkways, and shared-use paths shall have slip-resistant surfaces.

The fourth paragraph (up until the colon) is revised to read:

Materials for Standard Duty Cable Vaults and Pull Boxes shall conform to the following:

9-29.2(2)B Heavy-Duty Cable Vaults and Pull Boxes

The first paragraph is revised to read:

Heavy-Duty Cable Vaults and Pull Boxes shall be constructed of concrete having a minimum compressive strength of 4,000 psi, and have a minimum vertical load rating of 46,000 pounds without permanent deformation and 60,000 pounds without failure when tested in accordance with Section 9-29.2(5).

9-29.2(3) Structure Mounted Junction Boxes

The first and second paragraphs are revised to read:

Surface mounted junction boxes and concrete embedded junction boxes installed in cast-in-place structures shall be stainless steel NEMA 4X.

Concrete embedded junction boxes installed in structures constructed by slip forming shall be stainless steel NEMA 3R and shall be adjustable for depth, with depth adjustment bolts, which are accessible from the front face of the junction box with the lid installed.

9-29.3(1) Fiber Optic Cable

This section is revised to read:

All fiber optic cables shall be single mode fiber optic cables unless otherwise specified in the Contract. All fiber optic cables shall meet the following requirements:

1. Compliance with the current version of ANSI/ICEA S-87-640. A product data specification sheet clearly identifying compliance or a separate letter from manufacturer to state compliance shall be provided.

2. Cables shall be gel free, loose tube, low water peak, and all dielectric with no metallic component.

3. Cables shall not be armored unless specified in the Contract.

4. Cables shall be approved for mid-span entries and be rated by the manufacturer for outside plant (OSP) use, placement in underground ducts, and aerial installations.

5. Fiber counts shall be as specified in the Contract.

6. Fibers and buffer tubes shall be color coded in accordance with the current version of EIA/TIA-598.

7. Fibers shall not have any factory splices.

8. Outer Jacket shall be Type M (Medium Density Polyethylene). Outer jacket shall be free from holes, splits, blisters, or other imperfections and must be smooth and concentric as is consistent with the best commercial practice.

9. A minimum of one (1) rip cord is required for each cable.

10. Cable markings shall meet the following additional requirements:

    a. Color shall be white or silver.

b. Markings shall be approximately 3 millimeters (118 mils) in height, and dimensioned and spaced to produce good legibility.

c. Markings shall include the manufacturer's name, year of manufacture, the number of fibers, the words "OPTICAL CABLE", and sequential length marks.

d. Sequential length markings shall be in meters or feet, spaced at intervals not more than 1 meter or 2 feet apart, respectively.

e. The actual cable length shall not be shorter than the cable length marking. The actual cable length may be up to 1% longer than the cable length marking.

f. Cables with initial markings that do not meet these requirements will not be accepted and may not be re-marked.

11. Short term tensile strength shall be a minimum of 600 pounds (1bs). Long term tensile strength shall be a minimum of 180 pounds (1bs). Tensile strength shall be achieved using a fiberglass reinforced plastic (FRP) central member and / or aramid yarns.

12. All cables shall be new and free of material or manufacturing defects and dimensional non-uniformity that would:

    a. Interfere with the cable installation using accepted cable installation practices;

    b. Degrade the transmission performance or environmental resistance after installation;

    c. Inhibit proper connection to interfacing elements;

    d. Otherwise yield an inferior product.

13. The fiber optic cables shall be shipped on reels with a drum diameter at least 20 times the diameter of the cable, in order to prevent damage to the cable. The reels shall be substantial and constructed so as to prevent damage during shipment and handling. Reels shall be labeled with the same information required for the cable markings, with the exception that the total length of cable shall be marked instead of incremental length marks. Reels shall also be labeled with the type of cable.

This section is supplemented with the following new subsection:

9-29.3(1)B Multimode Optical Fibers

Where multimode fiber optic cables are specified in the Contract, the optical fibers shall be one of the following types, as specified in the Contract:

a. Type OM1, meeting the requirements of EIA/TIA 492-AAAA-A or ISO/IEC 11801. The fiber core diameter shall be 62.5 µm.

b. Type OM2, meeting the requirements of EIA/TIA 492-AAAB-A or ISO/IEC 11801. The fiber core diameter shall be 50 µm.

All multimode optical fibers shall have a maximum attenuation of 3.0 dB/km at 850nm and 1.0 dB/km at 1300nm. Completed cable assemblies shall be rated for 1000BaseLX Ethernet communications.

9-29.3(1)A Singlemode Fiber Optic Cable

This section is revised to read:

Single-Mode optical fibers shall be EIA/TIA 492-CAAB or ISO/IEC 11801 Type OS2, low water peak zero dispersion fibers, meeting the requirements of ITU-T G.652.D.

9-29.6 Light and Signal Standards

The third paragraph is revised to read:

Light standard, signal standards, slip base hardware and foundation hardware shall be hot dip galvanized in accordance with AASHTO M 111 and AASHTO M 232. Where colored standards are required, standards shall be powder-coated after galvanizing in accordance with Section 6-07.3(11). The standard color shall be as specified in the Contract.

9-29.6(1) Steel Light and Signal Standards

In the first paragraph, “ASTM A325” is revised to read “ASTM F3125 Grade A325”.

9-29.6(2) Slip Base Hardware

In this section, “ASTM A325” is revised to read “ASTM F3125 Grade A325”.

9-29.7(2) Fused Quick-Disconnect Kits

The table is supplemented with the following new row:

LED*	10A	10A	20A

The following footnote is inserted after the table:

* Applies to all LED luminaires, regardless of wattage. Fuses for LED luminaires shall be slow blow.

9-29.10 Luminaires

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

All luminaires shall be provided with markers for positive identification of light source type and wattage in accordance with ANSI C136.15-2011, with the exception that LED luminaires shall be labeled with the wattage of their conventional luminaire equivalents – the text “LED” is optional.

The table in the fourth paragraph is revised to read:

Conventional Lamp Wattage	Conventional Wattage Legend	Equivalent LED Legend
70	7	7E
100	10	10E

150	15	15E
175	17	17E
200	20	20E
250	25	25E
310	31	31E
400	40	40E
700	70	70E
750	75	75E
1,000	X1	X1E

9-29.13(10)C NEMA Controller Cabinets

Item number 6 of the first paragraph is revised to read:

6. LED light strips shall be provided for cabinet lighting. Each LED light strip shall be approximately 12 inches long, have a minimum output of 320 lumens, and have a color temperature of 4100K (cool white) or higher. Two light strips shall be provided. One light strip shall be ceiling mounted and oriented parallel to the door face. The second light strip shall be mounted under the lower shelf, such that the output terminal landings are illuminated. Lighting shall not interfere with the proper operation of any other ceiling or shelf mounted equipment. All lighting fixtures shall energize automatically when any door is opened. Each door switch shall be labeled "Light".

9-29.13(10)D Cabinets for Type 170E and 2070 Controllers

Item number 6 of the first paragraph is revised to read:

6. LED light strips shall be provided for cabinet lighting, powered from the Equipment breaker on the Power Distribution Assembly. Each LED light strip shall be approximately 12 inches long, have a minimum output of 320 lumens, and have a color temperature of 4100K (cool white) or higher. There shall be two light strips for each rack within the cabinet. Lighting shall be ceiling mounted – rack mounted lighting is not permitted. One light strip shall be installed above the front of the rack, oriented parallel to the door face, and placed such that the front of the rack and the rack mounted equipment is illuminated. The second light strip shall be installed above the rear of the rack, oriented perpendicular to the door face, and placed such that the interior of the rack is illuminated. Lighting shall not interfere with the proper operation of any other ceiling mounted equipment. All lighting fixtures above a rack shall energize automatically when either door to that respective rack is opened. Each door switch shall be labeled "Light".

9-29.13(12) ITS Cabinet

Item number 6 of the first paragraph is revised to read:

6. LED light strips shall be provided for cabinet lighting, powered from the Equipment breaker on the Power Distribution Assembly. Each LED light strip shall be approximately 12 inches long, have a minimum output of 320 lumens, and have a color temperature of 4100K (cool white) or higher. There shall be two light strips for each rack within the cabinet. Lighting shall be ceiling mounted – rack mounted lighting is not permitted. One light strip shall be installed above the front of the rack, oriented parallel to the door face, and placed such that the front of the rack and the rack mounted equipment is illuminated. The second light strip shall be installed above the rear of the rack, oriented perpendicular to the door face, and

placed such that the interior of the rack is illuminated. Lighting shall not interfere with the proper operation of any other ceiling mounted equipment. All lighting fixtures above a rack shall energize automatically when either door to that respective rack is opened. Each door switch shall be labeled "Light".

9-29.25 Amplifier, Transformer, and Terminal Cabinets

Item 2C is revised to read:

c.	Transformer up to 12.5 KVA	20″	48″	24″
	Transformer 12.6 to 35 KVA	30″	60″	32″

The following new sentence is inserted before the last sentence of item number 10:

There shall be an isolation breaker on the input (line) side of the transformer, and a breaker array on the output (load) side.

Section 9-30, Water Distribution Materials
August 7, 2017

9-30.6(3) Service Pipes

This section is supplemented with the following new subsection:

9-30.6(3)C PEX-a Tubing

PEX-a tubing shall be a minimum of ¾-inch or a maximum 2-inch in diameter and shall be manufactured in accordance with AWWA C904 and ASTM F876. The tubing shall have a minimum materials designation code of 3306 in accordance with ASTM F876, a pressure rating of 200 psi at 73.4 degrees using a design factor of 0.63 as outlined in PPI TR-3, Part F-7, and shall have a minimum SDR of 9. Tubing color shall be blue in accordance with APWA Uniform color standards.

9-30.6(4) Service Fittings

This section is supplemented with the following new paragraph:

Fittings for PEX-a tubing shall meet the requirements of AWWA C904.

Section 9-31, Elastomeric Pads
August 7, 2017

This section, including title, is revised to read:

9-31 Fabricated Bridge Bearing Assemblies

9-31.1 Steel Plates and Bars

Steel plates and bars, including anchor array templates, shall conform to ASTM A 36.

Recessed steel surfaces retaining PTFE shall have an average surface roughness of 250-microinches or less.

Steel surfaces in contact with pre-formed fabric pad or polyether urethane disc shall have an average surface roughness of 250-microinches or less.

Steel surfaces in contact with stainless steel sheet, or with the bearing block of a pin bearing assembly, shall have an average surface roughness of 125-microinches or less.

All other steel surfaces in contact with other fabricated bridge bearing assembly components shall have an average surface roughness of 250-microinches or less.

9-31.2 Stainless Steel

Stainless steel sheet shall conform to ASTM A 240 Type 304L. Stainless steel in contact with PTFE shall be polished to a Number 8 mirror finish. Stainless steel sheet for fabric pad bearing assemblies shall have a thickness greater than or equal to 14-gage.

Stainless steel countersunk screws shall be hexagon socket type conforming to the geometric requirements of ANSI B 18.3 and shall conform to ASTM F 593 Type 304L.

9-31.3 Bearing Blocks and Keeper Rings

Bearing block forgings for pin bearing assemblies shall conform to Section 9-06.11, including AASHTO M 102 Supplemental Requirement S4. The grade shall be Grade F. The bearing block forging surfaces in contact with other pin bearing assembly components shall have an average surface roughness of 63-microinches or less. All other bearing block forging surfaces shall have an average surface roughness of 250-microinches or less.

Keeper ring forgings for pin bearing assemblies shall conform to Section 9-06.11, and the grade shall be Grade H. All keeper ring surfaces shall have an average surface roughness of 125-microinches or less.

9-31.4 Pin Assembly

Pins shall conform to ASTM A 276 UNS Designation 21800. The pin surfaces in contact with the bearing block shall have an average surface roughness of 63-microinches or less.

Nuts shall conform to ASTM A 563 Grade DH. Nuts with a thread diameter equal to or less than six-inches shall have a minimum Rockwell Hardness of HRc 24. Nuts with a thread diameter greater than six-inches shall have a Rockwell Hardness between HRc 20 and HRc 30.

Washers shall conform to ASTM A 572 Grade 50.

Cotter pins shall be stainless steel.

9-31.5 Welded Shear Connectors

Welded shear connectors shall conform to Section 9-06.15.

9-31.6 Bolts, Nuts and Washers

Bolts, nuts and washers shall conform to Section 9-06.5(3).

9-31.7 Anchor Array Rods, Nuts and Washers

Anchor array rods, nuts and washers shall conform to Section 9-06.5(4). The top 1’-0”, minimum, of the exposed end of the anchor rods, and the associated nuts

and washers, shall be galvanized in accordance with AASHTO M 232 or ASTM F 2329 as applicable.

Pipe sleeves for anchor array templates shall conform to ASTM A 53 Grade B Type E or S, black.

9-31.8 Bearing Pads

9-31.8(1) Elastomeric Pads

Elastomeric pads shall conform to the requirements of AASHTO M251 unless otherwise specified in the Plans or Special Provisions. The elastomer shall be low-temperature Grade 3 and shall not contain any form of wax. Unless otherwise specified in the Plans or Special Provisions, the elastomer shall have a shear modulus of elasticity of 165 psi at 73°F.

All elastomeric pads with steel laminates shall be cast as units in separate molds and bonded and vulcanized under heat and pressure. Corners and edges of molded pads may be rounded at the option of the Contractor. Radius at corners shall not exceed ⅜ inch, and radius of edges shall not exceed ⅛ inch. Elastomeric pads shall be fabricated to meet the tolerances specified in AASHTO M251.

Shims contained in laminated elastomeric pads shall be mill rolled steel sheets not less than 20 gage in thickness with a minimum cover of elastomer on all edges of:

¼ inch for pads less than or equal to 5 inches thick and,

½ inch for pads greater than 5 inches thick.

Steel shims shall conform to ASTM A1011, Grade 36, unless otherwise noted. All shim edges shall be ground or otherwise treated so that no sharp edges remain.

9-31.8(2) Polytetrafluoroethylene (PTFE)

PTFE shall be unfilled (100-percent virgin) PTFE or fiberglass fiber filled PTFE (or woven fabric PTFE for disc or spherical bearing assemblies) conforming to Section 18.8 of the AASHTO LRFD Bridge Construction Specifications, and the following additional requirements:

1. PTFE shall be unfilled (100-percent virgin) PTFE except where filled PTFE is specified in the Plans.

2. Filled PTFE shall be composed of PTFE resin uniformly blended with 15-percent maximum fiberglass fiber.

3. The substrate shall limit the flow (elongation) of the confined PTFE to not more than 0.009-inch under a pressure of 2,000 psi for 15-minutes at 78°F for a two-inch by three-inch test sample.

4. Unfilled PTFE shall have a hardness of 50 to 65 Durometer D, at 78°F, in accordance with ASTM D 2240.

5. The PTFE may be dimpled.

9-31.8(3) Pre-Formed Fabric Pad

Pre-formed fabric pads shall be composed of multiple layers of duck, impregnated and bound with high-quality oil resistant synthetic rubber, compressed into resilient pads. The pre-formed fabric pads shall conform to MIL C 882 and the following additional requirements:

1. The pre-formed fabric pad shall have a shore A hardness of 90 ± 5 in accordance with ASTM D 2240.

2. The number of plies shall be as required to produce the specified thickness after compression and vulcanization.

9-31.9 Polyether Urethane

Polyether urethane shall be a molded polyether urethane compound conforming to the following properties:

Physical Properties	**Specification**			
Hardness, Type D durometer	ASTM D 2240	45	55	65
Minimum tensile stress, ksi	ASTM D 412			
At 100-percent elongation		1.5	1.9	2.3
At 200-percent elongation		2.8	3.4	4.0
Minimum tensile strength, ksi	ASTM D 412	4.0	5.0	6.0
Minimum ultimate elongation, percent	ASTM D 412	350	285	220
Maximum compression set (22 hours at 158°F) Method B, percent	ASTM D 395	40	40	40

Required minimums for tensile stress at specific elongations, tensile strength, ultimate elongation, and compression set may be interpolated for durometer hardness values between 45 and 55, and 55 and 65.

9-31.10 Silicone Grease

Silicone grease for use with dimpled PTFE shall conform to SAE AS 8660.

9-31.11 Epoxy Gel

Epoxy gel shall be Type 1, Grade 3, Class A, B, or C, conforming to Section 9-26.1.

9-31.12 Resin Filler

Resin filler shall be a two-component, resin and catalyst, liquid thermoset material, with the following properties:

1. The viscosity of the resin-catalyst mixture shall be 35,000 ± 5,000cP at 75°F immediately after mixing.

2. The flash point shall be 100°F minimum.

3. After mixing, the resin-catalyst mixture shall be pourable for a minimum of 8-minutes at 60°F and shall harden in 15-minutes maximum. Heating of the mixture to a maximum temperature of 250°F after placement is

permissible to obtain a full cure.

The properties of the cured resin-catalyst mixture shall be:

1. The fully cured compressive strength shall be 12,000 psi, minimum.

2. The maximum allowable shrinkage shall be 2-percent. To control shrinkage, an inert filler may be used in the resin provided the specified viscosity requirements are met.

3. The hardness shall be between 40 and 55 in accordance with ASTM D 2583.

The resin and catalyst components shall be supplied in separate containers.

INTRODUCTION TO THE SPECIAL PROVISIONS

(August 14, 2013 APWA GSP)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2016 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 the Amendments to the Standard Specifications and 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 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 project-specific Special Provisions are not labeled as such. 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 WSDOT GSP)
(May 1, 2013 SkagitR GSP)

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/APWA, current edition

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

Division 1
General Requirements

DESCRIPTION OF WORK

(*January 16, 2018*)

This Contract provides for a Hot Mix Asphalt (HMA) overlay on McLean Road between Best Road and La Conner Whitney Road. The work includes, but is not limited to: full width and length planing of existing asphalt for approximately one mile; hauling planings to a County determined site; placing and compacting a two inch HMA Cl. ½" PG 64-22 wearing course on the planed surface and driveway approaches; placement of temporary pavement markers; erosion control; and other work, all in accordance with the attached Contract Plans, these Contract Provisions, and the 2016 Standard Specifications.

1-01 Definitions and Terms.

1-01.3 Definitions

(January 4, 2016 APWA GSP)

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

Dates

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

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

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

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

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

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

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

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

Supplement this Section with the following:

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

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

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

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

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

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

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

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

Contract Documents
See definition for “Contract”.

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

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

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

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

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")	4	Furnished automatically upon award.
Contract Provisions	4	Furnished automatically upon award.
Large plans (24" x 36")	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
(August 15, 2016 APWA GSP Option B)

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

> Any prospective Bidder desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business five (5) business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

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

Delete this section and replace it with the following:

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

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

1-02.6 Preparation of Proposal

Add the following new section:

1-02.6(1) Recycled Materials Proposal
(January 4, 2016 APWA GSP)

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

1-02.7 Bid Deposit
(March 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

(July 14, 2016 SkagitR)

Delete Section 1-02.9 and replace it with the following:

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

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.

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.

1-02.12 Public Opening of Proposal

(July 14, 2016 SkagitR)

Section 1-02.12 is supplemented with the following:

Sealed bids shall be received at the time and location specified in the Call for Bids, unless modified by addenda.

1-02.13 Irregular Proposals

(June 20, 2017 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 authorized Proposal form furnished by the Contracting Agency is not used or is altered;
   c. The completed Proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
   d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
   e. A price per unit cannot be determined from the Bid Proposal;
   f. The Proposal form is not properly executed;
   g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable, as required in Section 1-02.6;
   h. The Bidder fails to submit or properly complete an Underutilized Disadvantaged Business Enterprise Certification, if applicable, as required in Section 1-02.6;
   i. The Bidder fails to submit written confirmation from each UDBE firm listed on the Bidder's completed UDBE Utilization Certification that they are in agreement with the bidder's UDBE 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;
   j The Bidder fails to submit UDBE 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 was made;
   k. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
   l. More than one Proposal is submitted for the same project from a Bidder under the same or different names.

2. A Proposal may be considered irregular and may be 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. Receipt of Addenda is not acknowledged;
   d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
   e. If Proposal form entries are not made in ink.

1-02.14 Disqualification of Bidders

(July 31, 2017 APWA GSP, Option A)

Delete this section and replace it with the following:

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

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

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

If the Contracting Agency determines the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1) 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.

1-02.15 Pre Award Information

(August 14, 2013 APWA GSP)

Revise this section to read:

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

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

7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-03 Award and Execution of Contract

1-03.1(1) Identical Bid Totals

(January 4, 2016 APWA GSP)

Revise this section to read:

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

1-03.3 Execution of Contract

(October 1, 2005 APWA GSP)

Revise this section to read:

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

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

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

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of ten (10) additional calendar days for

return of the documents, provided the Contracting Agency deems the circumstances warrant it.

1-03.4 Contract Bond

(July 23, 2015 APWA GSP)

Delete the first paragraph and replace it with the following:

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

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

1-03.7 Judicial Review

(July 23, 2015 APWA GSP)

Revise this section to read:

Any decision 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 36.01.05 shall control venue and jurisdiction.

1-04 Scope of Work

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

(March 13, 2012 APWA GSP)

Revise the second paragraph to read:

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

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

1-05 Control of Work

1-05.13 Superintendents, Labor and Equipment of Contractor

(August 14, 2013 APWA GSP)

Delete the sixth and seventh paragraphs of this section.

1-05.15 Method of Serving Notices

(March 25, 2009 APWA GSP)

Revise the second paragraph to read:

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

Add the following new section:

1-05.16 Water and Power

(October 1, 2005 APWA GSP)

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

1-06 Control of Material

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.

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).

1-07.4 Sanitation

1-07.4(1) General

(*July 14, 2016 SkagitR*)

Section 1-07.4(1) is supplemented with the following:

The Contractor shall provide employees with portable sanitary stations on site. These portable sanitary stations shall comply with all State Department of Health or other agency requirements; shall be kept clean, neat and sanitized; and shall not create any public nuisance.

1-07.7 Load Limits

Section 1-07.7 is supplemented with the following:

(March 13, 1995)
If the source 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.

1-07.18 Public Liability and Property Damage Insurance

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

1-07.18 Insurance

(January 4, 2016 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.

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 <u>not</u> 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:

$1,000,000	Each Occurrence
$2,000,000	General Aggregate
$2,000,000	Products & Completed Operations Aggregate
$1,000,000	Personal & Advertising Injury each offence
$1,000,000	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(1) Construction Under Traffic

(July 14, 2016 SkagitR)

In the second paragraph of Section 1-07.23(1), the following new sentence is inserted after the first sentence:

> No vehicle trip through the work zone may be stopped for more than 10 minutes without the prior approval of the Engineer.

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

(January 2, 2012)
Work Zone Clear Zone

The Work Zone Clear Zone (WZCZ) applies during working and nonworking hours. The WZCZ applies only to temporary roadside objects introduced by the Contractor's operations and does not apply to preexisting conditions or permanent Work. Those work operations that are actively in progress shall be in accordance with adopted and approved Traffic Control Plans, and other contract requirements.

During nonworking hours equipment or materials shall not be within the WZCZ unless they are protected by permanent guardrail or temporary concrete barrier. The use of temporary concrete barrier shall be permitted only if the Engineer approves the installation and location.

During actual hours of work, unless protected as described above, only materials absolutely necessary to construction shall be within the WZCZ and only construction vehicles absolutely necessary to construction shall be allowed within the WZCZ or allowed to stop or park on the shoulder of the roadway.

The Contractor's nonessential vehicles and employees private vehicles shall not be permitted to park within the WZCZ at any time unless protected as described above.

Deviation from the above requirements shall not occur unless the Contractor has requested the deviation in writing and the Engineer has provided written approval.

Minimum WZCZ distances are measured from the edge of traveled way and will be determined as follows:

Regulatory Posted Speed	Distance From Traveled Way (Feet)
35 mph or less	10 *
40 mph	15
45 to 55 mph	20
60 mph or greater	30

* or 2-feet beyond the outside edge of sidewalk

Minimum Work Zone Clear Zone Distance

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.

(******)

4. The SPCC Plan
5. A list of Emergency Contacts including those for after working hours
6. The TESC plan.
7. Any Traffic Control Plans that the Contractor plans to submit.

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) 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

(July 14, 2016 SkagitR)

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.

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 (Form 421-012), and
2. Statement of Intent to Pay Prevailing Wages (Form F700-007-000).

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.

1-08.4 Prosecution of Work

Delete this section and replace it with the following:

1-08.4 Notice to Proceed and Prosecution of Work

(July 23, 2015 APWA GSP)

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

(March 13, 1995)

This project shall be physically completed within ***ten (10)*** working days.

1-08.9 Liquidated Damages

(August 14, 2013 APWA GSP)

Revise the fourth paragraph to read:

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

1-09 Measurement and Payment

1-09.2(1) General Requirements for Weighing Equipment

(July 23, 2015 APWA GSP, Option 2)

Revise item 4 of the fifth paragraph to read:

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

1-09.2(5) Measurement

(May 2, 2017 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

(October 10, 2008 APWA GSP)

Supplement this section with the following:

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

1-09.11(3) Time Limitation and Jurisdiction

(July 23, 2015 APWA GSP)

Revise this section to read*:*

For the convenience of the parties to the Contract it is mutually agreed by the parties that any 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 any 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 36.01.05 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 any such claims or causes of action. It is further mutually agreed by the parties that when any 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 any records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-09.13(3) Claims $250,000 or Less

(October 1, 2005 APWA GSP)

Delete this section and replace it with the following:

The Contractor and the Contracting Agency mutually agree that those claims that total $250,000 or less, submitted in accordance with Section 1-09.11 and not resolved by nonbinding ADR processes, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

1-09.13(3)A Administration of Arbitration

(July 23, 2015 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 36.01.05 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.

1-10 Temporary Traffic Control

1-10.2 Traffic Control Management

1-10.2(1) General

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

(January 3, 2017)
Only training with WSDOT TCS card and WSDOT training curriculum is recognized in the State of Washington. The Traffic Control Supervisor shall be certified by one of the following:

The Northwest Laborers-Employers Training Trust
27055 Ohio Ave.
Kingston, WA 98346
(360) 297-3035

Evergreen Safety Council
12545 135th Ave. NE
Kirkland, WA 98034-8709
1-800-521-0778

The 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

1-10.2(1)B Traffic Control Supervisor

(July 14, 2016 Skagit R)

The third paragraph of Section 1-10.2(1) B is supplemented with the following:

8. Patrolling and maintaining traffic control as described in Section 1-10.3(2)E.

1-10.4 Measurement

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

(July 14, 2016 SkagitR)

The third paragraph of Section 1-10.4(2) is revised to read:

"Traffic Control Labor" will be measured by the hour. Time spent on activities other than those described herein will not be measured under this item. Hours will be measured for each person engaged in any one of the following activities:

- Flagging and Spotting. Hours will be measured for each flagging or spotting station, shown on an approved Traffic Control Plan, when that station is staffed in accordance with Section 1-10.3(1)A. When a flagging station is staffed on an intermittent basis, no deduction will be made in measured hours provided that the person staffing the station is in a standby mode and is not performing other duties.

- Operating a pilot vehicle during one-way piloted traffic control.

- Operating a traffic control vehicle or a chase vehicle during a rolling slowdown operation.

- Operating a vehicle or placing/removing traffic control devices during the setup or takedown of a lane closure. Performing preliminary work to prepare for placing and removing these devices.

- Operating any of the moving traffic control equipment, or adjusting signing during a mobile operation as described in Section 1-10.3(2)D.

- Placing and removing Class B construction signs. Performing preliminary work to prepare for placing and removing these signs.

- Relocation of Portable Changeable Message Signs within the project limits.

- Installing and removing Barricades, Traffic Safety Drums, Barrier Drums, Cones, Tubular Markers and Warning Lights and Flashers to carry out approved Traffic Control Plan(s). Performing preliminary work to prepare for installing these devices.

1-10.5 Payment

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

(July 14, 2016 SkagitR)

The second paragraph of Section 1-10.5(2) is revised to read:

The lump sum contract payment shall be full compensation for all costs incurred by the Contractor in performing the contract work defined in Section 1-10.2(1)B and Section 1-10.3(2)E.

The fifth, and sixth paragraphs have been revised to read:

" Traffic Control Labor", per hour.

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

Division 2
Earthwork

2-01 Clearing, Grubbing, and Roadside Cleanup

2-01.1 Description
(July 14, 2016 SkagitR)

Add the following new Section:

(******)
2-01.1(1) Preparation of Existing Surfaces
(October 12, 2016 SkagitR)

All pavements, bituminous surfaces, concrete surfaces, and shoulders shall be thoroughly cleaned of dust, soil, plant or organic material, pavement grindings, and other foreign matter.

2-01.4 Measurement
(October 12, 2016 SkagitR)

Section 2-01.4 is supplemented with the following:

There is no separate unit bid item for “Preparation of Existing Surfaces”.

2-01.5 Payment
(October 12, 2016 SkagitR)

Section 2-01.5 is supplemented with the following:

All labor and materials associated with “Preparation of Existing Surfaces” shall be included in the associated unit bid price for bid item “HMA Cl. ½” PG 64-22”.

2-02 Removal of Structures and Obstructions

2-02.1 Description
(March 13, 1995)

Section 2-02.1 is supplemented with the following:

Removing Miscellaneous Traffic Items
The following miscellaneous traffic items shall be removed and disposed of:

*** All raised pavement markers within the paving limits. ***

2-02.5 Payment

(October 12, 2016 SkagitR)

Section 2-02.5 is supplemented with the following:

All labor and materials associated with “Removing Miscellaneous Traffic Items” shall be included in the associated unit bid price for bid item “Planing Bituminous Pavement”.

2-11 Trimming and Cleanup

2-11.1 Description

(July 14, 2016 SkagitR)

Section 2-11.1 is revised to read:

This Work consists of dressing and trimming the entire Roadway(s) improved under the Contract, including frontage roads, connecting ramps, auxiliary lanes, and approach roads. This Work extends to roadbeds, shoulders, **lawns** and ditches.

The Contractor shall also trim and clean up the staging areas and any other area the Contractor uses for construction operations.

2-11.3 Construction Requirements

(July 14, 2016 SkagitR)

Item number four in the first paragraph of Section 2-11.3 is revised to read:

4. Remove and dispose of all weeds, brush, refuse, **rocks, asphalt chunks, survey stakes,** and any other debris that lie on the roadbed, shoulders, ditches, and slopes.

Division 5
Surface Treatments and Pavements

5-04 Hot Mix Asphalt

(February 21, 2017 APWA GSP)

Delete WSDOT Amended Section 5-04, Hot Mix Asphalt dated **January 3, 2017** and replace it with Section 5-04, Hot Mix Asphalt as printed in the Standard Specifications for Road, Bridge and Municipal Construction, 2016 edition.

(January 3, 2011)
ESAL's

The number of ESAL's for the design and acceptance of the HMA shall be *** 3.46 *** million.

5-04.3 Construction Requirements

5-04.3(7)A2 Statistical or Nonstatistical Evaluation

Delete this section and replace it with the following:

5-04.3(7)A2 Nonstatistical Evaluation

(January 16, 2014 APWA GSP)

Mix designs for HMA accepted by Nonstatistical evaluation shall;

- Be submitted to the Project Engineer on WSDOT Form 350-042
- Have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2) and 9-03.8(6).
- Have anti-strip requirements, if any, for the proposed mix design determined in accordance with WSDOT Test Method T 718 or based on historic anti-strip and aggregate source compatibility from WSDOT lab testing. Anti-strip evaluation of HMA mix designs utilized that include RAP will be completed without the inclusion of the RAP.

At or prior to the preconstruction meeting, the contractor shall provide one of the following mix design verification certifications for Contracting Agency review;

- The proposed mix design indicated on a WSDOT mix design/anti-strip report that is within one year of the approval date
- The proposed HMA mix design submittal (Form 350-042) with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.
- The proposed mix design by a qualified City or County laboratory mix design report that is within one year of the approval date.

The mix design will be performed by a lab accredited by a national authority such as Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction Materials Engineering Council (CMEC's) ISO 17025 or AASHTO Accreditation Program

(AAP) and shall supply evidence of participation in the AASHTO Material Reference Laboratory (AMRL) program.

At the discretion of the Engineer, agencies may accept mix designs verified beyond the one year verification period with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

5-04.3(8)A4 Definition of Sampling Lot and Sublot

(January 16, 2014 APWA GSP)

Section 5-04.3(8)A4 is supplemented with the following:

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

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

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

5-04.3(8)A5 Test Results

(January 16, 2014 APWA GSP)

The first paragraph of this section is deleted.

5-04.3(8)A6 Test Methods

(January 16, 2014 APWA GSP)

Delete this section and replace it with the following:

Testing of HMA for compliance of Va will be at the option of the Contracting Agency. If tested, compliance of Va will be use WSDOT Standard Operating Procedure 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 WAQTC FOP for AASHTO T 27/T 11.

5-04.3(14) Planing Bituminous Pavement

The last paragraph of Section 5-04.3(14) is revised to read:

All planing material derived from the contractors operations shall be delivered and stockpiled at the following site:

Butler Gravel Pit
18911 Kelleher Road
Burlington, WA

Butler Gravel Pit hours of operation are restricted to Monday through Saturday 6:30 A.M. to 5:00 P.M.

All details of the delivery, including the location within the pit for stockpiling, shall be coordinated with the Engineer at least 5 working days prior to delivery.

5-04.4 Measurement

(March 6, 2017 SkagitR)

Section 5-04.4 is revised as follows:

The first paragraph is revised to read:

> HMA Cl. ½" PG 64-22 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 materials removed will not be measured.

The ninth paragraph is revised to read:

There is no separate unit bid item or measurement for Hot Poured Joint Seal.

The eleventh paragraph is revised to read:

There is no separate unit bid item or measurement for Temporary Pavement Marking.

5-04.5 Payment

(March 6, 2017 SkagitR)

Section 5-04.5 is supplemented with the following:

The unit Contract price per ton for "HMA Cl.1/2" PG 64-22" shall include full compensation for all costs incurred in the paving of driveway approach aprons, including excavation, and any other required grading. It shall also include all costs for preparing existing pavements, bituminous surfaces, and gravel shoulders, including approaches, for paving as described in section 5-04.3(4).

There will be no price adjustments for HMA. HMA having all constituents falling within the tolerance limits of the job mix formula and meeting the compaction requirements of Section 5-04.3(10) shall be accepted at the unit contract price with no further evaluation.

All labor and materials associated with the placement of Hot Pour Joint Seal shall be included in the unit bid price for the associated bid item "HMA Cl. ½" PG 64-22".

The unit Contract price for "Planing Bituminous Pavement" per square yard shall include full compensation for all costs associated with planing around utility valves, utility vaults, and monuments.

All labor and materials associated with the placement of Temporary Pavement Marking shall be included in the unit bid price for the associated bid item "HMA Cl. ½" PG 64-22".

Division 8
Miscellaneous Construction

8-01 Erosion Control and Water Pollution Control

8-01.3 Construction Requirements

(******)

Section 8-01.3 is supplemented with the following:

At the Preconstruction Meeting, the Contractor shall submit the temporary erosion and sediment control (TESC) Plan. The TESC Plan shall include the identification of the ESC Lead.

8-01.4 Measurement

(******)

Section 8.01-4 is supplemented with the following:

Erosion Control will be measured by lump sum.

8-01.5 Payment

(******)

Section 8-01.5 is supplemented with the following:

"Erosion Control", per lump sum.

The lump sum Contract price for "Erosion Control" shall be full pay for all costs in providing any and all erosion control work, including preparing, submitting, and updating the TESC Plan; and any other work needed to meet the requirements of the Standard Specifications and the current version of the Stormwater Management Manual for Western Washington.

8-13 Monument Cases

8-13.1 Description

(January 12, 2017 SkagitR)

Section 8-13.1 is supplemented with the following:

This Work shall consist of adjusting monument case and covers in accordance with these Specifications.

8-13.3 Construction Requirements

(January 12, 2017 SkagitR)

Section 8-13.3 is supplemented with the following:

As required, the monument case and cover shall be adjusted either by removing and resetting the case, or by installing riser rings between the case and cover.

After paving operations are complete, the Contractor shall vertically adjust the monument case and cover to finished grade. The patch material used around the monument case and cover shall be the same as the adjacent pavement. The Contractor shall be responsible for referencing the location of the monument case and cover for locating after paving is complete. The adjusted elevation of the cover shall be 1/4 inch to 3/8 inch below the level of the finished pavement. The case and cover shall be cleaned prior to being reset.

The Contractor shall use care to avoid disturbing the monument inside the monument case. Any damage or disturbance to the monument as a result of the Contractor's operations shall be repaired and reset to its original position at no cost to the Contracting Agency.

8-13.4 Measurement

Section 8-13.4 is supplemented with the following:

Adjust monument case and cover will be measured per each for raising of the monument case and cover.

8-13.5 Payment

Section 8-13.5 is supplemented with the following:

"Adjust Monument Case and Cover", per each.

8-23 Temporary Pavement Markings

8-23.3 Construction Requirements

8-23.3(1) General

(September 28, 2016 SkagitR)

Delete Section 8-23.3(1) and replace it with the following:

This work consists of furnishing and installing Temporary Flexible Pavement Markers in accordance with the Contract Provisions and Plans. Temporary Pavement Marking Tape may only be used in locations approved by the Engineer or as indicated in the Plans.

8-23.4 Measurement

(September 28, 2016 SkagitR)

Delete Section 8-23.4 and replace it with the following:

There will be no separate unit of measurement for placement and removal of Temporary Pavement Markings. Temporary Pavement Markings shall be included in the associated bid item "HMA Cl. ½" PG 64-22".

8-23.5 Payment

(September 28, 2016 SkagitR)

Delete Section 8-23.5 and replace it with the following:

All labor and material associated with the placement and removal of Temporary Pavement Markings shall be included in the associated bid item "HMA Cl. ½" PG 64-22".

Appendices
(January 2, 2012)

The following appendices are attached and made a part of this contract:

APPENDIX A:
Standard Plans

APPENDIX B:
Washington State Prevailing Wage Rates

APPENDIX C:
Construction Contract and Contract Bond - Information Only

APPENDIX D:
Proposal Forms – Information Only

APPENDIX E:
Vicinity Map and Plans

(August 7, 2017)
Standard Plans

The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-01 transmitted under Publications Transmittal No. PT 16-048, effective August 7, 2017 is made a part of this contract.

The Standard Plans are revised as follows:

A-30.15
DELETED

A-40.10
Section View, PCCP to HMA Longitudinal Joint, callout, was – "Sawed Groove ~ Width 3/16" (IN) MIN. to 5/16" (IN) MAX. ~ Depth 1" (IN) MIN. ~ see Std. Spec. 5-04.3(12)B" is revised to read; "Sawed Groove ~ Width 3/16" (IN) MIN. to 5/16" (IN) MAX. ~ Depth 1" (IN) MIN. ~ see Std. Spec. Section 5-04.3(12)A2"

A-50.10
Sheet 2 of 2, Plan, with Single Slope Barrier, reference C-14a is revised to C-70.10

A-50.20
Sheet 2 of 2, Plan, with Anchored Barrier, reference C-14a is revised to C-70.10

A-50.30
Sheet 2 of 2, Plan (top), reference C-14a is revised to C-70.10

A-60.30
Note 4, was – "If the ACP and membrane is to be removed from the bridge deck, see GSP 023106 for deck preparation before placing new membrane." Is revised to read; "If the ACP and membrane is to be removed from the bridge deck, see GSP 6-02.3(10)D.OPT6.GB6 for deck preparation before placing new membrane."

B-10.20
Substitute "step" in lieu of "handhold" on plan

B-25.20
Note 4, was – "Bolt-Down capability is required on all frames, grates and covers, unless specified in the Contract. Provide two holes in the Frame that are vertically aligned with the grate slots. The frame shall accept the 5/8" x 11 NC x 2" allen head cap screw by being tapped, or other approved mechanism. The location of bolt-down holes varies among manufacturers. See BOLT-DOWN DETAIL, **Standard Plan B-30.10.** Is revised to read; "Bolt-Down capability is required on all frames, grates and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC x 2" (in) Allen head cap screw by being tapped, or other approved mechanism. The location of bolt-down holes varies by manufacturer."
See BOLT-DOWN DETAIL, **Standard Plan B-30.10.**

Add Note 7. See Standard Specification Section 8-04 for Curb and Gutter requirements

B-30.70

Note 2, was – "Bolt-Down capability is required on all frames, grates and covers, unless specified otherwise in the Contract. Provide 3 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 5/8" -1 NC x 2" Allen head cap screw by being tapped, or other approved mechanism. Location of bolt down holes varies by manufacturer." Is revised to read; "Bolt-Down capability is required on all frames, grates and covers, unless specified otherwise in the Contract. Provide 3 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC x 2" (in) Allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer."

RING PLAN, callout, was – "DRILL AND TAP 5/8" – 11NC HOLE FOR 1 1/2" X 5/8" STAINLESS STEEL SOCKET HEAD CAP SCREW (TYP.)" is revised to read; "SEE NOTE 2"

B-90.40

Valve Detail - DELETED

C-16b

DELETED

C-22.14

Note 3, formula, was: "Elevation G = (Elevation S – D x (0.1) + 28" is revised to read: "Elevation G = (Elevation S – D x (0.1) + 28/12"

C-22.16

Note 3, formula, was: "Elevation G = (Elevation S – D x (0.1) + 31" is revised to read: "Elevation G = (Elevation S – D x (0.1) + 31/12"

C-22.41

DELETED

C-25.18

DELETED

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-10.20
Wall Type 3 may be used in all cases. The last sentence of Note 6 on Wall Type 3 shall be revised to read: The seismic design of these walls has been completed using a site adjusted (effective) peak ground acceleration of 0.32g.

D-10.25
Wall Type 4 may be used in all cases. The last sentence of Note 6 on Wall Type 4 shall be revised to read: The seismic design of these walls has been completed using a site adjusted (effective) peak ground acceleration of 0.32g.

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.

D-15.10
STD Plans D-15 series “Traffic Barrier Details for Reinforced Concrete Retaining Walls” are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

D-15.20
STD Plans D-15 series “Traffic Barrier Details for Reinforced Concrete Retaining Walls” are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

D-15.30
STD Plans D-15 series “Traffic Barrier Details for Reinforced Concrete Retaining Walls” are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

F-10.12
Section Title, was – “Depressed Curb Section” is revised to read: “Depressed Curb and Gutter Section”

F-10.40
“EXTRUDED CURB AT CUT SLOPE”, Section detail - Deleted

F-10.42
DELETE – “Extruded Curb at Cut Slope” View

G-22.10
Sheet 2, Elevation , Three-Post Installation, Dimension, upper right, was – “.035” is revised to read: “ 0.35X”

G-24.60
Sheet 1, View A, Dimension @ Bottom of sign, is = 3” is revised to read: 6”.

G-60.10
Sheet 3, TYPICAL TRUSS DETAILS, BASE ~ TOP, callout, was – “15/16”(IN) DIAM. HOLES FOR FOUR, 7/8” (IN) DIAM. BOLTS (ASTM A 325)” is revised to read: “15/16”(IN) DIAM. HOLES FOR FOUR, 7/8” (IN) DIAM. BOLTS (ASTM F3125, GRADE A325)”

G-90.10
TOP VIEW, callout, was – “Vertical Brace ~ W4 x 13 steel (TYP.)(See Note 4)” is revised to read; “Vertical Brace ~ W4 x 13 steel (TYP.)(See Note 3)”

G-95.10
Sheet 2, Detail “B”, Plan View, callout, was – “5/8” DIAM. ASTM A 325 H.S. BOLT W/HEAVY HEX NUT AND WASHER, GALV. (TYP.) TIGHTEN PER STD. SPEC. 6-03.3(33)” is revised to read: “5/8” DIAM. ASTM F 3125, GRADE A325 H.S. BOLT W/HEAVY HEX NUT AND WASHER, GALV. (TYP.) TIGHTEN PER STD. SPEC. 6-03.3(33)”

H-70.20
Sheet 2, Spacing Detail, Mailbox Support Type 1, reference to Standard Plan I-70.10 is revised to H-70.10

I-30.30
8” Diameter Wattle Spacing Table, lower left corner, was –“Slope:1H : 1V, Maximum Spacing:10’ – 0”” is revised to read: “Slope:1H : 1V, Maximum Spacing:8’ – 0””.

J-3
DELETED

J-3b
DELETED

J-3C
DELETED

J-10.21
Note 18, was – “When service cabinet is installed within right of way fence, see Standard Plan J-10.22 for details.” Is revised to read; “When service cabinet is installed

within right of way fence, or the meter base is mounted on the exterior of the cabinet, see Standard Plan J-10.22 for details."

J-10.22

Key Note 1, was – "Meter base per serving utility requirements~ as a minimum, the meter base shall be safety socket box with factory-installed test bypass facility that meets the requirements of EUSERC drawing 305." Is revised to read; "Meter base per serving utility requirements~ as a minimum, the meter base shall be safety socket box with factory-installed test bypass facility that meets the requirements of EUSERC drawing 305. When the utility requires meter base to be mounted on the side or back of the service cabinet, the meter base enclosure shall be fabricated from type 304 stainless steel."

Key Note 4, "Test with (SPDT Snap Action, Positive close 15 Amp – 120/277 volt "T" rated). Is revised to read: "Test Switch (SPDT snap action, positive close 15 amp – 120/277 volt "T" rated)."

Key Note 14, was – "Hinged dead front with ¼ turn fasteners or slide latch." Is revised to read; "Hinged dead front with ¼ turn fasteners or slide latch. ~ Dead front panel bolts shall not extend into the vertical limits of the breaker array(s)."

Key Note 15, was – "Cabinet Main Bonding Jumper. Buss shall be 4 lug tinned copper. See Cabinet Main bonding Jumper detail, Standard Plan J-3b." is revised to read; "Cabinet Main Bonding Jumper Assembly ~ Buss shall be 4 lug tinned copper ~ See Standard Plan J-10.20 for Cabinet Main Bonding Jumper Assembly details."

J-20.10

Add Note 5, "5. One accessible pedestrian signal assembly per pedestrian pushbutton post."

J-20.11

Sheet 2, Foundation Detail, Elevation, callout – "Type 1 Signal Pole" is revised to read: "Type PS or Type 1 Signal Pole"

Sheet 2, Foundation Detail, Elevation, add note below Title, "(Type 1 Signal Pole Shown)"

Add Note 6, "6. One accessible pedestrian signal assembly per pedestrian pushbutton post."

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, 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-26.20
Sheet 1, NOTES, Note 5, was - "Connecting/clamping bolts AASHTO M 164 (ASTM A325)" is revised to read: "Connecting/clamping bolts ASTM F3125 GRADE A325"

Was - "NUTS AASHTO M 291 (ASTM A263) GRADE DH" is revised to read: "NUTS ASTM A563 GRADE DH"

J-28.43
KEY notes, note 1, was – "CLAMPING BOLTS, 7/8" (IN) DIAM. HEX HEAD BOLT AND NUT, TWO PLATE WASHERS, ONE HARDENED ROUND WASHER, 87 FT-LBS TORQUE (THREE CLAMPING BOLT ASSEMBLIES PER SLIP BASE) (PER ASTM A325)" is revised to read: "CLAMPING BOLTS, 7/8" (IN) DIAM. HEX HEAD BOLT AND NUT, TWO PLATE WASHERS, ONE HARDENED ROUND WASHER, 87 FT-LBS TORQUE (THREE CLAMPING BOLT ASSEMBLIES PER SLIP BASE) (PER ASTM F3125 GRADE A325)"

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-60.14

All references to J-16b (6x) are revised to read; J-60.11

K-80.30

In the NARROW BASE, END view, the reference to Std. Plan C-8e is revised to Std. Plan K-80.35

M-11.10

Layout, dimension (from stop bar to “X”), was – 23’ is revised to read; 24’

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.

A-10.10-00.....8/7/07
A-10.20-00.....10/5/07
A-10.30-00.....10/5/07
A-20.10-00.....8/31/07
A-30.10-00.....11/8/07
A-30.30-01.....6/16/11
A-30.35-00.....10/12/07
A-40.00-00.....8/11/09
A-40.10-03.....12/23/14
A-40.15-00.....8/11/09
A-40.20-04.....1/18/17
A-40.50-02.....12/23/14
A-50.10-00…....11/17/08
A-50.20-01…....9/22/09
A-50.30-00…....11/17/08
A-50.40-00…....11/17/08
A-60.10-03.....12/23/14
A-60.20-03.....12/23/14
A-60.30-00.....11/8/07
A-60.40-00.....8/31/07

B-5.20-02.....1/26/17
B-5.40-02.....1/26/17
B-5.60-02.....1/26/17
B-10.20-01.....2/7/12
B-10.40-01.....1/26/17
B-10.60-00.....6/8/06
B-10.70-00……1/26/17
B-15.20-01.....2/7/12
B-15.40-01.....2/7/12
B-15.60-02.....1/26/17
B-20.20-02.....3/16/12
B-20.40-03.....3/16/12
B-20.60-03.....3/15/12
B-25.20-01.....3/15/12
B-25.60-01.....1/26/17
B-30.10-02.....1/26/17
B-30.20-03.....1/26/17
B-30.30-02.....1/26/17
B-30.40-02.....1/26/17
B-30.50-02.....1/26/17
B-30.70-03.....4/26/12
B-30.80-00.....6/8/06
B-30.90-02.....1/26/17
B-35.20-00.....6/8/06
B-35.40-00.....6/8/06
B-40.20-00.....6/1/06
B-40.40-02.....1/26/17
B-45.20-01.....7/11/17
B-45.40-01.....7/21/17
B-50.20-00.....6/1/06
B-55.20-01.....1/26/17
B-60.20-00.....6/8/06
B-60.40-00.....6/1/06
B-65.20-01.....4/26/12
B-65.40-00.....6/1/06
B-70.20-00.....6/1/06
B-70.60-01.....1/26/17
B-75.20-01.....6/10/08
B-75.50-01.....6/10/08
B-75.60-00.....6/8/06
B-80.20-00.....6/8/06
B-80.40-00.....6/1/06
B-82.20-00.....6/1/06
B-85.10-01.....6/10/08
B-85.20-00.....6/1/06
B-85.30-00.....6/1/06
B-85.40-00.....6/8/06
B-85.50-01.....6/10/08
B-90.10-00.....6/8/06
B-90.20-00.....6/8/06
B-90.30-00.....6/8/06
B-90.40-01.....1/26/17
B-90.50-00.....6/8/06
B-95.20-01.....2/3/09
B-95.40-00.....6/8/06

C-1.....7/12/16
C-1a.....7/14/15
C-1b.....7/14/15
C-6.....7/15/16
C-6a.....10/14/09
C-6c.....7/15/16
C-23.60-04.....7/21/17
C.24.10-01.....6/11/14
C-25.20-06.....7/14/15

C-1c.....7/12/16
C-1d.....10/31/03
C-2.....1/6/00
C-2a.....6/21/06
C-2b.....6/21/06
C-2c.....6/21/06
C-2d.....6/21/06
C-2e.....6/21/06
C-2f.....3/14/97
C-2g.....7/27/01
C-2h.....3/28/97
C-2i.....3/28/97
C-2j.....6/12/98
C-2k.....7/12/16
C-2n.....7/12/16
C-2o.....7/13/01
C-2p.....10/31/03
C-3.....7/2/12
C-3a.....10/4/05
C-3b.....6/27/11
C-3c.....6/27/11
C-4b.....7/15/16
C-4e.....7/15/16
C-4f.....7/2/12
C-6d.....7/15/16
C-6f.....7/15/16
C-7.....6/16/11
C-7a.....6/16/11
C-8.....2/10/09
C-8a.....7/25/97
C-8b.....2/29/16
C-8e.....2/21/07
C-8f.....6/30/04
C-10.....7/15/16
C-16a.....7/21/17
C-20.10-04.....7/21/17
C-20.11-00……..7/21/17
C-20.14-03.....6/11/14
C-20.15-02.....6/11/14
C-20.18-02.....6/11/14
C-20.19-02.....6/11/14
C-20.40-06.....7/21/17
C-20.41-01.....7/14/15
C-20.42-05.....7/14/15
C-20.45.01.....7/2/12
C-22.14-04.....7/15/16
C-22.16-06.....7/21/17
C-22.40-06.....7/21/17
C-22.45-03.....7/21/17
C-25.22-05.....7/14/15
C-25.26-03.....7/14/15
C-25.80-04.....7/15/16
C-40.14-02.....7/2/12
C-40.16-02.....7/2/12
C-40.18-03.....7/21/17
C-70.10-01.....6/17/14
C-75.10-01.....6/11/14
C-75.20-01.....6/11/14
C-75.30-01.....6/11/14
C-80.10-01.....6/11/14
C-80.20-01.....6/11/14
C-80.30-01.....6/11/14
C-80.40-01.....6/11/14
C-80.50-00.....4/8/12
C-85.10-00.....4/8/12
C-85.11-00.....4/8/12
C-85.14-01.....6/11/14
C-85.15-01.....6/30/14
C-85.16-01.....6/17/14
C-85-18-01.....6/11/14
C-85.20-01.....6/11/14
C-90.10-00.....7/3/08

1

D-2.04-00.....11/10/05
D-2.06-01.....1/6/09
D-2.08-00.....11/10/05
D-2.14-00.....11/10/05
D-2.16-00.....11/10/05
D-2.18-00.....11/10/05
D-2.20-00.....11/10/05
D-2.32-00.....11/10/05
D-2.34-01.....1/6/09
D-2.36-03.....6/11/14
D-2.42-00.....11/10/05
D-2.44-00.....11/10/05
D-2.60-00.....11/10/05
D-2.62-00.....11/10/05
D-2.46-01.....6/11/14
D-2.48-00.....11/10/05
D-2.64-01.....1/6/09
D-2.66-00.....11/10/05
D-2.68-00.....11/10/05
D-2.80-00.....11/10/05
D-2.82-00.....11/10/05
D-2.84-00.....11/10/05
D-2.86-00.....11/10/05
D-2.88-00.....11/10/05
D-2.92-00.....11/10/05
D-3.09-00.....5/17/12
D-3.10-01……5/29/13
D-3.11-03……6/11/14
D-3.15-02……6/10/13
D-3.16-02……5/29/13
D-3.17-02……5/9/16
D-4.....12/11/98
D-6.....6/19/98
D-10.10-01.....12/2/08
D-10.15-01.....12/2/08
D-10.20-00.....7/8/08
D-10.25-00.....7/8/08
D-10.30-00.....7/8/08
D-10.35-00.....7/8/08
D-10.40-01.....12/2/08
D-10.45-01.....12/2/08
D-15.10-01.....12/2/08
D-15.20-03.....5/9/16
D-15.30-01.....12/02/08

2

E-1.....2/21/07
E-2.....5/29/98
E-4.....8/27/03
E-4a.....8/27/03

3

F-10.12-03.....6/11/14
F-10.16-00.....12/20/06
F-10.18-01.....7/11/17
F-10.40-03.....6/29/16
F-10.42-00.....1/23/07
F-10.62-02.....4/22/14
F-10.64-03.....4/22/14
F-30.10-03.....6/11/14
F-40.12-03.....6/29/16
F-40.14-03.....6/29/16
F-40.15-03.....6/29/16
F-40.16-03.....6/29/16
F-45.10-02.....7/15/16
F-80.10-04.....7/15/16

1

G-10.10-00.....9/20/07
G-20.10-02.....6/23/15
G-22.10-03.....7/10/15
G-24.10-00.....11/8/07
G-24.20-01.....2/7/12
G-24.30-01.....2/7/12
G-24.40-06.....2/29/16
G-24.50-04.....7/11/17
G-24.60-04.....6/23/15
G-25.10-04.....6/10/13
G-30.10-04.....6/23/15
G-50.10-02.....6/23/15
G-60.10-03.....6/18/15
G-60.20-02.....6/18/15
G-60.30-02.....6/18/15
G-70.10-03.....6/18/15
G-70.20-04.....7/21/17
G-70.30-04.....7/21/17
G-90.10-03……7/11/17
G-90.11-00……4/28/16
G-90.20-05……7/11/17
G-90.30-04……7/11/17
G-90.40-02……4/28/16
G-95.10-01.....6/2/11
G-95.20-02.....6/2/11
G-95.30-02.....6/2/11

2

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-70.10-01.....2/7/12
H-70.20-01.....2/16/12
H-70.30-02.....2/7/12

3

I-10.10-01.....8/11/09
I-30.10-02.....3/22/13
I-30.15-02.....3/22/13
I-30.16-00.....3/22/13
I-30.17-00.....3/22/13
I-30.20-00.....9/20/07
I-30.30-01.....6/10/13
I-30.40-01.....6/10/13
I-30.60-00.....5/29/13
I-40.10-00.....9/20/07
I-40.20-00.....9/20/07
I-50.20-01.....6/10/13
I-60.10-01.....6/10/13
I-60.20-01.....6/10/13
I-80.10-02.....7/15/16

4

J-10.....7/18/97
J-10.10-03……6/3/15
J-10.15-01.....6/11/14
J-10.16-00……6/3/15
J-10.17-00……6/3/15
J-10.18-00……6/3/15
J-10.20-01……6/1/16
J-10.21-00……6/3/15
J-10.22-00.....5/29/13
J-10.25-00……7/11/17
J-15.10-01.....6/11/14
J-15.15-02……7/10/15
J-20.10-03.....6/30/14
J-20.11-02.....6/30/14
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-26.20-00…..6/11/14
J-27.10-01…..7/21/16
J-27.15-00…..3/15/12
J-28.10-01.....5/11/11
J-28.22-00.....8/07/07
J-28.24-01.....6/3/15
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-28.43-00.....6/11/14
J-28.45-03.....7/21/16
J-28.50-03.....7/21/16
J-28.60-02.....7/21/16
J-28.70-03.....7/21/17
J-29.10-01.....7/21/16
J-29.15-01.....7/21/16
J-29.16-02.....7/21/16
J-30.10-00……6/18/15
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-40.40-01……4/28/16
J-45.36-00……7/21/17
J-50.05-00……7/21/17
J-50.10-00…….6/3/11
J-50.11-01…….7/21/17
J-50.12-01…….7/21/17
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J-50.16-01…….3/22/13
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-60.14-00……6/16/10
J-75.10-02……7/10/15
J-75.20-01……7/10/15
J-75.30-02…….7/10/15
J-75.40-02……6/1/16
J-75.41-01……6/29/16
J-75.45-02……6/1/16
J-90.10-02…….4/28/16
J-90.20-02…….4/28/16
J-90.21-01……4/28/16

5

K-70.20-01.....6/1/16

K-80.10-01.....6/1/16
K-80.20-00.....12/20/06
K-80.30-00.....2/21/07
K-80.35-00.....2/21/07
K-80.37-00.....2/21/07

1

L-10.10-02.....6/21/12
L-20.10-03.....7/14/15
L-30.10-02.....6/11/14
L-40.10-02.....6/21/12
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

2

M-1.20-03.....6/24/14
M-1.40-02.....6/3/11
M-1.60-02.....6/3/11
M-1.80-03.....6/3/11
M-2.20-03.....7/10/15
M-2.21-00……7/10/15
M-3.10-03.....6/3/11
M-3.20-02.....6/3/11
M-3.30-03.....6/3/11
M-3.40-03.....6/3/11
M-3.50-02.....6/3/11
M-5.10-02.....6/3/11
M-7.50-01.....1/30/07
M-9.50-02.....6/24/14
M-9.60-00……..2/10/09
M-11.10-02.....7/11/17
M-12.10-00……7/11/17
M-15.10-01.....2/6/07
M-17.10-02.....7/3/08
M-20.10-02.....6/3/11
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-24.50-00.....6/16/11
M-24.60-04.....6/24/14
M-24.65-00……7/11/17
M-24.66-00……7/11/17
M-40.10-03.....6/24/14
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-60.20-02.....6/27/11
M-65.10-02.....5/11/11
M-80.10-01.....6/3/11
M-80.20-00.....6/10/08
M-80.30-00.....6/10/08

3

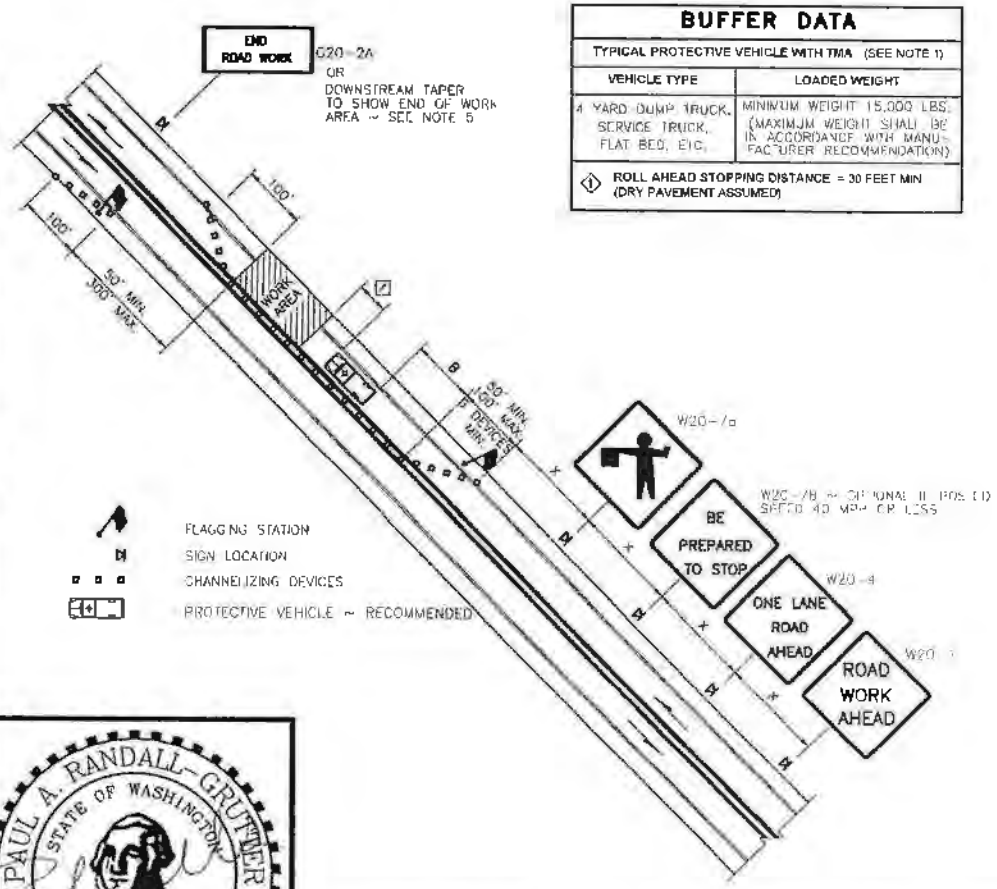
4

APPENDIX A

Standard Plans

LONGITUDINAL BUFFER SPACE=B									
POSTED SPEED (MPH)	25	30	35	40	45	50	55	60	65
LENGTH B (FEET)	165	200	250	305	360	425	495	570	645

BUFFER DATA	
TYPICAL PROTECTIVE VEHICLE WITH TMA (SEE NOTE 1)	
VEHICLE TYPE	LOADED WEIGHT
4 YARD DUMP TRUCK, SERVICE TRUCK, FLAT BED, ETC.	MINIMUM WEIGHT 15,000 LBS. (MAXIMUM WEIGHT SHALL BE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATION)
① ROLL AHEAD STOPPING DISTANCE = 30 FEET MIN (DRY PAVEMENT ASSUMED)	



NOTES:

1. A PROTECTIVE VEHICLE IS RECOMMENDED REGARDLESS IF A TRUCK MOUNTED ATTENUATOR (TMA) IS AVAILABLE. A WORK VEHICLE MAY BE USED. WHEN NO TMA IS USED, THE PROTECTIVE VEHICLE SHALL BE STRATEGICALLY LOCATED TO SHIELD WORKERS, WITH NO SPECIFIC ROLL AHEAD DISTANCE.
2. NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE WSDOT STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
3. EXTEND CHANNELIZING DEVICE TAPER ACROSS SHOULDER ~ RECOMMENDED.
4. SIGN SEQUENCE IS THE SAME FOR BOTH DIRECTIONS OF TRAVEL ON TWO ROADWAY.
5. CHANNELIZING DEVICE SPACING FOR THE DOWNSTREAM TAPER OPTION SHALL BE 20' O.C.
6. FOR SIGNS SIZE REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND WSDOT SIGN FABRICATION MANUAL M55-05

SIGN SPACING = X (1)		
RURAL HIGHWAYS	60/65 MPH	800'±
RURAL ROADS	45/55 MPH	500'±
RURAL ROADS & URBAN ARTERIALS	35/40 MPH	350'±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25/30 MPH	200'± (2)
URBAN STREETS	25 MPH OR LESS	100'± (2)
ALL SIGNS ARE BLACK ON ORANGE UNLESS DESIGNATED OTHERWISE		

(1) ALL SIGN SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT GRADE INTERSECTIONS, AND DRIVEWAYS.

(2) THIS SIGN SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS

PAUL A. RANDALL-GRUTTER
STATE OF WASHINGTON
40264
REGISTERED
PROFESSIONAL ENGINEER
9.19.11

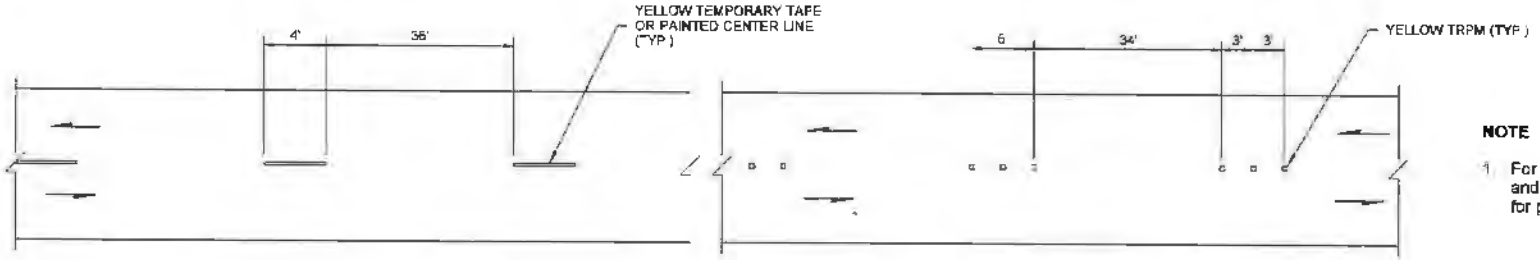
LANE CLOSURE WITH FLAGGER CONTROL

STANDARD PLAN

SKAGIT COUNTY PUBLIC WORKS
1800 CONTINENTAL PLACE
MOUNT VERNON, WA 98273-5625
(360) 336-9400 FAX (360) 336 9478

DATE: 09/19/2011

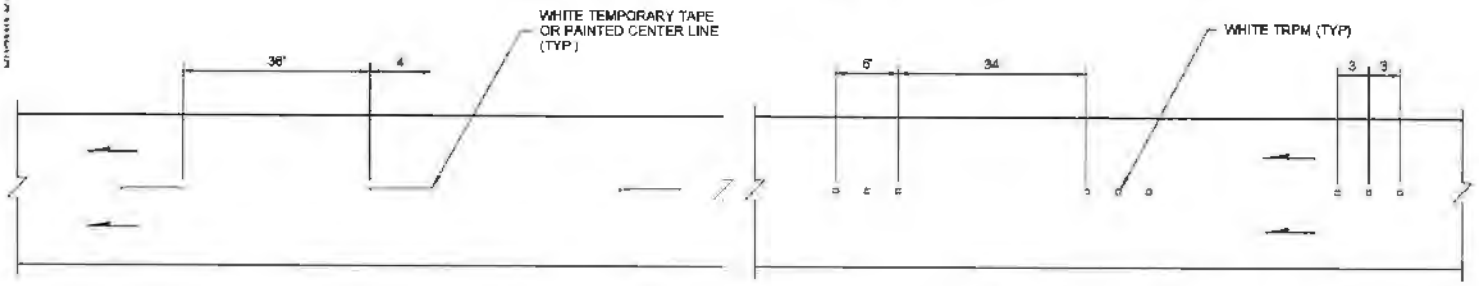
DRAWN BY: GES



HOT MIX ASPHALT PAVEMENT

BITUMINOUS SURFACE TREATMENT

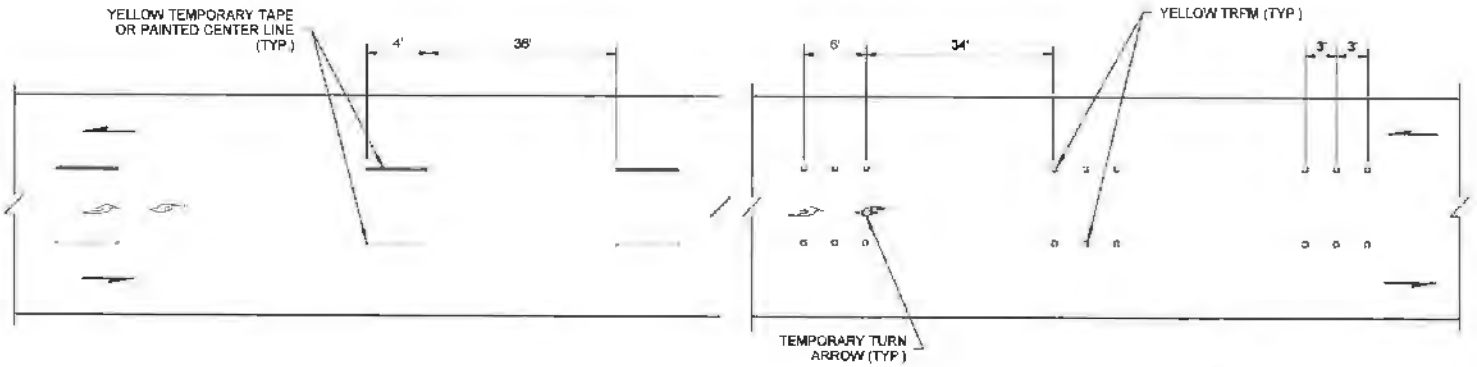
TWO-LANE ROADWAY



HOT MIX ASPHALT PAVEMENT

BITUMINOUS SURFACE TREATMENT

ONE-WAY TWO-LANE ROADWAY



HOT MIX ASPHALT PAVEMENT

BITUMINOUS SURFACE TREATMENT

TWO-WAY TWO-LANE LEFT TURN ROADWAY

NOTE

1. For Hot Mix Asphalt Paving projects ~ "DO NOT PASS" and "PASS WITH CARE" signs shall be included for passing zones

JOHN C. NISBET
STATE OF WASHINGTON
29115
REGISTERED
PROFESSIONAL ENGINEER

Nisbet, John
May 16 2015 9:56 AM

TEMPORARY PAVEMENT MARKING – SHORT DURATION STANDARD PLAN K-70.20-01

SHEET 1 OF 1 SHEET

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Carpenter, Jeff
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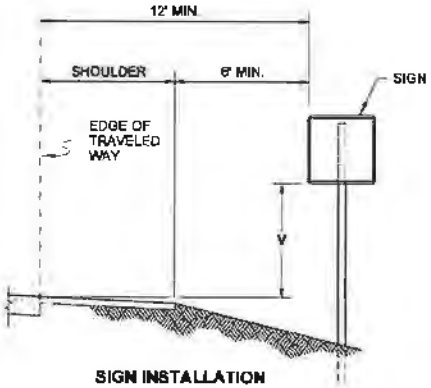
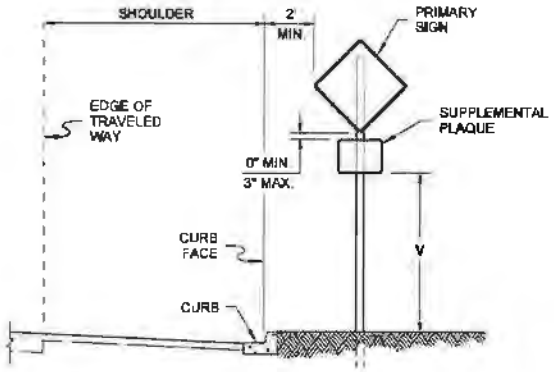
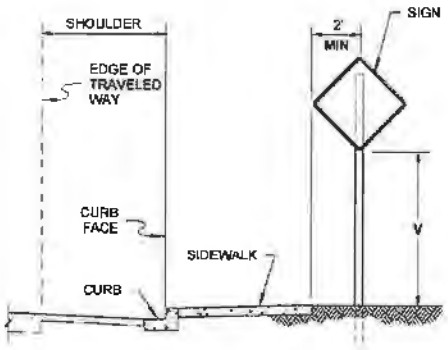
Washington State Department of Transportation



SIGN INSTALLATION (FILL SECTION)



SIGN INSTALLATION (CURB SECTION)

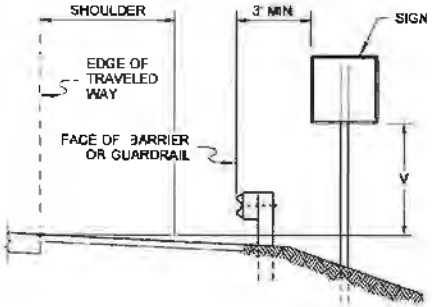


SIGN INSTALLATION (SIDEWALK AND CURB SECTION)

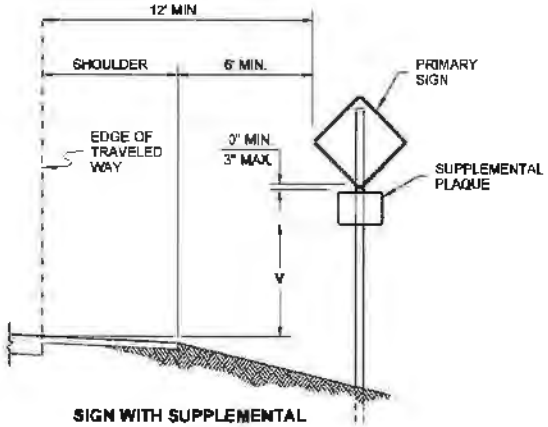
NOTES

1. For sign installation details, see **Standard Plan G - series.**
2. Where it is impractical to locate a sign with the lateral offset, a minimum of 2'(ft) offset may be used. A 1'(ft) lateral offset may be used in business, commercial or residential areas.
3. The "V" height for signs, with an area of more than 50 square feet and two or more sign supports, is 7 feet in both rural and urban areas.

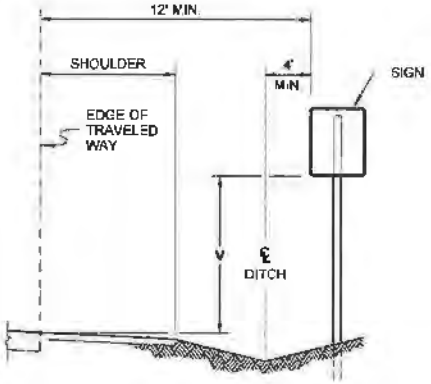
HEIGHT V		
	TO BOTTOM OF SIGN (NO SUPPLEMENTAL PLAQUE)	TO BOTTOM OF SUPPLEMENTAL PLAQUE (WHEN REQUIRED)
RURAL	5' MINIMUM	4' MINIMUM
URBAN	7' MINIMUM	6' MINIMUM



SIGN INSTALLATION (BEHIND TRAFFIC BARRIER)



SIGN WITH SUPPLEMENTAL PLAQUE INSTALLATION (FILL SECTION)



SIGN INSTALLATION (DITCH SECTION)

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29115
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PROFESSIONAL ENGINEER

Nisbet, John
May 16 2018 9:57 AM

CLASS A CONSTRUCTION SIGNING INSTALLATION

STANDARD PLAN K-80.10-01

SHEET 1 OF 1 SHEET

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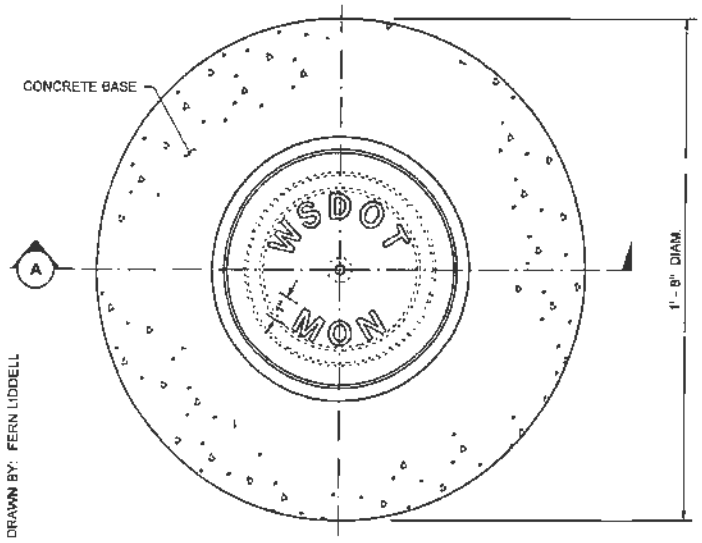
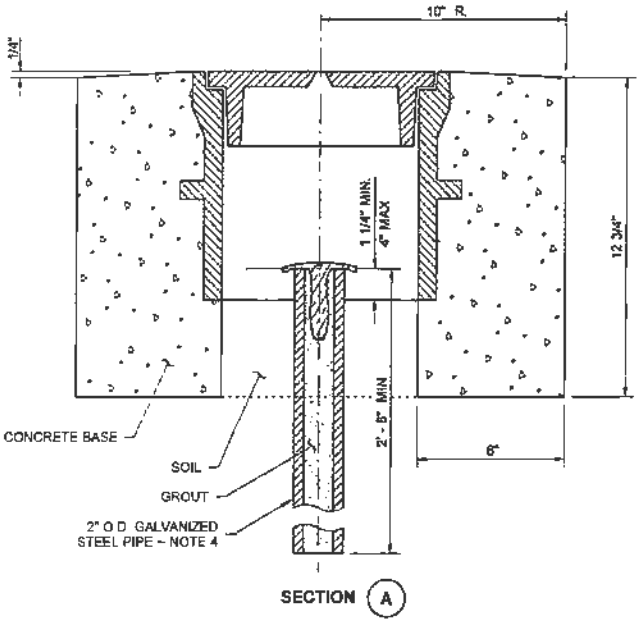


PLAN VIEW

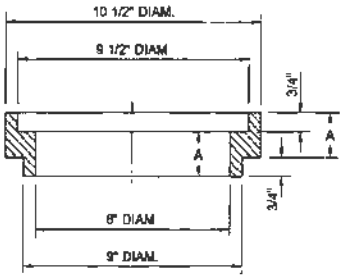
DRAWN BY: FERN LIDDELL



SECTION (A)

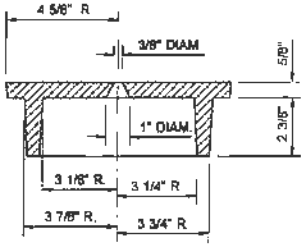
INSTALLATION

RISER RING DIMENSIONS			
A (SIZE)	1 1/2"	2"	3"



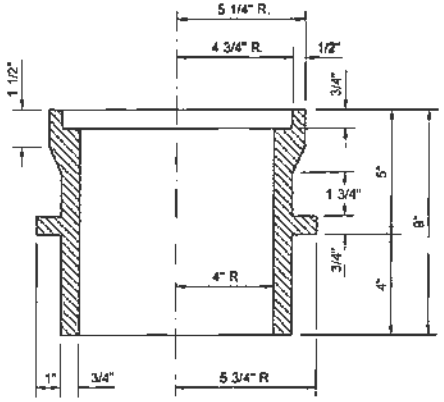
SECTION

RISER RING



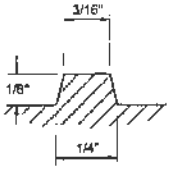
SECTION

COVER

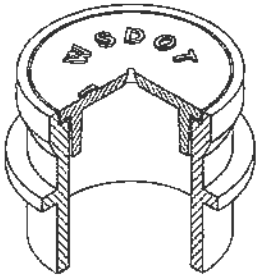


SECTION

CASE



SECTION OF LETTER



ISOMETRIC

NOTES

1. Dimensions may vary according to manufacturer.
2. Base to be placed on a well compacted foundation.
3. Monument case to be installed by contractor.
4. See Standard Plan A-10.20 for Monument (brass disc) type to place in 2" O.D. galvanized pipe.

APPROXIMATE WEIGHTS	
CASE	60 LBS
COVER	19 LBS
TOTAL	79 LBS

MONUMENT CASE AND COVER

STANDARD PLAN A-10.30-00

SHEET 1 OF 1 SHEET

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STATE DESIGN ENGINEER — DATE 10/15/07

Washington State Department of Transportation

APPENDIX B

Wage Rates

Washington State Prevailing Wage Rates

State of Washington
Department of Labor & Industries

Prevailing Wage Section - Telephone 360-902-5335
PO Box 44540, Olympia, WA 98504-4540

Washington State Prevailing Wage

The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, worker's wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements are provided on the Benefit Code Key.

Journey Level Prevailing Wage Rates for the Effective Date: 3/12/2018

County	Trade	Job Classification	Wage	Holiday	Overtime	Note
Skagit	Asbestos Abatement Workers	Journey Level	$46.57	5D	1H	
Skagit	Boilermakers	Journey Level	$66.54	5N	1C	
Skagit	Brick Mason	Journey Level	$55.82	5A	1M	
Skagit	Brick Mason	Pointer-Caulker-Cleaner	$55.82	5A	1M	
Skagit	Building Service Employees	Janitor	$11.50		1	
Skagit	Building Service Employees	Shampooer	$11.50		1	
Skagit	Building Service Employees	Waxer	$11.50		1	
Skagit	Building Service Employees	Window Cleaner	$11.50		1	
Skagit	Cabinet Makers (In Shop)	Journey Level	$18.85		1	
Skagit	Carpenters	Acoustical Worker	$57.18	5D	4C	
Skagit	Carpenters	Bridge, Dock And Wharf Carpenters	$57.18	5D	4C	
Skagit	Carpenters	Carpenter	$57.18	5D	4C	
Skagit	Carpenters	Carpenters on Stationary Tools	$57.31	5D	4C	
Skagit	Carpenters	Creosoted Material	$57.28	5D	4C	
Skagit	Carpenters	Floor Finisher	$57.18	5D	4C	
Skagit	Carpenters	Floor Layer	$57.18	5D	4C	
Skagit	Carpenters	Scaffold Erector	$57.18	5D	4C	
Skagit	Cement Masons	Journey Level	$57.21	7A	1M	
Skagit	Divers & Tenders	Bell/Vehicle or Submersible Operator (Not Under Pressure)	$110.54	5D	4C	
Skagit	Divers & Tenders	Dive Supervisor/Master	$72.97	5D	4C	
Skagit	Divers & Tenders	Diver	$110.54	5D	4C	8V
Skagit	Divers & Tenders	Diver On Standby	$67.97	5D	4C	
Skagit	Divers & Tenders	Diver Tender	$61.65	5D	4C	
Skagit	Divers & Tenders	Manifold Operator	$61.65	5D	4C	
Skagit	Divers & Tenders	Manifold Operator Mixed Gas	$66.65	5D	4C	
Skagit	Divers & Tenders	Remote Operated Vehicle Operator/Technician	$61.65	5D	4C	
Skagit	Divers & Tenders	Remote Operated Vehicle Tender	$57.43	5A	4C	
Skagit	Dredge Workers	Assistant Engineer	$56.44	5D	3F	
Skagit	Dredge Workers	Assistant Mate (Deckhand)	$56.00	5D	3F	

Skagit	Dredge Workers	Boatmen	$56.44	5D	3F	
Skagit	Dredge Workers	Engineer Welder	$57.51	5D	3F	
Skagit	Dredge Workers	Leverman, Hydraulic	$58.67	5D	3F	
Skagit	Dredge Workers	Mates	$56.44	5D	3F	
Skagit	Dredge Workers	Oiler	$56.00	5D	3F	
Skagit	Drywall Applicator	Journey Level	$56.78	5D	1H	
Skagit	Drywall Tapers	Journey Level	$57.43	5P	1E	
Skagit	Electrical Fixture Maintenance Workers	Journey Level	$21.48		1	
Skagit	Electricians - Inside	Cable Splicer	$68.09	7H	1E	
Skagit	Electricians - Inside	Construction Stock Person	$33.86	7H	1D	
Skagit	Electricians - Inside	Journey Level	$63.51	7H	1E	
Skagit	Electricians - Motor Shop	Craftsman	$15.37		1	
Skagit	Electricians - Motor Shop	Journey Level	$14.69		1	
Skagit	Electricians - Powerline Construction	Cable Splicer	$79.43	5A	4D	
Skagit	Electricians - Powerline Construction	Certified Line Welder	$69.75	5A	4D	
Skagit	Electricians - Powerline Construction	Groundperson	$46.28	5A	4D	
Skagit	Electricians - Powerline Construction	Heavy Line Equipment Operator	$69.75	5A	4D	
Skagit	Electricians - Powerline Construction	Journey Level Lineperson	$69.75	5A	4D	
Skagit	Electricians - Powerline Construction	Line Equipment Operator	$59.01	5A	4D	
Skagit	Electricians - Powerline Construction	Meter Installer	$46.28	5A	4D	8W
Skagit	Electricians - Powerline Construction	Pole Sprayer	$69.75	5A	4D	
Skagit	Electricians - Powerline Construction	Powderperson	$52.20	5A	4D	
Skagit	Electronic Technicians	Electronic Technicians Journey Level	$38.81	5B	1B	
Skagit	Elevator Constructors	Mechanic	$91.24	7D	4A	
Skagit	Elevator Constructors	Mechanic In Charge	$98.51	7D	4A	
Skagit	Fabricated Precast Concrete Products	Journey Level - In-Factory Work Only	$13.50		1	
Skagit	Fence Erectors	Fence Erector	$12.00		1	
Skagit	Flaggers	Journey Level	$39.48	7A	3I	
Skagit	Glaziers	Journey Level	$61.81	7L	1Y	
Skagit	Heat & Frost Insulators And Asbestos Workers	Journeyman	$67.93	5J	4H	
Skagit	Heating Equipment Mechanics	Mechanic	$62.96	7F	1E	
Skagit	Hod Carriers & Mason Tenders	Journey Level	$48.02	7A	3I	
Skagit	Industrial Power Vacuum Cleaner	Journey Level	$11.50		1	
Skagit	Inland Boatmen	Boat Operator	$61.41	5B	1K	

Skagit	Inland Boatmen	Cook	$56.48	5B	1K	
Skagit	Inland Boatmen	Deckhand	$57.48	5B	1K	
Skagit	Inland Boatmen	Deckhand Engineer	$58.81	5B	1K	
Skagit	Inland Boatmen	Launch Operator	$58.89	5B	1K	
Skagit	Inland Boatmen	Mate	$57.31	5B	1K	
Skagit	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator, Foamer Operator	$11.50		1	
Skagit	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Grout Truck Operator	$11.50		1	
Skagit	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	$12.78		1	
Skagit	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Technician	$11.50		1	
Skagit	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Tv Truck Operator	$11.50		1	
Skagit	Insulation Applicators	Journey Level	$57.18	5D	4C	
Skagit	Ironworkers	Journeyman	$67.88	7N	1O	
Skagit	Laborers	Air, Gas Or Electric Vibrating Screed	$46.57	7A	3I	
Skagit	Laborers	Airtrac Drill Operator	$48.02	7A	3I	
Skagit	Laborers	Ballast Regular Machine	$46.57	7A	3I	
Skagit	Laborers	Batch Weighman	$39.48	7A	3I	
Skagit	Laborers	Brick Pavers	$46.57	7A	3I	
Skagit	Laborers	Brush Cutter	$46.57	7A	3I	
Skagit	Laborers	Brush Hog Feeder	$46.57	7A	3I	
Skagit	Laborers	Burner	$46.57	7A	3I	
Skagit	Laborers	Caisson Worker	$48.02	7A	3I	
Skagit	Laborers	Carpenter Tender	$46.57	7A	3I	
Skagit	Laborers	Caulker	$46.57	7A	3I	
Skagit	Laborers	Cement Dumper-paving	$47.44	7A	3I	
Skagit	Laborers	Cement Finisher Tender	$46.57	7A	3I	
Skagit	Laborers	Change House Or Dry Shack	$46.57	7A	3I	
Skagit	Laborers	Chipping Gun (under 30 Lbs.)	$46.57	7A	3I	
Skagit	Laborers	Chipping Gun(30 Lbs. And Over)	$47.44	7A	3I	
Skagit	Laborers	Choker Setter	$46.57	7A	3I	
Skagit	Laborers	Chuck Tender	$46.57	7A	3I	
Skagit	Laborers	Clary Power Spreader	$47.44	7A	3I	
Skagit	Laborers	Clean-up Laborer	$46.57	7A	3I	
Skagit	Laborers	Concrete Dumper/chute Operator	$47.44	7A	3I	
Skagit	Laborers	Concrete Form Stripper	$46.57	7A	3I	
Skagit	Laborers	Concrete Placement Crew	$47.44	7A	3I	
Skagit	Laborers		$47.44	7A	3I	

		Concrete Saw Operator/core Driller				
Skagit	Laborers	Crusher Feeder	$39.48	7A	3I	
Skagit	Laborers	Curing Laborer	$46.57	7A	3I	
Skagit	Laborers	Demolition: Wrecking & Moving (incl. Charred Material)	$46.57	7A	3I	
Skagit	Laborers	Ditch Digger	$46.57	7A	3I	
Skagit	Laborers	Diver	$48.02	7A	3I	
Skagit	Laborers	Drill Operator (hydraulic,diamond)	$47.44	7A	3I	
Skagit	Laborers	Dry Stack Walls	$46.57	7A	3I	
Skagit	Laborers	Dump Person	$46.57	7A	3I	
Skagit	Laborers	Epoxy Technician	$46.57	7A	3I	
Skagit	Laborers	Erosion Control Worker	$46.57	7A	3I	
Skagit	Laborers	Faller & Bucker Chain Saw	$47.44	7A	3I	
Skagit	Laborers	Fine Graders	$46.57	7A	3I	
Skagit	Laborers	Firewatch	$39.48	7A	3I	
Skagit	Laborers	Form Setter	$46.57	7A	3I	
Skagit	Laborers	Gabian Basket Builders	$46.57	7A	3I	
Skagit	Laborers	General Laborer	$46.57	7A	3I	
Skagit	Laborers	Grade Checker & Transit Person	$48.02	7A	3I	
Skagit	Laborers	Grinders	$46.57	7A	3I	
Skagit	Laborers	Grout Machine Tender	$46.57	7A	3I	
Skagit	Laborers	Groutmen (pressure)including Post Tension Beams	$47.44	7A	3I	
Skagit	Laborers	Guardrail Erector	$46.57	7A	3I	
Skagit	Laborers	Hazardous Waste Worker (level A)	$48.02	7A	3I	
Skagit	Laborers	Hazardous Waste Worker (level B)	$47.44	7A	3I	
Skagit	Laborers	Hazardous Waste Worker (level C)	$46.57	7A	3I	
Skagit	Laborers	High Scaler	$48.02	7A	3I	
Skagit	Laborers	Jackhammer	$47.44	7A	3I	
Skagit	Laborers	Laserbeam Operator	$47.44	7A	3I	
Skagit	Laborers	Maintenance Person	$46.57	7A	3I	
Skagit	Laborers	Manhole Builder-mudman	$47.44	7A	3I	
Skagit	Laborers	Material Yard Person	$46.57	7A	3I	
Skagit	Laborers	Motorman-dinky Locomotive	$47.44	7A	3I	
Skagit	Laborers	Nozzleman (concrete Pump, Green Cutter When Using Combination Of High Pressure Air & Water On Concrete & Rock, Sandblast, Gunite, Shotcrete, Water Bla	$47.44	7A	3I	
Skagit	Laborers	Pavement Breaker	$47.44	7A	3I	
Skagit	Laborers	Pilot Car	$39.48	7A	3I	

Skagit	Laborers	Pipe Layer Lead	$48.02	7A	3I	
Skagit	Laborers	Pipe Layer/tailor	$47.44	7A	3I	
Skagit	Laborers	Pipe Pot Tender	$47.44	7A	3I	
Skagit	Laborers	Pipe Reliner	$47.44	7A	3I	
Skagit	Laborers	Pipe Wrapper	$47.44	7A	3I	
Skagit	Laborers	Pot Tender	$46.57	7A	3I	
Skagit	Laborers	Powderman	$48.02	7A	3I	
Skagit	Laborers	Powderman's Helper	$46.57	7A	3I	
Skagit	Laborers	Power Jacks	$47.44	7A	3I	
Skagit	Laborers	Railroad Spike Puller - Power	$47.44	7A	3I	
Skagit	Laborers	Raker - Asphalt	$48.02	7A	3I	
Skagit	Laborers	Re-timberman	$48.02	7A	3I	
Skagit	Laborers	Remote Equipment Operator	$47.44	7A	3I	
Skagit	Laborers	Rigger/signal Person	$47.44	7A	3I	
Skagit	Laborers	Rip Rap Person	$46.57	7A	3I	
Skagit	Laborers	Rivet Buster	$47.44	7A	3I	
Skagit	Laborers	Rodder	$47.44	7A	3I	
Skagit	Laborers	Scaffold Erector	$46.57	7A	3I	
Skagit	Laborers	Scale Person	$46.57	7A	3I	
Skagit	Laborers	Sloper (over 20")	$47.44	7A	3I	
Skagit	Laborers	Sloper Sprayer	$46.57	7A	3I	
Skagit	Laborers	Spreader (concrete)	$47.44	7A	3I	
Skagit	Laborers	Stake Hopper	$46.57	7A	3I	
Skagit	Laborers	Stock Piler	$46.57	7A	3I	
Skagit	Laborers	Tamper & Similar Electric, Air & Gas Operated Tools	$47.44	7A	3I	
Skagit	Laborers	Tamper (multiple & Self-propelled)	$47.44	7A	3I	
Skagit	Laborers	Timber Person - Sewer (lagger, Shorer & Cribber)	$47.44	7A	3I	
Skagit	Laborers	Toolroom Person (at Jobsite)	$46.57	7A	3I	
Skagit	Laborers	Topper	$46.57	7A	3I	
Skagit	Laborers	Track Laborer	$46.57	7A	3I	
Skagit	Laborers	Track Liner (power)	$47.44	7A	3I	
Skagit	Laborers	Traffic Control Laborer	$42.22	7A	3I	8R
Skagit	Laborers	Traffic Control Supervisor	$42.22	7A	3I	8R
Skagit	Laborers	Truck Spotter	$46.57	7A	3I	
Skagit	Laborers	Tugger Operator	$47.44	7A	3I	
Skagit	Laborers	Tunnel Work-Compressed Air Worker 0-30 psi	$92.60	7A	3I	8Q
Skagit	Laborers	Tunnel Work-Compressed Air Worker 30.01-44.00 psi	$97.63	7A	3I	8Q
Skagit	Laborers	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	$101.31	7A	3I	8Q
Skagit	Laborers	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	$107.01	7A	3I	8Q
Skagit	Laborers		$109.13	7A	3I	8Q

		Tunnel Work-Compressed Air Worker 60.01-64.00 psi				
Skagit	Laborers	Tunnel Work-Compressed Air Worker 64.01-68.00 psi	$114.23	7A	3I	8Q
Skagit	Laborers	Tunnel Work-Compressed Air Worker 68.01-70.00 psi	$116.13	7A	3I	8Q
Skagit	Laborers	Tunnel Work-Compressed Air Worker 70.01-72.00 psi	$118.13	7A	3I	8Q
Skagit	Laborers	Tunnel Work-Compressed Air Worker 72.01-74.00 psi	$120.13	7A	3I	8Q
Skagit	Laborers	Tunnel Work-Guage and Lock Tender	$48.12	7A	3I	8Q
Skagit	Laborers	Tunnel Work-Miner	$48.12	7A	3I	8Q
Skagit	Laborers	Vibrator	$47.44	7A	3I	
Skagit	Laborers	Vinyl Seamer	$46.57	7A	3I	
Skagit	Laborers	Watchman	$35.88	7A	3I	
Skagit	Laborers	Welder	$47.44	7A	3I	
Skagit	Laborers	Well Point Laborer	$47.44	7A	3I	
Skagit	Laborers	Window Washer/cleaner	$35.88	7A	3I	
Skagit	Laborers - Underground Sewer & Water	General Laborer & Topman	$46.57	7A	3I	
Skagit	Laborers - Underground Sewer & Water	Pipe Layer	$47.44	7A	3I	
Skagit	Landscape Construction	Irrigation Or Lawn Sprinkler Installers	$14.15		1	
Skagit	Landscape Construction	Landscape Equipment Operators Or Truck Drivers	$14.15		1	
Skagit	Landscape Construction	Landscaping or Planting Laborers	$14.18		1	
Skagit	Lathers	Journey Level	$56.78	5D	1H	
Skagit	Marble Setters	Journey Level	$55.82	5A	1M	
Skagit	Metal Fabrication (In Shop)	Fitter	$15.16		1	
Skagit	Metal Fabrication (In Shop)	Laborer	$11.50		1	
Skagit	Metal Fabrication (In Shop)	Machine Operator	$11.50		1	
Skagit	Metal Fabrication (In Shop)	Painter	$11.50		1	
Skagit	Metal Fabrication (In Shop)	Welder	$15.16		1	
Skagit	Millwright	Journey Level	$38.36		1	
Skagit	Modular Buildings	Journey Level	$11.50		1	
Skagit	Painters	Journey Level	$41.60	6Z	2B	
Skagit	Pile Driver	Crew Tender	$52.37	5D	4C	
Skagit	Pile Driver	Hyperbaric Worker - Compressed Air Worker 0-30.00 PSI	$71.35	5D	4C	
Skagit	Pile Driver	Hyperbaric Worker - Compressed Air Worker 30.01 - 44.00 PSI	$76.35	5D	4C	
Skagit	Pile Driver	Hyperbaric Worker - Compressed Air Worker 44.01 - 54.00 PSI	$80.35	5D	4C	

Skagit	Pile Driver	Hyperbaric Worker - Compressed Air Worker 54.01 - 60.00 PSI	$85.35	5D	4C	
Skagit	Pile Driver	Hyperbaric Worker - Compressed Air Worker 60.01 - 64.00 PSI	$87.85	5D	4C	
Skagit	Pile Driver	Hyperbaric Worker - Compressed Air Worker 64.01 - 68.00 PSI	$92.85	5D	4C	
Skagit	Pile Driver	Hyperbaric Worker - Compressed Air Worker 68.01 - 70.00 PSI	$94.85	5D	4C	
Skagit	Pile Driver	Hyperbaric Worker - Compressed Air Worker 70.01 - 72.00 PSI	$96.85	5D	4C	
Skagit	Pile Driver	Hyperbaric Worker - Compressed Air Worker 72.01 - 74.00 PSI	$98.85	5D	4C	
Skagit	Pile Driver	Journey Level	$57.43	5D	4C	
Skagit	Plasterers	Journey Level	$54.89	7Q	1R	
Skagit	Playground & Park Equipment Installers	Journey Level	$11.50		1	
Skagit	Plumbers & Pipefitters	Journey Level	$67.47	5A	1G	
Skagit	Power Equipment Operators	Asphalt Plant Operators	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Assistant Engineer	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Barrier Machine (zipper)	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Batch Plant Operator, Concrete	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Bobcat	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Brokk - Remote Demolition Equipment	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Brooms	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Bump Cutter	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Cableways	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Chipper	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Compressor	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Concrete Finish Machine -laser Screed	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure.	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Conveyors	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Cranes Friction: 200 tons and over	$62.33	7A	3C	8P
Skagit	Power Equipment Operators		$59.96	7A	3C	8P

		Cranes: 20 Tons Through 44 Tons With Attachments				
Skagit	Power Equipment Operators	Cranes: 100 Tons Through 199 Tons, Or 150' Of Boom (Including Jib With Attachments)	$61.10	7A	3C	8P
Skagit	Power Equipment Operators	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	$61.72	7A	3C	8P
Skagit	Power Equipment Operators	Cranes: 300 tons and over or 300' of boom including jib with attachments	$62.33	7A	3C	8P
Skagit	Power Equipment Operators	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Cranes: A-frame - 10 Tons And Under	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Cranes: Friction cranes through 199 tons	$61.72	7A	3C	8P
Skagit	Power Equipment Operators	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Crusher	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Deck Engineer/deck Winches (power)	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Derricks, On Building Work	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Dozers D-9 & Under	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Drilling Machine	$61.10	7A	3C	8P
Skagit	Power Equipment Operators	Elevator And Man-lift: Permanent And Shaft Type	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Forklift: 3000 Lbs And Over With Attachments	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Forklifts: Under 3000 Lbs. With Attachments	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Gradechecker/stakeman	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Guardrail Punch	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Horizontal/directional Drill Locator	$59.49	7A	3C	8P

Skagit	Power Equipment Operators	Horizontal/directional Drill Operator	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Hydralifts/boom Trucks Over 10 Tons	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Hydralifts/boom Trucks, 10 Tons And Under	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Loader, Overhead 8 Yards. & Over	$61.10	7A	3C	8P
Skagit	Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Loaders, Overhead Under 6 Yards	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Loaders, Plant Feed	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Loaders: Elevating Type Belt	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Locomotives, All	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Material Transfer Device	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Mechanics, All (leadmen - $0.50 Per Hour Over Mechanic)	$61.10	7A	3C	8P
Skagit	Power Equipment Operators	Motor Patrol Graders	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Outside Hoists (elevators And Manlifts), Air Tuggers,strato	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Overhead, Bridge Type: 100 Tons And Over	$61.10	7A	3C	8P
Skagit	Power Equipment Operators	Overhead, Bridge Type: 45 Tons Through 99 Tons	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Pavement Breaker	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Pile Driver (other Than Crane Mount)	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Plant Oiler - Asphalt, Crusher	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Posthole Digger, Mechanical	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Power Plant	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Pumps - Water	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Quad 9, Hd 41, D10 And Over	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Rigger And Bellman	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Rigger/Signal Person, Bellman (Certified)	$59.49	7A	3C	8P

Skagit	Power Equipment Operators	Rollagon	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Roller, Other Than Plant Mix	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Roto-mill, Roto-grinder	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Saws - Concrete	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Scrapers - Concrete & Carry All	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Service Engineers - Equipment	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Shotcrete/gunite Equipment	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	$61.10	7A	3C	8P
Skagit	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	$61.72	7A	3C	8P
Skagit	Power Equipment Operators	Slipform Pavers	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Spreader, Topsider & Screedman	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Subgrader Trimmer	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Tower Bucket Elevators	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Tower Crane Up To 175' In Height Base To Boom	$61.10	7A	3C	8P
Skagit	Power Equipment Operators	Tower Crane: over 175’ through 250’ in height, base to boom	$61.72	7A	3C	8P
Skagit	Power Equipment Operators	Tower Cranes: over 250’ in height from base to boom	$62.33	7A	3C	8P
Skagit	Power Equipment Operators	Transporters, All Track Or Truck Type	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Trenching Machines	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Truck Crane Oiler/driver - 100 Tons And Over	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Truck Crane Oiler/driver Under 100 Tons	$59.49	7A	3C	8P
Skagit	Power Equipment Operators	Truck Mount Portable Conveyor	$59.96	7A	3C	8P
Skagit	Power Equipment Operators	Welder	$60.49	7A	3C	8P
Skagit	Power Equipment Operators	Wheel Tractors, Farmall Type	$56.90	7A	3C	8P
Skagit	Power Equipment Operators	Yo Yo Pay Dozer	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Asphalt Plant Operators	$60.49	7A	3C	8P

Skagit	Power Equipment Operators-Underground Sewer & Water	Assistant Engineer	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Barrier Machine (zipper)	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Batch Plant Operator, Concrete	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Bobcat	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Brokk - Remote Demolition Equipment	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Brooms	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Bump Cutter	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Cableways	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Chipper	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Compressor	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Concrete Finish Machine -laser Screed	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure.	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Conveyors	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Cranes Friction: 200 tons and over	$62.33	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Cranes: 20 Tons Through 44 Tons With Attachments	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Cranes: 100 Tons Through 199 Tons, Or 150' Of Boom (Including Jib With Attachments)	$61.10	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Cranes: 200 tons- 299 tons, or 250’ of boom including jib with attachments	$61.72	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Cranes: 300 tons and over or 300’ of boom including jib with attachments	$62.33	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	$60.49	7A	3C	8P
Skagit			$56.90	7A	3C	8P

	Power Equipment Operators-Underground Sewer & Water	Cranes: A-frame - 10 Tons And Under				
Skagit	Power Equipment Operators-Underground Sewer & Water	Cranes: Friction cranes through 199 tons	$61.72	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Crusher	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Deck Engineer/deck Winches (power)	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Derricks, On Building Work	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Dozers D-9 & Under	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Drill Oilers: Auger Type, Truck Or Crane Mount	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Drilling Machine	$61.10	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Elevator And Man-lift: Permanent And Shaft Type	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Finishing Machine, Bidwell And Gamaco & Similar Equipment	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Forklift: 3000 Lbs And Over With Attachments	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Forklifts: Under 3000 Lbs. With Attachments	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Gradechecker/stakeman	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Guardrail Punch	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Horizontal/directional Drill Locator	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Horizontal/directional Drill Operator	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Hydralifts/boom Trucks Over 10 Tons	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Hydralifts/boom Trucks, 10 Tons And Under	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Loader, Overhead 8 Yards. & Over	$61.10	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Loader, Overhead, 6 Yards. But Not Including 8 Yards	$60.49	7A	3C	8P

Skagit	Power Equipment Operators-Underground Sewer & Water	Loaders, Overhead Under 6 Yards	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Loaders, Plant Feed	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Loaders: Elevating Type Belt	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Locomotives, All	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Material Transfer Device	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Mechanics, All (leadmen - $0.50 Per Hour Over Mechanic)	$61.10	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Motor Patrol Graders	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Oil Distributors, Blower Distribution & Mulch Seeding Operator	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Outside Hoists (elevators And Manlifts), Air Tuggers,strato	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Overhead, Bridge Type: 100 Tons And Over	$61.10	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Overhead, Bridge Type: 45 Tons Through 99 Tons	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Pavement Breaker	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Pile Driver (other Than Crane Mount)	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Plant Oiler - Asphalt, Crusher	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Posthole Digger, Mechanical	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Power Plant	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Pumps - Water	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Quad 9, Hd 41, D10 And Over	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Remote Control Operator On Rubber Tired Earth Moving Equipment	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Rigger And Bellman	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Rigger/Signal Person, Bellman (Certified)	$59.49	7A	3C	8P

Skagit	Power Equipment Operators-Underground Sewer & Water	Rollagon	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Roller, Other Than Plant Mix	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Roller, Plant Mix Or Multi-lift Materials	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Roto-mill, Roto-grinder	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Saws - Concrete	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Scraper, Self Propelled Under 45 Yards	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Scrapers - Concrete & Carry All	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Scrapers, Self-propelled: 45 Yards And Over	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Service Engineers - Equipment	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Shotcrete/gunite Equipment	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	$61.10	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 90 Metric Tons	$61.72	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Slipform Pavers	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Spreader, Topsider & Screedman	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Subgrader Trimmer	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Tower Bucket Elevators	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Tower Crane Up To 175' In Height Base To Boom	$61.10	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Tower Crane: over 175’ through 250’ in height, base to boom	$61.72	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Tower Cranes: over 250’ in height from base to boom	$62.33	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Transporters, All Track Or Truck Type	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Trenching Machines	$59.49	7A	3C	8P

Skagit	Power Equipment Operators-Underground Sewer & Water	Truck Crane Oiler/driver - 100 Tons And Over	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Truck Crane Oiler/driver Under 100 Tons	$59.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Truck Mount Portable Conveyor	$59.96	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Welder	$60.49	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Wheel Tractors, Farmall Type	$56.90	7A	3C	8P
Skagit	Power Equipment Operators-Underground Sewer & Water	Yo Yo Pay Dozer	$59.96	7A	3C	8P
Skagit	Power Line Clearance Tree Trimmers	Journey Level In Charge	$50.02	5A	4A	
Skagit	Power Line Clearance Tree Trimmers	Spray Person	$47.43	5A	4A	
Skagit	Power Line Clearance Tree Trimmers	Tree Equipment Operator	$50.02	5A	4A	
Skagit	Power Line Clearance Tree Trimmers	Tree Trimmer	$44.64	5A	4A	
Skagit	Power Line Clearance Tree Trimmers	Tree Trimmer Groundperson	$33.67	5A	4A	
Skagit	Refrigeration & Air Conditioning Mechanics	Journey Level	$23.95		1	
Skagit	Residential Brick Mason	Journey Level	$25.00		1	
Skagit	Residential Carpenters	Journey Level	$20.53		1	
Skagit	Residential Cement Masons	Journey Level	$16.00		1	
Skagit	Residential Drywall Applicators	Journey Level	$42.86	5D	4C	
Skagit	Residential Drywall Tapers	Journey Level	$30.00		1	
Skagit	Residential Electricians	JOURNEY LEVEL	$28.93		1	
Skagit	Residential Glaziers	Journey Level	$41.05	7L	1H	
Skagit	Residential Insulation Applicators	Journey Level	$13.96		1	
Skagit	Residential Laborers	Journey Level	$18.46		1	
Skagit	Residential Marble Setters	Journey Level	$25.00		1	
Skagit	Residential Painters	Journey Level	$15.00		1	
Skagit	Residential Plumbers & Pipefitters	Journey Level	$42.05	5A	1G	
Skagit	Residential Refrigeration & Air Conditioning Mechanics	Journey Level	$39.88	5A	1G	
Skagit	Residential Sheet Metal Workers	Journey Level (Field or Shop)	$20.91		1	
Skagit	Residential Soft Floor Layers	Journey Level	$23.46		1	
Skagit	Residential Sprinkler Fitters (Fire Protection)	Journey Level	$29.76		1	
Skagit	Residential Stone Masons	Journey Level	$25.00		1	
Skagit	Residential Terrazzo Workers	Journey Level	$25.00		1	
Skagit	Residential Terrazzo/Tile Finishers	Journey Level	$27.75		1	

Skagit	Residential Tile Setters	Journey Level	$25.00		1	
Skagit	Roofers	Journey Level	$31.84		1	
Skagit	Sheet Metal Workers	Journey Level (Field or Shop)	$62.96	7F	1E	
Skagit	Shipbuilding & Ship Repair	Carpenter	$21.69		1	
Skagit	Shipbuilding & Ship Repair	Electrician	$18.72		1	
Skagit	Shipbuilding & Ship Repair	Heat & Frost Insulator	$67.93	5J	4H	
Skagit	Shipbuilding & Ship Repair	Laborer	$11.71		1	
Skagit	Shipbuilding & Ship Repair	Machinist	$18.72		1	
Skagit	Shipbuilding & Ship Repair	Operator	$18.72		1	
Skagit	Shipbuilding & Ship Repair	Painter	$18.72		1	
Skagit	Shipbuilding & Ship Repair	Pipefitter	$18.72		1	
Skagit	Shipbuilding & Ship Repair	Welder/burner	$18.72		1	
Skagit	Sign Makers & Installers (Electrical)	Journey Level	$16.03		1	
Skagit	Sign Makers & Installers (Non-Electrical)	Journey Level	$13.28		1	
Skagit	Soft Floor Layers	Journey Level	$47.61	5A	3J	
Skagit	Solar Controls For Windows	Journey Level	$11.50		1	
Skagit	Sprinkler Fitters (Fire Protection)	Journey Level	$75.64	5C	1X	
Skagit	Stage Rigging Mechanics (Non Structural)	Journey Level	$13.23		1	
Skagit	Stone Masons	Journey Level	$55.82	5A	1M	
Skagit	Street And Parking Lot Sweeper Workers	Journey Level	$15.00		1	
Skagit	Surveyors	Assistant Construction Site Surveyor	$59.49	7A	3C	8P
Skagit	Surveyors	Chainman	$58.93	7A	3C	8P
Skagit	Surveyors	Construction Site Surveyor	$60.49	7A	3C	8P
Skagit	Telecommunication Technicians	Journey Level	$27.65		1	
Skagit	Telephone Line Construction - Outside	Cable Splicer	$40.52	5A	2B	
Skagit	Telephone Line Construction - Outside	Hole Digger/Ground Person	$22.78	5A	2B	
Skagit	Telephone Line Construction - Outside	Installer (Repairer)	$38.87	5A	2B	
Skagit	Telephone Line Construction - Outside	Special Aparatus Installer I	$40.52	5A	2B	
Skagit	Telephone Line Construction - Outside	Special Apparatus Installer II	$39.73	5A	2B	
Skagit	Telephone Line Construction - Outside	Telephone Equipment Operator (Heavy)	$40.52	5A	2B	
Skagit	Telephone Line Construction - Outside	Telephone Equipment Operator (Light)	$37.74	5A	2B	
Skagit	Telephone Line Construction - Outside	Telephone Lineperson	$37.74	5A	2B	
Skagit	Telephone Line Construction - Outside	Television Groundperson	$21.60	5A	2B	

Skagit	Telephone Line Construction - Outside	Television Lineperson/Installer	$28.68	5A	2B	
Skagit	Telephone Line Construction - Outside	Television System Technician	$34.10	5A	2B	
Skagit	Telephone Line Construction - Outside	Television Technician	$30.69	5A	2B	
Skagit	Telephone Line Construction - Outside	Tree Trimmer	$37.74	5A	2B	
Skagit	Terrazzo Workers	Journey Level	$51.36	5A	1M	
Skagit	Tile Setters	Journey Level	$51.36	5A	1M	
Skagit	Tile, Marble & Terrazzo Finishers	Journey Level	$25.00		1	
Skagit	Traffic Control Stripers	Journey Level	$45.43	7A	1K	
Skagit	Truck Drivers	Asphalt Mix Over 16 Yards (W. WA-Joint Council 28)	$52.70	5D	3A	8L
Skagit	Truck Drivers	Asphalt Mix To 16 Yards (W. WA-Joint Council 28)	$51.86	5D	3A	8L
Skagit	Truck Drivers	Dump Truck	$16.98		1	
Skagit	Truck Drivers	Dump Truck And Trailer	$16.98		1	
Skagit	Truck Drivers	Other Trucks (W. WA-Joint Council 28)	$52.70	5D	3A	8L
Skagit	Truck Drivers	Transit Mixer	$32.12		1	
Skagit	Well Drillers & Irrigation Pump Installers	Irrigation Pump Installer	$11.60		1	
Skagit	Well Drillers & Irrigation Pump Installers	Oiler	$11.50		1	
Skagit	Well Drillers & Irrigation Pump Installers	Well Driller	$11.60		1	

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Overtime Codes

Overtime calculations are based on the hourly rate actually paid to the worker. On public works projects, the hourly rate must be not less than the prevailing rate of wage minus the hourly rate of the cost of fringe benefits actually provided for the worker.

1. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

B. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

C. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

D. The first two (2) hours before or after a five-eight (8) hour workweek day or a four-ten (10) hour workweek day and the first eight (8) hours worked the next day after either workweek shall be paid at one and one-half times the hourly rate of wage. All additional hours worked and all worked on Sundays and holidays shall be paid at double the hourly rate of wage.

E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.

G. The first ten (10) hours worked on Saturdays and the first ten (10) hours worked on a fifth calendar weekday in a four-ten hour schedule, shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

H. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions or equipment breakdown) shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

I. All hours worked on Sundays and holidays shall also be paid at double the hourly rate of wage.

J. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage.

K. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

M. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

N. All hours worked on Saturdays (except makeup days) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

Overtime Codes Continued

1. O. The first ten (10) hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays, holidays and after twelve (12) hours, Monday through Friday and after ten (10) hours on Saturday shall be paid at double the hourly rate of wage.

P. All hours worked on Saturdays (except makeup days if circumstances warrant) and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

Q. The first two (2) hours after eight (8) regular hours Monday through Friday and up to ten (10) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays (except Christmas day) shall be paid at double the hourly rate of wage. All hours worked on Christmas day shall be paid at two and one-half times the hourly rate of wage.

R. All hours worked on Sundays and holidays shall be paid at two times the hourly rate of wage.

S. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays and all other overtime hours worked, except Labor Day, shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.

U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays (except Labor Day) shall be paid at two times the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.

V. All hours worked on Sundays and holidays (except Thanksgiving Day and Christmas day) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Thanksgiving Day and Christmas day shall be paid at double the hourly rate of wage.

W. All hours worked on Saturdays and Sundays (except make-up days due to conditions beyond the control of the employer)) shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

X. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over twelve (12) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage. When holiday falls on Saturday or Sunday, the day before Saturday, Friday, and the day after Sunday, Monday, shall be considered the holiday and all work performed shall be paid at double the hourly rate of wage.

Y. All hours worked outside the hours of 5:00 am and 5:00 pm (or such other hours as may be agreed upon by any employer and the employee) and all hours worked in excess of eight (8) hours per day (10 hours per day for a 4 x 10 workweek) and on Saturdays and holidays (except labor day) shall be paid at one and one-half times the hourly rate of wage. (except for employees who are absent from work without prior approval on a scheduled workday during the workweek shall be paid at the straight-time rate until they have worked 8 hours in a day (10 in a 4 x 10 workweek) or 40 hours during that workweek.) All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and Labor Day shall be paid at double the hourly rate of wage.

Z. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid the straight time rate of pay in addition to holiday pay.

Overtime Codes Continued

2. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

   B. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.

   C. All hours worked on Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at two times the hourly rate of wage.

   F. The first eight (8) hours worked on holidays shall be paid at the straight hourly rate of wage in addition to the holiday pay. All hours worked in excess of eight (8) hours on holidays shall be paid at double the hourly rate of wage.

   G. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on paid holidays shall be paid at two and one-half times the hourly rate of wage including holiday pay.

   H. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.

   O. All hours worked on Sundays and holidays shall be paid at one and one-half times the hourly rate of wage.

   R. All hours worked on Sundays and holidays and all hours worked over sixty (60) in one week shall be paid at double the hourly rate of wage.

   U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked over 12 hours in a day or on Sundays and holidays shall be paid at double the hourly rate of wage.

   W. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage. On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The first eight (8) hours worked on the fifth day shall be paid at one and one-half times the hourly rate of wage. All other hours worked on the fifth, sixth, and seventh days and on holidays shall be paid at double the hourly rate of wage.

3. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

   A. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal shift, and all work on Saturdays shall be paid at time and one-half the straight time rate. Hours worked over twelve hours (12) in a single shift and all work performed after 6:00 pm Saturday to 6:00 am Monday and holidays shall be paid at double the straight time rate of pay. Any shift starting between the hours of 6:00 pm and midnight shall receive an additional one dollar ($1.00) per hour for all hours worked that shift. The employer shall have the sole discretion to assign overtime work to employees. Primary consideration for overtime work shall be given to employees regularly assigned to the work to be performed on overtime situations. After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

   C. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays shall be paid at double the hourly rate of wage. After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

Overtime Codes Continued

3. E. All hours worked Sundays and holidays shall be paid at double the hourly rate of wage. Each week, once 40 hours of straight time work is achieved, then any hours worked over 10 hours per day Monday through Saturday shall be paid at double the hourly wage rate.

F. All hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on paid holidays shall be paid at two and one-half times the hourly rate of wage including holiday pay.

H. All work performed on Sundays between March 16th and October 14th and all Holidays shall be compensated for at two (2) times the regular rate of pay. Work performed on Sundays between October 15th and March 15th shall be compensated at one and one half (1-1/2) times the regular rate of pay.

I. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. In the event the job is down due to weather conditions during a five day work week (Monday through Friday,) or a four day-ten hour work week (Tuesday through Friday,) then Saturday may be worked as a voluntary make-up day at the straight time rate. However, Saturday shall not be utilized as a make-up day when a holiday falls on Friday. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

J. All hours worked between the hours of 10:00 pm and 5:00 am, Monday through Friday, and all hours worked on Saturdays shall be paid at a one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

4. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.

A. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage.

B. All hours worked over twelve (12) hours per day and all hours worked on holidays shall be paid at double the hourly rate of wage.

C. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay. On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay, except that if the job is down on Monday through Friday due to weather conditions or other conditions outside the control of the employer, the first ten (10) hours on Saturday may be worked at the straight time rate of pay. All hours worked over twelve (12) hours in a day and all hours worked on Sunday and Holidays shall be paid at two (2) times the straight time rate of pay.

Overtime Codes Continued

4. D. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturday, Sundays and holidays shall be paid at double the hourly rate of pay. Rates include all members of the assigned crew.

EXCEPTION:
On all multipole structures and steel transmission lines, switching stations, regulating, capacitor stations, generating plants, industrial plants, associated installations and substations, except those substations whose primary function is to feed a distribution system, will be paid overtime under the following rates:

The first two (2) hours after eight (8) regular hours Monday through Friday of overtime on a regular workday, shall be paid at one and one-half times the hourly rate of wage. All hours in excess of ten (10) hours will be at two (2) times the hourly rate of wage. The first eight (8) hours worked on Saturday will be paid at one and one-half (1-1/2) times the hourly rate of wage. All hours worked in excess of eight (8) hours on Saturday, and all hours worked on Sundays and holidays will be at the double the hourly rate of wage.

All overtime eligible hours performed on the above described work that is energized, shall be paid at the double the hourly rate of wage.

E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The Monday or Friday not utilized in the normal four-day, ten hour work week, and Saturday shall be paid at one and one half (1½) times the regular shift rate for the first eight (8) hours. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

F. All hours worked between the hours of 6:00 pm and 6:00 am, Monday through Saturday, shall be paid at a premium rate of 20% over the hourly rate of wage. All hours worked on Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.

G. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

H. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, and all hours on Sunday shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.

Holiday Codes

5. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, and Christmas Day (7).

B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, the day before Christmas, and Christmas Day (8).

C. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).

Holiday Codes Continued

5. D. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8).

H. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Day after Thanksgiving Day, And Christmas (6).

I. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).

J. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Eve Day, And Christmas Day (7).

K. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9).

L. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (8).

N. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, The Friday After Thanksgiving Day, And Christmas Day (9).

P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday And Saturday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9). If A Holiday Falls On Sunday, The Following Monday Shall Be Considered As A Holiday.

Q. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).

R. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day After Thanksgiving Day, One-Half Day Before Christmas Day, And Christmas Day. (7 1/2).

S. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, And Christmas Day (7).

T. Paid Holidays: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, Christmas Day, And The Day Before Or After Christmas (9).

Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).

6. A. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).

E. Paid Holidays: New Year's Day, Day Before Or After New Year's Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and a Half-Day On Christmas Eve Day. (9 1/2).

G. Paid Holidays: New Year's Day, Martin Luther King Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Christmas Eve Day (11).

Holiday Codes Continued

6. H. Paid Holidays: New Year's Day, New Year's Eve Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (10).

I. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, And Christmas Day (7).

T. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Last Working Day Before Christmas Day, And Christmas Day (9).

Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). If a holiday falls on Saturday, the preceding Friday shall be considered as the holiday. If a holiday falls on Sunday, the following Monday shall be considered as the holiday.

7. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any Holiday Which Falls On A Sunday Shall Be Observed As A Holiday On The Following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

C. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

D. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Unpaid Holidays: President's Day. Any paid holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any paid holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

E. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

F. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the last working day before Christmas day and Christmas day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

G. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Holiday Codes Continued

7. I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

J. Holidays: New Year's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

L. Holidays: New Year's Day, Memorial Day, Labor Day, Independence Day, Thanksgiving Day, the Last Work Day before Christmas Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

M. Paid Holidays: New Year's Day, The Day after or before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, And the Day after or before Christmas Day (10). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. When Christmas falls on a Saturday, the preceding Friday shall be observed as a holiday.

P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

Q. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.

R. Paid Holidays: New Year's Day, the day after or before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and the day after or before Christmas Day (10). If any of the listed holidays fall on Saturday, the preceding Friday shall be observed as the holiday. If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

S. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Day, the Day after Christmas, and A Floating Holiday (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

Holiday Codes Continued

T. Paid Holidays: New Year's Day, the Day after or before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and The Day after or before Christmas Day. (10). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Note Codes

8. D. Workers working with supplied air on hazmat projects receive an additional $1.00 per hour.

L. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $0.75, Level B: $0.50, And Level C: $0.25.

M. Workers on hazmat projects receive additional hourly premiums as follows: Levels A & B: $1.00, Levels C & D: $0.50.

N. Workers on hazmat projects receive additional hourly premiums as follows -Level A: $1.00, Level B: $0.75, Level C: $0.50, And Level D: $0.25.

P. Workers on hazmat projects receive additional hourly premiums as follows -Class A Suit: $2.00, Class B Suit: $1.50, Class C Suit: $1.00, And Class D Suit $0.50.

Q. The highest pressure registered on the gauge for an accumulated time of more than fifteen (15) minutes during the shift shall be used in determining the scale paid.

R. Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. These classifications are only effective on or after August 31, 2012.

S. Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.

T. Effective August 31, 2012 – A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.

Note Codes Continued

8. U. Workers on hazmat projects receive additional hourly premiums as follows – Class A Suit: $2.00, Class B Suit: $1.50, And Class C Suit: $1.00. Workers performing underground work receive an additional $0.40 per hour for any and all work performed underground, including operating, servicing and repairing of equipment. The premium for underground work shall be paid for the entire shift worked. Workers who work suspended by a rope or cable receive an additional $0.50 per hour. The premium for work suspended shall be paid for the entire shift worked. Workers who do “pioneer” work (break open a cut, build road, etc.) more than one hundred fifty (150) feet above grade elevation receive an additional $0.50 per hour.

V. In addition to the hourly wage and fringe benefits, the following depth and enclosure premiums shall be paid. The premiums are to be calculated for the maximum depth and distance into an enclosure that a diver reaches in a day. The premiums are to be paid one time for the day and are not used in calculating overtime pay.

Depth premiums apply to depths of fifty feet or more. Over 50' to 100' - $2.00 per foot for each foot over 50 feet. Over 101' to 150' - $3.00 per foot for each foot over 101 feet. Over 151' to 220' - $4.00 per foot for each foot over 220 feet. Over 221' - $5.00 per foot for each foot over 221 feet.

Enclosure premiums apply when divers enter enclosures (such as pipes or tunnels) where there is no vertical ascent and is measured by the distance travelled from the entrance. 25’ to 300’ - $1.00 per foot from entrance. 300’ to 600’ - $1.50 per foot beginning at 300’. Over 600’ - $2.00 per foot beginning at 600’.

W. Meter Installers work on single phase 120/240V self-contained residential meters. The Lineman/Groundmen rates would apply to meters not fitting this description.

APPENDIX C

Construction Contract and Contract Bond-Informational Only

CONSTRUCTION CONTRACT AGREEMENT

THIS AGREEMENT, effective upon the date of mutual execution, is made and entered into between Skagit County, Washington, and _____, hereinafter called the Contractor.

WITNESSETH:
That in consideration of the terms and conditions contained herein and attached and made a part of this agreement, the parties hereto covenant and agree as follows:

I. The Contractor shall do all work and furnish all tools, materials, equipment, and transportation required for the construction of **2018 HMA Overlay Project #ESHMA18-1** in accordance with and as described in the attached plans and specifications and the Washington State Department of Transportation *Standard Specifications for Road, Bridge, and Municipal Construction M 41-10 2016 edition*, which are by this reference incorporated herein and made a part hereof, and shall perform any changes to the work in accord with the Contract Documents.

II. The Contractor shall provide and bear the expense of all equipment, work, and labor of any sort whatsoever that may be required for the transfer of materials and for constructing and completing the work provided for in this contract and every part thereof and shall guarantee said materials and work for a period of one year after substantial completion of this contract, except as may be modified by the plans, specifications and/or contract documents.

III. Skagit County, Washington, hereby promises and agrees with the Contractor to retain and does retain the Contractor to provide the materials and to do and cause to be done the above-described work and to complete and finish the same according to the attached plans and specifications and the terms and conditions herein contained, and hereby contracts to pay for the same according to the attached specifications and the schedule of prices bid and hereto attached, at the time and in the manner and upon the conditions provided for in this contract.

IV. The Contractor for himself/herself, and for his/her heirs, executors, administrators, successors, and assigns, does hereby agree to full performance of all covenants required of the Contractor in the contract.

V. It is further provided that no liability shall attach to Skagit County by reason of entering into this contract, except as provided herein.

IN WITNESS WHEREOF the Contractor has executed this instrument on the day and year first below written, and the Authorized Official has caused this instrument to be executed by and in the name of Skagit County the day and year first above written.

CONTRACTOR

Signature _____ Mailing Address:

Printed _____

Title _____

Date _____ Telephone No. (___) ____-____

DATED this _____ day of _____, 2018.

BOARD OF COUNTY COMMISSIONERS
SKAGIT COUNTY, WASHINGTON

_____
Kenneth A. Dahlstedt, Chair

_____
Lisa Janicki, Commissioner

Attest: _____
Ron Wesen, Commissioner

_____
Clerk of the Board

For contracts under $5,000:
Authorization per Resolution R20030146

Recommended: _____
County Administrator

_____
Department Head

Approved as to form:

_____
Civil Deputy Prosecuting Attorney

Approved as to indemnification:

_____
Risk Manager

Approved as to budget:

_____
Budget & Finance Director

CONTRACT BOND

KNOW ALL MEN BY THESE PRESENTS, that Skagit County, a Municipal Corporation of Washington, has awarded _____ of _____, as Principal, and _____ as Surety, are jointly and severally held and bound unto the County of Skagit in the penal sum of _____ ($_____), dollars, for the payment of which we jointly and severely bind ourselves, our heirs, executors, administrators, and assigns, and successors and assigns, firmly by these presents.

THE CONDITION of this bond is such that whereas, on the _____ day of _____ A.D., 2018, the said Principal, herein, executed a certain contract with the County of Skagit by the items, conditions and provisions of which contract the said _____, Principal, herein agree to furnish all material and do certain work, to wit: That _____ will undertake and complete the construction of

2018 HMA Overlay Project #ESHMA18-1

according to the maps, plans and specifications made a part of said contract, which contract as so executed, is hereunto attached, is now referred to and by reference is incorporated herein and made a part hereof as fully for all purposes as if here set forth at length. The bond shall cover all approved change orders as if they were in the original contract.

NOW, THEREFORE, if the Principal herein shall faithfully and truly observe and comply with the terms, conditions and provisions of said contract in all respects and shall well and truly and fully do and perform all matters and things by _____ (principal) undertaken to be performed under said contract, upon the terms proposed therein, and within the time prescribed therein, and until the same is accepted, and shall pay all laborers, mechanics, subcontractors and material men, and all persons who shall supply such contractor or subcontractor with provisions and supplies for the carrying on of such work, and shall in all respects faithfully perform said contract according to law, then this obligation to be void, otherwise to remain in full force and effect.

WITNESS our hands this _____ day of _____, 2018.

_____

_____

_____

(Principal)

_____

_____

_____

Attorney-in-Fact, Surety

_____

Name and Address
Local Office of Agent

APPROVED AS TO FORM
RICH WEYRICH
Skagit County Prosecuting Attorney

APPROVED AS TO FORM
JESSICA NEIL HOYSON
Skagit County Risk Manager

BY: _____
Approving Authority

DATE: _____, 2018

_____
SURETY BOND NUMBER

_____
CONTRACT NUMBER

_____

_____

APPENDIX D

Proposal Forms-Informational Only

Proposal for Bidding Purposes

For Construction of:

2018 HMA OVERLAY PROJECT #ESHMA18-1

SKAGIT COUNTY PUBLIC WORKS

SKAGIT COUNTY
Public Works Department
1800 Continental Place
Mount Vernon, WA 98273

PROPOSAL

2018 HMA OVERLAY PROJECT
PROJECT #ESHMA17-1

All bid envelopes must be plainly marked on the outside, **"Sealed Bid, 2018 HMA Overlay Project #ESHMA18-1**

Sealed Bids will be received at the following location before the specified time:

Bids may be hand delivered to: The Reception Desk of Skagit County Commissioners Office, located at 1800 Continental Place, Mount Vernon, WA.

Bids may be mailed to: Skagit County Commissioners
1800 Continental Place, Suite 100
Mount Vernon, Washington, 98273

The bid opening date for this project will be **Monday, April 16, 2018.** The bids will be publicly opened and read after **2:30 p.m.** on this date.

Bid Advertisement: Skagit Valley Herald –March 29 and April 5, 2018

ENTIRE PROPOSAL TO BE RETURNED AS YOUR BID PACKAGE

FAILURE TO SIGN OR COMPLETE ALL INFORMATION ON THE FORMS PROVIDED CAN RESULT IN REJECTION OF THE PROPOSAL AS NON-RESPONSIVE

PROPOSAL

BOARD OF SKAGIT COUNTY COMMISSIONERS
MOUNT VERNON, WASHINGTON 98273

Attention:

This certifies that the undersigned has examined the locations of:

2018 HMA OVERLAY PROJECT #ESHMA18-1

and that the plans, specifications and contract governing the work embraced in this improvement, and the method by which payment will be made for said work is understood. The undersigned hereby proposes to undertake and complete the work embraced in this improvement, or as much thereof as can be completed with the money available in accordance with the said plans, specifications, and contract, and the following schedule of rates and prices:

Note: for work performed on this project the contractor should refer to Section 1-07.2(1) of the contract provisions and Department of Revenue Rule #171.

(Note: Unit prices for all items, all extensions, and total amount of bid shall be shown. All entries must be typed or entered in ink.)

2018 HMA OVERLAY PROJECT #ESHMA18-1

Item No.	Description	Spec	QTY	Unit of Measure	Unit Price	Total Price
1	MOBILIZATION	1-09.7	1.00	LS	$_____ .___	$_____ .___
2	SPCC PLAN	1-07.5(1)	1.00	LS	$_____ .___	$_____ .___
3	UNANTICIPATED SITE WORK	1-09.6 SP	EST	DOL	$ **1.00**	$ **5,000.00**
4	TRAFFIC CONTROL LABOR	1-10.5(2)	400.00	HR	$_____ .___	$_____ .___
5	TRAFFIC CONTROL SUPERVISOR	1-10.5(2)	1.00	LS	$_____ .___	$_____ .___
6	OTHER TEMPORARY TRAFFIC CONTROL	1-10.5(2)	1.00	LS	$_____ .___	$_____ .___

7	CONSTRUCTION SIGNS CLASS A	1-10.5(2)	247.00	SF	$_____ .___	$_____ .___
8	REMOVING MISC. TRAFFIC ITEM	2-02.5 SP	1.00	LS	$_____ .___	$_____ .___
9	TRIMMING AND CLEANUP	2-11.5	1.00	LS	$_____ .___	$_____ .___
10	PLANNING BITUMINOUS PAVEMENT	5-04.5 SP	23,745.00	SY	$_____ .___	$_____ .___
11	HMA CL 1/2" PG 64-22	5-04.5 SP	2,850.00	TON	$_____ .___	$_____ .___
12	ESC LEAD	8-01.5	1.00	DAY	$_____ .___	$_____ .___
13	EROSION CONTROL	8-01.5	1.00	LS	$_____ .___	$_____ .___
14	ADJUST MONUMENT CASE AND COVER	8-13.5 SP	1.00	EA	$_____ .___	$_____ .___
					TOTAL BID	**$**_____ **.**___

FOR WORK PERFORMED ON THIS PROJECT THE CONTRACTOR SHOULD REFER TO SECTION 1-07.2(1) OF THE CONTRACT PROVISIONS AND DEPARTMENT OF REVENUE RULE #171.

PROPOSAL – Signature Page

The bidder is hereby advised that by signature of this proposal he/she is deemed to have acknowledged all requirements and signed all certificates contained herein.

The undersigned hereby agrees to pay labor not less than the prevailing rates of wages in accordance with the requirements of the special provisions for this project.

A proposal guaranty in an amount of five percent (5%) of the total bid based upon the approximate estimate of quantities at the above prices and in the form as indicated below is attached hereto:

☐	CASHIER'S CHECK	In the amount of $_____Dollars
☐	CERTIFIED CHECK (Payable to Skagit County)	In the amount of $_____Dollars
☐	PROPOSAL BOND	In the amount five percent (5%) of the total bid.

Receipt is hereby acknowledged of Addendum(s) No. (s) _____, _____, & _____

Signature of Authorized Officials(s):

Proposal Must Be Signed →

_____

_____

PRINT NAME

Firm Name: _____

Address: _____

_____

_____

Telephone No.: _____

State of Washington Contractor's License No._____

UBI No._____

Employment Security Department No._____

Note:

(1) This proposal form is not transferable and any alteration of the firm's name entered hereon without prior permission from the Skagit County will be cause for considering the proposal irregular and subsequent rejection of the bid.

(2) Please refer to Section 1-02.6 of the Standard Specifications, "Preparation of Proposal", or "Article 4" of the Instruction to Bidders for building construction jobs.

BID PROPOSAL MUST BE SIGNED.

FAILURE TO SIGN OR COMPLETE ALL INFORMATION CAN RESULT IN REJECTION OF THE PROPOSAL AS NON-RESPONSIVE.

SUBMIT THE ENCLOSED PROPOSAL BOND FORM WITH YOUR PROPOSAL

USE OF OTHER FORMS MAY SUBJECT YOUR BID TO REJECTION

PROPOSAL BOND

KNOW ALL MEN BY THESE PRESENTS, That we, _____

_____

of _____ as principal, and the

_____ a corporation duly

organized under the laws of the State of _____,
and authorized to do business in the State of Washington, as surety, are held and firmly bound unto Skagit County in the full and penal sum of five (5) percent of the total amount of the bid proposal of said principal for the work hereinafter described for the payment of which, well and truly to be made, we bind our heirs, executors, administrators and assigns, and successors and assigns, firmly by these presents.

The condition of this bond is such, that whereas the principal herein is herewith submitting his or its sealed proposal for the following highway construction, to wit:

2018 HMA Overlay Project #ESHMA18-1

said bid and proposal, by reference thereto, being made a part hereof.

NOW THEREFORE, If the said proposal bid by said principal be accepted, and the contract be awarded to said principal, and if said principal shall duly make and enter into and execute said contract and shall furnish bond as required by Skagit County within a period of twenty (20) days from and after said award, exclusive of the day of such award, then this obligation shall be null and void, otherwise it shall remain and be in full force and effect.

IN TESTIMONY WHEREOF, The principal and surety have caused these presents to be signed and sealed this _____ day of _____, 2018.

_____

_____
(Principal)

_____ _____
(Surety) (Attorney-in-fact)

Failure to return this Declaration as part of the bid proposal package will make the bid nonresponsive and ineligible for award.

NON-COLLUSION DECLARATION

I, by signing the proposal, hereby declare, under penalty of perjury under the laws of the United States that the following statements are true and correct:

1. That the undersigned person(s), firm, association or corporation has (have) not, either directly or indirectly, entered into any agreement participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this proposal is submitted.
2. **That by signing the signature page of this proposal, I am deemed to have signed and to have agreed to the provisions of this declaration.**

NOTICE TO ALL BIDDERS

To report rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (USDOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of USDOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the USDOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

Certification of Compliance with Wage Payment Statutes

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date (March 29, 2018), the bidder is not a "willful" violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

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

_____
Bidder's Business Name

_____
Signature of Authorized Official*

_____
Printed Name

_____
Title

_____ _____ _____
Date City State

Check One:
Sole Proprietorship ☐ Partnership ☐ Joint Venture ☐ Corporation ☐

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

_____

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

_____

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

APPENDIX E

Vicinity Map and Plans